

# Protocol Conversion Systems: Comparison Columns

**In this report:**

Vendors ..... -302

Protocol Conversion  
Systems/Terminal  
Controller  
Columns..... -304

Code, Speed, Interface,  
and Async/Sync  
Converter  
Columns..... -323

**Synopsis**

**Editor's Note**

This report features comparison columns detailing products currently on the market. For information on market trends, see "Protocol Conversion Systems: Market Overview" (Report C23-010-101). For information on protocol conversion technology, see "Protocol Conversion Systems: Technology Overview" (Report C23-010-201).

**Highlights**

In the Comparison Column Entry Descriptions, we have briefly defined the specification categories used in the columns. Separate sections explain the entries for Protocol Conversion Systems/Terminal Controllers and Code, Speed, Interface, and Async/Sync Converters.

Vendors of these products furnished the information. When a vendor did not provide information for a specific entry and we could not locate that information in our files, we listed "Vendor did not specify." Datapro wishes to thank the vendors for their cooperation.

In addition to the lines allocated for vendors to indicate specified information for their models, we have added space at the bottom of the columns for vendor notations about options or special features.

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# Vendors

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## Protocol Conversion/Terminal Controller Vendors

**Andrew Corp.**

2771 Plaza Del Amo  
Torrance, CA 90503 (213) 320-7126, (800) 733-0331

**Andrew/KMW Systems**

100 Shepherd Mountain Plaza  
Austin, TX 78730-5014 (512) 338-3000, (800) 531-5167

**Arkansas Systems, Inc.**

8901 Kanis Road  
Little Rock, AK 72205 (501) 227-8471

**Avatar Corp.**

65 South Street  
Hopkinton, MA 01748 (508) 435-3000, (800) 289-2526

**Black Box Corp.**

P.O. Box 12800  
Pittsburgh, PA 15241 (412) 746-6552

**Carlisle Systems Group, Inc.**

Digital Controls Div.  
305 Pioneer Boulevard  
Springboro, OH 45066-1100 (513) 746-8118, (800) 421-0204

**Commtext Inc.**

1655 Crofton Boulevard  
Crofton, MD 21114 (301) 721-3666

**Comstat Datacomm Corp.**

1720 Spectrum Drive, NW  
Lawrenceville, GA 30243 (404) 822-1962, (404) 822-9496

**Diversified Data Resources, Inc.**

25 Mitchell Boulevard, Suite 7  
San Rafael, CA 94903 (415) 499-8870, (800) 233-3374

**Forest Computer**

1749 Hamilton Road, P.O. Box 509  
Okemos, MI 48864 (517) 349-4700

**Gandalf Data, Inc.**

130 Colonnadi Road, South  
Nepean, ON, Canada K2E 7M4 (613) 723-6500

**Innosys, Inc.**

2020 Challenger Drive, Suite 101  
Alameda, CA 94501 (415) 769-7717

**International Business Machines Corp. (IBM.)**

Old Orchard Road  
Armonk, NY 10504  
Contact your local IBM representative.

**JBM Electronics**

4645 La Guardia  
St. Louis, MO 63134 (314) 426-7781

**JDS Microprocessing**

22661 Lambert St., Suite 206  
El Toro, CA 92630 (714) 770-2263

**Memotec Data, Inc.**

600 McCaffrey Street  
Montreal, PQ, Canada H4T 1N1 (514) 738-4781

**Micom Communications Corp.**

4100 Los Angeles Avenue  
Simi Valley, CA 93063 (805) 583-8600, (800) 642-6687

**Netlink, Inc.**

3214 Spring Forest Road  
Raleigh, NC 27604 (919) 878-8612, (800) 638-5465

**Perle Systems, Inc.**

1980 Springer Drive  
Lombard, IL 60148 (708) 932-4171

**Plantronics Futurecomms, Inc.**

7450 New Technology Way  
Frederick, MD 21701 (301) 662-5926, (800) 537-9804

**Shaffstall Corp.**

7901 E. 88th Street  
Indianapolis, IN 46256 (317) 842-2077

**Telematics International, Inc.**

1201 Cypress Creek Road  
Ft. Lauderdale, FL 33309 (305) 772-3070, (800) 327-7944

**Thomas Engineering Company**

2440 Stanwell Drive  
Concord, CA 94520 (415) 680-8640, (800) 832-8649

**Trax Softworks, Inc.**

5840 Uplander Way  
Culver City, CA 90230-6620 (213) 649-5800

**Wall Data, Inc.**

17769 NE 78th Place  
Redmond, WA 98052 (206) 883-4777, (800) 433-3388

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## Code, Speed, Interface, and Async/ Sync Converter Vendors

**Arkansas Systems, Inc.**

8901 Kanis Road  
Little Rock, AK 72205 (501) 227-8471

**Astrocom Corp.**

120 W. Plato Boulevard  
St. Paul, MN 55107-2092 (612) 227-8651

**Black Box Corp.**

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Pittsburgh, PA 15241 (412) 746-5500

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Morton Grove, IL 60053 (708) 470-9600

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Westlake, OH 44145-0113 (216) 835-1510, (800) 262-3311

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Pennsauken, NJ 08110 (609) 662-7272

**General DataComm, Inc.**  
1579 Straits Turnpike  
Middlebury, CT 06762-1299 (203) 574-1118

**JBM Electronics**  
4645 La Guardia  
St. Louis, MO 63134 (314) 426-7781

**Memotec Data, Inc.**  
600 McCaffrey Street  
Montreal, PQ, Canada H4T 1N1 (514) 738-4781

**Nu Data, Inc.**  
32 Fairview Avenue  
Little Silver, NJ 07739 (201) 842-5757

**Perle Systems, Inc.**  
1980 Springer Drive  
Lombard, IL 60148 (708) 932-4171

**Plantronics Futurecomms, Inc.**  
7450 New Technology Way  
Frederick, MD 21701 (301) 662-5926, (800) 537-9804

**Shaffstall Corp.**  
7901 E. 88th Street  
Indianapolis, IN 46256 (317) 842-2077

**Telebyte Technology, Inc.**  
270 E. Pulaski Road  
Greenlawn, NY 11740 (516) 423-3232

**TeleProcessing Products, Inc.**  
4565 E. Industrial Street, 7-K  
Simi Valley, CA 93063 (805) 522-8147

**Trax Softworks, Inc.**  
5840 Uplander Way  
Culver City, CA 90230-6620 (213) 649-5800

**VIR, Inc.**  
105 James Way  
Southampton, PA 18966 (215) 364-8866, (800) 344-3934

**Wall Data, Inc.**  
17769 NE 78th Place  
Redmond, WA 98052 (206) 883-4777, (800) 433-3388

# Conversion Systems/ Terminal Controllers Comparison Column Entry Descriptions

For the reader's convenience, we have organized the comparison columns into two broad categories:

**Conversion Systems/ Terminal Controllers** can include protocol converters, terminal emulators, remote cluster controllers, and terminal controllers. Basically, devices in this section provide conversion from one protocol to another and/or allow one device (such as an asynchronous display terminal) to act as another type of device (such as an IBM 3270 display terminal) in a network.

The following text briefly describes the column entries in the order in which they appear in the columns.

## Conversion Systems/ Terminal Controllers

**Model.** Listed here is the exact model number or name of each device.

**Device Type.** This entry specifies if the device is a protocol converter, terminal emulator, code converter, or interface converter.

**Conversion Performed.** All converters perform some type of translation

from one code, speed, or protocol to another. The most common conversion is asynchronous ASCII to IBM SNA/SDLC or BSC, but a number of other translations occur on the units represented in the columns.

**Specific Device Emulated.** In many cases, conversion devices provide the means to convert the text format of one type of device into the characteristics and format of another. This translation, called emulation, is indicated, if available. Most protocol converters also support device emulation.

**Specific Functionality Provided.** Most converters allow one device to be used as another type of device in the network. For example, a number of units allow asynchronous displays to be used as IBM 3278 Model 2 displays.

**Virtual Screen Sizes Supported (char.).** For a device to provide emulation, it must support the screen size, in characters, of the emulated device. For example, a device emulating an IBM 3270 terminal

must support a 1,920-character screen.

**Command Port Supported.** Some converters support a port through which users can select operating parameters and monitor, diagnose, and control the network. A "yes" answer indicates that the device has a command port.

## Host-Side Specifications

**Specific Hosts Supported.** Conversion devices generally support IBM or compatible hosts, asynchronous hosts such as Digital's VAX, or both. In this entry, vendors list the name of the computer(s) with which the converter operates.

**Host Operating Systems Supported.** In this entry, vendors indicate the operating system from a choice of DOS/VS, OS/VS, RSTS/E or VAX VMS, or Other.

**Number of Host Selections Supported Concurrently.** If a converter supports more than one host line, the device can support both connected hosts concurrently, or separately through a switch selection.

**Connections Supported.** Conversion devices support direct connections and multipoint and/or point-to-point connections. Most converters support more than one type of connection, and many support all three.

**Connection to Host via Controller.** Some conversion devices emulate a controller, but others must connect to a controller in the network. If applicable, vendors specified the type of controller to which the converter interfaces.

## Transmission Specifications/Host Line

**Maximum Transmission Speed (bps).** This entry, stated in bits per second, indicates the maximum speed of operation or data rate supported by the device.

**Synchronization.** This entry refers to the time relationship among the bits comprising the characters that make up the messages. Conversion devices handle data in spurts (asynchronous) or continuous streams (synchronous).

**Transmission Mode.** Most converters operate in either half- or full-duplex mode or both. Half-duplex mode supports data transmission in either direction, but not simultaneously. In full-duplex operation, the data is simultaneously transmitted and received over a common communications facility. Simplex mode permits unidirectional data transmission, whereby data is either transmitted or received.

**Protocols Supported.** There are two basic types

of protocols: byte oriented (IBM's BSC or Digital's DDCMP) or bit oriented (IBM SNA/SDLC or ISO HDLC). Converters usually translate one protocol to another and thus support different protocols on the terminal and host sides.

**Codes Supported.** The most common codes are ASCII, used in the asynchronous protocol, and EBCDIC, the usual code generated by synchronous devices.

**Interface.** Interface is the electrical connection between components. Most communications devices provide an electrical interface (RS-232-C) in accordance with the standards established by the Electronics Industries Association (EIA). Several other interface standards exist, notably CCITT Recommendations V.24 and V.28.

**Clocking.** The repetitive, regularly timed signals controlling synchronous transmissions, clocking can be set internally by the device itself or externally by another device or be derived from the datastream.

#### **Terminal-Side Specifications/ Terminal Line**

**Number and Type of Ports Provided.** In general, a conversion device

supports asynchronous ports that accommodate a large variety of asynchronous printers, terminals, and personal computers. Many converters also support a dynamic printer port. Devices represented in the columns support from one to many input devices.

**Specific Devices Supported.** Most conversion devices designed for asynchronous-to-IBM SDLC or BSC conversion support virtually any asynchronous device. Some converters, however, are designed for operation only with a specific terminal. An answer of "virtually any device" means that the vendor's list of supported terminals was too long to fit into the assigned space, but the converter did support all major asynchronous display terminals and/or personal computers available in today's market.

**Connections Supported.** The options offered to vendors in this entry are Direct, Dial-Up, Remote, Leased, and Other.

#### **Transmission Specifications/ Terminal Line**

**Maximum Transmission Speed (bps).** This entry refers to the highest possible rate of speed at which data can be sent.

**Maximum Aggregate Input Rate (bps).** Conversion devices generally support many input ports, each operating at several different speeds, e.g., from 50 to 9600 bps. Aggregate input refers to the maximum data rate accepted from all channels simultaneously. For example, if there are four channels operating at a maximum 9600 bps rate per channel, the aggregate input rate could be four times 9600, or 38.4K bps.

**Synchronization.** Vendors indicate asynchronous or synchronous here.

**Transmission Mode.** Vendors note if the mode is half or full duplex.

**Protocols Supported.** The choices offered to vendors are TTY II, BSC, and Other.

**Codes Supported.** Vendors indicate if their products support ASCII or EBCDIC.

**Interfaces Supported.** The choices offered to vendors are RS-232-C, RS-449, and Other.

#### **Diagnostics**

Many conversion devices perform tests that check the device and the line connections. Most converters conduct a self-test of internal circuitry upon power-up and provide front-panel LEDs to monitor system status.

#### **Pricing and Availability**

**Purchase (\$).** Vendors provide the base price of the unit, excluding options, here.

**Serviced by.** Usually, the vendor offers service on an on-site or factory repair/return basis. In some cases, a third party provides service.

**Availability (Days ARO).** Here we list the current lead time on orders, given in days after receipt of order (ARO).

**Date of First Commercial Delivery.** This entry indicates the actual date on which the vendor delivered the product to the marketplace.

#### **Comments**

In this section, vendors list options and unique capabilities of their products.

Vendor	Andrew Corp.	Andrew Corp.	Andrew Corp.	Andrew Corp.
<b>Model</b>	DataLynx/3174	DataLynx/3780	DataLynx/5294	InterLynx/3278
<b>Device Type</b>	Protocol converter, Sys/370 to ASCII cluster controller	Protocol converter, terminal emulator	Protocol converter, terminal emulator	Terminal emulator
<b>Conversion Performed</b>	ASCII to EBCDIC, Async to SNA/SDLC, or async to BSC	Async to IBM 2770/2780/3780/3741	Async to IBM 5250	Async to IBM 3270
<b>Specific Device Emulated</b>	IBM 3274 Model 51C, IBM 3174-51R	IBM RJE Station	IBM 5294/5394 controller	IBM 3278 Model 2 display
<b>Specific Functionality Provided</b>	Async display or printer to IBM 3278 display or IBM 3287 printer	Links 2 async devices (1 display, PC, or mini-computer; and 1 printer)	Links 32 async devices to one or two S/3X or AS/400 hosts	Async display to IBM 3278 Model 2 display
<b>Virtual Screen Sizes Suppt. (char.)</b>	1920, 3564	Vendor did not specify	Vendor did not specify	Vendor did not specify
<b>Command Port Supported</b>	Yes	No	Yes	No
<b>Host Side Specifications</b>				
Specific Hosts Supported	IBM 43XX, 3080/3090	DEC PDP-11, VAX; IBM 3080/3090, 43XX, 8100	IBM AS/400, IBM System/3X	DEC PDP-11, VAX; IBM AS/400, 3080/3090, 43XX, and 9370
Host Operating Systems Supported	DOS/VS, OS/VS	DOS/VS, OS/VS, RSTS/E or VAX VMS	SSP, CPF, OS/400	DOS/VS, OS/VS, RSTS/E, or VAX VMS
No. Host Selections Suppt. Concurrently	2 SNA or 2 BSC, and 4 async ports	1 BSC	1 or 2 SDLC	1 SDLC and 1 async
Connections Supported	Direct connection, point-to-point on dial-up line, multi-point on leased line	Direct connection, point-to-point on dial-up line	Direct connection, point-to-point on dial-up line	Direct connection
Connection to Host Via Controller	IBM 37XX	No controller is needed	Not applicable	IBM 3174/3274
<b>Transmission Spec.-Host Line</b>				
Maximum Transmission Speed (bps)	19.2K bps; 56K bps optional	19.2K	19.2K, each host channel	19.2K, each host channel
Synchronization	Synchronous	Synchronous	Synchronous	Synchronous
Transmission Mode	Half/full duplex	Half duplex	Full duplex	Full duplex
Protocols Supported	BSC, SNA/SDLC	IBM BSC 2770/2780/3780/3741	SNA/SDLC	SNA/SDLC
Codes Supported	ASCII, EBCDIC	ASCII, EBCDIC	EBCDIC	EBCDIC
Interface	2 RS-232-C	1 RS-232-C	2 RS-232-C	Type A Coax
Clocking	Internal, external	Internal	Vendor did not specify	Vendor did not specify
<b>Terminal Side Spec.-Terminal Line</b>				
Number and Type of Ports Provided	4 to 23 RS-232-C ports	1 async display terminal port	Up to 32 async ports	1 async port
Specific Devices Supported	All popular brands of term.; all IBM-compat. PCs; also, up to 6 user-definable terminal drivers	Vendor did not specify	Vendor did not specify	Terminals: IBM 3101 & 3161, VT 52/100, ADDS Viewpoint, ADM-3A/21, TV 910/925, Wyse 100
Connections Supported	Remote, leased, connect to X.25 PAD with echoplex suppression	Direct connection, dial-up	Direct connection, dial-up	Direct connection
<b>Transmission Spec.-Terminal Line</b>				
Maximum Transmission Speed (bps)	19.2K	19.2K	19.2K	19.2K
Maximum Aggregate Input Rate (bps)	614.4K	19.2K	19.2K	19.2K
Synchronization	Asynchronous	Synchronous	Asynchronous	Asynchronous
Transmission Mode	Full duplex	Half duplex	Full duplex	Full duplex
Protocols Supported	TTY II	BSC, ASCII, ANSI	ASCII, ANSI	TTY II, ASCII, ANSI
Codes Supported	ASCII	ASCII	ASCII	ASCII
Interfaces Supported	RS-232-C	RS-232-C	RS-232-C	RS-232-C
<b>Diagnostics</b>	Extensive network diagnostics	Self-test, status LEDs	Self-test, status LEDs	Vendor did not specify
<b>Pricing and Availability</b>				
Purchase (\$)	3,000 to 10,500	1,445	2,000 with 4 device ports	995
Serviced By	Andrew Corp.	Andrew Corp.	Andrew Corp.	Andrew Corp.
Availability (days ARO)	7 days	7	7	7
Date of First Commercial Delivery	December 1986	October 1990	September 1990	July 1990
<b>Comments</b>	—	—	—	—



Vendor	Andrew Corp.	Andrew Corp.	Andrew Corp.	Andrew Corp.
Model	InterLynx/400	Newport III/Coax	Newport Twinax	VersaLynx/3278
Device Type	Protocol converter	Printer adapter	Printer adapter	Terminal emulator
Conversion Performed	Async to IBM 5250	ASCII to EBCDIC & async to IBM 3270	ASCII to EBCDIC & async to IBM 5250	IBM 3270 to async
Specific Device Emulated	IBM 5294/5394 controller	IBM 3287 Model 2 printer	IBM 4214, 5219, 5224, 5225, and 5256 Model printers	Digital Equipment VT100, IBM 3101, TV 925, TTY
Specific Functionality Provided	Links 7 async devices to an IBM midrange host	Async HP LaserJet printer to IBM 3287 printer	Async HP LaserJet printer to IBM printer	IBM printer to async printer
Virtual Screen Sizes Suppt. (char.)	Vendor did not specify	Not applicable	Not applicable	Vendor did not specify
Command Port Supported	No	Not applicable	Not applicable	No
Host Side Specifications Specific Hosts Supported	IBM AS/400, IBM System/3X	IBM 3080/3090, 43XX, 8100, 9370; IBM PC, PS/2	IBM System/3X, AS/400; IBM PC, PS/2	DEC PDP-11, VAX; IBM 43XX, 30XX, 9370, S/370
Host Operating Systems Supported	SSP, CPF, OS/400	All mainframe operating systems	All IBM midrange host operating systems	DOS/VS, OS/VS, RSTS/E or VAX VMS
No. Host Selections Suppt. Concurrently	1 SDLC	1 async and 1 SNA/SDLC	1 async session and 1 IBM midrange host session	1 SDLC and 1 async
Connections Supported	Direct connection	Direct connection	Direct connection	Direct connection, point-to-point on dial-up line
Connection to Host Via Controller	Vendor did not specify	IBM 3174/3274	IBM 5294/5394	IBM 3174/3274
Transmission Spec.-Host Line Maximum Transmission Speed (bps) Synchronization Transmission Mode Protocols Supported	19.2K Synchronous Full duplex SNA/SDLC	38.4K bps Synchronous Half duplex BSC, SNA/SDLC	38.4K bps Synchronous Half duplex SNA/SDLC	19.2K Asynchronous, synchronous Full duplex SNA/SDLC, ASCII, ANSI
Codes Supported	EBCDIC	ASCII, EBCDIC	ASCII, EBCDIC	ASCII, EBCDIC
Interface	Vendor did not specify	Type A coax	Twinax	1 RS-232-C, Type A coax
Clocking	Vendor did not specify	Data derived	Data derived	Vendor did not specify
Terminal Side Spec.-Terminal Line Number and Type of Ports Provided	Vendor did not specify	Not applicable (the unit is an adapter card)	Not applicable (the unit is an adapter card).	1 sync display terminal port plus 1 optional printer port
Specific Devices Supported	Terminals: IBM 3101/316X, DEC VT 100/220, and products from ADDS, C-Itch, Televideo, Wyse, DG, and others	HP LaserJet Series II, IID, III, and IIID	HP LaserJet Series II and IID	IBM 3178/3278 Model 2
Connections Supported	Direct connection, dial-up	Direct connection	Direct connection	Direct connection, dial-up
Transmission Spec.-Terminal Line Maximum Transmission Speed (bps) Maximum Aggregate Input Rate (bps) Synchronization Transmission Mode Protocols Supported	19.2K Vendor did not specify Asynchronous Full duplex ASCII, ANSI	38.4K bps 38.4K bps Asynchronous Half duplex BSC, SCSi	38.4K bps 38.4K bps Asynchronous Half duplex SCSi	19.2K 19.2K Vendor did not specify Full duplex TTY II, ASCII, ANSI
Codes Supported	ASCII	ASCII, EBCDIC	ASCII, EBCDIC	ASCII, EBCDIC
Interfaces Supported	RS-232-C, Centronics parallel	RS-232-C	RS-232-C	RS-232-C
Diagnostics	Self-test, status LEDs	Self-test, status LEDs	Self test, status LEDs	ASCII line tests, self-test, status LEDs
Pricing and Availability Purchase (\$) Serviced By Availability (days ARO) Date of First Commercial Delivery	2,900 with 4 device ports Andrew Corp. 7 February 1990	895 Andrew Corp. Immediate delivery September 1990	895 Andrew Corp. Immediate delivery May 1989	595 to 645 Andrew Corp. 7 September 1990
Comments	—	DB9F-DB25F serial cable opt.; host & PC can share printer; no external power sourcing	Host and PC can share printer; no external power sourcing	—

Vendor	Andrew/KMW Systems	Andrew/KMW Systems	Andrew/KMW Systems	Andrew/KMW Systems
<b>Model</b>	<b>NetAccess</b>	<b>Series II 2780/3780</b>	<b>Series II 3270</b>	<b>Series II 3770</b>
<b>Device Type</b>	AppleTalk-to-IBM AS/400 or S/3X Gateway	Protocol converter	Protocol converter	Protocol converter
<b>Conversion Performed</b>	Async to IBM SNA/SDLC	Asynchronous to 3270 BSC RJE	SNA or BSC to async	Async to SNA/SDLC
<b>Specific Device Emulated</b>	IBM Model 5251, 529X, 3179, 3196, & 3197	IBM 2780/3780 remote job entry station	IBM 3274 Model 51C, IBM 3271	IBM 3776/3777 RJE workstation
<b>Specific Functionality Provided</b>	Apple Macintosh PCs-IBM midrange displays and printers	I/O async device-2780/3780 RJE	Async display-IBM 3270 display	Acommodates I/O devices such as magnetic tape units, printers, and plotters
<b>Virtual Screen Sizes Suppt. (char.)</b>	Vendor did not specify	Vendor did not specify	3,564	Vendor did not specify
<b>Command Port Supported</b>	No	Yes	Yes	Yes
<b>Host Side Specifications</b>				
Specific Hosts Supported	IBM AS/400, IBM System/3X	Any IBM 2780- or 3780-compatible device	IBM S/370-compatible	IBM S/370-compatible mainframes
Host Operating Systems Supported	Vendor did not specify	Vendor did not specify	Vendor did not specify	Vendor did not specify
No. Host Selections Suppt. Concurrently	1 SDLC	1 BSC	8	Vendor did not specify
Connections Supported	Direct connection	Switched/dedicated pt.-to-pt./multipoint	Switched/dedicated pt.-to-pt./multipoint	Switched, dedicated pt.-to-pt.
Connection to Host Via Controller	Direct twinaxial connection	IBM 37XX, direct to 2780/3780 device	IBM 37XX	IBM 37XX
<b>Transmission Spec.-Host Line</b>				
Maximum Transmission Speed (bps)	19.2K	19.2K	19.2K; 56K optional	19.2K; 56K optional
Synchronization	Asynchronous	Asynchronous	Synchronous	Synchronous
Transmission Mode	Vendor did not specify	Full duplex, half duplex	Half duplex	Full duplex, half duplex
Protocols Supported	SNA/SDLC	BSC	BSC, SNA/SDLC	BSC
Codes Supported	Vendor did not specify	EBCDIC	EBCDIC	EBCDIC
Interface	1 Twinax interface	1 RS-232-C, V.35, X.21	1 RS-232-C	1 RS-232-C, V.35, or X.21 port
Clocking	Vendor did not specify	External, internal	External, internal	External, internal
<b>Terminal Side Spec.-Terminal Line</b>				
Number and Type of Ports Provided	7 Macintosh ports/card; 5 cards max.	Up to 8	Up to 8 asynchronous	Up to 8 async
Specific Devices Supported	Macintosh IIs	Virtually any ASCII or EBCDIC peripheral device	Virtually any async display, printer, or PC	Virtually any ASCII or EBCDIC peripheral device in serial or parallel
Connections Supported	Direct connection	Direct connection, dial-up	Direct connection, dial-up	Direct connection
<b>Transmission Spec.-Terminal Line</b>				
Maximum Transmission Speed (bps)	Vendor did not specify	19.2K	To 19.2K	To 19.2K
Maximum Aggregate Input Rate (bps)	19.2K	Vendor did not specify	Vendor did not specify	Vendor did not specify
Synchronization	Asynchronous	Asynchronous	Asynchronous	Asynchronous
Transmission Mode	Vendor did not specify	Full duplex, half duplex	Full duplex	Full duplex, half duplex
Protocols Supported	ASCII	Xon/Xoff, CTS, prompt	Xon/Xoff, CTS	Xon/Xoff, CTS, ASCII
Codes Supported	ASCII	ASCII, EBCDIC	ASCII	ASCII
Interfaces Supported	Uses AppleTalk cabling and connectors	RS-232-C, Centronics parallel	RS-232-C, parallel	RS-232-C, parallel, Centronics
<b>Diagnostics</b>	Vendor did not specify	ASCII line tests, self-test, status LEDs	ASCII line tests, self-test, status LEDs	ASCII line tests, self-test
<b>Pricing and Availability</b>				
Purchase (\$)	3,995 per card	1,995 to 4,395	1,295 to \$3,695	2,995 to 5,395
Serviced By	Andrew/KMW Systems	Andrew/KMW Systems	Andrew/KMW Systems	Andrew/KMW Systems
Availability (days ARO)	30	30	30	30
Date of First Commercial Delivery	February 1990	October 1981	Oct. 1981	October 1981
<b>Comments</b>	—	Modem eliminator configuration for local attachment available	—	Optional modem eliminator configuration for local attachment

<b>Vendor</b>	Andrew/KMW Systems	Andrew/KMW Systems	Andrew/KMW Systems	Arkansas Systems, Inc.
<b>Model</b>	Series III 3287/Coax	TwinAccess Series II	TwinAccess Series III	PATH I
<b>Device Type</b>	Protocol converter	Protocol converter	Protocol converter	Protocol converter
<b>Conversion Performed</b>	Async to IBM 3270	Async to IBM 5250	Async to IBM 5250	IBM BSC 3780 to IBM 3270
<b>Specific Device Emulated</b>	IBM 3287 Model 1 or 2 printer	IBM 5294/5394 controller	IBM 5294/5394 controller	IBM S/34/36/38 or AS/400 to 3270 devices
<b>Specific Functionality Provided</b>	Async printer-IBM 3287 Model 1 or 2 printer	Async displays, PCs, IBM 5251 displays	Async device-IBM 5251 display or 52XX printer	3780 point to point-3270 multipoint BSC
<b>Virtual Screen Sizes Suppt. (char.)</b>	3,564	1,920	1,920	Vendor did not specify
<b>Command Port Supported</b>	No	Yes	Yes	No
<b>Host Side Specifications</b>				
<b>Specific Hosts Supported</b>	IBM 43XX	Digital Equipment PDP-11, Digital Equipment VAX, IBM AS/400, IBM System/3X	Digital Equipment PDP-11, Digital Equipment VAX, IBM AS/400, IBM System/3X	IBM S/3X and AS/400
<b>Host Operating Systems Supported</b>	Vendor did not specify	Vendor did not specify	Vendor did not specify	Vendor did not specify
<b>No. Host Selections Suppt. Concurrently</b>	1 BSC and 1 SDLC	1 SDLC and 1 async	1 SDLC and 1 async	2 BSC
<b>Connections Supported</b>	Direct connection	Direct connection	Direct connection	Direct connection, point-to-point on dial-up line
<b>Connection to Host Via Controller</b>	IBM 3174/3274	Direct twinaxial connection to IBM host	Direct twinaxial connection to IBM host	Vendor did not specify
<b>Transmission Spec.-Host Line</b>				
<b>Maximum Transmission Speed (bps)</b>	19.2K; 56K optional	Vendor did not specify	Vendor did not specify	9,600
<b>Synchronization</b>	Synchronous	Synchronous	Synchronous	Synchronous
<b>Transmission Mode</b>	Half duplex	Vendor did not specify	Vendor did not specify	Full duplex
<b>Protocols Supported</b>	IBM Type A coax	SNA/SDLC	SNA/SDLC	3780
<b>Codes Supported</b>	EBCDIC	EBCDIC	EBCDIC	EBCDIC
<b>Interface</b>	1 coax	Twinax	Twinax	1 RS-232-C
<b>Clocking</b>	Data derived	Vendor did not specify	Vendor did not specify	External, internal
<b>Terminal Side Spec.-Terminal Line</b>				
<b>Number and Type of Ports Provided</b>	1 async or Dataproducts/Centronics port	7 RS-232-C or Centronics parallel ports	1 RS-232-C or Centronics parallel port	1 port supports 20 addresses
<b>Specific Devices Supported</b>	Any ASCII output device	Async display terminals, PCs, and printers, including Macintosh printers and PCs	An async display terminal, PC, or printer, including 9 Macintosh printers and PCs	IBM 3274, 3276; other 3270 devices such as teller terminals, and ATMs
<b>Connections Supported</b>	Direct connection, dial-up, remote	Direct connection, dial-up	Vendor did not specify	Leased
<b>Transmission Spec.-Terminal Line</b>				
<b>Maximum Transmission Speed (bps)</b>	19.2K	19.2K	19.2K	9,600
<b>Maximum Aggregate Input Rate (bps)</b>	Vendor did not specify	Vendor did not specify	Vendor did not specify	9,600
<b>Synchronization</b>	Asynchronous	Asynchronous	Asynchronous	Synchronous
<b>Transmission Mode</b>	Half duplex	Full duplex, half duplex	Full duplex, half duplex	Full duplex
<b>Protocols Supported</b>	Xon/Xoff, CTS, ASCII	Xon/Xoff, CTS, ASCII	Xon/Xoff, CTS, ASCII	BSC
<b>Codes Supported</b>	ASCII	ASCII	Vendor did not specify	EBCDIC
<b>Interfaces Supported</b>	RS-232-C, Centronics/Dataproducts, parallel	RS-232-C, Centronics parallel	RS-232-C, Centronics parallel	RS-232-C
<b>Diagnostics</b>	ASCII line tests, self-test, status LEDs	ASCII line tests, self-test, status LEDs	ASCII line tests, self-test, status LEDs	Self-test, problem annunciation
<b>Pricing and Availability</b>				
<b>Purchase (\$)</b>	1,295	3,595 for 7 device ports	1,295	4,950
<b>Serviced By</b>	Andrew/KMW Systems	Andrew/KMW Systems	Andrew/KMW Systems	Arkansas Systems, Inc.
<b>Availability (days ARO)</b>	7 days	30	30	Off the shelf
<b>Date of First Commercial Delivery</b>	March 1987	June 1981	June 1981	1985
<b>Comments</b>	Transparency, graphics support from SAS and ISCO	Full 5251 attribute support, including color; 25th status line	Full 5251 attribute support, including color; 25th status line	Connects 3270 bisync devices to an IBM midrange host via a 3780 bisync comm. line

Vendor	Arkansas Systems, Inc.	Arkansas Systems, Inc.	Arkansas Systems, Inc.	Arkansas Systems, Inc.
Model	PATH II	PATH III	PATH IV	PATH IV-PBM
Device Type	Protocol converter	Protocol converter	Protocol converter	Protocol converter
Conversion Performed	BSC to SDLC, 5250 remote SNA/SDLC to 3270 multipoint BSC	3780 bisync to 3780 bisync	5250 remote SDLC TO 3624 bisync	IBM 3624 ATM to IBM 4732 PBM
Specific Device Emulated	IBM 5251 Model 12	3780	IBM 5251 Model 12	IBM 4732 PBMS
Specific Functionality Provided	IBM 3270-IBM 5250 SNA	3780 bisync-3780 bisync	5250 remote SNA/SDLC-IBM 3624 ATM bisync	Bisync-3, ATM-SNA LU0 PBM
Virtual Screen Sizes Suppt. (char.)	1,920	Vendor did not specify	1,920	Vendor did not specify
Command Port Supported	No	No	No	No
Host Side Specifications				
Specific Hosts Supported	IBM S/34/36/38 or AS/400	IBM System/3X	IBM S/34/36/38 or AS/400	IBM AS/400
Host Operating Systems Supported	Vendor did not specify	Vendor did not specify	Vendor did not specify	OS/400
No. Host Selections Suppt. Concurrently	1 BSC and 1 SDLC	2 BSC 3780s	1 BSC and 1 SDLC	1 SDLC
Connections Supported	Direct connection, point-to-point on dial-up line, multipoint on leased line	Direct connection	Direct connection, point-to-point on dial-up line	Direct connection, multipoint on leased line
Connection to Host Via Controller	Vendor did not specify	Vendor did not specify	Vendor did not specify	None
<b>Transmission Spec.-Host Line</b>				
Maximum Transmission Speed (bps)	19.2K	9,600	19.2K	9,600
Synchronization	Synchronous	Synchronous	Synchronous	Synchronous
Transmission Mode	Full duplex	Full duplex	Full duplex	Half duplex
Protocols Supported	SNA/SDLC	BSC	SNA/SDLC	SNA/SDLC
Codes Supported	EBCDIC	EBCDIC	EBCDIC	EBCDIC
Interface	1 RS-232-C	1 RS-232-C	1 RS-232-C	1 RS-232-C
Clocking	External, internal	External, internal	External, internal	Internal
<b>Terminal Side Spec.-Terminal Line</b>				
Number and Type of Ports Provided	1 multidrop 3270 line	3780	Up to 64 devices over multidrop leased lines	1 SDLC port
Specific Devices Supported	3270 compatible, including ATMs, teller terminals	Any 3780 device	IBM 3624 ATM	IBM 3624 ATM version 8, with bisync feature
Connections Supported	Direct connection, dial-up, leased, remote	Direct connection	Leased, remote	Direct connection, leased
<b>Transmission Spec.-Terminal Line</b>				
Maximum Transmission Speed (bps)	9,600	9,600	9,600	4,800
Maximum Aggregate Input Rate (bps)	9,600	9,600	9,600	4,800
Synchronization	Synchronous	Synchronous	Synchronous	Synchronous
Transmission Mode	Full duplex	Full duplex	Full duplex	Half duplex
Protocols Supported	BSC	BSC	BSC	IBM transparent bisync-3
Codes Supported	EBCDIC	EBCDIC	EBCDIC	EBCDIC
Interfaces Supported	RS-232-C	RS-232-C	RS-232-C	RS-232-C
Diagnostics	Self-test, problem annunciation	Self-test	Self-test	Keybd. & monitor opt., w/ functions; printer opt.
<b>Pricing and Availability</b>				
Purchase (\$)	7,950	4,950	5,950	10,000
Serviced By	Arkansas Systems, Inc.	Arkansas Systems, Inc.	Arkansas Systems, Inc.	Arkansas Systems, Inc.
Availability (days ARO)	Contact vendor	Contact vendor	Contact vendor	Off the shelf
Date of First Commercial Delivery	1985	1985	1986	June 1990
Comments	Supports a maximum of 8 IBM 3274s on one comm. line	Overcomes IBM S/3X-BSC 3780 protocol contention limitations	Allows an IBM S/34/36/38 or AS/400 to drive a network of 3624 ATMs directly	Lets 3624 ATMs act like 4730 ATMs to the host

Vendor	Arkansas Systems, Inc.	Arkansas Systems, Inc.	Arkansas Systems, Inc.	Arkansas Systems, Inc.
Model	PATH IX	PATH V	PATH VI	PATH XV (ECCAA)
Device Type	Protocol converter	Protocol converter	Protocol converter	Protocol converter
Conversion Performed	ASCII to EBCDIC	NCR 150 async	IBM 5250 to Burroughs sync	Local IBM 5250 to IBM 3780 bisync
Specific Device Emulated	IBM 5251 Model 11 display	IBM 5251 Model 12	IBM 5251 Model 12	SDLC/SNA protocol workstation
Specific Functionality Provided	Async poll select-IBM 5250	5250 local/remote-Burroughs poll/select	5250 remote SNA/SDLC-Burroughs poll/select sync	5250 local/remote-3780 pt-to-pt bisync
Virtual Screen Sizes Suppt. (char.)	1,920	1,920	1,920	Vendor did not specify
Command Port Supported	No	No	No	Vendor did not specify
Host Side Specifications				
Specific Hosts Supported	IBM S/3X	IBM S/34/36/38 or AS/400	IBM S/34/36/38 or AS/400	IBM S/3X and AS/400
Host Operating Systems Supported	Vendor did not specify	Vendor did not specify	Vendor did not specify	Vendor did not specify
No. Host Selections Suppt. Concurrently	Twinax	SDLC 5250	SDLC 5250	Vendor did not specify
Connections Supported	Direct connection	Direct connection, point-to-point on dial-up line, multipoint on leased line	Direct connection, point-to-point on dial-up line, multipoint on leased line	Vendor did not specify
Connection to Host Via Controller	Vendor did not specify	Vendor did not specify	Vendor did not specify	Vendor did not specify
Transmission Spec.-Host Line				
Maximum Transmission Speed (bps)	Vendor did not specify	9,600	9,600	19.2K
Synchronization	Synchronous	Asynchronous	Synchronous	Synchronous
Transmission Mode	Full duplex	Full duplex	Full duplex	Vendor did not specify
Protocols Supported	SNA/SDLC	SNA/SDLC	SNA/SDLC	Vendor did not specify
Codes Supported	EBCDIC	EBCDIC	EBCDIC	Vendor did not specify
Interface	Twinax	Twinax	1 RS-232-C	Vendor did not specify
Clocking	Vendor did not specify	Data derived	Vendor did not specify	Vendor did not specify
Terminal Side Spec.-Terminal Line				
Number and Type of Ports Provided	Multiple terminals	Multidrop poll select network	Multidrop Burroughs sync	Attaches bisync comm. lines to IBM S/3X
Specific Devices Supported	Not applicable	Burroughs terminals: TT102, MT355, TU1800, RT650, RT750; NCR 150 async devices: 279, 2261, 2262, 5000 Series	All sync poll/select devices	3892 MICR Reader Sorter, 5294 controller
Connections Supported	Multidrop	Leased	Leased, remote	Direct connection, remote
Transmission Spec.-Terminal Line				
Maximum Transmission Speed (bps)	9,600	9,600	9,600	19.2K
Maximum Aggregate Input Rate (bps)	9,600	9,600	9,600	19.2K
Synchronization	Asynchronous	Asynchronous	Synchronous	Synchronous
Transmission Mode	Half duplex	Half duplex	Full duplex	Full duplex
Protocols Supported	Poll/select	Poll/select	Poll/select	BSC
Codes Supported	ASCII	ASCII	ASCII	Vendor did not specify
Interfaces Supported	RS-232-C	RS-232-C	RS-232-C	Vendor did not specify
Diagnostics	Self-test	Problem annunciation	Problem annunciation	Problem annunciation optional
Pricing and Availability				
Purchase (\$)	5,950	5,950	5,950	6,950
Serviced By	Arkansas Systems, Inc.	Arkansas Systems, Inc.	Arkansas Systems, Inc.	Arkansas Systems, Inc.
Availability (days ARO)	Vendor did not specify	Contact vendor	Off the shelf	Off the shelf
Date of First Commercial Delivery	1987	1986	1986	1987
Comments	Connects IBM terminal cluster to a Burroughs host	Connects async poll select terminals to an IBM S/3X or AS/400 w/o host comm line	—	PATH XV allows the attachment of multiple bisync lines

Vendor	Arkansas Systems, Inc.	Avatar Corp.	Avatar Corp.	Avatar Corp.
Model	PATH XVIII	EP-Connect	PA1500G	Passport
Device Type	Protocol converter, code converter	Protocol converter	Protocol converter	Protocol converter
Conversion Performed	Burroughs poll/select to 3270 bisync	EBCDIC to ASCII	EBCDIC to ASCII	EBCDIC to ASCII
Specific Device Emulated	IBM 3274 Model 51C	ASCII printer	ASCII printer	ASCII printer
Specific Functionality Provided	3277 Model 2-Burroughs MT-11	IBM 3287 printer-ASCII printer	IBM 3287 printer-ASCII printer	IBM 3287 printer-ASCII printer
Virtual Screen Sizes Suppt. (char.)	1,920	1,920	1,920	1,920
Command Port Supported	No	No	No	No
Host Side Specifications				
Specific Hosts Supported	IBM 43XX, or any host supporting IBM VTAM BSC	IBM 43XX, IBM 30XX	IBM 43XX, IBM 30XX	IBM 43XX, IBM 30XX
Host Operating Systems Supported	OS/VS	DOS/VS, MCS, TSO, CICS	DOS/VS, MCS, TSO, CICS	DOS/VS, MCS, TSO, CICS
No. Host Selections Suppt. Concurrently	1 BSC and 1 Burroughs poll/select	1 SDLC or 1 SNA	1 SDLC or 1 SNA	1 SDLC or 1 SNA
Connections Supported	DCE/DTE w/constant or switched CTS, RTS	Direct connection	Direct connection	Direct connection
Connection to Host Via Controller	IBM 37XX	IBM 3174/3274, IBM 3276	IBM 3174/3274, IBM 3276	IBM 3174/3274, IBM 3276, printer adapter
Transmission Spec.-Host Line				
Maximum Transmission Speed (bps)	9,600	Vendor did not specify	Vendor did not specify	Vendor did not specify
Synchronization	Synchronous	Asynchronous, synchronous	Asynchronous, synchronous	Asynchronous, synchronous
Transmission Mode	Half duplex	Full duplex	Full duplex	Full duplex
Protocols Supported	BSC	SNA/SDLC	SNA/SDLC	SNA/SDLC
Codes Supported	ASCII, EBCDIC	ASCII, EBCDIC	ASCII, EBCDIC	ASCII, EBCDIC
Interface	1 RS-232-C	1 RS-232-C, Centronics parallel, Type A coax	1 RS-232-C, Centronics parallel, Type A coax	1 RS-232-C, Centronics parallel, Type A coax
Clocking	DCE or DTE	Internal	Internal	Internal
Terminal Side Spec.-Terminal Line				
Number and Type of Ports Provided	1 port multiplexed to 32 devices	Not applicable	Not applicable	Not applicable
Specific Devices Supported	Burroughs EF7000, Datamaxx 983, 1200, 4300	Vendor did not specify	Vendor did not specify	Vendor did not specify
Connections Supported	Direct connection, leased, remote	Direct connection, dial-up, remote	Direct connection, dial-up, remote	Direct connection, dial-up, remote
Transmission Spec.-Terminal Line				
Maximum Transmission Speed (bps)	9,600	Vendor did not specify	Vendor did not specify	Vendor did not specify
Maximum Aggregate Input Rate (bps)	9,600	Vendor did not specify	Vendor did not specify	Vendor did not specify
Synchronization	Synchronous	Vendor did not specify	Vendor did not specify	Vendor did not specify
Transmission Mode	Half duplex	Vendor did not specify	Vendor did not specify	Vendor did not specify
Protocols Supported	Burroughs poll/select	Vendor did not specify	Vendor did not specify	Vendor did not specify
Codes Supported	ASCII	Vendor did not specify	Vendor did not specify	Vendor did not specify
Interfaces Supported	RS-232-C	Vendor did not specify	Vendor did not specify	Vendor did not specify
Diagnostics	CRT display printer diagnostic trace and dump	On-board self test	On-board self test	On-board self test
Pricing and Availability				
Purchase (\$)	5,950	795	795	595
Serviced By	Arkansas Systems, Inc.	Avatar	Avatar	Avatar
Availability (days ARO)	Contact vendor	2	2	2
Date of First Commercial Delivery	1989	1984	1984	1984
Comments	Can be configured to support up to 32 devices	—	—	—

Vendor	Avatar Corp.	Black Box Corp.	Carlisle Systems Group	Commtext Inc.
<b>Model</b>	<b>Pro-Series</b>	<b>A/S-2G Protocol Converter</b>	<b>PACE II</b>	<b>CX-81</b>
<b>Device Type</b>	Protocol converter	Protocol converter	Protocol converter	Protocol converter
<b>Conversion Performed</b>	EBCDIC to ASCII	ASCII to bisync 2780/3780	NCR ISO async to TTY ASCII	ASCII to EBCDIC
<b>Specific Device Emulated</b>	ASCII printer	IBM RJE Station	NCR 796-301/7900 Model 3	IBM 3271 Model 2, 3174 Model 51R, 3274
<b>Specific Functionality Provided</b>	IBM 3287 printer-ASCII printer	Any ASCII device-3780 bisync device	Async ASCII/ANSI CRT-NCR polled async line	Async display-IBM 3278 Model 2 display
<b>Virtual Screen Sizes Suppt. (char.)</b>	1,920	Vendor did not specify	6016-byte input buffer per port	1,920
<b>Command Port Supported</b>	No	No	Yes	Yes
<b>Host Side Specifications</b>				
<b>Specific Hosts Supported</b>	IBM 43XX, IBM 30XX	DEC PDP-11, VAX; IBM S/3X, AS/400; IBM 3080/3090, 43XX;	NCR V Systems 8000 and 9800	IBM 43XX
<b>Host Operating Systems Supported</b>	DOS/VS, MCS, TSO, CICS	Vendor did not specify	NCR VRX, VRX/E	DOS/VS, OS/VS, RSTS/E, VAX VMS
<b>No. Host Selections Suppt. Concurrently</b>	1 SDLC or 1 SNA	1 BSC and 1 async	4	2 IBM hosts (BSC and/or SDLC)
<b>Connections Supported</b>	Direct connection	Direct connection, point-to-point on dial-up line	Vendor did not specify	Direct connection, point-to-point on dial-up line, multipoint on leased line
<b>Connection to Host Via Controller</b>	IBM 3174/3274, IBM 3276	Direct connection to both async and bisync systems	CSG Polaris, NCR 621/721, ICS, LLCS	Vendor did not specify
<b>Transmission Spec.-Host Line</b>				
<b>Maximum Transmission Speed (bps)</b>	Vendor did not specify	9.6K for async & bisync ports	38.4K	64K
<b>Synchronization</b>	Asynchronous, synchronous	Asynchronous, synchronous	Asynchronous	Synchronous
<b>Transmission Mode</b>	Full duplex	Half duplex	Vendor did not specify	Full duplex
<b>Protocols Supported</b>	SNA/SDLC	BSC-2780/3780	NCR ISO async	BSC, SNA/SDLC
<b>Codes Supported</b>	ASCII, EBCDIC	ASCII, EBCDIC	Vendor did not specify	ASCII, EBCDIC
<b>Interface</b>	1 RS-232-C, Centronics parallel, Type A coax	2 RS-232-C (1 async, 1 bsync)	Two EIA-232-D	Vendor did not specify
<b>Clocking</b>	Internal	External, internal, (either/or)	External, internal	External, internal
<b>Terminal Side Spec.-Terminal Line</b>				
<b>Number and Type of Ports Provided</b>	Not applicable	1 async port connects to any ASCII term.	4 multimode ports for CRTs or printers	5 async w/support for 5 aux. printers
<b>Specific Devices Supported</b>	Vendor did not specify	Any ASCII device	ADDS, Wyse, NCR, ANSI X3.64, any serial printer	Vendor did not specify
<b>Connections Supported</b>	Direct connection, dial-up, remote	Direct connection, dial-up, leased, remote	Vendor did not specify	Direct connection, dial-up
<b>Transmission Spec.-Terminal Line</b>				
<b>Maximum Transmission Speed (bps)</b>	Vendor did not specify	9.6K	38.4K	38.4K
<b>Maximum Aggregate Input Rate (bps)</b>	Vendor did not specify	9.6K	76.8K	Vendor did not specify
<b>Synchronization</b>	Vendor did not specify	Asynchronous, synchronous	Vendor did not specify	Asynchronous
<b>Transmission Mode</b>	Vendor did not specify	Half duplex	Vendor did not specify	Full duplex
<b>Protocols Supported</b>	Vendor did not specify	BSC, or async	TTY	Vendor did not specify
<b>Codes Supported</b>	Vendor did not specify	ASCII, EBCDIC	Vendor did not specify	ASCII
<b>Interfaces Supported</b>	Vendor did not specify	RS-232-C	EIA-232-D	RS-232-C, V.24
<b>Diagnostics</b>	On-board self test	ASCII line tests, self-test, status LEDs	Vendor did not specify	Self-test
<b>Pricing and Availability</b>				
<b>Purchase (\$)</b>	795	1,295	1,350	3,295
<b>Serviced By</b>	Avatar	Black Box Corp.	NCR	Centel Business Systems
<b>Availability (days ARO)</b>	2	Vendor did not specify	1 to 30	Contact vendor
<b>Date of First Commercial Delivery</b>	1984	Several years ago	1985	August 1989
<b>Comments</b>	—	Has built-in modem eliminators-DCE/DTE selectable-block size	Data compress.; users can switch between polled and TTY applicat. on one CRT	Emulates dual control units for each host (1 or 2); 64 LUs per control unit

Vendor	Commtext Inc.	Commtext Inc.	Comstat Datacomm Corp.	Diversified Data Resources, Inc.
<b>Model</b>	CX-83	CX-86	C-2200 LTDS	HYDRA II
<b>Device Type</b>	Protocol converter, data PBX	Protocol converter, data PBX	Protocol converter	Protocol converter, dial-back security (2 modes) w/audit trail
<b>Conversion Performed</b>	ASCII to EBCDIC	ASCII to EBCDIC	Poll/select	ASCII to EBCDIC, async to IBM 3270, async to IBM 3211; async to IBM 3286
<b>Specific Device Emulated</b>	IBM 3274 Model 51C	IBM 3274 Model 51C	Vendor did not specify	IBM 3174/3274 controller
<b>Specific Functionality Provided</b>	Async display-IBM 3278 Model 2	Async display-IBM 3278 Model 2	Poll/select-serial or parallel TTY	Async terminal or PC-IBM 3215 or 3277
<b>Virtual Screen Sizes Suppt. (char.)</b>	1,920	1,920	1,920	1,920
<b>Command Port Supported</b>	Yes	Yes	No	No
<b>Host Side Specifications</b>				
Specific Hosts Supported	IBM 43XX, IBM 8100	IBM 43XX, IBM 8100	Unisys small, medium, or large systems	IBM 3080/3090, IBM 43XX
Host Operating Systems Supported	DOS/VS, OS/VS, RSTS/E, or VAX VMS	DOS/VS, OS/VS, RSTS/E or VAX VMS	Any Unisys mainframe	DOS/VS, OS/VS
No. Host Selections Suppt. Concurrently	4 IBM-BSC or SNA/SDLC hosts	10 IBM BSC or SNA/SDLC hosts	1 sync or async	Vendor did not specify
Connections Supported	Direct connection, point-to-point on dial-up line, multipoint on leased line	Direct connection, point-to-point on dial-up line, multipoint on leased line	Direct connection, point-to-point on dial-up line, multipoint on leased line, TDI on input from host CP 2000 or CP 3680	Direct connection, point-to-point on dial-up line, multipoint on leased line, any async LAN gateway Channel-attached, byte channel only
Connection to Host Via Controller	IBM 37XX	IBM 37XX		
<b>Transmission Spec.-Host Line</b>				
Maximum Transmission Speed (bps)	64K	64K	Up to 38.4K	Channel attached
Synchronization	Synchronous	Synchronous	Asynchronous, synchronous	Synchronous
Transmission Mode	Full duplex	Full duplex	Full duplex	Vendor did not specify
Protocols Supported	BSC, SNA/SDLC, X.25 through NPSI	BSC, SNA/SDLC, X.25 through NPSI	Poll/Select	Vendor did not specify
Codes Supported	ASCII, EBCDIC	ASCII, EBCDIC	ASCII	Vendor did not specify
Interface	Vendor did not specify	Vendor did not specify	1 RS-232-C, TDI (two-wire direct interface)	Vendor did not specify
Clocking	External, internal	External, internal	Data derived, extern./intern.	Vendor did not specify
<b>Terminal Side Spec.-Terminal Line</b>				
Number and Type of Ports Provided	Up to 20 async or 10 Type A coax ports	50 async or 25 Type A coax	Up to two serial TTY & one parallel	4, 8, 16, 32, or 64 RS-232-C ports
Specific Devices Supported	Vendor did not specify	Vendor did not specify	Centronix, Dataproducts, or ODEC parallel	Too numerous to list—any async terminal, printer, PC w/ emulation software, many light pens, bar code readers & printers, etc.
Connections Supported	Direct connection, dial-up	Direct connection, dial-up	Direct connection, dial-up, leased	Direct connection, dial-up, leased, indirect LAN (via async gateway)
<b>Transmission Spec.-Terminal Line</b>				
Maximum Transmission Speed (bps)	38.4K	38.4K	Up to 38.4K	38.4K
Maximum Aggregate Input Rate (bps)	Configuration dependent	Configuration dependent	Up to 38.4K	2.46M
Synchronization	Asynchronous	Asynchronous	Asynchronous, synchronous	Asynchronous
Transmission Mode	Full duplex	Full duplex	Full duplex	Full duplex
Protocols Supported	Vendor did not specify	Vendor did not specify	TTY II	Vendor did not specify
Codes Supported	ASCII	ASCII	ASCII	ASCII; custom. transl. tables
Interfaces Supported	RS-232-C, V.11, Type A coax, async coax, RS-422, V.24	V.24, V.11, Type A coax, async coax, current loop	RS-232-C, parallel	RS-232-C
<b>Diagnostics</b>	Self-test, status LEDs	Self-test, status LEDs	ASCII line tests, self-test, status LEDs	Self-test; diagnostic display via any async port
<b>Pricing and Availability</b>				
Purchase (\$)	4,950 to 6,800	6,550-13,950	Vendor did not specify	4,900+ (4 ports)
Serviced By	Centel Business Systems	Centel Business Systems	Comstat Datacomm Corp.	JDS MicroProcessing, Inc.
Availability (days ARO)	Contact vendor	Contact vendor	10	14
Date of First Commercial Delivery	1983	1980	1985	1983
<b>Comments</b>	Has functions of ASCII-3270 prot. conv., 3270-ASCII deconvrtr., & PBX/PAD	Enables up to 5 concurrent multiple sessions per user across multiple hosts	—	Upgradeable to as many as 64 ports



**Protocol Conversion  
Systems:  
Comparison Columns  
Conversion  
Systems/Terminal  
Controllers**

Vendor	Forest Computer, Inc.	Gandalf Data, Inc.	Innosys, Inc.	International Business Machines Corp. (IBM)
<b>Model</b>	Connection System	ITM 3270	IC100	3708 Network Conversion Unit
<b>Device Type</b>	Gateway	Protocol converter, terminal emulator, 3274/3276 controller emulator	Protocol converter, terminal emulator, code converter	Protocol converter
<b>Conversion Performed</b>	ASCII to EBCDIC	ASCII to EBCDIC	ASCII to EBCDIC, BSC to SDLC, ALC, SLC, SNA, X.25, Burroughs poll/select	ASCII to SNA/SDLC
<b>Specific Device Emulated</b>	DEC VT100, VT220 displays; IBM 5251 Model 11 display; IBM 5294/5394 controller	IBM 3274 Model 51C, IBM 3276 Model 12	IBM 3274 Model 51C, ALC terminal	IBM 3274 Model 51C
<b>Specific Functionality Provided</b>	IBM 5250-DEC VT220	Async ASCII terminals to IBM host	1All in ASCII	Async-SNA/SDLC
<b>Virtual Screen Sizes Suppt. (char.)</b>	1,920	1,920, 3,564, 480	1,920	Vendor did not specify
<b>Command Port Supported</b>	Yes	No	Yes	Yes
<b>Host Side Specifications</b>				
Specific Hosts Supported	Digital Equipment PDP-11, Digital Equipment VAX, IBM AS/400, IBM System/3X	IBM 43XX, any host that supports the IBM 3274	Digital Equipment PDP-11, VAX; IBM 43XX; numerous other hosts	IBM System/3X, IBM 43XX, IBM 8100, S/370, 30XX, 9370
Host Operating Systems Supported	RSTS/E or VAX VMS, OS/400	Independent of host operating system	DOS/VS, OS/VS	MVS, VM, VSE
No. Host Selections Suppt. Concurrently	1 token ring, 1 SDLC, and 1 Ethernet	1 SDLC	1 BSC and 1 SDLC, or 1 SDLC and 1 async	1 or 2 IBM hosts, and 1 async host
Connections Supported	Point-to-point on dial-up line, multipoint on leased line, LAN	Direct connection, point-to-point on dial-up line, multipoint on leased line	Point-to-point on dial-up line, multipoint on leased line	Direct connection, point-to-point on dial-up line, multipoint on leased line
Connection to Host Via Controller	Vendor did not specify	Emulates a cluster controller	IBM 3274	IBM 37XX
<b>Transmission Spec.-Host Line</b>				
Maximum Transmission Speed (bps)	64K	19.2K	56K	19.2K
Synchronization	Synchronous	Synchronous	Asynchronous, synchronous	Asynchronous
Transmission Mode	Full duplex	Full duplex, half duplex	Full duplex, half duplex	Full duplex, half duplex
Protocols Supported	SNA/SDLC, DECnet	SNA/SDLC	Vendor did not specify	SNA/SDLC
Codes Supported	ASCII, EBCDIC	EBCDIC	ASCII, EBCDIC, ALC Baudot	ASCII, EBCDIC
Interface	1 RS-232-C, token ring, Ethernet	1 RS-232-C	1 RS-232-C, 1 RS-422	1 RS-232-C, 1 RS-422
Clocking	External	External, internal	External, internal	Vendor did not specify
<b>Terminal Side Spec.-Terminal Line</b>				
Number and Type of Ports Provided	500	8; each channel connects to terminal	Not applicable	10 asynchronous device ports
Specific Devices Supported	IBM 5250, DEC VT200	IBM 3278 Models 1-5, IBM 3279-4 color model, IBM 3287 printer	Not applicable	ADDS, Data General, DEC, HP, and WYSE display terminals
Connections Supported	Token ring	Direct connection, dial-up, leased	Direct connection, dial-up, leased, remote	Direct connection, dial-up, leased
<b>Transmission Spec.-Terminal Line</b>				
Maximum Transmission Speed (bps)	64K	19.2K	56K	19.2K
Maximum Aggregate Input Rate (bps)	Vendor did not specify	Vendor did not specify	56K	Vendor did not specify
Synchronization	Synchronous	Asynchronous	Asynchronous, synchronous	Asynchronous
Transmission Mode	Full duplex	Full duplex	Full duplex, half duplex	Full duplex, half duplex
Protocols Supported	SNA/SDLC, DECnet	Vendor did not specify	BSC, TTY II	Vendor did not specify
Codes Supported	ASCII, EBCDIC	ASCII	ASCII, EBCDIC	ASCII, EBCDIC
Interfaces Supported	Token ring, Ethernet	RS-232-C	RS-232-C	RS-232-C, RS-422
<b>Diagnostics</b>	Remote diagnostics	ASCII line tests, self-test, async loopback	Self-test	Control terminal
<b>Pricing and Availability</b>				
Purchase (\$)	Vendor did not specify	2,400 hardware; 2K software	12,500	4,375
Serviced By	Vendor did not specify	Gandalf Data, Inc.	Innosys, Inc.	IBM
Availability (days ARO)	Vendor did not specify	Vendor did not specify	15	Contact vendor
Date of First Commercial Delivery	Vendor did not specify	July 1988	1982	1985
<b>Comments</b>	—	Passthru printing (for printer attached to terminal)	1ALC, SLC, SNA, X.25, bisync	3708 supports SNA network management features through NetView, NPDA, or NDLM

Vendor	International Business Machines Corp. (IBM)	International Business Machines Corp. (IBM.)	JBM Electronics	JDS MicroProcessing
<b>Model</b>	7171	<b>Asynchronous Emulation Adapter (for the 3174 Establishment Controller)</b>	MAPC-3270	HYDRA II
<b>Device Type</b>	Protocol converter	Protocol converter	Protocol converter	Protocol converter
<b>Conversion Performed</b>	ASCII to EBCDIC	Bidirectional async to IBM 3270	Async to IBM 3270	ASCII to EBCDIC
<b>Specific Device Emulated</b>	3274 Model 10	IBM 3178/3279 displays & IBM printers	IBM 3174/3274 controller, IBM 3278 Model 2 display	IBM 3274
<b>Specific Functionality Provided</b>	Async-IBM 3270	Async-IBM displays and printers	Async ASCII-IBM 3278 display	Async ASCII-IBM S/370 channel
<b>Virtual Screen Sizes Suppt. (char.)</b>	Vendor did not specify	1,920	1,920, 2,560, 3,564	1,920
<b>Command Port Supported</b>	Yes	Yes	Yes	Yes
<b>Host Side Specifications</b>				
Specific Hosts Supported	IBM 3081, 3083, 3084	DEC PDP-11, VAX; IBM 3080/3090, 43XX, 8100, 9370, System/390	IBM 3080/3090, IBM 43XX, IBM 9370	IBM 43XX, 30XX
Host Operating Systems Supported	VM/SP, MVS	OS/VS, RSTS/E or VAX VMS	DOS/VS, OS/VS	DOS/VS, OS/VS, VM/CMS, MCA/XA
No. Host Selections Suppt. Concurrently	1 IBM host	8 async host/devices per adapter	1 SDLC and 1 async	1 non-SNA and 1 ASCII
Connections Supported	Direct connection	Direct connection, point-to-point on dial-up line	Direct connection, point-to-point on dial-up line, multipoint on leased line	Direct connection, point-to-point on dial-up line, multipoint on leased line
Connection to Host Via Controller	IBM 3274	Resides in the IBM 3174	IBM 37XX	Byte multiplexer channel
<b>Transmission Spec.-Host Line</b>				
Maximum Transmission Speed (bps)	19.2K	19.2K	38.4K	Channel speed
Synchronization	Asynchronous	Asynchronous, synchronous	Asynchronous, synchronous	Synchronous
Transmission Mode	Full duplex	Full duplex, half duplex	Full duplex, half duplex	Full duplex
Protocols Supported	Vendor did not specify	BSC, SNA/SDLC, ASCII, ANSI	BSC, SNA/SDLC	3270/channel
Codes Supported	ASCII, EBCDIC	ASCII, EBCDIC	ASCII, EBCDIC	EBCDIC
Interface	1 RS-232-C	1 current loop	1 current loop, 1 RS-232-C, 1 RS-422	Bus and tag cables
Clocking	Vendor did not specify	Vendor did not specify	External, internal	Internal
<b>Terminal Side Spec.-Terminal Line</b>				
Number and Type of Ports Provided	Up to 64 async ports	8 EIA-232-D host/device ports	Up to 16 async ports	Up to 64 ports
Specific Devices Supported	IBM 3101, IBM PCs, and terminals from Digital, LSI, TeleVideo, and others	Async terminals from ADDS, Digital, Esprit, HP, Lear Siegler, and Televideo; PCs & PS/2s emulating display terminals; async hosts	90 different terminals on menu	ASCII CRTs, printers, PCs
Connections Supported	Direct connection	Vendor did not specify	Direct connection, dial-up, leased	Direct connection, dial-up, leased
<b>Transmission Spec.-Terminal Line</b>				
Maximum Transmission Speed (bps)	19.2K	19.2K	Vendor did not specify	38.4K
Maximum Aggregate Input Rate (bps)	Vendor did not specify	Vendor did not specify	38.4K	Vendor did not specify
Synchronization	Asynchronous	Asynchronous, synchronous	Asynchronous	Asynchronous
Transmission Mode	Full duplex	SNA/SDLC, BSC, async	Full duplex, half duplex	Full duplex
Protocols Supported	Vendor did not specify		TTY II	3270
Codes Supported	ASCII, EBCDIC	ASCII, ANSI	ASCII	ASCII
Interfaces Supported	RS-232-C	EIA-232-D	RS-232-C	RS-232-C
<b>Diagnostics</b>	Special maintenance facility	Diagnostics provided by the 3174	ASCII line tests, self-test, status LEDs	Self-test, memory dump
<b>Pricing and Availability</b>				
Purchase (\$)	14,100 for 10 device ports	2,645	995 base unit	4,900 and up
Serviced By	IBM	IBM	JBM Electronics	JDS MicroProcessing
Availability (days ARO)	Contact vendor	Contact vendor	14 days	30
Date of First Commercial Delivery	1984	May 1989	1985	1983
<b>Comments</b>	—	—	—	Call-back/password sec., positive logoff security, audit trail

Vendor	JDS MicroProcessing	Memotec Data, Inc.	Memotec Data, Inc.	Memotec Data, Inc.
<b>Model</b>	HYDRA SNA	DM 1200 B	DM 2000 B Plus	DM 2400 B PLUS
<b>Device Type</b>	Protocol converter	Protocol converter, cluster controller	Protocol converter, cluster controller	Protocol converter, data PBX for Unisys systems
<b>Conversion Performed</b>	ASCII to EBCDIC	Burroughs poll select	Burroughs poll select	Burroughs poll select
<b>Specific Device Emulated</b>	IBM 3274 controller	All Burroughs-compatible terminals	Digital Equipment VT100, all Burroughs compatible terminals	Digital Equipment VT100, all Burroughs-compatible terminals
<b>Specific Functionality Provided</b>	Async ASCII-IBM S/370 channel	Group poll to poll select	Group poll-poll select	Group poll-poll select
<b>Virtual Screen Sizes Suppt. (char.)</b>	1,920	3,564	3,564	3,564
<b>Command Port Supported</b>	Yes	No	No	Yes
<b>Host Side Specifications</b>				
Specific Hosts Supported	IBM 43XX, 30XX, and 9370	Burroughs computers, from B-20 to A-17	Burroughs computers, from B-20 to A-17	All Burroughs hosts, from B-20 to A-17
Host Operating Systems Supported	VTAM, VM/CMS, MVS/XA	Vendor did not specify	Vendor did not specify	Vendor did not specify
No. Host Selections Suppt. Concurrently	1 SNA and 1 ASCII	1 or 2 host ports (sync, async, or TDI)	1 or 2 host ports (sync, async, or TDI)	1 to 7 host ports (sync, async, TDI)
Connections Supported	Direct connection, point-to-point on dial-up line, multipoint on leased line	Direct connection, point-to-point on dial-up line, multipoint on leased line, TDI	Direct connection, point-to-point on dial-up line, multipoint on leased line, TDI	Direct connection, point-to-point on dial-up line, multipoint on leased line, TDI
Connection to Host Via Controller	Direct to block or byte multiplexer channel	Any Burroughs FEP	Any Burroughs FEP	Any Burroughs FEP
<b>Transmission Spec.-Host Line</b>				
Maximum Transmission Speed (bps)	Channel speed	19.2K	19.2K	19.2K
Synchronization	Synchronous	Asynchronous, synchronous	Asynchronous, synchronous	Asynchronous, synchronous
Transmission Mode	Full duplex	Half duplex	Half duplex	Half duplex
Protocols Supported	SNA/channel	Burroughs poll select	Burroughs poll select	Burroughs poll select
Codes Supported	EBCDIC	ASCII	ASCII	Vendor did not specify
Interface	Bus and tag cables	1 RS-232-C, TDI	1 RS-232-C, TDI	1 RS-232-C, TDI
Clocking	Internal	Data derived, extern./intern.	Data derived, extern./intern.	Data derived, extern, intern
<b>Terminal Side Spec.-Terminal Line</b>				
Number and Type of Ports Provided	Up to 64 ports	64 terminal addresses supported	254 terminal addresses supported	254 terminal addresses supported
Specific Devices Supported	ASCII CRTs, printers, PCs	All Burroughs-compatible and async devices	Any Burroughs-compatible or async device	All Burroughs-compatible and async devices
Connections Supported	Direct connection, dial-up, leased, remote	Direct connection, dial-up, leased, remote, TDI	Direct connection, dial-up, leased, remote, TDI	Direct connection, dial-up, leased, remote, TDI
<b>Transmission Spec.-Terminal Line</b>				
Maximum Transmission Speed (bps)	38.4K	19.2K	19.K	19.2K
Maximum Aggregate Input Rate (bps)	Vendor did not specify	Vendor did not specify	All ports at 19.2K	Vendor did not specify
Synchronization	Asynchronous	Asynchronous, synchronous	Asynchronous, synchronous	Asynchronous, synchronous
Transmission Mode	Full duplex	Full duplex, half duplex	Full duplex, half duplex	Full duplex, half duplex
Protocols Supported	SNA/3270	TTY II, Burroughs poll select, NCR poll	TTY II, Burroughs poll select, NCR poll	TTY II, Burroughs poll select, NCR poll
Codes Supported	ASCII	ASCII	ASCII	ASCII
Interfaces Supported	RS-232-C	RS-232-C, TDI	RS-232-C, TDI	RS-232-C, TDI
<b>Diagnostics</b>	Self-test, channel trace	Self-test, status LEDs, optional loop back	Status LEDs, optional loopback	Self-test, status LEDs, optional loop back
<b>Pricing and Availability</b>				
Purchase (\$)	12,900 and up	4,000 up	9,000	16,000 up
Serviced By	JDS MicroProcessing	Memotec Data, Inc.	Memotec Data, Inc.	Memotec Data, Inc.
Availability (days ARO)	60	30	30	30
Date of First Commercial Delivery	December 1988	1985	1985	1985
<b>Comments</b>	Call-back, multilevel security, dynamic baud rate set	Also acts as remote front-end processor; host-based net management	Also acts as a remote front-end processor; host-based net management	Also acts as remote front-end processor; host-based net management

Vendor	Micom Communications Corp.	Netlink, Inc.	Netlink, Inc.	Netlink, Inc.
<b>Model</b>	<b>Micom Box Type 3 (MB3)</b>	<b>SNA-Gate 3703-1</b>	<b>SNA-Gate 3703-1A</b>	<b>SNA-Gate 3703-1B</b>
<b>Device Type</b>	Protocol converter	Protocol converter	Protocol converter	Protocol converter
<b>Conversion Performed</b>	ASCII to EBCDIC	ASCII to EBCDIC, BSC to SDLC	ASCII to EBCDIC, LU0/1/2/3	BSC to SDLC, BSC 3275 to LU1/2; BSC 1 RJE to LU0/1
<b>Specific Device Emulated</b>	IBM 3274 Model 51C, IBM 3276 Model 12	Full func. PU Type 2, with multiple LU types (8100)	Full func. PU Type 2, with multiple LU types (8100)	IBM 3174/3274 controller, IBM 3770
<b>Specific Functionality Provided</b>	IBM PU Type 2	LU type dynamic-based on bind	LU type dyn., based on bind	BSC 2780/3780 or 3271/5377-3274
<b>Virtual Screen Sizes Suppt. (char.)</b>	1,920	3278 (types 2/3/4/5)	3278 (types 2, 3, 4, 5)	1,920, 3,564
<b>Command Port Supported</b>	Yes	Yes	Yes	Yes
<b>Host Side Specifications</b>				
Specific Hosts Supported	Digital Equipment PDP-11, VAX; IBM 43XX, 8100, 3090,	IBM 43XX, IBM 8100, VTAM, 8100 Tandem, IBM S/370	IBM 43XX, IBM 8100, IBM S/370, VTAM, 8100 Tandem	IBM 43XX, IBM 8100, 370/Tandem
Host Operating Systems Supported	DOS/VS, OS/VS, RSTS/E or VAX VMS	MVS	MVS	MVS
No. Host Selections Suppt. Concurrently	1 SDLC and 1 async, or 1 BSC and 1 async	40	40	40
Connections Supported	Direct connection, point-to-point on dial-up line, multipoint on leased line, using IBM 3174 or 37XX IBM 37XX	Direct connection, point-to-point on dial-up line, multipoint on leased line IBM 37XX or equivalent	Direct connection, point-to-point on dial-up line, multipoint on leased line, IBM 37XX, or equiv. IBM 3705, 3725 or equivalent	Direct connection, point-to-point on dial-up line, multipoint on leased line IBM 37XX, Amdahl, Comten
Connection to Host Via Controller				
<b>Transmission Spec.-Host Line</b>				
Maximum Transmission Speed (bps)	19.2K	64K	64K	64K
Synchronization	Asynchronous, synchronous	Synchronous	Synchronous	Synchronous
Transmission Mode	Full duplex	Full duplex, half duplex	Full duplex, half duplex	Full duplex, half duplex
Protocols Supported	BSC, SNA/SDLC	SNA/SDLC	SNA/SDLC	SNA/SDLC
Codes Supported	ASCII, EBCDIC	EBCDIC	EBCDIC	EBCDIC
Interface	1 RS-232-C, 1 RS-422	1 RS-232-C, V.35, X.21	1 RS-232-C, V.35, X.21	1 RS-232-C, V.35, X.21
Clocking	External, internal	External, internal	External, internal	External, internal
<b>Terminal Side Spec.-Terminal Line</b>				
Number and Type of Ports Provided	Up to 16 ports	2 to 8 BSC ports/2 to 16 async, multidrop ports	2 to 16 async, multidrop ports	2 to 8 BSC, multidrop ports
Specific Devices Supported	IBM displays, PCs, and all major printers for display terminals	Any terminal supporting cursor addressing; software-controlled via host	Any terminal supporting cursor addressing; software controlled via host	Contact vendor
Connections Supported	Direct connection, dial-up, leased, remote	Direct connection, dial-up, point-to-point	Point-to-point	Direct connection, dial-up, leased, remote, point-to-point
<b>Transmission Spec.-Terminal Line</b>				
Maximum Transmission Speed (bps)	19.2K	300 to 9,600 bps	300 to 9,600 bps	300 to 9,600 bps
Maximum Aggregate Input Rate (bps)	76.8K	64K	64K	64K
Synchronization	Asynchronous	Asynchronous, synchronous	Asynchronous	Synchronous
Transmission Mode	Full duplex	Full duplex, half duplex	Full duplex, half duplex	Half duplex
Protocols Supported	TTY II	BSC, TTY II, 327X, 2780, 3780, 2700, Burroughs poll/sel., 2740-1	Xon/Xoff	BSC
Codes Supported	ASCII	ASCII, EBCDIC	ASCII, EBCDIC	ASCII, EBCDIC
Interfaces Supported	RS-232-C	RS-232-C	RS-232-C	RS-232-C
<b>Diagnostics</b>	ASCII line tests, self-test, status LEDs	Self-test, status LEDs	Self-test, status LEDs	Self-test, status LEDs
<b>Pricing and Availability</b>				
Purchase (\$)	3,055 for 4 ports	7,000 to 9,500	4,000 to 6,000	5,250 to 6,000
Serviced By	Micom auth. svce. reps.	Contact vendor	Contact vendor	Contact vendor
Availability (days ARO)	30	10 to 14	10 to 14	10 to 14
Date of First Commercial Delivery	January 1983	July 1982	February 1986	December 1986
<b>Comments</b>	—	3-year warranty; expandable by 2 port increments; PC file transfer	3 year warranty; expandable by 2 port increments; PC file transfer	3 year warranty; expandable by 2 port increments; PC file transfer

Vendor	Perle Systems, Inc.	Perle Systems, Inc.	Plantronics Futurecomms, Inc.	Plantronics Futurecomms, Inc.
<b>Model</b>	PERLE Model 3I	XGATE HIU	MicroTURBO	NanoTURBO
<b>Device Type</b>	Protocol converter	Protocol converter	Protocol converter, terminal emulator, code converter	Protocol converter, terminal emulator, code converter
<b>Conversion Performed</b>	ASCII to EBCDIC	Async to IBM SNA/SDLC	ASCII to EBCDIC, async to IBM SNA/SDLC, async to IBM 3270	ASCII to EBCDIC, async to IBM SNA/SDLC, async to IBM 3270
<b>Specific Device Emulated</b>	IBM 5251 Model 11 display, IBM 5291 or 3180 Display Station	IBM 3180 Display Station	IBM 3174/3274 controller, IBM PU Type 2	IBM 3174/3274 controller, IBM PU Type 2
<b>Specific Functionality Provided</b>	ASCII display-IBM 3180, 5291, 5251	ASCII PCs & printers-IBM 3180	ASCII display-IBM 3174/3274	ASCII display-IBM 3174/3274
<b>Virtual Screen Sizes Suppt. (char.)</b>	3,564	3,564	1,920	1,920
<b>Command Port Supported</b>	Vendor did not specify	Yes	Yes	Yes
<b>Host Side Specifications</b>				
Specific Hosts Supported	IBM AS/400, IBM System/3X	IBM AS/400, IBM System/3X	DEC PDP-11, VAX; IBM AS/400, System/3X, IBM PU Type 4	DEC PDP-11, VAX; IBM AS/400, System/3X, PU Type 4
Host Operating Systems Supported	Vendor did not specify	Vendor did not specify	Vendor did not specify	Vendor did not specify
No. Host Selections Suppt. Concurrently	1 SNA/SDLC	1 SDLC	32 BSC, 32 SDLC, 8 async	32 BSC, 32 SDLC, 2 async
Connections Supported	Direct connection, point-to-point on dial-up line	Direct connection, point-to-point on dial-up line, multipoint on leased line	Direct connection, point-to-point on dial-up line, multipoint on leased line	Direct connection, point-to-point on dial-up line, multipoint on leased line
Connection to Host Via Controller	IBM 5294/5394	IBM 5294/5394	IBM 3174/3274, IBM 37XX	IBM 3174/3274
<b>Transmission Spec.-Host Line</b>				
Maximum Transmission Speed (bps)	1M	56K	Up to 19.2K	Up to 19.2K
Synchronization	Asynchronous, synchronous	Asynchronous, synchronous	Asynchronous, synchronous	Asynchronous, synchronous
Transmission Mode	Vendor did not specify	Full duplex	Full duplex	Full duplex
Protocols Supported	Vendor did not specify	SNA/SDLC	BSC, SNA/SDLC, HDLC, QLLC, Transparent frame relay	BSC, SNA/SDLC, HDLC, QLLC, Transparent frame relay
Codes Supported	ASCII	ASCII, EBCDIC	ASCII, EBCDIC	ASCII, EBCDIC
Interface	1 RS-232-C, Twinax	1 RS-232-C, V.35, X.21	1 RS-232-C	1 RS-232-C
Clocking	External	External, internal	External, internal	External
<b>Terminal Side Spec.-Terminal Line</b>				
Number and Type of Ports Provided	7 ports for printers or terminals	20 PC ports and 20 printer ports	Up to 10 async/SNA/BSC ports	Up to 6 sync (SNA/BSC) and async ports
Specific Devices Supported	Vendor did not specify	IBM PC & compatibles w/our software	Any asynchronous device	Any asynchronous device
Connections Supported	Direct connection, dial-up, leased	Dial-up, leased, remote	Direct connection, dial-up, leased, remote	Direct connection, dial-up, leased, remote
<b>Transmission Spec.-Terminal Line</b>				
Maximum Transmission Speed (bps)	38.4K	19.2K	Up to 19.2K	Up to 19.2K
Maximum Aggregate Input Rate (bps)	38.4K	19.2K	61.4K	Vendor did not specify
Synchronization	Asynchronous, synchronous	Synchronous	Asynchronous, synchronous	Asynchronous, synchronous
Transmission Mode	Vendor did not specify	Full duplex	Full duplex	Full duplex
Protocols Supported	Vendor did not specify	TTY II	BSC, SDLC	Vendor did not specify
Codes Supported	ASCII, EBCDIC	ASCII	ASCII, EBCDIC	ASCII, EBCDIC
Interfaces Supported	RS-232-C	RS-232-C, V.35, X.21	RS-232-C	RS-232-C
<b>Diagnostics</b>	Vendor did not specify	Status LEDs	ASCII line tests, self-test, status LEDs	ASCII line tests, self-test, status LEDs
<b>Pricing and Availability</b>				
Purchase (\$)	From 1,995	10,850 (incl. PC software)	2,995	1,995.00 Standard NanoTURBO
Serviced By	Perle Systems, Inc.	Perle Systems, Inc.	PFI	PFI
Availability (days ARO)	10	10	21 to 28	21 to 28
Date of First Commercial Delivery	October 1990	October 1990	December 1988	Vendor did not specify
<b>Comments</b>	Supports multiple sessions for terminals	—	SNA to X.25 & Telex to X.25 conversion opt.; supports PFI's net management	Optional SNA to X.25 & Telex to X.25 conversion; compatible with PFI's net management

Vendor	Plantronics Futurecomms, Inc.	Shaffstall Corp.	Telematics International, Inc.	Thomas Engineering Company
<b>Model</b>	PAC.25 TURBO	Shaffstall 6000	SmartNet 5250/T	Unitec
<b>Device Type</b>	Protocol converter, terminal emulator, code converter	Code converter	Protocol converter	Protocol converter, terminal emulator, code converter
<b>Conversion Performed</b>	ASCII to EBCDIC, async to IBM SNA/SDLC, async to IBM 3270	ASCII to EBCDIC, BSC to SDLC, proprietary	Vendor did not specify	ASCII to EBCDIC, async to IBM SNA/SDLC, BSC to SDLC
<b>Specific Device Emulated</b>	IBM 3174/3274 controller, IBM PU Type 2	IBM 3274 Model 51C	IBM 5291, 5292, 5256, 5219, 3812	IBM 3174/3274 controller, 3278 display, 3287 printer; Bull VIP 7700, 7760, 7800
<b>Specific Functionality Provided</b>	ASCII display-IBM 3174/3274	Async-sync	ASCII devices-IBM Twinax ports	Bidirectional conversion between IBM 3178/3279 displays & 3287 printers and async displays and printers
<b>Virtual Screen Sizes Suppt. (char.)</b>	1,920	1,920	Vendor did not specify	1,920
<b>Command Port Supported</b>	Yes	No	Yes	Yes
<b>Host Side Specifications</b>				
Specific Hosts Supported	DEC PDP-11, VAX; IBM AS/400, System/3X, PU Type 4	Digital Equipment PDP-11, Digital Equipment VAX	System 34/36/38	IBM 3080/3090, IBM 43XX; all Bull 6000, 7000, & 8000 hosts
Host Operating Systems Supported	Vendor did not specify	DOS/VS	Vendor did not specify	Vendor did not specify
No. Host Selections Suppt. Concurrently	128 BSC; 128 SDLC; 38 async	Vendor did not specify	Vendor did not specify	Up to 44 host ports
Connections Supported	Direct connection, point-to-point on dial-up line, multipoint on leased line	Direct connection, point-to-point on dial-up line	Twinax interface	Direct connection, point-to-point on dial-up line, multipoint on leased line
Connection to Host Via Controller	IBM 3174/3274, IBM 37XX	IBM 37XX	Connects to IBM 5294	Vendor did not specify
<b>Transmission Spec.-Host Line</b>				
Maximum Transmission Speed (bps)	Up to 64K	19.2K	19.2K	56K
Synchronization	Asynchronous, synchronous	Asynchronous, synchronous	Vendor did not specify	Asynchronous, synchronous
Transmission Mode	Full duplex	Full duplex	Vendor did not specify	Full duplex, half duplex
Protocols Supported	BSC, SNA/SDLC, HDLC, QLLC, SDLC, Transp. frame relay	BSC, SNA/SDLC	Vendor did not specify	BSC, SNA/SDLC, VIP, Uniscope, IPARS, X.25
Codes Supported	ASCII, EBCDIC	ASCII, EBCDIC, DX, DCA, DEF	Vendor did not specify	ASCII, EBCDIC, PARS
Interface	1 RS-232-C, RS-449	1 RS-232-C	Vendor did not specify	1 RS-232-C, 1 RS-422
Clocking	External, internal	External	Vendor did not specify	External, internal
<b>Terminal Side Spec.-Terminal Line</b>				
Number and Type of Ports Provided	Up to 72 async/SNA/BSC ports	Four ports and printer port	Up to 7 asynchronous	Up to 44 async or sync ports
Specific Devices Supported	Any synchronous device	Vendor did not specify	IBM, DEC, Lear Siegler, ADDS, Televideo, Wyse	ANSI 3.64-compatible; IBM 327X; Bull VIP 7700, 7760, 7800, HDS 5.7; Unisys UTS 20/40/400
Connections Supported	Direct connection, dial-up, leased, remote	Direct connection, dial-up	Vendor did not specify	Direct connection, dial-up
<b>Transmission Spec.-Terminal Line</b>				
Maximum Transmission Speed (bps)	Up to 64K	19.2K	Vendor did not specify	19.2K
Maximum Aggregate Input Rate (bps)	307.2K	9,600	Vendor did not specify	1.2M
Synchronization	Asynchronous, synchronous	Synchronous	Vendor did not specify	Asynchronous, synchronous
Transmission Mode	Full duplex	Half duplex	Vendor did not specify	Full duplex, half duplex
Protocols Supported	BSC, SDLC	TTY II, BSC 2770/2780/3780	Vendor did not specify	BSC
Codes Supported	ASCII, EBCDIC	ASCII, EBCDIC, DX, DCA, DEF	Vendor did not specify	ASCII
Interfaces Supported	RS-232-C	RS-232-C	RS-422	RS-232-C
<b>Diagnosics</b>	ASCII line tests, self-test, status LEDs	Self-test	Vendor did not specify	Self-test, status LEDs
<b>Pricing and Availability</b>				
Purchase (\$)	5,225 to 15,505	5,500 to 20,000	2,925 (8 ports)	1,500-30,000
Serviced By	Vendor did not specify	TRW Inc.	Telematics	Thomas Eng. Co., ITT ServeCom
Availability (days ARO)	21 to 28	30	Contact vendor	14
Date of First Commercial Delivery	2nd quarter 1988	August 1987	1987	August 1985
<b>Comments</b>	Optional SNA to X.25 & Telex to X.25 conversion; compatible with PFI's net management	The 6000 is a data conversion system for data transmission	—	Multi-processor, multi-function network computer

<b>Vendor</b>	Trax Softworks, Inc.	Wall Data Inc.
<b>Model</b>	VM DialOut	DCF II 3270
<b>Device Type</b>	Terminal emulator	Protocol converter
<b>Conversion Performed</b>	IBM 3270 (bisync or SNA) to async	ASCII to EBCDIC
<b>Specific Device Emulated</b>	Digital Equipment VT100, TTY	IBM 3274 Model 51C
<b>Specific Functionality Provided</b>	IBM 3270-async	Async-3270 SDLC-
<b>Virtual Screen Sizes Suppt. (char.)</b>	All 3270 sizes, including 1,920, 2560, & 3,564	1,920
<b>Command Port Supported</b>	Yes	Yes
<b>Host Side Specifications</b>		
Specific Hosts Supported	DEC PDP-11, VAX; IBM AS/400, 3080/3090, 43XX, or 9370; any async host	IBM 43XX, 3270 types
Host Operating Systems Supported	DOS/VS, OS/VS	VM/CMS, TSO
No. Host Selections Suppt. Concurrently	1 BSC and 1 SDLC	Any combination of SDLC, BSC, and async
Connections Supported	Direct connection, point-to-point on dial-up line, multipoint on leased line	Point-to-point on dial-up line; direct connection through RS-232-C cabling
Connection to Host Via Controller	IBM 3174/3274, IBM 37XX	Emulates 3174, 3274 controller
<b>Transmission Spec.-Host Line</b>		
Maximum Transmission Speed (bps)	38.4K	Vendor did not specify
Synchronization	Synchronous	Synchronous
Transmission Mode	Full duplex	Half duplex
Protocols Supported	BSC, SNA/SDLC	BSC, SNA/SDLC, async
Codes Supported	ASCII, EBCDIC	ASCII, EBCDIC
Interface	1 RS-232-C	1 RS-232-C
Clocking	Internal	Internal
<b>Terminal Side Spec.-Terminal Line</b>		
Number and Type of Ports Provided	Limited only by host; up to 15,000	Up to 17 RS-232-C ports
Specific Devices Supported	All 3270 terminals (IBM 3278, 3180, etc.)	async terminals, PCs, PS/2s, and printers
Connections Supported	Direct connection, dial-up, leased, remote, channel-attached	Direct connection, dial-up, leased, remote
<b>Transmission Spec.-Terminal Line</b>		
Maximum Transmission Speed (bps)	1.44M	19.2K
Maximum Aggregate Input Rate (bps)	40M	Vendor did not specify
Synchronization	Synchronous	Asynchronous
Transmission Mode	Full duplex	Half duplex
Protocols Supported	BSC, SNA/SDLC; channel attached	BSC, TTY II
Codes Supported	ASCII, EBCDIC	ASCII, EBCDIC
Interfaces Supported	RS-232-C	RS-232-C
<b>Diagnostics</b>	ASCII line tests, self-test, status LEDs	Self-test
<b>Pricing and Availability</b>		
Purchase (\$)	Vendor did not specify	4,995
Serviced By	Trax Softworks, Inc.	Wall Data, Inc.
Availability (days ARO)	Vendor did not specify	2 weeks
Date of First Commercial Delivery	1982	Vendor did not specify
<b>Comments</b>	VM dialout lets 3270 users dialout to async systems	Can simultaneously support SNA, BSC, and async in one unit

# Code, Speed, Interface, and Async/Sync Converters

## Comparison Column Entry Descriptions

**Code, Speed, Interface, and Async/Sync Converters** include a number of devices that handle conversions from one code, interface, speed, or synchronization to another. These units are generally less sophisticated devices than those represented in the other category.

The following text briefly describes the column entries in the order in which they appear in the columns.

### **Code, Speed, Interface, and Async/Sync Converters**

**Model.** This entry lists the exact name and model number of the product.

**Device Type.** In this entry, vendors indicate if the device is an interface converter, async/sync converter, code and speed converter, or another type.

**Conversion Performed.** Responses in this category include RS-232-C to

V.35, RS-232-C to RS-422, and AT&T 301/303 to V.35.

### **Transmission Specifications**

**Maximum Transmission Speed (bps).** Vendors list the maximum transmission speed in bits per second.

**Synchronization.** The possible responses are synchronous and asynchronous.

**Transmission Mode.** The devices operate in either half-duplex or full-duplex mode.

**Codes Supported.** Vendors indicate ASCII, Baudot, EBCDIC, or Other.

**Interface.** Vendors select from a choice of RS-232-C, V.24, V.28, V.35, Current Loop, or Other.

**Specific Devices Supported.** Typical responses include any async DTE,

any async or sync DCE, ASCII printers, and IBM 3X78 display terminals.

### **Connections Supported.**

The possibilities here are Direct, Dial-Up, Leased Lines, and Other.

**Diagnostics.** The types of diagnostics offered in the questionnaire to vendors are Status LEDs, Remote Tests, Loopbacks, and Other.

### **Pricing and Availability**

The explanations for the entries **Purchase, Serviced by, Availability (days ARO), Date of First Commercial Delivery**, and **Comments** are the same as those for Conversion Systems/Terminal Controllers.



Vendor	Arkansas Systems, Inc.	Astrocom Corp.	Black Box Corp.	Carlisle Systems Group
<b>Model</b>	PATH IV-PBM	ATS-1	Communications Adapter Plus (CAP)	93729 A/S Converter
<b>Device Type</b>	Protocol and data converter	Async/sync converter	Code and speed converter	Async/sync converter, speed converter, switched carrier emulator
<b>Conversion Performed</b>	See comments section	Asynchronous to synchronous	Speed conversion of code structure, transmission mode, word structure, and flow control	Async DTE to sync modem
<b>Transmission Specifications</b>				
Maximum Transmission Speed (bps)	9,600 bps	19.2K	45.5 to 19.2K	38.4K
Synchronization	Synchronous	Synchronous	Asynchronous	Synchronous
Transmission Mode	Half duplex	Full duplex	Half duplex, full duplex	Half duplex, full duplex
Codes Supported	EBCDIC	ASCII	ASCII, EBCDIC, Baudot, ticker tape, transcode	ASCII, Baudot
Interface	RS-232-C	RS-232-C	RS-232-C	EIA-232-D
<b>Specific Devices Supported</b>	Version 8 IBM 3624 ATM's w/Bisync feature	Vendor did not specify	Any async device	Async DTE, or async/sync DCE DCE
<b>Connections Supported</b>	Direct, leased lines	Vendor did not specify	Any type	Direct, leased lines, dial-up
<b>Diagnostics</b>	CRT + keyboard option; printer option	Status LEDs	Status LEDs	Status LEDs, self-test
<b>Pricing and Availability</b>				
Purchase (\$)	10,000	395	395	425
Serviced by	Arkansas Systems, Inc.	Astrocom	Black Box Corp.	Contact vendor
Availability (days ARO)	Off the shelf	Immediately	Available from stock	30
Date of First Commercial Delivery	June 1990	Vendor did not specify	Vendor did not specify	1985
<b>Comments</b>	Converts protocol & application data from IBM 3624 ATMs to IBM 4732 PBM protocol & data formats	—	Customized conversions available to fit customer requirements; provides connectivity between 2 incompatible async devices; cards for rack mount also available	6K buffer for speed change; daisy chainable

**Protocol Conversion  
Systems:  
Comparison Columns  
Code, Speed, Interface, and  
Async/Sync Converters**

Vendor	Comdata Corp.	Comstat Datacomm Corp.	Comstat Datacomm Corp.	Comstat Datacomm Corp.
<b>Model</b>	ASC-100 Async/Sync Converter	C-2200 LTDS	C-88000 Turbo Concentrator	C-8800 LT
<b>Device Type</b>	Async/sync converter	Interface converter, async/sync converter	Interface converter, async/sync converter, multiported FEPs	Interface converter, async/sync converter, remote front-end processor
<b>Conversion Performed</b>	Vendor did not specify	RS-232-C to TTY	RS-232-C to TDI	RS-232-C to TDI
<b>Transmission Specifications</b>				
Maximum Transmission Speed (bps)	600 to 19.2K (automatically selected)	Up to 38.4K	Up to 38.4K w/optional 56K	Up to 38.4K
Synchronization	Asynchronous, synchronous	Asynchronous, synchronous	Asynchronous, synchronous	Asynchronous, synchronous
Transmission Mode	Full duplex	Full duplex	Full duplex	Full duplex
Codes Supported	ASCII, EBCDIC, Wang	ASCII, Burroughs Poll/Select	Burroughs poll/select	ASCII, Burroughs poll/select
Interface	RS-232-C	RS-232-C	RS-232-C; V.35 is optional	RS-232-C
<b>Specific Devices Supported</b>	Vendor did not specify	Burroughs-compatible terminals	Burroughs-compatible terminals	Burroughs-compatible terminals
<b>Connections Supported</b>	Direct	Direct, leased lines, dial-up	Direct, leased lines, dial-up, TDI	Direct, leased lines, dial-up, TDI
<b>Diagnostics</b>	Vendor did not specify	Status LEDs	Status LEDs, internal generated screens	Status LEDs, internally-converted screens
<b>Pricing and Availability</b>				
Purchase (\$)	247	995 to 1,495	3,495 for 4 ports; 7,175 for 8 ports	1,295 to 1,795
Serviced by	Comdata Corp.	Comstat Datacomm Corp.	Comstat Datacomm Corp.	Comstat Datacomm Corp.
Availability (days ARO)	3-4	5	5 days	5 days
Date of First Commercial Delivery	Vendor did not specify	May 1985	January 1987	May 1985
<b>Comments</b>	Power derived from RS-232-C interface (some applications may require auxiliary power); codes are switch selectable; all RS-232-C leads are supported	—	—	—

Vendor	DCC Corp.	General DataComm, Inc.	General DataComm, Inc.	JBM Electronics
<b>Model</b>	ECS-21	ASC-3	GDC Interface Converter	ASC-RJE
<b>Device Type</b>	Interface converter	Async/sync converter	Interface converter	Async/sync converter
<b>Conversion Performed</b>	RS-232-C to 20mA current loop	Asynchronous to synchronous	RS-422 to RS-232-C/V.35; RS-232-C to V.35	Async to bisync or SNA/SDLC
<b>Transmission Specifications</b>				
Maximum Transmission Speed (bps)	20K	19.2K	Vendor did not specify	38.4K
Synchronization	Asynchronous	Asynchronous, synchronous	Asynchronous, synchronous	Asynchronous, synchronous
Transmission Mode	Half duplex, full duplex	Half duplex, full duplex	Half duplex, full duplex	Half duplex, full duplex
Codes Supported	ASCII, EBCDIC, Baudot	ASCII	ASCII	ASCII, EBCDIC
Interface	RS-232-C, current loop, 20 mA	RS-232-C, V.28	RS-232-C, V.35, RS-422	RS-232-C
<b>Specific Devices Supported</b>	Vendor did not specify	Asynchronous terminal	DTE/DCE	IBM 2770, 2780, 3741, 3780, 3270
<b>Connections Supported</b>	Leased lines	Direct, dial-up	Direct, dial-up	Direct, leased lines, dial-up
<b>Diagnostics</b>	Status LEDs, manual loopback	None	Power LED	Status LEDs
<b>Pricing and Availability</b>				
Purchase (\$)	125	245	Contact vendor	995
Serviced by	DCC Corp.	General DataComm	General DataComm	JBM Electronics
Availability (days ARO)	Stock to 30	Immediately	30	14 days
Date of First Commercial Delivery	1986	1990	1985	1988
<b>Comments</b>	Optically isolated; data line and low speed control path; LEDs indicate data transmission, loop current, and control status	In-line, miniature converter; operates without AC power	—	—

<b>Vendor</b>	JBM Electronics	JBM Electronics	Memotec Data, Inc.	Memotec Data, Inc.
<b>Model</b>	BBC	BPC	DM 50 B	DM 51 B
<b>Device Type</b>	Speed and data format conversion	Code and speed converter	Interface converter	Interface converter, TDI extender
<b>Conversion Performed</b>	Bisync to bisync	Bisync to SNA	RS-232-C to TDI (Burroughs)	RS-232-C to TDI (Burroughs)
<b>Transmission Specifications</b>				
Maximum Transmission Speed (bps)	38.4K	38.4K	19.2K	19.2K
Synchronization	Asynchronous, synchronous	Synchronous	Asynchronous	Asynchronous
Transmission Mode	Half duplex, full duplex	Half duplex, full duplex	Half duplex	Half duplex
Codes Supported	ASCII, EBCDIC	ASCII, EBCDIC	Code transparent	Code transparent
Interface	RS-232-C	RS-232-C	RS-232-C, TDI	RS-232-C, TDI
<b>Specific Devices Supported</b>	Vendor did not specify	IBM 3270, 3770	Burroughs terminals and hosts	Burroughs terminals and hosts
<b>Connections Supported</b>	Direct, leased lines, dial-up	Direct, leased lines, dial-up	Direct, leased lines, TDI	Direct, leased lines, TDI
<b>Diagnostics</b>	Status LEDs	Status LEDs, remote tests	Status LEDs	Status LEDs
<b>Pricing and Availability</b>				
Purchase (\$)	1995	1995	175	275
Serviced by	JBM Electronics	JBM Electronics	Memotec Data, Inc.	Memotec Data, Inc.
Availability (days ARO)	14 days	7 days	30	30
Date of First Commercial Delivery	1989	1984	1985	1985
<b>Comments</b>	—	—	—	Will regenerate TDI signals for another 1,000 feet

**Protocol Conversion  
Systems:  
Comparison Columns  
Code, Speed, Interface, and  
Async/Sync Converters**

Vendor	Memotec Data, Inc.	Nu Data, Inc.	Nu Data, Inc.	Nu Data, Inc.
<b>Model</b>	<b>DM 55 B</b>	<b>5144</b>	<b>7210/7212</b>	<b>7211</b>
<b>Device Type</b>	Interface converter, async/sync converter	Code and speed converter	Interface converter	Interface converter
<b>Conversion Performed</b>	RS-232-C or TDI (Burroughs) to sync	RS-232-C to Bell 43401	RS-232-C to Centronics, Centronics to RS-232-C	RS-232-C to Centronics
<b>Transmission Specifications</b>				
Maximum Transmission Speed (bps)	19.2K	Up to 19.2K	Up to 19.2K	Vendor did not specify
Synchronization	Asynchronous, synchronous	Synchronous	Asynchronous	Asynchronous
Transmission Mode	Half duplex, full duplex	Full duplex	Half duplex	Full duplex
Codes Supported	Code transparent	ASCII, bi-phase encoding	ASCII	ASCII
Interface	RS-232-C, TDI	RS-232-C, V.28, V.24, Bell 43401	RS-232-C, V.28, V.24, Centronics	RS-232-C, V.28, V.24, Centronics
<b>Specific Devices Supported</b>	Burroughs terminals and hosts	Vendor did not specify	Vendor did not specify	Vendor did not specify
<b>Connections Supported</b>	Direct, leased lines	Leased lines	Direct	Direct
<b>Diagnostics</b>	Status LEDs	Status LEDs, loopbacks	Status LEDs	Status LEDs
<b>Pricing and Availability</b>				
Purchase (\$)	895/pair	225	88	109
Serviced by	Memotec Data, Inc.	Nu Data, Inc.	Nu Data, Inc.	Nu Data, Inc.
Availability (days ARO)	30	Stock	Stock	Stock
Date of First Commercial Delivery	1985	1986	1988	1989
<b>Comments</b>	Must be used in pairs	Synch short haul	Selectable DTE/DCE, parity, stop and data bits	2K buffer

**Protocol Conversion  
Systems:  
Comparison Columns  
Code, Speed, Interface, and  
Async/Sync Converters**

<b>Vendor</b>	<b>Nu Data, Inc.</b>	<b>Nu Data, Inc.</b>	<b>Nu Data, Inc.</b>	<b>Nu Data, Inc.</b>
<b>Model</b>	<b>7213</b>	<b>7220</b>	<b>7221</b>	<b>7222</b>
<b>Device Type</b>	Interface converter	Code and speed converter	Interface converter, code and speed converter	Interface converter, code and speed converter
<b>Conversion Performed</b>	RS-232-C to Centronics	Vendor did not specify	RS-232-C to IBM Parallel (Centronics)	RS-232-C to IBM parallel (Centronics)
<b>Transmission Specifications</b>				
Maximum Transmission Speed (bps)	Vendor did not specify	Up to 19.2K	Up to 19.2K	Vendor did not specify
Synchronization	Asynchronous	Asynchronous	Asynchronous	Asynchronous
Transmission Mode	Full duplex	Full duplex	Full duplex	Full duplex
Codes Supported	ASCII	ASCII, EBCDIC, Baudot	ASCII, EBCDIC, Baudot	ASCII
Interface	RS-232-C, V.28, V.24, Centronics	RS-232-C, V.28, V.24	RS-232-C, V.28, V.24, IBM parallel (Centronics)	RS-232-C, V.28, V.24, IBM parallel (Centronics)
<b>Specific Devices Supported</b>	Vendor did not specify	Vendor did not specify	Vendor did not specify	Vendor did not specify
<b>Connections Supported</b>	Direct	Direct	Direct	Direct
<b>Diagnostics</b>	Status LEDs	Status LEDs	Status LEDs	Status LEDs
<b>Pricing and Availability</b>				
Purchase (\$)	225	398	398	450
Serviced by	Nu Data, Inc.	Nu Data, Inc.	Du Data, Inc.	Nu Data, Inc.
Availability (days ARO)	Stock	Stock	Stock	Stock
Date of First Commercial Delivery	1989	1985	1985	1985
<b>Comments</b>	64K buffer	Scientific software for async/sync converter available at customer request; supports Xon/Xoff or CTS/DTR control	Scientific software for async/sync inputs avail. at customer request; supports Xon/Xoff or CTS/DTR control	Software for async/sync conversion avail. at customer request; supports Xon/Xoff or CTS/DTR control

**Protocol Conversion  
Systems:  
Comparison Columns  
Code, Speed, Interface, and  
Async/Sync Converters**

<b>Vendor</b>	Nu Data, Inc.	Nu Data, Inc.	Nu Data, Inc.	Nu Data, Inc.
<b>Model</b>	7230/7231	7235	7240	7243/7244
<b>Device Type</b>	Interface converter	Interface converter	Interface converter	Interface converter
<b>Conversion Performed</b>	RS-232-C to RS-449; RS-449 to RS-232-C	RS-449/422/423 to EIA-530	RS-232-C to EIA-485	RS-232-C to EIA 422, EIA-422 to RS-232-C
<b>Transmission Specifications</b>				
Maximum Transmission Speed (bps)	Vendor did not specify	Up to 64K	Up to 64K	Vendor did not specify
Synchronization	Vendor did not specify	Asynchronous, synchronous	Asynchronous	Asynchronous
Transmission Mode	Vendor did not specify	Full duplex	Full duplex	Vendor did not specify
Codes Supported	Transparent	Transparent	Transparent	Transparent
Interface	RS-232-C, V.28, V.24, 449	Vendor did not specify	RS-232-C, V.28, V.24, EIA-485 multipoint	Vendor did not specify
<b>Specific Devices Supported</b>	Vendor did not specify	Vendor did not specify	Vendor did not specify	Vendor did not specify
<b>Connections Supported</b>	Direct	Direct	Direct	Direct
<b>Diagnostics</b>	Vendor did not specify	Vendor did not specify	Status LEDs	Status LEDs
<b>Pricing and Availability</b>				
Purchase (\$)	89	74	148	98
Serviced by	Nu Data, Inc.	Nu Data, Inc.	Nu Data, Inc.	Nu Data, Inc.
Availability (days ARO)	Stock	Stock	Stock	Stock
Date of First Commercial Delivery	1988	1988	1988	1988
<b>Comments</b>	Powered from interface	Powered from the interface	Collision detection & streaming control	Extends RS-232 links

Vendor	Nu Data, Inc.	Nu Data, Inc.	Nu Data, Inc.	Nu Data, Inc.
<b>Model</b>	<b>7257</b>	<b>7270</b>	<b>7272</b>	<b>7274</b>
<b>Device Type</b>	Interface converter	Interface converter	Interface converter	Interface converter
<b>Conversion Performed</b>	RS-232 to EIA-530/422	RS-232-C to V.35	RS-232-C to EIA-422	V.35 to EIA-422 (X.21)
<b>Transmission Specifications</b>				
Maximum Transmission Speed (bps)	Vendor did not specify	Up to 64K	Up to 64K	Up to 2.048M
Synchronization	Asynchronous, synchronous	Asynchronous, synchronous	Asynchronous, synchronous	Asynchronous, synchronous
Transmission Mode	Full duplex	Full duplex	Full duplex	Full duplex
Codes Supported	Transparent	ASCII, Transparent	Transparent	Transparent
Interface	RS-232-C, V.28, V.24, EIA-530/422	RS-232-C, V.35, V.28, V.24	RS-232-C, V.28, V.24, EIA-422	V.35, EIA-422 (X.21)
<b>Specific Devices Supported</b>	Vendor did not specify	Vendor did not specify	Vendor did not specify	Vendor did not specify
<b>Connections Supported</b>	Direct	Direct	Direct	Direct
<b>Diagnostics</b>	Status LEDs	Status LEDs	Status LEDs	Status LEDs
<b>Pricing and Availability</b>				
Purchase (\$)	283	289	268	298
Serviced by	Nu Data, Inc.	Nu Data, Inc.	Nu Data, Inc.	Nu Data, Inc.
Availability (days ARO)	Stock	Stock	Stock	Stock
Date of First Commercial Delivery	1988	1988	1988	1988
<b>Comments</b>	Rackmount card (model 7258): \$253; max. 16 per rack	Rackmount card (Model 7271): \$259; max. 16 per rack	Rackmount card (Model 7273): \$238; max.: 16 per rack	Rackmount card (Model 7275) \$268; max. 16 cards per rack



<b>Vendor</b>	<b>Nu Data, Inc.</b>	<b>Nu Data, Inc.</b>	<b>Nu Data, Inc.</b>	<b>Nu Data, Inc.</b>
<b>Model</b>	<b>7276</b>	<b>7278</b>	<b>7290</b>	<b>7292</b>
<b>Device Type</b>	Interface converter	Interface converter	Interface converter	Interface converter
<b>Conversion Performed</b>	RS-232-C to EIA-449/422	V.35 to EIA-449/422	RS-232-C to MIL 188	MIL 188 unbalanced to MIL 188-114A balanced
<b>Transmission Specifications</b>				
Maximum Transmission Speed (bps)	Up to 64K	Up to 2.048M	Vendor did not specify	Vendor did not specify
Synchronization	Asynchronous, synchronous	Asynchronous, synchronous	Asynchronous, synchronous	Asynchronous, synchronous
Transmission Mode	Full duplex	Full duplex	Full duplex	Full duplex
Codes Supported	Transparent	Transparent	Transparent	Transparent
Interface	RS-232-C, V.28, V.24, EIA-449/422	V.35, EIA 449/422	RS-232-C, V.28, V.24, MIL 188	MIL-188 unbalanced
<b>Specific Devices Supported</b>	Vendor did not specify	Vendor did not specify	Vendor did not specify	MIL-188-114A balanced
<b>Connections Supported</b>	Direct	Direct	Direct	Direct
<b>Diagnostics</b>	Status LEDs	Status LEDs	Status LEDs	Status LEDs
<b>Pricing and Availability</b>				
Purchase (\$)	209	289	298	328
Serviced by	Nu Data, Inc.	Nu Data, Inc.	Nu Data, Inc.	Nu Data, Inc.
Availability (days ARO)	Stock	Stock	Stock	Stock
Date of First Commercial Delivery	1988	1988	1988	1988
<b>Comments</b>	Rackmount card (Model 7277): \$179; max. 16 per 19" rack	Rackmount card (Model 7279): \$259; max. 16 per rack	Rackmount card (Model 7291): \$268; max. 16 per rack	Rackmount card (Model 7293): \$298; max. 16 per rack

Vendor	Nu Data, Inc.	Nu Data, Inc.	Perle Systems, Inc.	Plantronics Futurecomms, Inc.
<b>Model</b>	<b>7314</b>	<b>7360</b>	<b>PERLE Model 3i</b>	<b>MicroTURBO</b>
<b>Device Type</b>	Interface converter	Interface converter	Async/sync converter	Interface converter, code and speed converter, async/sync converter
<b>Conversion Performed</b>	RS-232-C to current loop	RS-232-C to 20/60 mA current loop	RS-232-C to Twinax	RS-232-C to V.35, RS-232-C to RS-422
<b>Transmission Specifications</b>				
Maximum Transmission Speed (bps)	Vendor did not specify	Up to 19.2K	38.4K	Up to 19.2K
Synchronization	Asynchronous	Asynchronous	Asynchronous, synchronous	Asynchronous, synchronous
Transmission Mode	Full duplex	Full duplex	Vendor did not specify	Full duplex
Codes Supported	Transparent	Transparent	ASCII, EBCDIC	ASCII, EBCDIC, Baudot
Interface	RS-232-C, V.28, current loop, V.24	RS-232-C, V.28, current loop, V.24	RS-232-C	RS-232-C, V.24, X.21 bis, RS-449, V.35
<b>Specific Devices Supported</b>	Vendor did not specify	Vendor did not specify	IBM 5251, 5291, 3180, 5224 Model 25, 5256, 5219	IBM SNA/SDLC, BSC 3270, BSC 2780/3780; Telex
<b>Connections Supported</b>	Direct	Direct	Direct, leased lines, dial-up	Direct, leased lines, dial-up
<b>Diagnostics</b>	Status LEDs	Status LEDs	Status LEDs	Status LEDs
<b>Pricing and Availability</b>				
Purchase (\$)	169	96	From 1,995	2,995
Serviced by	Nu Data, Inc.	Nu Data, Inc.	Perle Systems, Inc.	PFI
Availability (days ARO)	Stock	Stock	10	21 to 28
Date of First Commercial Delivery	1988	1986	October 1990	December 1988
<b>Comments</b>	Internal/external loop, 20/60 mA current loop, neutral or polar	Internal or external loop supply	Replaces Perle Model 3 in product line	Optional SNA to X.25 and Telex to X.25 conversion; compatible with PFI's PAC.NET network manager

**Protocol Conversion  
Systems:  
Comparison Columns  
Code, Speed, Interface, and  
Async/Sync Converters**

Vendor	Plantronics Futurecomms, Inc.	Plantronics Futurecomms, Inc.	Shaffstall Corp.	Telebyte Technology, Inc.
<b>Model</b>	NanoTURBO	PAC.25 TURBO	Shaffstall 6000	62-1/2
<b>Device Type</b>	Interface converter, code and speed converter, async/sync converter	Interface converter, code and speed converter, async/sync converter	Interface converter, code and speed converter	Interface converter
<b>Conversion Performed</b>	RS-232-C to V.35, RS-232-C to RS-422	RS-232-C to V.35, RS-232-C to RS-422	Vendor did not specify	RS-232-C to EIA-530 (MIL STD 188-114 Type 2)
<b>Transmission Specifications</b>				
Maximum Transmission Speed (bps)	Up to 19.2K	Up to 64K	19.2K	1M
Synchronization	Asynchronous, synchronous	Asynchronous, synchronous	Asynchronous, synchronous	Asynchronous
Transmission Mode	Full duplex	Full duplex	Full duplex	Full duplex
Codes Supported	ASCII, EBCDIC, Baudot	ASCII, EBCDIC, Baudot	ASCII, EBCDIC	ASCII, EBCDIC, Baudot
Interface	RS-232-C, V.24, X.21 bis, RS-449, V.35	RS-232-C, V.24, X.21 bis, RS-449, V.35	RS-232-C	RS-232-C, EIA-530
<b>Specific Devices Supported</b>	IBM SNA/SDLC, BSC 3270, BSC 2780/3780; Telex	IBM (SNA/SDLC BSC 3270, BSC 2780/3780; Telex	Vendor did not specify	Computers, printers, terminals, serial devices
<b>Connections Supported</b>	Direct, dial-up	Direct, leased lines, dial-up	Direct, dial-up	Direct
<b>Diagnostics</b>	Status LEDs	Status LEDs	CRT error messages	Vendor did not specify
<b>Pricing and Availability</b>				
Purchase (\$)	1,995 Standard NanoTURBO	5,225 to 15,505, depending on configuration	Contact vendor	138
Serviced by	PFI	PFI	TRW, Inc.	Telebyte Technology, Inc.
Availability (days ARO)	21 to 28	21 to 28	30	Vendor did not specify
Date of First Commercial Delivery	February 1991	February 1991	August 1987	Vendor did not specify
<b>Comments</b>	Optional SNA to X.25 and Telex to X.25 conversion; compatible with PFI's PAC.NET network manager	Optional Features: SNA to X.25 conversion, Telex to X.25 conversion (TLX.25 TURBO)	The 6000 is a data conversion system for data transmission	Supports 10 Category I, and 3 Category II circuits

Vendor	Telebyte Technology, Inc.	Telebyte Technology, Inc.	Telebyte Technology, Inc.	Telebyte Technology, Inc.
Model	62-7/8	63-2	63-3/4	65
Device Type	Interface converter	Interface converter	Interface converter	Interface converter
Conversion Performed	EIA-530 to RS-232-C (MIL STD 188-114 Type 1)	RS-232-C to RS-422	RS-232-C to RS-422	RS-232-C to current loop
<b>Transmission Specifications</b>				
Maximum Transmission Speed (bps)	100K	38.4K	100K at 4000 feet; 1M at 350 feet	9.6K
Synchronization	Asynchronous	Asynchronous	Asynchronous	Asynchronous
Transmission Mode	Full duplex	Full duplex	Full duplex	Half duplex, full duplex
Codes Supported	ASCII, EBCDIC, Baudot	ASCII, EBCDIC, Baudot	ASCII, EBCDIC, Baudot	ASCII, EBCDIC, Baudot
Interface	RS-232-C, EIA-530	RS-232-C, RS-422	RS-232-C, RS-422	RS-232-C, current loop
<b>Specific Devices Supported</b>	Computers, printers, terminals, serial devices	Computers, printers, terminals, serial devices	Computers, printers, terminals, serial devices	Computers, printers, terminals, serial devices
<b>Connections Supported</b>	Direct	Direct	Direct	Direct
<b>Diagnostics</b>	Vendor did not specify	Vendor did not specify	Vendor did not specify	Vendor did not specify
<b>Pricing and Availability</b>				
Purchase (\$)	160	110	126	105
Serviced by	Telebyte Technology, Inc.	Telebyte Technology, Inc.	Telebyte Technology, Inc.	Telebyte Technology, Inc.
Availability (days ARO)	Vendor did not specify	Vendor did not specify	Vendor did not specify	Vendor did not specify
Date of First Commercial Delivery	Vendor did not specify	Vendor did not specify	Vendor did not specify	Vendor did not specify
<b>Comments</b>	—	—	Self-powered	Self-powered

<b>Vendor</b>	<b>Telebyte Technology, Inc.</b>	<b>Telebyte Technology, Inc.</b>	<b>Telebyte Technology, Inc.</b>	<b>Telebyte Technology, Inc.</b>
<b>Model</b>	<b>66</b>	<b>67</b>	<b>69-1</b>	<b>69-2</b>
<b>Device Type</b>	Interface converter	Interface converter	Interface converter	Interface converter
<b>Conversion Performed</b>	RS-232-C to RS-485	RS-232-C to V.35	RS-232-C to MIL STD 188C	RS-232-C to MIL STD 188C
<b>Transmission Specifications</b>				
Maximum Transmission Speed (bps)	38.4K	56K, 64K, and above	19.2K	19.2K
Synchronization	Asynchronous	Asynchronous, synchronous	Vendor did not specify	Asynchronous
Transmission Mode	Half duplex	Full duplex	Full duplex	Full duplex
Codes Supported	ASCII, EBCDIC, Baudot	ASCII, EBCDIC, Baudot	ASCII, EBCDIC, Baudot	ASCII, EBCDIC, Baudot
Interface	RS-232-C, RS-485	RS-232-C, V.35	RS-232-C, MIL-STD 188C	RS-232-C, MIL STD 188C
<b>Specific Devices Supported</b>	Computers, printers, terminals, serial devices	Computers, printers, terminals, serial devices	Computers, printers, terminals, serial devices	Computers, printers, terminals, serial devices
<b>Connections Supported</b>	Direct	Direct	Direct	Direct
<b>Diagnostics</b>	Status LEDs	Status LEDs	Vendor did not specify	Vendor did not specify
<b>Pricing and Availability</b>				
Purchase (\$)	120	195	100	160
Serviced by	Telebyte Technology, Inc.	Telebyte Technology, Inc.	Telebyte Technology, Inc.	Telebyte Technology, Inc.
Availability (days ARO)	Vendor did not specify	Vendor did not specify	Vendor did not specify	Vendor did not specify
Date of First Commercial Delivery	Vendor did not specify	Vendor did not specify	Vendor did not specify	Vendor did not specify
<b>Comments</b>	—	—	—	—

Vendor	Telebyte Technology, Inc.	Telebyte Technology, Inc.	Telebyte Technology, Inc.	Telebyte Technology, Inc.
Model	69-3	69-4	69-5	69-6
Device Type	Interface converter	Interface converter	Interface converter	Interface converter
Conversion Performed	RS-232-C to MIL STD 188C	RS-232-C to MIL STD 188-114	RS-232-C to MIL-STD-188-114	RS-232-C to MIL STD 188-114
<b>Transmission Specifications</b>				
Maximum Transmission Speed (bps)	19.2K	38.4K	38.4K	38.4K
Synchronization	Synchronous	Vendor did not specify	Asynchronous	Synchronous
Transmission Mode	Full duplex	Full duplex	Full duplex	Full duplex
Codes Supported	ASCII, EBCDIC, Baudot	ASCII, EBCDIC, Baudot	ASCII, EBCDIC, Baudot	ASCII, EBCDIC, Baudot
Interface	RS-232-C, MIL STD 188C	RS-232-C, MIL STD 188-114	RS-232-C, MIL-STD-188-114	Vendor did not specify
<b>Specific Devices Supported</b>	Computers, printers, terminals, serial devices	Computers, printers, terminals, serial devices	Computers, printers, terminals, serial devices	Computers, printers, terminals, serial devices
Connections Supported	Direct	Direct	Direct	Direct
Diagnostics	Vendor did not specify	Vendor did not specify	Vendor did not specify	Vendor did not specify
<b>Pricing and Availability</b>				
Purchase (\$)	195	140	250	325
Serviced by	Telebyte Technology, Inc.	Telebyte Technology, Inc.	Telebyte Technology, Inc.	Telebyte Technology, Inc.
Availability (days ARO)	Vendor did not specify	Vendor did not specify	Vendor did not specify	Vendor did not specify
Date of First Commercial Delivery	Vendor did not specify	Vendor did not specify	Vendor did not specify	Vendor did not specify
Comments	—	—	—	—

**Protocol Conversion  
Systems:  
Comparison Columns  
Code, Speed, Interface, and  
Async/Sync Converters**

Vendor	Telebyte Technology, Inc.	Telebyte Technology, Inc.	Telebyte Technology, Inc.	Telebyte Technology, Inc.
Model	78	121	261	262
Device Type	Interface converter	Interface converter	Interface converter	Interface converter
Conversion Performed	RS-232-C to current loop	RS-232-C to RS-422	RS-232-C to RS-422	RS-232-C to RS-422
<b>Transmission Specifications</b>				
Maximum Transmission Speed (bps)	9.6K	38.4K	38.4K	38.4K
Synchronization	Asynchronous	Asynchronous	Asynchronous	Asynchronous
Transmission Mode	Half duplex, full duplex	Full duplex	Full duplex	Full duplex
Codes Supported	ASCII, EBCDIC, Baudot	ASCII, EBCDIC, Baudot	ASCII, EBCDIC, Baudot	ASCII, EBCDIC, Baudot
Interface	RS-232-C, current loop	RS-422	RS-232-C, RS-422	RS-232-C, RS-422
<b>Specific Devices Supported</b>	Computers, printers, terminals, serial devices	Computers, printers, terminals, serial devices	Computers, printers, terminals, serial devices	Computers, printers, terminals, serial devices
<b>Connections Supported</b>	Direct	Vendor did not specify	Direct	Direct
<b>Diagnostics</b>	Status LEDs	Vendor did not specify	Vendor did not specify	Vendor did not specify
<b>Pricing and Availability</b>				
Purchase (\$)	195	150	82	138
Serviced by	Telebyte Technology, Inc.	Telebyte Technology, Inc.	Telebyte Technology, Inc.	Telebyte Technology, Inc.
Availability (days ARO)	Vendor did not specify	Vendor did not specify	Vendor did not specify	Vendor did not specify
Date of First Commercial Delivery	Vendor did not specify	Vendor did not specify	Vendor did not specify	Vendor did not specify
Comments	—	—	—	Optically isolated

**Protocol Conversion  
Systems:  
Comparison Columns  
Code, Speed, Interface, and  
Async/Sync Converters**

Vendor	TeleProcessing Products, Inc.	TeleProcessing Products Inc.	TeleProcessing Products, Inc.	TeleProcessing Products, Inc.
<b>Model</b>	TP-200	TP-200M	TP-201	TP-350
<b>Device Type</b>	Async/sync converter	Async/sync converter	Async/sync converter	Interface converter
<b>Conversion Performed</b>	Async to sync with speed matching	Async to sync with speed matching; flow control	Async to sync	RS-232-C to V.35, or V.35 to RS-232-C
<b>Transmission Specifications</b>				
Maximum Transmission Speed (bps)	19.2K	9.6K	9.6K; optional 19.2K	To 100K
Synchronization	Asynchronous, synchronous	Asynchronous, synchronous	Asynchronous, synchronous	Asynchronous, synchronous
Transmission Mode	Half duplex, full duplex	Full duplex	Half duplex, full duplex	Half duplex, full duplex
Codes Supported	ASCII	ASCII (7, 8, or 9 bits)	ASCII, 7 or 8 bits; 9 bit optional	ASCII, EBCDIC, Baudot
Interface	RS-232-C	RS-232-C	RS-232-C	RS-232-C, V.35
<b>Specific Devices Supported</b>	Async DTE, sync DCE	Async DTE; async or sync DCE	Async DTE, sync DCE	Async DTE, sync DCE
<b>Connections Supported</b>	Direct, async DTE, and sync DCE/RS-232-C	Dial-up, async to sync DCE/RS-232-C	Direct, async DTE, sync DCE/RS-232-C	Vendor did not specify
<b>Diagnostics</b>	Loopbacks	Status LEDs, loopbacks, remote tests	Vendor did not specify	Status LEDs, loopbacks
<b>Pricing and Availability</b>				
Purchase (\$)	395 for quantity of 1-9	735 for quantity of 1-9	295 for quantity of 1-9	450 for quantity of 1-9
Serviced by	TeleProcessing Products, Inc.	TeleProcessing Products, Inc.	TeleProcessing Products, Inc.	TeleProcessing Products, Inc.
Availability (days ARO)	30	30	30	30
Date of First Commercial Delivery	1978	1981	1984	1979
<b>Comments</b>	Auxiliary AC power cord available; speed matching standard; 3K character buffer	Control signal option for controlled carrier applications; direct dial emulation option	Auxiliary AC power adapter optional; 9-bit option available	May be used with our TP-2002 Line Driver to extend RS-232-C interface to up to 2000 feet, at up to 9600 bps; available in both standalone and rackmounted versions



**Protocol Conversion  
Systems:  
Comparison Columns  
Code, Speed, Interface, and  
Async/Sync Converters**

Vendor	Trax Softworks, Inc.	VIR, Inc.	VIR, Inc.	VIR, Inc.
<b>Model</b>	VM Dial Out	MIU-303	MIU-530	MIU-530/V.35
<b>Device Type</b>	Code and speed converter	Interface converter	Interface converter	Interface converter
<b>Conversion Performed</b>	3270 to async	AT&T 303	RS-449 or EIA-530 to RS-232-C	RS-449 or EIA-530 to V.35
<b>Transmission Specifications</b>				
Maximum Transmission Speed (bps)	1M	Vendor did not specify	Vendor did not specify	Vendor did not specify
Synchronization	Asynchronous	Synchronous	Synchronous	Synchronous
Transmission Mode	Full duplex	Full duplex	Full duplex	Full duplex
Codes Supported	ASCII, EBCDIC	ASCII, EBCDIC, Baudot	ASCII, EBCDIC, Baudot	ASCII, EBCDIC, Baudot
Interface	RS-232-C	RS-232-C, V.35, 303	RS-449, EIA-530 or RS-422	V.35, RS-449, RS-422
<b>Specific Devices Supported</b>	Any 3270-compatible device	Vendor did not specify	Vendor did not specify	Vendor did not specify
<b>Connections Supported</b>	Direct, leased lines, dial-up	Direct, dial-up	Direct, dial-up	Direct, dial-up
<b>Diagnostics</b>	Status LEDs; data scope built in; self-test	Status LEDs, optional monitor port	Status LEDs	Status LEDs, optional monitor port
<b>Pricing and Availability</b>				
Purchase (\$)	9,000-20,000	610 for standalone version; 600 for rackmount version	450 standalone version; 435 rackmount version	450 standalone version; 435 rackmount version
Serviced by	Trax Softworks, Inc.	VIR	VIR	VIR
Availability (days ARO)	Vendor did not specify	Vendor did not specify	Vendor did not specify	Vendor did not specify
Date of First Commercial Delivery	December, 1982	Vendor did not specify	Vendor did not specify	2nd quarter of 1990
<b>Comments</b>	—	10 speed selector; uses internal or external clock	10 speed selector; uses internal or external clock	10 speed selections; uses internal or external clock

Vendor	VIR, Inc.	VIR, Inc.	Wall Data, Inc.
<b>Model</b>	MIU-V.35	MIU-X.21	DATAGATE/Concentrator
<b>Device Type</b>	Interface converter	Interface converter	Code and speed converter
<b>Conversion Performed</b>	RS-232-C to V.35	RS-232-C to X.21, V-35 to X.21, RS-422 to X.21	Single RS-232-C port to multiple RS-232-C
<b>Transmission Specifications</b>			
Maximum Transmission Speed (bps)	Vendor did not specify	Vendor did not specify	9.6K
Synchronization	Synchronous	Synchronous	Synchronous
Transmission Mode	Full duplex	Full duplex	Full duplex
Codes Supported	ASCII, EBCDIC, Baudot	ASCII, EBCDIC, Baudot	EBCDIC
Interface	RS-232-C, V.35	RS-232-C, RS-422	RS-232-C
<b>Specific Devices Supported</b>	Vendor did not specify	Vendor did not specify	IBM 3274, 3276, 5294, 5251-12
<b>Connections Supported</b>	Direct, dial-up	Direct, dial-up	Direct, leased lines, dial-up
<b>Diagnostics</b>	Status LEDs, optional monitor port	Status LEDs, optional monitor port	Remote tests
<b>Pricing and Availability</b>			
Purchase (\$)	450 standalone version; 435 rackmount version	450 for standalone version; 435 for rackmount version	7,495
Serviced by	VIR	VIR	Wall Data, Inc.
Availability (days ARO)	Vendor did not specify	Vendor did not specify	30
Date of First Commercial Delivery	1982	Vendor did not specify	Vendor did not specify
<b>Comments</b>	10 speed selector; uses internal or external clock	10 speed selector; uses internal or external clock	Maximum of 8 SDLC dial-up or multi-drop lines; port expander for 37X5 FEPs and 3274-type controllers

# Protocol Conversion Systems: Comparison Columns

**In this report:**

Vendors ..... -302

Protocol Conversion  
System/Terminal  
Controller  
Columns ..... -306

Code, Speed, and  
Interface Converter  
Columns ..... -330

**Synopsis**

**Editor's Note**

This report features comparison columns detailing products currently on the market. For information on the market, see "Protocol Conversion Systems: Market Overview" (C23-010-101). For information on protocol conversion technology, see "Protocol Conversion Systems: Technology Overview" (C23-010-201).

**Highlights**

In the Comparison Column Entry Descriptions, we have briefly defined the stub entries used in the columns. Separate sections explain the entries for Protocol Conversion Systems/Terminal Controllers and Code, Speed, and Interface Converters.

Vendors of these products furnished the information. When a vendor did not provide information for a specific entry and we could not locate that information in our files, we listed "Vendor did not specify." Datapro wishes to thank the vendors for their cooperation.

In addition to the lines allocated for vendors to indicate specified information for their models, we have added space at the bottom of the columns for vendor notations about options or special features.

The absence of any company or product from these columns means that the company either failed to respond to our repeated information requests or declined to be part of the survey.

The accompanying text briefly describes the entries in the order in which they appear. We have organized the comparison columns into broad categories: Protocol Conversion Systems/Terminal Controllers and Code, Speed, and Interface Converters.



# Vendors

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## Protocol Conversion/Terminal Controller Vendors

**Adacom Corp.**

8871 Bond Street  
Overland Park, KS 66214 (913) 888-4999

**Agile**

825 Alfred Nobel Drive  
Hercules, CA 94547 (415) 825-9220

**Andrew Corp.**

2771 Plaza Del Amo  
Torrance, CA 90503 (213) 320-7126

**Arkansas Systems**

8901 Kanis Road  
Little Rock, AK 72205 (501) 527-8471

**Avatar Technologies, Inc.**

99 South Street  
Hopkinton, MA 01748 (508) 435-3000

**Carlisle Systems Group, Inc.**

Digital Controls Division  
305 Pioneer Boulevard  
Springboro, OH 45066-1100 (513) 746-8118

**Codex Corp.**

7 Blue Hill River Road  
Canton, MA 02048 (617) 364-2000

**Commtext Inc.**

1655 Crofton Boulevard  
Suite 300  
Crofton, MD 21114 (301) 721-3666

**Computer Peripheral Systems, Inc.**

Box 98282  
Atlanta, GA 30359 (404) 292-9565

**Comstat Datacomm Corp.**

1720 Spectrum Drive, Northwest  
Lawrenceville, GA 30243 (404) 822-1962

**Datagraf, Inc.**

6101 West Courtyard Drive  
Building # 1  
Austin, TX 78730 (512) 288-0453

**Develcon Electronics Ltd.**

6701 Sierra Court  
Suite E  
Dublin, CA 94568 (415) 829-6200

**Gandalf Data, Inc.**

1020 S. Noel Avenue  
Wheeling, IL 60090 (312) 541-6060

**General Data Comm, Inc.**

Middlebury, CT 06762-1299 (203) 574-1118

**Innosys, Inc.**

2020 Challenger Drive  
Suite 101  
Alameda, CA 94501 (415) 769-7717

**Instrumentation Services Inc.**

957 Winnetka Avenue North  
Minneapolis, MN 55427 (612) 544-8916

**International Business Machines Corp. (IBM)**

Old Orchard Road  
Armonk, NY 10504 Contact local IBM representative.

**JBM Electronics**

4645 LaGuardia  
St. Louis, MO 63134-9906 (314) 731-7781

**JDS MicroProcessing**

22661 Lambert St.  
El Toro, CA 92630 (714) 770-2263

**Jupiter Technology, Inc.**

78 Fourth Ave.  
Waltham, MA 02154 (617) 890-4555

**KMW Systems**

100 Shepherd Mountain Plaza  
Austin, TX 78730-5014 (512) 338-3000

**Lemcom Systems, Inc.**

2104 W. Peoria Avenue  
Phoenix, AZ 85029 (602) 944-1543

**Memotec, Inc.**

600 rue McCaffrey  
Montreal, PQ H4T 1N1  
Canada (514) 738-4781

**Method Systems, Inc.**

3511 Lost Nation Road, #202  
Willoughby, OH 44094 (216) 942-2100

**Micom Communications Corp.**

4100 Los Angeles Avenue  
P.O. Box 8100  
Simi Valley, CA 93063 (805) 583-8600

**Netlink, Inc.**

3214 Spring Forest Road  
Raleigh, NC 27604 (919) 878-8612

**Perle Systems, Inc.**

1980 Springer Road  
Lombard, IL 60148 (312) 932-4171

**Protocol Computers, Inc.**

26630 Agoura Road  
Calabasas, CA 91302 (818) 880-4900

**Renex Corp.**

1513 Davis Ford Road  
Woodbridge, VA 22192 (703) 494-2200

**Shaffstall Corp.**

7901 East 88th Street  
Indianapolis, IN 46256 (317) 842-2077

**Trax Softworks, Inc.**

10801 National Boulevard  
Los Angeles, CA 90064-4126 (213) 475-8729

**Tri-Data Systems**

1450 Kifer Road  
Sunnyvale, CA 94086 (408) 746-2900

**Wall Data Inc.**

17769 NE 78th Place  
Redmond, WA 98052 (206) 883-4777

**Western DataCom**  
5083 Market Street  
Youngstown, OH 44512 (216) 788-6583

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**Code, Speed, and Interface Converter  
Vendors**

**Adacom Corp.**  
8871 Bond Street  
Overland Park, KS 66214 (913) 888-4999

**Agile**  
825 Alfred Nobel Drive  
Hercules, CA 94547 (415) 825-9220

**Astrocom**  
120 West Plato Blvd.  
St. Paul, MN 55107-2092 (612) 227-8651

**Carlisle Systems Group**  
Digital Controls Div.  
305 Pioneer Blvd.  
Springboro, OH 45066-1100 (513) 746-8118

**Computer Peripheral Systems, Inc.**  
Box 98282  
Atlanta, GA 30359 (404) 292-9565

**Datagraf, Inc.**  
6101 West Courtyard Drive  
Building # 1  
Austin, TX 78730 (512) 288-0453

**DCC Corp.**  
7300 North Crescent Boulevard  
Pennsauken, NJ 08110 (609) 662-7272

**Develcon Electronics Ltd.**  
6701 Sierra Court Suite E  
Dublin, CA 94568 (415) 829-6200

**Gandalf Data**  
1020 South Noel Avenue  
Wheeling, IL 60090 (312) 541-6000

**General DataComm, Inc.**  
Middlebury, CT 02762-1299 (203) 574-1118

**Memotec, Inc.**  
600 rue McCaffrey  
Montreal, PQ H4T 1N1  
Canada (514) 738-4781

**Method Systems, Inc.**  
3511 Lost Nation Road, #202  
Willoughby, OH 44094 (216) 942-2100

**Plantronics Futurecomms, Inc.**  
7630 Hayward Road  
P.O. Box 3159  
Frederick, MD 21701 (301) 662-7938

**RAD Data Communications, Inc.**  
151 West Passaic Street  
Rochelle Park, NJ 07662 (201) 587-8822

**Shaffstall Corp.**  
7901 East 88th Street  
Indianapolis, IN 46256 (317) 842-2077

**TeleProcessing Products Inc.**  
4565 East Industrial Street, Suite  
Bldg. 7-K  
Simi Valley, CA 93063 (803) 522-8147

**Trax Softworks, Inc**  
10801 National Boulevard  
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17769 NE 78th Place  
Redmond, WA 98052 (206) 883-4777

# Conversion Systems/ Terminal Controller Comparison Column Entry Descriptions

For the reader's convenience, we have organized the comparison columns into two broad categories:

**Conversion Systems/  
Terminal Controllers** can include protocol converters, terminal emulators, remote cluster controllers, and terminal controllers. Basically, devices in this section provide conversion from one protocol to another and/or allow one device, e.g., an asynchronous ASCII terminal, to act as another type of device, e.g., an IBM 3270 terminal, in a network.

The following text briefly describes the column entries in the order in which they appear in the columns.

**Conversion Systems/  
Terminal Controllers  
Product Name.** Listed here is the exact model number or name of each device.

**Device Type.** This entry specifies if the device is a protocol converter, terminal emulator, code, or interface converter.

**Conversion Performed.** All converters perform some type of translation from one code, speed, or protocol to another. The most common conversion is asynchronous ASCII to IBM SNA/SDLC or BSC, but a number of other

translations occur on the units represented in the columns.

**Specific Device Emulated.** In many cases, conversion devices provide the means to convert the text format of one type of device into the characteristics and format of another. This translation, called emulation, is indicated, if available. Most protocol converters also support device emulation.

**Specific Functionality Provided.** Most converters allow one device to be used as another type of device in the network. For example, a number of units allow asynchronous ASCII CRTs to be used as IBM 3277 Models 1 and 2.

**Virtual Screen Sizes Supported.** For a device to provide emulation, it must support the screen size in characters of the emulated device. For example, a device emulating an IBM 3270 terminal must support a 1,920-character screen.

**Command Port Support.** Some converters support a port through which users can select operating parameters and monitor, diagnose, and control the network. A "yes" answer indicates that the device has a command port.

## Host Side Specifications

**Specific Hosts Supported.** Conversion devices generally support IBM or compatible hosts or asynchronous hosts such as Digital's VAX. In this entry, vendors listed the name of the computer with which the converter operates.

**Host Operating Systems Supported.** In this entry, vendors indicated the operating system from a choice of DOS/VS, OS/VS, RSTS/E or VAX VMS, or Other.

**Number of Host Selections Supported Concurrently.** If a converter supports more than one host line, the device can support both connected hosts concurrently, or separately through a switch selection.

**Connectors Supported.** Conversion devices support direct connections, multipoint, and/or point-to-point connections. Most converters support more than one type of connection, and most support all three.

**Connection to Host via Controller.** Some conversion devices emulate a controller, but others must connect to a controller in the network. If applicable, vendors specified the type of controller to which the converter interfaces.

**Transmission Specifications/Host Line  
Maximum Transmission in (bps).** This entry, stated in bits per second, indicates the maximum speed

of operation or data rate supported by the device.

**Synchronization.** This entry refers to the time relationship among the bits comprising the characters that make up the messages. Conversion devices handle data in spurts (asynchronous) or continuous streams (synchronous).

**Transmission Mode.** Most converters operate in either half- or full-duplex mode or both. Half-duplex mode supports data transmission in either direction, but not simultaneously. In full-duplex operation, the data is simultaneously transmitted and received over a common communications facility. Simplex mode permits unidirectional data transmission, whereby data is either transmitted or received.

**Protocols Supported.** There are two basic types of protocols: byte-oriented (IBM's BSC or Digital's DDCMP) or bit-oriented (IBM SNA/SDLC or ISO HDLC). Converters usually translate one protocol to another and thus support different protocols on the terminal and host sides.

**Codes Supported.** The most common codes are ASCII, used in the asynchronous protocol; and EBCDIC, the usual code generated by synchronous devices.

**Interface.** Interface is the electrical connection between components. Most communications devices provide an electrical interface (RS-232-C) in accordance with the standards

established by the Electronics Industries Association (EIA). Several other interface standards exist, notably CCITT Recommendations V.24 and V.28.

**Clocking.** The repetitive, regularly-timed signals controlling synchronous transmissions, clocking can be set internally by the device itself or externally by another device, or be derived from the datastream.

**Terminal Side Specifications/ Terminal Line Number of Type of Ports Provided.** In general, a conversion device supports asynchronous ports that accommodate a large variety of asynchronous ASCII printers, terminals, and personal computers. Many converters also support a dynamic printer port. Devices represented in the columns support from one to many input devices.

**Specific Devices Supported.** Most conversion devices designed for asynchronous ASCII to IBM SDLC or BSC conversion support virtually any asynchronous ASCII device. Some converters, however, are designed for

operation only with a specific terminal. An answer of "virtually any device" means that the vendor's list of supported terminals was too long to fit into the assigned space, but the converter did support all major asynchronous ASCII terminals and/or personal computers available in today's market.

**Connections Supported.** The options offered to vendors in this entry were direct, dial-up, remote, leased, and other.

**Maximum Transmission Speed.** This entry refers to the highest possible rate of speed at which data can be sent.

**Transmission Specifications/ Terminal Line Maximum Aggregate Input Rate (bps).** Conversion devices generally support many input ports, each operating at several different speeds, e.g., from 50 to 9600 bps. Aggregate input refers to the maximum data rate accepted from all channels simultaneously. For example, if there are four channels operating at a maximum 9600 bps rate per channel, the aggregate input rate could be four times 9600, or 38.4K bps.

**Synchronization.** Vendors indicated asynchronous or synchronous.

**Transmission Mode.** Vendors noted if the mode is half- or full-duplex.

**Protocols Supported.** The choices offered to vendors were TTY II, BSC, and Other.

**Codes Supported.** Vendors indicated if their products supported ASCII or EBCDIC.

**Interfaces Supported.** The choices offered to vendors were RS-232-C, RS-449, or Other.

**Diagnostics**  
Many conversion devices perform tests that check the device and the line connections. Most converters conduct a self-test of internal circuitry upon power-up and provide front-panel LEDs to monitor system status.

**Pricing and Availability Purchase.** Vendors provided the base price of the unit, excluding options.

**Rental.** This entry shows the monthly charge for leasing the unit from the vendor or a third party.

**Installation.** This entry indicates if a vendor

charges a fee for installation. For the most part, vendors design conversion devices for customer installation.

**Maintenance.** Many vendors charge an annual fee to service the unit and provide ongoing maintenance.

**Serviced by.** Usually, the vendor offers service on an on-site or factory repair/return basis. In some cases, a third party provides service.

**Availability.** Here we list the current lead time on orders, given in days after receipt of order (ARO).

**Date of First Commercial Delivery.** This entry indicates the actual date on which the vendor delivered the product to the marketplace.

**Number Installed to Date.** Some vendors regard this information as proprietary, but others give a figure as of a certain date.

**Comments**  
In this section, vendors listed options and unique capabilities of their products.

Vendor	Adacom Corp.	Agile	Agile	Agile
<b>Product</b>	Adegate	Agile 6287IC	AT02	AT02G
<b>Device Type</b>	Protocol converter, Terminal emulator	Printer controller	Protocol converter	Protocol converter
<b>Conversion Performed</b>	3270 Type A to Sync/Async RS-232	EBCDIC to EBCDIC, EBCDIC to ASCII	ASCII to EBCDIC	ASCII to EBCDIC
<b>Specific Device Emulated</b>	IBM 3X78, 3X79	IBM 3287, 3289, 3262	IBM 3287 printer	IBM 3287 Model 2C and 5210 printer
<b>Specific Functionality Provided</b>	Async, ASCII-IBM 3179	Vendor did not specify	IBM 3X74-ASCII printer	IBM 3X74-ASCII printer
<b>Virtual Screen Sizes Suppt. (char.)</b>	1920, 3664	Vendor did not specify	Vendor did not specify	Vendor did not specify
<b>Command Port Supported</b>	No	Vendor did not specify	Vendor did not specify	Vendor did not specify
<b>Host Side Specifications</b>				
<b>Specific Hosts Supported</b>	IBM 43XX, IBM 8100	All IBM mainframes w/3174, 3274, 3276	IBM 43XX	IBM 43XX
<b>Host Operating Systems Supported</b>	DOS/VS, OS/VS	All IBM mainframes	DOS/VS, MVS-VM	MVS-VM
<b>No. Host Selections Suppt. Concurrently</b>	Two 3 x 74	1 BSC and 1 SDLC	1 BSC and 1 SDLC, 1 SDLC and 1 async	1 BSC and 1 SDLC, 1 SDLC and 1 async
<b>Connectors Supported</b>	Direct connection	Vendor did not specify	Direct connection	Direct connection
<b>Connection to Host via Controller</b>	IBM 3274	3174, 3276, display printer adapter	3174, 3276	3174, 3276
<b>Transmission Spec.-Host Line</b>				
<b>Maximum Transmission Speed (bps)</b>	2.35M	2.35M	2.35Mhz	2.35Mhz
<b>Synchronization</b>	Synchronous	Synchronous	Synchronous	Synchronous
<b>Transmission Mode</b>	Half duplex	Vendor did not specify	Full duplex	Full duplex
<b>Protocol Supported</b>	IBM Proprietary	BSC, SNA/SDLC	BSC, SNA/SDLC	BSC, SNA/SDLC
<b>Codes Supported</b>	IBM Proprietary	ASCII, EBCDIC	ASCII, EBCDIC	ASCII, EBCDIC
<b>Interface</b>	Two Coax BNC	Two ports, dual functions on each w/RS-232, CX	Centronics & Coax 3270	Centronics, Coax 3270
<b>Clocking</b>	Vendor did not specify	Not applicable	Internal	Internal
<b>Terminal Side Spec.-Terminal Line</b>				
<b>Number and Type of Ports Provided</b>	Up to 16 Sync/Async RS-232	1 printer either serial or parallel	1 Coax 3270 port	1 3270 Coax port
<b>Specific Devices Supported</b>	Vendor did not specify	IBM host via controller plus up to 3 alternate ASCII hosts	Centronics compatible printers	Centronics compatible printers
<b>Connections Supported</b>	Direct connection, Dial-up, Leased	Direct connection, Remote	Direct connection	Direct connection
<b>Transmission Spec.-Terminal Line</b>				
<b>Maximum Transmission Speed (bps)</b>	19.2K	Vendor did not specify	2.35Mhz	2.35M
<b>Maximum Aggregate Input Rate (bps)</b>	10K/port	Vendor did not specify	Vendor did not specify	Vendor did not specify
<b>Synchronization</b>	Async/sync	Vendor did not specify	Synchronous	Synchronous
<b>Transmission Mode</b>	Full duplex	Vendor did not specify	Full duplex	Full duplex
<b>Protocols Supported</b>	Other	Vendor did not specify	BSC	BSC
<b>Codes Supported</b>	ASCII	Vendor did not specify	ASCII, EBCDIC	ASCII, EBCDIC
<b>Interfaces Supported</b>	RS-232-C	Vendor did not specify	Centronics, Coax 3270	Centronics, Coax 3270
<b>Diagnostics</b>	Self-test, Staus LEDs, ASCII line tests	Hex dump, host dump tests	Self-test, Staus LEDs	Self-test, Staus LEDs
<b>Pricing and Availability</b>				
<b>Purchase (\$)</b>	9,500	1,495 (vol. disc. avail.)	950	1,500
<b>Serviced by</b>	ADACOM	Agile	Agile	Agile
<b>Availability (days ARO)</b>	30	5-7	1 week	1 week
<b>Date of First Commercial Delivery</b>	December 1986	1980	1985	1987
<b>Comments</b>	—	Programmable from host, alternate ASCII hosts and from the front panel	—	—



Vendor	Agile	Andrew Corp.	Arkansas Systems	Arkansas Systems
<b>Product</b>	AT04	Datalynx/3174	PATH I	PATH II
<b>Device Type</b>	Protocol converter	Protocol converter, Sys/370 to ASCII cluster controller	Protocol converter	Protocol converter
<b>Conversion Performed</b>	ASCII to EBCDIC	ASCII to EBCDIC, Async to SDLC/SNA or Async to BSC	3780 to 3270	5250 remote SNA/SDLC to 3270 multipoint bisync
<b>Specific Device Emulated</b>	5219 printer	IBM 3274 Model 51C, IBM 3174-51R	IBM S/34/36/38 or AS/400 to 3270 devices	IBM 5151/12
<b>Specific Functionality Provided</b>	IBM S/3X-AS 400-ASCII printers	Async ASCII-IBM 3278 Model 1-53287 Model 2	3780 Point to Point-3270 multipoint bisync	IBM 3270-IBM 5250 SNA
<b>Virtual Screen Sizes Suppt. (char.)</b>	Vendor did not specify	1, 920, 3,564, Model 1-5	Vendor did not specify	1,920
<b>Command Port Supported</b>	Vendor did not specify	Yes	No	No
<b>Host Side Specifications</b>				
Specific Hosts Supported	IBM S/3X-AS 400	IBM 43XX, 3080/3090	IBM S/3X and AS/400	IBM S/34/36/38 or AS/400
Host Operating Systems Supported	Vendor did not specify	DOS/VS, OS/VS	Vendor did not specify	Vendor did not specify
No. Host Selections Suppt. Concurrently	1 BSC and 1 SDLC, 1 SDLC and 1 async	2 SNA or 2 BSC & 5 Async ports	2 BSC	1 BSC and 1 SDLC
Connectors Supported	Direct connection	Direct connection, Point-to-point on dial-up line, Multipoint on leased line	Direct connection, Point-to-point on dial-up line	Direct connection, Point-to-point on dial-up, Multipoint on leased line
Connection to Host via Controller	5396, 5294, 5211	IBM 37XX	Vendor did not specify	Vendor did not specify
<b>Transmission Spec.-Host Line</b>				
Maximum Transmission Speed (bps)	3Mhz	19.2K	9600	19.2K
Synchronization Transmission Mode Protocol Supported	Synchronous Full duplex BSC, SNA/SDLC	Synchronous Half/full duplex BSC, SNA/SDLC	Synchronous Full duplex 3780	Synchronous Full duplex SNA/SDLC
Codes Supported	ASCII, EBCDIC	ASCII, EBCDIC	EBCDIC	EBCDIC
Interface	Centronics, IBM twinax	2 RS-232-C	One RS-232-C	One RS-232-C
Clocking	Internal	Internal, External	Internal, External	Internal, External
<b>Terminal Side Spec.-Terminal Line</b>				
Number and Type of Ports Provided	1 Twinax address	4-32, RS-232 ports, displays	1 port supports 20 addresses	1 multidrop 3270 line
Specific Devices Supported	Centronix compatible printers	All popular brands of term. all IBM & 100% compat. PCs. Also up to 6 user definable terminal drivers	IBM 3274, 3276; other 3270 devices such as teller terminals, ATMs	3270 compatible, including ATMs, teller terminals
Connections Supported	Direct connection	Direct connection, Dial-up, Remote, Leased, Connect to X.25 PAD with echoplex suppression	Leased	Direct connection, Dial-up, Remote, Leased
<b>Transmission Spec.-Terminal Line</b>				
Maximum Transmission Speed (bps)	3Mhz	19.2K	9600	9600
Maximum Aggregate Input Rate (bps)	Vendor did not specify	614.4K	9600	9600
Synchronization Transmission Mode Protocols Supported	Synchronous Full duplex BSC	Asynchronous Full duplex TTY II	Synchronous Full duplex BSC 3270	Synchronous Full duplex BSC
Codes Supported	ASCII, EBCDIC	ASCII	EBCDIC	EBCDIC
Interfaces Supported	Centronics, IBM twinax	RS-232-C	RS-232-C	RS-232-C
<b>Diagnostics</b>	Vendor did not specify	Extensive network diagnostics	Problem annunciation	Problem annunciation
<b>Pricing and Availability</b>				
Purchase (\$)	950	3000-10500	4,950	7,950
Serviced by	Agile	Andrew	Arkansas	Arkansas
Availability (days ARO)	1 week	1 week	Off the shelf	Contact vendor
Date of First Commercial Delivery	1985	12/86	1985	1985
<b>Comments</b>	—	—	Used to connect 3270 bisync protocol devices to IBM S/34/36/38 or AS/400 program	Supports a maximum of 8 IBM 3274s on one comm. line

Vendor	Arkansas Systems	Arkansas Systems	Arkansas Systems	Arkansas Systems
Product	PATH III	PATH IV	PATH IX	PATH V
Device Type	Protocol converter	Protocol converter	Protocol converter	Protocol converter
Conversion Performed	3780 bisync to 3780 bisync	5250 remote SDLC TO 3624 bisync	ASCII to EBCDIC	NCR 150 async
Specific Device Emulated	3780	IBM 5251/12	IBM 5251/11	IBM 5251/12
Specific Functionality Provided	3780 bisync-3780 bisync	5250 remote SNA/SDLC-BSC3 IBM 3624 ATM bisync	Poll Select async-Burroughs 5250 local remote	5250 local/remot-Burr poll sel or async-NCR 150
Virtual Screen Sizes Suppt. (char.)	Vendor did not specify	1,920	1,920	1,920
Command Port Supported	No	No	No	No
Host Side Specifications				
Specific Hosts Supported	IBM System 3X	IBM S/34/36/38 or AS/400	IBM S/3X	IBM S/34/36/38 or AS/400
Host Operating Systems Supported	Vendor did not specify	Vendor did not specify	Vendor did not specify	Vendor did not specify
No. Host Selections Suppt. Concurrently	2 BSC 3780s	1 BSC and 1 SDLC	Twinax	SDLC 5250
Connectors Supported	Direct connection	Direct connection, Point-to-point on dial-up line	Direct connection	Direct connection, Point-to-point on dial-up, Multipoint on leased line
Connection to Host via Controller	Vendor did not specify	Vendor did not specify	Vendor did not specify	Vendor did not specify
Transmission Spec.-Host Line				
Maximum Transmission Speed (bps)	9600	19.2K	Vendor did not specify	9600
Synchronization Transmission Mode Protocol Supported	Synchronous Full duplex BSC	Synchronous Full duplex SNA/SDLC	Synchronous Full duplex SNA/SDLC	Asynchronous Full duplex SNA/SDLC
Codes Supported	EBCDIC	EBCDIC	EBCDIC	EBCDIC
Interface	One RS-232-C	One RS-232-C	Twinax	Twinax
Clocking	Internal, External	Internal, External	Vendor did not specify	Data derived
Terminal Side Spec.-Terminal Line				
Number and Type of Ports Provided	3780	Multidrop leased lines	Multiple terminals	Multidrop Poll Select Network
Specific Devices Supported	Any 3780 device	IBM 3624 ATM	Not applicable	Burroughs terminals: TT102, MT355, TU1800, RT650, RT750; NCR 150 async dev.: 279, 2261, 2262, 5000 Series Leased
Connections Supported	Direct connection	Remote, Leased	Multidrop	
Transmission Spec.-Terminal Line				
Maximum Transmission Speed (bps)	9600	9600	9600	9600
Maximum Aggregate Input Rate (bps)	9600	9600	9600	9600
Synchronization Transmission Mode Protocols Supported	Synchronous Full duplex BSC	Synchronous Full duplex BSC	Asynchronous Half duplex Poll/Select	Asynchronous Half duplex Poll/Select
Codes Supported	EBCDIC	EBCDIC	ASCII	ASCII
Interfaces Supported	RS-232-C	RS-232-C	RS-232-C	RS-232-C
Diagnostics	Self-test	Self-test	Self-test	Problem announcement
Pricing and Availability				
Purchase (\$)	4,950	5,950	5,950	5,950
Serviced by	Arkansas	Arkansas	Arkansas	Arkansas
Availability (days ARO)	Contact vendor	Contact vendor	Vendor did not specify	Contact vendor
Date of First Commercial Delivery	1986	1986	1987	1986
Comments	Overcomes IBM S/34/36/3780 protocol contention limitations	Allows an IBM S/34/36/38 or AS/400 to drive a network of 3624 ATMs directly	IBM S/36 as terminal cluster to Burroughs host; inq., updt., prt. supptd.	Connects Async poll select terminals to an IBM S/3X or AS/400 w/o host comm line

Vendor	Arkansas Systems	Arkansas Systems	Arkansas Systems	Arkansas Systems
<b>Product</b>	PATH VI	PATH XV (ECCAA)	PATH XVI	PATH XVII
<b>Device Type</b>	Protocol converter	Protocol converter	Vendor did not specify	Vendor did not specify
<b>Conversion Performed</b>	IBM 5250 to Burroughs sync	Local 5250 to 3780 bisync	Vendor did not specify	3270 bisync to async point-to-point
<b>Specific Device Emulated</b>	IBM 5251/12	SDLC/SNA protocol workstation	5250 displays	NCR 2261 terminals
<b>Specific Functionality Provided</b>	5250 remote SNA/SDLC-Burroughs poll/select sync	5250 local/remote-3780 pt-to-pt bisync	5250 remote-NCR DLC/CC	3270 bisync-Marchant async pt-to-pt
<b>Virtual Screen Sizes Suppt. (char.)</b>	1,920	Vendor did not specify	Vendor did not specify	Vendor did not specify
<b>Command Port Supported</b>	No	Vendor did not specify	Vendor did not specify	Vendor did not specify
<b>Host Side Specifications</b>				
<b>Specific Hosts Supported</b>	IBM S/34/36/38 or AS/400	IBM S/3X and AS/400	IBM S/3X and AS/400	Vendor did not specify
<b>Host Operating Systems Supported</b>	Vendor did not specify	Vendor did not specify	Vendor did not specify	Vendor did not specify
<b>No. Host Selections Suppt. Concurrently</b>	SDLC 5250	Vendor did not specify	Vendor did not specify	Vendor did not specify
<b>Connectors Supported</b>	Direct connection, Point-to-point on dial-up, Multipoint on leased line	Vendor did not specify	Vendor did not specify	Vendor did not specify
<b>Connection to Host via Controller</b>	Vendor did not specify	Vendor did not specify	Vendor did not specify	Vendor did not specify
<b>Transmission Spec.-Host Line</b>				
<b>Maximum Transmission Speed (bps)</b>	9600	19.2K	Vendor did not specify	Vendor did not specify
<b>Synchronization</b>	Synchronous	Synchronous	Vendor did not specify	Vendor did not specify
<b>Transmission Mode</b>	Full duplex	Vendor did not specify	Vendor did not specify	Vendor did not specify
<b>Protocol Supported</b>	SNA/SDLC	Vendor did not specify	Vendor did not specify	Vendor did not specify
<b>Codes Supported</b>	EBCDIC	Vendor did not specify	Vendor did not specify	Vendor did not specify
<b>Interface</b>	One RS-232-C	Vendor did not specify	Vendor did not specify	Each path XVII supports max. 16 RS-232 connections
<b>Clocking</b>	Vendor did not specify	Vendor did not specify	Vendor did not specify	Vendor did not specify
<b>Terminal Side Spec.-Terminal Line</b>				
<b>Number and Type of Ports Provided</b>	Multidrop burroughs	Attaches bisync comm. lines to IBM S/3X	Vendor did not specify	Vendor did not specify
<b>Specific Devices Supported</b>	Burroughs sync All sync Poll/Select devices	3892 MICR Reader Sorter, 5294 Controller	Devices, networks, and terminals that operate using NCR DLC/CC protocol	Marchant TT-1012 teller terminals
<b>Connections Supported</b>	Remote, Leased	Direct connection, Remote	Vendor did not specify	Vendor did not specify
<b>Transmission Spec.-Terminal Line</b>				
<b>Maximum Transmission Speed (bps)</b>	9600	19.2K	Vendor did not specify	Vendor did not specify
<b>Maximum Aggregate Input Rate (bps)</b>	9600	19.2K	Vendor did not specify	Vendor did not specify
<b>Synchronization</b>	Synchronous	Synchronous	Vendor did not specify	Vendor did not specify
<b>Transmission Mode</b>	Full duplex	Full duplex	Vendor did not specify	Vendor did not specify
<b>Protocols Supported</b>	Poll/Select	BSC	Vendor did not specify	Vendor did not specify
<b>Codes Supported</b>	ASCII	Vendor did not specify	Vendor did not specify	Vendor did not specify
<b>Interfaces Supported</b>	RS-232-C	Vendor did not specify	Vendor did not specify	Vendor did not specify
<b>Diagnostics</b>	Problem annunciation	Problem annunciation optional	Vendor did not specify	Vendor did not specify
<b>Pricing and Availability</b>				
<b>Purchase (\$)</b>	5,950	6,950	7,000	5,950
<b>Serviced by</b>	Arkansas	Arkansas	Arkansas	Arkansas
<b>Availability (days ARO)</b>	Off the shelf	Off the shelf	Contact vendor	Contact vendor
<b>Date of First Commercial Delivery</b>	1986	1987	1989	1989
<b>Comments</b>	—	Allows attachment of multiple bisync lines	2 DLC/CC routers are supported by each PATH XVI	Provides on-line transaction processing

Vendor	Arkansas Systems	Avatar Technologies, Inc.	Carlisle Systems Group	Codex Corp.
<b>Product</b>	PATH XVIII	PA1500G, EP-Connect, Passport, Pro-Series	PACE II	4250 SNA Gateway
<b>Device Type</b>	Protocol converter, code converter	Protocol converter	Vendor did not specify	SNA Gateway
<b>Conversion Performed</b>	Burroughs Poll/Select to 3270 biasync	EBCDIC to ASCII	NCR ISO async to TTY ASCII	Non-SNA to SNA
<b>Specific Device Emulated</b>	IBM 3274 Model 51C	IBM 3287	NCR 796-301/7900 Model 3	IBM 3274 Model 51C
<b>Specific Functionality Provided</b>	3277 Model 2-Burroughs MT-11	EBCDIC 3287-ASCII Printer	Async ASCII/ANSI CRT-NCR polled async line	Non-SNA; ASCII-SNA; SDLC
<b>Virtual Screen Sizes Suppt. (char.)</b>	1,920	1,920	6016 byte input buffer per port	Vendor did not specify
<b>Command Port Supported</b>	No	No	Yes	Vendor did not specify
<b>Host Side Specifications</b>				
Specific Hosts Supported	Any host supporting IBM VTAM BSC	IBM 43XX	NCR V Systems 8000 and 9800	Vendor did not specify
Host Operating Systems Supported	OS/VS	DOS/VS	NCR VRX, VRX/E	NCP
No. Host Selections Suppt. Concurrently	1 BSC and 1 Burroughs Poll/Select	1 SDLC or 1 SNA	4	1 BSC and 1 SDLC
Connectors Supported	DCE/DTE w/constant or switched CTS, RTS	Direct connection	Vendor did not specify	Point-to-point on dial-up line
Connection to Host via Controller	IBM 37XX	IBM 3274	CSG Polaris, NCR 621/721, ICS, LLCS	Amdahl 4705
<b>Transmission Spec.-Host Line</b>				
Maximum Transmission Speed (bps)	9600	Vendor did not specify	38.4K	19.2K
Synchronization	Synchronous	Async/sync	Vendor did not specify	Asynchronous
Transmission Mode	Half duplex	Full duplex	Vendor did not specify	Full duplex
Protocol Supported	BSC	SNA/SDLC	NCR ISO async	BSC, SNA/SDLC
Codes Supported	ASCII, EBCDIC	ASCII, EBCDIC	Vendor did not specify	ASCII
Interface	One RS-232-C	Vendor did not specify	Two EIA-232D	One RS-232-C
Clocking	DCE or DTE	Internal	Vendor did not specify	Vendor did not specify
<b>Terminal Side Spec.-Terminal Line</b>				
Number and Type of Ports Provided	1 port multiplexed to 32 devices	Not applicable	4 multimode ports for CRTs or printers	8 ports provided
Specific Devices Supported	Burroughs EF7000, Datamaxx 983, 1200, 4300	Vendor did not specify	ADD5, Wyse, NCR, ANSI X3.64, any serial printer	Printers, plotters, PCs, microcomputers
Connections Supported	Direct connection, Remote, Leased	Direct connection, Dial-up, Remote	Vendor did not specify	Vendor did not specify
<b>Transmission Spec.-Terminal Line</b>				
Maximum Transmission Speed (bps)	9600	Vendor did not specify	38.4K	Vendor did not specify
Maximum Aggregate Input Rate (bps)	9600	Vendor did not specify	76.8K	Vendor did not specify
Synchronization	Synchronous	Vendor did not specify	Vendor did not specify	Vendor did not specify
Transmission Mode	Half duplex	Vendor did not specify	Vendor did not specify	Vendor did not specify
Protocols Supported	Burroughs Poll/Select	Vendor did not specify	TTY	Vendor did not specify SNA/SDLC
Codes Supported	ASCII	Vendor did not specify	Vendor did not specify	Vendor did not specify
Interfaces Supported	RS-232-C	Vendor did not specify	EIA-232D	Vendor did not specify
<b>Diagnostics</b>	CRT display printer diagnostic trace and dump	Vendor did not specify	Vendor did not specify	Vendor did not specify
<b>Pricing and Availability</b>				
Purchase (\$)	5,950	Contact vendor	1,250	Contact vendor
Serviced by	Arkansas	Avatar	NCR	Codex
Availability (days ARO)	Contact vendor	Contact vendor	1 to 30	Contact vendor
Date of First Commercial Delivery	1989	Contact vendor	1985	Contact vendor
<b>Comments</b>	Can be configured to support up to 32 devices	—	Data cmprsn. fr., users can switch between polled and TTY applctns. on one CRT	—

Vendor	Commtext Inc.	Commtext Inc.	Commtext Inc.	Computer Peripheral Systems, Inc.
<b>Product</b>	CX-81 Protocol Converter (CX-80 Data Exchange Fam)	CX-83 (CX-80 Data Exchange Family)	CX-86 (CX-80 Data Exchange Family)	MARS Jr.
<b>Device Type</b>	Protocol converter	Protocol converter, Data PBX	Protocol converter, Data PBX	Protocol converter
<b>Conversion Performed</b>	ASCII to EBCDIC	ASCII to EBCDIC	ASCII to EBCDIC	Burroughs Poll/Select to ASCII
<b>Specific Device Emulated</b>	3271 Model 2, 317 Model 51R, 3274, 3276	IBM 3274 Model 51C	IBM 3274 Model 51C	Vendor did not specify
<b>Specific Functionality Provided</b>	Async ASCII-IBM 3278 Model 2	Async ASCII-IBM 3278 Model 2	Async ASCII-IBM 3278 Model 2 and from IBM 3278 to ASYNC ASCII	TTY ASCII serial/par-Burroughs Poll/Select
<b>Virtual Screen Sizes Suppt. (char.)</b>	1,920	1,920	1,920	1,920
<b>Command Port Supported</b>	Yes	Yes	Yes	No
<b>Host Side Specifications</b>				
Specific Hosts Supported	IBM 43XX	IBM 43XX, IBM 8100	IBM 43XX, IBM 8100	Burroughs RS-232 sync/async or TDI
Host Operating Systems Supported	DOS/VS, OS/VS, RSTS/E or VAX VMS	DOS/VS, OS/VS, RSTS/E or VAX VMS	DOS/VS, OS/VS, RSTS/E or VAX VMS	MCP
No. Host Selections Suppt. Concurrently	2 IBM-BSC and/or SDLC	4 IBM-BSC and/or SDLC up to 20 async	4 IBM BSC and/or SDLC up to 10 async	Vendor did not specify
Connectors Supported	Direct connection, Point-to-point on dial-up line, Multipoint on leased line	Direct connection, Point-to-point on dial-up line, Multipoint on leased line	Direct connection, Point-to-point on dial-up line, Multipoint on leased line	Dir. connection, Point-to-point on dial-up, Multipoint on leased line, TDI RS-422
Connection to Host via Controller	Vendor did not specify	IBM 37XX	IBM 37XX	Any data comm. DLP or FEP
<b>Transmission Spec.-Host Line</b>				
Maximum Transmission Speed (bps)	64K	64K	64K	38.4K
Synchronization	Synchronous	Synchronous	Synchronous	Async/sync
Transmission Mode	Full duplex	Full duplex	Full duplex	Half duplex
Protocol Supported	BSC, SNA/SDLC	BSC, SNA/SDLC, X.25 thru NPSI	BSC, SNA/SDLC, X.25 thru NPSI	Poll/Select
Codes Supported	ASCII, EBCDIC	ASCII, EBCDIC	ASCII, EBCDIC	ASCII
Interface	Vendor did not specify	Vendor did not specify	Vendor did not specify	1 parallel
Clocking	Internal, External	Internal, External	Internal, External	External
<b>Terminal Side Spec.-Terminal Line</b>				
Number and Type of Ports Provided	5 async w/support for 5 aux. printers	Up to 20 async or 10 Type A	50 async or 25 Type A coax with support	1 serial or parallel
Specific Devices Supported	Vendor did not specify	Vendor did not specify	Vendor did not specify	Any RS-232 or parallel ASCII device
Connections Supported	Direct connection, Dial-up	Direct connection, Dial-up	Direct connection, Dial-up	Direct connection
<b>Transmission Spec.-Terminal Line</b>				
Maximum Transmission Speed (bps)	38.4K	38.4K	38.4K	38.4K
Maximum Aggregate Input Rate (bps)	Vendor did not specify	Configuration dependent	Configuration dependent	38.4K
Synchronization	Asynchronous	Asynchronous	Asynchronous	Asynchronous
Transmission Mode	Full duplex	Full duplex	Full duplex	Full duplex
Protocols Supported	Vendor did not specify	Vendor did not specify	Vendor did not specify	TTY II
Codes Supported	ASCII	ASCII	ASCII	ASCII
Interfaces Supported	RS-232-C, V.24	RS-232-C, V.11, Type A coax, async coax, RS-422, V.24	RS-232-C, V.11, Type A coax, async coax, current loop	RS-232-C
<b>Diagnostics</b>	Self-test	Self-test, Staus LEDS	Self-test, Staus LEDS	Self-test, Staus LEDS ASCII line tests
<b>Pricing and Availability</b>				
Purchase (\$)	3,295	4,950 to 6,800	6,550-13,950	795
Serviced by	Centel Business Systems	Centel Business Systems	Centel Business Systems	Computer Peripheral Systems
Availability (days ARO)	Contact vendor	Contact vendor	Contact vendor	Stock
Date of First Commercial Delivery	August 1989	1983	1980	1984
<b>Comments</b>	The CX-81 supports two 3270 hosts and emulates one or two control units for each	has functions of ASCII-3270 prot. conv., 3270-ASCII decnvrtr., & PBX/PAD	Enables up to 5 concurrent multiple sessions per user across multiple host	—

Vendor	Comstat Datacomm Corp.	Datagraf, Inc.	Datagraf, Inc.	Datagraf, Inc.
<b>Product</b>	C2200-LT	Datagraf BUMP 3270 BSC host/Burroughs Poll Select	Datagraf BUMP 3270 BSC host/Honeywell VIP 77/7800	Datagraf BUMP 3270 BSC host/IBM 3274 or 5394 SNA
<b>Device Type</b>	Protocol converter	Protocol converter, Terminal emulator, IBM sftw. switches IBM terminal for Burroughs	Protocol converter, Terminal emulator, IBM sftw. switches IBM terminal for Honeywell	Protocol converter, terminal emulator, IBM or others 3270 BSC to SNA-SDLC 3270 or 5394
<b>Conversion Performed</b>	Burroughs Poll/Select	IBM 3270 or 5250 to Burroughs	IBM 3270 or 5250 to Honeywell	IBM 3270 BSC to SNA
<b>Specific Device Emulated</b>	Vendor did not specify	Multidropped string of Burroughs tmns.	Mltidrpd./cntrlr. stg. of Honeywell tms	IBM 5394
<b>Specific Functionality Provided</b>	Unisys Poll/Select-serial or parallel TTY	1	1Honeywell term. emulation	3271/74 clstr. ctrlr-IBM SNA platform
<b>Virtual Screen Sizes Suppt. (char.)</b>	1,920	1,920	1,920	1,920
<b>Command Port Supported</b>	Yes	Yes	Yes	Yes
<b>Host Side Specifications</b>				
Specific Hosts Supported	Unisys small, medium, or large systems	IBM 3090, 9370, S/3X, AS/400	IBM 3090, 9370, S/3X, AS/400	IBM 3090, 9370, S/3X, AS/400
Host Operating Systems Supported	MCS/COMS	All	All	All
No. Host Selections Suppt. Concurrently	1 sync or async	Sync or async Burroughs	Sync Honeywell	1 SDLC and 1 async
Connectors Supported	Direct connection, Point-to-point on dial-up line, Multipoint on leased line	Direct connection, Point-to-point on dial-up line, Multipoint on leased line	Direct connection, Point-to-point on dial-up line, Multipoint on leased line	Direct connection, Point-to-point on dial-up line, Multipoint on leased line
Connection to Host via Controller	CP 2000 or CP3680	Burroughs FEP or comm. port	Honeywell FEP or Comm port	AS400 Comm port
<b>Transmission Spec.-Host Line</b>				
Maximum Transmission Speed (bps)	38.4K	Std. 19.2K, 56K or 64K opt.	Standard 19.2K, 56K optional	Std. 19.2K; optionally 56K
Synchronization	Async/sync	Async/sync	Synchronous	Synchronous
Transmission Mode	Half duplex, Full duplex	Half duplex	Half duplex	Half duplex
Protocol Supported	Poll/Select	BSC, Burroughs	BSC, Honeywell	SNA/SDLC
Codes Supported	ASCII	ASCII, EBCDIC	ASCII, EBCDIC	EBCDIC
Interface	TDI (two-wire direct interface)	1 or 2 RS-232-C and 1 or 2 V.35	1 or 2 RS-232-C and 1 or 2 V.35	One RS-232-C, 1 V.35
Clocking	Internal, External	Internal	Internal, External	Internal, External
<b>Terminal Side Spec.-Terminal Line</b>				
Number and Type of Ports Provided	Up to 5 asynchronous serial or parallel	1 3270 BSC RS-232-C port	1 3270 BSC RS-232-C port in	1 3270
Specific Devices Supported	Votrax, Dataproducts, Centronics	TD830, MT983, ET1100, T-27, all emulations	H-VIP 770X, 780X, all emulations	5394 SNA-SDLC 31/3274 SNA-SDLC
Connections Supported	Direct connection, Dial-up Leased	Direct connection, Dial-up, Remote, Leased	Direct connection, Dial-up Remote, Leased	Direct connection, Dial-up Remote, Leased
<b>Transmission Spec.-Terminal Line</b>				
Maximum Transmission Speed (bps)	38.4K	Std. 19.2K, 56K optional	Std. 19.2K, 56K opt.	Std. 19.2K, optionally 56K
Maximum Aggregate Input Rate (bps)	38.4K	56K	56K	56KB
Synchronization	Asynchronous	Synchronous	Synchronous	Synchronous
Transmission Mode	Half duplex, Full duplex	Half duplex	Half duplex	Half duplex
Protocols Supported	TTY II	BSC	BSC	BSC
Codes Supported	ASCII	EBCDIC	EBCDIC	EBCDIC
Interfaces Supported	RS-232-C, Parallel	RS-232-C	RS-232-C	RS-232-C
<b>Diagnostics</b>	Self-test, Staus LEDs, ASCII line tests	Self-test, Staus LEDs Advanced diagnostics	Off line, console to std. port off advanced diags.	Self-test, Staus LEDs, Offline, advanced diagnostics
<b>Pricing and Availability</b>				
Purchase (\$)	995-2 ports; 350 add'l.	4,280-4,880	4,280-4,880	3,805-4,255
Serviced by	Comstat Datacomm Corp.	Datagraf	Datagraf	Datagraf- unit replacement
Availability (days ARO)	10	14-30	14-30	14-30
Date of First Commercial Delivery	1985	1986	1986	1986
<b>Comments</b>	char. conv., data comp. download params., and DCE or DTE emulation	1IBM 3270 or 5250 PVM Passthru to Burroughs terminal emulation	1IBM 3270 or 5250 PVM Passthru; IBM standard software allows each IBM	—

Vendor	Datagraf, Inc.	Datagraf, Inc.	Datagraf, Inc.	Datagraf, Inc.
<b>Product</b>	Datagraf BUMP 3270 BSC host/Sperry UTS-20/40	Datagraf BUMP Burroughs poll select host PASSTHRU	Datagraf BUMP Honeywell VIP 77/7800 host/PASSTHRU	Datagraf BUMP Sperry UTS-20/40 host PASSTHRU
<b>Device Type</b>	Protocol converter, Terminal Emulator, IBM sftw. switches IBM terminal for Sperry	Protocol converter, Terminal emulator	Protocol converter, terminal emulator	Protocol converter, Terminal emulator
<b>Conversion Performed</b>	IBM 3270 or 5250 to Sperry	Burroughs Poll/Select to IBM	H-VIP to Honeywell or any IBM	S-UTS to Sperry or any IBM
<b>Specific Device Emulated</b>	T-mux output string of Sperry terminals	IBM 5394	IBM 3274 Model 51C, IBM 3777, IBM 5394	IBM 3274 Model 51C, IBM 5394
<b>Specific Functionality Provided</b>	<sup>1</sup> Sperry term. emul.	Burroughs Poll/Slct.-1	Honeywell VIP77/7800-IBM 3274 or 5394 emulation	Sperry UTS 20/40-IBM 3274 or 5394 emulation
<b>Virtual Screen Sizes Suppt. (char.)</b>	1,920	1,920	1,920	1,920
<b>Command Port Supported</b>	Yes	Yes	Yes	Yes
<b>Host Side Specifications</b>				
Specific Hosts Supported	IBM 43XX, IBM 3090, 9370, S/3X, AS/400	IBM 3090, 9370, S/3X, AS/400	IBM 43XX, IBM 3090, 9370, AS/400	IBM 43XX, IBM 3090, 9370, S/3X, AS/400
Host Operating Systems Supported	All	all	All	Vendor did not specify
No. Host Selections Suppt. Concurrently	Sync Sperry	1 bisync (BSC)	1 SDLC and 1 async, 1 bisync	1 SDLC and 1 async, 1 bisync
Connectors Supported	Direct connection, Point-to-point on dial-up line, Multipoint on leased line	Direct connection, Point-to-point on dial-up line, Multipoint on leased line	Direct connection, Point-to-point on dial-up line, Multipoint on leased line	Direct connection, Point-to-point on dial-up line, Multipoint on leased line
Connection to Host via Controller	Sperry FEP or Comm port	IBM 37XX, Emulating BPS and 31/3274 and 5394	IBM 3274, IBM 37XX, Emulating H-VIP 77/7800, 31/3274, 5394	IBM 37XX, Emulating S-UTS 20/40 & 31/3274 & 5394
<b>Transmission Spec.-Host Line</b>				
Maximum Transmission Speed (bps)	Standard 19.2K, optional 56K	Standard 19.2K; optional 56K or 64K	Std. 19.2K optional 56K or 64K	Std. 19.2K; optional 56K or 64K
Synchronization	Synchronous	Async/sync	Synchronous	Synchronous
Transmission Mode	Half duplex	Half duplex	Half duplex	Half duplex
Protocol Supported	BSC, Sperry	BSC, SNA/SDLC, BPS and TDI	BSC, SNA/SDLC, H-VIP Passthru to Honeywell	BSC, SNA/SDLC, S-UTS Passthru to Sperry
Codes Supported	ASCII, EBCDIC	ASCII, EBCDIC	ASCII, EBCDIC	ASCII, EBCDIC
Interface	1 or 2 RS-232-C and 1 or 2 V.35	One RS-232-C, One RS-422, One current loop, can support multiples; V.35	One RS-232-C, One RS-422, One current loop, multiples; V.35	One RS-232-C, Can optionally support multiples; V.35
Clocking	Internal, External	Internal, External	Internal, External	Internal, External
<b>Terminal Side Spec.-Terminal Line</b>				
Number and Type of Ports Provided	1 3270 BSC RS-232-C port in	Up to 2 BPS; 1 BPS, 1 SNA/SDLC line out	Up to 2 S-UTS in; 1 H-VIP line out <sup>1</sup>	Up to 2 S-UTS in; 1 S-UTS/1 SNA/SDLC out
Specific Devices Supported	S-UTS 20/40, 20/60, 20/200, 20/400 all emulations	TD830, ET1100, MT983, T-27, all emulations	H-VIP 770X, 780X, all emulations	S-UTS 20/40, 20/60, 20/200, 20/400 all emulations
Connections Supported	Direct connection, Dial-up, Remote, Leased	Direct connection, Dial-up, Remote, Leased	Direct connection, Dial-up, Remote, Leased	Direct connection, Dial-up, Remote, Leased
<b>Transmission Spec.-Terminal Line</b>				
Maximum Transmission Speed (bps)	Std. 19.2K, 56K opt.	Std. 19.2K; 56K opt.	Std. 19.2K; optionally 56K	Std. 19.2K, optional 56K
Maximum Aggregate Input Rate (bps)	56K	56K	56K	56K
Synchronization	Synchronous	Async/sync	Async/sync	Async/sync
Transmission Mode	Half duplex	Half duplex, Full duplex	Half duplex	Half duplex
Protocols Supported	BSC	TTY II, BSC	TTY II, BSC	TTY II, BSC
Codes Supported	EBCDIC	ASCII, EBCDIC	ASCII, EBCDIC	ASCII, EBCDIC
Interfaces Supported	RS-232-C	RS-232-C, RS-449, V.35	RS-232-C, RS-449, V.35	RS-232-C, RS-449, V.35
<b>Diagnostics</b>	Self-test, Staus LEDs, Off line, advanced diagnostics	Self-test, Staus LEDs, ASCII line tests, advanced diagnostics	Off line, cons. to std. port for opt. adv. diagn.	Self-test, Staus LEDs, ASCII line tests, advanced diag.
<b>Pricing and Availability</b>				
Purchase (\$)	4,280-4,880	4,955-6,155	4,955-6,155	5,155-6,355
Serviced by	Datagraf	Datagraf	Datagraf- unit replacement	Datagraf-unit replacement
Availability (days ARO)	14-30	14-30	14-30	14-30
Date of First Commercial Delivery	1989	1987	1988	1989
<b>Comments</b>	<sup>1</sup> IBM 3270 or 5250 PVM Passthru; IBM sftwr. permits operation on IBM platform	<sup>1</sup> Burroughs proc. or switch, IBM 3274 or 5394 emulation	<sup>1</sup> SNA-SDLC out	—

Vendor	Datagraf, Inc.	Datagraf, Inc.	Datagraf, Inc.	Develcon Electronics Ltd.
<b>Product</b>	Datagraf Switchable Coax to 8 asy.ASCII ports	Datagraf Switchable Twinax to 7 Async ASCII ports	Datagraf BUMP 3780 or HASP/3770 SNA-SDLC	Protocol Converter
<b>Device Type</b>	Protocol converter, Terminal emulator, code converter, Selective switching	Protocol converter, Terminal emulator, code converter, selective switching	Protocol converter	Protocol converter
<b>Conversion Performed</b>	IBM 3270 to Async ASCII or Passthru	IBM 5250 to Async ASCII or Passthru	BSC to SDLC	ASCII to EBCDIC, BSC to SDLC, Async to 3270
<b>Specific Device Emulated</b>	IBM 3270 and DEC VT100, DGC, HP, etc.	IBM 5250, 3179, 3476, DEC VT100, DGC, HP, etc.	IBM 3780 BSC or HASP multileaved BSC w/console to 3776/77 md 3 or 4 w/console	IBM 3274 Model 51C
<b>Specific Functionality Provided</b>	3270 coax-Passthru to 3274, DEC, or DGC	5250, 3476 Twinax-Passthru to AS400, DEC, DGC, HP	3776/77 Md 3 or 4 w/console	Async ASCII-IBM 3270
<b>Virtual Screen Sizes Suppt. (char.)</b>	1,920	1,920	Batch 80 col. card images; 132 print pos	Vendor did not specify
<b>Command Port Supported</b>	Yes	Yes	Yes	Vendor did not specify
<b>Host Side Specifications</b>				
Specific Hosts Supported	Local 3299 coax, 4300, 9370, DEC, DGC	IBM AS400, S3/X, DEC, DGC, HP, etc.	IBM 43XX, IBM 3090, 9370	IBM 43XX, IBM 8100, DEC PDP-11 or DEC VAX
Host Operating Systems Supported	All	All	All	DOS/VS, OS/VS, RSTS/E or VAX VMS
No. Host Selections Suppt. Concurrently	1-8 address 3299 coax	7 address 3299 Twinax	1 SDLC	1 BSC and 1 SDLC, 1 SDLC and 1 async
Connectors Supported	Local 3299 coax remote RS-232 or V.35	Local Twinax, remote RS-232 or V.35	Direct connection, Point-to-point on dial-up line, Multipoint on leased line	Vendor did not specify
Connection to Host via Controller	AS/400, S/3X, comm port	IBM AS/400, S/3X, Twinax or comm port	IBM 37XX	IBM 37XX
<b>Transmission Spec.-Host Line</b>				
Maximum Transmission Speed (bps)	Coax 2.3M, remote comm., std. 19.2K, opt. 56K	Twinax, 1M, remote comm., std. 19.2K, opt. 56K	Standard to 19.2K, 56K optional	96K
Synchronization	Async/sync	Async/sync	Synchronous	Synchronous
Transmission Mode	Half duplex	Half duplex	Half duplex	Full duplex
Protocol Supported	BSC, SNA/SDLC	SNA/SDLC	SNA/SDLC	BSC, SNA/SDLC, Async, X.25
Codes Supported	ASCII, EBCDIC	ASCII, EBCDIC	EBCDIC	ASCII, EBCDIC
Interface	One RS-232-C, 1 coax 3299 or V.35	One RS-232-C, 1 Twinax or V.35	One RS-232-C, Optionally V.35	One RS-232-C, One RS-422, V.35
Clocking	Internal, External	Internal, External	Internal, External	Internal, External
<b>Terminal Side Spec.-Terminal Line</b>				
Number and Type of Ports Provided	Coax or RS-232 Passthru	7 Twinax	RS-232-C or V.35 (one each) to BSC wkstrn	32 per card
Specific Devices Supported	IBM 3278, 79, 76, Coax in & selective Passthru plus: 8 VT100, or 8 DGC	IBM 5250, 3179, 3476; Twinax in & Passthru plus: 7 async ASCII devices	CDC, HP, Prime, DEC all have HASP 2780/3780 BSC in addition to IBM having same	60-70 types, available on request
Connections Supported	Direct connection, Dial-up Remote, coax emulating 3289	Direct connection, Dial-up, Remote, Leased, Twinax	Direct connection, Dial-up, Remote, Leased	Direct connection, Dial-up Remote, Leased
<b>Transmission Spec.-Terminal Line</b>				
Maximum Transmission Speed (bps)	19.2K to 64K (2.3 MHz coax)	Twinax 1M, RS-232 19.2K	Standard to 19.2K, 56K opt	38.4K
Maximum Aggregate Input Rate (bps)	2.3M	7 Twinax over 1M circuit	Standard to 19.2K, 56K opt	38.4K
Synchronization	Asynchronous	Asynchronous	Synchronous	Asynchronous
Transmission Mode	Half duplex	Half duplex	Half duplex	Full duplex
Protocols Supported	coax character	Twinax characters	BSC, Multileaved BSC	Async, X.25
Codes Supported	EBCDIC	EBCDIC	EBCDIC	ASCII
Interfaces Supported	coax	Twinax	RS-232-C, V.35	RS-232-C, RS-449, V.35
<b>Diagnostics</b>	Self-test, Staus LEDs, advanced diagnostics	Self-test, Staus LEDs, Offline, advanced diagnostics	Self-test, Sttaus LEDs, Remote console	Self test, Staus LEDs, ASCII line tests
<b>Pricing and Availability</b>				
Purchase (\$)	Contact vendor	3,995-4,795	3,000-4,000	Available on request
Serviced by	Datagraf-unit replacement	975 for 2 days	Datagraf-unit replacement	Develcon
Availability (days ARO)	14-30	600	14-30	30-60
Date of First Commercial Delivery	December 1989	Datagraf	1983	1984
<b>Comments</b>	—	December 1989	13780 BSC/HASP BSC to 3776/77 MD 3/4 w/cons.; 3780 BSC/HASP to 3776/77	—



Vendor	Gandalf Data, Inc.	Gandalf Data, Inc.	Innosys, Inc.	Instrumentation Services Inc.
<b>Product</b>	ITM 3270	ITM 3270	IC100	ISI-87
<b>Device Type</b>	Vendor did not specify	Protocol converter, Terminal emulator, 3274 51C, 3276 Mod. 12 cluster controller emul.	Protocol converter, Terminal emulator, Code converter	Protocol converter
<b>Conversion Performed</b>	NCR ISO async to TTY ASCII	ASCII to EBCDIC	Burroughs Poll/Select, ASCII to EBCDIC, BSC to SDLC, ALC, SLC, SNA, X.25	EBCDIC or LU Type 3 to ASCII
<b>Specific Device Emulated</b>	NCR 796-301/7900 Model 3	IBM 3274 Model 51C, IBM 3276 Model 12, Various ASCII terminals	IBM 3274 Model 51C, ALC terminal	IBM 3287
<b>Specific Functionality Provided</b>	4 async ASCII CRT-NCR polled async line	Async ASCII terms.-IBM host	1All in ASCII	IBM 32XX, 31XX-ASCII printers
<b>Virtual Screen Sizes Suppt. (char.)</b>	6,016 byte input buffer per port	480, 1,920, 3,564	1,920	Not applicable
<b>Command Port Supported</b>	Yes	Yes	Yes	Vendor did not specify
<b>Host Side Specifications</b>				
Specific Hosts Supported	NCR 85, 86, 88, 90, 98, 1000	IBM 43XX, Any host that supports 3274	IBM 43XX, DEC PDP-11 or DEC VAX, Numerous other hosts	Vendor did not specify
Host Operating Systems Supported	VRX, VRX/E, ITX Tranpro	Independent of host/OS	DOS/VS, OS/VS, RSTS/E or VAX VMS	Vendor did not specify
No. Host Selections Suppt. Concurrently	4	1 SDLC or 1 BSC	1 BSC and 1 SDLC, 1 SDLC and 1 async	Vendor did not specify
Connectors Supported	Vendor did not specify	Direct connection, Point-to-point on dial-up line, Multipoint on leased line	point-to-point on dial-up line, Multipoint on leased line	Vendor did not specify
Connection to Host via Controller	NCR 621/721, ICS, LLCS	Emulate cluster controller	IBM 3274	IBM 3274
<b>Transmission Spec.-Host Line</b>				
Maximum Transmission Speed (bps)	38.4K	19.2K	56K	Vendor did not specify
Synchronization	Vendor did not specify	Synchronous	Async/sync	Vendor did not specify
Transmission Mode	Vendor did not specify	Half duplex, Full duplex	Half duplex, Full duplex	Vendor did not specify
Protocol Supported	NCR 301 async polled	SNA/SDLC	Vendor did not specify	BSC, SNA/SDLC
Codes Supported	Vendor did not specify	EBCDIC	ASCII, EBCDIC, ALC Baudot	EBCDIC, LU Type 3
Interface	Vendor did not specify	One RS-232-C	One RS-232-C, One RS-422	One RS-232-C, Or 1 Centronics Parallel
Clocking	Vendor did not specify	Internal, External	Internal, External	Internal
<b>Terminal Side Spec.-Terminal Line</b>				
Number and Type of Ports Provided	4 multimode ports	8, each channel connects to terminal	Not applicable	1
Specific Devices Supported	ADDS 1010, 2020; WYSE 30, 50; NCR TTY terminals and printers ANSI X3.64	IBM 3278 Models 1-5, IBM 3279-4 color mode, IBM 3287 printer	Not applicable	Vendor did not specify
Connections Supported	Vendor did not specify	Direct connection, Dial-up Leased	Direct connection, Dial-up, Remote, Leased	Vendor did not specify
<b>Transmission Spec.-Terminal Line</b>				
Maximum Transmission Speed (bps)	38.4K	19.2K	56K	Vendor did not specify
Maximum Aggregate Input Rate (bps)	Vendor did not specify	Vendor did not specify	56K	Vendor did not specify
Synchronization	Vendor did not specify	Asynchronous	Async/sync	Vendor did not specify
Transmission Mode	Vendor did not specify	Full duplex	Half duplex, Full duplex	Vendor did not specify
Protocols Supported	Vendor did not specify	Vendor did not specify	TTY II, BSC	Vendor did not specify
Codes Supported	Vendor did not specify	ASCII	ASCII, EBCDIC	ASCII, EBCDIC
Interfaces Supported	Vendor did not specify	RS-232-C	RS-232-C	RS-232-C, Centronics Parallel
<b>Diagnostics</b>	Vendor did not specify	Self-test, Staus LEDs, ASCII tests, Async loopback, 3270 test	Self-test	Self tests
<b>Pricing and Availability</b>				
Purchase (\$)	1,350	3,200	12,500	1,295
Serviced by	NCR	Gandalf	Innosys	ISI
Availability (days ARO)	1 to 30	Contact vendor	15	Stock
Date of First Commercial Delivery	1985	July 1988	1982	1983
<b>Comments</b>	—	Passthru printing (to printer attached to terminal)	1ALC, SLC, SNA, X.25, bisync	Drive plotters, punches, bar code label printers

Vendor	International Business Machines Corp. (IBM)	International Business Machines Corp. (IBM)	JBM Electronics	JBM Electronics
<b>Product</b>	3708	7171	ASC	BPC
<b>Device Type</b>	Protocol converter	Protocol converter	Protocol converter	Protocol converter
<b>Conversion Performed</b>	ASCII to SNA/SDLC	ASCII to EBCDIC	Async to bisync or SNA/SDLC	BSC to BSC, BSC to SDLC
<b>Specific Device Emulated</b>	IBM 3274 Model 51C	3274-10	Bisync or SNA RJE	Bisync and SNA RJE
<b>Specific Functionality Provided</b>	Async ASCII-SNA/SDLC	ASCII-IBM 3270	Async-bisync or SNA/SDLC	Bisync-Bisync or SNA/SDLC
<b>Virtual Screen Sizes Suppt. (char.)</b>	Vendor did not specify	Vendor did not specify	Not applicable	Vendor did not specify
<b>Command Port Supported</b>	Yes	Yes	Yes	Yes
<b>Host Side Specifications</b>				
Specific Hosts Supported	IBM 43XX, IBM 8100, 370, 30XX, 9370, System 36, 38	IBM 3081, 3083, 3084	IBM 43XX, IBM 8100	IBM 43XX, IBM 8100
Host Operating Systems Supported	MVS, VM, VSE	VM/SP, MVS	Vendor did not specify	VTAM
No. Host Selections Suppt. Concurrently	Vendor did not specify	Vendor did not specify	1 BSC or SNA/SDLC	1 BSC or SNA/SDLC
Connectors Supported	Direct connection, Point-to-point on dial-up line, Multipoint on leased line	Direct connection	Direct connection, Point-to-point on dial-up line, Multipoint on leased line	Direct connection, Point-to-point on dial-up line, Multipoint on leased line
Connection to Host via Controller	IBM 37XX	IBM 3274	IBM 3274, IBM 270X, IBM 37XX	IBM 3274, IBM 270X, IBM 37XX
<b>Transmission Spec.-Host Line</b>				
Maximum Transmission Speed (bps)	19.2K	19.2K	19.2K	19.2K
Synchronization	Asynchronous	Asynchronous	Synchronous	Synchronous
Transmission Mode	Half duplex, Full duplex	Full duplex	Vendor did not specify	Half duplex, Full duplex
Protocol Supported	SNA/SDLC	Vendor did not specify	BSC, SNA/SDLC	BSC, SNA/SDLC
Codes Supported	ASCII, EBCDIC	ASCII, EBCDIC	ASCII, EBCDIC	ASCII, EBCDIC
Interface	One RS-232-C, One RS-422	One RS-232-C	One RS-232-C	One RS-232-C
Clocking	Vendor did not specify	Vendor did not specify	Internal, External	Internal, External
<b>Terminal Side Spec.-Terminal Line</b>				
Number and Type of Ports Provided	10 asynchronous	Up to 8 async	1 Async port	1 Sync port
Specific Devices Supported	ADDS, Data General, DEC, HP, WYSE	IBM PC, DEC VT 100	Vendor did not specify	Bisync RJE
Connections Supported	Direct connection, Dial-up, Remote	Direct connection	Direct connection, Dial-up Leased	Direct connection, Dial-up Leased
<b>Transmission Spec.-Terminal Line</b>				
Maximum Transmission Speed (bps)	19.2K	19.2K	19.2K	19.2K
Maximum Aggregate Input Rate (bps)	Vendor did not specify	Vendor did not specify	19.2K	Vendor did not specify
Synchronization	Asynchronous	Asynchronous	Asynchronous	Synchronous
Transmission Mode	Half duplex, Full duplex	Full duplex	Half duplex, Full duplex	Half duplex, Full duplex
Protocols Supported	Vendor did not specify	Vendor did not specify	TTY II	BSC
Codes Supported	ASCII, EBCDIC	ASCII, EBCDIC	ASCII, EBCDIC	ASCII, EBCDIC
Interfaces Supported	RS-232-C, RS-422	RS-232-C	RS-232-C	RS-232-C
<b>Diagnostics</b>	Control terminal	Special maintenance facility	Self-test	Self-test, Status LEDs
<b>Pricing and Availability</b>				
Purchase (\$)	3,750	12,420	995	1,995
Serviced by	IBM	IBM	JBM Electronics	JBM Electronics
Availability (days ARO)	Contact vendor	Contact vendor	7	7
Date of First Commercial Delivery	1985	1984	1983	1985
<b>Comments</b>	3780 supports SNA net. mgmt. features through NetView, NPDA, or NDLM	—	Support 2770, 2780, 3741, 3270, 3780 bisync and 3270 or 3776 SNA/SDLC for fl. trnsfr.	Used for file transfer, supports bisync to bisync or bisync to SNA conversion

Vendor	JBM Electronics	JBM Electronics	JBM Electronics	JBM Electronics
<b>Product</b>	MAPC-3270	MAPC-3672 Protocol Converter	MAPC-POLL/SELECT	MAPC-TANDEM
<b>Device Type</b>	Protocol converter	Protocol converter	Protocol converter	Protocol converter
<b>Conversion Performed</b>	BSC OR SDLC or async	Async to 3767 SNA/SDLC	Burroughs Poll/Select to ASCII	AM 6520 Tandem to Async
<b>Specific Device Emulated</b>	IBM 3274 Model 51C	Group of 3767 terminals	TD 380, MT983, ET1100, T27 terminals	6530 terminal
<b>Specific Functionality Provided</b>	Async-IBM 3270 Bisync or SNA/SDLC	Async-3767 SNA/SDLC	Async-Unisys Poll/Select	Async-Tandem AM 6520
<b>Virtual Screen Sizes Suppt. (char.)</b>	1,920	not applicable	1,920	Vendor did not specify
<b>Command Port Supported</b>	Yes	Yes	Yes	Yes
<b>Host Side Specifications</b>				
Specific Hosts Supported	System 34/36/38 360,370, 3080, 3090	IBM 370, 3080, 3090	Unisys Poll Select	Nonstop and Nonstop II
Host Operating Systems Supported	Vendor did not specify	VTAM	Vendor did not specify	AM 6520
No. Host Selections Suppt. Concurrently	1 Bisync or SNA/SDLC	1 SDLC	1 Poll/Select Async or Sync	Vendor did not specify
Connectors Supported	Direct connection, Point-to-point on dial-up line, Multipoint on leased line	Direct connection, Point-to-point on dial-up line, Multipoint on leased line	Direct connection, Point-to-point on dial-up line	Direct connection, Point-to-point on dial-up line, Multipoint on leased line
Connection to Host via Controller	IBM 270X, IBM 37XX	IBM 37XX	CP	6100, 6200, 6300
<b>Transmission Spec.-Host Line</b>				
Maximum Transmission Speed (bps)	19.2K	19.2K	19.2K	19.2K
Synchronization	Synchronous	Synchronous	Async/sync	Vendor did not specify
Transmission Mode	Vendor did not specify	Half duplex, Full duplex	Full duplex	Half duplex, Full duplex
Protocol Supported	BSC, SNA/SDLC	SNA/SDLC	Poll/Select	Tandem AM 6520
Codes Supported	ASCII, EBCDIC	ASCII, EBCDIC	ASCII	ASCII
Interface	One RS-232-C	One RS-232-C	One RS-232-C	One RS-232-C
Clocking	Internal, External	Internal	Internal, External	Internal
<b>Terminal Side Spec.-Terminal Line</b>				
Number and Type of Ports Provided	Up to 16 async ports	Up to 16 asynchronous ports	Up to 16 async ports	Up to 16 async ports
Specific Devices Supported	Various, 90 terminals on menu	Various	Various, 90 terminals on menu	Various terminals, 50 on menu
Connections Supported	Direct connection, Dial-up, Leased	Direct connection, Dial-up	Direct connection, Dial-up Leased	Direct connection, Dial-up Leased
<b>Transmission Spec.-Terminal Line</b>				
Maximum Transmission Speed (bps)	Vendor did not specify	19.2K	19.2K	19.2K
Maximum Aggregate Input Rate (bps)	Vendor did not specify	19.2K	Vendor did not specify	Vendor did not specify
Synchronization	Asynchronous	Asynchronous	Asynchronous	Asynchronous
Transmission Mode	Full duplex	Half duplex, Full duplex	Full duplex	Full duplex
Protocols Supported	TTY II	TTY II	TTY II	TTY II
Codes Supported	ASCII, EBCDIC	ASCII	ASCII	ASCII
Interfaces Supported	RS-232-C	RS-232-C	RS-232-C	RS-232-C
<b>Diagnostics</b>	Self-test, Staus LEDs	Self-test, Staus LEDs	Self-test	Self-test, Staus LEDs
<b>Pricing and Availability</b>				
Purchase (\$)	1,595	335-1,595	1,595	1,595
Serviced by	JBM Electronics Co.	JBM Electronics	JBM Electronics	JBM Electronics
Availability (days ARO)	7	Immediate	7	7
Date of First Commercial Delivery	1985	1985	1989	1987
<b>Comments</b>	Includes security dial back and logoff messages	Includes security dial back and logoff messages	T27 emulation supports async/sync Poll Select prot., full security	uses Multipoint, polled sync interface; 12 pages of mem. or 312 lines

Vendor	JBM Electronics	JBM Electronics	JDS MicroProcessing	JDS MicroProcessing
<b>Product</b>	MAPC-UNISCOPE Protocol Converter	MAPC-VIP	HYDRA II	HYDRA SNA
<b>Device Type</b>	Protocol converter	Protocol converter	Protocol converter	Protocol converter
<b>Conversion Performed</b>	Async to Uniscope	Async to VIP Sync	ASCII to EBCDIC	ASCII to EBCDIC
<b>Specific Device Emulated</b>	UTS 4040 Cluster Controller	7700, 7800 CRT	IBM 3274D	3274 A
<b>Specific Functionality Provided</b>	ASCII Async-Uniscope Sync	ASCII Async-Honeywell VIP Sync	Async ASCII-IBM 360 channel	Async ASCII-IBM SNA channel
<b>Virtual Screen Sizes Suppt. (char.)</b>	132 column x 24 rows (3168)	72 rows x 80 columns (5760)	1,920	1,920
<b>Command Port Supported</b>	Yes	Yes	Yes	Yes
<b>Host Side Specifications</b>				
Specific Hosts Supported	Unisys 1100, 90, 80, 2200	DPS 7, 8, 88, 90, 7000, 8000	IBM 43XX, 30XX	IBM 43XX, 30XX AND 9370
Host Operating Systems Supported	Telcon	Vendor did not specify	DOS/VS, OS/VS, VM/CMS, MVS/XA	VTAM, MVS/XA, VM/CMS
No. Host Selections Suppt. Concurrently	1 Uniscope	1 VIP	1 BSC and 1 ASCII	1 SNA and 1 ASCII
Connectors Supported	Direct connection, Point-to-point on dial-up line, Multipoint on leased line	Direct connection, Point-to-point on dial-up line, Multipoint on leased line	Direct connection, Point-to-point on dial-up line, Multipoint on leased line	Direct connection, Point-to-point on dial-up line, Multipoint on leased line
Connection to Host via Controller	DCP, GCS, SLCA	Datanet 8	Byte multiplexer channel	Direct to block or byte multiplexer chan
<b>Transmission Spec.-Host Line</b>				
Maximum Transmission Speed (bps)	19.2K	19.2K	Channel speed	Channel speed
Synchronization	Synchronous	Synchronous	Synchronous	Synchronous
Transmission Mode	Half duplex, Full duplex	Half duplex, Full duplex	Full duplex	Full duplex
Protocol Supported	Uniscope	VIP	BSC	SNA/channel
Codes Supported	ASCII	ASCII	EBCDIC	EBCDIC
Interface	One RS-232-C	One RS-232-C	Bus and tag cables	Bus and tag cables
Clocking	Internal	Internal, External	Internal	Internal
<b>Terminal Side Spec.-Terminal Line</b>				
Number and Type of Ports Provided	Up to 16 Async ports	Up to 16 Async ports	Up to 64 ports	Up to 64 ports
Specific Devices Supported	Various, 90 terminals on menu	Various, 90 terminals on menu	ASCII CRTs, printers, PCs	ASCII, CRTs, PCs, and printers
Connections Supported	Direct connection, Dial-up	Direct connection, Dial-up	Direct connection, Dial-up, Leased	Direct connection, Dial-up Remote, Leased
<b>Transmission Spec.-Terminal Line</b>				
Maximum Transmission Speed (bps)	19.2K	19.2K	38.4K	38.4K
Maximum Aggregate Input Rate (bps)	19.2K	19.2K	Vendor did not specify	Vendor did not specify
Synchronization	Asynchronous	Asynchronous	Asynchronous	Asynchronous
Transmission Mode	Full duplex	Full duplex	Full duplex	Full duplex
Protocols Supported	TTY II	TTY II	3270	SNA/3270
Codes Supported	ASCII	ASCII	ASCII	ASCII
Interfaces Supported	RS-232-C	RS-232-C	RS-232-C	RS-232-C
<b>Diagnostics</b>	Self-test, Staus LEDs	Self-test, Staus LEDs	Self test	Self-test
<b>Pricing and Availability</b>				
Purchase (\$)	1,595	1,595	4,900 and up	12,900 and up
Serviced by	JBM Electronics	JBM Electronics	JDS Microprocessing	JDS Microprocessing
Availability (days ARO)	Immediate	30 days	30 days	30
Date of First Commercial Delivery	1985	1989	1983	December, 1988
<b>Comments</b>	Full security incl. dial back/logoff mssgs.; full UTS control Mpage support	Full security including dial back and logoff messages	Call-back/password sec.; positive logoff security; audit trail	call-back security, multilevel security, dynamic band rate sel.

Vendor	Jupiter Technology, Inc.	KMW Systems Corp.	KMW Systems Corp.	KMW Systems Corp.
<b>Product</b>	System 100 & System 1000	Series II 2780/3780	Series II 3270 (SNA or BSC)	Series II 3287/Coax*
<b>Device Type</b>	Protocol converter, Terminal emulator	Protocol converter	Protocol converter	Protocol converter
<b>Conversion Performed</b>	ASCII to EBCDIC, TCP/IP to 5250, 3270, X.25	BSC to asynchronous	SNA or BSC to async	Async ASCII to 3287 coax
<b>Specific Device Emulated</b>	IBM 3274 Model 51C, IBM 3777, 2780/3780	IBM 2780, 3790 RJE's	IBM 3274 Model 51C, IBM 3271	IBM 3287 printer
<b>Specific Functionality Provided</b>	Vendor did not specify	Async ASCII/EBCDIC-IBM 2780, 3780	Async ASCII CRT-IBM 3278	Async ASCII output-IBM 3287
<b>Virtual Screen Sizes Suppt. (char.)</b>	All 3270 models	Vendor did not specify	3,564	Vendor did not specify
<b>Command Port Supported</b>	Yes	Yes	Yes	No
<b>Host Side Specifications</b>				
<b>Specific Hosts Supported</b>	IBM 43XX, DEC PDP-11 or DEC VAX, Prime, Tandem, Stratus	Any IBM 2780 or 3780 compatible device	IBM mainframes	IBM mainframes
<b>Host Operating Systems Supported</b>	DOS/VS, OS/VS, RSTS/E or VAX VMS, Accommodates all O/S	Vendor did not specify	Vendor did not specify	Vendor did not specify
<b>No. Host Selections Suppt. Concurrently</b>	Up to 8 terminals	1	8	1
<b>Connectors Supported</b>	Direct connection, Point-to-point on dial up line, Multipoint on leased line	Switched/dedicated pt.-to-pt./multipoint	Switched/dedicated pt.-to-pt./multipoint	Direct connection
<b>Connection to Host via Controller</b>	IBM 270X, IBM 37XX	IBM 37XX, Direct to 2780/3780 device	IBM 3705, 3725	Direct coax to IBM 3274
<b>Transmission Spec.-Host Line</b>				
<b>Maximum Transmission Speed (bps)</b>	2M	To 19.2K	19.2K, 56K optional	2.35MHz
<b>Synchronization Transmission Mode Protocol Supported</b>	Async/sync Half duplex, Full duplex BSC, SNA/SDLC, Async, X.25, TCP/IP	Synchronous Half/full duplex BSC	Synchronous Half duplex BSC, SNA/SDLC	Vendor did not specify Vendor did not specify 3287 coax
<b>Codes Supported</b>	ASCII, EBCDIC	EBCDIC	EBCDIC	EBCDIC, DSC
<b>Interface</b>	RS-232, RS-442, Ethernet, V.35	1 RS-232-C, V.35, X.21 optional	1 RS-232-C	1 3287 coax
<b>Clocking</b>	Internal, External, Data Derived	Internal, External	Internal, external	Vendor did not specify
<b>Terminal Side Spec.-Terminal Line</b>				
<b>Number and Type of Ports Provided</b>	Up to 624 lines	Up to 8	Up to 8 asynchronous	1 RS-232-C
<b>Specific Devices Supported</b>	Over 500 ASCII terminal types, all DOS-OS/2 compatible PCs	Virtually any ASCII or EBCDIC peripheral device	Virtually any async ASCII, CRT, printer, or PC	Virtually any async, serial or parallel output device
<b>Connections Supported</b>	Direct connection, Dial-up Remote, Leased	Direct connection, dial-up	Direct connection, dial-up	Direct connection, dial-up
<b>Transmission Spec.-Terminal Line</b>				
<b>Maximum Transmission Speed (bps)</b>	2M	To 19.2K	To 19.2K	To 19.2K
<b>Maximum Aggregate Input Rate (bps)</b>	104M	Vendor did not specify	Vendor did not specify	Vendor did not specify
<b>Synchronization Transmission Mode Protocols Supported</b>	Async/sync Half duplex, Full duplex TTY II, BSC, Ethernet	Asynchronous Half/full duplex Xon/Xoff, CTS, prompt ASCII, EBCDIC	Asynchronous Full duplex Xon/Xoff, CTS	Asynchronous Half duplex Xon/Xoff, CTS, parallel
<b>Codes Supported</b>	ASCII, EBCDIC	ASCII, EBCDIC	ASCII	ASCII
<b>Interfaces Supported</b>	RS-232-C, RS-449, V.35	RS-232-C, Parallel	RS-232-C, Parallel	RS-232-C, Parallel
<b>Diagnostics</b>	Self-test, Status LEDs, ASCII line tests	Self-test, ASCII line tests, status LEDs	Self-test, ASCII line tests	Self-test, ASCII line tests, status LEDs
<b>Pricing and Availability</b>				
<b>Purchase (\$)</b>	9,000-150,000	1,995	Starting at 1,495	Starts at 1,695
<b>Serviced by</b>	INTEL	KMW Systems	KMW Systems	KMW Systems
<b>Availability (days ARO)</b>	30 days	30	30	30
<b>Date of First Commercial Delivery</b>	February 1988	October 1981	Oct 1981 (3270A); Nov.1982	1984
<b>Comments</b>	Capacity ranges from 4 to 624 circuits	Original modem eliminator configuration for local attachment	—	Allows low-cost ASCII printers/pen plotters to appear as 3287 printer

Vendor	KMW Systems Corp.	KMW Systems Corp.	KMW Systems Corp.	KMW Systems Corp.
<b>Product</b>	Series II 3770 SNA/SDLC	Series II HASP	Series II Twinax*	Series III/Coax
<b>Device Type</b>	Protocol converter	Protocol converter	Protocol converter	Protocol converter
<b>Conversion Performed</b>	SNA/SDLC to async	BSC to async	IBM Systems 34/36/38 to async	EBCDIC to ASCII
<b>Specific Device Emulated</b>	IBM 3777, IBM 3776	IBM 360 model 20 HASP RJE workstation	IBM 5251 Model 11 CRT or 522X/5256 prtr.	IBM 3287
<b>Specific Functionality Provided</b>	Async ASCII periph.-3770 batch SNA workstation	Async ASCII periph.-HASP workstation	Async ASCII CRT-IBM 5251 or 522X/5256	IBM coax-ASCII (async or parallel)
<b>Virtual Screen Sizes Suppt. (char.)</b>	Vendor did not specify	Vendor did not specify	1,920	3,564
<b>Command Port Supported</b>	Yes	Yes	Yes	No
<b>Host Side Specifications</b>				
Specific Hosts Supported	IBM mainframes	IBM mnfrms., Systems 34/36/38, CDC mfms.	IBM 34/36/38	IBM 43XX
Host Operating Systems Supported	Vendor did not specify	Vendor did not specify	Vendor did not specify	Vendor did not specify
No. Host Selections Suppt. Concurrently	8	1 session with up to 8 devices	7	1 BSC & 1 SDLC
Connectors Supported	Switched/dedicated pt.-to-pt./multipoint	Switched/dedicated pt.-to-pt./multipoint	Direct connection	Direct connection
Connection to Host via Controller	IBM 37XX, IBM 3705, 3725	IBM 3705, 3725	Direct twinax to IBM System 34/36/38	IBM 3274, IBM 3174
<b>Transmission Spec.-Host Line</b>				
Maximum Transmission Speed (bps)	To 19.2K, 56K optional	To 19.2K, 56K optional	1MHz	2.5M
Synchronization Transmission Mode Protocol Supported	Synchronous Half/full duplex BSC	Synchronous Half/full duplex BSC	Vendor did not specify Vendor did not specify 5251 Model 11, 522X/5256	Synchronous Half duplex IBM coax Type A
Codes Supported	EBCDIC	EBCDIC	EBCDIC	EBCDIC, DSC
Interface	1 RS-232-C, V.35, X.21 optional	1 RS-232-C, V.35, X.21 optional	1 twinax I/F with 1 cable-through	1 coax
Clocking	Internal, External	Internal, External	Vendor did not specify	Data derived
<b>Terminal Side Spec.-Terminal Line</b>				
Number and Type of Ports Provided	Up to 8 async	Up to 8 async	Up to 7 async RS-232-C or parallel	1 async, Dataproducts, Centronics
Specific Devices Supported	Virtually any ASCII or EBCDIC peripheral device in serial or parallel	Virtually any ASCII or EBCDIC peripheral device in serial or parallel	Virtually any CRT, PC, or printer	Any ASCII output device with async or parallel
Connections Supported	Direct connection	Direct connection, dial-up	Direct connection, dial-up	Direct connection, remote dial-up
<b>Transmission Spec.-Terminal Line</b>				
Maximum Transmission Speed (bps)	To 19.2K	To 19.2K	To 19.2K	To 19.2K
Maximum Aggregate Input Rate (bps)	Vendor did not specify	Vendor did not specify	Vendor did not specify	Vendor did not specify
Synchronization Transmission Mode Protocols Supported	Asynchronous Half/full duplex Xon/Xoff, CTS, ASCII	Asynchronous Half/full duplex Xon/Xoff, CTS, prompt ASCII, EBCDIC	Asynchronous Half/full duplex Xon/Xoff, CTS, ASCII	Asynchronous Half duplex Xon/Xoff, CTS, ASCII prompt, parallel
Codes Supported	ASCII	ASCII, EBCDIC	ASCII	ASCII
Interfaces Supported	RS-232-C, Parallel	RS-232-C, Parallel	RS-232-C, Parallel	RS-232-C, Parallel
<b>Diagnostics</b>	Self-test, ASCII line	Self-test, ASCII line tests, status LEDs	Self-test, ASCII line tests, status LEDs	Self-test, ASCII line tests, status LEDs
<b>Pricing and Availability</b>				
Purchase (\$)	Starts at 4,595	Starts at 4,595	Starts at 1,495	Starts at 1,295
Serviced by	KMW Systems	KMW Systems	KMW Systems	KMW Systems
Availability (days ARO)	30	30	30	1 week
Date of First Commercial Delivery	October 1981	October 1981	1985	March 1987
<b>Comments</b>	Optional modem eliminator configuration for local attachment	Optional modem eliminator configuration for local attachment	Full 5251 attribute support including color; 25th status line	Transparency, graphics support from SAS and ISCO

Vendor	Lemcom Systems, Inc.	Memotec, Inc.	Memotec, Inc.	Memotec, Inc.
<b>Product</b>	<b>Distributed Network Processor Series</b>	<b>DM 2000B</b>	<b>DM 2400B PLUS</b>	<b>DM 2400B</b>
<b>Device Type</b>	Protocol converter, converter, Concentrator	Protocol converter, Cluster controller	Protocol converter, Data PBX For Burroughs Systems	Protocol converter, Data PBX for Burroughs systems
<b>Conversion Performed</b>	ASCII to EBCDIC, BSC to SDLC, ASCII to SDLC	Burroughs Poll/Select	Burroughs Poll/Select to ASCII	Burroughs Poll/Select
<b>Specific Device Emulated</b>	IBM 3274 Model 51C, IBM 3276 Model 12, 3274-1A, 3274-1D	All Burroughs terminals	All Burroughs terminals	All Burroughs terminals
<b>Specific Functionality Provided</b>	Vendor did not specify	Cluster control	Cluster controller—host switching	Cluster controller
<b>Virtual Screen Sizes Suppt. (char.)</b>	480, 1,920, 3,564, 2560, 960	3,564	3,564	3,564
<b>Command Port Supported</b>	Yes	Yes	Yes	Yes
<b>Host Side Specifications</b>				
Specific Hosts Supported	IBM 43XX, 9370	All Burroughs host from B-20 to A-17	All Burroughs host from B20 to A17	All Burroughs host from B-20 to A-17
Host Operating Systems Supported	DOS/VS, OS/VS, VM, MVS, MVS/XA, VSE	Vendor did not specify	Vendor did not specify	Vendor did not specify
No. Host Selections Suppt. Concurrently	Vendor did not specify	1 per terminal, 120 maximum	7, 1 per terminal (256 maximum)	7, 1 per terminal (128 maximum)
Connectors Supported	Direct connection, Point-to-point on dial-up line, Multipoint on leased line	Direct connection, Point-to-point on dial-up line, Multipoint on leased line	Direct connection, Point-to-point on dial-up line, Multipoint on leased line	Direct connection, Point-to-point on dial-up line, Multipoint on leased line
Connection to Host via Controller	IBM 37XX, Direct channel (byte or block)	Any Burroughs FEP	Any Burroughs FEP	Any Burroughs FEP
<b>Transmission Spec.-Host Line</b>				
Maximum Transmission Speed (bps)	64K (or 100K)	19.2K	19.2K	19.2K
Synchronization	Async/sync	Async/sync	Async/sync	Async/sync
Transmission Mode	Half duplex, Full duplex	Half duplex	Half duplex	Half duplex
Protocol Supported	BSC, SNA/SDLC	Poll/Select	Poll/Select	Poll/Select
Codes Supported	ASCII, EBCDIC	Vendor did not specify	ASCII	ASCII
Interface	One RS-232-C, One RS-422, V.35	One RS-232-C, Second host line optional, TDI	TDI, 7-RS-232-C	Or TDI, 7-RS232-C
Clocking	Internal, External	Internal, External	Internal, External	Internal, External
<b>Terminal Side Spec.-Terminal Line</b>				
Number and Type of Ports Provided	Up to 1,024 ports	18 ports config. as Poll/Sel, ASCII TTY	24 ports config. as Poll/Sel, ASCII TTY	24 ports conf. as Poll/Sel or ASCII TTY
Specific Devices Supported	Any IBM compatible terminal	All Burroughs and compatibles, any ASCII devices	All Burroughs and compatibles any ASCII devices	All Burroughs and compatibles; any ASCII devices
Connections Supported	Direct connection, Dial-up Remote, Leased	Direct connection, Dial-up Leased	Direct connection, Dial-up Leased	Direct connection, Dial-up, Leased
<b>Transmission Spec.-Terminal Line</b>				
Maximum Transmission Speed (bps)	64K	19.2K	19.2K	19.2K
Maximum Aggregate Input Rate (bps)	8M	All ports at 19.2K	All ports at 19.2K	All ports at 9600
Synchronization	Async/sync	Async/sync	Async/sync	Async/sync
Transmission Mode	Half duplex, Full duplex	Half duplex, Full duplex	Half duplex, Full duplex	Half duplex, Full duplex
Protocols Supported	TTY II, BSC, SDLC	TTY II, Poll/Select	TTY II, Poll/Select	TTY II, Poll Select
Codes Supported	ASCII, EBCDIC	ASCII	ASCII	ASCII
Interfaces Supported	RS-232-C, RS-449, V.35	RS-232-C, TDI	RS-232-C, TDI	RS-232-C, TDI
<b>Diagnostics</b>	Self-test, Status LEDs, Console problem determination tools	Self-test, Status LEDs, Stand alone diagnostic routines	Self-test, Status LEDs, Stand alone diagnostic routines	Self-test, Status LEDs, Stand alone diagnostic routines
<b>Pricing and Availability</b>				
Purchase (\$)	9,000 and up	9,000-25,000	20,000-34,000	16,000-20,000
Serviced by	NAS	Memotec Data	Memotec Data	Memotec Data
Availability (days ARO)	10 days	30	30	30
Date of First Commercial Delivery	1980	1979	1989	1983
<b>Comments</b>	—	Acts as remote front end processor for polling terminals	—	—

Vendor	Memotec, Inc.	Memotec, Inc.	Method Systems, Inc.	Micom Communications Corp.
<b>Product</b>	<b>DM 600B</b>	<b>DM 60B</b>	<b>PCT-100</b>	<b>MB3 SPC MB3 BPC</b>
<b>Device Type</b>	Protocol converter, Cluster controller	Protocol converter, Micro cluster controller	Protocol converter, terminal emulator, Code converter	Protocol converter
<b>Conversion Performed</b>	Burroughs Poll/Select to ASCII	Burroughs Poll/Select to ASCII	ASCII to EBCDIC, Any async to async	ASCII to EBCDIC
<b>Specific Device Emulated</b>	All Burroughs terminals	All Burroughs terminals	Depends on programming installed	IBM 3274 Model 51C, IBM 3276 Model 12
<b>Specific Functionality Provided</b>	Cluster controller	1	Vendor did not specify	Async ASCII-IBM 327X
<b>Virtual Screen Sizes Suppt. (char.)</b>	3,564	3,564	Vendor did not specify	1,920
<b>Command Port Supported</b>	Yes	Yes	No	Yes
<b>Host Side Specifications</b>				
<b>Specific Hosts Supported</b>	All Burroughs host from B-20 to A-17	All Burroughs from B20 to A17	All Asynchronous	IBM 43XX, IBM 8100, DEC PDP-11 or DEC VAX
<b>Host Operating Systems Supported</b>	Vendor did not specify	Vendor did not specify	All	DOS/VS, OS/VS, RSTS/E or VAX VMS
<b>No. Host Selections Suppt. Concurrently</b>	1 per terminal (18 maximum)	1 host line	Not applicable	1 SDLC and 1 async, 1 BSC, 1 async
<b>Connectors Supported</b>	Direct connection, Point-to-point on dial-up line, Multipoint on leased line	Direct connection, Point-to-point on dial-up line, Multipoint on leased line, TDI	In line device	Direct connection, Point-to-point on dial-up line, Multipoint on leased line
<b>Connection to Host via Controller</b>	Any Burroughs FEP	Any Burroughs FEP	Not applicable	IBM 3274, IBM 37XX
<b>Transmission Spec.-Host Line</b>				
<b>Maximum Transmission Speed (bps)</b>	19.2K	19.2K	19.2K	19.2K
<b>Synchronization</b>	Async/sync	Async/sync, TDI	Asynchronous	Async/sync
<b>Transmission Mode</b>	Half duplex	Half duplex	Full duplex	Full duplex
<b>Protocol Supported</b>	Poll/Select	Poll/Select	Vendor did not specify	BSC, SNA/SDLC
<b>Codes Supported</b>	ASCII	ASCII	All codes	ASCII, EBCDIC
<b>Interface</b>	One RS-232-C, TDI	One RS-232-C, TDI	2 RS-232-C: inline device	One RS-232-C, One RS-422
<b>Clocking</b>	Internal, External	Internal, External	Not applicable	Internal, External
<b>Terminal Side Spec.-Terminal Line</b>				
<b>Number and Type of Ports Provided</b>	3-Poll/Select, 7 Async ASCII	1 Poll/Select	One inline device	Up to 16 ports
<b>Specific Devices Supported</b>	All Burroughs and compatibles, any ASCII devices	All Burroughs and compatibles, any ASCII devices	Depends upon programming installed	All major CRT printers, PCs
<b>Connections Supported</b>	Direct connection, Dial-up Leased	Direct connection, Dial-up Leased	Not applicable	Direct connection, Dial-up, Remote, Leased
<b>Transmission Spec.-Terminal Line</b>				
<b>Maximum Transmission Speed (bps)</b>	19.2K	19.2K	19.2K	19.2K
<b>Maximum Aggregate Input Rate (bps)</b>	All ports at 19.2K	All ports at 19.2K	19.2K	76.8K
<b>Synchronization</b>	Async/sync	Async/sync	Asynchronous	Async
<b>Transmission Mode</b>	Half duplex, Full duplex	Half duplex, Full duplex	Full duplex	Full duplex
<b>Protocols Supported</b>	TTY II, Poll/Select	TTY II, Poll/Select	Async protocols	TTY II
<b>Codes Supported</b>	ASCII	ASCII	ASCII, EBCDIC	ASCII
<b>Interfaces Supported</b>	RS-232-C, TDI	TDI	RS-232-C	RS-232-C
<b>Diagnostics</b>	Self-test, Staus LEDs, Stand alone diagnostic routines	Self-test, Staus LEDs, Stand alone diagnostic routines	Self-test, Staus LEDs	Self-test, Staus LEDs, ASCII line tests
<b>Pricing and Availability</b>				
<b>Purchase (\$)</b>	1,795-4,400	1,295	495	3,055 for 4 ports
<b>Serviced by</b>	Memotec Data	Memotec Data	Method Systems	MICOM, auth. svcs. reps.
<b>Availability (days ARO)</b>	30	30	Stock	30
<b>Date of First Commercial Delivery</b>	1985	1985	1979	January 1983
<b>Comments</b>	Acts as remote front end processor for polling terminals	1group poll on composite poll select serves as remote front end	—	—



Vendor	Netlink, Inc.	Netlink, Inc.	Netlink, Inc.	Perle Systems, Inc.
<b>Product</b>	<b>SNA-Gate 3703-1</b>	<b>SNA-Gate 3703-1A</b>	<b>SNA-Gate 3703-1B</b>	<b>PERLE 350/294 Protocol Converter</b>
<b>Device Type</b>	Protocol converter	Protocol converter	Protocol converter	Protocol converter
<b>Conversion Performed</b>	ASCII to EBCDIC, BSC to SDLC, LUO/1/2/3, BSC 3271, 3275 to LU1/2.	ASCII to EBCDIC, LUO/1/2/3	BSC 3275 to LU1/2; BSC 1 RJE to LUO/1	ASCII to EBCDIC
<b>Specific Device Emulated</b>	Full func. PUT2 w/mult. LU types (8100)	Full func. PUT2 w/mult LU types (8100)	IBM 3274 Model 51C, IBM 3777, IBM Model 3276 Model 12, IBM 3770	IBM 5294 or IBM 5251 model 12
<b>Specific Functionality Provided</b>	LU type dynamic-based on bind	LU type dyn., based-on bind	2780/3780 3271/5377/-3274	ASCII-5250M11
<b>Virtual Screen Sizes Suppt. (char.)</b>	3278 (types 2,3,4,5)	3278 (types 2, 3, 4, 5)	480, 1,920, 3,564	1,920
<b>Command Port Supported</b>	Vendor did not specify	Vendor did not specify	Vendor did not specify	Vendor did not specify
<b>Host Side Specifications</b>				
Specific Hosts Supported	IBM 43XX, IBM 8100, IBM 370 VTAM, 8100 Tandem	IBM 43XX, IBM 8100, IBM 370 VTAM, 8100 Tandem	IBM 43XX, IBM 8100, 370/tandem	IBM System 34, 36, 38, AS400
Host Operating Systems Supported	MVS	MVS	MVS	SSP (34), SSP (36), CPF (38), OS400
No. Host Selections Suppt. Concurrently	40	40	40	1
Connectors Supported	Direct connection, point-to point on dial-up, Multipoint on leased line	Direct connection, multipoint on leased line, point-to-point on dial-up	Direct connection, Multipoint on leased line, point-to-point on dial-up	Digital
Connection to Host via Controller	IBM 3705, 3725 or equivalent	IBM 3705, 3725 or equivalent	IBM 37XX, Amdahl, Comten	IS Controller
<b>Transmission Spec.-Host Line</b>				
Maximum Transmission Speed (bps)	64K	64K	64K	19.2K
Synchronization Transmission Mode Protocol Supported	Synchronous Half/full duplex SNA/SDLC	Synchronous Half/full duplex SNA/SDLC	Synchronous Half/full duplex SNA/SDLC	Synchronous Half/full duplex SNA/SDLC
Codes Supported	EBCDIC	EBCDIC	EBCDIC	EBCDIC
Interface	1 RS-232-C, V.35, X.21	1 RS-232-C, V.35, X.21	1 RS-232-C, V.35, X.21	One RS-232-C
Clocking	Internal, External	Internal, External	Internal, External	Internal, External
<b>Terminal Side Spec.-Terminal Line</b>				
Number and Type of Ports Provided	2-8 BSC, 2-16 async	2-16 async	2-8 BSC	4, 8, 12, 16, or 20
Specific Devices Supported	Any terminal supporting cursor addressing; software-controlled via host	Any terminal supporting cursor addressing; software controlled via host	Contact vendor	Most ASCII devices & PC
Connections Supported	Direct connection, Point-to point, dial-up	Point-to-point	Direct connection, remote, dial-up, leased, point-to-point	Direct connection, Dial-up, Remote, Leased
<b>Transmission Spec.-Terminal Line</b>				
Maximum Transmission Speed (bps)	96K	96K	96K	19.2K
Maximum Aggregate Input Rate (bps)	20K	20K	10K	19.2K/port
Synchronization Transmission Mode Protocols Supported	Async/sync Half/full duplex TTY ii, BSC, 327X, 2780, 3780, 2700, Burr. Poll/Sel., 2740-1, TTY	Asynchronous Half/full duplex Xon/Xoff	Synchronous Half duplex BSC	Asynchronous Full duplex Async
Codes Supported	ASCII, EBCDIC	ASCII, EBCDIC	ASCII, EBCDIC	ASCII
Interfaces Supported	RS-232-C	RS-232-C	RS-232-C	RS-232-C, RS422
<b>Diagnostics</b>	Self-test, status LEDs,	Self-test, status LEDs	Self-test, status LEDs	Self-test, Staus LEDs, Async diagnostic port
<b>Pricing and Availability</b>				
Purchase (\$)	650-10,000	4,000-6,000	4,750-6,250	3,995-up
Serviced by	Contact vendor	Contact vendor	Contact vendor	Perle Systems, Inc.
Availability (days ARO)	10-14	10-14	10-14	Immediate delivery
Date of First Commercial Delivery	July 1982	February 1986	December 1986	1984
<b>Comments</b>	3-year warranty; expandable by 2 port increments; PC file transfer	3 year warranty; expandable by 2 port increments; PC file transfer	3 year warranty; expandable by 2 port increments; PC file transfer	1 year warranty-first year express, warranty optional, 5 model avail. in prod. line

Vendor	Perle Systems, Inc.	Perle Systems, Inc.	Perle Systems, Inc.	Protocol Computers, Inc.
<b>Product</b>	PERLE 394 Remote Controller	PERLE 394E Remote Controller	PERLE Model 3 Protocol Converter	PCI SmartNet 276
<b>Device Type</b>	Remote Communications Controller	Expandable Remote Communications Controller	Protocol converter	Vendor did not specify
<b>Conversion Performed</b>	None	None	ASCII to EBCDIC	3270 ASCII/SNA
<b>Specific Device Emulated</b>	IBM 5394 or 5294	IBM 5394 or 5294	5251M11 or 5291	3270
<b>Specific Functionality Provided</b>	Vendor did not specify	Vendor did not specify	ASCII-5250	Async 3270-IBM 3270 SNA host
<b>Virtual Screen Sizes Suppt. (char.)</b>	1,920	1,920	1,920	Vendor did not specify
<b>Command Port Supported</b>	Vendor did not specify	Vendor did not specify	Vendor did not specify	Yes
<b>Host Side Specifications</b>				
Specific Hosts Supported	IBM System 36, 38, AS400	IBM System 36, 38, AS400	IBM 34, 36, 38, & AS400	IBM SNA hosts
Host Operating Systems Supported	SSP (36 ), CPF (38), OS400	SSP (36), CPF (38), OS400	SSP (34), SSP (36), CPF (38), OS400	Vendor did not specify
No. Host Selections Suppt. Concurrently	1	1	1	Vendor did not specify
Connectors Supported	Direct connection, Point-to-point on dial-up line, Multipoint on leased line	Direct connection, Point-to-point on dial-up line, Multipoint on leased line	Direct connection, Point-to-point on dial-up line	Remote
Connection to Host via Controller	IS Controller	IS Controller	1	Vendor did not specify
<b>Transmission Spec.-Host Line</b>				
Maximum Transmission Speed (bps)	64K	64K	1M	19.2K
Synchronization	Synchronous	Synchronous	Synchronous	Vendor did not specify
Transmission Mode	Half/full duplex	Half/full duplex	Full duplex	Vendor did not specify
Protocol Supported	SNA/SDLC	SNA/SDLC	SNA/SDLC	Vendor did not specify
Codes Supported	EBCDIC	EBCDIC	EBCDIC	Vendor did not specify
Interface	One RS-232-C	One RS-232-C	Twinax	32 RS-232-C ports
Clocking	Internal, External	Internal, External	Host	Vendor did not specify
<b>Terminal Side Spec.-Terminal Line</b>				
Number and Type of Ports Provided	1-8	1-80 for 5394 emulation, 1-64 for 5294	1, 3, 5, or 7 ports	32
Specific Devices Supported	IBM twinax and plug compatibles	IBM twinax and plug compatibles	Most ASCII devices & PC	IBM, DEC, Lear Siegler, ADDS, DG, Televideo
Connections Supported	Direct connection, Dial-up Remote, Leased, Multi-drop	Direct connection, Dial-up Remote, Leased, Multi-drop	Direct connection, Via controller	Vendor did not specify
<b>Transmission Spec.-Terminal Line</b>				
Maximum Transmission Speed (bps)	1M	1M	38.4K	Vendor did not specify
Maximum Aggregate Input Rate (bps)	Vendor did not specify	Vendor did not specify	38.4K/port	Vendor did not specify
Synchronization	Synchronous	Synchronous	Async/sync	Vendor did not specify
Transmission Mode	Full duplex	Full duplex	Full duplex	Vendor did not specify
Protocols Supported	SDLE	SDLE	Async	Vendor did not specify
Codes Supported	EBCDIC	EBCDIC	ASCII	Vendor did not specify
Interfaces Supported	Twinax	Twinax	RS-232-C, Parallel	Vendor did not specify
<b>Diagnostics</b>	Self-test, Staus LEDs, Async Diagnostic Port	Self-test, Staus LEDs Async diagnostic port	Self-test, Staus LEDs	Vendor did not specify
<b>Pricing and Availability</b>				
Purchase (\$)	2495	3595-up	1,995-up	8,570 (32 ports)
Serviced by	Perle Systems, Inc.	Perle Systems, Inc.	Perle Systems, Inc.	PCI
Availability (days ARO)	Immediate delivery	Immediate delivery	Immediate delivery	Contact vendor
Date of First Commercial Delivery	August 14, 1989	April, 1988	1985	1985
<b>Comments</b>	1 year warranty- first year express, warranty optional	1 year warranty; first year express warranty opti.; 10 models in product line	IBM 5294/5394/5251 Model 12, Perle 8294/394/394E; 1 year warranty	PCI offers desktop versions of the 276

Vendor	Protocol Computers, Inc.	Protocol Computers, Inc.	Renex Corp.	Renex Corp.
<b>Product</b>	PCI SmartNet 376	PCI SmartNet 5250/T	Renex Connect	Renex PCM
<b>Device Type</b>	Vendor did not specify	Vendor did not specify	PAD	Vendor did not specify
<b>Conversion Performed</b>	Async access to 3270S via X.25	Vendor did not specify	ASCII-X.25, ASCII-3270, ASCII-5250	ASCII-3270 Coax
<b>Specific Device Emulated</b>	IBM 3X74/3X76	IBM 5291, 5292, 5256, 5219, 3812	3274-51C, 5274, 3767	IBM 3180, IBM 3270PC
<b>Specific Functionality Provided</b>	Async access-3270 based applications	ASCII devices-IBM Twinax ports	ASCII-IBM 3270, 5250, 3767	Async ASCII-3270 Coax
<b>Virtual Screen Sizes Suppt. (char.)</b>	Vendor did not specify	Vendor did not specify	32 x 80, 43 x 80, 62 x 160	Vendor did not specify
<b>Command Port Supported</b>	Yes	Yes	Yes	Yes
<b>Host Side Specifications</b>				
Specific Hosts Supported	SNA host	System 34/36/38	370, S/36, S/38, AS400	IBM 370, 30XX
Host Operating Systems Supported	Vendor did not specify	Vendor did not specify	Vendor did not specify	Vendor did not specify
No. Host Selections Suppt. Concurrently	Vendor did not specify	Vendor did not specify	3 BSC/SDLC	1 Coax
Connectors Supported	Via X.25 port	Twinax interface	Vendor did not specify	Vendor did not specify
Connection to Host via Controller	Not applicable	Connects to IBM 5294	64K	IBM 3174
<b>Transmission Spec.-Host Line</b>				
Maximum Transmission Speed (bps)	19.2K	19.2K	Vendor did not specify	2M
Synchronization Transmission Mode Protocol Supported	Vendor did not specify Vendor did not specify HDLC	Vendor did not specify Vendor did not specify Vendor did not specify	Vendor did not specify Vendor did not specify Vendor did not specify	Vendor did not specify Vendor did not specify Coax 3270
Codes Supported	Vendor did not specify	Vendor did not specify	Vendor did not specify	Vendor did not specify
Interface	Vendor did not specify	Vendor did not specify	3 RS-232 or V.35	RG-62 Coax
Clocking	Vendor did not specify	Vendor did not specify	Vendor did not specify	Vendor did not specify
<b>Terminal Side Spec.-Terminal Line</b>				
Number and Type of Ports Provided	Up to 16	Up to 7 asynchronous	2 async plus 64 X.25 channels	8 asynchronous
Specific Devices Supported	IBM, DEC, ADDS, Lear Siegler, DG, Freedom, Hazeltine, HP, Televideo	IBM, DEC, Lear Siegler, ADDS, Televideo, Wyse	Over 100 terminals & PCs	Over 100 terminals & PCs
Connections Supported	Vendor did not specify	Vendor did not specify	Wide area networks	Vendor did not specify
<b>Transmission Spec.-Terminal Line</b>				
Maximum Transmission Speed (bps)	19.2K	Vendor did not specify	19.2K	19.2K
Maximum Aggregate Input Rate (bps)	Vendor did not specify	Vendor did not specify	38.4K	38.4K
Synchronization Transmission Mode Protocols Supported	Vendor did not specify Vendor did not specify LAP B	Vendor did not specify Vendor did not specify Vendor did not specify	Vendor did not specify Vendor did not specify ASCII async	Vendor did not specify Vendor did not specify Async ASCII
Codes Supported	Vendor did not specify	Vendor did not specify	Vendor did not specify	Vendor did not specify
Interfaces Supported	Vendor did not specify	RS-422	Vendor did not specify	Vendor did not specify
<b>Diagnostics</b>	Vendor did not specify	Vendor did not specify	Internal line monitoring, error statistic display	Line monitoring, error statistics display
<b>Pricing and Availability</b>				
Purchase (\$)	3,275 (8 ports)	2,925	695	5495
Serviced by	PCI	PCI	Contact vendor	Renex
Availability (days ARO)	Contact vendor	Contact vendor	Contact vendor	Contact vendor
Date of First Commercial Delivery	Contact vendor	1987	Contact vendor	June, 1989
<b>Comments</b>	PCI offers desktop, eight-port models	—	—	—

Vendor	Renex Corp.	Shaffstall Corp.	Trax Softworks, Inc.	Tri-Data Corp.
<b>Product</b>	TMS1, TMS2	Shaffstall 6000	VM Dial Out - Full Screen Option	Netway 1000, Netway 2000
<b>Device Type</b>	Vendor did not specify	Code converter	Terminal emulator	SNA Gateway
<b>Conversion Performed</b>	ASCII-3270, ASCII-5250, ASCII-3767	ASCII to EBCDIC, BSC to SDLC, proprietary	EBCDIC to ASCII	ASCII to EBCDIC
<b>Specific Device Emulated</b>	3278-41C, 5294, 3767	IBM 3274 Model 51C	any ASCII terminal	IBM 3274 Model 51C
<b>Specific Functionality Provided</b>	ASCII-IBM 5250, 3270, 3767	Async-sync	Vendor did not specify	Macintosh or IBM PC-IBM 3270 SNA
<b>Virtual Screen Sizes Suppt. (char.)</b>	32 x 80, 43 x 80, 62 x 160	1,920	3,564	3270 model 2, 3, 4, 5
<b>Command Port Supported</b>	Yes	No	Yes	Yes
<b>Host Side Specifications</b>				
Specific Hosts Supported	370, S/36, S/38, AS400	DEC PDP-11, DEC VAX	IBM 43XX, DEC PDP-11 or DEC IBM 43XX, IBM 30XX VAX	
Host Operating Systems Supported	Vendor did not specify	DOS/VS	RST/E or VAX VMS, VM/CMS	TSO, MVS, CICS, VM
No. Host Selections Suppt. Concurrently	2 or 4 BSC or HDLC	Vendor did not specify	No limit	1 SDLC
Connectors Supported	Vendor did not specify	Direct connection, point-to-point on dial-up line	Direct connection, Point-to-point on dial-up line, Multipoint on leased line	Point-to-point on dial-up line, Multipoint on leased line
Connection to Host via Controller	Vendor did not specify	IBM 37XX	IBM 3274, IBM 37XX	Netway 1000 or Netway 2000
<b>Transmission Spec.-Host Line</b>				
Maximum Transmission Speed (bps)	64K	19.2K	Vendor did not specify	Netway 1000-19.2K, Netway 2000-56K
Synchronization	Vendor did not specify	Async/sync	Asynchronous	Synchronous
Transmission Mode	Vendor did not specify	Full duplex	Full duplex	Full duplex
Protocol Supported	Vendor did not specify	BSC, SNA/SDLC	Asynchronous	SNA/SDLC
Codes Supported	Vendor did not specify	ASCII, EBCDIC, DX, DCA, DEF	ASCII, EBCDIC	EBCDIC
Interface	4 RS-232 or V.35	1 RS-232-C	One RS-232-C	RS-232-C, V.35
Clocking	Vendor did not specify	External	Internal	External
<b>Terminal Side Spec.-Terminal Line</b>				
Number and Type of Ports Provided	32 async	Four ports and printer port	any no. of 3270 terminals	1000-16 log. units, 2000-64 log. units
Specific Devices Supported	Over 100 terminals & PCs	Vendor did not specify	any 3270 compatible device	IBM 3270 model 2, 3, 4, 5; IBM 3287 printer
Connections Supported	Vendor did not specify	Direct connection, dial-up	Direct connection, Dial-up, Remote, Leased	Dial-up, Remote, Leased
<b>Transmission Spec.-Terminal Line</b>				
Maximum Transmission Speed (bps)	19.2K	19.2K	1M	Vendor did not specify
Maximum Aggregate Input Rate (bps)	38.4K	9600	3M	Vendor did not specify
Synchronization	Vendor did not specify	Synchronous	Synchronous	Vendor did not specify
Transmission Mode	Vendor did not specify	Half duplex	Full duplex	Vendor did not specify
Protocols Supported	ASCII Async	TTY II, BSC, 2770, 2780, 3780	BSC, SDLC	Vendor did not specify
Codes Supported	Vendor did not specify	ASCII, EBCDIC	ASCII, EBCDIC	Vendor did not specify
Interfaces Supported	Vendor did not specify	RS-232-C	RS-232-C, RS-449, channel	LAN
<b>Diagnostics</b>	Line monitoring, error statistics, display	Self-test	Self-test, Staus LEDs, ASCII line tests, built-in data scope	Self-test, Staus LEDs
<b>Pricing and Availability</b>				
Purchase (\$)	7495-16245	5,500 to 20,000	9,000-20,000	3,995 and 9,995
Serviced by	Renex	TRW Inc.	Trax Softworks	Contact vendor
Availability (days ARO)	Contact vendor	30	Contact vendor	5
Date of First Commercial Delivery	1985	August 1987	December 1982	1987 and 1989
<b>Comments</b>	—	The 6000 is a data conversion system for data transmission	Any number of 3270-type terminals can access VM-Dial-Out	—

Vendor	Unisync Inc.	Unisync Inc.	Wall Data Inc.	Western DataCom
<b>Product</b>	HYBRID BRIDGE	UNILINC	DCF II 3270	DataCom 1000
<b>Device Type</b>	Protocol converter	Terminal emulator	Protocol converter	Async protocol converter
<b>Conversion Performed</b>	Burroughs Poll/Selsec to ASCII ASCII to EBCDIC, BSC to SDLC Honeywell, Univac, DEC	Burroughs Poll/Select to ASCII, ASCII to EBCDIC, BSC to SDLC	ASCII to EBCDIC	Vendor did not specify
<b>Specific Device Emulated</b>	1	1	IBM 3274 Model 51C	Vendor did not specify
<b>Specific Functionality Provided</b>	All of above	All of above	Async-3270 SDLC or BSC	Vendor did not specify
<b>Virtual Screen Sizes Suppt. (char.)</b>	1,920	1,920	1,920	480
<b>Command Port Supported</b>	Yes	Yes	Yes	Yes
<b>Host Side Specifications</b>				
Specific Hosts Supported	IBM 43XX, IBM 8100, DEC PDP-11 or DEC VAX, Honeywell Burroughs, Univac	IBM 43XX, IBM 8100, DEC PDP- 11 or DEC VAX, Honeywell, Burroughs, Univac	IBM 43XX, 3270 types	Vendor did not specify
Host Operating Systems Supported	Direct connection, Point-to- point on dial-up line, Multipoint on leased line	DOS/VS, OS/VS, RSTS/E or VAX VMS	VM/CMS, TSO	Vendor did not specify
No. Host Selections Suppt. Concurrently	Up to 8 in any combinations	Up to 8 lines in any combination	Any comb. SDLC, BSC, Async	Vendor did not specify
Connectors Supported	Direct connection, Point-to- point on dial-up line, Multipoint on leased line	Direct connection, Point-to- point on dial-up line, Multipoint on leased line	Point-to-point on dial-up line Direct thru RS-232-C cabling	Direct connection, point-to-point on dial-up line
Connection to Host via Controller	IBM 3274, IBM 270X, Burroughs ET1100, Honeywell VIP7700, Univac UTS 20-400	IBM 3274, IBM 270X, IBM 37XX, Burroughs ET1100, Honeywell, VIP7700, Univac UTS 20-400	Emulates 3174, 3274 controller	Vendor did not specify
<b>Transmission Spec.-Host Line</b>				
Maximum Transmission Speed (bps)	64K	64K	Vendor did not specify	9600
Synchronization	Async/sync	Async/sync	Synchronous	Asynchronous
Transmission Mode	Half/full duplex	Half/full duplex	Half duplex	Half/full duplex
Protocol Supported	BSC, SNA/SDLC, X.25, Poll/ Select, Uniscope VIP7700	BSC, SNA/SDLC, Uniscope, Poll/Select, VIP7700, X.25	BSC, SNA/SDLC, Async	Vendor did not specify
Codes Supported	ASCII, EBCDIC	ASCII, EBCDIC	ASCII, EBCDIC	ASCII, EBCDIC
Interface	RS-232-C, V.35, or RS-422	8 RS-232, or 8 V.35, or 8 RS422	One RS-232-C	1 RS-232-C
Clocking	Internal, External	Internal, External	Internal	Internal, data derived, external
<b>Terminal Side Spec.-Terminal Line</b>				
Number and Type of Ports Provided	Up to 8 async or 8 sync ports	Up to 8 async or 8 sync	Up to 17 async trmls., PC, or prntr. pts.	4 async
Specific Devices Supported	IBM 3270, Burroughs ET1100, Honeywell VIP 7700, Uniscope, PC XT, PC AT, DEC VT52/100/220	IBM 3270, Burroughs ET1100, Honeywell VIP 7700, Uniscope, PC XT, PC AT, DEC, VT52/100/220	PC XT, PC AT, 286, 386, PS/2	Most async, ASCII
Connections Supported	Direct connection, Dial- up, Remote, Leased	Direct connection, Dial-up Leased	Direct connection, Dial-up, Remote, Leased	Direct connection, dial-up
<b>Transmission Spec.-Terminal Line</b>				
Maximum Transmission Speed (bps)	64K	64K	19.2K	Vendor did not specify
Maximum Aggregate Input Rate (bps)	64K	1.024M	Vendor did not specify	Vendor did not specify
Synchronization	Async/sync	Async/sync	Asynchronous	Asynchronous
Transmission Mode	Half/full duplex	Half/full duplex	Half duplex	Half/full duplex
Protocols Supported	TTY II, BSC, SNA Poll/Select VIP7700, Async Uniscope, X.25	TTY II, BSC	TTY II, BSC	Vendor did not specify
Codes Supported	ASCII, EBCDIC	ASCII, EBCDIC	ASCII, EBCDIC	ASCII
Interfaces Supported	RS-232-C, RS-422, V.35	RS-232-C, RS-422, V.35	RS-232-C	RS-232-C
<b>Diagnostics</b>	Self test	Self-test	Self-test	Self-test
<b>Pricing and Availability</b>				
Purchase (\$)	6,250 base price 2 lines	6,250 base price 2 lines	3,995-5,995	875
Serviced by	Unisync, Inc.	Unisync, Inc.	Wall Data	Factory
Availability (days ARO)	1 week	1 week	2 weeks	14
Date of First Commercial Delivery	11/85	February, 1989	Contact vendor	1982
<b>Comments</b>	13780, Burroughs Poll/ Select, Honeywell VIP 7700, DEC VT52/100/220, UTS 20/400	1Honeywell VIP 7700, DEC VT52/100/220, Univac UTS 20-400	Can simultaneously support SNA, BSC, and async in one unit	—



# Code, Speed, Interface, and Async /Sync Converters

## Comparison Column Entry Descriptions

**Code, Speed, Interface, and Async/Sync Converters** include a number of devices that handle conversions from one code, interface, speed, or synchronization to another. These units are generally less sophisticated devices than those represented in the other category.

The following text briefly describes the column entries in the order in which they appear in the columns.

### **Code, Speed, Interface, and Async/Sync Converters**

**Model.** This entry lists the exact name and model number of the product.

**Device Type.** In this entry, vendors indicated if the device is an interface converter, async/sync converter, code and speed converter, or another type.

**Conversion Performed.** Responses in this category include RS-232-C to

V.35; RS-232-C to RS-422; and AT&T 301/303 to V.35).

### **Transmission Specifications**

**Maximum Transmission (bps).** Vendors listed the maximum transmission speed in bits per second.

**Synchronization.** The possible responses were synchronous or asynchronous.

**Transmission Mode.** The devices operate in either half-duplex or full-duplex mode.

**Codes Supported.** Vendors indicated ASCII, Baudot, EBCDIC, or Other.

**Interface.** Vendors selected from a choice of

RS-232-C, V.24, V.28, V.35, Current Loop, or Other.

### **Specific Devices Supported Connections Supported.**

The possibilities here were Direct, Dial-Up, Leased Lines, and Other.

**Diagnostics.** The types of diagnostics offered in the questionnaire to vendors were Status LEDs, Remote Tests, Loopbacks, and Other.

### **Pricing and Availability**

The explanations for the entries **Purchase, Serviced By, Availability (days ARO), Date of First Commercial Delivery, and Number Installed to Date** are the same as those for Conversion Systems/ Terminal Controllers.

**Protocol Conversion  
Systems:  
Comparison Columns  
Code, Speed, Interface, and  
Async/Sync Converters**

Vendor Name	Adacom	Adacom	Adacom	Agile
Product Name	CP-100	CP-101	CP-401	AT02
Device Type	Interface converter, code and speed converter	Interface converter, code and speed converter	Interface converter, code and speed converter	Interface converter, code and speed converter, async/sync converter
Conversion Performed	3270 Type A Coax to RS-232	RS-232 to 3270 Type A coax	RS-232 to 3270 Type A coax	Coax 3270 to RS-232/Centronics
<b>Transmission Specifications</b>				
Maximum Transmission Speed (bps)	19.2K	19.2K	19.2K	2.35 mhz <sup>1</sup>
Synchronization	Asynchronous, synchronous	Asynchronous, synchronous	Asynchronous, synchronous	Synchronous
Transmission Mode	Full duplex	Full duplex	Full duplex	Full duplex
Codes Supported	IBM Proprietary	IBM proprietary	IBM proprietary	ASCII, EBCDIC
Interface	RS-232-C	RS-232-C	RS-232-C	RS-232-C, Centronics coax 3270
<b>Specific Devices Supported</b>	IBM 3101, 3161, VT-100, Televideo 910	IBM 3X78/9, 3191, 3192	IBM 3X78/9, 3191, 3192	ASCII printers
<b>Connections Supported</b>	Direct, leased lines, dial-up	Direct, leased lines, dial-up	Direct, leased lines, dial-up	Direct
<b>Diagnostics</b>	Status LEDs	Status LEDs	Status LEDs	Status LEDs
<b>Pricing and Availability</b>				
Purchase (\$)	1,000	800	1,800	950
Serviced by	Adacom	Adacom	Adacom	Contact vendor
Availability (days ARO)	30	30	30	7
Date of First Commercial Delivery	June, 1986	June, 1986	June, 1987	1985
Number Installed to Date	1680	2,570	350	20,000
<b>Comments</b>	Can emulate IBM 3178	May serve as code converter to emulate VT-200 or HP-2392A	Has 4 ports to support 4 IBM displays or printers. may emulate VT-100 or HP-2392A	<sup>1</sup> Accepts IBM data and sends to printer at 19.2K bps



Vendor	Agile	Agile	Agile	Astrocom Corp.
<b>Product</b>	AT02G	AT04	AT04G	ATS-1
<b>Device Type</b>	Interface converter, code and speed converter, async/sync converter	Interface converter, code and speed converter, async/sync converter	Interface converter, code and speed converter, async/sync converter	Async/sync converter
<b>Conversion Performed</b>	Coax 3270 to RS-232/Centronics	IBM Twinax to RS-232/Centronics	IBM Twinax to RS-232/Centronics	Asynchronous to synchronous
<b>Transmission Specifications</b>				
Maximum Transmission Speed (bps)	2.35 mhz <sup>1</sup>	3 mhz <sup>1</sup>	3 mhz <sup>1</sup>	19.2K
Synchronization	Synchronous	Synchronous	Synchronous	Synchronous
Transmission Mode	Full duplex	Full duplex	Full duplex	Full duplex
Codes Supported	ASCII, EBCDIC	ASCII, EBCDIC	ASCII, EBCDIC	ASCII
Interface	RS-232-C, Centronics coax 3270	RS-232-C, Centronics IBM Twinax	RS-232-C, Centronics IBM Twinax	RS-232-C
<b>Specific Devices Supported</b>	ASCII printers	ASCII printers	ASCII printer	Vendor did not specify
<b>Connections Supported</b>	Direct	Direct	Direct	Vendor did not specify
<b>Diagnostics</b>	Status LEDs, remote tests	Status LEDs, remote tests	Status LEDs, remote tests	Status LEDs
<b>Pricing and Availability</b>				
Purchase (\$)	1,500	950	1,500	395
Serviced by	Contact vendor	Contact vendor	Contact vendor	Astrocom
Availability (days ARO)	7	7	7	Immediate
Date of First Commercial Delivery	1987	1985	1987	Vendor did not specify
Number Installed to Date	5,000	15,000	3,000	Vendor did not specify
<b>Comments</b>	<sup>1</sup> Accepts IBM data rate and sends to printer at 19.2K bps	<sup>1</sup> Accepts IBM data rate and sends to printer at 19.2K bps	<sup>1</sup> Accepts IBM data rate and sends to printer at 19.2K bps	—

Vendor	Carlisle Systems Group	Computer Peripheral Systems, Inc.	Comstat Datacomm Corp.	Datagraf, Inc.
<b>Product</b>	93729 A/S Converter	SAT-19	C88000/6	Asy.ASCII/RJE batch HASP or 3770 SNA or 3780
<b>Device Type</b>	Async/sync converter, speed converter, switched carrier emulator	Async/sync converter	Concentrator and converter	Interface converter, code and speed converter, async/sync converter
<b>Conversion Performed</b>	Async DTE to sync modem	RS-232 sync to RS-232 and TDI async	Synchronous to asynchronous (any combination)	RS-232-C to RS-232-C or V.35 or RS-422
<b>Transmission Specifications</b>				
Maximum Transmission Speed (bps)	38.4K	38.4K	56K	19.2K standard; 56K, 64K optional
Synchronization	Synchronous	Asynchronous, synchronous	Asynchronous, synchronous	Asynchronous, synchronous
Transmission Mode	Half duplex, full duplex	Half duplex	Half duplex	Half duplex, full duplex
Codes Supported	ASCII, Baudot	ASCII	ASCII	ASCII, EBCDIC
Interface	EIA-232D	RS-232-C, V.24	RS-232-C, V.35, TDI	RS-232-C, V.35, V.28
<b>Specific Devices Supported</b>	Async DTE, async or sync DCE	Any Burroughs Poll/Select device	ET1100, T27 terminals & Unisys CPUs	Vendor did not specify
<b>Connections Supported</b>	Direct, leased lines, dial-up	Direct, leased lines, dial-up	Direct, leased lines, dial-up, TDI direct connect	Direct, leased lines, dial-up
<b>Diagnostics</b>	Status LEDs, self-test	Status LEDs	Status LEDs, remote tests, control port	Status LEDs, loopbacks, remote tests
<b>Pricing and Availability</b>				
Purchase (\$)	425	875	5,485	2,190-3,850 quantity discounts available
Serviced by	Contact vendor	Computer Peripheral Systems	ComStat Datacomm Corp.	Datagraf
Availability (days ARO)	30	Immediate	10	14
Date of First Commercial Delivery	1985	1985	1987	1985
Number Installed to Date	3,000	Thousands	180	Contact vendor
<b>Comments</b>	6K buffer for speed change, daisy chainable	Intelligent device with RAM-6809 microprocessor	Expands from 4 to 6 ports with menu driven parameter control; each port is DCE/DTE/TDI selectable; supports dial-in security and multiple host switching	Parallel interface in lieu of async ASCII ports; other batch protocols; also supports Burroughs 5000/7000 systems

**Protocol Conversion  
Systems:  
Comparison Columns  
Code, Speed, Interface, and  
Async/Sync Converters**

Vendor	Datagraf, Inc.	Datagraf, Inc.	Datagraf, Inc.	Datagraf, Inc.
<b>Product</b>	Datagraf BUMP ports ASCII/Honeywell VIP 77/7800	Datagraf BUMP ports ASCII/IBM 5394 SNA-SDLC emulation	Datagraf BUMP ports ASCII/Sperry UTS-20/40	Datagraf BUMP ports asy.ASCII/Burroughs (BPS)
<b>Device Type</b>	Interface converter, code and speed converter, async/sync converter	Interface converter, code and speed converter, async/sync converter	Interface converter, code and speed converter, async/sync converter	Interface converter, code and speed converter, async/sync converter
<b>Conversion Performed</b>	RS-232-C to RS-232-C or V.35 or RS-422	RS-232-C to RS-232-C or V.35 or RS-422	RS-232C to RS-232-C or V.35 or RS-422	RS232-C to RS232-C or V.35 or RS-422
<b>Transmission Specifications</b>				
Maximum Transmission Speed (bps)	Std. 19.2K; optional 56K or 64K	Std. 19.2K; optional 56K or 64K	Standard 19.2K; optional 56K or 64K	Std 19.2K; optional 56K or 64K
Synchronization	Asynchronous, synchronous	Asynchronous, synchronous	Asynchronous, synchronous	Asynchronous, synchronous
Transmission Mode	Half duplex, full duplex	Half duplex, full duplex	Half duplex, full duplex	Half duplex, full duplex
Codes Supported	ASCII, EBCDIC	ASCII, EBCDIC	ASCII, EBCDIC	ASCII, EBCDIC
Interface	RS-232-C, V.35, V.28	RS-232-C, V.35, V.28	RS-232-C, V.35, V.28	RS-232-C, V.35, V.28
<b>Specific Devices Supported</b>	Vendor did not specify	Vendor did not specify	Vendor did not specify	Vendor did not specify
<b>Connections Supported</b>	Direct, leased lines, dial-up	Direct, leased lines, dial-up	Direct, leased lines, dial-up	Direct, leased lines, dial-up
<b>Diagnostics</b>	Status LEDs, loopbacks, remote tests	Status LEDs, loopbacks, remote tests	Status LEDs, loopbacks, remote tests	Status LEDs, loopbacks, remote tests
<b>Pricing and Availability</b>				
Purchase (\$)	2,190-\$4,785 Quantity discounts available Datagraf	2,300-5,060 Quantity discounts available Datagraf	2,285- \$4,985 quantity discounts available Datagraf	2,190-\$4,785
Serviced by				Datagraf
Availability (days ARO)	14	14	14	14
Date of First Commercial Delivery Number Installed to Date	1987 Several	1989 Several	1988 Several	1986 Vendor did not specify
<b>Comments</b>	Can switch between async ASCII character processor and Datagraf converter to H-VIP 77/7800	Can switch between async ASCII character processor and Datagraf converter to remote 5394 cluster controller emulation plus file transfer	Can switch between ASCII async character processor (DEC, DGC, HP ) and the Datagraf converter to S-UTS 20/40 converter	Can switch between an ASCII character processor (i. e. DEC, DGC, HP, etc.) and the Datagraf converter to BPS.

Vendor	Datagraf, Inc.	DCC Corp.	Develcon Electronics Ltd.	Gandalf Data, Inc.
<b>Product</b>	Datagraf BUMP ports asy.ASCII/IBM 3274 emul/bisyn	ECS-21	Develnet	AIM 2086
<b>Device Type</b>	Interface converter, code and speed converter, async/sync converter	RS-232 to 20mA line driver	Interface converter, code and speed converter, async/sync converter	Subscriber interface model for data PBXs
<b>Conversion Performed</b>	RS-232-C to RS-232-C or V.35 or RS-422	RS-232 to 20mA	See comments	Speed, flow control; parity; character format
<b>Transmission Specifications</b>				
Maximum Transmission Speed (bps)	19.2K standard; 56K, 64K optional	Vendor did not specify	38.4K aync, 128K sync	Vendor did not specify
Synchronization	Asynchronous, synchronous	Asynchronous	Asynchronous, synchronous	Asynchronous
Transmission Mode	Half duplex, full duplex	Half duplex, full duplex	Half duplex, full duplex	Full duplex
Codes Supported	ASCII, EBCDIC	Any	ASCII, EBCDIC	ASCII
Interface	RS-232-C, V.35, V.28	RS-232-C, 20mA	RS-232-C, V.35, 449	RS-232-C
<b>Specific Devices Supported</b>	Vendor did not specify	Any RS-232 or 20mA interfaced device	Vendor did not specify	Async DTE or DCE equipment
<b>Connections Supported</b>	Direct, leased lines, dial-up	Direct, leased lines	Direct, leased lines, dial-up	Direct
<b>Diagnostics</b>	Status LEDs, loopbacks, remote tests	Status LEDs, loopbacks	Status LEDs, loopbacks, remote tests	Status LEDs, loopbacks, remote tests
<b>Pricing and Availability</b>				
Purchase (\$)	2,190-4,785 quantity discounts available	125	Contact vendor	Contact vendor
Serviced by	Datagraf	DCC Corp.	Develcon	Gandalf
Availability (days ARO)	14	30	30	15
Date of First Commercial Delivery Number Installed to Date	1984 Contact vendor	1986 1,380	1984 100	Vendor did not specify Vendor did not specify
<b>Comments</b>	Async ASCII terminal switching between async ASCII character processor and Datagraf converter to 3274 SNA-SDLC emulation	LED display or data, control, and line conditions; end to end control signal path; DCE/DTC configurable; plug connections to all terminals	Conversion: RS-232 to V.35 and RS422; TCP/IP Ethernet to X.25, Async; 3270BSC/SNA (all bidirectional); 7 bit to 8 bit (bi directional); all speeds and parity conversion	Supports data PBX or STARMaster network processor

Vendor	Gandalf Data, Inc.	Gandalf Data, Inc.	Gandalf Data, Inc.	General DataComm, Inc.
<b>Product</b>	IFC 201/202/203/204	IFC 205/206	IFC 207/208/209	ASC-1
<b>Device Type</b>	Interface converter	Interface converter	Interface converter	Async/sync converter
<b>Conversion Performed</b>	RS-232-C to RS-422/423 and vice-versa	RS-232-C to V.35 and vice-versa	RS-232-C to AT&T 300 & vice-versa	Asynchronous to synchronous
<b>Transmission Specifications</b>				
Maximum Transmission Speed (bps)	20K; 2M(RS-422)	20K	48K	9600
Synchronization	Asynchronous	Asynchronous	Asynchronous	Asynchronous, synchronous
Transmission Mode	Full duplex	Full duplex	Full duplex	Half duplex, full duplex
Codes Supported	All	All	All	ASCII
Interface	RS-232-C, RS-422, RS-423	RS-232-C, V.35	RS-232-C, V.35, AT&T 300	RS-232-C, V.28
<b>Specific Devices Supported</b>	DCE/DTE	DCE/DTE	DCE/DTE	Asynchronous terminal
<b>Connections Supported</b>	Direct	Direct	Direct	Direct, dial-up
<b>Diagnostics</b>	None	None	None	Loopbacks
<b>Pricing and Availability</b>				
Purchase (\$)	425	425	400-650	400-650
Serviced by	Gandalf	Gandalf	Gandalf	General DataComm
Availability (days ARO)	15	15	15	30
Date of First Commercial Delivery	April 1982	April 1982	April 1982	1981
Number Installed to Date	Vendor did not specify	Vendor did not specify	Vendor did not specify	1,000
<b>Comments</b>	—	—	Self contained power supply	—

Vendor	General DataComm, Inc.	Memotec, Inc.	Memotec, Inc.	Memotec, Inc.
<b>Product</b>	GDC Interface Converter	DM 50 B	DM 51 B	DM 55 B
<b>Device Type</b>	Interface converter	Interface converter	Interface converter, TDI Extender	Interface converter, async/sync converter
<b>Conversion Performed</b>	RS-422 to Rs-232-C/V.35; RS-232-C to V.35	RS-232-C to TDI (Burroughs)	RS-232-C to TDI (Burroughs)	RS-232-C or TDI (Burroughs) to sync
<b>Transmission Specifications</b>				
Maximum Transmission Speed (bps)	Vendor did not specify	19.2K	19.2K	Vendor did not specify
Synchronization	Asynchronous, synchronous	Asynchronous	Asynchronous	Asynchronous, synchronous
Transmission Mode	Half duplex, full duplex	Half duplex	Half duplex	Half duplex, full duplex
Codes Supported	ASCII	Code transparent	Code transparent	Code transparent
Interface	RS-232-C, V.35, RS-422	RS-232-C, TDI	RS-232-C, TDI	RS-232-C, V.24, TDI
<b>Specific Devices Supported</b>	DTE/DCE	Burroughs terminals and host	Burroughs terminal and host	Burroughs terminal and host
<b>Connections Supported</b>	Direct, dial-up	Direct, leased lines	Direct, leased lines	Direct, leased lines
<b>Diagnostics</b>	Power LED	Status LEDs	Status LEDs	Status LEDs
<b>Pricing and Availability</b>				
Purchase (\$)	Contact vendor	175	275	895
Serviced by	General DataComm	Vendor	Vendor	Vendor
Availability (days ARO)	30	30	30	30
Date of First Commercial Delivery	1985	Contact vendor	Contact vendor	Contact vendor
Number Installed to Date	Vendor did not specify	Contact vendor	Contact vendor	Contact vendor
<b>Comments</b>	—	Powered by interface or external power supply	Will regenerate TDI signal for 1,000 feet and provide an RS-232-C port	Must be used in pairs; sync and async speed must be within 2%.

**Protocol Conversion  
Systems:  
Comparison Columns  
Code, Speed, Interface, and  
Async/Sync Converters**

Vendor	Method Systems, Inc.	Plantronics Futurecomms, Inc.	RAD Data Communications, Inc.	RAD Data Communications, Inc.
<b>Product</b>	Programmable Communications Translator	TELEX TURBO	CCS	XTP
<b>Device Type</b>	Interface converter, code and speed converter	Code and speed converter	Carrier control simulator	Interface converter
<b>Conversion Performed</b>	Interface most asynchronous devices	Vendor did not specify	Half duplex to full duplex	Vendor did not specify
<b>Transmission Specifications</b>				
Maximum Transmission Speed (bps)	19.2K	Vendor did not specify	19.2K	2M
Synchronization	Asynchronous	Asynchronous, synchronous	Synchronous	Vendor did not specify
Transmission Mode	Full duplex	Half duplex, full duplex	Half duplex, full duplex	Vendor did not specify
Codes Supported	ASCII, all codes	ASCII, Baudot	ASCII, EBCDIC, Baudot	Vendor did not specify
Interface	RS-232-C	RS-232-C, current loop	RS-232-C, V.24	Vendor did not specify
<b>Specific Devices Supported</b>	Most async devices	Vendor did not specify	Half duplex equipment & full duplex modems	IBM 3X Systems & AS400
<b>Connections Supported</b>	Direct	Leased lines	Direct, leased lines	Direct
<b>Diagnostics</b>	Status LEDs	Vendor did not specify	Vendor did not specify	Vendor did not specify
<b>Pricing and Availability</b>				
Purchase (\$)	495	Contact vendor	245	20
Serviced by	Method Systems	Contact vendor	RAD	RAD
Availability (days ARO)	Immediate	Contact vendor	28	28
Date of First Commercial Delivery	1980	Vendor did not specify	October, 1988	July, 1987
Number Installed to Date	2,000	Vendor did not specify	Not available	Not available
<b>Comments</b>	—	—	No AC required	Replaces Twinax cable with twisted pair

Vendor	RAD Data Communications, Inc.	RAD Data Communications, Inc.	RAD Data Communications, Inc.	RAD Data Communications, Inc.
<b>Product</b>	DCTP	ITA	LM-291	LM-291X
<b>Device Type</b>	Interface converter	Code and speed converter	Interface converter	Interface converter
<b>Conversion Performed</b>	Vendor did not specify	V.24 DTE/ ISDN B-Channel	Coax to fiber optic	Twinax to Fiber Optic
<b>Transmission Specifications</b>				
Maximum Transmission Speed (bps)	2M	64K	2.358M	1M
Synchronization	Vendor did not specify	Asynchronous, synchronous	Vendor did not specify	Synchronous
Transmission Mode	Vendor did not specify	Half duplex, full duplex	Half duplex	Half duplex
Codes Supported	Vendor did not specify	ASCII, EBCDIC, Baudot	ASCII, EBCDIC	ASCII, EBCDIC, Baudot
Interface	Vendor did not specify	V.24, X.21/V.35	Coax/SMA-ST	Twinax/SMA-ST
<b>Specific Devices Supported</b>	IBM 3270 controllers and compatible terminals	V.24 DTE to ISDN B-Channels	IBM 3274 Controller and CAT. A terminals	IBM System/3X Host and AS/400
<b>Connections Supported</b>	Direct	Direct	Direct	Direct
<b>Diagnostics</b>	Vendor did not specify	Status LEDs	Status LEDs	Status LEDs
<b>Pricing and Availability</b>				
Purchase (\$)	36	257	450	450
Serviced by	RAD	RAD	RAD	RAD
Availability (days ARO)	28	28	28	28
Date of First Commercial Delivery	April, 1987	March, 1988	September, 1986	September, 1988
Number Installed to Date	Not available	Not available	Not available	Not available
<b>Comments</b>	Replaces two coax with two twisted pair	Can also be used as a rate converter for non-ISDN applications	Hardware/software transparent	Hardware/software transparent supports single or daisy chain terminals



**Protocol Conversion  
Systems:  
Comparison Columns  
Code, Speed, Interface, and  
Async/Sync Converters**

Vendor	RAD Data Communications, Inc.	RAD Data Communications, Inc.	RAD Data Communications, Inc.	RAD Data Communications, Inc.
<b>Product</b>	MIC 24/21	MIC 24/35	MIC 24/36	MIC 35/21
<b>Device Type</b>	Interface converter	Interface converter	Interface converter	Interface converter
<b>Conversion Performed</b>	RS-232/X.21	RS-232 to V.35	RS-232/RS-449/422, V.36, RS-530	V.35/X.21
<b>Transmission Specifications</b>				
Maximum Transmission Speed (bps)	200K	200K	200K	200K
Synchronization	Asynchronous, synchronous	Asynchronous, synchronous	Asynchronous, synchronous	Asynchronous, synchronous
Transmission Mode	Half duplex, full duplex	Half duplex, full duplex	Half duplex, full duplex	Half duplex, full duplex
Codes Supported	ASCII, EBCDIC, Baudot	ASCII, EBCDIC, Baudot	ASCII, EBCDIC, Baudot	ASCII, EBCDIC, Baudot
Interface	RS-232-C, V.24, X.21	RS-232-C, V.35, V.24	RS-232-C, V.36	V.35, X.21
<b>Specific Devices Supported</b>	Vendor did not specify	All RS-232/V.35 devices	Vendor did not specify	Vendor did not specify
<b>Connections Supported</b>	Direct	Direct	Direct	Direct
<b>Diagnostics</b>	Vendor did not specify	Vendor did not specify	Vendor did not specify	Vendor did not specify
<b>Pricing and Availability</b>				
Purchase (\$)	300	300	200	200
Serviced by	RAD	RAD	RAD	RAD
Availability (days ARO)	28	28	28	28
Date of First Commercial Delivery	June, 1987	June, 1987	June, 1987	June, 1987
Number Installed to Date	Not available	Not available	Not available	Not available
<b>Comments</b>	No AC required	No AC required	No AC required	—

Vendor	RAD Data Communications, Inc.	RAD Data Communications, Inc.	RAD Data Communications, Inc.	RAD Data Communications, Inc.
<b>Product</b>	MIC 35/36	MIC 36/21	MIC-24/CL	MIC-P/S1
<b>Device Type</b>	Interface converter	Interface converter	Interface converter	Interface converter
<b>Conversion Performed</b>	V.35/V.36, RS-449/422/530	V.36, RS449/422/530/X.21	RS-232 to current loop	RS-232 to parallel
<b>Transmission Specifications</b>				
Maximum Transmission Speed (bps)	200K	Vendor did not specify	19.2K	9600
Synchronization	Asynchronous, synchronous	Asynchronous, synchronous	Asynchronous	Asynchronous
Transmission Mode	Half duplex, full duplex	Half duplex, full duplex	Half duplex, full duplex	Half duplex
Codes Supported	ASCII, EBCDIC, Baudot	ASCII, EBCDIC, Baudot	ASCII, EBCDIC, Baudot	ASCII, EBCDIC
Interface	V.35, V.36	X.21/V.36	RS-232-C, current loop, V.24	V.24
<b>Specific Devices Supported</b>	Vendor did not specify	Vendor did not specify	RS-232 and current loop devices	PC parallel port to serial printers
<b>Connections Supported</b>	Direct	Direct	Direct	Direct
<b>Diagnostics</b>	Vendor did not specify	Vendor did not specify	Status LEDs	Vendor did not specify
<b>Pricing and Availability</b>				
Purchase (\$)	150	75	75	89
Serviced by	RAD	RAD	RAD	RAD
Availability (days ARO)	28	28	28	28
Date of First Commercial Delivery	June, 1987	June, 1987	March, 1988	November, 1986
Number Installed to Date	Not available	Not available	Not available	Not available
<b>Comments</b>	No AC required	—	RS-232 to current loop conversion, active or passive units; no AC required on passive unit	No AC required

**Protocol Conversion  
Systems:  
Comparison Columns  
Code, Speed, Interface, and  
Async/Sync Converters**

Vendor	RAD Data Communications, Inc.	RAD Data Communications, Inc.	RAD Data Communications, Inc.	RAD Data Communications, Inc.
<b>Product</b>	MIC-P/SX	MIC-S/P1	MIC-S/PX	MSA-1
<b>Device Type</b>	Interface converter	Interface converter	Interface converter	Async/sync converter
<b>Conversion Performed</b>	RS-232 to parallel	RS-232 to Centronics parallel	RS-232 to Centronics parallel	Vendor did not specify
<b>Transmission Specifications</b>				
Maximum Transmission Speed (bps)	19.2K	9600	19.2K	19.2K
Synchronization	Asynchronous	Asynchronous	Asynchronous	Asynchronous, synchronous
Transmission Mode	Half duplex	Half duplex	Half duplex	Half duplex, full duplex
Codes Supported	ASCII, EBCDIC	ASCII, EBCDIC	ASCII, EBCDIC	ASCII, EBCDIC
Interface	V.24	V.24, Centronics	V.24, Centronics	RS-232-C, V.24
<b>Specific Devices Supported</b>	PC Parallel Port to Serial Printers	Vendor did not specify	RS-232 Ports/Centronics Parallel	Async DTEs, Sync DCE's
<b>Connections Supported</b>	Direct	Direct	Direct	Direct, leased lines, dial-up
<b>Diagnostics</b>	Vendor did not specify	Vendor did not specify	Vendor did not specify	Vendor did not specify
<b>Pricing and Availability</b>				
Purchase (\$)	110	89	Contact vendor	245
Serviced by	RAD	RAD	RAD	RAD
Availability (days ARO)	28	28	28	28
Date of First Commercial Delivery	August, 1989	December, 1986	September, 1989	April, 1987
Number Installed to Date	Not available	Not available	Not available	Not available
<b>Comments</b>	Supports both software XON/XOFF and hardware flow control; no AC required	No AC required	Supports both software (XONXOFF) and hardware flow control; no AC required	Meets V.22 bis; no AC required

Vendor	RAD Data Communications, Inc.	RAD Data Communications, Inc.	RAD Data Communications, Inc.	RAD Data Communications, Inc.
<b>Product</b>	MTE-1	MTE-2	SPD-64	SPD-703
<b>Device Type</b>	Tail-end adaptor	Tail-end adaptor	Interface and speed converter	Interface converter, code and speed converter
<b>Conversion Performed</b>	RS-232-C to RS-232	RS-232-C to RS-232	56K to 64K, 48K to 64K, 48K to 56K	RS-449/422 to G.703, V.35 to G.703, X.21 to G.703
<b>Transmission Specifications</b>				
Maximum Transmission Speed (bps)	256K	256K	64K	64K
Synchronization	Synchronous	Synchronous	Synchronous	Synchronous
Transmission Mode	Half duplex, full duplex	Half duplex, full duplex	Half duplex, full duplex	Half duplex, full duplex
Codes Supported	ASCII, EBCDIC, Baudot	ASCII, EBCDIC, Baudot	All Sync data	Sync data
Interface	RS-232-C, V.24	RS-232-C, V.24	RS-232-C, V.35, V.24, X.21	V.35, G.703
<b>Specific Devices Supported</b>	DCE to DCE connect	DCE to DCE	DDS services	G.703 PCM equipment
<b>Connections Supported</b>	Direct	Direct	Direct, leased lines, DDS	Direct, leased lines
<b>Diagnostics</b>	Vendor did not specify	Vendor did not specify	Status LEDs, loopbacks, remote tests	Status LEDs, loopbacks, remote tests
<b>Pricing and Availability</b>				
Purchase (\$)	275	330	Contact vendor	777
Serviced by	RAD	RAD	RAD	RAD
Availability (days ARO)	28	28	28	28
Date of First Commercial Delivery	January, 1987	January, 1987	December, 1987	January, 1988
Number Installed to Date	Not available	Not available	Not available	Not available
<b>Comments</b>	Enables modems (DCEs) to be externally clocked from another DCE device; line powered	Allows two independent clocking sources to pass data; line powered	Synchronous TDM multiplexer which acts like a rate adapter	—

Vendor	RAD Data Communications, Inc.	RAD Data Communications, Inc.	RAD Data Communications, Inc.	RAD Data Communications, Inc.
<b>Product</b>	SPD-T1	VOMUX-2	VSC	WTP
<b>Device Type</b>	Code and speed converter	Interface converter	Interface converter	Interface converter
<b>Conversion Performed</b>	1.544M(T1) AMI or B8ZS to 2.048M(CEPT) HDB3	2/4 wire voice w/2 wire E&M to RS-449/422, X.21/V.11	4W/2W-CB telephone lines to 2W/4W E&M voice	BNC/TNC to twisted pair
<b>Transmission Specifications</b>				
Maximum Transmission Speed (bps)	2.048M	Vendor did not specify	Not applicable	Vendor did not specify
Synchronization	Synchronous	Synchronous	Vendor did not specify	Vendor did not specify
Transmission Mode	Full duplex	Full duplex	Vendor did not specify	Vendor did not specify
Codes Supported	AMI or B8ZS to HDB3	ADPCM	Vendor did not specify	Vendor did not specify
Interface	Vendor did not specify	RS-449/422	Current loop	Vendor did not specify
<b>Specific Devices Supported</b>	Vendor did not specify	PABX, or point to point applications	Telephones & E&M interfaces	Wang terminals
<b>Connections Supported</b>	Direct, leased lines	Direct, leased lines	Direct	Direct
<b>Diagnostics</b>	Status LEDs, loopbacks, remote tests	Status LEDs, loopbacks, remote tests	Status LEDs	Vendor did not specify
<b>Pricing and Availability</b>				
Purchase (\$)	2,000	1,780	500	20
Serviced by	RAD	RAD	RAD	RAD
Availability (days ARO)	28	28	28	28
Date of First Commercial Delivery	October, 1988	March, 1987	August, 1988	July, 1987
Number Installed to Date	Not available	Not available	Not available	Not available
<b>Comments</b>	Allows a T1 signal to be sent across CEPT transmission facilities	Provides two ADPCM voice channels into one 56K/64K bps stream	Strappable to any E&M signaling requirement	Replaces 2 coax with 2 twisted pairs

**Protocol Conversion  
Systems:  
Comparison Columns  
Code, Speed, Interface, and  
Async/Sync Converters**

Vendor	RAD Data Communications, Inc.	Shaffstall Corp.	TeleProcessing Products Inc.	TeleProcessing Products Inc.
<b>Product</b>	CTP	Shaffstall 6000	TP-200	TP-200M
<b>Device Type</b>	Interface converter	Interface converter, code and speed converter	Async/sync converter	Async/sync converter
<b>Conversion Performed</b>	Vendor did not specify	Vendor did not specify	Async/sync with speed matching	Async to sync with speed matching, flow control
<b>Transmission Specifications</b>				
Maximum Transmission Speed (bps)	2M	19.2K	19.2K	9600
Synchronization	Vendor did not specify	Asynchronous, synchronous	Asynchronous, synchronous	Asynchronous, synchronous
Transmission Mode	Vendor did not specify	Full duplex	Half duplex, full duplex	Full duplex
Codes Supported	Vendor did not specify	ASCII, EBCDIC	ASCII	ASCII, 7, 8, or 9 bit
Interface	Vendor did not specify	RS-232-C	RS-232-C	RS-232-C
<b>Specific Devices Supported</b>	IBM 3270 and compatible terminals	Vendor did not specify	Async DTE, sync DECE	Async DTEs to async or sync DCE
<b>Connections Supported</b>	Direct	Direct, dial-up	Direct, Async DTE and Sync DCE/RS-232-C	Dial-up, async to sync DCE/RS-232-C
<b>Diagnostics</b>	Vendor did not specify	CRT error messages	Loopbacks	Status LEDs, loopbacks, remote tests
<b>Pricing and Availability</b>				
Purchase (\$)	20	Contact vendor	395 for quantity 1-9	735 for quantity 1-9
Serviced by	RAD	TRW, Inc.	TeleProcessing Products, Inc.	TeleProcessing Products, Inc.
Availability (days ARO)	28	30	30	30
Date of First Commercial Delivery	December, 1986	August 1987	1978	1981
Number Installed to Date	Not available	300	Contact vendor	Contact vendor
<b>Comments</b>	Replaces coax with twisted pair	Data conversion system	Auxiliary AC power cord available. Speed matching standard; 3K Character Buffer.	Control signal option for controlled carrier applications, direct dial emulation option

**Protocol Conversion  
Systems:  
Comparison Columns  
Code, Speed, Interface, and  
Async/Sync Converters**

Vendor	TeleProcessing Products Inc.	TeleProcessing Products Inc.	Trax Softworks, Inc.	Wall Data Inc.
<b>Product</b>	TP-201	TP-350	VM Dial Out	CPX-100
<b>Device Type</b>	Async/sync converter	Interface converter	Code and speed converter	Code and speed converter
<b>Conversion Performed</b>	Async/sync	RS-232-C to V.35 or V.35 to RS-232-C	3270 to async	Single RS-232-C port to multiple RS-232-C
<b>Transmission Specifications</b>				
Maximum Transmission Speed (bps)	9600; optional 19.2K	To 100K	1M	9600
Synchronization	Asynchronous, synchronous	Asynchronous, synchronous	Asynchronous	Synchronous
Transmission Mode	Half duplex, full duplex	Half duplex, full duplex	Full duplex	Full duplex
Codes Supported	ASCII, 7 or 8 bits; 9 bit optional	ASCII, EBCDIC, Baudot	ASCII, EBCDIC	EBCDIC
Interface	RS-232-C	RS-232-C, V.35	RS-232-C	RS-232-C
<b>Specific Devices Supported</b>	Async DTEs to sync DCEs	Async DTE, sync DCE	Any 3270 compatible device	IBM 3274, 3276,5294, 5251-12
<b>Connections Supported</b>	Direct, async DTE, sync DCE/RS-232-C	Vendor did not specify	Direct, leased lines, dial-up	Direct, leased lines, dial-up
<b>Diagnostics</b>	Vendor did not specify	Status LEDs, loopbacks	Status LEDs, data scope built in, self-test	Remote tests
<b>Pricing and Availability</b>				
Purchase (\$)	295 for quantity 1-9	450 for quantity 1-9	9,000-20,000	4,995-6,995
Serviced by	TeleProcessing Products, Inc.	TeleProcessing Products, Inc.	Trax Softworks, Inc.	Wall Data, Inc.
Availability (days ARO)	30	30	Contact vendor	30
Date of First Commercial Delivery	1984	1979	December, 1982	Vendor did not specify
Number Installed to Date	Contact vendor	Contact vendor	50	Vendor did not specify
<b>Comments</b>	Auxiliary AC power adaptor optional; 9-bit option available	May be used with our TP-2002 Line Driver to extend RS-232-C interface up to 2000 feet at up to 9600; bps, available in both standalone and rackmounted versions	—	Max 8 SDLC dial-up or multi-drop lines, port expander for 37X5 FEPs and 3274-type controllers





Code, Speed, and Interface Converter Comparison Columns

VENDOR NAME	Com/Tech Systems	Digital Controls Corporation	Gandalf Data, Inc.	Gandalf Data, Inc.
PRODUCT NAME	RTS/Emulator A302	93729 A/S Converter	AIM 2086	IFC 201/202/203/204
<b>DEVICE TYPE</b>	Async/sync converter	Async/sync converter	Subscriber interface model for data PBXs	Interface converter
<b>CONVERSION PERFORMED</b>	Full to half duplex; async to sync	Async data to sync modem device	Speed, flow control, parity, character format	RS-232-C to RS-422/423 and vice-versa
<b>TRANSMISSION SPECIFICATIONS</b>				
Maximum Transmission Speed (bps)	9600	75 to 38.4K	Vendor did not specify	20K; 2M (RS-422)
Synchronization	Asynchronous	Synchronous	Asynchronous	Asynchronous
Transmission Mode	Half/full duplex	Half/full duplex	Full duplex	Full duplex
Codes Supported	5-9 level codes	7-8 level codes	ASCII	All
Interface	RS-232-C	RS-232-C	RS-232-C	RS-232-C, RS-422 or RS-423, depending on model
<b>SPECIFIC DEVICES SUPPORTED</b>	Any	Any async DTE and async/sync DCE	Async DTE or DCE equipment	DCE/DTE
<b>CONNECTIONS SUPPORTED</b>	Direct, dial-up	Direct, leased lines, dial-up	Direct	Direct
<b>DIAGNOSTICS</b>	None	Status LEDs, self-tests	Status LEDs, loopbacks, remote tests	None
<b>PRICING AND AVAILABILITY</b>				
Purchase (\$)	390 to 450	425	Contact vendor	425
Serviced by	Com/Tech Systems	NCR	Gandalf	Gandalf
Availability (days ARO)	14	Immediate to 30	15	15
Date of First Commercial Delivery	1978	1985	Vendor did not specify	April 1982
Number Installed to Date	Vendor did not specify	2700	Vendor did not specify	Vendor did not specify
<b>COMMENTS</b>	Includes 64 or 128 character buffer and break signalling.	—	Subscriber interface module for data PBX or STARMaster network processor.	—
VENDOR NAME	Gandalf Data, Inc.	Gandalf Data, Inc.	General DataComm Industries, Inc.	General DataComm Industries, Inc.
PRODUCT NAME	IFC 205/206	IFC 207/208/209	ASC-1	GDC Interface Converter
<b>DEVICE TYPE</b>	Interface converter	Interface converter	Async/sync converter	Interface converter
<b>CONVERSION PERFORMED</b>	RS-232-C to V.5 and vice-versa	RS-232-C to AT&T 300 & vice-versa; AT&T 300 to V.35	Asynchronous to synchronous	RS-422 to RS-232-C/V.35; RS-232-C to V.35
<b>TRANSMISSION SPECIFICATIONS</b>				
Maximum Transmission Speed (bps)	20K	48K	9600	Vendor did not specify
Synchronization	Asynchronous	Asynchronous	Asynchronous, synchronous	Asynchronous, synchronous
Transmission Mode	Full duplex	Full duplex	Half/full duplex	Half/full duplex
Codes Supported	All	All	ASCII	ASCII
Interface	RS-232-C, V.35	RS-232-C, V.35, AT&T 300	RS-232-C, V.28	RS-232-C, V.35, RS-422
<b>SPECIFIC DEVICES SUPPORTED</b>	DCE/DTE	DCE/DTE	Asynchronous terminal	DTE/DCE
<b>CONNECTIONS SUPPORTED</b>	Direct	Direct	Direct, dial-up	Direct, dial-up
<b>DIAGNOSTICS</b>	None	None	Loopbacks	Power LED
<b>PRICING AND AVAILABILITY</b>				
Purchase (\$)	425	400 (207/208); 650 (209)	295	Contact vendor
Serviced by	Gandalf	Gandalf	Factory	Factory
Availability (days ARO)	15	15	30	30
Date of First Commercial Delivery	April 1982	April 1982	1981	1985
Number Installed to Date	Vendor did not specify	Vendor did not specify	1,000	Vendor did not specify
<b>COMMENTS</b>	—	All units equipped with self-contained power supplies and appropriate cables and connectors.	—	—

### Code, Speed, and Interface Converters Comparison Columns

VENDOR NAME	Method Systems, Inc.	Shaffstall Corporation	Wall Data Inc.	
PRODUCT NAME	PCT-100	Shaffstall 6000	CPX-100	
<b>DEVICE TYPE</b>	Code and speed converter, data manipulation	Interface converter, code and speed converter	Code and speed converter	
<b>CONVERSION PERFORMED</b>	Vendor did not specify	Vendor did not specify	Single RS-232-C port to multiple RS-232-C	
<b>TRANSMISSION SPECIFICATIONS</b>				
Maximum Transmission Speed (bps)	19.2K	19.2K	9600	
Synchronization	Asynchronous	Asynchronous, synchronous	Synchronous	
Transmission Mode	Full duplex	Full duplex	Full duplex	
Codes Supported	ASCII, EBCDIC, Baudot	ASCII, EBCDIC	EBCDIC	
Interface	RS-232-C	RS-232-C	RS-232-C	
<b>SPECIFIC DEVICES SUPPORTED</b>	Most async machines	Vendor did not specify	IBM 3274, 3276, 5294, 5251-12*	
<b>CONNECTIONS SUPPORTED</b>	Vendor did not specify	Direct, dial-up	Direct, leased lines, dial-up	
<b>DIAGNOSTICS</b>	Not applicable	CRT error messages	Remote tests	
<b>PRICING AND AVAILABILITY</b>				
Purchase (\$)	495	Vendor did not specify	4,995 to 6,995	
Serviced by	Gandalf	TRW Inc.	Factory	
Availability (days ARO)	Vendor did not specify	30	30	
Date of First Commercial Delivery	1983	August 1987	Vendor did not specify	
Number Installed to Date	2,200	300	Vendor did not specify	
<b>COMMENTS</b>	—	Data conversion system	Max. 8 SDLC dial-up or multi-drop lines; port exp. for 37X5 FEPs and 3274-type controls.	

### Conversion Systems/Terminal Controllers

MANUFACTURER & MODEL	Agile 6287	Altextext, Inc. Altextext I/Altextext II	Arkansas Systems PATH I	Arkansas Systems PATH II
DEVICE TYPE	Protocol converter	Disk conversion system	Protocol converter	Protocol converter
CONVERSION PERFORMED	ASCII to EBCDIC	Direct exchange of text, codes, commands between incompat. word proc., compu., typeset Not applicable	3780 to 3270	BSC to SDLC
SPECIFIC DEVICE EMULATED	IBM 3287	—	—	IBM 5151/12
SPECIFIC FUNCTIONALITY PROVIDED	3270/Coax to ASCII	Disk to disk, disk to comm, comm to disk, comm to comm	IBM S/3X to 3270 terminals	IBM 3270 to IBM 5250 SNA
VIRTUAL SCREEN SIZES SUPP., in char.	—	Not applicable	—	1920
COMMAND PORT SUPPORTED	—	No	No	No
HOST SIDE SPECIFICATIONS				
Specific hosts supported	IBM 43XX	Contact vendor	IBM System 3X	IBM System 3X
Number and type of host lines supported	—	One input/one output async or BSC	—	SSP, CL
Number host sessions supported concurrently	1 BSC and 1 SDLC	1	2 BSC	1 BSC and 1 SDLC
Connections supported	Direct	Direct, dial up	Direct, point-to-point on dial-up line	Direct, point-to-point on dial-up line, multi-point on leased line
Connection to host via controller	IBM 3274	IBM 37XX	—	None
TRANSMISSION SPEC. (Host Line)				
Maximum transmission, in bps	—	19.2K	9600	19.2K
Synchronization	—	Async/sync	Synchronous	Synchronous
Transmission mode	—	Half/full duplex	Full duplex	Full duplex
Protocols supported	SNA/SDLC	BSC	3780	SNA/SDLC
Codes supported	EBCDIC	ASCII, EBCDIC, TTS*	EBCDIC	EBCDIC
Interface	1 RS-232-C, parallel Centronics	5 RS-232-C	1 RS-232-C	1 RS-232-C
Clocking	Internal	Internal, external	Internal, external	Internal, external
TERMINAL SIDE SPECIFICATIONS				
Number and type of ports provided	RS-232-C, Centronics parallel	1 asynchronous	1 port (multidrop for up to 64 terminals)	1 multidrop 3270 line
Devices supported	Virtually any printer or plotter	All serial printers	IBM 3274, 3276 teller terminals, ATMs, ATM switches	3270 compatible (incl. ATMs, teller terminals)
Connections supported	Direct	Direct connection	Leased	Direct, remote, dial-up, leased
TRANSMISSION SPEC. (Terminal Line)				
Maximum transmission, in bps	19.2K	19.2K	9600	9600
Maximum aggregate input rate, in bps	—	19.2K	9600	9600
Synchronization	Asynchronous	Asynchronous	Synchronous	Synchronous
Transmission mode	Half duplex	Full duplex	Full duplex	Full duplex
Protocols supported	IBM coax	TTY	BSC 3270	BSC
Codes supported	EBCDIC, DSC, SDS	ASCII	EBCDIC	EBCDIC
Interfaces supported	RS-232-C, RS-449	RS-232-C	RS-232-C	RS-232-C
DIAGNOSTICS	Self-tests, status LEDs, ASCII line tests	Comm line ASCII or HEX monitoring	Self-test, problem annunciation	Self-test, problem annunciation
PRICING AND AVAILABILITY				
Purchase, \$	1,595	12,000	Contact vendor	Contact vendor
Rental, \$/month-to-month	None	—	—	—
Installation, \$	None	—	—	—
Maintenance, \$ Annual	—	—	—	—
Serviced by	Factory	Vendor	Vendor	Vendor
Availability	21 days	—	Off the shelf	Off the shelf
Date of first comm. delivery of this model	October 1984	Info. not available	1985	1985
Number installed to date	300/300	—	25	10
COMMENTS	—	*Supports any code set	Primarily used to support 3270-type devices from specified S/36 or S/34 programs; screen order translation isn't performed; can support up to 64 3270 devices; dev. address is appended to front of the 3780 message for application-level decoding	Full display mapping supported as well as user-defined keyboard options for mapping 3270 keys to 5250 keys; this is useful for connecting mainframe operator terminal to System 3Xs

### Conversion Systems/Terminal Controllers

MANUFACTURER & MODEL	Arkansas Systems PATH III	Arkansas Systems PATH IV	Arkansas Systems PATH V	Arkansas Systems PATH VI
DEVICE TYPE	Protocol converter	Protocol converter	Protocol converter	Protocol converter
CONVERSION PERFORMED	—	—	ASCII to EBCDIC, Burroughs SDLC	Burroughs Poll Select to IBM 5250 SDLC remote
SPECIFIC DEVICE EMULATED	3780	IBM 5251/12	IBM 5251/11	IBM 5251/12
SPECIFIC FUNCTIONALITY PROVIDED	—	IBM S/3X to 3624 ATM	IBM 5250 to Burroughs Poll Select	IBM 5250 to Burroughs (sync)
VIRTUAL SCREEN SIZES SUPP., in char.	—	1920	—	1920
COMMAND PORT SUPPORTED	No	No	No	No
HOST SIDE SPECIFICATIONS				
Specific hosts supported	IBM System 3X	IBM System 3X	IBM System 3X	IBM System 3X
Number and type of host lines supported	SSP	SSP, CL	SSP, CL	SSP, CL
Number host sessions supported concurrently	2 BSC 3780s	1 BSC and 1 SDLC	Twinax attach	SDLC 5250
Connections supported	Direct	Direct, point-to-point on dial-up line, multi- point on leased line	Direct	Direct, point-to-point on dial-up line, multi- point on leased line
Connection to host via controller	Not applicable	Not applicable	Not applicable	Not applicable
TRANSMISSION SPEC. (Host Line)				
Maximum transmission, in bps	9600K	19.2K	1M	—
Synchronization	Synchronous	Synchronous	Synchronous	Synchronous
Transmission mode	Full duplex	Full duplex	Full duplex	Full duplex
Protocols supported	BSC	SNA/SDLC	SNA/SDLC	SNA/SDLC
Codes supported	EBCDIC	EBCDIC	EBCDIC	EBCDIC
Interface	1 RS-232-C	1 RS-232-C	Twinax	1 RS-232-C
Clocking	Internal, external	Internal, external	Data derived	—
TERMINAL SIDE SPECIFICATIONS				
Number and type of ports provided	3780	Multidrop leased lines	Multidrop poll select network	Multidrop Burroughs synchronous
Devices supported	Any 3780 device	IBM 3624, ATM	TT102, MT355, TU1800, RT560, RT750 and other poll-select terminals	All sync Poll Select devices
Connections supported	Direct	Remote, leased	Leased	Remote, leased
TRANSMISSION SPEC. (Terminal Line)				
Maximum transmission, in bps	9600	9600	9600	9600
Maximum aggregate input rate, in bps	9600	9600	9600	9600
Synchronization	Synchronous	Synchronous	Asynchronous	Synchronous
Transmission mode	Full duplex	Full duplex	Half duplex	Full duplex
Protocols supported	BSC	BSC	Poll select	Poll select
Codes supported	EBCDIC	EBCDIC	ASCII	ASCII
Interfaces supported	RS-232-C	RS-232-C	RS-232-C	RS-232-C
DIAGNOSTICS	Self-test	Self-test	Self-test, problem annunciator	Self-test, problem annunciator
PRICING AND AVAILABILITY				
Purchase, \$	Contact vendor	Contact vendor	Contact vendor	Contact vendor
Rental, \$/month-to-month	—	—	—	—
Installation, \$	—	—	—	—
Maintenance, \$ Annual	—	—	—	—
Serviced by	Vendor	Vendor	Vendor	Vendor
Availability	Off the shelf	Off the shelf	Off the shelf	Off the shelf
Date of first comm. delivery of this model	1986	1986	1986	1986
Number installed to date	—	—	10	5
COMMENTS	Frees an IBM S/3X application program from a READ when the remote side does not answer; also acts as line speed converter and buffer	Allows IBM System 3X to drive a network of 3624 automated tellers directly	Connects async poll select terminals to an IBM S/3X without using a communications line on the host	Useful when converting from Burroughs to IBM, or when specialized terminals are needed

### Conversion Systems/Terminal Controllers

MANUFACTURER & MODEL	Arkansas Systems PATH IX	Avatar Technologies PA1000G	Avatar Technologies PA1500G	Avatar Technologies PA100G
DEVICE TYPE	Protocol converter	Protocol converter	Protocol converter	Protocol converter
CONVERSION PERFORMED	ASCII to EBCDIC	ASCII to BSC or SNA/SDLC	ASCII to BSC, SNA LU1 and LU3	ASCII to BSC, SNA/SDLC
SPECIFIC DEVICE EMULATED	IBM 5251/11	IBM 3278-2 terminal	IBM 3287	IBM 3278-2
SPECIFIC FUNCTIONALITY PROVIDED	Burroughs Poll Select to IBM 5250	Async ASCII terminals, personal computers to IBM 3278 Model 25	Async ASCII printers, to IBM 3287	Any ASCII terminal, personal computer to IBM 3278-2
VIRTUAL SCREEN SIZES SUPP., in char.	1920	1920	960 to 3564 char. buffer	1920
COMMAND PORT SUPPORTED	No	No	No	No
HOST SIDE SPECIFICATIONS	IBM System 3X	IBM mnfrms., async hosts such as DEC, DG, Wang	IBM mainframes	IBM mainframes, async hosts, e.g., DEC, Wang
Number and type of host lines supported	SSP, CL	1 IBM Type A coax 1 RS-232-C for async host	1 IBM Type A coax	—
Number host sessions supported concurrently	Twinax	2 (switch sel.)	1	2
Connections supported	Direct	Direct, point-to-point via modem	Direct	Direct
Connection to host via controller	Not applicable	IBM 3274/76	IBM 3274/76	IBM 3274/3276
TRANSMISSION SPEC. (Host Line)	1M	To 9600	To 9600	To 9600
Maximum transmission, in bps	Synchronous	Async/sync	Synchronous	Async/sync
Synchronization	Full duplex	—	—	—
Transmission mode	SNA/SDLC	BSC, SNA/SDLC or async	BSC, SNA/SDLC	BSC, SNA/SDLC, async
Protocols supported	EBCDIC	—	—	ASCII, EBCDIC
Codes supported	Twinax	RS-232-C; 3270 coax	Type A coax	RS-232-C, 3270 coax
Interface	—	—	—	—
Clocking	—	—	—	—
TERMINAL SIDE SPECIFICATIONS	We appear to be multiple terminals	1 term. port, 1 aux. port	1 async ASCII printer	1 terminal port
Number and type of ports provided	Not applicable	Any asynchronous device	Dot mtrx., In., ltr-qual prts. from Dataproducts, NEC, Centronics, Xerox	IBM PC, any ASCII device
Devices supported	Remote, leased, multi-drop	Direct, dial-up	Direct	Plug-in board
Connections supported	9600	300 to 9600	—	300 to 9600
TRANSMISSION SPEC. (Terminal Line)	9600	—	—	9600
Maximum transmission, in bps	Asynchronous	Asynchronous	—	Asynchronous
Maximum aggregate input rate, in bps	Half duplex	—	—	—
Synchronization	Poll Select	X-on/X-off, ETX/ACK	—	—
Transmission mode	ASCII	ASCII	ASCII	ASCII
Protocols supported	RS-232-C	RS-232-C	RS-232-C or parallel	RS-232-C
Codes supported	—	—	—	—
Interfaces supported	Self-test	Self-tests	—	Self-tests
DIAGNOSTICS	Contact vendor	995	1,295	479
PRICING AND AVAILABILITY	—	—	—	—
Purchase, \$	—	—	—	—
Rental, \$/month-to-month	—	—	—	—
Installation, \$	—	—	—	—
Maintenance, \$ Annual	—	—	—	—
Serviced by	Vendor	Vendor	Vendor	Vendor
Availability	Stock	Immediate	Immediate	Contact vendor
Date of first comm. delivery of this model	1987	February 1984	March 1984	May 1987
Number installed to date	—	—	—	—
COMMENTS	PATH IX is a terminal out both ports allowing multiple S/3X users to appear to be attached Burroughs terminals to a Burroughs mainframe; inquiry, update, and print is supported without coding changes on the Burroughs	Allows one connected ASCII term. to emulate IBM 3278 and access IBM mainframe or asynchronous minicomputer, public information network, or timesharing service	Info. not available Supports Transparent mode operation for specialized host applications incl. graphics, bar-code generation, alternate characters	Info. not available Allows companies to standardize on IBM 3278/79 connectivity even if they have an IBM clone; users can mix and match Avatar and IBM software and hardware

Conversion Systems/Terminal Controllers

MANUFACTURER & MODEL	Avatar Technologies RPA2000	Black Box C/A-1, C/A-2	Black Box A/S-2E	Black Box A/S-3
DEVICE TYPE	Protocol converter	Protocol converter	Protocol converter	Protocol converter
CONVERSION PERFORMED	EBCDIC to ASCII	3270 to async	BSC RJE protocols to/ from async ASCII	ASCII to BSC 3270 or SNA 3270
SPECIFIC DEVICE EMULATED	VT100, VTS2	327X emulates a VT100 or ADM-3	IBM 2770, 2780, 3780, 3741	IBM 3275 model 51C
SPECIFIC FUNCTIONALITY PROVIDED	IBM 3278/3279 to VT100	IBM 327X CRTs switch between IBM control unit or async host	BSC RJE protocols to/ from async ASCII	Async ASCII CRT to IBM 3278 models 2, 3, 4, 5
VIRTUAL SCREEN SIZES SUPP., in char.	1920	1920	—	1920
COMMAND PORT SUPPORTED	No	Menu driven	No	Yes
HOST SIDE SPECIFICATIONS	IBM 3270	DEC, IBM, HP, DG, Prime, TI	IBM	IBM 360, 370, 43XX, 30XX, 8100
Specific hosts supported	—	1 IBM	1	—
Number and type of host lines supported	1	1	1	12
Number host sessions supported concurrently	—	1	1	12
Connections supported	Direct, dial-up	Direct, dial-up	Direct, dial-up	Direct, point-to-point, multipoint
Connection to host via controller	IBM 3274, 3276	IBM 3274/3276 Type A coax	—	All IBM and compatibles
TRANSMISSION SPEC. (Host Line)	19.2K	Not applicable	9600	19.2K
Maximum transmission, in bps	Asynchronous	Async/sync	Synchronous	Synchronous
Synchronization	Full duplex	Full duplex	Half/full duplex	Half duplex
Transmission mode	Asynchronous	Asynchronous, coax	BSC	BSC, SNA/SDLC
Protocols supported	ASCII	ASCII, EBCDIC	EBCDIC	ASCII, EBCDIC
Codes supported	RS-232-C	RS-232-C, 2 Type A coax	RS-232-C	2 RS-232-C
Interface	Internal, external	External	Internal, external	Internal, external
Clocking	1	1 (C/A-1); 1 term. & 1 printer (C/A-2)	Asynchronous	2—12 async & 1 async command port
TERMINAL SIDE SPECIFICATIONS	3278-2, 3279-2	3178, 3179, 3278, 3279	Any asynchronous TTY	A number of async ASCII devices
Number and type of ports provided	Direct	Direct	Direct, dial-up	Direct, dial-up
Devices supported	Direct	Direct	Direct, dial-up	Direct, dial-up
Connections supported	Direct	Direct	Direct, dial-up	Direct, dial-up
TRANSMISSION SPEC. (Terminal Line)	19.2K	Not applicable	9600	9600
Maximum transmission, in bps	—	Not applicable	—	9600/channel
Maximum aggregate input rate, in bps	Synchronous	Synchronous	Asynchronous	Asynchronous
Synchronization	Full duplex	Full duplex	Half/full duplex	Full duplex
Transmission mode	—	Coax protocol Type A	TTY	TTY
Protocols supported	EBCDIC	EBCDIC	EBCDIC, BCD	ASCII
Codes supported	—	Type A coax; 1 RS-232-C on C/A-2	RS-232-C	RS-232-C, current 100
Interfaces supported	Self-test	Self-test, status LEDs	Diagnostic menu, status LEDs	Self-test, line trace, status LEDs
DIAGNOSTICS	Self-test	Self-test, status LEDs	Diagnostic menu, status LEDs	Self-test, line trace, status LEDs
PRICING AND AVAILABILITY	695	695 (C/A-1); 795 (C/A-2)	1,295	1,695 (2)—4,750 (12)
Purchase, \$	—	—	—	—
Rental, \$/month-to-month	—	—	—	—
Installation, \$	—	—	—	—
Maintenance, \$ Annual	—	—	—	—
Serviced by	Vendor	Factory	Factory	Factory
Availability	—	Stock	Stock	Stock
Date of first comm. delivery of this model	March 1985	Oct. 1985/Jan. 1986	October 1984	February 1984
Number installed to date	Info. not available	100+	1000+	Info. not available
COMMENTS	Allows IBM 3270-type terminals to use phone lines to access public databases, LANs, mini- computers, and remote IBM hosts without the need of local control- lers	One-year warranty at no extra cost. The C/A-2 has an async printer port	Baud rates selected independently for each port; selectable, built-in modem elimina- tors	Options include dual sync host, async host; integral modems, current loop, ASCII BSC, large- screen support, IBM PC support. Other capabili- ties—inbound priority, automatic log-on, banner/broadcast mes- sages, draft document prep. and security

### Conversion Systems/Terminal Controllers

MANUFACTURER & MODEL	Black Box A/S-4	Black Box A/C-2 (RO)	Black Box A/C-2 (B)	Black Box BPS/BSA
DEVICE TYPE	Protocol converter, terminal emulator	Protocol converter	Protocol converter	Protocol converter
CONVERSION PERFORMED	ASCII to SNA/SDLC	ASCII to BAC, SNA LU1 and LU3	ASCII to BSC or SNA/SDLC	Burroughs Poll Select to async TTY TDI
SPECIFIC DEVICE EMULATED	IBM 3274/3276; IBM 3776/3777	IBM 3287	IBM 3278-2 terminal	Not applicable
SPECIFIC FUNCTIONALITY PROVIDED	IBM 3278/3287	Async ASCII printers to IBM 3287	Async ASCII terminals, PCs to IBM 3278-2	Burroughs sync to async, Sync TDI or async to TTY async
VIRTUAL SCREEN SIZES SUPP., in char.	1920	960—3564 char. buffer	1920	1920 block size
COMMAND PORT SUPPORTED	Yes	No	No	Menu-driven config.
HOST SIDE SPECIFICATIONS				
Specific hosts supported	—	IBM mainframes	IBM mainframes, async hosts incl. DEC, Wang	Any Burroughs running Poll/Select
Number and type of host lines supported	—	1 IBM Type A coax	1 IBM Type A coax, 1 RS-232-C for async	1
Number host sessions supported concurrently	2	1	2	1
Connections supported	Direct, multipoint, point-to-point	Direct	Direct, point-to-point via modem	Direct, dial-up, leased line
Connection to host via controller	Not applicable	IBM 3274/3276	IBM 3274/3276	Not applicable
TRANSMISSION SPEC. (Host Line)				
Maximum transmission, in bps	To 19.2K	To 9600	To 9600	To 19.2K
Synchronization	Sync/isocho	Synchronous	Async/sync	Async/sync
Transmission mode	Half/full duplex	—	—	Half/full duplex
Protocols supported	SNA/SDLC	BSC, SNA/SDLC	BSC, SNA/SDLC, async	Poll Select
Codes supported	ASCII, EBCDIC	—	—	ASCII
Interface	1 RS-232-C NRZI, 1 RS-232-C	Type A coax	RS-232-C, 3270 coax	1 RS-232-C
Clocking	Int./ext., data derived	—	—	Internal, external
TERMINAL SIDE SPECIFICATIONS				
Number and type of ports provided	1 async with dynamic printer port	1 async ASCII printer	1 terminal port, 1 auxiliary port	1 RS-232-C
Devices supported	All ASCII TTY devices	Dot matrix, letter-qual. printers from Xerox, NEC, Dataproducts, Cent.	VT100, IBM 3101, LSI, ADM5, Televideo 910, ADD5 Viewpoint, and PCs	Any ASCII device
Connections supported	Direct, dial-up	Direct	Direct, dial-up	Direct, dial-up
TRANSMISSION SPEC. (Terminal Line)				
Maximum transmission, in bps	To 19.2K	—	300—9600	300—19.2K
Maximum aggregate input rate, in bps	19.2K	—	—	19.2K
Synchronization	Asynchronous	—	Asynchronous	Asynchronous
Transmission mode	Half/full duplex	—	—	Half/full duplex
Protocols supported	TTY, ASCII	—	X-on/X-off, ETX/ACK	TTY, TDI
Codes supported	ASCII	ASCII	ASCII	ASCII
Interfaces supported	1 RS-232-C	RS-232-C or parallel	RS-232-C	RS-232-C, TDI
DIAGNOSTICS	RAM, EPROM, status LEDs	—	Self-test	Self-test, LEDs
PRICING AND AVAILABILITY				
Purchase, \$	Contact vendor	Contact vendor	1,095	1,269
Rental, \$/month-to-month	—	—	—	—
Installation, \$	—	—	—	—
Maintenance, \$ Annual	—	—	—	—
Serviced by	Factory	Factory	Factory	Factory
Availability	Stock	Stock	Stock	Stock
Date of first comm. delivery of this model	May 1984	March 1984	July 1984	October 1985
Number installed to date	—	500+	500+	100+
COMMENTS	Menu-driven batch and interactive	Supports transparent mode operation for specialized host appli- cations including graphics, bar-code, generation, alternate characters	Allows one ASCII termi- nal or PC to emulate IBM 3278 and access IBM mainframe or asynchro- nous minicomputer	Allows sync, async or TDI Burroughs Poll Sel. to be converted to async TTY; also allows sync to async or TDI Burroughs conversion

### Conversion Systems/Terminal Controllers

MANUFACTURER & MODEL	Black Box BSC/SDLC	Black Box PQ5-RO	Black Box PQ5-B	Black Box PQ5-Centronics
DEVICE TYPE	Protocol conversion	Protocol converter printer interface	Bidirectional protocol converter	Protocol converter printer interface
CONVERSION PERFORMED	BSC to SDLC	Twinax ADLC to async ASCII	Async ASCII to twinax SDLC	Twinax to Centronics
SPECIFIC DEVICE EMULATED	3776/3777	IBM 5256, 5224, 5225 printers	IBM 5251, Model 11	IBM 5256, 5224, 5225 printers
SPECIFIC FUNCTIONALITY PROVIDED	3780/2780 to 3776/3777	IBM System 34/36/38, 5251 model 12 to async printer	Async terminal to 5251 Model 12 remote	IBM System 34/36/38, 5251 Model 12 to Centronics printer
VIRTUAL SCREEN SIZES SUPP., in char.	512 block size	—	—	—
COMMAND PORT SUPPORTED	No	No	No	No
HOST SIDE SPECIFICATIONS				
Specific hosts supported	Any IBM running 3770 SDLC	IBM System 34/36/38	IBM System 34/36/38	IBM System 34/36/38
Number and type of host lines supported	1	1	1	1 SDLC twinax
Number host sessions supported concurrently	1	1	1	1
Connections supported	Direct, dial-up, leased line	Direct	Direct	Direct
Connection to host via controller	3705, 3725, ICA4300, 3704	5251 Model 12	5251 Model 12	5251 Model 12
TRANSMISSION SPEC. (Host Line)				
Maximum transmission, in bps	To 19.2K	—	—	—
Synchronization	—	Synchronous	Synchronous	Synchronous
Transmission mode	Full duplex	Full duplex	Full duplex	Full duplex
Protocols supported	SNA/SDLC	SDLC	SDLC	SDLC
Codes supported	EBCDIC	EBCDIC	—	—
Interface	1 RS-232-C	Twinax	Twinax	Twinax
Clocking	Internal, external	—	—	—
TERMINAL SIDE SPECIFICATIONS				
Number and type of ports provided	1 RS-232-C	1 asynchronous	1 asynchronous	1 Centronics
Devices supported	Any using 3780/2780	Asynchronous printer	Any asynchronous device	Centronics printer
Connections supported	Direct, dial-up	Direct, dial-up	Direct, dial-up	Direct
TRANSMISSION SPEC. (Terminal Line)				
Maximum transmission, in bps	1200—19.2K	To 9600	To 9600	—
Maximum aggregate input rate, in bps	19.2K	—	—	—
Synchronization	Synchronous	Asynchronous	Asynchronous	Centronics
Transmission mode	Half/full duplex	Full duplex	Full duplex	—
Protocols supported	BSC	—	TTY	—
Codes supported	EBCDIC	ASCII	ASCII	ASCII
Interfaces supported	RS-232-C	RS-232-C	RS-232-C	Centronics
DIAGNOSTICS	LEDs	Self-test, status LEDs	Self-test, status LEDs	Self-test, status LEDs
PRICING AND AVAILABILITY				
Purchase, \$	1,625	1,395	1,395	1,495
Rental, \$/month-to-month	—	—	—	—
Installation, \$	—	—	—	—
Maintenance, \$ Annual	—	—	—	—
Serviced by	Factory	Factory	Factory	Factory
Availability	Stock	Stock	Stock	Stock
Date of first comm. delivery of this model	October 1985	July 1984	July 1984	July 1985
Number installed to date	50+	1000+	500+	100+
COMMENTS	Converts 3780/2780 RJE protocols to SNA/SDLC 3770 RJE protocol	One-year warranty at no charge with an additional year avail- able	One-year warranty at no charge with an additional year avail- able	One-year warranty at no charge with an additional year avail- able



### Conversion Systems/Terminal Controllers

MANUFACTURER & MODEL	Bridge Communications CS/1-SNA	Codex 4255 SNA Gateway	Commercial Data Processing 440E/440E-1/440E-PC	Computer Communications CCI 8274C
DEVICE TYPE	Terminal/host port interface unit	Protocol converter, PU.T2 cluster controller	Microprocessor controller	Protocol converter
CONVERSION PERFORMED	ASCII to EBCDIC	ASCII to EBCDIC, BSC to SDLC, async to SDLC, 3271, 3275, 2780/3780	ASCII tape format to async TTY RS-232-C; NCR packed HEX code to ASCII	ASCII to BSC or SDLC
SPECIFIC DEVICE EMULATED	—	Full implementation of PU.T2; supports multiple LU types	—	IBM 3274 Model 51C, IBM 3276 Model 12, IBM 3274 41C
SPECIFIC FUNCTIONALITY PROVIDED	—	Async/BSC to LU.T0, LU.T1, LU.T2, LU.T3	NCR cassette tapes to be read by micro-, mini-, or mainframe	Async ASCII to IBM 3274
VIRTUAL SCREEN SIZES SUPP., in char.	1920, 3564	3278 Models 2,3,4,5	Not applicable	1920
COMMAND PORT SUPPORTED	—	SNA host loaded	—	Yes
HOST SIDE SPECIFICATIONS				
Specific hosts supported	IBM 43XX	VTAM host	Any protocol	IBM 43XX
Number and type of host lines supported	—	—	1 asynchronous	—
Number host sessions supported concurrently	—	1 SDLC	—	1 BSC and 1 SDLC, 1 BSC or 1 SDLC
Connections supported	Direct, point-to-point on dial-up line	Direct, point-to-point on dial-up line, multipoint on leased 327XX or equivalent	Direct, point-to-point, multipoint	Point-to-point on dial-up line, multipoint on leased line
Connection to host via controller	—	—	—	IBM 270X, 37XX
TRANSMISSION SPEC. (Host Line)				
Maximum transmission, in bps	64K	19.2K	1200 (212A); 9600*	—
Synchronization	Synchronous	Synchronous	Asynchronous	Synchronous
Transmission mode	Full duplex	Half/full duplex	Full duplex	Half duplex
Protocols supported	SNA/SDLC	SNA/SDLC	TTY	BSC, SNA/SDLC
Codes supported	EBCDIC	EBCDIC	ASCII, Packed HEX	ASCII
Interface	1 RS-232-C, V.35	1 RS-232-C	RS-232-C	1 RS-232-C
Clocking	Internal, external	Selectable	Data derived	External
TERMINAL SIDE SPECIFICATIONS				
Number and type of ports provided	24 async terminal or printer ports	Up to 16 device ports	1 asynchronous	Up to 32 Coax CCI cable talk
Devices supported	—	User programmable for variety of async and BSC (3271, 3275, 2780/3780)	NCR 2126, 2140, 2152, 2160, 2950, 7750	Any ASCII async plus CCI 8178 and CCI 8287
Connections supported	LAN	Direct, dial-up, leased	Direct, dial-up	Direct
TRANSMISSION SPEC. (Terminal Line)				
Maximum transmission, in bps	38.4K	9600	1200 or 9600	56K
Maximum aggregate input rate, in bps	—	—	—	56K
Synchronization	Asynchronous	Async/sync	Asynchronous	Async/sync
Transmission mode	Full duplex	Half/full duplex	Full duplex	—
Protocols supported	TTY II	TTY II, Async, BSC*	TTY	—
Codes supported	ASCII	ASCII, EBCDIC	ASCII	ASCII
Interfaces supported	RS-232-C, RS-449, V.35	RS-232-C	RS-232-C, RS-423	RS-232-C, Coax cable talk
DIAGNOSTICS	Self-test, status LEDs	Self-test, status LEDs, host-based network management	Self-test, status LEDs, control panel	Self-test, status LEDs, diagnostic port, local, remote
PRICING AND AVAILABILITY				
Purchase, \$	Approximately 10,000	4,600 to 12,100	3,250/1,975 (440-1 & PC)	2,995 to 4,795
Rental, \$/month-to-month	No rental	Various lease	None	—
Installation, \$	Hourly	Varies w/ configuration	—	—
Maintenance, \$ Annual	Contact vendor	Varies w/ configuration	—	—
Serviced by	Vendor	Vendor	Unit exchange	Vendor
Availability	Immediate	60 days ARO	Two to four weeks	7 days ARO
Date of first comm. delivery of this model	1985	1986	1978/1979/1983	—
Number installed to date	Over 200	—	800/160/40	—
COMMENTS	—	*3271, 3275, 2780/3780	Unit designed to interface NCR cassette handler to most mainframes, minis, and micros; works in local environment through modem eliminator	Multidrop coaxial; ASCII printer ports; twisted pair connection
			*On leased line	

### Conversion Systems/Terminal Controllers

MANUFACTURER & MODEL	Computer Peripheral Systems MARS jr.	Comstat Datacomm C2200	Comstat Datacomm C6600	Comstat Datacomm C8800
DEVICE TYPE	Protocol converter	Protocol converter	Protocol converter	Protocol converter
CONVERSION PERFORMED	ASCII to Burroughs Poll Select	Burroughs Poll Select to ASCII	Burroughs Poll Select to ASCII	Burroughs Poll Select to ASCII
SPECIFIC DEVICE EMULATED	General purpose	—	—	—
SPECIFIC FUNCTIONALITY PROVIDED	Any RS-232-C ASCII or parallel device to Burroughs Poll Select	Poll Select to TTY	Sync/Async/TDI to Sync/Async/TDI	Sync/Async/TDI to Sync/Async/TDI
VIRTUAL SCREEN SIZES SUPP.. in char.	1920	—	—	—
COMMAND PORT SUPPORTED	No	—	—	—
HOST SIDE SPECIFICATIONS				
Specific hosts supported	Any Burroughs host operating Poll Select	—	—	—
Number and type of host lines supported	1 Poll Select	—	—	—
Number host sessions supported concurrently	1	—	—	—
Connections supported	TDI, direct connect, dial-up multidrop	—	—	—
Connection to host via controller	Uniline, CP 3680, 874, 974, CP2000	—	—	—
TRANSMISSION SPEC. (Host Line)				
Maximum transmission, in bps	38.4K	—	—	—
Synchronization	TDI, sync/async	Async/sync	—	—
Transmission mode	Half/full duplex	—	—	—
Protocols supported	Poll select	—	Burroughs Poll Select	Burroughs Poll Select
Codes supported	ASCII	—	—	—
Interface	RS-232-C, Centronics, Data Products parallel	1 RS-232-C, Poll Select	—	1 RS-232-C
Clocking	Internal, external	—	—	—
TERMINAL SIDE SPECIFICATIONS				
Number and type of ports provided	1	—	—	—
Devices supported	General purpose	Burroughs terminals and CPUs, TTY ASCII devices of all types	—	—
Connections supported	Direct connect, dial-up	Direct, dial-up	—	—
TRANSMISSION SPEC. (Terminal Line)				
Maximum transmission, in bps	19.2K	19.2K	19.2K	19.2K
Maximum aggregate input rate, in bps	19.2K	19.2K	19.2K	19.2K
Synchronization	Asynchronous	Async/sync	Async/sync	Async/sync
Transmission mode	Half/full duplex	Half duplex	Half duplex	—
Protocols supported	TTY II	TTY II, Burr. Poll Select	TTY II, Burr. Poll Select	Poll Select
Codes supported	ASCII	ASCII	ASCII	ASCII
Interfaces supported	RS-232-C, RS-422	RS-232-C	RS-232-C	RS-232-C
DIAGNOSTICS	Self-test to terminal, status LEDs	Status LEDs	Status LEDs	Status LEDs
PRICING AND AVAILABILITY				
Purchase, \$	795	995	995	1,295
Rental, \$/month-to-month	Not applicable	—	—	—
Installation, \$	Not applicable	—	—	—
Maintenance, \$ Annual	Not applicable	—	—	—
Serviced by	Vendor	Contact vendor	Contact vendor	Contact vendor
Availability	Stock	—	—	—
Date of first comm. delivery of this model	August 1984	—	—	—
Number installed to date	Over 600	—	—	—
COMMENTS	Line speed conversion async/sync to TDI con- version; flexible para- meter change download, upload or program switches on the unit; small package (7.5x3.5x 1.5); hangs on device by velcro strips with 6 ft. integral connecting cable standard	Converts Burroughs Poll Select to TTY RS-232-C	Converts Sync/Async/TDI to Sync/Async/TDI; up- speed conversion	Supports single and group poll; data concen- trator, up-speed and down-speed conversion

### Conversion Systems/Terminal Controllers

MANUFACTURER & MODEL	Comstat Datacomm C9900	CTi Data CTi 1000	CTi Data CTi 4000	CTi Data CTi 5000
DEVICE TYPE	Protocol converter	Terminal controller	Terminal controller remote cluster control.	Protocol converter, terminal emulator
CONVERSION PERFORMED	Burroughs Poll Select to ASCII	IBM EBCDIC to ASCII	ASCII or Type A coax to BSC or SNA/SDLC	ASCII to EBCDIC
SPECIFIC DEVICE EMULATED	—	IBM 2740 Model 2	IBM 3274-61C, 3274-51C	IBM 3274 Model 51C, IBM 3276 Model 12, and 3274 61C
SPECIFIC FUNCTIONALITY PROVIDED	2 host CPUs to terminal	—	IBM 3178; 3278-2,3,4,5; 3179; 3180; 3268; 3287 printer	ASCII to IBM 3278-3787
VIRTUAL SCREEN SIZES SUPP., in char.	—	1920	1920	1920
COMMAND PORT SUPPORTED	—	—	Yes	Yes
HOST SIDE SPECIFICATIONS				
Specific hosts supported	—	All IBM mainframes	IBM mainframes, 37XX FEPs	IBM 43XX, all IBM main- frames
Number and type of host lines supported	—	1 BSC	1 SNA/SDLC or BSC	—
Number host sessions supported concurrently	—	1	1 for each terminal	—
Connections supported	—	Multipoint leased line	Leased line, multipoint, or point-to-point	Point-to-point on dial- up line, multipoint on leased line
Connection to host via controller	—	IBM 270X/37XX	IBM 37XX or equivalent	IBM 3274
TRANSMISSION SPEC. (Host Line)				
Maximum transmission, in bps	—	1800	2400—9600	19.2K
Synchronization	Async/sync	Asynchronous	Synchronous	Async/sync
Transmission mode	Half duplex	Half/full duplex	Half/full duplex	Half/full duplex
Protocols supported	Burroughs Poll Select	IBM 2740	BSC or SNA/SDLC	BSC or SNA/SDLC
Codes supported	ASCII, Burr. Poll Select	EBCDIC	EBCDIC	ASCII, EBCDIC
Interface	1 RS-232-C, Burr. TDI	RS-232-C	RS-232-C	One RS-422
Clocking	—	Internal	External	Internal, external
TERMINAL SIDE SPECIFICATIONS				
Number and type of ports provided	—	1	Up to 16 Type A coax incl 1 ASCII printer port	4 A coax, 4 ASCII, 1 parallel
Devices supported	Burroughs devices	CTi 1000A; 1006 printer*	IBM 3178; 3278-2,3,4,5; 3179; 3268; 3287; 3180; 3270 PC	DEC VT-100/220, TRA 3161-3163, 3101; ASCII printers, IBM 3178 *
Connections supported	—	Direct, dial-up	Direct, dial-up	Remote, dial-up, leased
TRANSMISSION SPEC. (Terminal Line)				
Maximum transmission, in bps	19.2K	9600	ASCII—9600; A coax 2.3M	19.2K
Maximum aggregate input rate, in bps	19.2K	9600	9600	19.2K
Synchronization	Async/sync	Asynchronous	A coax or async	Async/sync
Transmission mode	Half duplex	Full duplex	Half/full duplex	Half/full duplex
Protocols supported	Poll Select, TTY II	X-on/X-off	A coax, ASCII	—
Codes supported	ASCII	ASCII	A coax, ASCII	ASCII, EBCDIC
Interfaces supported	—	RS-232-C	RS-232-C, Type A coax	RS-232-C
DIAGNOSTICS	—	—	ROM based; diskette based	Self-test, BAT
PRICING AND AVAILABILITY				
Purchase, \$	1,795	2,575	4,795—6,395	3,495
Rental, \$/month-to-month	—	127—2 year	Not available	—
Installation, \$	—	—	User installable	125
Maintenance, \$ Annual	—	300	360	336
Serviced by	Contact vendor	TRW	Momentum Technologies	Momentum Technologies
Availability	—	30 days	30 days	45 days
Date of first comm. delivery of this model	—	1981	1984	June 1985
Number installed to date	—	1250	250	325
COMMENTS	Allows Burroughs terminals and other devices to communicate with 2 host CPU	*1006 printer is 55 cps, formed character device with document insertion	Support for 3270 Type A coax terminals and printers; ASCII RS-232-C serial printer port with same functionality as 3287 LU1 or LU3; DFT support in third quarter 1986	Support for popular PC attachment cards and popular PC type modems and printers; a number of ASCII terminals and printers; PC attachment through RS-232-C interface with emulation software
				* IBM 3179, 3191, etc.

## Conversion Systems/Terminal Controllers

MANUFACTURER & MODEL	Datagraf "Bump" Interactive ASCII/Honeywell VIP 77-7800	Datagraf Series II+ Interactive ASCII/Burroughs Poll Select	Datagraf Series II+ RJE (Batch) 3780 BSC/3770 SDLC	Datagraf RJE (Batch) HASP/ASCII
DEVICE TYPE	Protocol converter	Protocol converter	Protocol converter	Protocol converter
CONVERSION PERFORMED	ASCII terminal to Honeywell terminal	ASCII to Burroughs Poll Select	2780 or 3780 BSC to 3770 SNA/SDLC	BSC to ASCII
SPECIFIC DEVICE EMULATED	Honeywell VIP 7700/7800 Poll/Select terminal	TD-830, MT-983, ET-1100 Burroughs terminals	IBM 3776 models 3 & 4, IBM 3777 model 3	Separate ASCII I/O ports
SPECIFIC FUNCTIONALITY PROVIDED	Allows ASCII terminal to run interactive applications on a Honeywell host	Async ASCII CRT to Burroughs terminals and printers	Batch conversion for 2780/3780 BSC to 3770 SNA/SDLC	Allows ASCII hosts to support HASP multi-leaving terminals
VIRTUAL SCREEN SIZES SUPP., in char.	1920	1920	Not applicable	Not applicable
COMMAND PORT SUPPORTED	Yes (set up, diag.)	Yes (set up, diag.)	Yes (set up, diag.)	Yes (set up, diag.)
HOST SIDE SPECIFICATIONS				
Specific hosts supported	All supporting VIP line	Burroughs hosts that support poll/select	Any that support 3770 SNA/SDLC	Any ASCII hosts with prog. I/O ports
Number and type of host lines supported	1 Poll/Select VIP line	1	1 SDLC	See below
Number host sessions supported concurrently	1 to 16	1 to 32	7 LUs	Up to 8 of 3 types: inp/outp/bidirectional
Connections supported	Direct, remote	Direct, remote multi-drop	Direct, remote multi-point, point-to-point	Direct, remote
Connection to host via controller	All supporting VIP protocol	All supporting Burroughs Poll/Select	IBM 37XX	Not applicable
TRANSMISSION SPEC. (Host Line)				
Maximum transmission, in bps	19.2K	19.2K; 38.4K opt.	19.2K; 56K opt.	19.2K
Synchronization	Synchronous	Async, sync, TDI	Synchronous	Asynchronous
Transmission mode	Half duplex	Half duplex	Half duplex	Full duplex
Protocols supported	VIP Poll Select	Poll/select	BSC, SNA/SDLC	X-on/X-off, CTS/RTS
Codes supported	ASCII	ASCII	EBCDIC	ASCII
Interface	1 RS-232-C	RS-232-C	RS-232-C	1-8 RS-232-C
Clocking	Internal, external	Internal, external	Internal, external	Internal
TERMINAL SIDE SPECIFICATIONS				
Number and type of ports provided	1—16 RS-232-C	1-32 ports; up to 2 can be parallel	1—3 BSC ports	1 BSC port
Devices supported	VT-100/200, DG, Dasher, Wyse 50/75, custom ASCII	VT-100/220, Data Gen., Dasher, WYSE 50/75, Custom	IBM 2780/3780 BSC term. supporting card read., punch, printer	1 HASP multileaving term. supporting console: crd rd, punch, prt
Connections supported	Direct, remote	Direct, remote	Direct, remote	Direct, remote
TRANSMISSION SPEC. (Terminal Line)				
Maximum transmission, in bps	19.2K	19.2K	19.2K	19.2K
Maximum aggregate input rate, in bps	19.2K x number of ports	19.2K x no. ports	19.2K x no. ports	19.2K
Synchronization	Asynchronous	Asynchronous	Synchronous	Synchronous
Transmission mode	Full duplex	Full duplex	Half duplex	Half duplex
Protocols supported	X-on/X-off, CTS/RTS	X-on/X-off, CTS/RTS	BSC	HASP Multileaving BSC
Codes supported	ASCII	ASCII	EBCDIC	EBCDIC
Interfaces supported	RS-232-C, Dataproducts, Centronics	RS-232-C, Dataproducts, Centronics	RS-232-C	RS-232-C
DIAGNOSTICS	Self-tests, extended tests, status LEDs	Self-tests, extended tests, status LEDs	Self-tests, extended tests, status LEDs	Self-tests, extended tests, status LEDs
PRICING AND AVAILABILITY				
Purchase, \$	2,320—4,785*	2,900—7,000	2,195—6,130	3,995—6,150
Rental, \$/month-to-month	Not applicable	Not applicable	Not applicable	Not applicable
Installation, \$	Optional; \$975/2 days	Optional; \$975/2 days	Optional; \$975/2 days	Optional; \$975/2 days
Maintenance, \$ Annual	600	960	960	960
Serviced by	Vendor; overnight replacement	Vendor; overnight replacement	Vendor; overnight replacement	Vendor; overnight replacement
Availability	30 (can improve)	30 (can improve)	30 (can improve)	30 (can improve)
Date of first comm. delivery of this model	Summer 1986	1984	Fall 1983	—
Number installed to date	Info. not available	Info. not available	Info. not available	Info. not available
COMMENTS	*Quantity discounts are available	Features include up to 8 screen pages per CRT and support for following multipoint control procedures: specific, group, fast, broadcast select, contention	Allows users of existing 3780 equipment (or equivalent) batch access with remote console to SNA host	Allows ASCII hosts to utilize HASP RJE devices for I/O
		*Quantity discounts available		

## Conversion Systems/Terminal Controllers

MANUFACTURER & MODEL	Datagraf, Inc. Series II+ Host-to-Host 3270 BSC/3270 SNA	Datagraf, Inc. Series II+ Satellite Compensators 3780	Datagraf, Inc. Switchable Coax 3270/ASCII	Datagraf, Inc. "Bump" Interactive ASCII/ASCII
DEVICE TYPE	Protocol converter	Satellite compensator/ converter	Protocol converter	Protocol converter
CONVERSION PERFORMED	3271/24 BSC to 3274 SNA	3780 to satellite to 3780	EBCDIC to ASCII	ASCII terminal to different ASCII host
SPECIFIC DEVICE EMULATED	Remote versions of above controllers	IBM 2780/3780 BSC terminal	VT100/220, Dasher, and others	VT100, HP-2624B, many others
SPECIFIC FUNCTIONALITY PROVIDED	Allows interactive file transfer between hosts. Each host sees cont. as supported controller	Converts I/O from host to device to special protocol for transmission over sat.	IBM 3277/78 coax to RS-232-C ASCII	Allows VT100 to attach to HP hosts
VIRTUAL SCREEN SIZES SUPP., in char.	1920	Not applicable	1920	1920
COMMAND PORT SUPPORTED	Yes (set up, diag.)	Yes (set up, diag.)	Yes (set up, diag.)	Yes (set up, diag.)
HOST SIDE SPECIFICATIONS				
Specific hosts supported	All supporting 3274 SNA	All supporting 3270 BSC	Various ASCII hosts, e.g., DEC VAX, DGC-MV	Any host supporting HP 2624
Number and type of host lines supported	1 SDLC	3: 1 reader, 1 punch, 1 printer	—	—
Number host sessions supported concurrently	1	3	8 async	1 async
Connections supported	Direct, remote multi- point, point-to-point	Direct, remote	Direct, remote	—
Connection to host via controller	37X5	All supporting 3780 BSC	Same as vendor's termi- nal equipment	Not applicable
TRANSMISSION SPEC. (Host Line)				
Maximum transmission, in bps	19.2K	19.2K	19.2K	19.2K
Synchronization	Synchronous	Synchronous	Asynchronous	Asynchronous
Transmission mode	Half duplex	Half duplex	Full duplex	Full duplex
Protocols supported	SNA/SDLC	BSC	X-on/X-off, CTS/RTS	X-on/X-off, CTS/RTS
Codes supported	EBCDIC	EBCDIC	ASCII	ASCII
Interface	1 RS-232-C	1 RS-232-C	8 RS-232-C	1 RS-232-C
Clocking	Internal, external	Internal, external	Internal	Internal
TERMINAL SIDE SPECIFICATIONS				
Number and type of ports provided	1 RS-232-C	1 RS-232-C	16 coax type A, 8 in- put, 8 output (passtr.)	1 async
Devices supported	To host as 3271/74 BSC	IBM 2780/3780 BSC terminal	IBM 3277 models 1, 2; IBM 3278 models 2, 3	VT-100 many others
Connections supported	Direct, remote	Direct, remote	Coax direct connect	Direct, remote
TRANSMISSION SPEC. (Terminal Line)				
Maximum transmission, in bps	19.2K	19.2K	2MHz	19.2K x no. ports
Maximum aggregate input rate, in bps	19.2K	19.2K	2MHz x 8 ports	—
Synchronization	Synchronous	Synchronous	Coax	Asynchronous
Transmission mode	Half duplex	Half duplex	—	Full duplex
Protocols supported	BSC	BSC	Coax	X-on/X-off, CTS/RTS
Codes supported	EBCDIC	EBCDIC	Coax	ASCII
Interfaces supported	RS-232-C	RS-232-C	Coax type A	RS-232-C
DIAGNOSTICS	Self-tests, extended tests, status LEDs	Self-tests, extended tests, status LEDs	Self-tests, extended tests, status LEDs	Self-tests, status LEDs, extended tests
PRICING AND AVAILABILITY				
Purchase, \$	7,175—10,500	5,320—7,490	4,400—5,400	375—810
Rental, \$/month-to-month	Not applicable	Not applicable	Not applicable	Not applicable
Installation, \$	Optional; \$875/2 days	Optional; \$875/2 days	Optional \$875/2 days	Optional; \$875/2 days
Maintenance, \$ Annual	960	960	960	600
Serviced by	Vendor; overnight replacement	Vendor; overnight replacement	Vendor; overnight replacement	Vendor; overnight replacement
Availability	30 (can improve)	30 (can improve)	30 (can improve)	30 (can improve)
Date of first comm. delivery of this model	—	—	—	—
Number installed to date	—	—	—	—
COMMENTS	Info. not available Many other configura- tions including inter- active and RJE (batch), Honeywell interactive and RJE (batch) etc.; may mix conversion types	Info. not available Two protocol converters provided, one for each side of satellite; special protocol dev. to handle delays, and use low no. of turn- arounds to increase throughput. Avail. for other protocols as well or may be converted bwt. protocols over link	Info. not available Inline coax switch at terminal allows contin- uations of existing connection or conver- sion; may be converted into other multidropped protocols, e.g., Bur- roughs, Honeywell, Sperry, or twinax	Info. not available

## Conversion Systems/Terminal Controllers

MANUFACTURER & MODEL	Datagraf "Bump" Interactive 3270 BSC/Honeywell VIP 77-7800	Datagraf "Bump" Interactive ASCII/Sperry UTS 20-40	Datagraf "Bump" 3270 BSC/ Burroughs Poll Select	Datagram DM-60B
DEVICE TYPE	Protocol converter	Protocol converter	Protocol converter	Micro cluster controller
CONVERSION PERFORMED	3270 BSC to Honeywell VIP	ASCII terminal to Sperry terminal	3270 BSC to Burroughs Poll Select	—
SPECIFIC DEVICE EMULATED	Honeywell VIP 7700/7800 Poll Select terminal	Sperry UTS-20/UTS-40 terminal	TD-830, MT-983, ET-1100 Burroughs terminals	All Burroughs terminals
SPECIFIC FUNCTIONALITY PROVIDED	Lets systems supportingu 3270 BSC Cntrlr. emulation access interactive Honeywell applications 1920 Yes (set up, diag.)	Allows ASCII terminal to run interactive applications on a Sperry host 1920 Yes (set up, diag.)	3271/3274 BSC to Burroughs terminals and printers 1920 Yes (set up, diag.)	Cluster control of all Burroughs terminals
VIRTUAL SCREEN SIZES SUPP., in char.	1920	1920	1920	All supported
COMMAND PORT SUPPORTED	Yes (set up, diag.)	Yes (set up, diag.)	Yes (set up, diag.)	No
HOST SIDE SPECIFICATIONS	Honeywell host support- ing VIP Poll Select 1 multidrop Poll Select	All supporting UTS 20/40 vis UNISCOPE 1 UNISCOPE line	Burroughs hosts that support poll select 1 multidropped BPS	All Burroughs Computers from B20 through A15 1 Host line operating sync, async, or TDI 1 per terminal
Number and type of host lines supported	8, 16	1 to 16	8, 16	Direct connection, multipoint, leased line, TDI
Number host sessions supported concurrently	Direct, remote	Direct, remote	Direct, remote multi-drop	Any Burroughs FEP
Connections supported	All supporting VIP Poll Select	All supporting UNISCOPE protocol	All supporting Burroughs Poll Select	
Connection to host via controller	19.2K Async/sync Half duplex VIP Poll Select ASCII 1 RS-232-C	19.2K Synchronous Half duplex UNISCOPE ASCII 1 RS-232-C	19.2K; 38.4K opt. Async/sync/TDI Half duplex Poll select ASCII RS-232-C	19.2K Async/sync/TDI Full duplex Poll Select ASCII 1 RS-232-C, TDI
TRANSMISSION SPEC. (Host Line)	Internal/external	Internal/external	Internal/external	Internal/external
Maximum transmission, in bps	1 BSC port	1 to 16 RS-232-C	1 BSC port	1 Poll/Select
Synchronization	3277/78 terminals through 3271/74 controllers	VT-100/200, DG, Dasher, Wyse 50/75, custom ASCII	3277/78 terminals through 3271/74 controllers	All Burroughs and Burroughs cmpat. dvces.; any ASCII device; any Micro Direct
Transmission mode	Direct, remote	Direct, remote	Direct, remote (via RS-232-C)	
Protocols supported	19.2K	19.2K	19.2K	19.2K
Codes supported	19.2K x number of ports Synchronous Half duplex 3270 BSC EBCDIC RS-232-C	19.2K x number of ports Asynchronous Full duplex X-on/X-off, CTS/RTS ASCII RS-232-C, Dataproducts, Centronics	19.2K x no. ports Synchronous Half duplex BSC EBCDIC RS-232-C	All ports @ 19.2K Async/sync/TDI Half/full duplex TTY, Poll/Select ASCII RS-232-C, V.24 TDI
Interface	Self-tests, extended tests, status LEDs	Self-tests, extended tests, status LEDs	Self-tests, extended tests, status LEDs	Continual self-test, standalone diagnostic routines
Clocking	4,280 to 4,880*	2,520 to 4,985*	4,280 to 4,880	1,295
TERMINAL SIDE SPECIFICATIONS	Not applicable	Not applicable	Not applicable	—
Number and type of ports provided	Optional; \$975/2 days 600	Optional; \$975/2 days 600	Optional; \$975/2 days 600	Customer installed
Devices supported	Vendor; overnight replacement 30 (can improve) Summer 1986	Vendor; overnight replacement 30 (can improve) Summer 1986	Vendor; overnight replacement 30 (can improve) Spring 1985	Contact vendor
Connections supported	Info. not available	Info. not available	Info. not available	Factory
TRANSMISSION SPEC. (Terminal Line)	Allows users of 3270 BSC equipment (or equiv.) interactive access to Honeywell hosts with mapping, as well as conversion	* Quantity discounts are available	Allows users of 3270 BSC equipment (or equiv.) interactive access to Burroughs hosts with mapping, as well as conversion.	Over 500
Maximum transmission, in bps	30 (can improve)	30 (can improve)	30 (can improve)	30 days
Maximum aggregate input rate, in bps	Summer 1986	Summer 1986	Spring 1985	1985
Synchronization	Info. not available	Info. not available	Info. not available	Over 500
Transmission mode	Allows users of 3270 BSC equipment (or equiv.) interactive access to Honeywell hosts with mapping, as well as conversion	* Quantity discounts are available	Allows users of 3270 BSC equipment (or equiv.) interactive access to Burroughs hosts with mapping, as well as conversion.	Device also acts as remote front-end process., which independently polls the terminals; enabling the user to put up to 10 devices on a single line adaptor with excellent response time
Protocols supported				
Codes supported				
Interfaces supported				
DIAGNOSTICS				
PRICING AND AVAILABILITY				
Purchase, \$				
Rental, \$/month-to-month				
Installation, \$				
Maintenance, \$ Annual				
Serviced by				
Availability				
Date of first comm. delivery of this model				
Number installed to date				
COMMENTS				

Conversion Systems/Terminal Controllers

MANUFACTURER & MODEL	Datagram DM-600B	Datagram DM-2000B	Datagram DM2400B	Datamaxx USA Command
DEVICE TYPE	Cluster controller/ protocol converter	Cluster controller/ remote front end proc.	Data PBX for Burroughs computer systems	Protocol converter and terminal emulator
CONVERSION PERFORMED	Burroughs Poll Select to ASCII	Burroughs Poll Select ASCII	Burroughs Poll Select— ASCII	IBM BSC and SDLC to Burroughs Poll Select, EBCDIC to ASCII
SPECIFIC DEVICE EMULATED	All Burroughs terminals	All Burroughs terminals	All Burroughs terminals	IBM 3274/76 cluster controller
SPECIFIC FUNCTIONALITY PROVIDED	Cluster control of all Burroughs terminals	Cluster control of all Burroughs terminals	Cluster controller & data PBX	Allows ASCII devices to appear as IBM 3278-2 CRT or IBM 3287-2 printer
VIRTUAL SCREEN SIZES SUPP., in char.	All supported	All supported	All supported	1920
COMMAND PORT SUPPORTED	Yes	Yes	Yes	Yes
HOST SIDE SPECIFICATIONS				
Specific hosts supported	All Burroughs Computers from B20 through A15	All Burroughs Computers from B20 through A15	All Burroughs Computers from B800 through A15	IBM BSC and SDLC hosts
Number and type of host lines supported	1 Host line operating sync, async, or TDI 1 per terminal	1 Host line operating sync, async, or TDI 1 per terminal	Up to 7 sync, async, or TDI 1 per terminal	1 BSC and SDLC
Number host sessions supported concurrently	—	—	address per host	—
Connections supported	Direct connection, multipoint, leased line, TDI	Direct connection, multipoint, leased line, TDI	Direct connection, multipoint, leased line, TDI	Direct, dial-up
Connection to host via controller	Any Burroughs FEP	Any Burroughs FEP	Any Burroughs FEP	Not applicable
TRANSMISSION SPEC. (Host Line)				
Maximum transmission, in bps	19.2K	19.2K	19.2K	19.2K
Synchronization	Async/sync/TDI	Async/sync/TDI	Async/sync	Synchronous
Transmission mode	Full duplex	Full duplex	Full duplex	Full duplex
Protocols supported	Poll Select	Poll Select	Poll Select	BSC and SDLC
Codes supported	ASCII	ASCII	ASCII	EBCDIC
Interface	1 RS-232-C, TDI	1 RS-232-C, TDI	RS-232-C (max of 7), TDI	RS-232-C
Clocking	Internal/external	Internal/external	Internal/external	—
TERMINAL SIDE SPECIFICATIONS				
Number and type of ports provided	Up to 3 Poll/Select, up to 7 Async ASCII	Up to 18 Poll/Select, up to 18 Async ASCII	Up to 24 Burroughs P/S, up to 24 async ASCII	From 3 to 11, plus an extension port for ATM
Devices supported	All Burroughs and Burroughs cmpat. dvces.; any ASCII device; any Micro	All Burroughs and Burroughs cmpat. dvces.; any ASCII device; any Micro	All Burroughs and Burroughs cmpat. dvces.; any ASCII device; any Micro	Burroughs TT102 and MT355, TRW MCI, ASCII CRT/printer, ATM * Direct
Connections supported	Direct, dial-up, leased line	Direct, dial-up, leased line	Direct, dial, leased line	Direct
TRANSMISSION SPEC. (Terminal Line)				
Maximum transmission, in bps	19.2K	19.2K	19.2K	19.2K
Maximum aggregate input rate, in bps	All ports @ 19.2K	All ports @ 19.2K	All ports @ 19.2K	—
Synchronization	Async/sync/TDI	Async/sync/TDI	Async/sync	Async/sync
Transmission mode	Half/full duplex	Half/full duplex	Half/full duplex	Full duplex
Protocols supported	TTY, Poll/Select	TTY, Poll/Select	TTY, Poll/Select	Async, Burroughs P/S
Codes supported	ASCII	ASCII	ASCII	ASCII, TDI
Interfaces supported	RS-232-C, V.24 TDI	RS-232-C, V.24 TDI	RS-232-C, TDI	RS-232-C, current loop, Centronics, TDI
DIAGNOSTICS	Continual self-test, standalone diagnostic routines	Continual self-test, standalone diagnostic routines	Continual self-test, standalone diagnostic routines	Status LEDs, link/port monitoring
PRICING AND AVAILABILITY				
Purchase, \$	1,795 to 3,500	9,000 to 25,000	16,000 to 30,000	15,000
Rental, \$/month-to-month	—	—	—	Not applicable
Installation, \$	1,500	1,500	—	Contact vendor
Maintenance, \$ Annual	Contact vendor	Contact vendor	Contact vendor	Contact vendor
Serviced by	Factory	Factory	Factory, third party	Vendor
Availability	30 days	30 days	30	30 days
Date of first comm. delivery of this model	1985	1979	1983	Spring 1984
Number installed to date	Over 1,000	Over 1,000	Over 200	Approximately 200
COMMENTS	Device also acts as re- mote front-end process., which independently polls the terminals; enabling the user to put up to 18 devices on a single line adaptor with excellent response time	Device also acts as re- mote front-end process., which independently polls the terminals; enabling the user to put up to 100 devices on a single line adaptor with excellent response time	Device also acts as re- mote front-end process., which independently polls the terminals; enables a Burr. user to put up to 100 devices on a single line adaptor with excellent response time	Host-independent pro- cessor operates in a remote location; pro- vides protocol and code conversion, remote line concentration, control unit emulation  * Also supports Sperry UTS40, IBM PC, and Macintosh

## Conversion Systems/Terminal Controllers

MANUFACTURER & MODEL	Digital Communications Associates Protocol Processor II	Digital Controls 94041/94042 UNIPACE	Digital Controls 94044/94045 PACE	Diversified Data Resources Hydra II
DEVICE TYPE	Protocol processor	Protocol converter, terminal emulator	Protocol converter, terminal emulator	Protocol converter, controller
CONVERSION PERFORMED	Async ASCII to IBM 3270 BSC, SNA/SDLC, or 5251 SNA	NCR ISO Async polled to TTY	NCR ISO Async polled to TTY	Async ASCII to 3270 BSC or SNA
SPECIFIC DEVICE EMULATED	IBM 3271, 3274, 3275, 3278, 3279, 3287, 5251, 5256, 5291	NCR 796-301, NCR 7900-3	NCR 796-301, NCR 7900-3	IBM 3277, 3278, 3279, 3274, 3211, 3286, 3272
SPECIFIC FUNCTIONALITY PROVIDED	Async ASCII devices, Apple Mac or IBM PC to 327X-2,3,4,5 or 525X-11	Allows 1 async device to be connected to an NCR polled async link	Allows 4 async devs. to be connected to an NCR polled async link	ASYNC/ASCII terminal or PC to 3277, 3278, 3279; ASCII printer to 3211 or 3286
VIRTUAL SCREEN SIZES SUPP., in char. COMMAND PORT SUPPORTED	1920 Yes	1920 Yes	1920 Yes	1920 Yes
HOST SIDE SPECIFICATIONS Specific hosts supported	IBM mainframes, and System 3X	CR 85XX, 86XX, 93XX, 98XX	CR 85XX, 86XX, 93XX, 98XX	IBM 360, 370, 4300, 303X, 308X, & compatible DOS, VSE, VSI, MVS, XA, SP VM ACP
Number and type of host lines supported	2 BSC, SNA/SDLC or System 3X	—	—	2
Number host sessions supported concurrently	7	—	—	—
Connections supported	Direct, point-to-point (dial-up), multipoint	Direct, point-to-point on dial-up, multipoint on leased, daisy chain	Direct, point-to-point on dial-up, multipoint on leased, daisy chain	Dir. conn., multipoint on leased line, point- to-point on dial-up line Direct channel attach
Connection to host via controller	IBM 3274 mdl's 21C, 31C, 51C or IBM 3276-12, 5294	NCR 61/721, CLC/MLA, LLCS	NCR 61/721, CLC/MLA, LLCS	—
TRANSMISSION SPEC. (Host Line) Maximum transmission, in bps	To 19.2K	19.2K	19.2K	1.8M byte
Synchronization	Sync/async	Asynchronous	Asynchronous	Channel
Transmission mode	Half/full duplex	—	—	Half/full duplex
Protocols supported	BSC or SNA/SDLC	NCR ISO - async polled	NCR ISO - async polled	Async/BSC/SNA
Codes supported	EBCDIC	ASCII	ASCII	ASCII, EBCDIC
Interface	RS-232-C	1 RS-232-C	1 RS-232-C	Up to 32 RS-232-C
Clocking	Internal, external	Internal, external	Internal, external	Internal
TERMINAL SIDE SPECIFICATIONS Number and type of ports provided	Up to 64 async devices	1 multimode port	4 multimode ports	Up to 8, 16, 32 or 64 async ports
Devices supported	Virtually any async ASCII terminal	Those supported under NCR 796-301/7900-3, incl. Wyse, ADDS, and NCR mdl's	Those supported under NCR 796-301/7900-3, incl. Wyse, ADDS, and NCR mdl's	Teletype, IBM PC 3101, Lear Siegler, VT100, and others
Connections supported	Direct, dial-up	Direct	Direct	Direct, dial-up, leased line
TRANSMISSION SPEC. (Terminal Line) Maximum transmission, in bps	300 to 19.2K	38.4K	38.4K	9600
Maximum aggregate input rate, in bps	—	—	48K	1.8M bytes
Synchronization	Asynchronous	Asynchronous	Asynchronous	Asynchronous
Transmission mode	Half/full duplex	Half/full duplex	Half/full duplex	Full duplex
Protocols supported	—	TTY II	TTY II	X-on/X-off, TTY
Codes supported	ASCII	ASCII	ASCII	ASCII, EBCDIC
Interfaces supported	RS-232-C	RS-232-C	RS-232-C	RS-232-C
DIAGNOSTICS	Status message	Self-test	Self-test	Self-test, status LEDs software diagnostics
PRICING AND AVAILABILITY Purchase, \$	4,595 to 5,995	94041—695; 94042—895	94044-1,850; 94045-2,050	7,900—16,900
Rental, \$/month-to-month	Contact vendor	62/75	120/133	Contact Vendor
Installation, \$	Contact vendor	105	143	None
Maintenance, \$ Annual	Contact vendor	168	300	12 percent
Serviced by	Vendor	NCR	NCR	Vendor
Availability	March 1986	2 to 4 weeks	2 to 4 weeks	30 days
Date of first comm. delivery of this model	April 1986	—	August 1984	September 1982
Number installed to date	Information not avail.	—	2,350	1000
COMMENTS	File transfer and dial back security are available	Soft set-up via ter- minal. Model 94042 has an integrated async/ sync converter with signalled carrier capability	Soft set-up via ter- minal. Model 94045 has an integrated async/ sync converter with signalled carrier capability	Channel attach 3211/1403 printer support; dial-up support; PC/ Host File transfer capability; re- mote devices appear as local, dial-back security, 3278/79



### Conversion Systems/Terminal Controllers

MANUFACTURER & MODEL	Forest Computer Gateway/1000	Gandalf Data AIM 3270	INCAA Datacom B.V. PIT-3274	INCAA Datacom B.V. PIT-SNA-0300
DEVICE TYPE	Multivendor gateway provides conversion & emul.	Protocol/code converter, terminal emulator	Terminal emulator, string converter	Protocol/code converter, string converter
CONVERSION PERFORMED	ASCII/EBCDIC, EBCDIC/ASCII, async/SNA, SNA/async, async/BPS, BPS/async, BPS/SNA, SNA/BSP	ASCII to EBCDIC, async to SNA, async to bisync	ASCII to EBCDIC	ASCII to EBCDIC, BSC to SDLC
SPECIFIC DEVICE EMULATED	IBM 3274, 3278	IBM 3274 Model 51C	IBM 3274 Model 51C, IBM 3174, IBM 3276 Model 12, IBM 3777	IBM 3274 Model 51C, IBM 3174
SPECIFIC FUNCTIONALITY PROVIDED	HP CRT to IBM 3270, IBM 3270 to HP CRT, Burr. TD830 to IBM 3270, IBM 3270 to Bur. TD 830, etc	ASCII to bisync, ASCII to SNA	1 async ASCII to 3278/3179 Model 2	SNA to BSC/Async
VIRTUAL SCREEN SIZES SUPP., in char.	1920	1920, 3564	1920	480, 1920, 3564
COMMAND PORT SUPPORTED	Yes	Yes	Yes	Yes
HOST SIDE SPECIFICATIONS				
Specific hosts supported	IBM 370/30XX,43XX, Burr. B1XXX—B7XXX <sup>1</sup>	IBM 43XX and 8100	IBM 43XX	IBM 43XX
Number and type of host lines supported	—	—	—	—
Number host sessions supported concurrently	500	1 BSC or 1 SDLC	1 BSC and 1 SDLC, 1 SDLC and 1 Async	1 BSC and 1 SDLC, 1 SDLC and 1 Async
Connections supported	Direct, dial-up, leased line	Direct, point-to-point on dial-up line, multi-point on leased line	Direct, point-to-point on dial-up line, multi-point on leased line	Direct, point-to-point on dial-up line, multi-point on leased line
Connection to host via controller	IBM 3705, 3725, 4300 Adapter, HP, Burroughs I	3705, 3725	IBM 270X, 37XX	IBM 270X, 37XX
TRANSMISSION SPEC. (Host Line)				
Maximum transmission, in bps	56K	19.2K	19.2K	19.2K
Synchronization	Async/sync	Synchronous	Async/sync	Async/sync
Transmission mode	Half/full duplex	Half/full duplex	Half/full duplex	Half/full duplex
Protocols supported	HP async, SNA/SDLC, BPS	BSC, SNA/SDLC	BSC, SNA/SDLC	BSC, SNA/SDLC
Codes supported	ASCII, EBCDIC	ASCII, EBCDIC	ASCII, EBCDIC	ASCII, EBCDIC
Interface	RS-232-C, V.35, RS-422	1 RS-232-C	1 RS-232-C, V.24	1 RS-232-C, V.24
Clocking	Internal, external	Internal, external	Int./ext., data derived	Int./ext., data derived
TERMINAL SIDE SPECIFICATIONS				
Number and type of ports provided	500	Up to 8 termnl. w/slave or dedicated printers	1 port + printer pass-through	1 to 1 virtual protocol converter
Devices supported	HP262X/264X, Burr TD830/ET1100, IBM 3178/3179/3180/3277/3278/3279	See comments *	VT100, VT220, Haseltine, IBM, etc.	Telex message switchers, bank terminals, etc.
Connections supported	Direct, dial-up, leased line	Direct, remote, dial-up	Direct, remote, dial-up, leased	Direct, remote, dial-up, leased
TRANSMISSION SPEC. (Terminal Line)				
Maximum transmission, in bps	56K	19.2K	19.2K	19.2K
Maximum aggregate input rate, in bps	—	153.6K	±9K	9K
Synchronization	Async/sync	Asynchronous	Asynchronous	Async/sync
Transmission mode	Half/full duplex	Half/full duplex	Half/full duplex	Half/full duplex
Protocols supported	X-on/X-off, SNA, BPS	TTY II	—	BSC, MSV 1/2 (Siemens)
Codes supported	ASCII, EBCDIC	ASCII	ASCII, EBCDIC	ASCII, EBCDIC
Interfaces supported	RS-232-C, RS-422	RS-232-C	RS-232-C, V.24	RS-232-C, V.24
DIAGNOSTICS	Remote dial-up diagnostics	Self-test, status LEDs, ASCII line tests	Self-test, status LEDs, set-up test	Self-test, status LEDs, set-up test
PRICING AND AVAILABILITY				
Purchase, \$	10,000—100,000	Contact vendor	2,000	2,000
Rental, \$/month-to-month	—	—	Contact vendor	Contact vendor
Installation, \$	0	Install./svrc. pkg avail	Contact vendor	Contact vendor
Maintenance, \$ Annual	2,000—20,000	Install./svrc. pkg avail	Contact vendor	Contact vendor
Serviced by	Vendor on site	Vendor	Contact vendor	Contact vendor
Availability	Contact vendor	Contact vendor	Contact vendor	Contact vendor
Date of first comm. delivery of this model	February 1985	—	—	—
Number installed to date	4	—	—	—
COMMENTS	Features include programmatic access, multiple sessions as each terminal, automatic port selection <sup>1</sup> HP1000/3000	Console, facility provides ability to define async terminal and prnr profiles; this is a gateway module integral to data PBX (PACS 2000)  * Facility provided to define profile of any async terminal or printer via console	—	The PIT-SNA is capable of connecting BSC oriented equipment into an SNA network

### Conversion Systems/Terminal Controllers

MANUFACTURER & MODEL	INCAA Datacom B.V. CAT-I	Innovative Electronics MC-80/100	Innovative Electronics MC-80/300	Innovative Electronics MC-80/400
DEVICE TYPE	Protocol/code converter, terminal emulator	Protocol converter	Protocol converter	Protocol converter
CONVERSION PERFORMED	ASCII to EBCDIC	BSC to Async ASCII	BSC to Burroughs poll/select	BSC TO NCR poll/select
SPECIFIC DEVICE EMULATED	IBM 3274 Model 51C, IBM 3174, IBM 3276 Model 12,	IBM 2780 or 3780 BSC RJE	3271 cluster controller with 3277 terminals	3271 cluster controller with 3277 terminals
SPECIFIC FUNCTIONALITY PROVIDED	IBM 3777 ASCII to 3278 Model 2	Async ASCII terminal, printer and micro/mini computer to IBM 2780/3780 BSC	IBM 3270 BSC host to Burroughs teller terminals (poll/select)	IBM 3270 BSC host to NCR poll/select teller terminals
VIRTUAL SCREEN SIZES SUPP., in char.	1920	Up to 1000 bytes*	Up to 1920	Up to 1920
COMMAND PORT SUPPORTED	Yes	No	No	No
HOST SIDE SPECIFICATIONS	IBM 43XX	Not applicable	Not applicable	Not applicable
Specific hosts supported	—	1 BSC	1 BSC	1 BSC
Number and type of host lines supported	—	1	1	1
Number host sessions supported concurrently	1 SDLC and 1 Async	1	1	1
Connections supported	Direct, point-to-point on dial-up line, multipoint on leased, coax	Direct connect, multipoint, point-to-point	Direct, multipoint, point-to-point	Direct connect, multipoint, point-to-point
Connection to host via controller	IBM 3274, 3174	Not applicable	Not applicable	NCR 751 supporting up to 13 NCR 279 tel. terms.
TRANSMISSION SPEC. (Host Line)	Coax speed	To 19.2K	To 19.2K	Up to 19.2K
Maximum transmission, in bps	Not applicable	Synchronous	Async/sync	Async/sync
Synchronization	Not applicable	Half/full duplex	Half/full duplex	Half/full duplex
Transmission mode	Not applicable	BSC	BSC	BSC
Protocols supported	Not applicable	EBCDIC	ASCII or EBCDIC	EBCDIC or ASCII
Codes supported	Not applicable	1 RS-232-C	1 RS-232-C	1 RS-232-C
Interface	Not applicable	Internal/external	Internal/external	Internal/external avail.
Clocking	Not applicable	Up to 2 async	Up to 2 async ports; TDI & mod. shar. opt. avail.	Up to 2 async
TERMINAL SIDE SPECIFICATIONS	1 terminal/async device connection	Any async terminal, printer, mini/micro-computer	Burroughs TT 102, TT 602, MT 355 teller term.	NCR 279 teller terminals
Number and type of ports provided	Whole range of terminals and PCs with emulation	Direct connect, dial-up	Direct, dial-up	Direct, dial-up
Devices supported	Direct, remote, dial-up, leased	Direct connect, dial-up	Direct, dial-up	Direct, dial-up
Connections supported	Direct, remote, dial-up, leased	Direct connect, dial-up	Direct, dial-up	Direct, dial-up
TRANSMISSION SPEC. (Terminal Line)	19.2K	9600	To 2400	To 2400
Maximum transmission, in bps	10K	9600	To 2400	To 2400
Maximum aggregate input rate, in bps	Async/sync	Asynchronous	Asynchronous	Asynchronous
Synchronization	Half/full duplex	Half/full duplex	Half/full duplex	Half/full duplex
Transmission mode	BSC	Async	Burroughs poll/select	NCR poll/select
Protocols supported	ASCII, EBCDIC	ASCII	ASCII	ASCII
Codes supported	RS-232-C, V.24	RS-232-C	RS-232-C, TDI	RS-232-C, TDI
Interfaces supported	Self-test, status LEDs, set-up test	Self-test, loopback test, status LEDs	Self-test, status LEDs, loopback test	Self-test, loopback, status LEDs
DIAGNOSTICS	Self-test, status LEDs, set-up test	Self-test, loopback test, status LEDs	Self-test, status LEDs, loopback test	Self-test, loopback, status LEDs
PRICING AND AVAILABILITY	Contact vendor	1,495	2,095	2,095
Purchase, \$	Contact vendor	Not applicable	Not applicable	Not applicable
Rental, \$/month-to-month	Contact vendor	Not applicable	Not applicable	Not applicable
Installation, \$	Contact vendor	300	300	300
Maintenance, \$ Annual	Contact vendor	Factory	Factory	Factory
Serviced by	Contact vendor	Factory	Factory	Factory
Availability	Contact vendor	In stock	In stock	In stock
Date of first comm. delivery of this model	—	June 1981	December 1981	December 1981
Number installed to date	—	1750	750	750
COMMENTS	CAT-I will connect any personal computer or asynchronous device to your IBM mainframe	Automatic record blocking at 80 characters; auto answer capability, auto log-on; buffer expandable to over 14K bytes  *In transmission message from host	Multiple MC-80 units may reside on single multi-drop line and coexist with any other 3270 compatible equipment; multiline sharing device permits chaining of one MC-80 to other MC-80s and/or 3270 control units at any location	Compatible with CICS, VTAM, RTAM, IMS; multiple MC-80 units may reside on a single multi-drop line and coexist with any 3270-compatible equipment; multiline sharing device permits chaining of one MC-80 to other MC-80s and/or 3270 cont. units at any loc.

Conversion Systems/Terminal Controllers

MANUFACTURER & MODEL	Instrumentation Services ISI-87	International Business Machines 7171	International Business Machines 3708	International Business Machines 3710
DEVICE TYPE	Protocol converter	Protocol converter	Line concentrator, protocol conversion/envel.	PU Type 2 cluster controller
CONVERSION PERFORMED	EBCDIC to ASCII, LU Type 1 or LU Type 3 to ASCII	Async ASCII to IBM 3270	Async ASCII to IBM SNA/SDLC	Start/stop async, BSC, and SDLC to SDLC or X.25; async ASCII to 3270 through 8PCA*
SPECIFIC DEVICE EMULATED	IBM 3787	3274 1D control unit	ASCII displays appear as 3278-2, 3178, 3279, &3179; ASCII printers as 3287-1,2	3274 model 51C, 61C through 8PCA
SPECIFIC FUNCTIONALITY PROVIDED	Allows any ASCII printer connection to 3274/3276 controller	Allows asynchronous ASCII devices to emulate IBM 3270-type term., print., plotters	Allows async ASCII devices to emulate IBM 3270 full-screen displays and printers	Concentrates lines from BSC, start/stop, and SDLC onto SDLC or X.25 links; asyn to IBM 3270
VIRTUAL SCREEN SIZES SUPP., in char.	1920, 2560, 3440, 3564	1920	1920	—
COMMAND PORT SUPPORTED	No	Maintenance Facility	Yes	Yes
HOST SIDE SPECIFICATIONS				
Specific hosts supported	IBM mainframe through 3274/3276 controller	IBM 43XX, 308X	IBM System/370, 303X, 3090, 43XX, 8100, Sys/38	IBM System/370, 30XX, 43XX
Number and type of host lines supported	Not applicable	1	2; 1 SNA, 1 async	Up to 5 IBM SNA through 8PCA
Number host sessions supported concurrently	Not applicable	—	—	—
Connections supported	Not applicable	Direct via block multiplexer channel	Direct	Switched, leased
Connection to host via controller	IBM 3274/3276 or interpad adapter	No	May be through 37X5, 3710; downstream-CBX II	3705, 3725
TRANSMISSION SPEC. (Host Line)				
Maximum transmission, in bps	75 to 9600	19.2K	19.2K	19.2K
Synchronization	Synchronous	Synchronous	Async/sync	Async/sync
Transmission mode	Half/full duplex	Full duplex	Half/full; full on async	Half/full duplex
Protocols supported	BSC, SDLC	SNA/SDLC	SNA/SDLC	Asynchronous thru 8PCA
Codes supported	—	EBCDIC	EBCDIC	ASCII, SDLC
Interface	—	Block mux channel	RS-232-C (async)	RS-232-C, V.35, X.21
Clocking	Internal	—	—	—
TERMINAL SIDE SPECIFICATIONS				
Number and type of ports provided	1 receive-only printer	16—64	8 async	Support for up to 7 8PCAs (56 async lines)
Devices supported	Any ASCII printer, serial or parallel	Async ASCII devices	Async ASCII CRTs and printers	Async ASCII devices supported thorough 8PCA
Connections supported	Direct coax RG 62	Direct or via null modem cable/asy line drv	Direct, point-to-point on switched/non-switched	Direct or through service modem
TRANSMISSION SPEC. (Terminal Line)				
Maximum transmission, in bps	To 9600	19.2K	19.2K	19.2K or 64K w. V.35/X.21
Maximum aggregate input rate, in bps	Not applicable	—	—	—
Synchronization	Asynchronous	Asynchronous	Asynchronous	Async/sync
Transmission mode	—	Full duplex	Full duplex	Half/full duplex
Protocols supported	X-on/X-off	Asynchronous	Asynchronous	Async, SDLC, BSC
Codes supported	ASCII	ASCII	ASCII	ASCII, EBCDIC
Interfaces supported	RS-232-C or parallel	RS-232-C; V.24/V.28 (international)	RS-232-C, RS-422-A	RS-232-C, V.35, X.21
DIAGNOSTICS	Self-test at power-up, buffer dump with log information	Self-test on power up, failure isolation thru IBM Prob. Determ. Proc.	Prob. determine through control term	Continuous monitoring; testing of comm. adap., cables, modem
PRICING AND AVAILABILITY				
Purchase, \$	1,295	12,420 basic unit (16)	3,750; \$750 microcode	20,300 basic unit**
Rental, \$/month-to-month	None	—	—	110
Installation, \$	None	—	Customer installation	753—1,160
Maintenance, \$ Annual	None	229 mo.	Contact vendor	Vendor
Serviced by	Factory	Vendor	Vendor	Vendor
Availability	In stock	Now	—	—
Date of first comm. delivery of this model	June 1982	September 1984	October 1985	September 1984
Number installed to date	3000	Info. not available	Info. not available	Info. not available
COMMENTS	Has transparent mode that allows control codes to be sent to printer as plain text; can be used to drive plotters such as IBM 749 or 750, HP 7550; use with Tektronix 4510/4692 color graphics printing system	—	In conversion mode, 3708 converts 3270 datastream to/from ASCII code; protocol enveloping allows connection between TWX 33/35 devices and SNA host	*8PCA is communications adapter for async ASCII devices **Prices for comm. adap. as follows: V.24—\$2,000; V.35—\$2,000; X.21—\$2,200

## Conversion Systems/Terminal Controllers Addendum

MANUFACTURER & MODEL	JBM Electronics ABC-RJE	JBM Electronics BPC	JBM Electronics MAPC-3270	JBM Electronics MAPC-Burroughs
DEVICE TYPE	Protocol converter	Protocol converter	Protocol converter	Protocol converter
CONVERSION PERFORMED	ASCII to EBCDIC	BSC to SDLC	ASCII to EBCDIC	Burroughs Poll Select to ASCII
SPECIFIC DEVICE EMULATED	Bisync RJE	IBM 3274 Model 51C	IBM 3274 Model 51C	ET 1100
SPECIFIC FUNCTIONALITY PROVIDED	Async ASCII to Bisync RJE	Bisync to SNA	Async ASCII to 3270 Bisync or SNA	Async ASCII to Burroughs ET 1100 Poll Select
VIRTUAL SCREEN SIZES SUPP., in char.	Not applicable	—	480, 1920, 3520, 3564	1920, multiple pages
COMMAND PORT SUPPORTED	No	No	Yes	Yes
HOST SIDE SPECIFICATIONS Specific hosts supported	IBM 43XX and 8100	IBM 43XX and 8100	IBM 43XX and 8100	Burroughs processors
Number and type of host lines supported	—	—	—	—
Number host sessions supported concurrently	1 Bisync port	1 BSC and 1 SDLC	1 BSC or 1 SDLC	1 TDI, async or sync
Connections supported	Direct, point-to-point on dial-up line, multi-point on leased line	Direct, point-to-point on dial-up line, multi-point on leased line	Direct, point-to-point on dial-up line, multi-point on leased line	Direct, pt-to-pt on dial-up line, multi-point on leased line, TDI
Connection to host via controller	IBM 270X and 37XX	IBM 270X and 37XX	IBM 270X and 37XX	Burroughs
TRANSMISSION SPEC. (Host Line) Maximum transmission, in bps	19.2K	19.2K	19.2K	38.4K
Synchronization	Synchronous	Synchronous	Synchronous	Async/sync
Transmission mode	Half duplex	Half duplex	Half duplex	Half/full duplex
Protocols supported	BSC	SNA/SDLC	BSC, SNA/SDLC	Burroughs poll select
Codes supported	ASCII, EBCDIC	ASCII, EBCDIC	ASCII, EBCDIC	ASCII
Interface	One RS-232-C	One RS-232-C	One RS-232-C	One RS-232-C, TDI
Clocking	Internal, external	Internal, external	Internal, external	Int., ext., data derived
TERMINAL SIDE SPECIFICATIONS Number and type of ports provided	1 async port	1 port bisync terminal or host emulation	16 async ports, each supporting CRT/printer	Up to 16 async ports, and printer off CRT port
Devices supported	TTY async	Not applicable	Terminal menu contains over 100 different terminals *	Menu contains over 100 terminals, user can program his own terminal
Connections supported	Direct, remote, dial-up, leased	Direct, remote, dial-up, leased	Direct, remote, dial-up, leased	Direct, remote, dial-up, leased
TRANSMISSION SPEC. (Terminal Line) Maximum transmission, in bps	19.2K	19.2K	19.2K	19.2K
Maximum aggregate input rate, in bps	19.2K	19.2K	19.2K	19.2K
Synchronization	Asynchronous	Synchronous	Asynchronous	Asynchronous
Transmission mode	Half duplex	Half duplex	Full duplex	Full duplex
Protocols supported	TTY II	BSC	TTY II	TTY II
Codes supported	ASCII	ASCII, EBCDIC	ASCII	ASCII
Interfaces supported	RS-232-C	RS-232-C	RS-232-C, current loop	RS-232-C, current loop
DIAGNOSTICS	Self-test, status LEDs	Self-test, status LEDs, SNA network diagnostics	Self-test, status LEDs, ASCII line tests, network line monitor	Self-test, status LEDs, ASCII line tests, network line monitor
PRICING AND AVAILABILITY Purchase, \$	995	1,995	1,395 base price **	1,695 base *
Rental, \$/month-to-month	—	—	—	—
Installation, \$	—	—	—	—
Maintenance, \$ Annual	T&M after 1-yr warranty	T&M after 1-yr warranty	T&M after 1-yr warranty	T&M after 1-yr warranty
Serviced by	Factory	Factory	Factory	Factory
Availability	7 days ARO	7 days ARO	7 days ARO	30 days ARO
Date of first comm. delivery of this model	January 1984	June 1986	June 1986	April 1987
Number installed to date	1,000	500	600	—
COMMENTS	Supports IBM 2770, 2780, 3741, 3270, and 3780 bisync; used for file transfers between async device and bisync network	Provides bisync host and terminal emulation; supports 3270 and 3770 SNA terminal emulation; optional 3777 MLU emulation available	Supports 3278 Models 1 to 5 and base color; security features include dial-back security; log-on, log-off messages; and network address associated with passwords * User can program his own terminal **\$335 each extra port	Full emulation for all Burroughs CRTs; security features include dial-back security; log-on, log-off messages; and network address associated with passwords * \$350 for each additional port

### Conversion Systems/Terminal Controllers

MANUFACTURER & MODEL	JBM Electronics MAPC-Univac	KMW Systems Series II 3270 (SNA or BSC)	KMW Systems Series II 2780/3780	KMW Systems Series II 3770 SNA/SDLC
DEVICE TYPE	Protocol converter	Protocol converter	Protocol converter	Protocol converter
CONVERSION PERFORMED	Async to Univac	SNA or BSC to async	BSC to asynchronous	SNA/SDLC to async
SPECIFIC DEVICE EMULATED	UTS30	IBM 3274 or 3271	IBM 2780, 3780 RJE's	IBM 3776 Models 3 and 4; IBM 3777 Model 3
SPECIFIC FUNCTIONALITY PROVIDED	Async ASCII to Uniscope	Async ASCII CRT to IBM 3278; async printer to IBM 3287	Async ASCII or EBCDIC peripherals to IBM 2780, 3780 card reader, card punch, or printer	Async ASCII peripherals appear as 3770 batch SNA workstation
VIRTUAL SCREEN SIZES SUPP., in char.	3168	To 3564	—	—
COMMAND PORT SUPPORTED	Yes	Yes	Yes	Yes
HOST SIDE SPECIFICATIONS				
Specific hosts supported	Univac 1100	IBM mainframes	Any IBM 2780 or 3780 compatible device	IBM mainframes
Number and type of host lines supported	—	1 BSC or SNA/SDLC	1 BSC	1 SNA/SDLC
Number host sessions supported concurrently	1 Uniscope	8	1	8
Connections supported	Direct, pt-to-pt on dial-up line, multipt on leased line, mux	Switched or dedicated, point-to-point or multi-point	Switched or dedicated, point-to-point or multi-point	Switched or dedicated, point-to-point or multi-point
Connection to host via controller	GCS or DCP	IBM 3705, 3725	IBM 37XX or direct to 2780/3780 device	IBM 3705, 3725
TRANSMISSION SPEC. (Host Line)				
Maximum transmission, in bps	19.2K	To 19.2K (56K optional)	To 19.2K	To 19.2K (56K opt.)
Synchronization	Synchronous	Synchronous	Synchronous	Synchronous
Transmission mode	Half duplex	Half duplex	Half/full duplex	Half/full duplex
Protocols supported	Uniscope	SNA/SDLC, BSC	BSC	SNA/SDLC
Codes supported	ASCII	EBCDIC	EBCDIC	EBCDIC
Interface	One RS-232-C	RS-232-C; V.35, X.21 optional	RS-232-C; V.35, X.21 optional	RS-232-C; V.35, X.21 optional
Clocking	Internal, external	Internal, external	Internal, external	Internal, external
TERMINAL SIDE SPECIFICATIONS				
Number and type of ports provided	Up to 16 async ports, and printer off CRT port	Up to 8 asynchronous	Up to 8	Up to 8 async
Devices supported	Menu contains over 100 terminals, user can program his own terminal	Virtually any async ASCII CRT, printer, or personal computer	Virtually any ASCII or EBCDIC peripheral device	Virtually any ASCII or EBCDIC peripheral device
Connections supported	Direct, remote, dial-up, leased	Direct, dial-up	Direct, dial up	Direct, dial-up
TRANSMISSION SPEC. (Terminal Line)				
Maximum transmission, in bps	19.2K	To 19.2K	To 19.2K	To 19.2K
Maximum aggregate input rate, in bps	19.2K	—	—	—
Synchronization	Asynchronous	Asynchronous	Asynchronous	Asynchronous
Transmission mode	Full duplex	Full duplex	Half/full duplex	Half/full duplex
Protocols supported	TTY II	X-on/X-off, CTS	X-on/X-off, CTS, prompt	X-on/X-off, CTS, Prompt
Codes supported	ASCII	ASCII	ASCII, EBCDIC	ASCII, EBCDIC
Interfaces supported	RS-232-C, current loop	RS-232-C; parallel	RS-232-C, parallel	RS-232-C, parallel
DIAGNOSTICS	Self-test, status LEDs, ASCII line tests, network line monitor	Status LEDs, PROM/RAM checks, self-test, ASCII line test, int/ext lpb	Status LEDs, PROM/RAM checks, self-test, ASCII line test, int/ext lpb	Status LEDs, self tests, internal loopback, ASCII line tests, int/ext lpb
PRICING AND AVAILABILITY				
Purchase, \$	1,595 base *	Starts at 1,495	1,995	Starts at 4,595
Rental, \$/month-to-month	—	Contact vendor	Contact vendor	Contact vendor
Installation, \$	—	Contact vendor	Contact vendor	Contact vendor
Maintenance, \$ Annual	T&M after 1-yr warranty	Contact vendor	Contact vendor	Contact vendor
Serviced by	Factory	Vendor	Vendor	Vendor
Availability	7 days ARO	30 days	30 days	30 days
Date of first comm. delivery of this model	June 1985	10/81-3270A; 11/82-3270B	October 1981	October 1981
Number installed to date	1,000	Information not avail.	Information not avail.	Information not avail.
COMMENTS	Full emulation for all Univac CRTs; security features include dial-back security; log-on, log-off messages; and network address associated with passwords	Device maintains separate buffer for each device; device address assigned sequentially for each port at start-up; programmable setup mode; also includes forced logoff on async disconnect; BSC model upgradable to SNA/SDLC	Optional modem eliminator configuration for local attachment; automatic sign-on; programmable setup mode; UL, FCC & CSA conform	Optional modem eliminator config. for local attachment; conforms to PU2, LU1; programmable setup mode; automatic sign-on; UL, FCC, & CSA conformance
	* \$335 for each additional port			

## Conversion Systems/Terminal Controllers

MANUFACTURER & MODEL	KMW Systems Series II HASP	KMW Systems Twinax*	KMW Systems Series II 3287/Coax	KMW Systems Series III/Coax
DEVICE TYPE	Protocol converter	Protocol converter	Protocol converter	Protocol converter
CONVERSION PERFORMED	BSC to async	IBM System 34/36/38 to async	Async ASCII to 3287 Coax	EBCDIC to ASCII
SPECIFIC DEVICE EMULATED	IBM 360 model 20 HASP RJE workstation	IBM 5251 Model 11 CRT or IBM 522X/5256 printer	IBM 3287 printer	IBM 3287
SPECIFIC FUNCTIONALITY PROVIDED	Async ASCII peripherals appear as HASP workstation	Async ASCII CRT to IBM 5251 or 522X/5256	Async ASCII output devices to IBM 3287	IBM coax to ASCII (Async or parallel)
VIRTUAL SCREEN SIZES SUPP., in char.	—	1920	—	3564
COMMAND PORT SUPPORTED	Yes	Yes	No	No
HOST SIDE SPECIFICATIONS				
Specific hosts supported	IBM mainframes, System 34/36/38, CDC mainframes	IBM system 34/36/38	IBM mainframes	IBM 43XX
Number and type of host lines supported	1 BSC	1 twinax	1 Type A coax	—
Number host sessions supported concurrently	1 session with up to 8 devices	7	1	1 BSC and 1 SDLC
Connections supported	Switched or dedicated	Direct connection	Direct connection	Direct
Connection to host via controller	IBM 3705, 3725	Direct twinax to IBM System 34/36/38	Direct coax to IBM 3274	IBM 3274 and 3174
TRANSMISSION SPEC. (Host Line)				
Maximum transmission, in bps	To 19.2K (56K opt.)	1MHz	2.35MHz	2.5M
Synchronization	Synchronous	—	—	Synchronous
Transmission mode	Half/full duplex	—	—	Half duplex
Protocols supported	BSC	5251 Model 11, 522X/5256	3287 Coax	IBM Coax Type A
Codes supported	EBCDIC	EBCDIC	EBCDIC	DSC
Interface	RS-232-C; V.35, X.21 optional	1 twinax I/F with 1 cable-through	1 3287 Coax	1 Coax
Clocking	Internal/external	—	—	Data derived
TERMINAL SIDE SPECIFICATIONS				
Number and type of ports provided	Up to 8 async	Up to 7 async	1 RS-232-C	1 Async, DataProducts, Centronics
Devices supported	Virtually any ASCII or EBCDIC peripheral device in serial or parallel	Virtually any CRT, PC, or printer	Virtually any async serial or parallel output device	Any ASCII output device with async or parallel
Connections supported	Direct, dial-up	Direct, dial-up	Direct, dial-up	Direct, remote, dial-up
TRANSMISSION SPEC. (Terminal Line)				
Maximum transmission, in bps	To 19.2K	To 19.2K	To 19.2K	19.2K
Maximum aggregate input rate, in bps	—	—	—	—
Synchronization	Asynchronous	Asynchronous	Asynchronous	Asynchronous
Transmission mode	Half/full duplex	Half/full duplex	Half duplex	Half duplex
Protocols supported	X-on/X-off, CTS, Prompt	X-on/X-off, CTS	X-on/X-off, CTS	TTY II, parallel
Codes supported	ASCII, EBCDIC	ASCII	ASCII	ASCII
Interfaces supported	RS-232-C, parallel	RS-232-C, parallel	RS-232-C, parallel	RS-232-C, parallel
DIAGNOSTICS	Status LEDs, self tests, internal loopback, ASCII line tests, int/ext lpb	Status LEDs, self-tests, ASCII line tests	Status LEDs, self tests, ASCII line tests	Self-test, ASCII line tests, status LEDs
PRICING AND AVAILABILITY				
Purchase, \$	Starts at 4,595	Starts at 1,495	Starts at 1,695	1,295
Rental, \$/month-to-month	Contact vendor	Contact vendor	Contact vendor	—
Installation, \$	Contact vendor	Contact vendor	Contact vendor	500 + expenses (1 day)
Maintenance, \$ Annual	Contact vendor	Contact vendor	Contact vendor	Hot spares \$360/year
Serviced by	Vendor	Vendor	Vendor	—
Availability	30 days	30 days	30 days	1 week
Date of first comm. delivery of this model	October 1981	1985	1984	March 1987
Number installed to date	Information not avail.	Information not avail.	Information not avail.	3
COMMENTS	Optional modem eliminator config. for local attachment; setup mode through console port; automatic sign-on; UL, FCC, and CSA conformance	Full 5251 attribute support including color, 25th status line, IBM or Wang PC file transfer; optional forced log off; and transparent passthrough	Allows low-cost ASCII printers or pen plotters to interface to an IBM 3274 controller and appear to the host as a 3287 printer; supports transparent passthrough; complete 3287 front panel on deluxe model	Transparency, graphics support from SAS and ISCO
		*Multiport (up to 7) and single port models available		

## Conversion Systems/Terminal Controllers

MANUFACTURER & MODEL	KMW Systems Series III/Twinax	Lee Data/Datastream Networking Division 774	Lee Data/Datastream Networking Division 874	Lee Data/Datastream Networking Division Series 8000
DEVICE TYPE	Protocol converter	Protocol converter terminal emulator	Protocol converter terminal emulator	Protocol converter
CONVERSION PERFORMED	ASCII to EBCDIC, Twinax to async or parallel	ASCII to EBCDIC	ASCII to EBCDIC	ASCII to EBCDIC
SPECIFIC DEVICE EMULATED	IBM 5291 or 5225	IBM 3274-51C, 3271-2	IBM 3274-51C	IBM 3274 Model 51C
SPECIFIC FUNCTIONALITY PROVIDED	ASCII(async or parallel) to IBM Twinax	ASCII CRT, all PCs to 3278/3277 Model 2; ASCII printer to 3287	Async ASCII CRT, all PCs to 3278 model 2,3,4,5 ASCII printer to 3287	ASCII/async to 3278, models 2 to 5
VIRTUAL SCREEN SIZES SUPP., in char.	1920	1920	1920, 2880, 3440, 3554	1920, 2560, 3440, 3564
COMMAND PORT SUPPORTED	Yes	Yes	Yes	Yes
HOST SIDE SPECIFICATIONS Specific hosts supported	IBM S/34, S/36, S/38	IBM 43XX, 360/370, 30XX, 33XX, 8100	IBM 43XX, 360/370, 30XX, 33XX, 8100	IBM 43XX, 8100, and 370
Number and type of host lines supported	—	All interactive	All interactive	—
Number host sessions supported concurrently	—	24	44	1 BSC and 1 SDLC; 2 BSC or 2 SDLC
Connections supported	Direct, direct to remote C.U.	Direct, multipoint on leased line, point-to- point on dial-up	Direct, multipoint on leased line, point-to- point on dial-up	Direct, multipoint on leased line, point-to- point on dial up line
Connection to host via controller	IBM 5294	IBM 37XX	IBM 37XX	IBM 37XX
TRANSMISSION SPEC. (Host Line) Maximum transmission, in bps	1M	9600	19.2K	19.2K
Synchronization	Synchronous	Synchronous	Synchronous	Synchronous
Transmission mode	Full duplex	Half duplex	Half duplex	Half/full duplex
Protocols supported	Twinax	BSC	SNA/SDLC	BSC, SNA/SDLC
Codes supported	EBCDIC	EBCDIC	EBCDIC	EBCDIC, BOC SARTS
Interface	1 Twinax	2 RS-232-C	2 RS-232-C	RS-232-C
Clocking	Data derived	Int/ext/data derived	Int/ext/data derived	Int/ext/data derived
TERMINAL SIDE SPECIFICATIONS Number and type of ports provided	1 parallel or async	Up to 23 async device ports, CRT, or printer	Up to 15 async device ports, CRT or printer	32 asynchronous ports, 88 virtual sessions
Devices supported	IBM PC, Apple Macintosh, DEC VT 100, most CRTs and all ASCII printers	Over 200	Over 200	Library of over 150
Connections supported	Direct, remote, dial-up, leased	Direct, dial-up	Direct, dial-up	Direct, dial-up, remote, leased
TRANSMISSION SPEC. (Terminal Line) Maximum transmission, in bps	19.2K	9600	19.2K	19.2K
Maximum aggregate input rate, in bps	—	9600 per line	19.2K per line	19.2K per port
Synchronization	Asynchronous	Asynchronous	Asynchronous	Asynchronous
Transmission mode	Full duplex	Full duplex	Full duplex	Half duplex
Protocols supported	TTY II, parallel	TTY II	TTY II	TTY II
Codes supported	ASCII	ASCII	ASCII	ASCII
Interfaces supported	RS-232-C, parallel Centronics, DataProducts	RS-232-C	RS-232-C	RS-232-C
DIAGNOSTICS	Self-test, ASCII line tests, status LEDs	Self-tests	Self-tests	Self-test, status LEDs, network management
PRICING AND AVAILABILITY Purchase, \$	1,195	Contact vendor	Contact vendor	5,000 to 20,000
Rental, \$/month-to-month	—	—	—	Not applicable
Installation, \$	500 + expenses (1 day)	—	—	—
Maintenance, \$ Annual	Hot spares \$360/year	—	—	60 to 200
Serviced by	—	Vendor, Dow Jones	Vendor, Dow Jones	Vendor
Availability	1 week	30 days	30 days	30 days
Date of first comm. delivery of this model	September 1986	1980	1982	—
Number installed to date	300	3000	2000	—
COMMENTS	IBM PC and Apple Mac- intosh and Wang file transfer, attached printer support on CRTs and personal computers	Security software for dial-in access; inactivity monitor; multiple hosts; paper display	Security software for dial-in access; LU1,2,3 support; multiple sess; workstation/system print 3270 PC file transfer SAS graphics support, color, answer back, inactivity monitor	3270/PC file transfer, comprehensive security features, 10MB hard disk with network software for statistics, broad- cast messaging, enable/ disable lines, multiple sessions, CRT attached printer support

## Conversion Systems/Terminal Controllers

MANUFACTURER & MODEL	Local Data DataLynx/3174	Local Data DataLynx/3274* (SNA or BSC)	Local Data DataLynx/5251	Local Data InterLynx/3278
DEVICE TYPE	Protocol converter	Protocol converter	Protocol converter	Protocol converter
CONVERSION PERFORMED	ASCII to SNA	Async ASCII to SNA/SDLC or BSC	Async to SNA/SDLC, ASCII to EBCDIC	IBM Type A coax to ASCII
SPECIFIC DEVICE EMULATED	IBM 3274 Model 51C, IBM 3174	IBM 3274-51C	IBM 5251 Model 12	IBM 3278-2
SPECIFIC FUNCTIONALITY PROVIDED	Asynchronous ASCII to SNA/SDLC	Async ASCII PC/CRT/micro to IBM 3278/1-5, ASCII printer to IBM 3287	Async ASCII PC, CRT, printer to IBM 5251 model 12, 5256, 522X	Allows async ASCII CRT/micro to emulate IBM 3278-2 on IBM control unit
VIRTUAL SCREEN SIZES SUPP., in char.	480, 1920, 3564	960/1920/2560/3440/3564	1920	1920
COMMAND PORT SUPPORTED	Yes	No	Yes	No
HOST SIDE SPECIFICATIONS				
Specific hosts supported	IBM 43XX	3704, 3705, 3725 or any oth. 3270 front end proc	IBM Systems 34/36/38	Cncts. to any IBM cntrl. unit w/Type A coax
Number and type of host lines supported	—	1 SDLC, 1 BSC, 2 SDLC, or 2 BSC	1	1 coax line
Number host sessions supported concurrently	2 SDLC	1 SDLC, 1 BSC, 2 SDLC, or 2 BSC	9	1
Connections supported	Direct, point-to-point on dial-up line, multi-point on leased line	Direct connect, multi-point, point-to-point	Direct, dial-up	Coax
Connection to host via controller	37XX	IBM 370X, 270X	System 34/36/38 comm. port	IBM 3274, 3276, 4701
TRANSMISSION SPEC. (Host Line)				
Maximum transmission, in bps	19.2K	19.2K	19.2K	2.5M
Synchronization	Synchronous	Synchronous	Synchronous	Synchronous
Transmission mode	Half/full duplex	Full duplex	Half/full duplex	Full duplex
Protocols supported	SNA/SDLC	SNA/SDLC or BSC	SNA/SDLC	BSC, SNA/SDLC
Codes supported	ASCII, EBCDIC	EBCDIC (BSC-ASCII)	EBCDIC	EBCDIC
Interface	1 RS-232-C	RS-232-C, Current loop	10 RS-232-C, 1 or 2 may be sync, balanced async	RG62A/U coax
Clocking	Internal/external	Internal/external	Internal/external	—
TERMINAL SIDE SPECIFICATIONS				
Number and type of ports provided	16 ports, up to 32 devices	Up to 9 async ports, 32 logic. unit addresses	10 ports, up to 2 sync, up to 9 async	1 main RS-232-C port; 1 pass-thru RS-232-C prt
Devices supported	Virtually any; contact factory for assistance	Virtually any async ASCII device	Any async ASCII printer, CRT, or PC	Virtually any
Connections supported	Direct, dial-up	Direct, dial-up	Direct, dial-up	Direct, dial-up
TRANSMISSION SPEC. (Terminal Line)				
Maximum transmission, in bps	19.2K	19.2K	19.2K	19.2K
Maximum aggregate input rate, in bps	—	—	19.2K	19.2K
Synchronization	Asynchronous	Asynchronous	Asynchronous	Asynchronous
Transmission mode	Full duplex	Full duplex	Full duplex	Full duplex
Protocols supported	Asynchronous	Asynchronous	SNA/SDLC	Asynchronous display
Codes supported	ASCII	ASCII	ASCII	ASCII
Interfaces supported	RS-232-C, RS-422	RS-232-C, current loop	RS-232-C	RS-232-C
DIAGNOSTICS	Self-test, status LEDs, ASCII line tests, sync/async line monitor	Multi-task. watchdog timer, front-panel LEDs, SNA REQMS, line monitor	Self-test on power up, front-panel LED	Self-test at power up, front-panel LEDs
PRICING AND AVAILABILITY				
Purchase, \$	3,000 to 6,000	1,850 to 6,000	1,850 to 6,000	995 to 1,395
Rental, \$/month-to-month	—	Leasing available	Leasing available	Leasing available
Installation, \$	—	—	—	—
Maintenance, \$ Annual	400	400—600	400—600	175
Serviced by	Vendor	Vendor/R&R advance exch.	Vendor factory	Return to factory, adv. exchange
Availability	30 days ARO	Stock to 60 days	Stock to 60 days	Stock to 60 days
Date of first comm. delivery of this model	January 2, 1987	December 1982	1984	March 1983
Number installed to date	—	3000	325	3,000
COMMENTS	Optional sync and async diagnostic facilities, custom terminal configurator, 19" rackmount avail, modular for easy maintenance, available in standard and deluxe models	Full SNA/SDLC code, SNA inbound/outbound pacing, menu driven configuration, forced log off, dual-level security, inactivity disconnect timer, CPU to CPU support; BSC model upgradeable to SNA/SDLC; echo disable for X.25 network *Deluxe models avail.	Front-panel monitoring of any two RS-232-C channels; options stored in non-volatile memory; field upgradeable to IBM 3270 BSC or SNA; support for up to 18 LUs; which can be shared bwt. 2 syn ports; dual host supp.; integral modem eliminator	Full 1-yr warranty; extensive flow control options; dial-up security; forced log-off; numeric override; async pass-thru port; menu-driven configuration; remote optioning; inactivity disconnect; rackmount versions avl. for 16-channel unit



## Conversion Systems/Terminal Controllers

MANUFACTURER & MODEL	Local Data InterLynx/3287	Local Data InterLynx/5251	Local Data VersaLynx/3278	May-Craft 52 Remote
DEVICE TYPE	Protocol convertor	Protocol converter	Protocol convertor	Protocol converter
CONVERSION PERFORMED	IBM 3274/76 control unit thru Type A coax to ASCII	ASCII to EBCDIC	IBM 3278/3178 terminals via coax to RS-232-C async ASCII	ASCII to EBCDIC
SPECIFIC DEVICE EMULATED	IBM 3287/89 printer	IBM 5251 model 12, IBM 5256, 522X	VT100/102/52, TV 925, TTY, IBM 3101	5251 model 12
SPECIFIC FUNCTIONALITY PROVIDED	Async ASCII printer to IBM 3287/89 printer emulation	Twinax conn asyn devices to IBM 34/36/38 emulating IBM 5251 model 12, 5256, 522X	IBM 3278/3178 terminal to serial async ASCII	Allows ASCII terminal, printer, or PC to communicate with IBM System 3X
VIRTUAL SCREEN SIZES SUPP., in char.	—	1920	1920	1920
COMMAND PORT SUPPORTED	No	Yes	No	No
HOST SIDE SPECIFICATIONS				
Specific hosts supported	All supporting 3270	IBM System 34/36/38	Virtually any ASCII mini/microcomputers	IBM System 34/36/38
Number and type of host lines supported	1 coax port	1 twinax	1	2 SDLC
Number host sessions supported concurrently	1	7	1	2
Connections supported	Coax	Direct twinax, dial-up	Direct, dial-up, point-to-point	Direct, dial-up, leased line
Connection to host via controller	IBM 3274, 3276, 4701	IBM 5294, 5251-12	Any async controller	Not applicable
TRANSMISSION SPEC. (Host Line)				
Maximum transmission, in bps	2.5 M	1M	19.2K	19.2K
Synchronization	Synchronous	Synchronous	Asynchronous	Synchronous
Transmission mode	Full duplex	Half duplex	Full duplex	Full duplex
Protocols supported	SCS (LU1) or BSC (LU3)	Twinax, SDLC	Async CRT personality	SNA/SDLC
Codes supported	EBCDIC	EBCDIC	ASCII	EBCDIC
Interface	RG62A/U Type A coax	RS-232-C	1 RS-232-C	RS-232-C
Clocking	—	—	Internal	Internal/external
TERMINAL SIDE SPECIFICATIONS				
Number and type of ports provided	1 RS-232-C and 1 parallel	Up to 7 async, plus 1 parallel printer	1 coax, 2 RS-232-C	Up to 9 async
Devices supported	Any async ASCII serial or Centronics/Data Prod. parallel	Virtually any async CRTs, PCs, printers	IBM 3278/3178 terminals	Most ASCII terminals, printers, and IBM PC and compatibles
Connections supported	Direct connect, dial-up	Direct, dial-up	Direct connect to terminal	Direct, dial-up
TRANSMISSION SPEC. (Terminal Line)				
Maximum transmission, in bps	19.2K	38.4K	2.5M Hz	19.2K
Maximum aggregate input rate, in bps	19.2K	120K	2.5M Hz	Not applicable
Synchronization	Asynchronous	Asynchronous	Coax buffer code	Asynchronous
Transmission mode	Full duplex	Full duplex	Full duplex	Full duplex
Protocols supported	—	Twinax SDLC	IBM 3278 coax	TTY
Codes supported	ASCII	ASCII	IBM scan code	ASCII
Interfaces supported	RS-232-C or parallel	RS-232-C	IBM Type A coax	RS-232-C
DIAGNOSTICS	Printer test, full-feature 3287 front panel	Self-test on power up, LED, breakout by port	Self-test, status, LEDs	Self-test
PRICING AND AVAILABILITY				
Purchase, \$	995 to 1,295	1,295 to 4,750	695 to 795	3,100 to 6,000
Rental, \$/month-to-month	Leasing available	—	Leasing available	Not applicable
Installation, \$	—	—	—	Not applicable
Maintenance, \$ Annual	175	400	100; add. units @ \$75 ea	—
Serviced by	Return to factory/advance exch.	Vendor factory	Factory	Vendor
Availability	Stock to 90 days	Stock to 60 days	Stock to 60 days	14 days
Date of first comm. delivery of this model	March 1983	November 1985	July 1984	—
Number installed to date	7,000	200	1,000	Info. not available
COMMENTS	Front panel LED optioning; serial and parallel ports; 3287 lookalike front panel on standard model; model without front panel avail.; unit supports pseudo-transparency feature for graphics, page-length choice, baud rate, parity	Twinax connect; dual-level password security; file transfer support; inactivity disconnect; RS-232-C interface switchable DCE/DTE; autobaud to 19.2K; opt. stored in non-volatile memory; auxiliary print. feature supports display & printer on 1 port	User may develop other terminal personality emulation; options stored in non-volatile memory; may be used with InterLynx and DataLynx products to improve system flexibility; menu set up available; host addressable auxiliary printer port	—

### Conversion Systems/Terminal Controllers

MANUFACTURER & MODEL	May-Craft 52 Local	May-Craft 74 R	May-Craft 87P	May-Craft 78T
DEVICE TYPE	Protocol converter (twinax)	Protocol converter	Protocol converter	Protocol converter
CONVERSION PERFORMED	ASCII to EBCDIC	ASCII to EBCDIC	ASCII to EBCDIC	ASCII to EBCDIC
SPECIFIC DEVICE EMULATED	5251 model 11	3274, 3276	IBM 3287	IBM 3278
SPECIFIC FUNCTIONALITY PROVIDED	Allows ASCII terminal, printer, or PC to communicate with IBM System 3X	Allows ASCII terminal, printer, or PC to communicate with IBM 30XX, 43XX	Async ASCII printer to IBM 3287	Async ASCII printer to IBM 3278
VIRTUAL SCREEN SIZES SUPP., in char.	1920	1920	Not applicable	1920
COMMAND PORT SUPPORTED	No	No	No	No
HOST SIDE SPECIFICATIONS				
Specific hosts supported	IBM System 34/36/38	IBM 30XX, 43XX	IBM 370	IBM 370
Number and type of host lines supported	1	2 SDLC	1	1
Number host sessions supported concurrently	1	2	1	1
Connections supported	Direct connection	Direct, dial-up, leased line	Direct connection	Direct connection
Connection to host via controller	5251-12 or 5294	3725, 3705	327X, 4701	327X
TRANSMISSION SPEC. (Host Line)				
Maximum transmission, in bps	1.2M	19.2K	2.5M	2.5M
Synchronization	Synchronous	Synchronous	Synchronous	Synchronous
Transmission mode	Full duplex	Full duplex	Full duplex	Full duplex
Protocols supported	SNA/SDLC	SNA/SDLC	BSC, SNA	BSC, SNA
Codes supported	EBCDIC	EBCDIC	EBCDIC	EBCDIC
Interface	Standard twinax	RS-232-C	1 coax, 2 RS-232-C	1 coax
Clocking	Internal	Internal, external	Internal	Internal
TERMINAL SIDE SPECIFICATIONS				
Number and type of ports provided	Up to 7	Up to 9 async	1 + passthrough port	1
Devices supported	Most ASCII terminals, printers, and IBM PC and compatibles	Most ASCII terminals, printers, and IBM PC and compatibles	Most ASCII printers	Most ASCII terminals
Connections supported	Direct, dial-up	Direct, dial-up	Direct, dial-up	Direct, dial-up
TRANSMISSION SPEC. (Terminal Line)				
Maximum transmission, in bps	19.2K	19.2K	19.2K	19.2K
Maximum aggregate input rate, in bps	Not applicable	Not applicable	Not applicable	Not applicable
Synchronization	Asynchronous	Asynchronous	Asynchronous	Asynchronous
Transmission mode	Full duplex	Full duplex	Full duplex	Full duplex
Protocols supported	TTY	TTY	Asynchronous	Asynchronous
Codes supported	ASCII	ASCII	ASCII	ASCII
Interfaces supported	RS-232-C	RS-232-C	RS-232-C	RS-232-C
DIAGNOSTICS	Self-test	Self-test	Self-tests	Self-tests
PRICING AND AVAILABILITY				
Purchase, \$	1,995 (base unit)	3,100 to 6,000	1,295	995
Rental, \$/month-to-month	Not applicable	Not applicable	Not applicable	Not applicable
Installation, \$	Not applicable	Not applicable	Not applicable	Not applicable
Maintenance, \$ Annual	—	—	—	—
Serviced by	Vendor	Vendor	Vendor	Vendor
Availability	14 days	14 days	14 days	14 days
Date of first comm. delivery of this model	—	—	—	—
Number installed to date	Info. not available	Info. not available	Info. not available	Info. not available
COMMENTS	—	—	—	—

### Conversion Systems/Terminal Controllers

MANUFACTURER & MODEL	May-Craft 3174	May-Craft 3780	Memotec Data SP/8400 BSC 3270	Memotec Data SP/8400 SNA/SDLC
DEVICE TYPE	Protocol converter	Protocol converter	Protocol converter	Protocol converter
CONVERSION PERFORMED	ASCII to EBCDIC	ASCII to BSC 3780	BSC 3270 to X.25	SNA/SDLC to X.25
SPECIFIC DEVICE EMULATED	IBM 3274 Model 51C, IBM 3276 Model 12, IBM 3174	IBM 3780	—	—
SPECIFIC FUNCTIONALITY PROVIDED	ASCII terminal, printer, or PC to comm with IBM 30XX, 43XX	ASCII terminal or PC or printer to a host that supports BSC RJE	BSC 3270 access to hosts via X.25 PDN	SNA/SDLC access to NPSI hosts via X.25 PDN
VIRTUAL SCREEN SIZES SUPP., in char.	1920, 3564	Not applicable	1920	Unrestricted
COMMAND PORT SUPPORTED	No	Yes	Yes	Yes
HOST SIDE SPECIFICATIONS				
Specific hosts supported	IBM 30XX and 43XX	IBM 43XX/8100, all hosts supporting BSC RJE *	Any hosts running BSC 3270 application	Any host running NPSI
Number and type of host lines supported	—	—	—	—
Number host sessions supported concurrently	1 host	1 host	Six	Six
Connections supported	Direct, pt-to-pt on dial-up or leased line, multipt on leased line 37XX	Direct, point-to-point on leased or dial-up lines 37XX, ICA	Direct, multipoint on leased line, pt-to-pt on dial-up 37XX front-end processor	Direct, multipoint on leased line, pt-to-pt on dial-up 37XX front-end proces- sor with NPSI
Connection to host via controller				
TRANSMISSION SPEC. (Host Line)				
Maximum transmission, in bps	19.2K	—	9600	9600
Synchronization	Synchronous	Synchronous	Synchronous	Synchronous
Transmission mode	Half/full duplex	Half/full duplex	Half duplex	Half duplex
Protocols supported	SNA/SDLC	BSC	BSC III 3270	SNA/SDLC
Codes supported	EBCDIC	ASCII, EBCDIC	EBCDIC	—
Interface	1 RS-232-C	1 R-232-C	Six RS-232-C	Six RS-232-C
Clocking	Internal, external	Internal, external	Internal, external	Internal, external
TERMINAL SIDE SPECIFICATIONS				
Number and type of ports provided	Up to 16 asynchronous ports	2 (1 console and 1 printer)	Up to six synchronous	Up to six synchronous
Devices supported	Most ASCII terminals, printers, and IBM PCs and compatibles	Most ASCII terminals, printers, and IBM PCs and compatibles	IBM BSC 3270 compatible	IBM SNA/SDLC and compatible
Connections supported	Direct, dial-up, leased	Direct, dial-up, leased	Direct, dial-up	Direct, dial-up
TRANSMISSION SPEC. (Terminal Line)				
Maximum transmission, in bps	19.2K	9600	9600	9600
Maximum aggregate input rate, in bps	Not applicable	Not applicable	48K	48K
Synchronization	Asynchronous	Asynchronous	Synchronous	Synchronous
Transmission mode	Full duplex	Full duplex	Half duplex	Half duplex
Protocols supported	—	TTY II	BSC III	SDLC
Codes supported	ASCII	ASCII	EBCDIC	—
Interfaces supported	RS-232-C	RS-232-C	RS-232-C, V.24	RS-232-C, V.24
DIAGNOSTICS	Self-tests, status LEDs, ASCII line tests, monitor mode	Self-tests, status LEDs	Local/remote test, status LEDs, self tests	Local/remote test, status LEDs, self tests
PRICING AND AVAILABILITY				
Purchase, \$	3,000 to 6,500	1,445	Contact vendor	Contact vendor
Rental, \$/month-to-month	Not applicable	Not applicable	Contact vendor	Contact vendor
Installation, \$	Not applicable	Not applicable	Contact vendor	Contact vendor
Maintenance, \$ Annual	—	—	Contact vendor	Contact vendor
Serviced by	Vendor	Vendor	Vendor	Vendor
Availability	14 days	14 days	Contact vendor	Contact vendor
Date of first comm. delivery of this model	—	—	Info. not available	Info. not available
Number installed to date	Info. not available	Info. not available	Info. not available	Info. not available
COMMENTS	—	* DEC PDP-11	—	—

### Conversion Systems/Terminal Controllers

MANUFACTURER & MODEL	Memotec Data SP/8400 2780/3780	Micom Systems Micro7400	Micom Systems Micro7881	Micom Systems Micro7887
DEVICE TYPE	Protocol converter	Protocol converter	Protocol converter	Protocol converter
CONVERSION PERFORMED	2780/3780 to X.25	ASCII to BSC 3270, ASCII to SNA 3270	ASCII to BSC or SDLC	ASCII to BSC or SDLC
SPECIFIC DEVICE EMULATED	—	IBM 3274 model 51c, 61C	IBM 3278-2	IBM 3287/3289 printer
SPECIFIC FUNCTIONALITY PROVIDED	BSC 2780/3780 KJE access to host via X.25 PDN	Async. ASCII CRT to IBM 3278 models 2, 3, 4, 5; Async ASCII printer to IBM 3287	Async ASCII CRT to IBM 3278 model 2; IBM PC or compatible to IBM 3278	ASCII printer to IBM 3287
VIRTUAL SCREEN SIZES SUPP., in char.	Not applicable	1920	1920	960—3564 char. buffer
COMMAND PORT SUPPORTED	Yes	Yes	No	No
HOST SIDE SPECIFICATIONS	Any hosts running BSC 2780/3780 application	IBM 360, 370, 43XX, 30XX, 8100	IBM mainframes, DEC, Prime, etc.	IBM mainframes
Specific hosts supported	—	1 BSC or 1 SNA	2	1
Number and type of host lines supported	Six	Sixteen	1 BSC or SNA/SDLC and 1 async	1 BSC or SNA/SDLC
Number host sessions supported concurrently	Direct, multipoint on leased line, pt-to-pt on dial-up	Direct, point-to-point, multipoint	Direct, dial-up	Not applicable
Connections supported	37XX front-end processor	All IBM, IBM-compatible	IBM 3274/3276	IBM 3274/3276
Connection to host via controller	TRANSMISSION SPEC. (Host Line)	TRANSMISSION SPEC. (Host Line)	TRANSMISSION SPEC. (Host Line)	TRANSMISSION SPEC. (Host Line)
Maximum transmission, in bps	9600	19.2K	9600	—
Synchronization	Synchronous	Synchronous	Asynchronous	Not applicable
Transmission mode	Half duplex	Half duplex	Full duplex	Not applicable
Protocols supported	BSC II 2780/3780	BSC, SNA/SDLC	BSC, SNA/SDLC or async	BSC, SNA/SDLC
Codes supported	EBCDIC	EBCDIC, ASCII	ASCII	Not applicable
Interface	Six RS-232-C	2 RS-232-C	RS-232-C, Type A Coax	Type A Coax
Clocking	Internal, external	Internal/external	Not applicable	Not applicable
TERMINAL SIDE SPECIFICATIONS	Number and type of ports provided	Number and type of ports provided	Number and type of ports provided	Number and type of ports provided
Number and type of ports provided	Up to six synchronous	2, 4, 8, 12, 16 async + 1 async command port	1 async CRT, 1 async printer or host port	1 async printer
Devices supported	BSC 2780/3780 and compatible	A number of async ASCII devices	Various ASCII CRTs, IBM PC	Various ASCII printers
Connections supported	Direct, dial-up	Direct, dial-up	Direct, dial-up	Direct
TRANSMISSION SPEC. (Terminal Line)	TRANSMISSION SPEC. (Terminal Line)	TRANSMISSION SPEC. (Terminal Line)	TRANSMISSION SPEC. (Terminal Line)	TRANSMISSION SPEC. (Terminal Line)
Maximum transmission, in bps	9600	9600	9600	9600
Maximum aggregate input rate, in bps	48K	76.8K	Not applicable	Not applicable
Synchronization	Synchronous	Asynchronous	Asynchronous	Asynchronous
Transmission mode	Half duplex	Full duplex	Full duplex	Not applicable
Protocols supported	BSC II	TTY	—	—
Codes supported	EBCDIC	ASCII	ASCII	ASCII
Interfaces supported	RS-232-C, V.24	RS-232-C, current loop	RS-232-C	RS-232-C or parallel
DIAGNOSTICS	Local/remote test, status LEDs, self tests	Self-test, line trace, status LEDs	Self-tests, status LEDs	Self-tests, status LEDs
PRICING AND AVAILABILITY	PRICING AND AVAILABILITY	PRICING AND AVAILABILITY	PRICING AND AVAILABILITY	PRICING AND AVAILABILITY
Purchase, \$	Contact vendor	1,650 (2ch)—5,650 (16ch)	1,095	1,495
Rental, \$/month-to-month	Contact vendor	Not applicable	Not applicable	Not applicable
Installation, \$	Contact vendor	Not applicable	Not applicable	Not applicable
Maintenance, \$ Annual	Contact vendor	Not applicable	—	—
Serviced by	Vendor	Factory	Vendor-factory	Vendor-factory
Availability	Contact vendor	30 days	45 days	45 days
Date of first comm. delivery of this model	Info. not available	February 1984	December 1985	December 1985
Number installed to date	Info. not available	4,000	Info. not available	Info. not available
COMMENTS	—	Options include async host, integ. modems, current loop, ASCII BSC, large-screen support, IBM PC support; unique capabilities: inbound priority, auto- matic logon, banner/ broadcast messages, draft document prep., extensive security feat.	Allows one connected ASCII terminal to emu- late IBM 3278 and access IBM mainframe or async minicomputer, public info. network, or time- sharing service. IBM PC terminal emulation soft- ware is available	Supports transparent mode operation for specialized host appli- cations including graphics, bar-code generation, alternate characters

## Conversion Systems/Terminal Controllers

MANUFACTURER & MODEL	Modemsplus SMRTE IV	Modemsplus SNAP	Modemsplus BRITE II	Modemsplus SMRTE
DEVICE TYPE	Protocol converter	Protocol converter, terminal emulator	Protocol converter, terminal emulator	Protocol converter
CONVERSION PERFORMED	SDLC/SNA to 3275 BSC	ASCII to BSC or SDLC	ASCII to Burroughs	SDLC/SNA to DDCMP
SPECIFIC DEVICE EMULATED	IBM 3274 or 3276	IBM 3280/2780; IBM 3274/3276 or IBM 3776/3777	Any Burroughs VDU	IBM 3776 or 3777, Decnet Gateway
SPECIFIC FUNCTIONALITY PROVIDED	IBM 3278, 3287	Async ASCII CRT to IBM 3278/3279, CRT to 377X workstation or CRT to 3780 BSC RJE	Async ASCII CRT/printer to Burroughs TD830, ET1100, etc., and any Burroughs printr	377X workstation
VIRTUAL SCREEN SIZES SUPP., in char.	1920	1920	1920	Not applicable
COMMAND PORT SUPPORTED	Yes	Yes	Yes	Yes
HOST SIDE SPECIFICATIONS				
Specific hosts supported	All SNA hosts	All SNA hosts or BSC hosts	All Burroughs	All SNA hosts
Number and type of host lines supported	1 SDLC/SNA	1 BSC or 1 SNA	1 Burroughs	1 SDLC, 1 DDCMP
Number host sessions supported concurrently	6	2	3	2
Connections supported	Direct, multipoint, point-to-point, dial-up	Direct, multipoint, dial-up, point-to-point	Direct, multipoint, point-to-point, dial-up	Direct, multipoint, point-to-point, dial-up
Connection to host via controller	—	—	—	—
TRANSMISSION SPEC. (Host Line)				
Maximum transmission, in bps	19.2K	19.2K	19.2K	19.2K
Synchronization	Synchronous/isosync	Synchronous, isosync	Sync/async/isosync	Synchronous/isosync
Transmission mode	Half/full duplex	Half/full duplex	Half/full duplex	Half/full duplex
Protocols supported	3270 SNA/SDLC	BSC, SDLC/SNA	Burroughs Poll Select	377X
Codes supported	EBCDIC	ASCII, EBCDIC, async	ASCII	EBCDIC, SNA/SDLC
Interface	RS-232-C	RS-232-C	TDI or RS-232-C	RS-232-C
Clocking	Int./ext.; data derived	Int./ext.; data derived	Int./ext.; data derived	Int./ext.; data derived
TERMINAL SIDE SPECIFICATIONS				
Number and type of ports provided	3 sync or isosync	1 async with dynamic printer	1 async with dynamic printer	1 async or sync
Devices supported	Any 3275 and emulator	All ASCII TTY devices	All ASCII TTY devices	Any DECNET Gateway device
Connections supported	Direct, dial-up, leased line	Direct, dial-up, leased line	Direct, dial-up, leased line special prntr cable	Direct, dial-up, leased line
TRANSMISSION SPEC. (Terminal Line)				
Maximum transmission, in bps	19.2K	19.2K	19.2K	19.2K
Maximum aggregate input rate, in bps	57.6K	19.2K	19.2K	19.2K
Synchronization	Synchronous/isosync	Asynchronous	Asynchronous	Async/isosync
Transmission mode	Half/full duplex	Half/full duplex	Half/full duplex	Half/full duplex
Protocols supported	BSC 3275	TTY/ASCII	TTY/ASCII	DDCMP
Codes supported	ASCII, EBCDIC	ASCII	ASCII	ASCII, EBCDIC
Interfaces supported	3 RS-232-C	RS-232-C	RS-232-C	RS-232-C
DIAGNOSTICS	Self-tests, status LEDs	Self-tests, line trace, status LEDs	Self-tests, line trace, status LEDs	Self-tests, status LEDs
PRICING AND AVAILABILITY				
Purchase, \$	3,995	1,395	1,395	3,995
Rental, \$/month-to-month	None	None	None	None
Installation, \$	None	None	None	None
Maintenance, \$ Annual	180	60	60	180
Serviced by	Factory	Factory	Factory	Factory
Availability	30 days ARO	30 days	30 days ARO	30 days ARO
Date of first comm. delivery of this model	August 1983	May 1984	May 1984	March 1984
Number installed to date	30	475	250	120
COMMENTS	Allows systems emulating a BSC IBM 3275 to connect to an SNA host; supports 3275 CRT and attached printer; options: disconnect 3275 if no activity, don't answer until 3275 unit host is up	Allows 1 connected ASCII device to emulate IBM 3278, 3287, and 3770 SNA units; same ASCII dev. also emulates IBM BSC RJE wkstation, selection betw./BSC, SNA 3270 or 3770 emulation through menus	Allows 2 connected ASCII dev. to emulate a Burroughs CRT and printer, can be selected to convert Burroughs sync lines into async polled lines; options selected by menus; Xmit numbers, batch, or interactive operation	—

Conversion Systems/Terminal Controllers

MANUFACTURER & MODEL	Modemsplus SMRTE V	Modemsplus SNAP Link	Modemsplus SNAP PC	Modemsplus SNAP V
DEVICE TYPE	Protocol converter	Protocol converter	Protocol converter, terminal emulator	Protocol converter
CONVERSION PERFORMED	SDLC/SNA to IBM 2780, 3780	SDLC/SNA dial up to leased line	ASCII to BSC or SDLC	SNA/SDLC to IBM 2780/ 3780
SPECIFIC DEVICE EMULATED	IBM 3776, 3777	IBM 3274, 3276, 377X, any other SNA device	IBM 3274/3276, IBM 3776/3777, IBM 3780/2780	IBM 3776/3777
SPECIFIC FUNCTIONALITY PROVIDED	BSC RJE workstation to 377X workstation	Allows multiple dial-up lines on 1 port off the IBM 3705 or 3725	IBM PC to IBM 3278/3287; PC to 377X workstation or PC to 3780 BSC RJE	377X workstation
VIRTUAL SCREEN SIZES SUPP., in char.	—	—	1920	—
COMMAND PORT SUPPORTED	Yes	No	Yes	No
HOST SIDE SPECIFICATIONS				
Specific hosts supported	All SNA hosts	All IBM hosts	All SNA or BSC hosts	All SNA hosts
Number and type of host lines supported	1 SDLC/SNA	1 SDLC/SNA	1 BSC or 1 SNA	1 SDLC/SNA
Number host sessions supported concurrently	3	32	2	1
Connections supported	Direct, multipoint, point-to-point, dial-up	Direct, multipoint, point-to-point	Direct, dial-up, multipoint, point-to- point	Direct, dial-up, multipoint, point-to- point
Connection to host via controller	—	—	—	—
TRANSMISSION SPEC. (Host Line)				
Maximum transmission, in bps	19.2K	19.2K	19.2K	19.2K
Synchronization	Synchronous/isosync	Synchronous/isosync	Synchronous/isosync	Synchronous/isosync
Transmission mode	Half/full duplex	Half/full duplex	Half/full duplex	Half/full duplex
Protocols supported	SDLC/SNA, BSC2780/3780	SNA/SDLC	SNA/SDLC	SNA/SDLC
Codes supported	EBCDIC	EBCDIC	EBCDIC	EBCDIC
Interface	RS-232-C	RS-232-C	RS-232-C	RS-232-C
Clocking	Int./ext.; data derived	Int./ext.; data derived	Int./ext., data-derived	Int./ext., data derived
TERMINAL SIDE SPECIFICATIONS				
Number and type of ports provided	3 sync or isosync	1 SNA/SDLC	1 async, 1 IBM PC slot	1 synchronous
Devices supported	Any 2780, 3780 emulator	All SNA/SDLC devices	IBM PC and any TTY serial printer	Any 2780/3780 emulator
Connections supported	Direct, dial-up, leased line	Direct, dial-up, leased line	IBM PC slot, dial-up, direct	Direct, dial-up, point-to-point
TRANSMISSION SPEC. (Terminal Line)				
Maximum transmission, in bps	19.2K	19.2K	19.2K	19.2K
Maximum aggregate input rate, in bps	57.6K	19.2K	38.4K	19.2K
Synchronization	Sync/isosync	Synchronous	Asynchronous	Synchronous
Transmission mode	Half/full duplex	Half/full duplex	Full duplex	Half/full duplex
Protocols supported	IBM 2780, 3780	SNA/SDLC	TTY, ASCII	IBM 2780/3780
Codes supported	ASCII, EBCDIC	ASCII, EBCDIC	ASCII	EBCDIC
Interfaces supported	RS-232-C	RS-232-C	1 IBM PC slot, 1 RS-232-C	RS-232-C
DIAGNOSTICS	Self-tests, status LEDs	Self-tests, status LEDs	Self-tests, line trace	Self-tests, status LEDs
PRICING AND AVAILABILITY				
Purchase, \$	3,995	995 per channel	995	1,625
Rental, \$/month-to-month	None	—	None	None
Installation, \$	None	—	None	None
Maintenance, \$ Annual	180	60 by replacement	60	120
Serviced by	Factory	Factory	Factory	Factory
Availability	30	30 days ARO	30 days ARO	30 days ARO
Date of first comm. delivery of this model	March 1984	March 1985	December 1985	November 1985
Number installed to date	45	5	15	425
COMMENTS	Allows systems emulating a BSC IBM 3780/2780 unit to connect to an SNA host; supports SNA and BSC compression, FMHs, card, print, and disk data; connects BSC RJE units to JES, POWER, CICS, etc.	Allows dial-up SNA/SDLC to leased line SNA/SDLC for backup, port savings or phone bill savings; provides 254 PU 2 type addresses from a single leased line FEP port	Allows IBM PC to emulate a BSC or SNA RJE wkstation or an SNA 3270 CRT and prnr; selection betw./emulation and options, menu driven	Unit has unique capa- city to put old BSC equipment on multi- point SNA/SDLC line

## Conversion Systems/Terminal Controllers Addendum

MANUFACTURER & MODEL	NCR Comten Integrated Protocol Converter	Netlink SNA-Gate 3703, 3703-1	Netlink SNA-Gate 3703-1A	Netlink SNA-Gate 3703-1B
DEVICE TYPE	Protocol converter, terminal emulator	Network processor, cluster controller	Network processor, cluster controller	Protocol converter
CONVERSION PERFORMED	ASCII to BSC 3270	ASCII to EBCDIC LU1, LU2; BSC 3271, 3275 to LU1, LU2; BSC 1 RJE MLU to LU0, LU1	ASCII to EBCDIC LU1, LU2: to LU0, LU1	BSC to SDLC
SPECIFIC DEVICE EMULATED	3274 Model 1C with 3278 displays and 3284 printers	Full function PUT2 with multiple LU types (8100)	Full function PUT2 with multiple LU types	IBM 3274 Model 51C, IBM 3276 Model 12, IBM 3770, and IBM 3777
SPECIFIC FUNCTIONALITY PROVIDED	Async ASCII to 3278 Model 2	Dynamic, based on bind parameters LU0, 1, 2, or 3	Dynamic, based on bind parameters LU0, 1, 2	2780/3780 3721/5 to 3274/3770
VIRTUAL SCREEN SIZES SUPP., in char.	1920	3278 (2, 3, 4, 5)	3278 (2, 3, 4, 5)	480, 1920, 3564
COMMAND PORT SUPPORTED	Yes	Host program loaded	Host program loaded	Yes
HOST SIDE SPECIFICATIONS				
Specific hosts supported	IBM 43XX and 360/370	IBM 370 VTAM, 8100 tandem	IBM 370 VTAM, 8100 tandem	IBM 43XX and 8100, 370/ tandem
Number and type of host lines supported	1 BSC	1 SDLC	1 SDLC	—
Number host sessions supported concurrently	2 to 8 hosts through comm processor	40	40	1 SDLC
Connections supported	Direct	Direct, point-to-point, multipoint	Direct, point-to-point, multipoint	Direct, point-to-point on dial-up line, multi- point on leased line
Connection to host via controller	Comten 3600/5600	IBM 3705, 3725, or equivalent	IBM 3705, 3725, or equivalent	37XX, Amdahl/Comten
TRANSMISSION SPEC. (Host Line)				
Maximum transmission, in bps	40K to 80K	64K	64K	64K
Synchronization	Synchronous	Synchronous	Synchronous	Synchronous
Transmission mode	Half duplex	Half/full duplex	Half/full duplex	Full duplex
Protocols supported	BSC	SNA/SDLC	SNA/SDLC	SNA/SDLC
Codes supported	EBCDIC	EBCDIC	EBCDIC	EBCDIC
Interface	Channel or link through comm processor	RS-232-C	RS-232-C	1 RS-232-C, V.35
Clocking	Internal	Switch selectable	Switch selectable	Internal, external
TERMINAL SIDE SPECIFICATIONS				
Number and type of ports provided	32 RS-232-C—may be terminal or printer	6 sync, 16 async	16 async	8 BSC
Devices supported	43 predefined terminals; most async printers; see comments for more *	Any terminal supporting cursor addressing*	Any terminal supporting cursor addressing*	Contact vendor, examples: WANG, 4 Phase, Datapoint, Series/1 VAX
Connections supported	Direct, dial-up	Direct, point-to-point, dial-up	Direct, point-to-point, dial-up	Direct, remote, dial-up, leased
TRANSMISSION SPEC. (Terminal Line)				
Maximum transmission, in bps	9600	9600	9600	9600
Maximum aggregate input rate, in bps	28.8K for 16 lines	20K	20K	1K
Synchronization	Asynchronous	Async/sync	Asynchronous	Synchronous
Transmission mode	Full duplex	Half/full duplex	Half/full duplex	Half duplex
Protocols supported	TTY II	327X,2780,3780,2770**	327X,2780,3780,2770	BSC
Codes supported	ASCII	ASCII, EBCDIC	ASCII, EBCDIC	EBCDIC
Interfaces supported	RS-232-C	RS-232-C	RS-232-C	RS-232-C
DIAGNOSTICS	Self-tests, status displays	Self-tests, host-based network diagnostics	Self-tests, host-based network diagnostics	Self-tests, status LEDs, load/DSNA via NSP*
PRICING AND AVAILABILITY				
Purchase, \$	6,100 to 15,450	6,000 to 9,500	4,000 to 6,000	4,500 to 6,000
Rental, \$/month-to-month	296 to 746	Contact Vendor	Contact Vendor	Contact Vendor
Installation, \$	Not applicable	1,000 (optional)	1,000 (optional)	800
Maintenance, \$ Annual	216 to 492	220***	220**	240 to 360
Serviced by	Vendor on-site	Depot	Depot	Contact vendor
Availability	30 days	30 days	30 days	10 to 14 days ARO
Date of first comm. delivery of this model	1984	July 1982	February 1986	December 1986
Number installed to date	Information not avail.	1000	Info. not available	Over 200
COMMENTS	Provides choice of BSC protocol conversion or async passthrough on each line; security features include IMS queue flushing, password protection per line, and inactivity disconnect	*Software-controlled via host **Also Burroughs Poll/ Select, 2740-1, TTY ***36-month warranty	*Software-controlled via host **36-month warranty	36-month warranty  * Software controlled via host
	* Also up to 6 user- defined terminal types			

## Conversion Systems/Terminal Controllers

MANUFACTURER & MODEL	PCI Series 100 Model 167	PCI 71B/SNA; 75B/SNA; 3780/SNA	PCI Smartnet 1000 Series*	PCI Series 200, Model 276
DEVICE TYPE	Protocol converter	Protocol converter	IBM SNA/X.25 converter/ PAD	Protocol converter
CONVERSION PERFORMED	ASCII to SDLC	BSC to SDLC	ASCII to 3270 X.25; X.25 to SNA; SNA to X.25	ASCII to SNA/SDLC
SPECIFIC DEVICE EMULATED	IBM 3267	—	IBM 3278-2	IBM 3274/76
SPECIFIC FUNCTIONALITY PROVIDED	ASCII devices talk to SNA in line-by-line mode	IBM 3271 to 3274; IBM 3275 to 3276; IBM 3780 to 3776-2	PCI 1100—ASCII to 3270 X.25; PCI 1200—X.25 to 3270 SNA; PCI 1300—3270 SNA to X.25	Lets ASCII CRTs, print- ers, and IBM PCs attach to IBM SNA networks as 3278
VIRTUAL SCREEN SIZES SUPP., in char.	Not applicable	Not applicable	1920	1920
COMMAND PORT SUPPORTED	No	No	No	Yes; full-screen config.
HOST SIDE SPECIFICATIONS				
Specific hosts supported	IBM 43XX, 30XX	IBM 43XX, 30XX	IBM 43XX, 30XX, S/36, S/38	IBM 43XX, 30XX, 8100
Number and type of host lines supported	1 SNA	1 SDLC	8 SDLC	1 SDLC
Number host sessions supported concurrently	—	—	—	—
Connections supported	Direct, point-to-point, multipoint	Direct, point-to-point, multipoint	Direct, point-to-point, multipoint	Direct, point-to-point, multipoint
Connection to host via controller	IBM 37XX or communica- tions adapter	IBM 37XX or communica- tions adapter	IBM 37XX with or without NPSI; IBM ICA	IBM 37XX or communica- tions adapter
TRANSMISSION SPEC. (Host Line)				
Maximum transmission, in bps	9600	9600	9600	19.2K
Synchronization	Synchronous	Synchronous	Synchronous	Synchronous
Transmission mode	Half/full duplex	Half/full duplex	Full duplex	Half/full duplex
Protocols supported	SDLC	SDLC	X.25, HDLC, SNA/SDLC	SDLC
Codes supported	EBCDIC	EBCDIC	EBCDIC	EBCDIC
Interface	1 RS-232-C	1 RS-232-C	1 RS-232-C	1 RS-232-C
Clocking	Internal, external	Internal, external	Internal, external	Internal, external
TERMINAL SIDE SPECIFICATIONS				
Number and type of ports provided	Up to 7 async	3 3271/3275 contr. ports; 1 3780 port	7 async, 1 dynamic prnt port or 3 IBM clus. con	4—32 phys. ports; 8—64
Devices supported	Virtually any ASCII device	IBM BSC devices or equivalent	Virtually any ASCII de- vice or 3270, 3770, 5250 cluster controller	Virtually any ASCII device
Connections supported	Direct, dial-up	Direct, dial-up	Direct, dial-up	Direct, dial-up
TRANSMISSION SPEC. (Terminal Line)				
Maximum transmission, in bps	9600	9600	9600	19.2K
Maximum aggregate input rate, in bps	—	—	—	—
Synchronization	Asynchronous	Synchronous	Async/sync	Asynchronous
Transmission mode	Full duplex	Full duplex	Full duplex	Full duplex or no echo
Protocols supported	Not applicable	BSC	BSC	—
Codes supported	ASCII, EBCDIC	EBCDIC	ASCII	ASCII
Interfaces supported	RS-232-C	RS-232-C	RS-232-C	RS-232-C
DIAGNOSTICS	Self-tests, LEDs, ASCII, lines tests, full-trace capability	LEDs	Status LEDs, diagnostic port	Self-tests, status LEDs, ASCII line tests, full- trace capability
PRICING AND AVAILABILITY				
Purchase, \$	2,850 to 5,300	3,100 to 4,100	1,650 to 3,800	3,275 to 9,000
Rental, \$/month-to-month	300	300	350	From 300
Installation, \$	—	—	—	—
Maintenance, \$ Annual	300 to 500	400	300 to 500	300 to 1,000
Serviced by	Vendor; distributor	Vendor; distributor	Vendor	Vendor; distributor
Availability	30 days	30 days	30 days	30 days
Date of first comm. delivery of this model	1980	1982 (71B/SNA)	1983	March 1985
Number installed to date	Information not avail.	Information not avail.	Information not avail.	Information not avail.
COMMENTS	Host-to-host graphics; videotext versions available; transparency; replaces IBM NTO or VTF software	*71B/SNA is 3271 to 3274; 75B/SNA is 3275 to 3276; 3780/SNA is 3780 to 3776-2.  ASCII printer port option available on 3780/SNA	*PCI 1100 lets ASCII terminals, PCs, printers act as 3278 SNA devices via X.25; PCI 1200 is an IBM host SNA PAD that can replace IBM NPSI; PCI 1300 lets SNA/SDLC 3270, 3770, 5250 cluster controller use X.25 net to IBM host	IBM 3270-PC file trans- fer support using PCI Smartlink PC software; advanced security for IMS; graphics; user profiles; auto logon/ logoff plus auto dial back security; DTR tog- gles and timers; inter- national and translate tables; sel. scrn update



### Conversion Systems/Terminal Controllers

MANUFACTURER & MODEL	PCI Series 200, Model 271	PCI Series 200, Model 251	PCI Series 100 Models 176, 171, 151*	PCI 5250/T
DEVICE TYPE	Protocol converter	Protocol converter	Protocol converter	Protocol converter
CONVERSION PERFORMED	ASCII to BSC	ASCII to SNA/SDLC	ASCII to SDLC or BSC	ASCII to EBCDIC
SPECIFIC DEVICE EMULATED	IBM 3271/74	IBM 5251-12	IBM 3271/76, 5251	IBM 5291, 5292, 3180, 5219, 5256
SPECIFIC FUNCTIONALITY PROVIDED	Lets ASCII CRTs, printers, and IBM PCs attach to IBM SNA networks as 3277 or 3278	Lets ASCII CRTs, printers, and IBM PCs attach to IBM S/34, S/36, S/38 as 5251	ASCII devices look like IBM full-screen devices	Async ASCII to System 3X direct attached
VIRTUAL SCREEN SIZES SUPP., in char.	1920	1920	1920	1920, 3564
COMMAND PORT SUPPORTED	Yes; full-screen config.	Yes; full-screen config.	No	Yes, floating
HOST SIDE SPECIFICATIONS				
Specific hosts supported	IBM 43XX, 30XX, S/370	IBM S/34, S/36, S/38	Any IBM host	IBM S/3X
Number and type of host lines supported	1 BSC	1 SDLC	1 host link	—
Number host sessions supported concurrently	—	—	—	Not applicable
Connections supported	Direct, point-to-point, multipoint	Direct, point-to-point, multipoint	Direct, point-to-point, multipoint	Twinax
Connection to host via controller	IBM 37XX, 27XX	Comms adapter MLCA, ELCA, SLCA	IBM FEP or communications adapter	IBM 5294
TRANSMISSION SPEC. (Host Line)				
Maximum transmission, in bps	9600	19.2K	9600	Not applicable
Synchronization	Synchronous	Synchronous	Synchronous	Synchronous
Transmission mode	Half/full duplex	Half/full duplex	Half/full duplex	—
Protocols supported	BSC	SDLC	BSC, SDLC	—
Codes supported	EBCDIC	EBCDIC	EBCDIC	—
Interface	1 RS-232-C	1 RS-232-C	1 RS-232-C	—
Clocking	Internal, external	Internal, external	Internal, external	—
TERMINAL SIDE SPECIFICATIONS				
Number and type of ports provided	4—32 phys. ports; 8—64 concurrent LU sessions	4 to 32 phys. ports	Up to 7 async ports plus 1 dynamic printer	Up to 7 async
Devices supported	Virtually any ASCII device	Virtually any ASCII device	Virtually any ASCII device	VT100, IBM 316X, DEC, Lear Siegler, Hazletine, Wyse, and more
Connections supported	Direct, dial-up	Direct, dial-up	Direct, dial-up	Direct, dial-up, leased
TRANSMISSION SPEC. (Terminal Line)				
Maximum transmission, in bps	19.2K	19.2K	9600	19.2K
Maximum aggregate input rate, in bps	—	—	—	—
Synchronization	Asynchronous	Asynchronous	Asynchronous	Asynchronous
Transmission mode	Full duplex or no echo	Full duplex or no echo	Full duplex	Full duplex
Protocols supported	—	—	—	—
Codes supported	ASCII	ASCII	ASCII	ASCII
Interfaces supported	RS-232-C	RS-232-C	RS-232-C	RS-232-C, RS-422
DIAGNOSTICS	Self-tests, status LEDs, ASCII line tests, full-trace capability	Self-tests, status LEDs, ASCII line tests, full-trace capability	Self-test, LEDs, ASCII line tests, full trace capability	Self-tests, status LEDs, ASCII line tests
PRICING AND AVAILABILITY				
Purchase, \$	3,450 to 9,950	2,975 to 9,750	2,850 to 5,300	4, 950
Rental, \$/month-to-month	From 300	From 300	300	—
Installation, \$	—	—	—	—
Maintenance, \$ Annual	300 to 1,000	300 to 1,000	300 to 500	—
Serviced by	Vendor; distributor	Vendor; distributor	Vendor; distributor	Vendor; distributor
Availability	30 days	30 days	30 days	45 days ARO
Date of first comm. delivery of this model	March 1985	March 1985	1981	—
Number installed to date	Information not avail.	Information not avail.	Information not avail.	New product
COMMENTS	IBM 3270-PC file transfer support using PCI Smartlink PLC software; advanced security with user profiles; auto logon/logoff plus auto dial back security; graphics; DTR timers; international translate tables; selective screen updating	Host file transfer using SSI and PCI Smartlink PC software; advanced security; user profiles; auto logon/logoff plus auto dial back; international translate tables; selective screen updating; CRT/PRT interleaving via concurrent sessions	*PCI 176 is ASCII to 3270 SDLC; PCI 171 is ASCII to 3270 BSC; and PCI 151 is ASCII to 5251 SDLC  Upgrade to PCI Series 200 available. See columns for those models	—

Conversion Systems/Terminal Controllers

MANUFACTURER & MODEL	Perle Systems PDS 350/294	Perle Systems PDS 350/525	Perle Systems PDS 350/BSC	Perle Systems PDS 350/SNA
DEVICE TYPE	Protocol converter	Protocol converter, commun. controller	Protocol converter, commun. controller	Protocol converter, commun. controller
CONVERSION PERFORMED	ASCII to EBCDIC	ASCII to EBCDIC, async to SNA/SDLC	ASCII to EBCDIC, async to bisync	ASCII to EBCDIC, async to SNA/SDLC
SPECIFIC DEVICE EMULATED	5251 M/12 or 5294	Two 5251 model 12s (to host)	IBM 3274 model 51C, 3276 model 12	IBM 3274 model 51C, 3276 model 12, 3770
SPECIFIC FUNCTIONALITY PROVIDED	Async to 5251	Any ASCII printer to 52XX printer; asynchro- nous ASCII terminal or PC to 5251 or 5291 M/11	Any ASCII CRT to IBM 327X; async ASCII printer to IBM 328X	Any ASCII CRT to IBM 3278, 3279; PC to IBM 3278, 3777, 3767, async ASCII printer to 328X
VIRTUAL SCREEN SIZES SUPP., in char.	1920	1920	1920	1920; others available
COMMAND PORT SUPPORTED	No	Yes	Yes	No
HOST SIDE SPECIFICATIONS				
Specific hosts supported	IBM System 34, 36, 38	IBM System 34, 36, 38	Any IBM mainframe	Any IBM mainframe
Number and type of host lines supported	—	One SDLC	One BSC	Two SNA/SDLC
Number host sessions supported concurrently	1 SDLC	16	Not applicable	32
Connections supported	Direct, point-to-point on dial-up line, multi- point on leased line	Direct, multipoint, point-to-point	Direct, multipoint, point-to-point	Direct, multipoint, point-to-point
Connection to host via controller	Comm. line	SLCA, MLCA, or ELCA communications adapter	IBM 37X5 or equivalent	IBM 37X5 or equivalent
TRANSMISSION SPEC. (Host Line)				
Maximum transmission, in bps	19.2K	9600	9600	19.2K
Synchronization	Synchronous	Synchronous	Synchronous	Synchronous
Transmission mode	Full duplex	Half/full duplex	Half/full duplex	Half/full duplex
Protocols supported	SNA/SDLC	SNA/SDLC	BSC	SNA/SDLC
Codes supported	EBCDIC	EBCDIC	EBCDIC	EBCDIC
Interface	1 RS-232-C	RS-232-C	RS-232-C	RS-232-C
Clocking	Internal/external	Internal/external	Internal/external	Internal/external
TERMINAL SIDE SPECIFICATIONS				
Number and type of ports provided	Up to 20 async ports—ea. supports auxillary. prntr	Up to 16 asynchronous	Up to 16 asynchronous	Up to 16 asynchronous
Devices supported	VT100; Televideo 910, 925, 950; ADM 3A and SA; CIE 7103; WYSE 50, 100	Virtually any async ASCII terminal, printer, PC	Virtually any async ASCII printer, CRT, or PC	Virtually any async ASCII printer, CRT, or PC
Connections supported	Direct, dial-up, remote	Direct, dial-up	Direct, dial-up	Direct, dial-up
TRANSMISSION SPEC. (Terminal Line)				
Maximum transmission, in bps	19.2K	9600	19.2K	19.2K
Maximum aggregate input rate, in bps	384K	153.6K	153.6K	153.6K
Synchronization	Asynchronous	Asynchronous	Asynchronous	Asynchronous
Transmission mode	Full duplex	Half/full duplex	Full duplex	Half/full duplex
Protocols supported	TTY II	—	Asynchronous	—
Codes supported	ASCII	ASCII	ASCII	ASCII
Interfaces supported	RS-232-C, RS-422	RS-232-C, RS-422	RS-232-C, RS-422	RS-232-C, RS-422
DIAGNOSTICS	Self-test, status LEDs	Self-test or from any user port	Self-test, diagnostic port	Self test or from any user port
PRICING AND AVAILABILITY				
Purchase, \$	4,650 to 15,500	4,760 (U.S.)	4,760 (U.S.)	4,200 (U.S.)
Rental, \$/month-to-month	Not applicable	—	—	—
Installation, \$	—	—	—	—
Maintenance, \$ Annual	650 to 1,500	—	—	—
Serviced by	Vendor	Vendor on-site, factory, third party	Vendor on-site, factory, third party	Vendor on-site, factory, third party
Availability	—	14 days	14 days	14 days
Date of first comm. delivery of this model	1981	June 1984	September 1985	June 1984
Number installed to date	875	Info. not available	Info. not available	Info. not available
COMMENTS	Features include auto call print, echo suppression, and unattended file transfer	—	—	Concurrent, interactive and batch 3274 and 3770 emulation; support for asynchronous block-mode terminals; data encryption.

## Conversion Systems/Terminal Controllers

MANUFACTURER & MODEL	Perle Systems GSD 3M	Protocom Devices Beanstalk	Quasitronics Q-4050	Renex Translator RT74 Family
DEVICE TYPE	Protocol converter	Terminal emulator	Code converter	Protocol converter
CONVERSION PERFORMED	ASCII to EBCDIC	ASCII to EBCDIC	—	ASCII to 3270 BSC, ASCII to 3270 SDLC
SPECIFIC DEVICE EMULATED	5251 M/11	IBM 3276 Model 12	—	IBM 3274-41C, 51C, 61C; IBM 3276-2, 12
SPECIFIC FUNCTIONALITY PROVIDED	ASCII CRT or printer to IBM 5251 M/11 or 5291 printers to 5256	MS DOS PC with async acces to 3270 BCS, 3270 SNA, UTS-20, via X.25	—	ASCII CRT to IBM 3278/79 models 2
VIRTUAL SCREEN SIZES SUPP., in char.	1920	1920 for UTS-20	—	1920
COMMAND PORT SUPPORTED	Not applicable	Not applicable	—	Yes
HOST SIDE SPECIFICATIONS Specific hosts supported	IBM Systems 34, 36, 38	IBM 43XX, Sperry, Burroughs	—	IBM mainframes
Number and type of host lines supported	—	—	—	1 SDLC or BSC
Number host sessions supported concurrently	1 SDLC	—	—	1
Connections supported	Direct conect via Twinax	Direct, point-to-point on dial-up line, multi-point on leased line	—	Direct, multipoint, point-to-point
Connection to host via controller	5251 M/12 or 5294	3276, UTS-20, Burroughs TD830	—	—
TRANSMISSION SPEC. (Host Line) Maximum transmission, in bps	1M	9600	19.2K	1200 to 19.2K
Synchronization	Synchronous	Async/sync	Asynchronous	Synchronous
Transmission mode	Full duplex	Full duplex	Full duplex	Half/full duplex
Protocols supported	SNA/SDLC	SNA/SDLC, Uniscope *	—	BSC, SNA/SDLC
Codes supported	EBCDIC	ASCII	ASCII, EBCDIC, Baudot	ASCII, EBCDIC
Interface	1 Twinax	1 RS-232-C	One RS-232-C, one current loop	RS-232-C
Clocking	Not applicable	—	—	Internal/external
TERMINAL SIDE SPECIFICATIONS Number and type of ports provided	Up to 7 asynch	MS DOS PC emulates 1 terminal	—	1 to 20
Devices supported	—	MS DOS PC with async comm	Any RS-232-C or current loop interface	Over 150 devices supported
Connections supported	Direct, dial-up	Direct, dial-up	Direct connection	Direct, dial-up
TRANSMISSION SPEC. (Terminal Line) Maximum transmission, in bps	38.4K	9600	19.2K	19.2K w/autbd. rate det.
Maximum aggregate input rate, in bps	—	—	19.2K	Not limited
Synchronization	Asynchronous	Asynchronous	Asynchronous	Asynchronous
Transmission mode	Full duplex	Full duplex	Full duplex	Full duplex
Protocols supported	Async	TTY II	—	Various
Codes supported	ASCII	ASCII	ASCII, EBCDIC, Baudot	ASCII or transparent
Interfaces supported	RS-232-C	RS-232-C	RS-232-C, current loop	RS-232-C, RS-449
DIAGNOSTICS	Self-test, status LEDs	—	—	Self-tests; status LEDs monitor capabilities
PRICING AND AVAILABILITY Purchase, \$	1,450 to 5,100	Contact vendor	299	995 to 10,990
Rental, \$/month-to-month	Not applicable	—	Not applicable	250 to 850
Installation, \$	0	—	Not applicable	300
Maintenance, \$ Annual	350 to 850	—	Not applicable	300 to 1,100
Serviced by	Vendor	—	Vendor	Vendor, factory, third party on site
Availability	Immediate	—	60 days ARO	30 days
Date of first comm. delivery of this model	October 1985	—	1985	October 1980
Number installed to date	250	—	300	Info. not available
COMMENTS	—	Provides sync access to host attached to X.25 network via Protocom PADs; PC needs only an async connection to ITI PAD attached to X.25 network	Flow control conversions, XON/XOFF, ENQ/ACK, DTR/DSR/CTS	Personal computer support, APL support; seven-color and extended highlight; multiplex terminal and printer on same physical line; graphics passthrough for SAS, Tellagraf etc; also includes inactivity timeout and password security
		* Other protocols supported include Burroughs Poll Select		

### Conversion Systems/Terminal Controllers

MANUFACTURER & MODEL	Renex Translator RT51 Family	Renex TMS-One	Shaffstall 5000XT	Tekelec T.A.N.S. 8000
DEVICE TYPE	Protocol converter	Protocol converter	Protocol convtrr, floppy disk and tape conversion	Protocol/code converter, terminal emulator*
CONVERSION PERFORMED	ASCII to SDLC	ASCII to 3270 BSC (ASCII or EBCDIC), 3270 SNA, and 3767/3770 SNA	—	ASCII to EBCDIC, BSC to SDLC, Burr. Poll Select to ASCII, ASCII to X.25, SNA to/from X.25
SPECIFIC DEVICE EMULATED	IBM 5251 model 12	IBM 3274-41C, 51C, 61C IBM 3276-2 & 12, IBM 3767, 3770	2770, 2780, 3780, async to bisync to async	Full layered protocol to any other installed
SPECIFIC FUNCTIONALITY PROVIDED	ASCII CRT to IBM 5251 model 11	ASCII CRT to IBM 3278/9	—	Full layered protocol to any other installed
VIRTUAL SCREEN SIZES SUPP., in char.	1920	All, models 1-5 and 3290	Not applicable	—
COMMAND PORT SUPPORTED	Yes	Yes	—	Yes
HOST SIDE SPECIFICATIONS				
Specific hosts supported	IBM 43XX, 81XX, System 34/36/38	IBM 43XX, 81XX and plug-compatibles	DEC direct connection	All
Number and type of host lines supported	1 or 2 SDLC	2 BSC and/or SDLC	—	—
Number host sessions supported concurrently	1	5 cont. emulated/unit, 128 sessions/unit	—	2 sync, 6 async
Connections supported	Direct, multipoint, point-to-point	Direct, multipoint, point-to-point	Direct	Direct, point-to-point on dial-up line, multipoint on leased line
Connection to host via controller	—	—	Not applicable	IBM 3274, 270X, 37XX
TRANSMISSION SPEC. (Host Line)				
Maximum transmission, in bps	1200 to 19.2K	19.2K bps (aggregate)	9600	10M-Ethr.; 64K-SNA, X.25
Synchronization	Synchronous	Synchronous	Async/sync	Async/sync
Transmission mode	Half/full duplex	Half/full duplex	Half duplex	Half/full duplex
Protocols supported	SDLC	BSC, SNA/SDLC	BSC, synchronous	BSC, SNA/SDLC, X.25
Codes supported	ASCII, EBCDIC	ASCII, EBCDIC	ASCII	ASCII, EBCDIC
Interface	RS-232-C	1 or 2 RS-232-C	2 RS-232-Cs	RS-232-C, Ethernet, Cheapenet
Clocking	Internal/external	Internal/external	Internal/external	Internal/external
TERMINAL SIDE SPECIFICATIONS				
Number and type of ports provided	1 to 20 ports	Up to 32 physical and 128 logical ports	Not applicable	8-port units transparently linked together
Devices supported	Over 150 devices supported	Over 125 devices supported	500XT can read and write disks for over 700 systems; see comments	All ASCII printers, async terminals supporting VT100
Connections supported	Direct, dial-up	Direct, dial-up	—	Direct, dial-up, remote, leased
TRANSMISSION SPEC. (Terminal Line)				
Maximum transmission, in bps	19.2K w/autbd. rate det.	19.2K w/autbd. rate det.	Not applicable	64K
Maximum aggregate input rate, in bps	Not limited	Not limited	Not applicable	234.2K
Synchronization	Asynchronous	Asynchronous	Not applicable	Async/sync
Transmission mode	Full duplex	Full duplex	Not applicable	Half/full duplex
Protocols supported	—	Various	Not applicable	TTY II, BSC, SNA, X.25**
Codes supported	ASCII	ASCII	Not applicable	ASCII, EBCDIC
Interfaces supported	RS-232-C, RS-449	RS-232-C, RS-449, coax, RJ-11	RS-232-C	RS-232-C, RS-449
DIAGNOSTICS	Self-tests, status LEDs monitor capabilities	Self-tests; status LEDs, control operator diagnostics & status	Self-tests, status LEDs, ASCII line tests	Self-test, ASCII line tests, LCD display of errors
PRICING AND AVAILABILITY				
Purchase, \$	995 to 10,990	7,495 to 19,990	Starts at 14,500	5,000 to 7,500 (8 ports)
Rental, \$/month-to-month	350 to 750	560 to 1,400	—	400
Installation, \$	300	400 to 650	Included	By quotation
Maintenance, \$ Annual	300 to 1,110	450 to 1,300	1,670 to 2,690	8%
Serviced by	Vendor, factory, third party on site	Vendor, factory, third party on site	Vendor, repair/exchange	Vendor
Availability	30 days	30 days	30 days ARO	30 days
Date of first comm. delivery of this model	January 1984	February 1985	1986 for XT version	May 1986 UK, Feb 87 US
Number installed to date	Information not avail.	Information not avail.	Over 800	280
COMMENTS	Multiplex terminal and printer on one physical port; inactivity timer, password security, and personal computer support	APL, 7-color, extended highlighting, allows user to have up to 5 concurrent sessions active, dynamic LU assignments thru passwords, file transfer capabilities for PC, dial-back security, and internal modems	500XT currently enables the conversion of Word Processor or PC disks to other, formerly incompatible, systems; as an example, a WANG WP disk can be rewritten to an MS DOS disk that can then be read on an IBM PC	* Switch, gateway, LAN (Ethernet) ** Burroughs Poll Select  Protocol conversion, protocol switching, terminal and printer sharing and LAN (Ethernet) node connection capabilities all in one unit

Conversion Systems/Terminal Controllers

MANUFACTURER & MODEL	Thomas Engineering MZ-80H	Thomas Engineering UNI-TEC	Thomas Engineering MINI-TEC	Trax Softworks TSF (Terminal Simulation Facility)
DEVICE TYPE	Protocol/code converter emulator, concentrator	Protocol/code conver- ter, emulator, concen.	Protocol/code conver- ter, emulator, concen.	Terminal emulator
CONVERSION PERFORMED	ASCII to EBCDIC, async to sync	ASCII to EBCDIC, async to sync	ASCII to EBCDIC, async to sync	ASCII to EBCDIC
SPECIFIC DEVICE EMULATED	IBM 3271, 3274/Honeywell VIP 77XX	IBM 3271, 3274, Honey- well 7700, 7800, Sperry UTS 20/40	IBM 3271, 3274, Honey- well 7700, 7800	VT 100 and ASCII Teletype
SPECIFIC FUNCTIONALITY PROVIDED	Async ASCII CRT and/or PC to IBM 3270 or VIP 77XX	Async ASCII CRT and/or PC to IBM 3270 or VIP 7700/VIP 7800 or Sperry UTS 20/40	Async ASCII CRT and/or PC to IBM 3270 or VIP 7700/VIP 7800	Async to 3270
VIRTUAL SCREEN SIZES SUPP., in char.	1920	1920	1920	1920
COMMAND PORT SUPPORTED	Yes	Yes	Yes	Yes
HOST SIDE SPECIFICATIONS				
Specific hosts supported	IBM, Honeywell, others	IBM, Honeywell, Sperry	IBM, Honeywell, others	All hosts supporting VM/CMS operating system
Number and type of host lines supported	Most Honeywell, IBM	4	1	All async or X.25 packet switched lines
Number host sessions supported concurrently	1	Up to 4 (1 per host)	1	Unlimited
Connections supported	Any combination of modem or direct connection	Any combination of mo- dem or direct connec- tion	Any combination of mo- dem or direct connec- tion	Direct, point-to-point on dial-up line, multi- point on leased line
Connection to host via controller	IBM 3704/5; Datanet 355, 66, 8; GRTS-II, NPS, DNS	IBM 3704/5; Datanet 355, 66, 8; GRTS-II, NPS, DNS	IBM 3704/5; Datanet 355, 66, 8; GRTS-II, NPS, DNS	IBM 37X5; NCR Comten CC-80, Amdahl 4705
TRANSMISSION SPEC. (Host Line)				
Maximum transmission, in bps	19.2K	19.2K	9600	9600
Synchronization	Synchronous	Synchronous	Synchronous	Asynchronous
Transmission mode	Half/full duplex	Half/full duplex	Half/full duplex	Full duplex
Protocols supported	BSC, VIP	BSC, SNA/SDLC, VIP *	BSC, VIP	X.25 and start-stop
Codes supported	ASCII, EBCDIC	ASCII, EBCDIC	ASCII, EBCDIC	ASCII, EBCDIC
Interface	1 RS-232-C	Up to 4 RS-232-C	1 RS-232-C	1 RS-232-C
Clocking	Internal/external	Internal/external	Internal/external	External
TERMINAL SIDE SPECIFICATIONS				
Number and type of ports provided	Up to 32 async ports	Up to 24 async	2 async ports	Unlimited
Devices supported	Virtually any ASCII CRT, printer, PC	Virtually any ASCII device, CRT, printer, PC	Virtually any ASCII device, CRT, printer, PC	IBM 3270 type terminals
Connections supported	Direct, dial-up, through modem	Direct, dial-up, modem	Direct, dial-up, modem	Direct, remote, dial-up, leased
TRANSMISSION SPEC. (Terminal Line)				
Maximum transmission, in bps	19.2K	19.2K	9600	9600
Maximum aggregate input rate, in bps	80K (approx.)	80K (approx.)	19.2K	9600
Synchronization	Async/sync	Async/sync	Asynchronous	Asynchronous
Transmission mode	Full duplex	Full duplex	Full duplex	Full duplex
Protocols supported	TTY, custom	TTY, custom	TTY, custom	TTY II, VT 100
Codes supported	ASCII, EBCDIC	ASCII, EBCDIC	ASCII, EBCDIC	ASCII, EBCDIC
Interfaces supported	RS-232-C, MIL-188	RS-232-C, MIL-STD-188	RS-232-C	RS-232-C
DIAGNOSTICS	Self-tests, status LEDs, loadable diag., diag. port	Self-test, status LEDs, diagnostic port	Status LEDs, diagnostic port	Self-test, status LEDs, ASCII line tests
PRICING AND AVAILABILITY				
Purchase, \$	4,000 to 10,000	9,000 to 15,000	800 to 1,500	15,000 to 20,000
Rental, \$/month-to-month	Terms vary	Terms vary	Terms vary	650 to 850
Installation, \$	—	—	—	Not applicable
Maintenance, \$ Annual	First yr. incl.; 500 aft	1st yr inc. then \$1,200	1st yr inc. then \$1,200	15% of selling price
Serviced by	Vendor, factory; spares; ITT Servcom on site	ITT Servcom, vendor, factory, spares	Vendor, factory, spares	Factory
Availability	30 days	30 days	30 days	5 days ARO
Date of first comm. delivery of this model	December 1981	August 1985	1986	Late 1982
Number installed to date	1,000	30	50	50
COMMENTS	Supports one or more printers in 3286/87 mode; menu-driven device selection; remote diag. cap., incl. software transmission; rackmount- able & field-expandable; supports optional floppy disks for local process- ing & user system development	All capabilities of MZ-80 IMIU plus multi- host access; file trans- fer, PC support utili- ties, Unix System V, CP/M emulation for up to 24 users, laser printer support  * UNISCOPE protocol is also supported	All capabilities of MZ-80 IMIU for two async ports	TSF is a communications tool that enables 3270- type terminals on VM/CMS systems to emulate ASCII terminals, allowing access to public data- bases such as CompuServ and The Source, as well as networks like Telenet and Tymnet

### Conversion Systems/Terminal Controllers

MANUFACTURER & MODEL	Tri-Data Netway 1000A	Tymnet/McDonnell Douglas Asynchronous Terminal Concentrator (ATC)	Wall Data DCF II Series	Wall Data Datagate/PC Series
DEVICE TYPE	Gateway	Terminal concentrator	Protocol converter	Protocol converter
CONVERSION PERFORMED	Appletalk to BSC and SNA	ASCII to Tymnet Network protocol	ASCII to EBCDIC	ASCII to EBCDIC
SPECIFIC DEVICE EMULATED	3274-61C	Asynchronous host character echoes Tymnet Network node	IBM 3274 Model 51C, IBM 3276 Model 12	IBM 3274 Model 51C, IBM 3276 Model 12
SPECIFIC FUNCTIONALITY PROVIDED	3278 Model 2	Async ASCII to Tymnet network protocol at host node conv. of Tymnet prot. to BSC/SDLC/UTS Any size, applic. cont.	Async ASCII to IBM 3278, Models 1,2,3,4,5	Async ASCII to IBM 3278 Models 1-5
VIRTUAL SCREEN SIZES SUPP., in char.	1920 plus status		480, 1920, 3564, Mod 1-5	480,1920,3564, Mods. 1-5
COMMAND PORT SUPPORTED	No	Not applicable	Yes	Yes
HOST SIDE SPECIFICATIONS				
Specific hosts supported	IBM 4XX, 3033, 370, 308X, Tandem	Not applicable	IBM 43XX, IBM 8100, DEC PDP-11, IBM SCP	IBM 43XX and 8100, DEC PDP-11, IBM S/3X
Number and type of host lines supported	—	Not applicable	—	—
Number host sessions supported concurrently	16 for hardware; 4 for terminal emulator	Not applicable	1 BSC & 1 SDLC, 1 SDLC & 1 Async *	1 BSC and 1 SDLC, 1 SDLC and 1 Async
Connections supported	Modem linked or modem bypass to FEP	Direct, dial-up, leased line	Direct, point-to-point on dial-up line, multi-point on leased line 37XX	Direct, point-to-point on dial-up line, multi-point on leased line 37XX
Connection to host via controller	37X5, Comten, 47X5	Not applicable		
TRANSMISSION SPEC. (Host Line)				
Maximum transmission, in bps	9600	9600	19.2K	19.2K
Synchronization	Synchronous	Synchronous	Async/sync	Async/sync
Transmission mode	Half/full duplex	Half/full duplex	Half/full duplex	Half/full duplex
Protocols supported	BSC, SNA/SDLC	Tymnet Network	BSC,SNA/SDLC,async ASCII	BSC,SNA/SDLC,async ASCII
Codes supported	EBCDIC	ASCII; conv. at host node	ASCII, EBCDIC	ASCII, EBCDIC
Interface	1 sync RS-232-C and 1 Appletalk	2 RS-232-C/V.24	1 RS-232-C	1 RS-232-C
Clocking	Internal, external	Data derived	Int./ext., data derived	Int./ext., data derived
TERMINAL SIDE SPECIFICATIONS				
Number and type of ports provided	16 LUs on LAN	Up to 8 async	To 17 async terms. or PCs w/17 attached prntrs	1 PC term. + 4 terms./PCs w/attached printers
Devices supported	MacIntosh PC	Most async ASCII terminals and PCs	70+ common ASCII terms., most general-purpose ASCII serial printers	70 common ASCII terms., PCs w/terminal emulation *
Connections supported	LAN based	Direct, dial-up, leased line	Direct, remote, dial-up, leased	Direct, remote, dial-up, leased
TRANSMISSION SPEC. (Terminal Line)				
Maximum transmission, in bps	230K	9600	19.2K	19.2K
Maximum aggregate input rate, in bps	230K	19.2K	Dictated by host	Dictated by host
Synchronization	Synchronous	Asynchronous	Asynchronous	Asynchronous
Transmission mode	Half duplex	Half/full duplex	Full duplex	Half/full duplex
Protocols supported	SNA	Asynchronous	TTY II	TTY II
Codes supported	EBCDIC	ASCII	ASCII	ASCII
Interfaces supported	RS-422	RS-232-C	RS-232-C, RS-422	RS-232-C, RS-422
DIAGNOSTICS	Self-test, LEDs	Self-tests, status LEDs, remotely accessible diag. through term port.	Self-test, ASCII line tests	Self-test, ASCII line tests
PRICING AND AVAILABILITY				
Purchase, \$	2,725	3,300	3,995 to 5,995	1,195 to 1,995
Rental, \$/month-to-month	Not applicable	Contact vendor	Not applicable	Not applicable
Installation, \$	50	From 250	750/day + expenses	750/day + expenses
Maintenance, \$ Annual	250	85 to 165	500 to 900 per year	200 to 400
Serviced by	Vendor, dealer	Vendor, depot	Vendor at factory	Vendor at factory
Availability	14 days	30—60 days	30 days	30 days
Date of first comm. delivery of this model	August 1985	1984	October 1983	February 1986
Number installed to date	250	300+	550	160
COMMENTS	May 1986 additions incl MacWindows 3270 (four simultaneous sessions in each MacIntosh) and host-based file transfer	The ATC operates as a node in Tymnet network	2 simultaneous sync hosts std. feature; async host passthrough std.; user ID and dial-back security on modem lines optional	Up to 5 SNA sessions per PC terminal std.; async host passthrough std.; user ID and dial-back security on modem lines standard
			* 4 sync hosts + up to 8 async hosts	* Also supports most general-purpose ASCII printers

### Conversion Systems/Terminal Controllers

MANUFACTURER & MODEL	Western DataCom Datacom 1000			
DEVICE TYPE	Async protocol translator			
CONVERSION PERFORMED	—			
SPECIFIC DEVICE EMULATED	—			
SPECIFIC FUNCTIONALITY PROVIDED	—			
VIRTUAL SCREEN SIZES SUPP., in char.	480			
COMMAND PORT SUPPORTED	Yes			
HOST SIDE SPECIFICATIONS				
Specific hosts supported	—			
Number and type of host lines supported	—			
Number host sessions supported concurrently	—			
Connections supported	Direct, point-to-point on dial-up line			
Connection to host via controller	—			
TRANSMISSION SPEC. (Host Line)				
Maximum transmission, in bps	9600			
Synchronization	Asynchronous			
Transmission mode	Half/full duplex			
Protocols supported	—			
Codes supported	ASCII, EBCDIC			
Interface	1 RS-232-C			
Clocking	Int./ext.; data derived			
TERMINAL SIDE SPECIFICATIONS				
Number and type of ports provided	4 async			
Devices supported	Most Async, ASCII			
Connections supported	Direct, dial-up			
TRANSMISSION SPEC. (Terminal Line)				
Maximum transmission, in bps	—			
Maximum aggregate input rate, in bps	—			
Synchronization	Asynchronous			
Transmission mode	Half/full duplex			
Protocols supported	—			
Codes supported	ASCII			
Interfaces supported	RS-232-C			
DIAGNOSTICS	Status LEDs			
PRICING AND AVAILABILITY				
Purchase, \$	875			
Rental, \$/month-to-month	—			
Installation, \$	—			
Maintenance, \$ Annual	87.50			
Serviced by	Factory			
Availability	14 days			
Date of first comm. delivery of this model	1982			
Number installed to date	1,653			
COMMENTS	—			





### X.25 Packet Assemblers/Disassemblers (PADs)

MANUFACTURER & MODEL	Advanced Computer Communications ACP 629	Amdahl 4440	Amdahl 4450	Amdahl 4460
NETWORK CERTIFICATION	Telenet, Tymnet, Uninet Accunet Packet Service	Telenet, Tymnet, Uninet, Accunet Packet Service, British Tele- com PSS, Itapac, Saponet X.25, X.3, X.29, X.28	Telenet, Tymnet, Uninet, Accunet Packet Service, British Tele- com PSS, Itapac, Saponet X.25	Telenet, Tymnet, Uninet, Accunet Packet Service, British Tele- com PSS, Itapac, Saponet —
CCITT RECOMMENDATION SUPPORTED	X.25			
BUFFER MEMORY CAPACITY	64K	512K	512K	512K
ADDITIONAL RAM AVAILABLE	—	—	—	—
DEVICE CONFIGURATIONS	Host, terminal con- centrator	Host/terminal concentrator	Host/terminal concentrator	Host/terminal concentrator
INPUT SPECIFICATIONS				
Number and type of devices supported	Up to 32 asynchronous terminals	Up to 40 asynchronous ports	Up to 16 bisync 2370 ports	Up to 40 ports: 16 bisync, RJE; 24 async
Connections supported	Direct connection, access via dial-up modem	Direct, dial-up	Direct connect, multi- point 3270	Direct connect, multi- point 3270
Maximum input rate per port, in bps	19.2K	19.2K	19.2K	19.2K
Maximum aggregate input rate, in bps	—	80K	100K	80K
Synchronization	Asynchronous	Asynchronous	3270 bisynchronous	Async, bisync, SDLC
Transmission mode	Full duplex	Half duplex	Half duplex	Half duplex
Interface	RS-232-C	RS-232-C, V.24	RS-232-C, V.24	RS-232-C, V.24
Autospeed/autoparity available	—	Yes	—	Yes
Channel config. data downline loadable	—	Yes	Yes	Yes
Ports config. for perm./switched circ.	No, switched only	Yes, both	Yes, both	Yes, both
NETWORK CHANNEL SPECIFICATIONS				
Number X.25 channels supported	1 X.25 network trunk	Up to 8	8	8
Interface	RS-232-C, RS-422, V.35	RS-232-C, V.24	RS-232-C, V.24	RS-232-C, V.24
Maximum transmission rate, in bps	56K	19.2K	19.2K	19.2K
Synchronization	Synchronous	Synchronous	Synchronous	Synchronous
Transmission mode	Full duplex	Half/full duplex	Half/full duplex	Half/full duplex
Number virtual circuits supported	32	40	128	128
Max. window size supported, in frames	7	7	7	7
Link-level framing supported	HDLC-LAPB	HDLC	HDLC	HDLC
DIAGNOSTICS	Self-tests	On-line network diag., status LEDs, self-test	On-line network diag., status LEDs, self-test	On-line network diag., status LEDs, self-test
FEATURES				
Channel priority assignment	No	Yes	Yes	Yes
Password protection	No	Yes	Yes	Yes
Supervisory port	Yes	Yes	Yes	Yes
Echoplex	Yes	Yes	—	Yes
Autodialer supported	No	No	No	No
PRICING AND AVAILABILITY				
Purchase, \$	6,490	7,200	11,500	15,000
Rental, \$ month-to-month	None	—	—	—
Installation, \$	Time and maintenance	400	645	645
Maintenance, \$ Annual	1,164	840	1,320	1,320
Serviced by	Vendor	Vendor	Vendor	Vendor
Availability	30 days	30 days	30 days	30 days
Date of first comm. delivery of this model	1985	1982	1982	1984
Number installed to date	—	350	1,900	300
COMMENTS	Host resident front end supports locally attach- ed terminal access to X.25 network & remote terminal access to host from the X.25 network; supports full-screen editing terminal cap.	Supports 1984 version of X.3; includes Amdahl enhanced options as part of X.3; uses 4404E NA for network management	Supports DSP as level 4 protocol to be loaded; Async, BSC, SDLC, Async- to-BSC conversion; allows Async and BSC to load simultaneously; uses 4404E NA for network management	Allows any single proto- col to be loaded; Async, BSC, SDLC, Async-to-BSC conversion; allows Async and BSC to load simulta- neous; uses 4404E NA for network management

## X.25 Packet Assemblers/Disassemblers (PADs)

MANUFACTURER & MODEL	Amdahl 4470E	Amdahl Communications 4415	Atlantic Research XPRT PC Card	BBN Communications C/10 PAD
NETWORK CERTIFICATION	Telenet, Tymnet, Uninet, Accunet Packet Service, British Telecom PSS, Itapac, Saponet X.25	Telenet, Tymnet, Data-pac, Uninet, Accunet, PPS, Itapac, Saponet	—	No
CCITT RECOMMENDATION SUPPORTED		All supported	All supported	All
BUFFER MEMORY CAPACITY	512K	512K	32K	384K + 64K/8 lines
ADDITIONAL RAM AVAILABLE	—	No	Yes	—
DEVICE CONFIGURATIONS	Host/terminal concentrator	Host concentrator, terminal concentrator, X.25 devices	Terminal concentrator, PAD Eliminator	Host, terminal concentrator
INPUT SPECIFICATIONS				
Number and type of devices supported	8 sync ports (16 SNA clusters, 128 SNA logical units)	Up to 40 native X.25 or Async devices supported	4 terminal emulations—3278, 3287, Teletype, VT100, D200, ADM-3	Up to 64 async lines, up to 32 sync lines; 128 devices max.
Connections supported	Direct connect, multi-point	Direct, leased	Direct, access via dial-up modem, leased	Direct, dial-up, leased line
Maximum input rate per port, in bps	9600	19.2K	9600	9600
Maximum aggregate input rate, in bps	100K	80K	9600	112K
Synchronization	Synchronous	Synchronous	Async/sync	Async/sync
Transmission mode	Half duplex	Full duplex	Full duplex	Half/full duplex
Interface	RS-232-C, V.24	RS-232-C, V.24, V.35	X.21 bis	RS-232-C, V.24
Autospeed/autoparity available	—	No	—	Yes
Channel config. data downline loadable	Yes	Yes	—	Yes
Ports config. for perm./switched circ.	Yes, both	Yes, both	—	Yes
NETWORK CHANNEL SPECIFICATIONS				
Number X.25 channels supported	8	Up to 40	1	1 standard; 2 opt.
Interface	RS-232-C, V.24	RS-232-C, V.24, V.35	—	RS-232-C, V.24, V.35
Maximum transmission rate, in bps	9600	64K	9600	64K/channel
Synchronization	Synchronous	Synchronous	Async/sync	Synchronous
Transmission mode	Half/full duplex	Full duplex	Full duplex	Full duplex
Number virtual circuits supported	128	512	4	128
Max. window size supported, in frames	7	7	2	7
Link-level framing supported	HDLC	HDLC	HDLC	HDLC
DIAGNOSTICS	On-line network diag., status LEDs, self-test	Self-test, status LEDs, on-line network diagnostics	Self-test, remote line tests, local line tests	Self-tests, LEDs, remote & local tests
FEATURES				
Channel priority assignment	Yes	Yes	No	No
Password protection	Yes	Not applicable	No	Yes
Supervisory port	Yes	Yes	Yes	Yes
Echoplex	—	Not applicable	Yes	Yes
Autodialer supported	No	No	Yes	No
PRICING AND AVAILABILITY				
Purchase, \$	12,500	15,000	1,295	5,850
Rental, \$ month-to-month	—	Not applicable	—	—
Installation, \$	645	650	—	—
Maintenance, \$ Annual	1,320	1,320	—	—
Serviced by	Vendor	Vendor	Vendor	Vendor on site, factory
Availability	30 days	30 days	30 to 60 days	120 days
Date of first comm. delivery of this model	1983	1984	1985	February 1984
Number installed to date	65	60	5,500	—
COMMENTS	Supports PSH/QLLC, 3270 3600/4700, and other PUT.2; NPSI compatible; uses 4404E network administrator for network management	Provides local switching of X.25 VCs; can be used as an X.25 line concentrator or as a low-end packet switch; uses 4404E NA for network management; also supports async devices for X.25 network access	XPRT PC Card eliminates the need for a PAD; the PC card turns a PC into 4 terminals active at the same time	BSC 3270, 2780/3780, HASP, SDLC, SNA and multiple-protocol support also available; also expandable, multiple microprocessors, automatic virtual set-up, call accounting, downline loading of configuration and software parameters

### X.25 Packet Assemblers/Disassemblers (PADs)

MANUFACTURER & MODEL	Black Box X.25 PAD-4/X.25 PAD-8	Bridge Communications GS/1-X.25	Cableshare CSI-X.25	Cableshare LSI-X.25 IC
NETWORK CERTIFICATION	Telenet, Tymnet, Uninet	Telenet, Datapac, Tymnet, Transpac, Austpac	Telenet, Tymnet, Datapac, Uninet, Infoswitch, and others	Telenet, Tymnet, Datapac Uninet, Infoswitch, and others
CCITT RECOMMENDATION SUPPORTED	X.3, X.28, X.29, X.121, X.25	X.25 levels 1,2,3; X.3; X.29	X.25 1, 2, & 3; X.3, X.28, X.29	X.25 levels 1, 2, & 3; X.3, X.29
BUFFER MEMORY CAPACITY	—	384K memory, 512K buffer	256K	64K
ADDITIONAL RAM AVAILABLE	—	Yes	Yes	Yes
DEVICE CONFIGURATIONS	Port concentrator, div. multiplexer, terminal concentrator	Host concentrator, LAN interface	Host concentrator, terminal concentrator, stat mux	Host/terminal concentrator, Telex/Teletex gateway
INPUT SPECIFICATIONS				
Number and type of devices supported	4 async terminals/ 8 async terminals	8 sync lines	Up to 16 asynchronous or synchronous	Up to 64 asynchronous or 8 synchronous teletex
Connections supported	Direct, dedicated, dial-up terminal connections	Direct	Direct, dial-up	Direct, dial-up
Maximum input rate per port, in bps	—	—	19.2K	9600
Maximum aggregate input rate, in bps	—	304K	—	—
Synchronization	Asynchronous	Synchronous	Async/sync	Async/sync
Transmission mode	Half/full duplex	Full duplex	Full duplex	Full duplex
Interface	RS-232-C, V.24, V.28	RS-232-C, V.24, V.28	RS-232-C, RS-423	RS-232-C, RS-423
Autospeed/autoparity available	—	No	Yes	Yes
Channel config. data downline loadable	—	No	Yes	Yes
Ports config. for perm./switched circ.	—	No	Yes	Yes
NETWORK CHANNEL SPECIFICATIONS				
Number X.25 channels supported	26	8	2	5
Interface	RS-232-C, V.24, V.28	RS-232-C, V.24, V.28	RS-232-C, RS-423	RS-232-C, RS-423
Maximum transmission rate, in bps	9600 bps	56K	64K per channel	19.2K
Synchronization	Asynchronous	Synchronous	Synchronous	Synchronous
Transmission mode	Half/full duplex	Full duplex	Full duplex	Full duplex
Number virtual circuits supported	4—8	48	Up to 17	Up to 64
Max. window size supported, in frames	—	System generatable	7	7
Link-level framing supported	DTE or DCE appearance & user definable values	HDLC	HDLC	HDLC—BSC/ASCII
DIAGNOSTICS	Terminal test, local test, remote test, system test	Self-test, status LEDs, remote line tests	Self-tests, status LEDs, remote check-out through network, central netwk. management facilities	Self-test, on-board link diag., remote loading of dial over X.25
FEATURES				
Channel priority assignment	—	No	No	No
Password protection	—	No	Yes; multiple levels	Yes
Supervisory port	No	Yes	Yes	Yes
Echoplex	No	—	Yes	Yes
Autodialer supported	No	—	Yes	Yes
PRICING AND AVAILABILITY				
Purchase, \$	2,050/2,750	Approximately 10,000	1,900 to 4,000	5,000 (8 prt.); 1,760 each add. port
Rental, \$ month-to-month	None	No rental	—	—
Installation, \$	None	300	300	600
Maintenance, \$ Annual	None	Contact vendor	120	300
Serviced by	Factory	Vendor	3M	DEC
Availability	Stock	Immediate	30/60 days	30/60 days
Date of first comm. delivery of this model	1985	1985	September 1983	1980
Number installed to date	—	Over 300	—	800
COMMENTS		The GS/1 is an Ethernet to X.25 gateway that allows devices on a LAN to communicate with dev. on an X.25 network; also provides interconnection service which allows 2 remote LANs to communicate between each other	Has 16-bit 80186 microprocessor; remote access for centralized monitoring and network management; on-line help information; supports IBM SDLC	Uses DEC LSI-II family hardware; custom-enhancement of software available; local forms storage and field editing

### X.25 Packet Assemblers/Disassemblers (PADs)

MANUFACTURER & MODEL	Cableshare LSI-X.25 Front End Processor	Cableshare KXT X.25 Front End Processor	ComDesign TX-700	Commtext Cx-25 PAD
NETWORK CERTIFICATION	Telenet, Tymnet, Datapac Uninet, Infoswitch, and others	Telenet, Tymnet, Data- pac, Uninet, Infoswitch, and others	Telenet, Tymnet, Uninet, Transpac, Datapac, IPSS, Euronet	Telenet, Transpac (Fr), Datapak (Norway), PSS (UK)
CCITT RECOMMENDATION SUPPORTED	X.25, X.3, X.28, X.29	X.25 levels 1, 2, 3; X.3, X.25, X.28, X.29	—	X.25 levels 1,2,3; X.3; X.28, X.29
BUFFER MEMORY CAPACITY ADDITIONAL RAM AVAILABLE DEVICE CONFIGURATIONS	128K Yes Host/terminal	32K No Host/terminal	Up to 320K — Terminal concentrator	32K No Terminal concentrator
INPUT SPECIFICATIONS Number and type of devices supported	DEC UNIBUS interface	DEC Q-BUS interface	Up to 32 async devices and telexes	Up to 25 aysnc terminals or PCs + IBM Type-A Coax terminals
Connections supported	Direct, dial-up	Direct, dial-up	Direct, access via dial- up modem	Direct, access via dial- up modem
Maximum input rate per port, in bps Maximum aggregate input rate, in bps Synchronization	19.2K 80K Async/sync	19.2K 80K Async/sync	9600 307.2K Asynchronous	19.2K — Asynchronous
Transmission mode Interface	Full duplex RS-232-C, RS-423	Full duplex RS-232-C, RS-423	Full duplex RS-232-C, V.24	Full duplex RS-232-C
Autospeed/autoparity available Channel config. data downline loadable Ports config. for perm./switched circ.	Yes Yes Yes	Yes Yes Yes	Yes Yes Yes, both	Yes No Switched only
NETWORK CHANNEL SPECIFICATIONS Number X.25 channels supported Interface	5 RS-232-C, RS-423	2 RS-232-C, RS-423	1 RS-232-C, V.24	1 RS-232-C
Maximum transmission rate, in bps Synchronization Transmission mode Number virtual circuits supported Max. window size supported, in frames Link-level framing supported	19.2K Synchronous Full duplex 127 7 HDLC, BSC	19.2K Synchronous Full duplex 127 7 HDLC/BSC	64K Synchronous Full duplex 33 Window size negotiation LAPB	9600 Synchronous Full duplex 25 7 HDLC
DIAGNOSTICS	Remote and local tests	Remote line tests, local line tests	Self-test, status LEDs, remote line tests, local line tests	Self-test, status LEDs
FEATURES Channel priority assignment Password protection Supervisory port Echoplex Autodialer supported	No Yes Yes Yes Yes	No Yes Yes Yes Yes	No Yes Yes Yes Yes	No Yes Yes Yes Yes
PRICING AND AVAILABILITY Purchase, \$	5,000 to 50,000	2,950 to 3,600	2,145 to 8,950	2,650
Rental, \$ month-to-month Installation, \$ Maintenance, \$ Annual Serviced by Availability Date of first comm. delivery of this model Number installed to date	— 600 to 2,000 300 to 1,250 DEC 45 days 1980 250	No rental 120 300 DEC 30/60 days 1982 350	Contact vendor User installable Contact vendor Vendor 30 days 1984 —	Distributor determined Distributor determined Distributor determined CENTEL - on site 30 days 1985 —
COMMENTS	Interface between X.25, DEC hosts, and asynchronous terminals; all 3 levels of X.25 processed on the front end	X.25 interface for digital microvax and Micro II systems; all 3 levels of X.25 processed on KXT board; single width module that implements the Q-BUS	Hardwired Executive Port provides testing and monitoring functions; features incl. abbrevi- ated addressing, support for perm. vir- tual circuits, autocal, user-configurable pro- files; support of HP ENQ/ACK and CTS/RTS flow throughput class nego- tiation and reverse charging	Cx-25 is an optional integrated X.25 inter- face for the Cx-80 data exchange; in addition to outbound calls (by name), incoming calls to rotary hunt groups are supported

### X.25 Packet Assemblers/Disassemblers (PADs)

MANUFACTURER & MODEL	Computer Communications CCI9124 X.25 Controller	Datagraf "Bump" X.25 PAD	Datagram DMX-2502	Datagram DMX-2504
NETWORK CERTIFICATION	Telenet, Tymnet	AT&T	Telenet, Tymnet, Datapac	Telenet, Tymnet, Datapac
CCITT RECOMMENDATION SUPPORTED	X.25 levels 1, 2, & 3; X.29	All supported	X.25 level 3	X.25 level 3
BUFFER MEMORY CAPACITY ADDITIONAL RAM AVAILABLE DEVICE CONFIGURATIONS	Dynamic buffer pool — Host concentrator (emulation mode)	256K No Terminal concentrator	8K — Host concentrator, terminal concentrator	8K — Host concentrator, terminal concentrator
INPUT SPECIFICATIONS Number and type of devices supported	—	3 asynchronous	2	4
Connections supported	—	Dial, access via dial- up modem	Direct, dialup	Direct, dialup
Maximum input rate per port, in bps Maximum aggregate input rate, in bps Synchronization	— — —	19.2K — Asynchronous	9600 38.4K Asynchronous	9600 38.4K Asynchronous
Transmission mode Interface	— —	Full duplex RS-232-C	Half/full duplex RS-232-C, V.24	Half/full duplex RS-232-C, V.24
Autospeed/autoparity available Channel config. data downline loadable Ports config. for perm./switched circ.	— — Yes	Yes No Switched only	Yes, both Yes Yes, both	Yes, both — Yes, both
NETWORK CHANNEL SPECIFICATIONS Number X.25 channels supported Interface	32 RS-232-C	1 RS-232-C	1 RS-232-C, V.24	1 RS-232-C, V.24
Maximum transmission rate, in bps Synchronization Transmission mode Number virtual circuits supported Max. window size supported, in frames Link-level framing supported	9600 Synchronous Full duplex 240 7 HDLC	19.2K Synchronous Full duplex 16 7 HDLC	9600 Synchronous Full duplex 2 7 HDLC	9600 Synchronous Full duplex 4 7 HDLC
DIAGNOSTICS	LEDs	Self-test, status LEDs, local line tests	Interface & logical status, loopback test, RAM & program memory test & memory dumps	Interface & logical status, loopback test, RAM & program memory test & memory dumps
FEATURES Channel priority assignment Password protection Supervisory port Echoplex Autodialer supported	No No No No No	No No Yes No No	Yes Yes Yes Yes Yes	Yes Yes Yes Yes Yes
PRICING AND AVAILABILITY Purchase, \$	Contact Vendor	3,095 to 4,525*	1,750	1,995
Rental, \$ month-to-month Installation, \$ Maintenance, \$ Annual Serviced by Availability Date of first comm. delivery of this model Number installed to date	Contact Vendor Contact Vendor Contact Vendor Vendor 90 days —	Not applicable Optional, \$975/2 days 600 Vendor, overnight replacement Winter 1986 Info. not available	— Customer installed Contact vendor Factory 30 days 1979 —	— Customer installed Contact vendor Factory 30 days 1979 —
COMMENTS	Dynamic application switching	Certified by AT&T for Acunet packet service  * Quantity discounts are available	Full communication protocol conversion Uniscope CCITT X.25, command language (X.28) fastcall in/outcoming call facility	Full communication protocol conversion Uniscope CCITT X.25, command language (X.28) fastcall in/outcoming call facility

### X.25 Packet Assemblers/Disassemblers (PADs)

MANUFACTURER & MODEL	Datagram DMX-2508	Datagram DMX-2516	Digital Communications Associates X.25/PAD	Digital Communications Associates DPAX 1100
NETWORK CERTIFICATION	Telenet, Tymnet, Datapac	Telenet, Tymnet, Datapac	Telenet, Tymnet, Uninet, Autonet, Datapac, & others	Telenet
CCITT RECOMMENDATION SUPPORTED	X.25 level 3	X.25 level 3	All	All supported
BUFFER MEMORY CAPACITY	16K	16K	Approx 15K char.	128K
ADDITIONAL RAM AVAILABLE	—	—	—	No
DEVICE CONFIGURATIONS	Host concentrator, terminal concentrator	Host concentrator, terminal concentrator		Host concentrator, terminal concentrator, X.3 PAD
INPUT SPECIFICATIONS				
Number and type of devices supported	8	16	Up to 32 async devices	Up to 64 async terminals
Connections supported	Direct, dial-up	Direct, dial-up	Direct, dial-up via modem	Direct, access via dial- up modem, leased
Maximum input rate per port, in bps	9600	9600	Up to 9600	19.2K
Maximum aggregate input rate, in bps	38.4K	38.4K	To 57.6K	72K
Synchronization	Asynchronous	Asynchronous	Asynchronous	Asynchronous
Transmission mode	Half/full duplex	Half/full duplex	Half/full duplex	Half/full duplex
Interface	RS-232-C, V.24	RS-232-C, V.24	RS-232-C; V.24, V.28, 20 mA current loop	RS-232-C
Autospeed/autoparity available	Yes, both	Yes, both	Yes	Yes
Channel config. data downline loadable	—	—	Remote console	No
Ports config. for perm./switched circ.	Yes, both	Yes, both	Yes; both	Yes, both
NETWORK CHANNEL SPECIFICATIONS				
Number X.25 channels supported	1	1	1	2
Interface	RS-232-C, V.24	RS-232-C, V.24	RS-232-C, V.24, V.28	RS-232-C, V.35
Maximum transmission rate, in bps	9600	9600	Up to 19.2K	72K
Synchronization	Synchronous	Synchronous	Synchronous	Synchronous
Transmission mode	Full duplex	Full duplex	Full duplex	Full duplex
Number virtual circuits supported	8	16	Up to 33	66
Max. window size supported, in frames	7	7	1 to 7	127
Link-level framing supported	HDLC	HDLC	HDLC, BSC, LAP/LAPB, DTE/DCE	HDLC, LAPB
DIAGNOSTICS	Interface & logical status, loopback test, RAM & program memory test & memory dumps	Interface & logical status, loopback test, RAM & program memory test & memory dumps	Status LEDs, built-in diagnostics, console	Self-test, status LEDs, remote line tests, local line tests
FEATURES				
Channel priority assignment	Yes	Yes	No	Yes
Password protection	Yes	Yes	No	Yes
Supervisory port	Yes	Yes	Yes; console port	Yes
Echoplex	Yes	Yes	Yes	Yes
Autodialer supported	Yes	Yes	No	No
PRICING AND AVAILABILITY				
Purchase, \$	2,995	3,750	1,895—8,445	5,190
Rental, \$ month-to-month	—	—	From 76 to 338 (12 mo.)	—
Installation, \$	Customer installed	Customer installed	Contact vendor	—
Maintenance, \$ Annual	Contact vendor	Contact vendor	Contact vendor	—
Serviced by	Factory	Factory	Vendor	Vendor
Availability	30 days	30 days	—	30 days ARO
Date of first comm. delivery of this model	1979	1979	—	March 1987
Number installed to date	—	—	—	—
COMMENTS	Full communication protocol conversion Uniscope CCITT X.25, command language (X.28) fastcall in/outcoming call facility	Full communication protocol conversion Uniscope CCITT X.25, command language (X.28) fastcall in/outcoming call facility	Half duplex on 2- or 4-wire circuits. Configurable from ASCII terminal console	—

### X.25 Packet Assemblers/Disassemblers (PADs)

MANUFACTURER & MODEL	Digital Communications Associates DPAx 2100	Dynatech Packet Technology Mono-PAD X.25	Dynatech Packet Technology Multi-PAD X.25 108/116	Dynatech Packet Technology Multi-PAD Model 224
NETWORK CERTIFICATION	Telenet	Worldwide	Telenet, Tymnet, Datapac, worldwide	Worldwide
CCITT RECOMMENDATION SUPPORTED	All supported	All supported (incl. X.25 levels 1, 2, 3; X.3; X.29; X.121)	All supported (incl. X.25 levels 1, 2, 3; X.3; X.29; X.121)	All supported (incl. X.25 levels 1, 2, 3; X.3; X.29; X.121)
BUFFER MEMORY CAPACITY ADDITIONAL RAM AVAILABLE DEVICE CONFIGURATIONS	128K No Host concentrator, terminal concentrator, X.3 PAD	10K ROM, 14K RAM No Host concentrator, terminal concentrator	10K ROM, 14K RAM Yes Host concentrator, terminal concentrator, time division multiplexer	144K ROM, 216K RAM No Host concentrator, terminal concentrator, time division multiplexer
INPUT SPECIFICATIONS Number and type of devices supported	Up to 80 async terminals	1 async device	4, 8, 12, 16 async ports	4 to 24 async ports in 4-port increments
Connections supported	Direct, access via dial-up modem, leased	Access via dial-up modem, direct connect	Access via dial-up modem	Direct, access via dial-up modem
Maximum input rate per port, in bps Maximum aggregate input rate, in bps Synchronization	19.2K 72K Async/sync	9600 9600 Asynchronous	9600 115.2K Asynchronous	9600 345.6K Asynchronous
Transmission mode Interface	Half/full duplex RS-232-C	Full duplex RS-232-C, V.24	Full duplex RS-232-C, V.24	Full duplex RS-232-C, V.24
Autospeed/autoparity available Channel config. data downline loadable Ports config. for perm./switched circ.	Autospeed available No Yes, both	Yes Yes Yes, both	Yes Yes Yes, both	Yes Yes Yes, both
NETWORK CHANNEL SPECIFICATIONS Number X.25 channels supported Interface	2 RS-232-C, V.35	1 RS-232-C, V.24	1 RS-232-C, V.24	2 RS-232-C, V.24
Maximum transmission rate, in bps Synchronization Transmission mode Number virtual circuits supported Max. window size supported, in frames Link-level framing supported	72K Synchronous Full duplex 82 127 HDLC, LAPB	9600 Synchronous Full duplex 2 7 HDLC, LAPB	9600 Synchronous Full duplex 17 7 HDLC, BSC/EBCDIC, BSC/ASCII, LAP/LAPB	14.4K Synchronous Full duplex 25 — HDLC, LAP/LAPB
DIAGNOSTICS	Self-test, status LEDs, remote line tests, local line tests	Self-test, status LEDs, diagnostic/supervisory ports	Self-test, status LEDs, diagnostic/supervisory ports	Self-test, status LEDs, diagnostic/supervisory ports
FEATURES Channel priority assignment Password protection Supervisory port Echoplex Autodialer supported	Yes Yes Yes Yes No	No Yes Yes Yes Yes	No Yes Yes Yes Yes	No Yes Yes Yes No
PRICING AND AVAILABILITY Purchase, \$	5,690	695 for board; 995 for standalone	108—2,205 to 2,905; 116—3,415 to 5,500	11,995
Rental, \$ month-to-month Installation, \$ Maintenance, \$ Annual Serviced by Availability Date of first comm. delivery of this model Number installed to date	— — — Vendor 30 days ARO March 1987 —	Contact vendor Contact vendor Contact vendor Vendor or 3rd party 30 to 60 days ARO 1984 Information not avail.	Contact vendor Contact vendor Contact vendor Vendor or 3rd party 30 to 60 days ARO 1982 Information not avail. Features include: spec. support for VT100, HP; Baudot to ASCII conversion; mnemonic addressing	Contact vendor Contact vendor Contact vendor Vendor or 3rd party 60 to 90 days ARO 1986 Information not avail. Dual X.25 trunks to access 2 independent networks or X.25 devices
COMMENTS	—	Single-port PAD		

## X.25 Packet Assemblers/Disassemblers (PADs)

MANUFACTURER & MODEL	Dynatech Packet Technology Proto-PAD X.25 Models 301, 341, 381	Dynatech Packet Technology Crypto-PAD X.25	Dynatech Packet Technology CPX.25 Series 4 and 8	Dynatech Packet Technology PBX.25 Gateway
NETWORK CERTIFICATION	Worldwide	Worldwide	Worldwide	Worldwide
CCITT RECOMMENDATION SUPPORTED	X.25 levels 1, 2, 3; X.3; X.29; X.28; X.121	X.25 levels 1, 2, 3; X.3; X.29; X.28; X.121	X.25 levels 1, 2, 3; X.3; X.29; X.28; X.121 (all supported)	X.25 levels 1, 2, 3; X.3; X.29; X.28; X.121 (all supported)
BUFFER MEMORY CAPACITY ADDITIONAL RAM AVAILABLE DEVICE CONFIGURATIONS	16K RAM, 32K w/async prt No Host concentrator, terminal concentrator	16K RAM No Terminal connection host	128K ROM, 32K RAM No Terminal concentrator, time division multi- plexer	72 RAM, 116K ROM No Host concentrator, terminal concentrator, time div. multiplexer, PBX interface
INPUT SPECIFICATIONS				
Number and type of devices supported	32 devices/8 cluster controllers plus 4 or 8 asynchronous ports	1 async device	4 or 8 async ports	16 async ports from Northern Telecom SL-1 Meridian
Connections supported	Direct, access via dial- up modem	Direct, access via dial- up modem	Direct, access via dial- up modem	PBX
Maximum input rate per port, in bps Maximum aggregate input rate, in bps Synchronization	9600 57.6K Async/sync	9600 — Asynchronous	19.2K 153.6K Asynchronous	19.2K 57.6K Synchronous
Transmission mode Interface	Full duplex RS-232-C, V.24, X.21 bis	Full duplex RS-232-C, V.24, X.21 bis	Full duplex RS-232-C, V.24	Full duplex RS-422
Autospeed/autoparity available Channel config. data downline loadable Ports config. for perm./switched circ.	Yes Yes Switched only	Yes Yes Switched only	Yes Yes Switched only	Yes Yes Yes, both
NETWORK CHANNEL SPECIFICATIONS				
Number X.25 channels supported Interface	1 RS-232-C, V.24, X.21 bis	1 RS-232-C, V.24, X.21 bis	1 RS-232-C, V.24	2 RS-232-C, V.24
Maximum transmission rate, in bps Synchronization Transmission mode Number virtual circuits supported Max. window size supported, in frames Link-level framing supported	9600 Synchronous Full duplex 17 7 HDLC	— Synchronous Full duplex 2 7 HDLC, LAPB	19.2K Synchronous Full duplex 9 7 HDLC, LAPB	19.2K Synchronous Full duplex 17 7 HDLC, LAPB
DIAGNOSTICS	Status LEDs, local and remote access, statistics	Status LEDs, local and remote access, statistics	Self-test, status LEDs, diagnostic/supervisory ports	Self-test, status LEDs, diagnostic/supervisory ports
FEATURES				
Channel priority assignment Password protection Supervisory port Echoplex Autodialer supported	No Yes Yes Yes No	No Yes Yes Yes —	No Yes Yes Yes Yes	No Yes Yes Yes No
PRICING AND AVAILABILITY				
Purchase, \$	4,890 to 7,990	2,495	4-port—2,250; 8-port—2,950	16-port unit—7,240
Rental, \$ month-to-month Installation, \$ Maintenance, \$ Annual Serviced by Availability Date of first comm. delivery of this model Number installed to date	Contact vendor Contact vendor Contact vendor Vendor or 3rd party 30 days ARO 1985 Information not avail.	Contact vendor Contact vendor Contact vendor Vendor or 3rd party 30 days ARO 1986 Information not avail.	Contact vendor Contact vendor Contact vendor Vendor or 3rd party 30 to 60 days ARO 1986 Information not avail.	Contact vendor Contact vendor Contact vendor Vendor or 3rd party 60 days ARO 1986 Information not avail.
COMMENTS	Synchronous side supports 3270 series BSC equipment, supports manual, mnemonic, or automatic addressing	Encrypting PAD using DES algorithm; 3 key handling methods provided; compatible with a logical channel encryptor, Multi-Crypt X.25, made by DYNATECH	All 1984 X.3 parameters; menu-driven set-up with help menu; asynchronous interface test; support NUI and mnemonic calling	DESigned to interface a Northern Telecom SL-1 Meridian PBX



### X.25 Packet Assemblers/Disassemblers (PADs)

MANUFACTURER & MODEL	EDA Instruments UTX.2500 Series	EDA Instruments ATX.2500 Series	EDA Instruments BTX.2500 Series	EDA Instruments PCX.2500
NETWORK CERTIFICATION	Worldwide	Worldwide	Worldwide	Worldwide
CCITT RECOMMENDATION SUPPORTED	X.3, X.28, X.29, X.25 levels 1, 2, & 3	X.3, X.28, X.29, X.25 levels 1, 2, & 3	X.3, X.28, X.29, X.25 levels 1, 2, & 3	X.3, X.28, X.29, X.25 levels 1, 2 & 3
BUFFER MEMORY CAPACITY	12.5K	12.5K	12.5K	4.5K—12.5K
ADDITIONAL RAM AVAILABLE	No	No	No	No
DEVICE CONFIGURATIONS	Host/terminal concentrator	Host/terminal concentrator	Host/terminal concentrator	Host/terminal concen- trator
INPUT SPECIFICATIONS				
Number and type of devices supported	Up to 15 logical devices running Uniscope/Sperry- link	Up to 16 ASCII async devices	Up to 15 logical devices running Synchronous Poll/Select	Up to 5 ASCII async devices
Connections supported	Direct, dial-up, leased	Direct, dial-up, leased	Direct, dial-up, leased	Direct, dial-up, leased
Maximum input rate per port, in bps	9600	9600	9600	Internal PC rate
Maximum aggregate input rate, in bps	38.4K	38.4K	38.4K	38.4K
Synchronization	Synchronous	Asynchronous	Synchronous	Asynchronous
Transmission mode	Half/full duplex	Half/full duplex	Half/full duplex	—
Interface	RS-232-C	RS-232-C	RS-232-C	RS-232-C
Autospeed/autoparity available	Yes	Yes	Yes	Yes
Channel config. data downline loadable	Yes	Yes	Yes	Yes
Ports config. for perm./switched circ.	SVC	SVC	SVC	SVC
NETWORK CHANNEL SPECIFICATIONS				
Number X.25 channels supported	1	1	1	1
Interface	RS-232-C	RS-232-C	RS-232-C	RS-232-C
Maximum transmission rate, in bps	19.2K	19.2K	19.2K	19.2K
Synchronization	Synchronous	Synchronous	Synchronous	Synchronous
Transmission mode	Full duplex	Full duplex	Full duplex	Full duplex
Number virtual circuits supported	15	16	15	5
Max. window size supported, in frames	7	7	7	7
Link-level framing supported	HDLC	HDLC	HDLC	HDLC
DIAGNOSTICS	Interface & logical chan statistics; loopback tests; RAM prog. memory test and dump	Interface & logical chan statistics; loopback tests; RAM prog. memory test and dump	Interface & logical chan statistics; loopback tests; RAM prog. memory test and dump	Interface & logical channel statistics; loopback tests; RAM prog. memory test/dump
FEATURES				
Channel priority assignment	Not applicable	Not applicable	Not applicable	Not applicable
Password protection	Yes	Yes	Yes	Yes
Supervisory port	Yes	Yes	Yes	No
Echoplex	Yes	Yes	Yes	Yes
Autodialer supported	Yes	Yes	Yes	No
PRICING AND AVAILABILITY				
Purchase, \$	3,350 to 15,000	1,850 to 10,450	3,210 to 14,590	695 to 995
Rental, \$ month-to-month	Contact vendor	Contact vendor	Contact vendor	Contact vendor
Installation, \$	Customer installed	Customer installed	Customer installed	Customer installed
Maintenance, \$ Annual	—	—	—	—
Serviced by	Factory/distributor	Factory/distributor	Factory/distributor	Factory/distributor
Availability	30 days	30 days	30 days	1986
Date of first comm. delivery of this model	December 1982	1977	1985	30 days
Number installed to date	—	—	—	—
COMMENTS	Data compression/ expansion; extensive network management package, soft configu- ration	Data compression/ expansion; extensive network management package, soft configu- ration	Data compression/ expansion; extensive network management package, soft configu- ration	No software impact; IBM PC compatible plug-in card

### X.25 Packet Assemblers/Disassemblers (PADs)

MANUFACTURER & MODEL	EDA Instruments MPX 25000	Gandalf Data Pin 9101E	Gandalf Data MUX 2000/XMUX	General DataComm 2541
NETWORK CERTIFICATION	Telenet, Tymnet, Datapac, most others	All major networks	All major networks	Telenet, Tymnet, Datapac, etc.
CCITT RECOMMENDATION SUPPORTED	All supported (including X.25 levels 1, 2, 3; X.3; X.29)	X.25 levels 1, 2, 3; X.28, and extended X.3	All supported, plus extended X.3 and X.28	All
BUFFER MEMORY CAPACITY ADDITIONAL RAM AVAILABLE DEVICE CONFIGURATIONS	Up to 48K No Host concentrator, terminal concentrator	4 to 12K No PAD, front end to in-face async ports to network, terminal concentrator, stat mux	— Yes Host concentrator, terminal concentrator	— — Host/terminal
INPUT SPECIFICATIONS				
Number and type of devices supported	Up to 32 async, up to 135 sync (Sperry, Burroughs, Qantel)	Up to 16 asynchronous devices	Up to 32 channels	4—16 asynchronous devices
Connections supported	Direct, access via dial-up modem, leased, LAN	Any using RS-232-C	Dial, leased, access via dial-up modem	Direct, dial-up
Maximum input rate per port, in bps Maximum aggregate input rate, in bps Synchronization	19.2K 72K per 16 terminals Async/sync	To 9600 57.6K Asynchronous	19.2K 614K Synchronous	19.2K 153.6K Asynchronous
Transmission mode Interface	Half/full duplex RS-232-C	Full duplex RS-232-C, CCITT V.24/V.28	Full duplex RS-232-C	Half/full duplex RS-232-C/V.24
Autospeed/autoparity available Channel config. data downline loadable Ports config. for perm./switched circ.	Yes Yes Yes, both	Yes Yes Yes, either PVC or SVC	Yes Yes Yes	Yes Yes Yes, both
NETWORK CHANNEL SPECIFICATIONS				
Number X.25 channels supported Interface	Up to 12 RS-422, V.35	1 RS-232-C, V.24, V.28	2 RS-232-C, V.24, V.28	1 or 2 RS-232-C, V.24, V.35
Maximum transmission rate, in bps Synchronization Transmission mode Number virtual circuits supported Max. window size supported, in frames Link-level framing supported	100K Synchronous Full duplex Up to 1,024 7 HDLC	19.2K bps Synchronous Full duplex 16 10 HDLC	64K Synchronous Full duplex 32K — HDLC	64K Asynchronous Half/full duplex 16 7 HDLC
DIAGNOSTICS	Self-test, status LEDs, remote line tests, local line tests	Continuous test mode, loopback tests on line, internal, and external channels, status LEDs	Self-test, status LEDs, remote line tests, local line tests	Remote or local line tests, status LEDs, self-tests
FEATURES				
Channel priority assignment	—	No	Yes	Yes
Password protection	—	Yes	Yes	Yes
Supervisory port	Yes	Yes	Yes	Yes
Echoplex	Yes	Yes	Yes	Yes
Autodialer supported	—	Yes; supports external unit	Yes	Yes
PRICING AND AVAILABILITY				
Purchase, \$	TBA	1,950 (4 ch.); 2,550 (8 ch.); 3,650 (16 ch.)	See comments *	3,630
Rental, \$ month-to-month	Contact dealer	Contact vendor	Install./svc. pkg avail	—
Installation, \$	Contact dealer	Contact vendor	Install./svc. pkg avail	745
Maintenance, \$ Annual	Contact dealer	Contact vendor	Install./svc. pkg avail	Open
Serviced by	Factory	Factory	Factory	Vendor-on site
Availability	30 days ARO	30-60 days	15 days	60—90 days ARO
Date of first comm. delivery of this model	—	1/84 (enhanced version)	March 1987	1985
Number installed to date	—	—	—	Info. not available
COMMENTS	Multiple protocol support; LAN interface; easily upgraded and enhanced in the field	Fully prompting operator interface; auto-call on channel basis; flexible flow control, incl. X-on/X-off plus CTS or HP ENQ/ACK protocol; provides usage statistics	Purchase price: 4-channel— \$2,195 8-channel— \$2,995 16-channel— \$4,695	—

### X.25 Packet Assemblers/Disassemblers (PADs)

MANUFACTURER & MODEL	General DataComm 2550	General DataComm 2551	General DataComm 2552	General DataComm 2553
NETWORK CERTIFICATION	Telenet, Tymnet, Data-pac, etc.	Telenet, Tymnet, Data-pac, etc.	Telenet, Tymnet, Data-pac, etc.	Telenet, Tymnet, Data-pac, etc.
CCITT RECOMMENDATION SUPPORTED	X.25 levels 1, 2, & 3	X.25 levels 1, 2, & 3	X.25 levels 1, 2, & 3	X.25 levels 1, 2, & 3
BUFFER MEMORY CAPACITY	—	—	—	—
ADDITIONAL RAM AVAILABLE	—	—	—	—
DEVICE CONFIGURATIONS	Host/terminal	Host/terminal	Host/terminal	Host/terminal
INPUT SPECIFICATIONS				
Number and type of devices supported	1—4 Burroughs sync	1—6 2780/3780 sync	1—6 3270 sync	1—3 SNA/SDLC sync
Connections supported	Direct, dial-up	Direct, dial-up	Direct, dial-up	Direct, dial-up
Maximum input rate per port, in bps	9600	9600	9600	19.2K
Maximum aggregate input rate, in bps	38.4K	57.6K	57.6K	57.6K
Synchronization	Synchronous	Synchronous	Synchronous	Synchronous
Transmission mode	Half/full duplex	Half/full duplex	Half/full duplex	Half/full duplex
Interface	RS-232-C, V.24	RS-232-C, V.24	RS-232-C, V.24	RS-232-C, V.24
Autospeed/autoparity available	Yes	Yes	Yes	Yes
Channel config. data downline loadable	Yes	Yes	Yes	Yes
Ports config. for perm./switched circ.	Yes, both	Yes, both	Yes, both	Yes, both
NETWORK CHANNEL SPECIFICATIONS				
Number X.25 channels supported	1 or 2	1 or 2	1 or 2	1 or 2
Interface	RS-232-C, V.24	RS-232-C, V.24	RS-232-C, V.24	RS-232-C, V.24, V.35
Maximum transmission rate, in bps	19.2K	9600	19.2K	64K
Synchronization	Synchronous	Synchronous	Synchronous	Synchronous
Transmission mode	Half/full duplex	Half/full duplex	Half/full duplex	Half/full duplex
Number virtual circuits supported	6	6	6	3
Max. window size supported, in frames	7	7	7	7
Link-level framing supported	HDLC	HDLC	HDLC	HDLC
DIAGNOSTICS	Remote or local line tests, status LEDs, self-tests	Remote or local line tests, status LEDs, self-tests	Remote or local line tests, status LEDs, self-tests	Remote or local line tests, status LEDs, self-tests
FEATURES				
Channel priority assignment	Yes	Yes	Yes	Yes
Password protection	Yes	Yes	Yes	Yes
Supervisory port	Yes	Yes	Yes	Yes
Echoplex	Yes	Yes	Yes	Yes
Autodialer supported	Yes	Yes	Yes	Yes
PRICING AND AVAILABILITY				
Purchase, \$	6,600 (4 port)	3,995	3,995	5,195
Rental, \$ month-to-month	—	—	—	—
Installation, \$	745	745	745	745
Maintenance, \$ Annual	Open	Open	—	—
Serviced by	Vendor-on site	Vendor-on site	Vendor-on site	Vendor-on site
Availability	60-90 days	60-90 days ARO	60-90 days	60-90 days
Date of first comm. delivery of this model	1985	1985	1985	1985
Number installed to date	—	Info. not available	—	—
COMMENTS	—	—	—	—

### X.25 Packet Assemblers/Disassemblers (PADs)

MANUFACTURER & MODEL	General DataComm GEN*PAC 2520	General DataComm GEN*PAC 2530/2540	GTE Telenet TP3005	GTE Telenet TP3/II-3010
NETWORK CERTIFICATION	Telenet, Tymnet, Data-pac, etc.	Telenet, Tymnet, Data-pac, etc.	Telenet	Telenet
CCITT RECOMMENDATION SUPPORTED	All	X.25 levels 1, 2, & 3 (2530); all (2540)	All	All
BUFFER MEMORY CAPACITY	—	—	64K	64K
ADDITIONAL RAM AVAILABLE	—	—	No	No
DEVICE CONFIGURATIONS	Host/terminal	Host/terminal	Host/terminal concentrator	Host/terminal concentrator
INPUT SPECIFICATIONS				
Number and type of devices supported	4 asynchronous	4-16 async	4 or 8 async device lines	Up to 26 async lines; 8 sync lines
Connections supported	Direct, dial-up	Direct, dial-up	Direct, dial-up	Direct, dial-up
Maximum input rate per port, in bps	9600	9600	9600	9600
Maximum aggregate input rate, in bps	38.4K	153.6K	38.3K	38.3K
Synchronization	Asynchronous	Asynchronous	Asynchronous	Async/sync
Transmission mode	Half/full duplex	Half/full duplex	Half/full duplex	Half/full duplex
Interface	RS-232-C, V.24	RS-232-C, V.24	RS-232-C, V.24, V.2B	RS-232-C, V.24
Autospeed/autoparity available	Yes	Yes	Yes	Yes
Channel config. data downline loadable	Yes	Yes	Yes	Yes
Ports config. for perm./switched circ.	Yes, both	Yes, both	Switched only	Switched only
NETWORK CHANNEL SPECIFICATIONS				
Number X.25 channels supported	1	1 or 2	1	1
Interface	RS-232-C, V.24	RS-232-C, V.24	RS-232-C, V.24	RS-232-C, V.24
Maximum transmission rate, in bps	19.2K	19.2K	19.2K	19.2K
Synchronization	Asynchronous	Asynchronous	Synchronous, X.25	Synchronous, X.25
Transmission mode	Half/full duplex	Half/full duplex	Full duplex	Full duplex
Number virtual circuits supported	16	16+	255	255
Max. window size supported, in frames	7	7	7	7
Link-level framing supported	HDLC	HDLC	HDLC or BSC	HDLC or BSC
DIAGNOSTICS	Remote or local line tests, status LEDs, self-tests	Remote or local line tests, status LEDs, self-tests	Remote	Remote
FEATURES				
Channel priority assignment	Yes	Yes	No	No
Password protection	Yes	Yes	Yes	Yes
Supervisory port	Yes	Yes	Yes	Yes
Echoplex	Yes	Yes	Yes	Yes
Autodialer supported	Yes	Yes	Yes	Yes
PRICING AND AVAILABILITY				
Purchase, \$	1,610 (4 port)	2530—3,250; 2540—2,595	2,500 or 3,500	5,100/2 ports 1,650/8 add'l ports
Rental, \$ month-to-month	—	—	350 or 600	800
Installation, \$	420	745	400	400
Maintenance, \$ Annual	Open	—	360 or 480	780
Serviced by	Vendor-on site	Vendor-on site	Vendor on site	Vendor on site
Availability	60-90 days	60-90 days	—	—
Date of first comm. delivery of this model	1985	1985	1983	1983
Number installed to date	—	—	—	—
COMMENTS	—	—	Software features: error detection & recovery; autospeed detection to 1200bps; dynamic flow control; alarm messages; autoconnect cap. for directly attached term.; multiple host access; configurable parameters; Network Mgmt Features: realtime event reporting diagnostics accessible from any async terminal on network using TDT-2	Software features: error detection & recovery; autospeed detection to 1200bps; dynamic flow control; alarm messages; autoconnect cap. for directly attached term.; multiple host access; configurable parameters; Network Mgmt Features: realtime event reporting diagnostics accessible from any async terminal on network using TDT-2

### X.25 Packet Assemblers/Disassemblers (PADs)

MANUFACTURER & MODEL	GTE Telenet TP3/II-3006	GTE Telenet TP3/II-3025	GTE Telenet TP4/II-4200	INCAA Datacom B.V. PIT-X.25-I
NETWORK CERTIFICATION	Telenet	Telenet	Telenet	All European countries
CCITT RECOMMENDATION SUPPORTED	All	All	All	X.25 levels 1,2,3; X.3; X.29
BUFFER MEMORY CAPACITY ADDITIONAL RAM AVAILABLE DEVICE CONFIGURATIONS	64K No Host/terminal concentrator	64K No Concentrate 3005, 3010, & 3006 devices	832K No Host/terminal concentrator	4K Yes Host concentrator, terminal concentrator
INPUT SPECIFICATIONS Number and type of devices supported	4 or 8 async/sync lines	4 or 8 sync X.25 lines	Up to 224 async lines; 112 sync lines	1- or 2-port PAD with async BSC 27/3780 and SNA
Connections supported	Direct, dial-up	Direct	Direct, dial-up	Direct, access via dial- up modem, leased
Maximum input rate per port, in bps Maximum aggregate input rate, in bps Synchronization	9600 38.3K Async/sync	19.2K 128K Synchronous X.25	9600 268.8K Async/sync	19.2K 12K Async/sync
Transmission mode Interface	Half/full duplex RS-232-C, V.24	Full duplex RS-232-C, V.24	Half/full duplex RS-232-C, V.24	Half/full duplex RS-232-C, V.24, V.28
Autospeed/autoparity available Channel config. data downline loadable Ports config. for perm./switched circ.	Yes Yes Switched only	No Yes Switched only	Yes Yes Yes, both	No Yes Yes, both
NETWORK CHANNEL SPECIFICATIONS Number X.25 channels supported Interface	1 RS-232-C, V.24	2 RS-232-C, V.24, V.35	Up to 224 RS-232-C, V.24, V.35	1 or 2 RS-232-C, V.24, V.28
Maximum transmission rate, in bps Synchronization Transmission mode Number virtual circuits supported Max. window size supported, in frames Link-level framing supported	19.2K Synchronous, X.25 Full duplex 255 7 HDLC or BSC	64K Synchronous, X.25 Full duplex 2040 7 HDLC	64K Synchronous X.25 Full duplex 224 7 HDLC or BSC	19.2K Async/sync Half-full duplex 8 7 HDLC, BSC/EBCDIC
DIAGNOSTICS	Remote	Remote	Remote	Self-test, status LEDs, remote line tests, set- up test
FEATURES Channel priority assignment Password protection Supervisory port Echoplex Autodialer supported	No Yes Yes Yes Yes	Yes No Yes Yes No	Yes Yes Yes Yes Yes	Yes Yes Yes Yes Yes
PRICING AND AVAILABILITY Purchase, \$	3,200 or 4,000	6,000 or 7,500	40,800—74,150	Contact vendor
Rental, \$ month-to-month Installation, \$ Maintenance, \$ Annual Serviced by Availability Date of first comm. delivery of this model Number installed to date	— 400 360 or 480 Vendor on site — 1985 —	— 400 480 or 600 Vendor on site — 1985 —	1,950—2,530 2,120 2,520—4,680 Vendor on site — 1984 —	Contact vendor Contact vendor Contact vendor Contact vendor April 1987 and June 1987 — —
COMMENTS	Software features: error detection & recovery; autospeed detection to 1200bps; dynamic flow control; alarm messages; autoconnect cap. for directly attached term.; multiple host access; configurable parameters; Network Mgmt Features: realtime event reporting diagnostics accessible from any async terminal on network using TDT-2	Software features: error detection & recovery; autospeed detection to 1200bps; dynamic flow control; alarm messages; autoconnect cap. for directly attached term.; multiple host access; configurable parameters; Network Mgmt Features: realtime event reporting diagnostics accessible from any async terminal on network using TDT-2	Features: multitrunks with speeds up to 64K; statistics & alarm reporting; field upgrad. to 4800 processors; full call accounting; local & transit switching; auto reconnect; call redirect to alternate destination DTE	There are two models due for release in 1987, one supports a 2-port PAD w/ async, BSC 27/3780 and SNA, the other supports a 1-port PAD; program- mable datastream modification facilities above level 3 for both

## X.25 Packet Assemblers/Disassemblers (PADs)

MANUFACTURER & MODEL	Infinet INX 8300	Infinet INX 8400	Infotron Infolinx.25	Memotec Data SP/830
NETWORK CERTIFICATION	Telenet, Tymnet, Data-pac, DDN	Telenet, Tymnet, Data-pac, DDN	Telenet (testing for Tymnet)	Telenet, Tymnet
CCITT RECOMMENDATION SUPPORTED	X.25 levels 1,2,3; X.3; X.28, all others supported	X.25 levels 1,2,3	X.25 levels 1, 2, & 3; X.3, X.28, X.29, X.121	X.25 Level 1, 2, 3; X.3, S.28, X.29
BUFFER MEMORY CAPACITY ADDITIONAL RAM AVAILABLE DEVICE CONFIGURATIONS	— — Host concentrator, terminal concentrator	— — Host concentrator, terminal concentrator	— No Terminal concentrator statistical multiplexer	48K No Host or terminal concentrator, time division multiplexer
INPUT SPECIFICATIONS Number and type of devices supported	16 asynchronous	1 to 16 ports; all IBM BSC or SNA/SDLC, RJE, or Burroughs	Up to 16 asynchronous devices	Four asynchronous devices
Connections supported	Direct, access via dial-up modem, leased	Direct, access via dial-up modem, leased	Direct, dial-up	Direct, dial-up
Maximum input rate per port, in bps Maximum aggregate input rate, in bps Synchronization	19.2K 120K Asynchronous	19.2K 120K Synchronous	19.2K — Asynchronous	9600 38K Asynchronous
Transmission mode Interface	Full duplex RS-232-C	Half/full duplex RS-232-C	Full duplex RS-232-C	Half/full duplex RS-232-C, V.24
Autospeed/autoparity available Channel config. data downline loadable Ports config. for perm./switched circ.	Yes Yes Yes, both	No Yes Yes, both	Yes Yes Yes	Yes Yes Yes; both SVC and PVC
NETWORK CHANNEL SPECIFICATIONS Number X.25 channels supported Interface	2 RS-232-C, V.35	2 RS-232-C, V.35	2 RS-232-C, RS-422	One RS-232-C, V.24
Maximum transmission rate, in bps Synchronization Transmission mode Number virtual circuits supported Max. window size supported, in frames Link-level framing supported	64K Synchronous Full duplex 16 7 HDLC	64K Synchronous Full duplex 24 7 HDLC	64K per X.25 channel Synchronous Full duplex 16 7 HDLC, LAPB, or LAP	19.2K Synchronous Full duplex 5 7 HDLC
DIAGNOSTICS	Self-test, status LEDs, remote line tests, local line tests	Self-test, status LEDs, remote line tests, local line tests	Status LEDs, local and remote diagnostics and statistics	Remote/local tests, LEDs
FEATURES Channel priority assignment Password protection Supervisory port Echoplex Autodialer supported	No Yes Yes Yes No	No Yes Yes No No	Yes Yes No Yes Yes	Yes Yes Yes Yes Yes
PRICING AND AVAILABILITY Purchase, \$	1,725	4,000	2,500 to 5,500	Contact vendor
Rental, \$ month-to-month Installation, \$ Maintenance, \$ Annual Serviced by Availability Date of first comm. delivery of this model Number installed to date	— 52 228 Vendor — — —	— 120 44 Vendor — — —	— No charge 1-yr factory warranty Vendor-factory 30 days 1984 —	Contact vendor Contact vendor Contact vendor Vendor Contact vendor Info. not available Info. not available
COMMENTS	Hunt groups, mnemonic addressing, call parameter negotiation, flow control, DTE/DCE selection all standard features	Configure from IBM Bisync or SNA or Burroughs terminal; multiple host sessions; NIPSI/LLC and DSP compatible	Split speed, remote diagnostics, statistics and dual 64K bps X.25 links, field upgradeable for port size	—

### X.25 Packet Assemblers/Disassemblers (PADs)

MANUFACTURER & MODEL	Memotec Data SP/8200 & SP/8300	Micom Systems Micro800 X.25 Concentrator PAD	Micom Systems MB3-BSC-STD	Micom Systems MB3-PSW-STD
NETWORK CERTIFICATION	Datapac, Uninet, Infonet	Telenet, Datapac, Uninet, Tymnet, Trans- pac, DN-1, PSS, DCS, Saponet, Datex-P	—	Telenet, Tymnet, Datex-P, PSS
CCITT RECOMMENDATION SUPPORTED	X.25 Level 1, 2, 3; X.3, X.28, X.29	X.25 levels 1, 2, & 3; X.3, X.28, X.29, X.121	X.25 levels 1,2,3; X.3; X.29	—
BUFFER MEMORY CAPACITY ADDITIONAL RAM AVAILABLE DEVICE CONFIGURATIONS	48K No Host or terminal concen- trator, time division multiplexer	32K No Host, terminal concen- trator	256K RAM No Host concentrator, terminal concentrator	256K No Switch
INPUT SPECIFICATIONS				
Number and type of devices supported	4, 10, or 16 asynchro- nous devices	4, 8, 12, 16 async ports	Up to 16 327X BSC clusters; up to 64 327X devices	6 or 12 X.25 links
Connections supported	Direct, dial-up	Direct	Direct, leased	Direct, leased
Maximum input rate per port, in bps Maximum aggregate input rate, in bps Synchronization	9600 48K Asynchronous	9600 100K (burst mode) Asynchronous	9600 — Synchronous	— — Synchronous
Transmission mode Interface	Half/full duplex RS-232-C, V.24	Full duplex RS-232-C, current loop, V.24	— RS-232-C	Full duplex RS-232-C
Autospeed/autoparity available Channel config. data downline loadable Ports config. for perm./switched circ.	Yes Yes Yes; both SVC and PVC	Yes Yes Yes	Not applicable Yes Switched only	Not applicable Yes Yes, both
NETWORK CHANNEL SPECIFICATIONS				
Number X.25 channels supported Interface	One or two RS-232-C, V.24	1 RS-232-C, V.24	1 RS-232-C, V.35	6, 12 RS-232-C, V.35, X.21
Maximum transmission rate, in bps Synchronization Transmission mode Number virtual circuits supported Max. window size supported, in frames Link-level framing supported	19.2K Synchronous Full duplex 17 7 HDLC	9600 Synchronous Full duplex Up to 26 7 HDLC, LAPB	72K Synchronous Full duplex 66 7 HDLC	72K Synchronous Full duplex 127 7 HDLC
DIAGNOSTICS	Remote/locate tests, LEDs	Remote and local line tests, status LEDs, self-tests, terminal/ modem loopback	Self-test, status LEDs	—
FEATURES				
Channel priority assignment Password protection Supervisory port Echoplex Autodialer supported	Yes Yes Yes Yes Yes	Yes Yes Yes Yes —	Not applicable Yes Yes Not applicable Not applicable	Yes Yes Yes No No
PRICING AND AVAILABILITY				
Purchase, \$	Contact vendor	2,050/2,750/3,700/4,600	3,740	3,740 to 4,990
Rental, \$ month-to-month Installation, \$ Maintenance, \$ Annual Serviced by Availability Date of first comm. delivery of this model Number installed to date	Contact vendor Contact vendor Contact vendor Vendor Contact vendor Info. not available Info. not available	— — — Factory 60 days November 1982 Info. not available	Not applicable — — Factory 30 to 45 days April 1, 1987 Not applicable	— — — Vendor 30 to 45 days 1986 500
COMMENTS	—	—	Provides switching via DSP CRM1, CRM2, CRM3; autocall and ATM (trans- parent network) incl.; PAD supports up to 4 BSC lines; each line may be configured as HPAD or TPAD; BSC software in Featurepak cartridge	PAD software is in a Featurepak cartridge; outstanding price/per- formance ratio

## X.25 Packet Assemblers/Disassemblers (PADs)

MANUFACTURER & MODEL	Micom Systems MB3-XAP-STD	Micom Systems MB2-XAP-STD	PCI Smartnet Series 2000 Model 2500	PCI Smartnet Series 2000 Model 2600
NETWORK CERTIFICATION	Telenet, Tymnet, Datex-P, PSS	Telenet, Tymnet, Datex-P, PSS	Accunet Packet Service, Telenet, Tymnet, Auto-net, Uninet, Datex-P	Accunet Packet Service, Telenet, Tymnet, Auto-net, Uninet, Datex-P
CCITT RECOMMENDATION SUPPORTED	X.25 levels 1,2,3; X.3; X.29; all others supported	X.25 levels 1,2,3; X.3; X.29; all others supported	X.3, X.28, X.29, X.21 per CCITT 1984; X.25 levels 1, 2, & 3	X.3, X.28, X.29, X.21 per CCITT 1984; X.25 levels 1, 2, & 3
BUFFER MEMORY CAPACITY ADDITIONAL RAM AVAILABLE DEVICE CONFIGURATIONS	256K No Host concentrator, terminal concentrator	64K No Host concentrator, terminal concentrator	170K to 200K No Host/terminal connector	150K to 200K No Host/terminal connector, X.25 concentrator
INPUT SPECIFICATIONS				
Number and type of devices supported	4, 10, or 16 async devices	4, 10, or 16 async devices	Up to 27 asynchronous	Up to 26 asynchronous
Connections supported	Direct, leased	Direct, leased, access via dial-up modem	Dedicated, dial-in, dial-out, 3-wire	Dedicated, dial-in, dial-out, 3-wire
Maximum input rate per port, in bps Maximum aggregate input rate, in bps Synchronization	9600 76.8 Asynchronous	9600 56K Asynchronous	9600 — Asynchronous	9600 — Asynchronous
Transmission mode Interface	Full duplex RS-232-C	Full duplex RS-232-C	Half/full duplex RS-232-C, V.24	Half/full duplex RS-232-C, V.24
Autospeed/autoparity available Channel config. data downline loadable Ports config. for perm./switched circ.	Yes — Yes, both	Yes — Yes, both	Yes Yes Yes, both	Yes Yes Yes, both
NETWORK CHANNEL SPECIFICATIONS				
Number X.25 channels supported Interface	1 RS-232-C, V.35, X.21	1 RS-232-C, V.35, X.21	1 V.35, RS-232-C, V.24	Up to 8 V.35, RS-232-C, V.24
Maximum transmission rate, in bps Synchronization Transmission mode Number virtual circuits supported Max. window size supported, in frames Link-level framing supported	72K Synchronous Full duplex Channel count + 2 15 HDLC	72K Synchronous Full duplex Channel count + 2 7 HDLC	9600(RS-232-C), 64K(V.35) Synchronous Full duplex Up to 32 1 to 15 LAP and LAPB	9600 (R-232); 64K (V.35) Synchronous Full duplex Up to 256 1 to 15 LAP and LAPB
DIAGNOSTICS	Self-test, status LEDs, remote line tests, local line tests	Self-test, status LEDs, remote line tests, local line tests	Built-in local and remote diagnostics	Built-in local and remote diagnostics
FEATURES				
Channel priority assignment Password protection Supervisory port Echoplex Autodialer supported	Yes Yes Yes Yes —	Yes Yes Yes Yes —	Yes Yes Yes Yes Yes	Yes Yes Yes Yes Yes
PRICING AND AVAILABILITY				
Purchase, \$	4,790	1,750 to 4,250	4,750 to 6,250	5,000 to 7,250
Rental, \$ month-to-month Installation, \$ Maintenance, \$ Annual Serviced by Availability Date of first comm. delivery of this model Number installed to date	2,790 to 4,790 — — Vendor 30 to 45 days 1985 3,000	— — — Vendor or 3M 30 days 1985 3,000	600/90 days — 500 to 700 Vendor; distributors 30 days — Information not avail.	750/90 days — 500 to 700 Vendor; distributors 30 days — Information not avail.
COMMENTS	PAD software is in a Featurepak cartridge; variety of hosts and terminals supported, including DEC and H.P.	Billing and accounting on a per call basis; expandable from 4 to 10 to 16 channels	Full software configured; parameters stored on 3½-inch diskette; parity protected memory; modulo 8 and 128 for link and packet-level communication; Network Management System software available	Full software configured; parameters stored on 3½-inch diskette; parity protected memory; modulo 8 and 128 for link and packet-level communication; Network Management System software available



### X.25 Packet Assemblers/Disassemblers (PADs)

MANUFACTURER & MODEL	PCI Smartnet Series 2000 Model 2700	PCI Smartnet 1000 Series*	PCI Smartnet Series 1000 Model 1500	PCI Smartnet Series 3000 Model 3600
NETWORK CERTIFICATION	Accunet Packet Service, Telenet, Tymnet, Autonet, Uninet, Datex-P	Telenet, Tymnet, Transpac, PSS, Datex-P, Datapac	—	—
CCITT RECOMMENDATION SUPPORTED	X.21 per CCITT 1984; X.25 levels 1, 2, & 3	X.25 levels 1, 2, & 3	X.25 levels 1, 2, 3; X.3; X.29	X.25 levels 1, 2, 3; X.3; X.29; X.28, X.21
BUFFER MEMORY CAPACITY	140K to 160K	—	—	150K to 200K
ADDITIONAL RAM AVAILABLE	No	—	No	No
DEVICE CONFIGURATIONS	X.25 switch and connector	PCI 1100—IBM SNA 3270 term. PAD; PCI 1200—IBM SNA host PAD; PCI 1300—IBM SNA cluster PAD	Host concentrator, terminal concentrator	Host concentrator, terminal concentrator, X.25 concentrator
INPUT SPECIFICATIONS				
Number and type of devices supported	Not applicable	Seven async terminals or three IBM SNA cluster controllers	Up to 7 async	Up to 24 async
Connections supported	Not applicable	Direct, dial-up	Direct, dial-up, leased	Dedicated, dial-in, dial-out, 3-wire
Maximum input rate per port, in bps	Not applicable	9600	9600	9600
Maximum aggregate input rate, in bps	Not applicable	—	—	—
Synchronization	Not applicable	Async/sync	Asynchronous	Asynchronous
Transmission mode	Not applicable	Full duplex	Half/full duplex	Half/full duplex
Interface	Not applicable	RS-232-C	RS-232-C	RS-232-C, V.24
Autospeed/autoparity available	Not applicable	Async autobaud	No	Yes
Channel config. data downline loadable	Not applicable	No	No	Yes
Ports config. for perm./switched circ.	Not applicable	Yes	No	Yes, both
NETWORK CHANNEL SPECIFICATIONS				
Number X.25 channels supported	Up to 16	1	1	Up to 4
Interface	V.35, RS-232-C, V.24	RS-232-C	RS-232-C	RS-232-C, V.24, V.35
Maximum transmission rate, in bps	9600 (R-232), 64K (V.35)	9600	9600	76.8K
Synchronization	Synchronous	Synchronous	Synchronous	Synchronous
Transmission mode	Full duplex	Full duplex	Full duplex	Full duplex
Number virtual circuits supported	Up to 448	8	7	Up to 256
Max. window size supported, in frames	1 to 15	7	7	1 to 15
Link-level framing supported	LAP and LAPB	HDLC, LAP, LAPB, IBM NPSI, QLLC, PSH	HDLC	LAP, LAPB
DIAGNOSTICS	Built-in local and remote diagnostics	Status LEDs, diagnostic port	Self-test, status LEDs	Built-in local and remote
FEATURES				
Channel priority assignment	Yes	Not applicable	No	Yes
Password protection	Yes	No	Yes	Yes
Supervisory port	Yes	Not applicable	No	Yes
Echoplex	Yes	Yes	Yes	Yes
Autodialer supported	Yes	No	No	Yes
PRICING AND AVAILABILITY				
Purchase, \$	4,250 to 7,250	1,650 to 3,800	1,550	6,150 to 9,600
Rental, \$ month-to-month	750/90 days	350	—	—
Installation, \$	—	—	—	—
Maintenance, \$ Annual	500 to 800	300 to 500	—	—
Serviced by	Vendor; distributors	Vendor	Vendor	Vendor
Availability	30 days	30 days	45 days	45 days
Date of first comm. delivery of this model	—	1983	—	—
Number installed to date	Information not avail.	Information not avail.	New product	New product
COMMENTS	Full software configured; parameters stored on 3½-inch diskette; parity protected memory; modulo 8 and 128 for link and packet-level communication; Network Management System software available	*Formerly known as PCI 1076X, 73SX, and R73SX. Series incl. PCI 1100—allows ASCII term./PCs & printers to act as SNA devices via X.25; PCI 1200—an IBM host SNA PAD that can replace IBM NPSI; PCI 1300—lets SNA/SDLC 3270, 3770, 5250 cluster controllers use X.25 network to IBM host	—	—

### X.25 Packet Assemblers/Disassemblers (PADs)

MANUFACTURER & MODEL	Protocom Devices P160	Protocom Devices P250	Protocom Devices P2500	Tekelec T.A.N.S. 5000
NETWORK CERTIFICATION	Telenet, Tymnet, Uninet, Datapac, Accunet, Datex-P	Datapac, Transpac, Telenet, Tymnet, DN-1, Accunet, Uninet	Datapac, Transpac, Telenet, Tymnet, DN-1, Accunet, Uninet	PSS (UK), Transpac (FR); Telenet and Tymnet pending
CCITT RECOMMENDATION SUPPORTED	X.25 levels 1, 2, 3	All (1980)	All (1980)	All supported
BUFFER MEMORY CAPACITY ADDITIONAL RAM AVAILABLE DEVICE CONFIGURATIONS	256K Yes Host concentrator, terminal concentrator, port selector	32K Not necessary HPAD, TPAD, controller	32K Not necessary HPAD, TPAD, controller, port selector	2M Yes Host/terminal concentrator, terminal to terminal/printer LAN
INPUT SPECIFICATIONS Number and type of devices supported	Up to 240 sync devices* and 128 async devices	32 sync dev: incl. BSC, SNA, Uniscope, Burroughs PS, Hnywell 2780, others	40 Sync term. dev: incl. BSC, SNA, Uniscope, Burroughs PS, Hnywell 2780	8 ports per unit, total of 5,000 ports possible through chaining
Connections supported	Direct, leased	Direct, dial-up, leased line	Direct, dial-up, leased line	Direct, leased, access via dial-up modem
Maximum input rate per port, in bps Maximum aggregate input rate, in bps Synchronization	9600 230K sync Async/sync	9600 9600 Sync., polling sync.	9600 38.4K Sync, polling sync.	64K 243.2K Async/sync
Transmission mode Interface	Half/full duplex RS-232-C	Full/half duplex RS-232-C	Half/full duplex RS-232-C	Half/full duplex RS-232-C, V.24, RS-422/449
Autospeed/autoparity available Channel config. data downline loadable Ports config. for perm./switched circ.	No Yes Yes, both	Not applicable Yes Yes	Not Applicable Yes Yes	Yes Yes Yes, both
NETWORK CHANNEL SPECIFICATIONS Number X.25 channels supported Interface	2 RS-232-C, V.35	1 RS-232-C, X.21 bis	1 RS-232-C, X.21 bis	8 per unit RS-232-C, RS-422/449
Maximum transmission rate, in bps Synchronization Transmission mode Number virtual circuits supported Max. window size supported, in frames Link-level framing supported	64K Synchronous Full duplex 256 7 HDLC	9600 Synchronous Full duplex 34 7 HDLC, LAPB	9600 Synchronous Full duplex 42 7 HDLC, LAPB	243.2K Async/sync Half/full duplex 50 7 HDLC, BSC/EBCDIC
DIAGNOSTICS	Self-test, status LEDs, remote line tests, local line tests	Local & remote diag., polling self-test, stat. LEDs, remote alarm, Statistics, stat. report	Local & remote diag., polling self-test, stat. LEDs, remote alarm, stat reporting, statistics	Self-test, remote line tests, local line tests, LCD diagnostic display
FEATURES Channel priority assignment Password protection Supervisory port Echoplex Autodialer supported	Yes Yes Yes — —	No Yes, dual level Yes, remote Not applicable No	No Yes, dual level Yes, local and remote Not applicable No	Yes Yes Yes Yes Yes
PRICING AND AVAILABILITY Purchase, \$	10,000+	2,500—5,000	8,000 to 10,500	5,000 to 7,500 (8 ports)
Rental, \$ month-to-month Installation, \$ Maintenance, \$ Annual Serviced by Availability Date of first comm. delivery of this model Number installed to date	— — — Vendor, 3rd party 10 to 60 days July 1985 30	— — 100 Swapping/Vendor, 3rd party 10-60 days June 1985 200	— — 150 Swapping/Vendor, 3rd party 10-60 days December 1983 300	400 By quotation 8% Vendor 30 days May 86-UK, Feb 87-US 285
COMMENTS	Multiple protocols, sync and async combined on one or two X.25 trunks; some features supported as in Protocom P250 and P2500 models  * Sync devices include all supported by Protocom P250 and P2500 models	Fully featured session layer (based on OSI architecture), dual-level network security; end-to-end data integ., data streaming, dual sessions, network mgmt, remote configuration, polling address mapping, port pooling, auto-connect, local switching, LU switching in SNA	Fully featured session layer (based on OSI architecture), dual-level network security, end-to-end data integ., data streaming, dual sessions, network mgmt., remote configuration, polling address mapping, port pooling, auto-connect, auto-reconnect, local switching, LU switching in SNA	The only comm processor on market capable of protocol conversion, protocol switching, terminal and printer sharing, and LAN (Ethernet) node connection in 1 single unit; units may be chained together transparently and any port may access any other; 5000 port system capability

### X.25 Packet Assemblers/Disassemblers (PADs)

MANUFACTURER & MODEL	Tymnet/McDonnell Douglas Micro 3	Tymnet/McDonnell Douglas Micro 4	Western Digital WD4025A and FLEX.25	
NETWORK CERTIFICATION	Tymnet	Tymnet	Telenet, Iberpac	
CCITT RECOMMENDATION SUPPORTED	All supported	All supported	All supported	
BUFFER MEMORY CAPACITY ADDITIONAL RAM AVAILABLE DEVICE CONFIGURATIONS	1M No Host concentrator, terminal concentrator	1M No Host concentrator, terminal concentrator, switcher	64K No Host concentrator	
INPUT SPECIFICATIONS				
Number and type of devices supported	16 async, 8 sync	4 async, 10 sync	—	
Connections supported	Direct, access via dial-up modem, leased	Direct, access via dial-up modem, leased	Direct, access via dial-up modem, leased	
Maximum input rate per port, in bps Maximum aggregate input rate, in bps Synchronization	— 100K Asynchronous	— 80K Async/sync	64K — Synchronous	
Transmission mode Interface	Half/full duplex RS-232-C, V.24	Half/full duplex RS-232-C, V.24	Full duplex RS-232-C	
Autospeed/autoparity available Channel config. data downline loadable Ports config. for perm./switched circ.	No Yes Yes, both	No Yes Yes, both	— No Switched only	
NETWORK CHANNEL SPECIFICATIONS				
Number X.25 channels supported Interface	8 RS-232-C, V.24	7 RS-232-C, V.24	1 RS-232-C	
Maximum transmission rate, in bps Synchronization Transmission mode Number virtual circuits supported Max. window size supported, in frames Link-level framing supported	1000K Async/sync Half/full duplex — 7 BSC/EBCDIC, BSC/ASCII	80K Synchronous Half/full duplex — 7 BSC/EBCDIC, BSC/ASCII, HDLC	— Synchronous Full duplex 64 7 HDLC	
DIAGNOSTICS	Status LEDs, remote line tests, local line tests	Status LEDs, remote line tests, local line tests	Self-test, local line tests	
FEATURES				
Channel priority assignment Password protection Supervisory port Echoplex Autodialer supported	No Yes Yes — Yes	No Yes Yes — Yes	No No No No No	
PRICING AND AVAILABILITY				
Purchase, \$	Contact vendor	Contact vendor	649	
Rental, \$ month-to-month Installation, \$ Maintenance, \$ Annual	— — —	— — —	Not applicable Not applicable Not applicable	
Serviced by Availability Date of first comm. delivery of this model Number installed to date	McDonnell Douglas 45 1983 Over 1,000	McDonnell Douglas 45 1987 Over 100	— — 1986 —	
COMMENTS	Battery backup	Battery backup, supports bit and byte oriented protocols concurrently	WD4025A is a board for IBM PCs and compatibles; comes with FLEX.25 software for X.25 systems designers and OEMs; can be programmed for host or terminal applications	



### Conversion Systems/Terminal Controllers

MANUFACTURER & MODEL	Agile 6287/6287S	Agile LC36	Altext, Inc. Altext I/Altext II	Avatar Technologies PA1000E
DEVICE TYPE	Protocol converter	Protocol converter	Disk conversion system	Protocol converter
CONVERSION PERFORMED	Async ASCII to IBM 3270 coax	ASCII to Burroughs Poll/Select	Direct exchange of text, codes, commands between incompat. word proc., compu., typeset Not applicable	ASCII to BSC or SNA/SDLC
SPECIFIC DEVICE EMULATED	IBM 3287	—	—	IBM 3278-2 terminal
SPECIFIC FUNCTIONALITY PROVIDED	ASCII printer/plotter to IBM 3274/3276	—	Disk to disk, disk to comm, comm to disk, comm to comm	Async ASCII terminals, personal computers to IBM 3278 Model 25
VIRTUAL SCREEN SIZES SUPP., in char.	—	—	Not applicable	1920
COMMAND PORT SUPPORTED	—	—	No	No
HOST SIDE SPECIFICATIONS				
Specific hosts supported	IBM mainframe	Burroughs Poll/Select	Contact vendor	IBM mnfrms., async hosts such as DEC, DG, Wang
Number and type of host lines supported	—	One Poll Select	One input/one output async or BSC	1 IBM Type A coax 1 RS-232-C for async host 2 (switch sel.)
Number host sessions supported concurrently	—	—	One	—
Connections supported	—	TDI and synchronous modem	Direct, dial up	Direct, point-to-point via modem
Connection to host via controller	IBM 3274, 3276	—	IBM 37XX	IBM 3274/76
TRANSMISSION SPEC. (Host Line)				
Maximum transmission, in bps	—	—	19.2K	To 9600
Synchronization	—	—	Async/sync	Async/sync
Transmission mode	—	—	Half/full duplex	—
Protocols supported	BSC, SNA/SDLC/SCS	Poll Select	BSC	BSC, SNA/SDLC or async
Codes supported	—	—	ASCII, EBCDIC, TTS*	—
Interface	IBM Type A coax	TDI	5 RS-232-C	RS-232-C; 3270 coax
Clocking	Internal	Internal	Internal or external	—
TERMINAL SIDE SPECIFICATIONS				
Number and type of ports provided	RS-232-C Serial and Centronics parallel	One asynchronous	One asynchronous	1 term. port, 1 aux. port
Devices supported	Virtually any printer or plotter	Virtually any async ASCII device with RS-232-C	All serial printers	Any asynchronous device
Connections supported	Direct	Direct, dial-up	Direct connection	Direct, dial-up
TRANSMISSION SPEC. (Terminal Line)				
Maximum transmission, in bps	19.2K	19.2K	19.2K	300 to 9600
Maximum aggregate input rate, in bps	—	—	19.2K	—
Synchronization	Asynchronous	Asynchronous	Asynchronous	Asynchronous
Transmission mode	Half duplex	Half duplex	Full duplex	—
Protocols supported	IBM coax	Poll Select	TTY	X-on/X-off, ETX/ACK
Codes supported	EBCDIC, DSC, SDS	—	ASCII	ASCII
Interfaces supported	RS-232-C, Centronics parallel	RS-232-C	RS-232-C	RS-232-C
DIAGNOSTICS	Self-tests, LEDs	Self-tests, LEDs	Comm line ASCII or HEX monitoring	Self-tests
PRICING AND AVAILABILITY				
Purchase, \$	1,595/1,395	995	12,000	1,095
Rental, \$/month-to-month	None	None	—	—
Installation, \$	None	None	—	—
Maintenance, \$ Annual	—	—	—	—
Serviced by	Factory	Factory	Vendor	Vendor
Availability	21 days	21 days	—	30 days
Date of first comm. delivery of this model	October 1984	1979	Info. not available	February 1984
Number installed to date	300/300	1250	—	—
COMMENTS	Allows any ASCII printer or plotter to attach to IBM 3274/3276 controller as LU1, LU3 type A coax device. 2 year warranty 6287 has 3287-style front panel	Allows any RS-232-C device to interface with Burroughs Poll Select protocol either locally (TDI) or remote (sync)	*Supports any code set	Allows one connected ASCII term. to emulate IBM 3278 and access IBM mainframe or asynchronous minicomputer, public information network, or timesharing service

Conversion Systems/Terminal Controllers

MANUFACTURER & MODEL	Avatar Technologies PA1500	Avatar Technologies PA100	Avatar Technologies RPA2000	Avatar Technologies MPA6000
DEVICE TYPE	Protocol converter	Protocol converter	Protocol converter	Multi-port protocol converter
CONVERSION PERFORMED	ASCII to BSC, SNA LU1 and LU3	ASCII to BSC, SNA/SDLC	EBCDIC to ASCII	EBCDIC to ASCII/Sperry Uniscope
SPECIFIC DEVICE EMULATED	IBM 3287	IBM 3278-2	VT100, VTS2	IBM 3274, 5251-12, 5294, UTS4020
SPECIFIC FUNCTIONALITY PROVIDED	Async ASCII printers, to IBM 3287	Any ASCII terminal, personal computer to IBM 3278-2	IBM 3278/3279 to VT100	ASCII to 3278-2, 3287, 5251, 5256, UTS20, Sperry printer
VIRTUAL SCREEN SIZES SUPP., in char.	960—3564 char. buffer	1920	1920	1920
COMMAND PORT SUPPORTED	No	No	No	Yes
HOST SIDE SPECIFICATIONS				
Specific hosts supported	IBM mainframes	IBM mainframes, async hosts, e.g., DEC, Wang	IBM 3270	IBM 3270, 3X, Sperry, ASCII passthrough
Number and type of host lines supported	1 IBM Type A coax	—	1	2, expandable to 4
Number host sessions supported concurrently	1	2	—	2
Connections supported	Direct	Direct	Direct, dial-up	Direct, dial-up
Connection to host via controller	IBM 3274/76	IBM 3274/3276	IBM 3274, 3276	3705
TRANSMISSION SPEC. (Host Line)				
Maximum transmission, in bps	To 9600	To 9600	19.2K	19.2K
Synchronization	Synchronous	Async/sync	Asynchronous	Synchronous
Transmission mode	—	—	Full duplex	Full duplex
Protocols supported	BSC, SNA/SDLC	BSC, SNA/SDLC, async	Asynchronous	BSC, SNA/SDLC, Uniscope
Codes supported	—	ASCII, EBCDIC	ASCII	EBCDIC, Sperry
Interface	Type A coax	RS-232-C, 3270 coax	RS-232-C	RS-232-C
Clocking	—	—	Internal, external	Internal, external
TERMINAL SIDE SPECIFICATIONS				
Number and type of ports provided	1 async ASCII printer	1 terminal port	1	Up to 28 ASCII devices
Devices supported	Dot mtrx., In., Itr-qual prts. from Dataproducts, NEC, Centronics, Xerox	IBM PC, any ASCII device	3278-2, 3279-2	Any ASCII device
Connections supported	Direct	Plug-in board	Direct	Direct, dial-up
TRANSMISSION SPEC. (Terminal Line)				
Maximum transmission, in bps	—	300 to 9600	19.2K	19.2K
Maximum aggregate input rate, in bps	—	9600	—	—
Synchronization	—	Asynchronous	Synchronous	Asynchronous
Transmission mode	—	—	Full duplex	Full duplex
Protocols supported	—	—	—	—
Codes supported	ASCII	ASCII	EBCDIC	ASCII
Interfaces supported	RS-232-C or parallel	RS-232-C	—	RS-232-C
DIAGNOSTICS	—	Self-tests	Self-test	Self-test
PRICING AND AVAILABILITY				
Purchase, \$	1,495	895	695	4,500 (base)
Rental, \$/month-to-month	—	—	—	—
Installation, \$	—	—	—	—
Maintenance, \$ Annual	—	—	—	—
Serviced by	Vendor	Vendor	Vendor	Factory
Availability	30 days	Contact vendor	—	—
Date of first comm. delivery of this model	March 1984	—	March 1985	November 1985
Number installed to date	Info. not available	Info. not available	Info. not available	Info. not available
COMMENTS	Supports Transparent mode operation for specialized host applications incl. graphics, bar-code generation, alternate characters		Allows IBM 3270-type terminals to use phone lines to access public databases, LANs, mini-computers, and remote IBM hosts without the need of local controllers.	

### Conversion Systems/Terminal Controllers

MANUFACTURER & MODEL	Avatar Technologies PA3500	Black Box Corp. C/A-1, C/A-2	Black Box Corp. A/S-2E	Black Box Corp. A/S-3
DEVICE TYPE	Protocol converter	Protocol converter	Protocol converter	Protocol converter
CONVERSION PERFORMED	EBCDIC to ASCII	3270 to async	BSC RJE protocols to/ from async ASCII	ASCII to BSC 3270 or SNA 3270
SPECIFIC DEVICE EMULATED	IBM 5291, 5224, 5225, 5256 printers	327X emulates a VT100 or ADM-3	IBM 2770, 2780, 3780, 3741	IBM 3275 model 51C
SPECIFIC FUNCTIONALITY PROVIDED	System/3X to ASCII printer	IBM 327X CRTs switch between IBM control unit or async host	BSC RJE protocols to/ from async ASCII	Async ASCII CRT to IBM 3278 models 2, 3, 4, 5
VIRTUAL SCREEN SIZES SUPP., in char.	Not applicable	1920	—	1920
COMMAND PORT SUPPORTED	No	Menu driven	No	Yes
HOST SIDE SPECIFICATIONS				
Specific hosts supported	IBM System 34/36/38	DEC, IBM, HP, DG, Prime, TI	IBM	IBM 360, 370, 43XX, 30XX, 8100
Number and type of host lines supported	One	1 IBM	1	—
Number host sessions supported concurrently	One	1	1	12
Connections supported	Direct	Direct, dial-up	Direct, dial-up	Direct, point-to-point, multipoint
Connection to host via controller	5251-11, 5294 direct to 3X	IBM 3274/3276 Type A coax	—	All IBM and compatibles
TRANSMISSION SPEC. (Host Line)				
Maximum transmission, in bps	1M	Not applicable	9600	19.2K
Synchronization	Synchronous	Async/sync	Synchronous	Synchronous
Transmission mode	Full duplex	Full duplex	Half/full duplex	Half duplex
Protocols supported	BSC, SNA/SDLC	Asynchronous, coax	BSC	BSC, SNA/SDLC
Codes supported	ASCII, EBCDIC	ASCII, EBCDIC	EBCDIC	ASCII, EBCDIC
Interface	Twinax	RS-232-C, 2 Type A coax	RS-232-C	2 RS-232-C
Clocking	—	External	Internal, external	Internal, external
TERMINAL SIDE SPECIFICATIONS				
Number and type of ports provided	One ASCII printer port	1 (C/A-1); 1 term. & 1 printer (C/A-2)	Asynchronous	2—12 async & 1 async command port
Devices supported	Any ASCII output device	3178, 3179, 3278, 3279	Any asynchronous TTY	A number of async ASCII devices
Connections supported	Direct	Direct	Direct, dial-up	Direct, dial-up
TRANSMISSION SPEC. (Terminal Line)				
Maximum transmission, in bps	—	Not applicable	9600	9600
Maximum aggregate input rate, in bps	17.6K/para. 9600/serial	Not applicable	—	9600/channel
Synchronization	Asynchronous	Synchronous	Asynchronous	Asynchronous
Transmission mode	Full duplex	Full duplex	Half/full duplex	Full duplex
Protocols supported	—	Coax protocol Type A	TTY	TTY
Codes supported	ASCII	EBCDIC	EBCDIC, BCD	ASCII
Interfaces supported	RS-232-C or parallel	Type A coax; 1 RS-232-C on C/A-2	RS-232-C	RS-232-C, current 100
DIAGNOSTICS	—	Self-test, status LEDs	Diagnostic menu, status LEDs	Self-test, line trace, status LEDs
PRICING AND AVAILABILITY				
Purchase, \$	1,495	695 (C/A-1); 795 (C/A-2)	1,295	1,695 (2)—4,750 (12)
Rental, \$/month-to-month	Not applicable	—	—	—
Installation, \$	Not applicable	—	—	—
Maintenance, \$ Annual	—	—	—	—
Serviced by	Vendor	Factory	Factory	Factory
Availability	30 days	Stock	Stock	Stock
Date of first comm. delivery of this model	1986	Oct. 1985/Jan. 1986	October 1984	February 1984
Number installed to date	Info. not available	100+	1000+	Info. not available
COMMENTS	Allows connection of low-cost, high-perfor- mance ASCII printers to the IBM System 3X	One-year warranty at no extra cost. The C/A-2 has an async printer port.	Baud rates selected independently for each port; selectable, built-in modem elimina- tors	Options include dual sync host, async host; integral modems, current loop, ASCII BSC, large- screen support, IBM PC support. Other capabili- ties—inbound priority, automatic log-on, banner/broadcast mes- sages, draft document prep. and security

Conversion Systems/Terminal Controllers

MANUFACTURER & MODEL	Black Box Corp. A/S-4	Black Box Corp. A/C-2 (RO)	Black Box Corp. A/C-2 (B)	Black Box Corp. BPS/BSA
DEVICE TYPE	Protocol converter, terminal emulator	Protocol converter	Protocol converter	Protocol converter
CONVERSION PERFORMED	ASCII to SNA/SDLC	ASCII to BAC, SNA LU1 and LU3	ASCII to BSC or SNA/SDLC	Burroughs Poll/Select to async TTY TDI
SPECIFIC DEVICE EMULATED	IBM 3274/3276; IBM 3776/3777	IBM 3287	IBM 3278-2 terminal	Not applicable
SPECIFIC FUNCTIONALITY PROVIDED	IBM 3278/3287	Async ASCII printers to IBM 3287	Async ASCII terminals, PCs to IBM 3278-2	Burroughs sync to async, Sync TDI or async to TTY async
VIRTUAL SCREEN SIZES SUPP., in char.	1920	960—3564 char. buffer	1920	1920 block size
COMMAND PORT SUPPORTED	Yes	No	No	menu-driven config.
HOST SIDE SPECIFICATIONS				
Specific hosts supported	—	IBM mainframes	IBM mainframes, async hosts incl. DEC, Wang	Any Burroughs running Poll/Select
Number and type of host lines supported	—	1 IBM Type A coax	1 IBM Type A coax, 1 RS-232-C for async	1
Number host sessions supported concurrently	2	1	2	1
Connections supported	Direct, multipoint, point-to-point	Direct	Direct, point-to-point via modem	Direct, dial-up, leased line
Connection to host via controller	Not applicable	IBM 3274/3276	IBM 3274/3276	Not applicable
TRANSMISSION SPEC. (Host Line)				
Maximum transmission, in bps	To 19.2K	To 9600	To 9600	To 19.2K
Synchronization	Sync/isoch	Synchronous	Async/sync	Async/sync
Transmission mode	Half/full duplex	—	—	Half/full duplex
Protocols supported	SNA/SDLC	BSC, SNA/SDLC	BSC, SNA/SDLC, async	Poll/Select
Codes supported	ASCII, EBCDIC	—	—	ASCII
Interface	1 RS-232-C NRZI, 1 RS-232-C	Type A coax	RS-232-C, 3270 coax	1 RS-232-C
Clocking	Int./ext., data derived	—	—	Internal, external
TERMINAL SIDE SPECIFICATIONS				
Number and type of ports provided	1 async with dynamic printer port	1 async ASCII printer	1 terminal port, 1 auxiliary port	1 RS-232-C
Devices supported	All ASCII TTY devices	Dot matrix, letter-qual. printers from Xerox, NEC, Dataproducts, Cent.	VT100, IBM 3101, LSI, ADM5, Televideo 910, ADDS Viewpoint, and PCs	Any ASCII device
Connections supported	Direct, dial-up	Direct	Direct, dial-up	Direct, dial-up
TRANSMISSION SPEC. (Terminal Line)				
Maximum transmission, in bps	To 19.2K	—	300—9600	300—19.2K
Maximum aggregate input rate, in bps	19.2K	—	—	19.2K
Synchronization	Asynchronous	—	Asynchronous	Asynchronous
Transmission mode	Half/full duplex	—	—	Half/full duplex
Protocols supported	TTY, ASCII	—	X-on/X-off, ETX/ACK	TTY, TDI
Codes supported	ASCII	ASCII	ASCII	ASCII
Interfaces supported	1 RS-232-C	RS-232-C or parallel	RS-232-C	RS-232-C, TDI
DIAGNOSTICS	RAM, EPROM, status LEDs	—	Self-test	Self-test, LEDs
PRICING AND AVAILABILITY				
Purchase, \$	Contact vendor	Contact vendor	1,095	1,269
Rental, \$/month-to-month	—	—	—	—
Installation, \$	—	—	—	—
Maintenance, \$ Annual	—	—	—	—
Serviced by	Factory	Factory	Factory	Factory
Availability	Stock	Stock	Stock	Stock
Date of first comm. delivery of this model	May 1984	March 1984	July 1984	October 1985
Number installed to date	—	500+	500+	100+
COMMENTS	Menu-driven batch and interactive	Supports transparent mode operation for specialized host appli- cations including graphics, bar-code, generation, alternate characters.	Allows one ASCII termi- nal or PC to emulate IBM 3278 and access IBM mainframe or asynchro- nous minicomputer	Allows sync, async or TDI Burroughs Poll/Sel. to be converted to async TTY; also allows sync to async or TDI Burroughs conversion



Conversion Systems/Terminal Controllers

MANUFACTURER & MODEL	Black Box Corp. BSC/SDLC	Black Box Corp. PQ5-RO	Black Box Corp. PQ5-B	Black Box Corp. PQ5-Centronics
DEVICE TYPE	Protocol conversion	Protocol converter printer interface	Bidirectional protocol converter	Protocol converter printer interface
CONVERSION PERFORMED	BSC to SDLC	Twinax ADLC to async ASCII	Async ASCII to twinax SDLC	Twinax to Centronics
SPECIFIC DEVICE EMULATED	3776/3777	IBM 5256, 5224, 5225 printers	IBM 5251, Model 11	IBM 5256, 5224, 5225 printers
SPECIFIC FUNCTIONALITY PROVIDED	3780/2780 to 3776/3777	IBM System 34/36/38, 5251 model 12 to async printer	Async terminal to 5251 Model 12 remote	IBM System 34/36/38, 5251 Model 12 to Centronics printer
VIRTUAL SCREEN SIZES SUPP., in char.	512 block size	—	—	—
COMMAND PORT SUPPORTED	No	No	No	No
HOST SIDE SPECIFICATIONS				
Specific hosts supported	Any IBM running 3770 SDLC	IBM System 34/36/38	IBM System 34/36/38	IBM System 34/36/38
Number and type of host lines supported	1	1	1	1 SDLC twinax
Number host sessions supported concurrently	1	1	1	1
Connections supported	Direct, dial-up, leased line	Direct	Direct	Direct
Connection to host via controller	3705, 3725, ICA4300, 3704	5251 Model 12	5251 Model 12	5251 Model 12
TRANSMISSION SPEC. (Host Line)				
Maximum transmission, in bps	To 19.2K	—	—	—
Synchronization	—	Synchronous	Synchronous	Synchronous
Transmission mode	Full duplex	Full duplex	Full duplex	Full duplex
Protocols supported	SNA/SDLC	SDLC	SDLC	SDLC
Codes supported	EBCDIC	EBCDIC	—	—
Interface	1 RS-232-C	Twinax	Twinax	Twinax
Clocking	Internal, external	—	—	—
TERMINAL SIDE SPECIFICATIONS				
Number and type of ports provided	1 RS-232-C	1 asynchronous	1 asynchronous	1 Centronics
Devices supported	Any using 3780/2780	Asynchronous printer	Any asynchronous device	Centronics printer
Connections supported	Direct, dial-up	Direct, dial-up	Direct, dial-up	Direct
TRANSMISSION SPEC. (Terminal Line)				
Maximum transmission, in bps	1200—19.2K	To 9600	To 9600	—
Maximum aggregate input rate, in bps	19.2K	—	—	—
Synchronization	Synchronous	Asynchronous	Asynchronous	Centronics
Transmission mode	Half/full duplex	Full duplex	Full duplex	—
Protocols supported	BSC	—	TTY	—
Codes supported	EBCDIC	ASCII	ASCII	ASCII
Interfaces supported	RS-232-C	RS-232-C	RS-232-C	Centronics
DIAGNOSTICS	LEDs	Self-test, status LEDs	Self-test, status LEDs	Self-test, status LEDs
PRICING AND AVAILABILITY				
Purchase, \$	1,625	1,395	1,395	1,495
Rental, \$/month-to-month	—	—	—	—
Installation, \$	—	—	—	—
Maintenance, \$ Annual	—	—	—	—
Serviced by	Factory	Factory	Factory	Factory
Availability	Stock	Stock	Stock	Stock
Date of first comm. delivery of this model	October 1985	July 1984	July 1984	July 1985
Number installed to date	50+	1000+	500+	100+
COMMENTS	Converts 3780/2780 RJE protocols to SNA/SDLC 3770 RJE protocol	One-year warranty at no charge with an additional year avail- able	One-year warranty at no charge with an additional year avail- able	One-year warranty at no charge with an additional year avail- able

Conversion Systems/Terminal Controllers

MANUFACTURER & MODEL	CASE Communications Blue-Gate/S-Gate	CASE Communications DCX A-Net	Commercial Data Processing 440E/440E-1/440E-PC	Computer Peripheral Systems, Inc. MARS jr.
DEVICE TYPE	Protocol converter	Reverse protocol converter	Microprocessor controller	Protocol converter
CONVERSION PERFORMED	ASCII to 3270 BSC (Blue- Gate) or SNA/SDLC (S- Gate)	3270 SNA or BSC to ASCII	ASCII tape format to async TTY RS-232-C; NCR packed HEX code to ASCII	ASCII to Burroughs Poll/Select
SPECIFIC DEVICE EMULATED	IBM 3274-1C	VT100, VT101, VT52, IBM 3101, TTY 33/35	—	General purpose
SPECIFIC FUNCTIONALITY PROVIDED	Async ASCII to 3278 Model 2 conversion	Any 3270 CRT to ASCII conversion	NCR cassette tapes to be read by micro- mini-, or mainframe	Any RS-232-C ASCII or parallel device to Burroughs Poll/Select
VIRTUAL SCREEN SIZES SUPP., in char. COMMAND PORT SUPPORTED	1920 Yes	User definable Not applicable	Not applicable —	1920 No
HOST SIDE SPECIFICATIONS Specific hosts supported	IBM 3090/308X/303X/43XX S/360-370, Amdahl, NAS	IBM 3090/308X/303X/43XX S/360-370, Amdahl, NAS	Any protocol	Any Burroughs host operating Poll/Select
Number and type of host lines supported	—	—	1 asynchronous	1 Poll/Select
Number host sessions supported concurrently	32	No limit	—	1
Connections supported	Dial-up, leased line	Leased line—point-to- point or multipoint	Direct, point-to-point, multipoint	TDI, direct connect, dial-up multidrop
Connection to host via controller	37XX, 270X	37XX	—	Uniline, CP 3680, 874, 974, CP2000
TRANSMISSION SPEC. (Host Line) Maximum transmission, in bps	9600	19.2K	1200 (212A); 9600*	38.4K
Synchronization	Synchronous	Synchronous	Asynchronous	TDI, sync/async
Transmission mode	Half (Blue)/full (S-)	Full duplex	Full duplex	Half/full duplex
Protocols supported	BSC (Blue)/SNA/SDLC (S-)	SNA/SDLC, BSC	TTY	Poll/select
Codes supported	EBCDIC, ASCII, bit-orin	EBCDIC, bit-oriented	ASCII, Packed HEX	ASCII
Interface	1 RS-232-C	1 or more RS-232-C	RS-232-C	RS-232-C, Centronics, Data Products parallel
Clocking	Internal, external	Internal, external	Data derived	Internal, external
TERMINAL SIDE SPECIFICATIONS Number and type of ports provided	32	No limit	1 asynchronous	1
Devices supported	VT100, IBM 3101, ADM3A, Cifer 2605 and compati- bles	All IBM 3270 terminals	NCR 2126, 2140, 2152, 2160, 2950, 7750	General purpose
Connections supported	Direct, dial-up, or CASE DCX Network	Direct, dial-up, X.25	Direct, dial-up	Direct connect, dial-up
TRANSMISSION SPEC. (Terminal Line) Maximum transmission, in bps	9600	IBM host dependent	1200 or 9600	19.2K
Maximum aggregate input rate, in bps	307.2K	—	—	19.2K
Synchronization	Asynchronous	Synchronous	Asynchronous	Asynchronous
Transmission mode	Full duplex	Full duplex	Full duplex	Half/full duplex
Protocols supported	Relevant to terminal	Not applicable	TTY	TTY II
Codes supported	ASCII	EBCDIC, ASCII	ASCII	ASCII
Interfaces supported	RS-232-C, current loop	RS-232-C, current loop	RS-232-C, RS-423	RS-232-C, RS-422
DIAGNOSTICS	Status LEDs, data monitoring, NMS system	Status LED, data moni- tor, NMS system	Self-test, status LEDs, control panel	Self-test to terminal, status LEDs
PRICING AND AVAILABILITY Purchase, \$	5,475	27,000	3,250/1,975 (440-1 & PC)	795
Rental, \$/month-to-month	—	—	None	Not applicable
Installation, \$	650	650	—	Not applicable
Maintenance, \$ Annual	833	65	—	Not applicable
Serviced by	Vendor-on site	Vendor-on site	Unit exchange	Vendor
Availability	Now	Now	Two-four weeks	Stock
Date of first comm. delivery of this model	September 1984	October 1985	1978/1979/1983	August 1984
Number installed to date	Over 500	6	800/160/40	300+
COMMENTS	Integral protocol conversion within a multiplexed/switched network; comprehensive and flexible feeder network; four-color support on S-Gate		Unit designed to inter- face NCR cassette han- dler to most mainframes, minis, and micros; works in local environment through modem eliminator	Line speed conversion async/sync to TDI con- version; flexible para- meter change download, upload or program switches on the unit. Small package (7.5x3.5x 1.5). Hangs on device by velcro strips with 6 ft. integral connecting cable standard

Conversion Systems/Terminal Controllers

MANUFACTURER & MODEL	Control Concepts CC-3276	Control Concepts EM-3276	CTi Data Corporation CTi Series 1000	CTi Data Corporation CTi Series 4000
DEVICE TYPE	Terminal Emulator	Terminal Emulator	Terminal controller	Terminal controller remote cluster control.
CONVERSION PERFORMED	ASCII to SNA/SDLC	ASCII to SNA/SDLC	IBM EBCDIC to ASCII	ASCII or Type A coax to BSC or SNA/SDLC
SPECIFIC DEVICE EMULATED	IBM 3276-12	IBM 3276-2	IBM 2740 Model 2	IBM 3274-61C, 3274-51C
SPECIFIC FUNCTIONALITY PROVIDED	Compatible to IBM 3276-12 with 1 printer port	Compatible with IBM 3276-2 with 1 printer port	—	IBM 3178; 3278-2,3,4,5; 3179; 3180; 3268; 3287 printer
VIRTUAL SCREEN SIZES SUPP., in char.	1920	1920	1920	1920
COMMAND PORT SUPPORTED	No	No	—	Yes
HOST SIDE SPECIFICATIONS				
Specific hosts supported	Any that support 3270 SNA/SDLC	Any that support 3270 SNA/SDLC	All IBM mainframes	IBM mainframes, 37XX FEPs
Number and type of host lines supported	Any that support 3270 SNA/SDLC	Any that support 3270 SNA/SDLC	1 BSC	1 SNA/SDLC or BSC
Number host sessions supported concurrently	1	1	1	1 for each terminal
Connections supported	Multipoint, point-to- point	multipoint, point-to- point	Multipoint leased line	Leased line, multipoint, or point-to-point
Connection to host via controller	37XX	37XX	IBM 270X/37XX	IBM 37XX or equivalent
TRANSMISSION SPEC. (Host Line)				
Maximum transmission, in bps	9600	9600	1800	2400—9600
Synchronization	Synchronous	Synchronous	Asynchronous	Synchronous
Transmission mode	Full duplex	Full duplex	Half/full duplex	Half/full duplex
Protocols supported	SNA/SDLC	SNA/SDLC	IBM 2740	BSC or SNA/SDLC
Codes supported	ASCII, EBCDIC	ASCII, EBCDIC	EBCDIC	EBCDIC
Interface	1 RS-232-C	1 RS-232-C	RS-232-C	RS-232-C
Clocking	External	External	Internal	External
TERMINAL SIDE SPECIFICATIONS				
Number and type of ports provided	1 terminal port, 1 printer port	1 terminal port, 1 printer port	1	Up to 16 Type A coax incl 1 ASCII printer port
Devices supported	Any serial RS-232-C printer	Any serial RS-232-C printer	CTi 1000A; 1006 printer*	IBM 3178; 3278-2,3,4,5; 3179; 3268; 3287; 3180; 3270 PC
Connections supported	Leased line, dial-up	Leased line, dial-up	Direct, dial-up	Direct, dial-up
TRANSMISSION SPEC. (Terminal Line)				
Maximum transmission, in bps	9600	9600	9600	ASCII—9600; A coax 2.3M
Maximum aggregate input rate, in bps	9600	9600	9600	9600
Synchronization	Synchronous	Synchronous	Asynchronous	A coax or async
Transmission mode	Full duplex	Full duplex	Full duplex	Half/full duplex
Protocols supported	SNA/SDLC	BSC	X-on/X-off	A coax, ASCII
Codes supported	ASCII, EBCDIC	ASCII, EBCDIC	ASCII	A coax, ASCII
Interfaces supported	RS-232-C	RS-232-C	RS-232-C	RS-232-C, Type A coax
DIAGNOSTICS	Self tests	Self tests	—	ROM based; diskette based
PRICING AND AVAILABILITY				
Purchase, \$	2,395	2,195	2,575	4,795—6,395
Rental, \$/month-to-month	124—2 year lease	114—2 year lease	127—2 year	Not available
Installation, \$	—	—	—	User installable
Maintenance, \$ Annual	350	350	300	360
Serviced by	Vendor/factory	Vendor/factory	TRW	MDS
Availability	15 days	15 days	30 days	30 days
Date of first comm. delivery of this model	July 1982	September 1980	1981	1984
Number installed to date	—	—	1250	250
COMMENTS	Internal 2400 bps or 4800 bps sync modem opt. Composite Video Output Printer port supports serial printer as 3287 standard feature of the IBM style keyboard	Internal 2400 bps or 4800 bps sync modem opt. Composite Video Output Printer port supports serial printer as 3287 standard feature of the IBM style keyboard optional at no add'l cost	*1006 printer is 55 cps, formed character device with document insertion	Support for 3270 Type A coax terminals and printers; ASCII RS-232-C serial printer port with same functionality as 3287 LU1 or LU3; DFT support in third quarter 1986

Conversion Systems/Terminal Controllers

MANUFACTURER & MODEL	CTi Data Corporation CTi Series 5000	Datagraf, Inc. Series II+ Interactive ASCII/Burroughs Poll Select	Datagraf, Inc. Series II+ RJE (Batch) 3780 BSC/3770 SDLC	Datagraf, Inc. Series II+ Interactive 3270 BSC/Burroughs Poll Select
DEVICE TYPE	Term/PC remote cluster cont., protocol convert.	Protocol converter	Protocol converter	Protocol converter
CONVERSION PERFORMED	ASCII or A coax to BSC or SNA/SDLC	ASCII to Burroughs Poll/Select	2780 or 3780 BSC to 3770 SNA/SDLC	3270 BSC to Burroughs Poll/Select
SPECIFIC DEVICE EMULATED	IBM 3274, 7171, 3708	TD-830, MT-983, ET-1100 Burroughs terminals	IBM 3776 models 3 & 4, IBM 3777 model 3	TD-830, MT-983, ET-1100 Burroughs terminals
SPECIFIC FUNCTIONALITY PROVIDED	IBM 3XXX devices; VT100, VT220, 3101, 3161, 3163, & PC attach. cards, RS-232 emul., ser/para prnt 1920	Async ASCII CRT to Burroughs terminals and printers	Batch conversion for 2780/3780 BSC to 3770 SNA/SDLC	3271/3274 BSC to Burroughs terminals and printers
VIRTUAL SCREEN SIZES SUPP., in char.	1920	1920	Not applicable	1920
COMMAND PORT SUPPORTED	Yes	Yes (set up, diag.)	Yes (set up, diag.)	Yes (set up, diag.)
HOST SIDE SPECIFICATIONS				
Specific hosts supported	IBM mainframes, 37XX FEPs	Burroughs hosts that support poll/select	Any that support 3770 SNA/SDLC	Burroughs hosts that support poll/select
Number and type of host lines supported	1 SNA/SDLC or BSC	1	1 SDLC, three BSC	1
Number host sessions supported concurrently	1 for each terminal	1—32 async, 1 BPS	1 SDLC, one-three BSC	1 mux BSC, 1 multidrop BPS
Connections supported	Leased line, multipoint, or point-to-point	Direct, remote multi-drop	Direct, remote multipoint, point-to-point	Direct, remote multi-drop
Connection to host via controller	IBM 37XX or equivalent	All supporting Burroughs Poll/Select	IBM 37XX	All supporting Burroughs Poll/Select
TRANSMISSION SPEC. (Host Line)				
Maximum transmission, in bps	2400—9600	19.2K; 38.4K opt.	19.2K; 56K opt.	19.2K; 38.4K opt.
Synchronization	Synchronous	Async, sync, TDI	Synchronous	Async, sync, TDI
Transmission mode	Half/full duplex	Full duplex	Full duplex	Full duplex
Protocols supported	BSC or SNA/SDLC	Poll/select	BSC, SNA/SDLC	Poll/select
Codes supported	EBCDIC	ASCII	EBCDIC	ASCII
Interface	RS-232-C	RS-232-C	RS-232-C	RS-232-C
Clocking	External	Internal, external	Internal, external	Internal, external
TERMINAL SIDE SPECIFICATIONS				
Number and type of ports provided	Up to 7 A coax, ASCII, and Cent. printer port	1-32 ports; up to 2 can be parallel	1—3 BSC ports	1 BSC port
Devices supported	IBM 3178, 3278, 3101, 3161, 3163, VT100, Forte, Cent. IDEA Assoc.; compat. prntr	VT-100/220, Data Gen., Dasher, WYSE 50/75, Custom	IBM 2780/3780 BSC term. supporting card read., punch, printer	3277/78 terminals through 3271/74 controllers
Connections supported	Direct, dial-up	Direct, remote	Direct, remote	Direct, remote (via RS-232-C)
TRANSMISSION SPEC. (Terminal Line)				
Maximum transmission, in bps	ASCII—9600; A coax 2.3M	19.2K	19.2K	19.2K
Maximum aggregate input rate, in bps	9600	19.2K x no. ports	19.2K x no. ports	19.2K x no. ports
Synchronization	A coax or async	Asynchronous	Synchronous	Synchronous
Transmission mode	Half/full duplex	Full duplex	Full duplex	Full duplex
Protocols supported	A coax, ASCII, Centronic	X-on/X-off, CTS/RTS	BSC	BSC
Codes supported	A coax, ASCII	ASCII	EBCDIC	EBCDIC
Interfaces supported	RS-232-C, A coax, Cent. parallel printer ROM based	RS-232-C, Dataproducts, Centronics	RS-232-C	RS-232-C
DIAGNOSTICS		Self-tests, extended tests, status LEDs	Self-tests, extended tests, status LEDs	Self-tests, extended tests, status LEDs
PRICING AND AVAILABILITY				
Purchase, \$	3,495	2,195—8,000*	3,545—6,525*	4,750—8,600*
Rental, \$/month-to-month	Not available	Not applicable	Not applicable	Not applicable
Installation, \$	User installable	Optional; \$875/2 days	Optional; \$875/2 days	Optional; \$875/2 days
Maintenance, \$ Annual	360	960	960	960
Serviced by	MDS	Vendor; overnight replacement	Vendor; overnight replacement	Vendor; overnight replacement
Availability	30 days	30 (can improve)	30 (can improve)	30 (can improve)
Date of first comm. delivery of this model	1985	1984	Fall, 1983	Spring, 1985
Number installed to date	150	Info. not available	Info. not available	Info. not available
COMMENTS	Support for popular PC attachment cards, and popular PC type modems, a number of ASCII term. and popular IBM 3270 type terminals and printers; PC attachment through RS-232-C interface with emulation software	Features include up to 8 screen pages per CRT and support for following multipoint control procedures: specific, group, fast, broadcast select, contention.	Allows users of existing 3780 equipment (or equivalent) batch access to SNA hosts.	Allows users of 3270 BSC equipment (or equiv) interactive access to Burroughs hosts with mapping, as well as conversion.
		*Quantity discounts available	*Quantity discounts available	*Quantity discounts available

Conversion Systems/Terminal Controllers

MANUFACTURER & MODEL	Datagraf, Inc. RJE (Batch) HASP/ASCII	Datagraf, Inc. Series II+ RJE (Batch) ASCII/Honeywell GRTS	Datagraf, Inc. "Bump" Interactive ASCII/ASCII	Datagraf, Inc. Switchable Coax 3270/ASCII
DEVICE TYPE	Protocol converter	Protocol converter	Protocol converter	Protocol converter
CONVERSION PERFORMED	BSC to ASCII	ASCII to synchronous Honeywell GRTS	ASCII terminal to different ASCII host	EBCDIC to ASCII
SPECIFIC DEVICE EMULATED	Separate ASCII I/O ports	GE 115	VT100, HP-2624B, many others	VT100/220, Dasher, and others
SPECIFIC FUNCTIONALITY PROVIDED	Allows ASCII hosts to support HASP multi- leaving terminals	Allows Honeywell host supporting GRTS protocol	Allows VT100 to attach to HP hosts	IBM 3277/78 coax to RS-232-C ASCII
VIRTUAL SCREEN SIZES SUPP., in char.	Not applicable	Not applicable	1920	1920
COMMAND PORT SUPPORTED	Yes (set up, diag.)	Yes (set up, diag.)	Yes (set up, diag.)	Yes (set up, diag.)
HOST SIDE SPECIFICATIONS				
Specific hosts supported	Any ASCII hosts with prog. I/O ports	Any Honeywell host sup- porting GRTS protocol	Any host supporting HP 2624	Various ASCII hosts, e.g., DEC VAX, DGC-MV
Number and type of host lines supported	See below	3	—	—
Number host sessions supported concurrently	Up to 8 of 3 types:	3: 1 console, 1	1 async	8 async
Connections supported	inp/outp/bidirectional Direct, remote	printer, 1 reader Direct, remote	—	Direct, remote
Connection to host via controller	Not applicable	Not applicable	Not applicable	Same as vendor's termi- nal equipment
TRANSMISSION SPEC. (Host Line)				
Maximum transmission, in bps	19.2K	19.2K	19.2K	19.2K
Synchronization	Asynchronous	Synchronous	Asynchronous	Asynchronous
Transmission mode	Full duplex	Full duplex	Full duplex	Full duplex
Protocols supported	X-on/X-off, CTS/RTS	Honey GRTS	X-on/X-off, CTS/RTS	X-on/X-off, CTS/RTS
Codes supported	ASCII	ASCII	ASCII	ASCII
Interface	1-8 RS-232-C	1 RS-232-C	1 RS-232-C	8 RS-232-C
Clocking	Internal	Internal, external	Internal	Internal
TERMINAL SIDE SPECIFICATIONS				
Number and type of ports provided	1 BSC port	3; async, serial, or parallel	1 async.	16 coax type A, 8 in- put, 8 output (passtr.)
Devices supported	1 HASP multileaving term. supporting con- sole: crd rd, punch, prt	VT-100, Centronics, Dataproducts	VT-100 many others	IBM 3277 models 1, 2; IBM 3278 models 2, 3
Connections supported	Direct, remote	Direct, remote	Direct, remote	Coax direct connect
TRANSMISSION SPEC. (Terminal Line)				
Maximum transmission, in bps	19.2K	19.2K x no. ports	19.2K x no. ports	2MHz
Maximum aggregate input rate, in bps	19.2K	Asynchronous	Asynchronous	2MHz x 8 ports
Synchronization	Synchronous	Full duplex	Full duplex	Coax
Transmission mode	Full duplex	Full duplex	Full duplex	Coax
Protocols supported	HASP Multileaving BSC	X-on/X-off, CTS/RTS	X-on/X-off, CTS/RTS	Coax
Codes supported	EBCDIC	ASCII	ASCII	Coax
Interfaces supported	RS-232-C	RS-232-C, Centronics, Dataproducts	RS-232-C	Coax type A
DIAGNOSTICS	Self-tests, extended tests, status LEDs	Self-tests, Centronics, Dataproducts	Self-tests, Status LEDs, extended tests	Self-tests, extended tests, status LEDs
PRICING AND AVAILABILITY				
Purchase, \$	3,995—6,150	2,350—4,195	375—810	4,400—5,400
Rental, \$/month-to-month	Not applicable	Not applicable	Not applicable	Not applicable
Installation, \$	Optional; \$875/2 days	Optional; \$875/2 days	Optional; \$875/2 days	Optional \$875/2 days
Maintenance, \$ Annual	960	960	600	960
Serviced by	Vendor; overnight replacement	Vendor; overnight replacement	Vendor; overnight replacement	Vendor; overnight replacement
Availability	30 (can improve)	30 (can improve)	30 (can improve)	30 (can improve)
Date of first comm. delivery of this model	—	—	—	—
Number installed to date	Info. not available	Info. not available	Info. not available	Info. not available
COMMENTS	Allows ASCII hosts to utilize HASP RJE devices for I/O			Inline coax switch at terminal allows contin- uations of existing connection or conver- sion; may be converted into other multidropped protocols, e.g., Bur- roughs, Honeywell, Sperry, or twinax

### Conversion Systems/Terminal Controllers

MANUFACTURER & MODEL	Datagraf, Inc. Series II+ Satellite Compensators 3780	Datagraf, Inc. Series II+ Host-to-Host 3270 BSC/3270 SNA	Datagram Corp. DM-60B	Datagram Corp. DM-600B
DEVICE TYPE	Satellite compensator/ converter	Protocol converter	Micro cluster controller	Cluster controller/ protocol converter
CONVERSION PERFORMED	3780 to satellite to 3780	3271/24 BSC to 3274 SNA	—	Burroughs Poll Select to ASCII
SPECIFIC DEVICE EMULATED	IBM 2780/3780 BSC terminal	Remote versions of above controllers	All Burroughs terminals	All Burroughs terminals
SPECIFIC FUNCTIONALITY PROVIDED	Converts I/O from host to device to special protocol for transmission over sat.	Allows interactive file transfer between hosts. Each host sees cont. as supported controller	Cluster control of all Burroughs terminals	Cluster control of all Burroughs terminals
VIRTUAL SCREEN SIZES SUPP., in char.	Not applicable	1920	All supported	All supported
COMMAND PORT SUPPORTED	Yes (set up, diag.)	Yes (set up, diag.)	No	Yes
HOST SIDE SPECIFICATIONS				
Specific hosts supported	All supporting 3270 BSC	All supporting 3274 SNA	All Burroughs Computers from B20 through B7900	All Burroughs Computers from B20 through B7900
Number and type of host lines supported	3: 1 reader, 1 punch, 1 printer	1 SDLC	1 Host line operating sync, async, or TDI	1 Host line operating sync, async, or TDI
Number host sessions supported concurrently	3	1	1 per terminal	1 per terminal
Connections supported	Direct, remote	Direct, remote multi- point, point-to-point	Direct connection, multipoint, leased line, TDI	Direct connection, multipoint, leased line, TDI
Connection to host via controller	All supporting 3780 BSC	37X5	Any Burroughs FEP	Any Burroughs FEP
TRANSMISSION SPEC. (Host Line)				
Maximum transmission, in bps	19.2K	19.2K	19.2K	19.2K
Synchronization	Synchronous	Synchronous	Async/sync/TDI	Async/sync/TDI
Transmission mode	Half duplex	Half duplex	Full duplex	Full duplex
Protocols supported	BSC	SNA/SDLC	Poll/Select	Poll/Select
Codes supported	EBCDIC	EBCDIC	ASCII	ASCII
Interface	1 RS-232-C	1 RS-232-C	1 RS-232-C, TDI	1 RS-232-C, TDI
Clocking	Internal, external	Internal, external	Internal/external	Internal/external
TERMINAL SIDE SPECIFICATIONS				
Number and type of ports provided	1 RS-232-C	1 RS-232-C	1 Poll/Select	Up to 3 Poll/Select, up to 7 Async ASCII
Devices supported	IBM 2780/3780 BSC terminal	To host as 3271/74 BSC	All Burroughs and Burr- oughs cmpat. dvces.; any ASCII device; any Micro Direct	All Burroughs and Burr- oughs cmpat. dvces.; any ASCII device; any Micro Direct, dial-up, leased line
Connections supported	Direct, remote	Direct, remote		
TRANSMISSION SPEC. (Terminal Line)				
Maximum transmission, in bps	19.2K	19.2K	19.2K	19.2K
Maximum aggregate input rate, in bps	19.2K	19.2K	All ports @ 19.2K	All ports @ 19.2K
Synchronization	Synchronous	Synchronous	Async, sync, or TDI	Async, sync, or TDI
Transmission mode	Half duplex	Half duplex	Half/full duplex	Half/full duplex
Protocols supported	BSC	BSC	TTY, Poll/Select	TTY, Poll/Select
Codes supported	EBCDIC	EBCDIC	ASCII	ASCII
Interfaces supported	RS-232-C	RS-232-C	RS-232-C, V.24 TDI	RS-232-C, V.24 TDI
DIAGNOSTICS	Self-tests, extended tests, status LEDs	Self-tests, extended tests, status LEDs	Continual self-test, standalone diagnostic routines	Continual self-test, standalone diagnostic routines
PRICING AND AVAILABILITY				
Purchase, \$	5,320—7,490	7,175—10,500	1,295	1,795—3,495
Rental, \$/month-to-month	Not applicable	Not applicable	—	—
Installation, \$	Optional; \$875/2 days	Optional; \$875/2 days	Customer installed	Customer installed
Maintenance, \$ Annual	960	960	Contact vendor	Contact vendor
Serviced by	Vendor; overnight replacement	Vendor; overnight replacement	Factory	Factory
Availability	30 (can improve)	30 (can improve)	30 days	30 days
Date of first comm. delivery of this model	—	—	1985	1985
Number installed to date	—	—	—	100+
COMMENTS	Info. not available Two protocol converters provided, one for each side of satellite; special protocol dev. to handle delays, and use low no. of turn- arounds to increase throughput. Avail. for other protocols as well or may be converted bwt. protocols over link.	Info. not available Many other configura- tions including inter- active and RJE (batch), Honeywell interactive and RJE (batch) etc.; may mix conversion types	Device also acts as re- mote front-end process., which independently polls the terminals; enabling the user to put up to 10 devices on a single line adaptor with excellent response time	Device also acts as re- mote front-end process., which independently polls the terminals; enabling the user to put up to 18 devices on a single line adaptor with excellent response time

### Conversion Systems/Terminal Controllers

MANUFACTURER & MODEL	Datagram Corp. DM-2000B	Datagram Corp. DM2400B	Datamaxx USA Corp. Command	Datastream Networking Division, Lee Data Corp. 774
DEVICE TYPE	Cluster controller/ remote front end proc.	Data PBX for Burroughs computer systems	Multifunction remote communications cont.	Protocol converter
CONVERSION PERFORMED	Burroughs Poll/Select ASCII	Burroughs Poll/Select— ASCII	IBM BSC to Burroughs Poll/Selection, EBCDIC to ASCII	terminal emulator ASCII to EBCDIC
SPECIFIC DEVICE EMULATED	All Burroughs terminals	All Burroughs terminals	IBM 3274/76 cluster controller	IBM 3274-51C, 3271-2
SPECIFIC FUNCTIONALITY PROVIDED	Cluster control of all Burroughs terminals	Cluster controller & data PBX	Allows ASCII devices to appear as IBM 3278-2 CRT or IBM 3287-2 printer	ASCII CRT, all PCs to 3278/3277 Model 2; ASCII printer to 3287
VIRTUAL SCREEN SIZES SUPP., in char.	All supported	All supported	1920	1920
COMMAND PORT SUPPORTED	Yes	Yes	Yes	Yes
HOST SIDE SPECIFICATIONS				
Specific hosts supported	All Burroughs Computers from B20 through B7900	All Burroughs Computers from B800 through B7900	IBM BSC hosts	IBM 43XX, 360/370, 30XX, 33XX, 8100
Number and type of host lines supported	1 Host line operating sync, async, or TDI	Up to 7 sync, async, or TDI	1 BSC	All interactive
Number host sessions supported concurrently	1 per terminal	1 per terminal address per host	—	24
Connections supported	Direct connection, multipoint, leased line, TDI	Direct connection, multipoint, leased line, TDI	Direct, dial-up	Direct, multipoint on leased line, point-to- point on dial-up
Connection to host via controller	Any Burroughs FEP	Any Burroughs FEP	Not applicable	IBM 37XX
TRANSMISSION SPEC. (Host Line)				
Maximum transmission, in bps	19.2K	19.2K	19.2K	9600
Synchronization	Async/sync/TDI	Async/sync	Synchronous	Synchronous
Transmission mode	Full duplex	Full duplex	Full duplex	Half duplex
Protocols supported	Poll/Select	Poll/Select	BSC	BSC
Codes supported	ASCII	ASCII	EBCDIC	EBCDIC
Interface	1 RS-232-C, TDI	RS-232-C (max of 7), TDI	RS-232-C	2 RS-232-C
Clocking	Internal/external	Internal/external	—	Int/ext/data derived
TERMINAL SIDE SPECIFICATIONS				
Number and type of ports provided	Up to 18 Poll/Select, up to 18 Async ASCII	Up to 24 Burroughs P/S, up to 24 async ASCII	From 3 to 11, plus an extension port for ATM	Up to 23 async device ports, CRT, or printer
Devices supported	All Burroughs and Burr- oughs cmpat. dvces.; any ASCII device; any Micro	All Burroughs and Burr- oughs cmpat. dvces.; any ASCII device; any Micro	Burroughs TT102 and MT355, TRW MCI cl. con, ASCII CRT/printer, ATM	Over 200
Connections supported	Direct, dial-up, leased line	Direct, dial, leased line	Direct	Direct, dial-up
TRANSMISSION SPEC. (Terminal Line)				
Maximum transmission, in bps	19.2K	19.2K	19.2K	9600
Maximum aggregate input rate, in bps	All ports @ 19.2K	All ports @ 19.2K	—	9600 per line
Synchronization	Async, sync, or TDI	Async/sync	Async/sync	Asynchronous
Transmission mode	Half/full duplex	Half/full duplex	Full duplex	Full duplex
Protocols supported	TTY, Poll/Select	TTY, Poll/Select	Async, Burroughs P/S	TTY II
Codes supported	ASCII	ASCII	ASCII, TDI	ASCII
Interfaces supported	RS-232-C, V.24 TDI	RS-232-C, TDI	RS-232-C, current loop, Centronics, TDI	RS-232-C
DIAGNOSTICS	Continual self-test, standalone diagnostic routines	Continual self-test, standalone diagnostic routines	Status LEDs, link/port monitoring	Self-tests
PRICING AND AVAILABILITY				
Purchase, \$	8,500—20,200	16,000-30,000	Contact vendor	Contact vendor
Rental, \$/month-to-month	—	—	Contact vendor	—
Installation, \$	1,500	—	Contact vendor	—
Maintenance, \$ Annual	Contact vendor	Contact vendor	Contact vendor	—
Serviced by	Factory	Factory, third party	Vendor	Vendor, Dow Jones
Availability	30 days	30	Contact vendor*	30 days
Date of first comm. delivery of this model	1979	1983	Spring 1984	1980
Number installed to date	500+	100+	Info. not available	3000
COMMENTS	Device also acts as re- mote front-end process., which independently polls the terminals; enabling the user to put up to 126 devices on a single line adaptor with excellent response time	Device also acts as re- mote front-end process., which independently polls the terminals; enables a Burr. user to put up to 126 devices on a single line adaptor with excellent response time	Host-independent pro- cessor operates in a remote location; pro- vides protocol and code conversion, remote line concentration, control unit emulation.  *Units can be custom- developed	Security software for dial-in access; inactivity monitor; multiple hosts; paper display

### Conversion Systems/Terminal Controllers

MANUFACTURER & MODEL	Datastream Networking Division, Lee Data Corp. 874	Datastream Networking Division, Lee Data Corp. Series 8000	Davox Series 1000/2000	Davox Series 5000 Controller
DEVICE TYPE	Protocol converter terminal emulator	Protocol converter	Terminal emulator	Terminal emulator
CONVERSION PERFORMED	ASCII to EBCDIC	ASCII to 3270 EBCDIC	—	—
SPECIFIC DEVICE EMULATED	IBM 3274-51C	IBM 3274 61C/41C	IBM 3274 models 21C, 31C, 41C, 51C, 61C	IBM 3274 models 21C, 31C, 41C, 51C, 61C
SPECIFIC FUNCTIONALITY PROVIDED	Async ASCII CRT, all PCs to 3278 model 2,3,4,5 ASCII printer to 3287	ASCII & PC to 3278 mds. 2-5; IBM PC to IBM 3270 PC file trans.; serial ASCII print. to 3287	IBM 3278 model 2, 3178; IBM PC ASCII/TTY, DEC VT52/VT100	IBM 3278 model 2, 3178; IBM PC ASCII/TTY, DEC VT52/VT100
VIRTUAL SCREEN SIZES SUPP., in char.	1920, 2880, 3440, 3554	1920/2880/3440/3564	1920	1920
COMMAND PORT SUPPORTED	Yes	Yes	—	—
HOST SIDE SPECIFICATIONS	IBM 43XX, 360/370, 30XX, 33XX, 8100	All IBM hosts	IBM 303X, 43XX, 370X, 8100; DEC PDP 11, VAX 1 SDLC, 1 BSC	IBM 303X, 43XX, 370X, 8100; DEC PDP 11, VAX 1 SDLC, 1 BSC
Number and type of host lines supported	All interactive	—	—	—
Number host sessions supported concurrently	44	88 sessions; any mix of BSC and SNA from ASCII	1	2
Connections supported	Direct, multipoint on leased line, point-to- point on dial-up	Direct, multipoint on leased line, point-to- point on dial up	Point-to-point on dial- up, multipoint on leased line	Point-to-point on dial- up, multipoint on leased line
Connection to host via controller	IBM 37XX	270X, 37XX	Davox 1000 controller	Davox 2000/3200 controllers
TRANSMISSION SPEC. (Host Line)	19.2K	19.2K	56K sync; 19.2K async	56K sync; 19.2K async
Maximum transmission, in bps	Synchronous	Synchronous	Async/sync	Async/sync
Synchronization	Half duplex	Half duplex	Half/full duplex	Half/full duplex
Transmission mode	SNA/SDLC	BSC, SNA/SDLC	BSC, SNA/SDLC	BSC, SNA/SDLC
Protocols supported	EBCDIC	EBCDIC	ASCII, EBCDIC	ASCII, EBCDIC
Codes supported	2 RS-232-C	RS-232-C	1 RS-232-C	2 RS-232-C
Interface	Int/ext/data derived	Int./ext., data derived	External	External
Clocking	Up to 15 async device ports, CRT or printer	Up to 32 ports; any mix of terminals & printers	8 sync, up to 32 sync w/ expansion controllers	8 sync, up to 32 sync w/ expansion controllers
TERMINAL SIDE SPECIFICATIONS	Over 200	150+	Davox workstations, IBM PC, any serial interface	Davox workstations, IBM PC, any serial interface
Number and type of ports provided	Direct, dial-up	Direct, dial-up, switched	printer Dial-up	printer Dial-up
Devices supported	19.2K	19.2K	400K bps	400K bps
Connections supported	19.2K per line	19.2K	—	—
TRANSMISSION SPEC. (Terminal Line)	Asynchronous	Asynchronous	Async/sync	Async/sync
Maximum transmission, in bps	Full duplex	Half duplex	Half/full duplex	Half/full duplex
Maximum aggregate input rate, in bps	TTY II	TTY II	BSC, SNA/SDLC, TTY	BSC, SNA/SDLC, TTY
Synchronization	ASCII	ASCII	ASCII, EBCDIC	ASCII, EBCDIC
Transmission mode	RS-232-C	RS-232-C	RS-232-C	RS-232-C
Protocols supported	Self-tests	Self-test, LEDs, online screen monitor	Self-test, status LEDs, built-in line monitors	Self-test, status LEDs, built-in line monitors
Codes supported	—	—	—	—
Interfaces supported	—	—	—	—
DIAGNOSTICS	Vendor, Dow Jones	Lee Data	402 (on-site); 268 (repl Factory, third party)	402(on-site); 268(repla) Factory, third party
PRICING AND AVAILABILITY	30 days	30 days	3,880/5,455	11,225
Purchase, \$	1982	September 1985	210 (2 yr.); 173 (3 yr.)	432 (2 yr.)
Rental, \$/month-to-month	2000	100+	—	—
Installation, \$	Security software for dial-in access; LU1,2,3 support; multiple sess; workstation/system print	Includes 10MB hard disk with Network Audi- tor software for statis- tics, broadcast message, enable/disable lines;	402 (on-site); 268 (repl Factory, third party)	402(on-site); 268(repla) Factory, third party
Maintenance, \$ Annual	SAS graphics support, color, answer back, inactivity monitor	multiple session sup- port; CRT & attached printer support; 3270/ PC file transfer; and security	—	—
Serviced by	—	—	—	—
Availability	—	—	—	—
Date of first comm. delivery of this model	—	—	30 days ARO	30 days ARO
Number installed to date	—	—	1982/1984	February 1985
COMMENTS	—	—	5000	1 (as of February '85)
	—	—	Operates with terminals on coax or twisted pair; PC sharing among all terminals in config.;	Operates with terminals on coax or twisted pair; PC sharing among all terminals in config.;
	—	—	modular upgradeability;	modular upgradeability;
	—	—	coax eliminator & reduc- tion; device independ- ent—can mix terminals on same controller;	coax eliminator & reduc- tion; device independ- ent—can mix terminals on same controller;
	—	—	controller redundancy	controller redundancy;
	—	—	—	V.35 option



Conversion Systems/Terminal Controllers

MANUFACTURER & MODEL	Digital Communications Associates Protocol Processor	Diversified Data Resources Hydra II	Forest Computer Gateway/1000	Icot 351/352
DEVICE TYPE	Protocol processor	Protocol converter, controller	Multivendor gateway provides conversion & emul.	Protocol converter
CONVERSION PERFORMED	Async ASCII to IBM 3270 BSC, SNA/SDLC, or 5251 SNA	Async ASCII to 3270 BSC or SNA	ASCII/EBCDIC, EBCDIC/ASCII, async/SNA, SNA/async, async/BPS, BPS/async, BPS/SNA, SNA/BSP	ASCII to BSC/SDLC
SPECIFIC DEVICE EMULATED	IBM 3271, 3274, 3275, 3278, 3287, 5251, 5256	IBM 3277, 3278, 3279, 3274, 3211, 3286, 3272	IBM 3274, 3278	IBM 3271
SPECIFIC FUNCTIONALITY PROVIDED	Async ASCII devices or PC t IBM 327X-2 or 525X-11	ASYNC/ASCII terminal or PC to 3277, 3278, 3279; ASCII printer to 3211 or 3286	HP CRT to IBM 3270, IBM 3270 to HP CRT, Burr. TD830 to IBM 3270, IBM 3270 to Bur. TD 830, etc	ASCII terminal to 3277 models 2-5
VIRTUAL SCREEN SIZES SUPP., in char.	1920	1920	1920	1920 to 3696
COMMAND PORT SUPPORTED	Yes	Yes	Yes	Yes
HOST SIDE SPECIFICATIONS				
Specific hosts supported	IBM mainframes, and System 3X	IBM 360, 370, 4300, 303X, 308X, & compatible	IBM 370/30XX,43XX, Burr. B1XXX—B7XXX <sup>1</sup>	IBM 43XX, 30XX, 360, 370
Number and type of host lines supported	1 BSC, SNA/SDLC or System 3X	DOS, VSE, VSI, MVS, XA, SP VM ACP	—	Two BSC; one BSC, one SDLC
Number host sessions supported concurrently	3	2	500	2
Connections supported	Direct, point-to-point (dial-up), multipoint	Dir. conn., multipoint on leased line, point-to-point on dial-up line	Direct, dial-up, leased line	Direct, multipoint leased, dial-up
Connection to host via controller	IBM 3274 models 21C, 31C, 51C, or IBM 3276-12	Direct channel attach	IBM 3705, 3725, 4300 Adapter, HP, Burroughs I	IBM 270X, 37XX
TRANSMISSION SPEC. (Host Line)				
Maximum transmission, in bps	To 19.2K	1.8M byte	56K	2400 to 19.2K
Synchronization	Sync/async	Channel	Async/sync	Synchronous
Transmission mode	Half/full duplex	Half/full duplex	Half/full duplex	Full duplex
Protocols supported	BSC or SNA/SDLC	Async/BSC/SNA	HP async, SNA/SDLC, BPS	BSC, SDLC
Codes supported	EBCDIC	ASCII/EBCDIC	ASCII, EBCDIC	EBCDIC
Interface	RS-232-C	Up to 32 RS-232-C	RS-232-C, V.35, RS-422	2 RS-232-C, RS-422, 20 mA current loop
Clocking	Internal/external	Internal	Internal, external	Internal/external
TERMINAL SIDE SPECIFICATIONS				
Number and type of ports provided	Up to 64 async devices	Up to 8 , 16, 32 or 64 async ports	500	6 or 12 asynchronous
Devices supported	Virtually any async ASCII terminal	Televideo, IBM PC 3101, Lear Siegler, VT100, and others	HP262X/264X, Burr TD830/ET1100, IBM 3178/3179/3180/3277/3278/3279	Over 60 types CRTs, printers, personal computers
Connections supported	Direct, dial-up	Direct, dial-up, leased line	Direct, dial-up, leased line	Direct, dial-up
TRANSMISSION SPEC. (Terminal Line)				
Maximum transmission, in bps	300—19.2K	9600	56K	9600
Maximum aggregate input rate, in bps	—	1.8M bytes	—	—
Synchronization	Asynchronous	Asynchronous	Async/sync	Asynchronous
Transmission mode	Half/full duplex	Full duplex	Half/full duplex	Full duplex
Protocols supported	—	X-on/X-off, TTY	X-on/X-off, SNA, BPS	—
Codes supported	ASCII	ASCII/EBCDIC	ASCII, EBCDIC	ASCII
Interfaces supported	RS-232-C	RS-232-C	RS-232-C, RS-422	RS-232-C, RS-422, 20 mA current loop
DIAGNOSTICS	Status message	Self-test, status LEDs software diagnostics	Remote dial-up diagnostics	Memory, checksum, line wrap
PRICING AND AVAILABILITY				
Purchase, \$	8,950-14,950	7,900—16,900	10,000—100,000	5,800/7,600
Rental, \$/month-to-month	Contact vendor	Contact Vendor	—	Contact vendor
Installation, \$	Contact vendor	None	0	Contact vendor
Maintenance, \$ Annual	Contact vendor	12 percent	2,000—20,000	Contact vendor
Serviced by	Vendor	Vendor	Vendor-on site	Vendor on-site, depot
Availability	March 1986	30 days	Contact vendor	30 days
Date of first comm. delivery of this model	New product	September 1982	February 1985	June 1982
Number installed to date	Info. not available	1000	4	Over 150
COMMENTS	File transfer and dial back security are available	Channel attach 3211/1403 printer support; dial-up support; PC/ Host File transfer capability; remote devices appear as local, dial-back security, 3278/79	Features include programmatic access, multiple sessions as each terminal, automatic port selection <sup>1</sup> HP1000/3000	Dual, concurrent sessions supported

Conversion Systems/Terminal Controllers

MANUFACTURER & MODEL	Icot 361/362	Infotron VTS 351/VTS 352	Infotron VTS 361/VTS 362	Innovative Electronics MC-80/100
DEVICE TYPE	Protocol converter	Terminal emulator	Protocol converter/ terminal emulator	Protocol converter
CONVERSION PERFORMED	ASCII to SDLC	Async ASCII to BSC EBCDIC	ASCII to EBDCIC, Async to SDLC/SNA	BSC to Async ASCII
SPECIFIC DEVICE EMULATED	IBM 3274 model 51C	IBM 3278, 3276, 3271 models 2 and 12	IBM 3274, 3276	IBM 2780 or 3780 BSC RJE
SPECIFIC FUNCTIONALITY PROVIDED	ASCII terminal to 3278 models 2-5	Async ASCII CRT to IBM 3278	Async ASCII CRT to IBM 3274, 3276	Async ASCII terminal, printer and micro/mini computer to IBM 2780/ 3780 BSC
VIRTUAL SCREEN SIZES SUPP., in char.	1920 to 3696	560 to 3696	Up to 1920	Up to 1000 bytes*
COMMAND PORT SUPPORTED	Yes	Yes	No	No
HOST SIDE SPECIFICATIONS				
Specific hosts supported	IBM 43XX, 30XX, 360, 370	Amdahl 4705, IBM 3705, Comten 3690, Memorex1270	IBM 370X or 43XX with ICA	Not applicable
Number and type of host lines supported	2 SDLC	2 BSC or 1 SDLC and 1 BSC	—	1 BSC
Number host sessions supported concurrently	2	2	2	1
Connections supported	Direct, multipoint on leased, dial-up	Direct, multipoint, dial-up	Direct, dial-up, leased line, point-to-point	Direct connect, multi- point, point-to-point
Connection to host via controller	IBM 270X, 37XX	IBM 3275, 3271	IBM 3274, 3271 acts as controller	Not applicable
TRANSMISSION SPEC. (Host Line)				
Maximum transmission, in bps	2400 to 19.2K	19.2K	19.2K	To 19.2K
Synchronization	Synchronous	Synchronous	Synchronous	Synchronous
Transmission mode	Full duplex	Full duplex	Full duplex	Half/full duplex
Protocols supported	SNA/SDLC	BSC, SDLC, PU Type 1	SNA/SDLC	BSC
Codes supported	EBCDIC	ASCII (term.), EBCDIC	EBCDIC	EBCDIC
Interface	2 RS-232-C, RS-422, 20 mA current loop Internal/external	RS-232-C, V.24	2 RS-232-C	1 RS-232-C
Clocking		Internal/external	Internal/external	Internal/external
TERMINAL SIDE SPECIFICATIONS				
Number and type of ports provided	8 or 16 asynchronous	6 or 12 asynchronous	Up to 8 or 16 async	Up to 2 async
Devices supported	Over 60 types CRTs, printers, personal computers	Infotron 70X terminals, many ASCII terminals, prntrs., pers. computers	Any async ASCII device	Any async terminal, printer, mini/micro- computer
Connections supported	Direct, dial-up	Direct, point-to-point, multipoint	Direct, point-to-point, multipoint, dial-up	Direct connect, dial-up
TRANSMISSION SPEC. (Terminal Line)				
Maximum transmission, in bps	19.2K	50 to 19.2K	19.2K	9600
Maximum aggregate input rate, in bps	—	Not applicable	—	9600
Synchronization	Asynchronous	Synchronous	Asynchronous	Asynchronous
Transmission mode	Full duplex	Full duplex	Full duplex	Half/full duplex
Protocols supported	—	BSC, SDLC, PU Type 1	Asynchronous	Async
Codes supported	ASCII	ASCII	ASCII	ASCII
Interfaces supported	RS-232-C, RS-422, 20 mA current loop	RS-232-C	RS-232-C	RS-232-C
DIAGNOSTICS	Memory, checksum, line wrap	Self-tests, status LEDs	Self-tests, status LEDs	Self-test, loopback test, status LEDs
PRICING AND AVAILABILITY				
Purchase, \$	9,800	5,800/7,600	6,500/9,800	1,495
Rental, \$/month-to-month	Contact vendor	None	—	Not applicable
Installation, \$	Contact vendor	Contact factory	No charge	Not applicable
Maintenance, \$ Annual	Contact vendor	Contact factory	Contact factory	300
Serviced by	Vendor on-site, depot	Factory	Factory	Factory
Availability	30 days	60 days	30 days	In stock
Date of first comm. delivery of this model	November 1983	May 1984	1984	June 1981
Number installed to date	Over 30	Info. not available	Info. not available	1750
COMMENTS		Menu-guided set-up, password security, auto- matic speed detection, automatic log-on and in- activity disconnect, non-volatile EEPROM memory set-up, dial-up capabilities, multiple 16-bit microprocessors	Menu-guided set-up, password security, auto- matic speed detection, automatic log-on and in- activity disconnect, non-volatile EEPROM memory set-up, dial-up capabilities, multiple 16-bit microprocessors	Automatic record block- ing at 80 characters; auto answer capability, auto log-on; buffer ex- pandable to over 14K bytes
				*In transmission message from host

Conversion Systems/Terminal Controllers

MANUFACTURER & MODEL	Innovative Electronics MC-80/300	Innovative Electronics MC-80/400	Instrumentation Services, Inc. ISI-87	International Business Machines 7426
DEVICE TYPE	Protocol converter	Protocol converter	Protocol converter	Protocol converter
CONVERSION PERFORMED	BSC to Burroughs poll/ select	BSC TO NCR poll/select	EBCDIC to ASCII, LU Type 1 or LU Type 3 to ASCII	ASCII to 3270 SDLC
SPECIFIC DEVICE EMULATED	3271 cluster controller with 3277 terminals	3271 cluster controller with 3277 terminals	IBM 3787	IBM 3276-12
SPECIFIC FUNCTIONALITY PROVIDED	IBM 3270 BSC host to Burroughs teller ter- minals (poll/select)	IBM 3270 BSC host to NCR poll/select teller ter- minals	Allows any ASCII printer connection to 3274/3276 controller	ASCII terminals, IBM 3101, and PC running 3101 emul. appear as IBM 3278/3287 equip. 1920
VIRTUAL SCREEN SIZES SUPP., in char.	Up to 1920	Up to 1920	1920, 2560, 3440, 3564	1920
COMMAND PORT SUPPORTED	No	No	No	—
HOST SIDE SPECIFICATIONS				
Specific hosts supported	Not applicable	Not applicable	IBM mainframe through 3274/3276 controller	IBM 8100, 43XX, S/370, 30XX
Number and type of host lines supported	1 BSC	1 BSC	Not applicable	1 SNA/SDLC
Number host sessions supported concurrently	1	1	Not applicable	1
Connections supported	Direct, multipoint, point-to-point	Direct connect, multi- point, point-to-point	Not applicable	Point-to-point, multi- point on leased facil. sync. ext. modem req.
Connection to host via controller	Not applicable	NCR 751 supporting up to 13 NCR 279 tel. terms.	IBM 3274/3276 or interpad adapter	—
TRANSMISSION SPEC. (Host Line)				
Maximum transmission, in bps	To 19.2K	Up to 19.2K	75 to 9600	38.4K/dir at;9600/remote
Synchronization	Async/sync	Async/sync	Synchronous	Synchronous
Transmission mode	Half/full duplex	Half/full duplex	Half/full duplex	Half/full duplex
Protocols supported	BSC	BSC	BSC, SDLC	SNA/SDLC
Codes supported	ASCII or EBCDIC	EBCDIC or ASCII	—	EBCDIC
Interface	1 RS-232-C	1 RS-232-C	—	Directly attached loop, data-link attach. loop
Clocking	Internal/external	Internal/external avail.	Internal	—
TERMINAL SIDE SPECIFICATIONS				
Number and type of ports provided	Up to 2 async ports; TDI & mod. shar. opt. avail.	Up to 2 async	1 receive-only printer	4 ports
Devices supported	Burroughs TT 102, TT 602, MT 355 teller term.	NCR 279 teller terminals	Any ASCII printer, serial or parallel	Virtually any async ASCII devices incl. IBM PC running 3101 emul. Direct, dial-up
Connections supported	Direct, dial-up	Direct, dial-up	Direct coax RG 62	—
TRANSMISSION SPEC. (Terminal Line)				
Maximum transmission, in bps	Up to 2400	To 2400	To 9600	9600
Maximum aggregate input rate, in bps	Up to 2400	To 2400	Not applicable	—
Synchronization	Asynchronous	Asynchronous	Asynchronous	Asynchronous
Transmission mode	Half/full duplex	Half/full duplex	—	Half/full duplex
Protocols supported	Burroughs poll/select	NCR poll/select	X-on/X-off	TTY
Codes supported	ASCII	ASCII	ASCII	ASCII
Interfaces supported	RS-232-C, TDI	RS-232-C, TDI	RS-232-C or parallel	RS-232-C, RS-422-A
DIAGNOSTICS	Self-test, status LEDs, loopback test	Self-test, loopback, status LEDs	Self-test at power-up, buffer dump with log information	Self-test
PRICING AND AVAILABILITY				
Purchase, \$	2,095	2,095	1,295	4,210 (1); 3,830 (2)
Rental, \$/month-to-month	Not applicable	Not applicable	None	None
Installation, \$	Not applicable	Not applicable	None	—
Maintenance, \$ Annual	300	300	None	20/repair-cent. maint.
Serviced by	Factory	Factory	Factory	Vendor
Availability	In stock	In stock	In stock	—
Date of first comm. delivery of this model	December 1981	December 1981	June 1982	Fourth quarter, 1982
Number installed to date	750	750	3000	Info. not available
COMMENTS	Multiple MC-80 units may reside on single multi- drop line and coexist with any other 3270 com- patible equipment; multiline sharing device permits chaining of one MC-80 to other MC-80s and/or 3270 control units at any location	Compatible with CICS, VTAM, RTAM, IMS; multi- ple MC-80 units may re- side on a single multi- drop line and coexist with any 3270-compatible equipment; multiline sharing device permits chaining of one MC-80 to other MC-80s and/or 3270 cont. units at any loc.	Has transparent mode that allows control codes to be sent to printer as plain text; can be used to drive plotters such as IBM 7, 9, or 750; use with Tektronix 4510/4692 color graphics printing system	microcoded control logic into 7426 RAM; users can customize 7426 for spe- cific operating environ- ments *Model 1—direct attach or data-link loop; Model 2—SDLC comm. link

### Conversion Systems/Terminal Controllers

MANUFACTURER & MODEL	International Business Machines Machines 7171	International Business Machines Machines 3708	International Business Machines Machines 3710	KMW Systems Series II 3270 (SNA or BSC)
DEVICE TYPE	Protocol converter	Line concentrator, protocol conversion/envel.	PU Type 2 cluster controller	Protocol converter
CONVERSION PERFORMED	Async ASCII to IBM 3270	Async ASCII to IBM SNA/SDLC	Start/stop async, BSC, and SDLC to SDLC or X.25; async ASCII to 3270 through 8PCA* 3274 model 51C, 61C through 8PCA	SNA or BSC to async
SPECIFIC DEVICE EMULATED	3274 1D control unit	ASCII displays appear as 3278-2, 3178, 3279, &3179; ASCII printers as 3287-1,2		IBM 3274 or 3271
SPECIFIC FUNCTIONALITY PROVIDED	Allows asynchronous ASCII devices to emulate IBM 3270-type term., print., plotters 1920 Maintenance Facility	Allows async ASCII devices to emulate IBM 3270 full-screen displays and printers 1920	Concentrates lines from BSC, start/stop, and SDLC onto SDLC or X.25 links; asyn to IBM 3270	Async ASCII CRT to IBM 3278; async printer to IBM 3287
VIRTUAL SCREEN SIZES SUPP., in char.	1920	Yes	—	To 3564
COMMAND PORT SUPPORTED	Maintenance Facility	Yes	Yes	Yes
HOST SIDE SPECIFICATIONS				
Specific hosts supported	IBM 43XX, 308X	IBM System/370, 303X, 3090, 43XX, 8100, Sys/38 2; 1 SNA, 1 async	IBM System/370, 30XX, 43XX	IBM mainframes
Number and type of host lines supported	1	—	Up to 5 IBM SNA through 8PCA	1 BSC or SNA/SDLC
Number host sessions supported concurrently	—	—	—	8
Connections supported	Direct via block multiplexer channel	Direct	Switched, leased	Switched or dedicated, point-to-point or multi-point
Connection to host via controller	No	May be through 37X5, 3710; downstream-CBX II	3705, 3725	IBM 3705, 3725
TRANSMISSION SPEC. (Host Line)				
Maximum transmission, in bps	19.2K	19.2K	19.2K	To 19.2K (56K optional)
Synchronization	Synchronous	Async/sync	Async/sync	Synchronous
Transmission mode	Full duplex	Half/full; full on async	Half/full duplex	Half duplex
Protocols supported	SNA/SDLC	SNA/SDLC	Asynchronous thru 8PCA	SNA/SDLC, BSC
Codes supported	EBCDIC	EBCDIC	ASCII, SDLC	EBCDIC
Interface	Block mux channel	RS-232-C (async)	RS-232-C, V.35, X.21	RS-232-C; V.35, X.21 optional
Clocking	—	—	—	Internal/external
TERMINAL SIDE SPECIFICATIONS				
Number and type of ports provided	16—64	8 async	Support for up to 7 8PCAs (56 async lines)	Up to 8 asynchronous
Devices supported	Async ASCII devices	Async ASCII CRTs and printers	Async ASCII devices supported thorough 8PCA	Virtually any async ASCII CRT, printer, or personal computer
Connections supported	Direct or via null modem cable/asy line drv	Direct, point-to-point on switched/non-switched	Direct or through service modem	Direct, dial-up
TRANSMISSION SPEC. (Terminal Line)				
Maximum transmission, in bps	19.2K	19.2K	19.2K or 64K w. V.35/X.21	To 19.2K
Maximum aggregate input rate, in bps	—	—	—	—
Synchronization	Asynchronous	Asynchronous	Async/sync	Asynchronous
Transmission mode	Full duplex	Full duplex	Half/full duplex	Full duplex
Protocols supported	Asynchronous ASCII	Asynchronous ASCII	Async, SDLC, BSC	X-on/X-off, CTS
Codes supported	RS-232-C; V.24/V.28 (international)	RS-232-C, RS-422-A	ASCII, EBCDIC	ASCII
Interfaces supported	RS-232-C; V.24/V.28 (international)		RS-232-C, V.35, X.21	RS-232-C; parallel
DIAGNOSTICS	Self-test on power up, failure isolation thru IBM Prob. Determin. Proc.	Prob. determine through control term	Continuous monitoring; testing of comm. adap., cables, modem	Status LEDs, PROM/RAM checks, self-test, ASCII line test, int/ext lpb
PRICING AND AVAILABILITY				
Purchase, \$	12,420 basic unit (16)	3,750; \$750 microcode	20,300 basic unit** 110	Contact vendor
Rental, \$/month-to-month	—	—	—	Contact vendor
Installation, \$	—	Customer installation	—	Contact vendor
Maintenance, \$ Annual	229 mo.	Contact vendor	753—1,160	Contact vendor
Serviced by	IBM	IBM	IBM	Vendor; third party, depot
Availability	Now	—	—	30 days
Date of first comm. delivery of this model	September 1984	October 1985	September 1984	10/81-3270A; 11/82-3270B
Number installed to date	Info. not available	Info. not available	Info. not available	Info. not available
COMMENTS		In conversion mode, 3708 converts 3270 datastream to/from ASCII code; protocol enveloping allows connection between TWX 33/35 devices and SNA host	*8PCA is communications adapter for async ASCII devices **Prices for comm. adap. as follows: V.24—\$2,000; V.35—\$2,000; X.21—\$2,200	Device maintains separate buffer for each device; device address assigned sequentially for each port at start-up; programmable setup mode; also includes forced logoff on async disconnect; BSC model upgradable to SNA/SDLC

Conversion Systems/Terminal Controllers

MANUFACTURER & MODEL	KMW Systems Series II 2780/3780	KMW Systems Series II 3770 SNA/SDLC	KMW Systems Series II HASP	KMW Systems Twinax*
DEVICE TYPE	Protocol converter	Protocol converter	Protocol converter	Protocol converter
CONVERSION PERFORMED	BSC to asynchronous	SNA/SDLC to async	BSC to async	IBM System 34/36/38 to async
SPECIFIC DEVICE EMULATED	IBM 2780, 3780 RJE's	IBM 3776 Models 3 and 4; IBM 3777 Model 3	IBM 360 model 20 HASP RJE workstation	IBM 5251 Model 11 CRT or IBM 522X/5256 printer
SPECIFIC FUNCTIONALITY PROVIDED	Async ASCII or EBCDIC peripherals to IBM 2780, 3780 card reader, card punch, or printer	Async ASCII peripherals appear as 3770 batch SNA workstation	Async ASCII peripherals appear as HASP workstation	Async ASCII CRT to IBM 5251 or 522X/5256
VIRTUAL SCREEN SIZES SUPP., in char.	—	—	—	1920
COMMAND PORT SUPPORTED	Yes	Yes	Yes	Yes
HOST SIDE SPECIFICATIONS				
Specific hosts supported	Any IBM 2780 or 3780 compatible device	IBM mainframes	IBM mainframes, System 34/36/38, CDC mainframes	IBM system 34/36/38
Number and type of host lines supported	1 BSC	1 SNA/SDLC	1 BSC	1 twinax
Number host sessions supported concurrently	1	8	1 session with up to 8 devices	7
Connections supported	Switched or dedicated, point-to-point or multi-point	Switched or dedicated, point-to-point or multi-point	Switched or dedicated	Direct connection
Connection to host via controller	IBM 37XX or direct to 2780/3780 device	IBM 3705, 3725	IBM 3705, 3725	Direct twinax to IBM System 34/36/38
TRANSMISSION SPEC. (Host Line)				
Maximum transmission, in bps	To 19.2K	To 19.2K (56K opt.)	To 19.2K (56K opt.)	1MHz
Synchronization	Synchronous	Synchronous	Synchronous	—
Transmission mode	Half/full duplex	Half/full duplex	Half/full duplex	—
Protocols supported	BSC	SNA/SDLC	BSC	5251 Model 11, 522X/5256
Codes supported	EBCDIC	EBCDIC	EBCDIC	EBCDIC
Interface	RS-232-C; V.35, X.21 optional	RS-232-C; V.35, X.21 optional	RS-232-C; V.35, X.21 optional	1 twinax I/F with 1 cable-through
Clocking	Internal/external	Internal/external	Internal/external	—
TERMINAL SIDE SPECIFICATIONS				
Number and type of ports provided	Up to 8	Up to 8 async	Up to 8 async	Up to 7 async
Devices supported	Virtually any ASCII or EBCDIC peripheral device	Virtually any ASCII or EBCDIC peripheral device in serial or parallel	Virtually any ASCII or EBCDIC peripheral device in serial or parallel	RS-232-C or parallel Virtually any CRT, PC, or printer
Connections supported	Direct, dial up	Direct, dial-up	Direct, dial-up	Direct, dial-up
TRANSMISSION SPEC. (Terminal Line)				
Maximum transmission, in bps	To 19.2K	To 19.2K	To 19.2K	To 19.2K
Maximum aggregate input rate, in bps	—	—	—	—
Synchronization	Asynchronous	Asynchronous	Asynchronous	Asynchronous
Transmission mode	Half/full duplex	Half/full duplex	Half/full duplex	Half/full duplex
Protocols supported	X-on/X-off, CTS, prompt	X-on/X-off, CTS, Prompt	X-on/X-off, CTS, Prompt	X-on/X-off, CTS
Codes supported	ASCII, EBCDIC	ASCII, EBCDIC	ASCII, EBCDIC	ASCII
Interfaces supported	RS-232-C, parallel	RS-232-C, parallel	RS-232-C, parallel	RS-232-C, parallel
DIAGNOSTICS	Status LEDs, PROM/RAM checks, self-test, ASCII line test, int/ext lpb	Status LEDs, self tests, internal loopback, ASCII line tests, int/ext lpb	Status LEDs, self tests, internal loopback, ASCII line tests, int/ext lpb	Status LEDs, self-tests, ASCII line tests
PRICING AND AVAILABILITY				
Purchase, \$	Contact vendor	Contact vendor	Contact vendor	Contact vendor
Rental, \$/month-to-month	Contact vendor	Contact vendor	Contact vendor	Contact vendor
Installation, \$	Contact vendor	Contact vendor	Contact vendor	Contact vendor
Maintenance, \$ Annual	Contact vendor	Contact vendor	Contact vendor	Contact vendor
Serviced by	Vendor, third party, depot	Vendor, third party, depot	Vendor, third party depot	Vendor, third party depot
Availability	30 days	30 days	30 days	30 days
Date of first comm. delivery of this model	October 1981	October 1981	October 1981	1985
Number installed to date	Info. not available	Info. not available	Info. not available	Info. not available
COMMENTS	Optional modem eliminator configuration for local attachment; automatic sign-on; programmable setup mode; UL, FCC & CSA conform	Optional modem eliminator config. for local attachment; conforms to PU2, LU1; programmable setup mode; automatic sign-on; UL, FCC, & CSA conformance	Optional modem eliminator config. for local attachment; setup mode through console port; automatic sign-on; UL, FCC, and CSA conformance	Full 5251 attribute support including color, 25th status line, IBM or Wang PC file transfer; optional forced log off; and transparent passthrough
				*Multiport (up to 7) and single port models available

Conversion Systems/Terminal Controllers

MANUFACTURER & MODEL	KMW Systems Series II 3287/Coax	Local Data, Inc. DataLynx/3274* (SNA or BSC)	Local Data, Inc. DataLynx/5251	Local Data, Inc. InterLynx/3278
DEVICE TYPE	Protocol converter	Protocol converter	Protocol converter	Protocol converter
CONVERSION PERFORMED	Async ASCII to 3287 Coax	Async ASCII to SNA/SDLC or BSC	Async to SNA/SDLC, ASCII to EBCDIC	IBM Type A coax to ASCII
SPECIFIC DEVICE EMULATED	IBM 3287 printer	IBM 3274-51C	IBM 5251 Model 12	IBM 3278-2
SPECIFIC FUNCTIONALITY PROVIDED	Async ASCII output devices to IBM 3287	Async ASCII PC/CRT/mini/micro to IBM 3278/1-5, ASCII printer to IBM 3287	Async ASCII PC, CRT, printer to IBM 5251 model 12, 5256, 522X	Allows async ASCII CRT/mini/micro to emulate IBM 3278-2 on IBM control unit
VIRTUAL SCREEN SIZES SUPP., in char.	—	960/1920/2560/3440/3564	1920	1920
COMMAND PORT SUPPORTED	No	No	Yes	No
HOST SIDE SPECIFICATIONS				
Specific hosts supported	IBM mainframes	3704, 3705, 3725 or any oth. 3270 front end proc	IBM Systems 34/36/38	Cncts. to any IBM cntrl. unit w/Type A coax
Number and type of host lines supported	1 Type A coax	1 SDLC, 1 BSC, 2 SDLC, or 2 BSC	1	1 coax line
Number host sessions supported concurrently	1	1 SDLC, 1 BSC, 2 SDLC, or 2 BSC	9	1
Connections supported	Direct connection	Direct connect, multi-point, point-to-point	Direct, dial-up	Coax
Connection to host via controller	Direct coax to IBM 3274	IBM 370X, 270X	System 34/36/38 comm. port	IBM 3274, 3276, 4701
TRANSMISSION SPEC. (Host Line)				
Maximum transmission, in bps	2.35MHz	19.2K	19.2K	2.5M
Synchronization	—	Synchronous	Synchronous	Synchronous
Transmission mode	—	Full duplex	Half/full duplex	Full duplex
Protocols supported	3287 Coax	SNA/SDLC or BSC	SNA/SDLC	BSC, SNA/SDLC
Codes supported	EBCDIC	EBCDIC (BSC-ASCII)	EBCDIC	EBCDIC
Interface	1 3287 Coax	RS-232-C, Current loop	10 RS-232-C, 1 or 2 may be sync, balanced async	RG62A/U coax
Clocking	—	Internal/external	Internal/external	—
TERMINAL SIDE SPECIFICATIONS				
Number and type of ports provided	1 RS-232-C	Up to 9 async ports, 32 logic. unit addresses	10 ports, up to 2 sync, up to 9 async	1 main RS-232-C port; 1 pass-thru RS-232-C prt
Devices supported	Virtually any async serial or parallel output device	Virtually any async ASCII device	Any async ASCII printer, CRT, or PC	Virtually any
Connections supported	Direct, dial-up	Direct, dial-up	Direct, dial-up	Direct, dial-up
TRANSMISSION SPEC. (Terminal Line)				
Maximum transmission, in bps	To 19.2K	19.2K	19.2K	19.2K
Maximum aggregate input rate, in bps	—	—	19.2K	19.2K
Synchronization	Asynchronous	Asynchronous	Asynchronous	Asynchronous
Transmission mode	Half duplex	Full duplex	Full duplex	Full duplex
Protocols supported	X-on/X-off, CTS	Asynchronous	SNA/SDLC	Asynchronous display
Codes supported	ASCII	ASCII	ASCII	ASCII
Interfaces supported	RS-232-C, parallel	RS-232-C, current loop	RS-232-C	RS-232-C
DIAGNOSTICS	Status LEDs, self tests, ASCII line tests	Multi-task. watchdog timer, front-panel LEDs, SNA REQMS, line monitor	Self-test on power up, front-panel LED	Self-test at power up, front-panel LEDs
PRICING AND AVAILABILITY				
Purchase, \$	Contact vendor	2,300—6,000	3,000—4,500	995—1,395
Rental, \$/month-to-month	Contact vendor	Leasing available	Leasing available	Leasing available
Installation, \$	Contact vendor	—	—	—
Maintenance, \$ Annual	Contact vendor	400—600	400—600	175
Serviced by	Vendor, third party depot	Vendor/R&R advance exch.	Vendor factory	Ret. to fac./adv. exch.
Availability	30 days	Stock to 60 days	Stock to 60 days	Stock to 60 days
Date of first comm. delivery of this model	1984	December 1982	1984	March 1983
Number installed to date	Info. not available	3000	325	3000
COMMENTS	Allows low-cost ASCII printers or pen plotters to interface to an IBM 3274 controller and appear to the host as a 3287 printer; supports transparent passthrough; complete 3287 front panel on deluxe model	Full SNA/SDLC code, SNA inbound/outbound pacing, menu driven configuration, forced log off, dual-level security, inactivity disconnect timer, CPU to CPU support; BSC model upgrade-able to SNA/SDLC; echo disable for X.25 network *Deluxe models avail.	Front-panel monitoring of any two RS-232-C channels; options stored in non-volatile memory; field upgradable to IBM 3270 BSC or SNA; support for up to 18 LUs; which can be shared bwt. 2 syn ports; dual host supp.; integral modem eliminator	Full one year warranty; extensive flow control options; dial-up security; forced log-off; numeric lock override; async pass-thru port; menu-driven configuration; remote optioning; inactivity disconnect. Rackmount versions avl. for 16-channel unit

Conversion Systems/Terminal Controllers

MANUFACTURER & MODEL	Local Data, Inc. InterLynx/3287	Local Data, Inc. InterLynx/5251	Local Data, Inc. VersaLynx/3278	May-Craft 52 Remote
DEVICE TYPE	Protocol converter	Protocol converter	Protocol converter	Protocol converter
CONVERSION PERFORMED	IBM 3274/76 control unit thru Type A coax to ASCII	ASCII to EBCDIC	IBM 3278/3178 terminals via coax to RS-232-C async ASCII	ASCII to EBCDIC
SPECIFIC DEVICE EMULATED	IBM 3287/89 printer	IBM 5251 model 12, IBM 5256, 522X	VT100/102/52, TV 925, TTY, IBM 3101	5251 model 12
SPECIFIC FUNCTIONALITY PROVIDED	Async ASCII printer to IBM 3287/89 printer emulation	Twinax conn asyn devices to IBM 34/36/38 emulating IBM 5251 model 12, 5256, 522X	IBM 3278/3178 terminal to serial async ASCII	Allows ASCII terminal, printer, or PC to communicate with IBM System 3X
VIRTUAL SCREEN SIZES SUPP., in char.	—	1920	1920	1920
COMMAND PORT SUPPORTED	No	Yes	No	No
HOST SIDE SPECIFICATIONS				
Specific hosts supported	All supporting 3270	IBM System 34/36/38	Virtually any ASCII mini/microcomputers	IBM System 34/36/38
Number and type of host lines supported	1 coax port	1 twinax	1	2 SDLC
Number host sessions supported concurrently	1	7	1	2
Connections supported	Coax	Direct twinax, dial-up	Direct, dial-up, point-to-point	Direct, dial-up, leased line
Connection to host via controller	IBM 3274, 3276, 4701	IBM 5294, 5251-12	Any async controller	Not applicable
TRANSMISSION SPEC. (Host Line)				
Maximum transmission, in bps	2.5 M	1M	19.2K	19.2K
Synchronization	Synchronous	Synchronous	Asynchronous	Synchronous
Transmission mode	Full duplex	Half duplex	Full duplex	Full duplex
Protocols supported	SCS (LU1) or BSC (LU3)	Twinax, SDLC	Async CRT personality	SNA/SDLC
Codes supported	EBCDIC	EBCDIC	ASCII	EBCDIC
Interface	RG62A/U Type A coax	RS-232-C	1 RS-232-C	RS-232-C
Clocking	—	—	Internal	Internal, external
TERMINAL SIDE SPECIFICATIONS				
Number and type of ports provided	1 RS-232-C and 1 parallel	Up to 7 async, plus 1 parallel printer	1 coax, 2 RS-232-C	Up to 9 async
Devices supported	Any async ASCII serial or Centronics/Data Prod. parallel	Virtually any async CRTs, PCs, printers	IBM 3278/3178 terminals	Most ASCII terminals, printers, and IBM PC and compatibles
Connections supported	Direct connect, dial-up	Direct, dial-up	Direct connect to terminal	Direct, dial-up
TRANSMISSION SPEC. (Terminal Line)				
Maximum transmission, in bps	19.2K	38.4K	2.5M Hz	19.2K
Maximum aggregate input rate, in bps	19.2K	120K	2.5M Hz	Not applicable
Synchronization	Asynchronous	Asynchronous	Coax buffer code	Asynchronous
Transmission mode	Full duplex	Full duplex	Full duplex	Full duplex
Protocols supported	—	Twinax SDLC	IBM 3278 coax	TTY
Codes supported	ASCII	ASCII	IBM scan code	ASCII
Interfaces supported	RS-232-C or parallel	RS-232-C	IBM Type A coax	RS-232-C
DIAGNOSTICS	Printer test, full-feature 3287 front panel	Self-test on power up, LED, breakout by port	Self-test, status, LEDs	Self-test
PRICING AND AVAILABILITY				
Purchase, \$	1,195—1,495	1,595—5,295	695—795	3,100—6,000
Rental, \$/month-to-month	Leasing available	—	Leasing available	Not applicable
Installation, \$	—	—	—	Not applicable
Maintenance, \$ Annual	175	400	100; add. units @ \$75 ea	—
Serviced by	Return to factory/advance exch.	Vendor factory	Factory	Vendor
Availability	Stock to 90 days	Stock to 60 days	Stock to 60 days	14 days
Date of first comm. delivery of this model	March 1983	November 1985	July 1984	—
Number installed to date	7,000	200	1,000	Info. not available
COMMENTS	Front panel LED optioning; serial and parallel ports; 3287 lookalike front panel on standard model; model without front panel avail.; unit supports pseudo-transparency feature for graphics, page-length choice, baud rate, parity	Twinax connect; dual-level password security; file transfer support; inactivity disconnect; RS-232-C interface switchable DCE/DTE; autobaud to 19.2K; opt. stored in non-volatile memory; auxiliary print. feature supports display & printer on 1 port	User may develop other terminal personality emulation; options stored in non-volatile memory; may be used with InterLynx and DataLynx products to improve system flexibility; menu set up available; host addressable auxiliary printer port	

Conversion Systems/Terminal Controllers

MANUFACTURER & MODEL	May-Craft 52 Local	May-Craft 74 R	May-Craft 87P	May-Craft 78R
DEVICE TYPE	Protocol converter (twinax)	Protocol converter	Protocol converter	Protocol converter
CONVERSION PERFORMED	ASCII to EBCDIC	ASCII to EBCDIC	ASCII to EBCDIC	ASCII to EBCDIC
SPECIFIC DEVICE EMULATED	5251 model 11	3274, 3276	IBM 3287	IBM 3278
SPECIFIC FUNCTIONALITY PROVIDED	Allows ASCII terminal, printer, or PC to communicate with IBM System 3X	Allows ASCII terminal, printer, or PC to communicate with IBM 30XX, 43XX	Async ASCII printer to IBM 3287	Async ASCII printer to IBM 3278
VIRTUAL SCREEN SIZES SUPP., in char.	1920	1920	Not applicable	1920
COMMAND PORT SUPPORTED	No	No	No	No
HOST SIDE SPECIFICATIONS				
Specific hosts supported	IBM System 34/36/38	IBM 30XX, 43XX	IBM 370	IBM 370
Number and type of host lines supported	1	2 SDLC	1	1
Number host sessions supported concurrently	1	2	1	1
Connections supported	Direct connection	Direct, dial-up, leased line	Direct connection	Direct connection
Connection to host via controller	5251-12 or 5294	3725, 3705	327X, 4701	327X
TRANSMISSION SPEC. (Host Line)				
Maximum transmission, in bps	1.2M	19.2K	2.5M	2.5M
Synchronization	Synchronous	Synchronous	Synchronous	Synchronous
Transmission mode	Full duplex	Full duplex	Full duplex	Full duplex
Protocols supported	SNA/SDLC	SNA/SDLC	BSC, SNA	BSC, SNA
Codes supported	EBCDIC	EBCDIC	EBCDIC	EBCDIC
Interface	Standard twinax	RS-232-C	1 coax, 2 RS-232-C	1 coax
Clocking	Internal	Internal, external	Internal	Internal
TERMINAL SIDE SPECIFICATIONS				
Number and type of ports provided	Up to 7	Up to 9 async	1 + passthrough port	1
Devices supported	Most ASCII terminals, printers, and IBM PC and compatibles	Most ASCII terminals, printers, and IBM PC and compatibles	Most ASCII printers	Most ASCII terminals
Connections supported	Direct, dial-up	Direct, dial-up	Direct, dial-up	Direct, dial-up
TRANSMISSION SPEC. (Terminal Line)				
Maximum transmission, in bps	19.2K	19.2K	19.2K	19.2K
Maximum aggregate input rate, in bps	Not applicable	Not applicable	Not applicable	Not applicable
Synchronization	Asynchronous	Asynchronous	Asynchronous	Asynchronous
Transmission mode	Full duplex	Full duplex	Full duplex	Full duplex
Protocols supported	TTY	TTY	Asynchronous	Asynchronous
Codes supported	ASCII	ASCII	ASCII	ASCII
Interfaces supported	RS-232-C	RS-232-C	RS-232-C	RS-232-C
DIAGNOSTICS	Self-test	Self-test	Self-tests	Self-tests
PRICING AND AVAILABILITY				
Purchase, \$	1,995 (base unit)	3,100—6,000	1,495	995
Rental, \$/month-to-month	Not applicable	Not applicable	Not applicable	Not applicable
Installation, \$	Not applicable	Not applicable	Not applicable	Not applicable
Maintenance, \$ Annual	—	—	—	—
Serviced by	Vendor	Vendor	Vendor	Vendor
Availability	14 days	14 days	14 days	14 days
Date of first comm. delivery of this model	—	—	—	—
Number installed to date	Info. not available	Info. not available	Info. not available	Info. not available
COMMENTS				



Conversion Systems/Terminal Controllers

MANUFACTURER & MODEL	Micom Systems Micro7400	Micom Systems Micro7881	Micom Systems Micro7887	Modemsplus SNAP
DEVICE TYPE	Protocol converter	Protocol converter	Protocol converter	Protocol converter, terminal emulator
CONVERSION PERFORMED	ASCII to BSC 3270, ASCII to SNA 3270	ASCII to BSC or SDLC	ASCII to BSC or SDLC	ASCII to SDLC/SNA
SPECIFIC DEVICE EMULATED	IBM 3274 model 51c, 61C	IBM 3278-2	IBM 3287/3289 printer	IBM 3274 or 3276 IBM 3776 or 3777
SPECIFIC FUNCTIONALITY PROVIDED	Async. ASCII CRT to IBM 3278 models 2, 3, 4, 5; Async ASCII printer to IBM 3287	Async ASCII CRT to IBM 3278 model 2; IBM PC or compatible to IBM 3278	ASCII printer to IBM 3287	IBM 3278, 3287
VIRTUAL SCREEN SIZES SUPP., in char.	1920-3564	1920	960—3564 char. buffer	1920
COMMAND PORT SUPPORTED	Yes	No	No	Yes
HOST SIDE SPECIFICATIONS				
Specific hosts supported	IBM 360, 370, 43XX, 30XX, 8100	IBM mainframes, DEC, Prime, etc.	IBM mainframes	All
Number and type of host lines supported	1 BSC or 1 SNA	2	1	1 SDLC
Number host sessions supported concurrently	Sixteen	1 BSC or SNA/SDLC and 1 async	1 BSC or SNA/SDLC	2
Connections supported	Direct, point-to-point, multipoint	Direct, dial-up	Not applicable	Direct, multipoint, point-to-point
Connection to host via controller	All IBM, IBM-compatible	IBM 3274/3276	IBM 3274/3276	—
TRANSMISSION SPEC. (Host Line)				
Maximum transmission, in bps	19.2K	9600; IBM Type A Coax	IBM Type A Coax	To 19.2K
Synchronization	Synchronous	Asynchronous	Not applicable	Sync, isosync
Transmission mode	Half duplex	Full duplex	Not applicable	Half/full duplex
Protocols supported	BSC, SNA/SDLC	BSC, SNA/SDLC or async	BSC, SNA/SDLC	SDLC/SNA
Codes supported	EBCDIC, ASCII	ASCII	Not applicable	ASCII, EBCDIC
Interface	2 RS-232-C	RS-232-C, Type A Coax	Type A Coax	1 RS-232-C-NRZI, 1 RS-232-C
Clocking	Internal/external	Not applicable	Not applicable	Int/ext/data derived
TERMINAL SIDE SPECIFICATIONS				
Number and type of ports provided	2, 4, 8, 12, 16 async + 1 async command port	1 async CRT, 1 async printer or host port	1 async printer	1 async with dynamic printer
Devices supported	A number of async ASCII devices	Various ASCII CRTs, IBM PC	Various ASCII printers	All ASCII TTY devices
Connections supported	Direct, dial-up	Direct, dial-up	Direct	Direct, dial-up, leased line
TRANSMISSION SPEC. (Terminal Line)				
Maximum transmission, in bps	9600	9600	9600	To 19.2K
Maximum aggregate input rate, in bps	76,800	Not applicable	Not applicable	19.2K
Synchronization	Asynchronous	Asynchronous	Asynchronous	Asynchronous
Transmission mode	Full duplex	Full duplex	Not applicable	Half/full duplex
Protocols supported	TTY	—	—	TTY/ASCII
Codes supported	ASCII	ASCII	ASCII	ASCII
Interfaces supported	RS-232-C, current loop	RS-232-C	RS-232-C or parallel	1 RS-232-C
DIAGNOSTICS	Self-test, line trace, status LEDs	Self-tests, status LEDs	Self-tests, status LEDs	RAM, EPROM Status LEDs
PRICING AND AVAILABILITY				
Purchase, \$	1,650 (2ch)—5,650 (16ch)	1,095	1,495	1,395
Rental, \$/month-to-month	Not applicable	Not applicable	Not applicable	None
Installation, \$	Not applicable	Not applicable	Not applicable	None
Maintenance, \$ Annual	Not applicable	—	—	60
Serviced by	Factory	Vendor-factory	Vendor-factory	Factory
Availability	30 days	45 days	45 days	30
Date of first comm. delivery of this model	February 1984	December 1985	December 1985	May 1984
Number installed to date	1500	Info. not available	Info. not available	160
COMMENTS	Options include async host, integ. modems, current loop, ASCII BSC, large-screen support, IBM PC support; unique capabilities: inbound priority, automatic logon, banner/broadcast messages, draft document prep., extensive security feat.	Allows one connected ASCII terminal to emulate IBM 3278 and access IBM mainframe or async minicomputer, public info. network, or time-sharing service. IBM PC terminal emulation software is available	Supports transparent mode operation for specialized host applications including graphics, bar-code generation, alternate characters	Menu-driven batch and interactive

Conversion Systems/Terminal Controllers

MANUFACTURER & MODEL	Modemplus BRITE II	Modemplus SMRTE IV	Modemplus SMRTE	Modemplus SMRTE
DEVICE TYPE	Protocol converter, terminal emulator	Protocol converter	Protocol converter	Protocol converter
CONVERSION PERFORMED	ASCII to Burroughs	SDLC/SNA to 3275 BSC	SDLC/SNA to DDCMP	SDLC/SNA to IBM 2780, 3780
SPECIFIC DEVICE EMULATED	Any Burroughs VDU	IBM 3274 or 3276	IBM 3776 or 3777, Decnet Gateway	IBM 3776, 3777
SPECIFIC FUNCTIONALITY PROVIDED	Any Burroughs CRT or printer	IBM 3278, 3287	377X workstation	377X workstation
VIRTUAL SCREEN SIZES SUPP., in char.	1920	1920	Not applicable	—
COMMAND PORT SUPPORTED	Yes	Yes	Yes	Yes
HOST SIDE SPECIFICATIONS	All	All	All	IBM 43XX, 8100, DEC PDP-11
Specific hosts supported	1 Burroughs	1 SDLC	1 SDLC, 1 DDCMP	1 SDLC
Number and type of host lines supported	2	6	2	3
Number host sessions supported concurrently	Direct, multipoint, point-to-point	Direct, multipoint, point-to-point	Direct, multipoint, point-to-point	Direct, multipoint, point-to-point
Connections supported	—	—	—	—
Connection to host via controller	—	—	—	—
TRANSMISSION SPEC. (Host Line)	To 19.2K	To 19.2K	To 19.2K	To 19.2K
Maximum transmission, in bps	Sync/async/isosync	Sync/isosync	Sync/isosync	Sync/isosync
Synchronization	Half/full duplex	Half/full duplex	Half/full duplex	Half/full duplex
Transmission mode	Burroughs	—	—	SDLC/SNA, BSC2780/3780
Protocols supported	ASCII	ASCII, EBCDIC	ASCII, EBCDIC	ASCII, EBCDIC
Codes supported	1 TDI, 1 RS-232-C	1 RS-232-C	1 RS-232-C	1 RS-232-C
Interface	Int/ext/data derived	Int/ext/data derived	Int/ext/data derived	Int/ext/data derived
Clocking	1 async with dynamic printer	3 sync or isosyn	1 async or sync	1 sync or isosync
TERMINAL SIDE SPECIFICATIONS	All ASCII TTY devices	Any 3275 and emulator	Any DECNET Gateway device	Any 2780, 3780 emulator device
Number and type of ports provided	Direct, dial-up, leased line	Direct, dial-up, leased line	Direct, dial-up, leased line	Direct, dial-up, leased line
Devices supported	Direct, dial-up, leased line	Direct, dial-up, leased line	Direct, dial-up, leased line	Direct, dial-up, leased line
Connections supported	To 19.2K	To 19.2K	To 19.2K	To 19.2K
TRANSMISSION SPEC. (Terminal Line)	19.2K	19.2K	19.2K	19.2K
Maximum transmission, in bps	Asynchronous	Sync/isosync	Async/isosync	Sync/isosync
Maximum aggregate input rate, in bps	Half/full duplex	Half/full duplex	Half/full duplex	Half/full duplex
Synchronization	TTY/ASCII	BSC 3275	DDCMP	DDCMP
Transmission mode	ASCII	ASCII, EBCDIC	ASCII, EBCDIC	ASCII, EBCDIC
Protocols supported	1 RS-232-C	3 RS-232-C	1 RS-232-C	1 RS-232-C
Codes supported	RAM, EPROM Status LEDs	RAM, EPROM Status LEDs	RAM, EPROM Status LEDs	RAM, EPROM status LEDs
Interfaces supported	RAM, EPROM Status LEDs	RAM, EPROM Status LEDs	RAM, EPROM Status LEDs	RAM, EPROM status LEDs
DIAGNOSTICS	RAM, EPROM Status LEDs	RAM, EPROM Status LEDs	RAM, EPROM Status LEDs	RAM, EPROM status LEDs
PRICING AND AVAILABILITY	1,395	3,995	3,995	3,995
Purchase, \$	None	None	None	None
Rental, \$/month-to-month	None	None	None	None
Installation, \$	60	180	180	180
Maintenance, \$ Annual	Factory	Factory	Factory	Factory
Serviced by	187	30	30	30
Availability	May 1984	August 1983	March 1984	March 1984
Date of first comm. delivery of this model	50	30	120	30
Number installed to date	Menu-driven batch interactive; replaces BRITE I; three-year delivery 3000			
COMMENTS				

Conversion Systems/Terminal Controllers

MANUFACTURER & MODEL	Modemsplus Sna Sna	Modemsplus SNAP PC	Modemsplus BRITE II TD/PC	Modemsplus SNAP V
DEVICE TYPE	Protocol converter	Protocol converter, terminal emulator	Protocol converter, terminal emulator	Protocol converter
CONVERSION PERFORMED	SDLC/SNA dial up to leased line	ASCII to SNA/SDLC	ASCII to Burroughs	SNA/SDLC to IBM 2780/ 3780
SPECIFIC DEVICE EMULATED	IBM 3274, 3276, 3776 or 3777	IBM 3274/3276, IBM 3776/3777	Any Burroughs VDU	IBM 3776/3777
SPECIFIC FUNCTIONALITY PROVIDED	Allows multiple dial-up lines on 1 port off the IBM 3705 or 3275	IBM 3278/3287	Any Burroughs CRT or printer	377X workstation
VIRTUAL SCREEN SIZES SUPP., in char.	—	1920	1920	512 blocks
COMMAND PORT SUPPORTED	No	Yes	Yes	No
HOST SIDE SPECIFICATIONS				
Specific hosts supported	All IBM hosts	All	All	IBM 43XX, 8100, DEC PDP-11
Number and type of host lines supported	All	—	—	—
Number host sessions supported concurrently	32	2	2	1
Connections supported	Direct, multipoint, point-to-point	Direct, dial-up, leased line	Direct, dial-up, leased line	Direct, dial-up, leased line
Connection to host via controller	—	Not applicable	Not applicable	Not applicable
TRANSMISSION SPEC. (Host Line)				
Maximum transmission, in bps	To 19.2K	To 19.2K	To 19.2K	To 19.2K
Synchronization	Sync/isosync	Sync/isosync	Sync/async/isosync	Sync/isosync
Transmission mode	Half/full duplex	Half/full duplex	Half/full duplex	Half/full duplex
Protocols supported	SNA/SDLC	SNA/SDLC	Burroughs	SNA/SDLC
Codes supported	ASCII, EBCDIC	ASCII, EBCDIC	ASCII	ASCII, EBCDIC
Interface	1 RS-232-C with NRZI or non-NRZI	1 RS-232-C NRZI, 1 RS-232-C	1 TDI, 1 RS-232-C	1 RS-232-C
Clocking	Int/ext/data derived	Int./ext., data-derived	Int./ext., data derived	Int./ext., data derived
TERMINAL SIDE SPECIFICATIONS				
Number and type of ports provided	1 SNA/SDLC dial up	1 async with dynamic printer	1 async with dynamic printer	1 synchronous
Devices supported	All SNA/SDLC devices	All ASCII TTY devices	All ASCII TTY devices	Any 2780/3780 emulator
Connections supported	Direct, dial-up, leased line	IBM PC slot	IBM PC slot	Direct, dial-up, leased line
TRANSMISSION SPEC. (Terminal Line)				
Maximum transmission, in bps	To 19.2K	To 19.2K	To 19.2K	To 19.2K
Maximum aggregate input rate, in bps	19.2K	19.2K	19.2K	19.2K
Synchronization	Synchronous	Asynchronous	Asynchronous	Synchronous
Transmission mode	Half/full duplex	Full duplex	Full duplex	Full duplex
Protocols supported	SNA/SDLC	TTY, ASCII	TTY	IBM 2780/3780
Codes supported	ASCII, EBCDIC	ASCII	ASCII	ASCII, EBCDIC
Interfaces supported	1 RS-232-C	1 IBM PC slot	1 IBM PC slot	1 RS-232-C
DIAGNOSTICS	RAM, EPROM, Status LEDs	RAM, EPROM	RAM, EPROM	RAM, EPROM
PRICING AND AVAILABILITY				
Purchase, \$	995 per channel	995	995	1,625
Rental, \$/month-to-month	—	None	None	None
Installation, \$	—	None	None	None
Maintenance, \$ Annual	60 by replacement	60	60	120
Serviced by	Factory	Factory	Factory	Factory
Availability	30	30 days	30 days	30
Date of first comm. delivery of this model	March 1985	December 1985	March 1986	November 1985
Number installed to date	1	5	2	105
COMMENTS	Allows dial-up SNA/SDLC to leased line SNA/SDLC for backup, port savings or phone bill savings; provides 254 PU 2 type addresses from a single leased line FEP port	Menu options for PU address, LU addresses, baud rate, XID, X-on/ X-off, etc.	Menu options for Xmit numbers, addresses, baud rate, parity, CR and LF options, etc.	Unit has unique capa- city to put old BSC equipment on multi- drop SNA/SDLC line

Conversion Systems/Terminal Controllers

MANUFACTURER & MODEL	NCR Comten, Inc. Comten Integrated Protocol Converter	Netlink, Inc. 3703, 3703-1 SNA-Gate	Netlink, Inc. 3703-1A SNA-Gate	Netlink, Inc. 3711 SNA-Gate
DEVICE TYPE	Protocol converter	Network processor, cluster controller	Network processor, cluster controller	LAN gateway, network proc., cluster control.
CONVERSION PERFORMED	ASCII to BSC 3270	ASCII to EBCDIC LU1, LU2; BSC 3271, 3275 to LU1, LU2; BSC 1 RJE MLU to LU0, LU1	ASCII to EBCDIC LU1, LU2: to LU0, LU1	ASCII to EBCDIC LU1, LU2: RJE MLU to LU0, LU1
SPECIFIC DEVICE EMULATED	3274 Model 1C with 3278 displays and 3287 printers	Full function PUT2 with multiple LU types (8100)	Full function PUT2 with multiple LU types	Full function PUT2 with multiple LU types
SPECIFIC FUNCTIONALITY PROVIDED	Async ASCII CRT to 3278 Model 2	Dynamic, based on bind parameters LU0, 1, 2, or 3	Dynamic, based on bind parameters LU0, 1, 2	Dynamic, based on bind parameters LU0, 1, 2
VIRTUAL SCREEN SIZES SUPP., in char.	1920	3278 (2, 3, 4, 5)	3278 (2, 3, 4, 5)	3278 (2, 3, 4, 5)
COMMAND PORT SUPPORTED	Yes	Host program loaded	Host program loaded	Host program loaded
HOST SIDE SPECIFICATIONS				
Specific hosts supported	IBM 360/370 via a Comten 3600	IBM 370 VTAM, 8100	IBM 370 VTAM, 8100	IBM 370 VTAM, 8100
Number and type of host lines supported	1 BSC	1 SDLC	1 SDLC	1 SDLC
Number host sessions supported concurrently	1 BSC; 14 async pass- through	40	40	32
Connections supported	Direct, dial-up on point-to-point	Direct, point-to-point, multipoint	Direct, point-to-point, multipoint	Direct, LAN via Netbios interface
Connection to host via controller	Comten 3650; Comten 3690	IBM 3705, 3725, or equivalent	IBM 3705, 3725, or equivalent	IBM 3705, 3725, or equivalent
TRANSMISSION SPEC. (Host Line)				
Maximum transmission, in bps	4000 bytes/second	64K	64K	64K
Synchronization	Asynchronous	Synchronous	Synchronous	Synchronous
Transmission mode	Full duplex	Half/full duplex	Half/full duplex	Half/full duplex
Protocols supported	BSC	SNA/SDLC	SNA/SDLC	SNA/SDLC
Codes supported	EBCDIC	EBCDIC	EBCDIC	EBCDIC
Interface	NCR Comten proprietary	RS-232-C	RS-232-C	RS-232-C
Clocking	Internal	Switch selectable	Switch selectable	Switch selectable
TERMINAL SIDE SPECIFICATIONS				
Number and type of ports provided	32 async CRTs or printers	6 sync, 16 async	16 async	32 virtual circuits
Devices supported	All major asynchronous devices	Any terminal supporting cursor addressing*	Any terminal supporting cursor addressing*	Any terminal supporting cursor addressing*
Connections supported	Direct, dial-up	Direct, point-to-point, dial-up	Direct, point-to-point, dial-up	Ethernet, 3COM
TRANSMISSION SPEC. (Terminal Line)				
Maximum transmission, in bps	9600	9600	9600	LAN dependent
Maximum aggregate input rate, in bps	28.8K for 16 lines	20K	20K	20K
Synchronization	Asynchronous	Async/sync	Asynchronous	Asynchronous
Transmission mode	Full duplex	Half/full duplex	Half/full duplex	Half/full duplex
Protocols supported	TTY	327X, 2780, 3780, 2770**	327X, 2780, 3780, 2770	XNS, TCP/IP, OSI
Codes supported	ASCII	ASCII, EBCDIC	ASCII, EBCDIC	ASCII, EBCDIC
Interfaces supported	RS-232-C	RS-232-C	RS-232-C	—
DIAGNOSTICS	Self-tests, status displays	Self-tests, host-based network diagnostics	Self-tests, host-based network diagnostics	Self-tests, host-based network diagnostics
PRICING AND AVAILABILITY				
Purchase, \$	6,100—15,450	8,500-12,500	4,000—7,600	Contact vendor
Rental, \$/month-to-month	296—746	Contact Vendor	Contact Vendor	Contact Vendor
Installation, \$	Not applicable	1,000 (optional)	1,000 (optional)	—
Maintenance, \$ Annual	216—492	220***	220**	—
Serviced by	Vendor on-site	Depot	Depot	Depot
Availability	—	30 days	30 days	Contact vendor
Date of first comm. delivery of this model	1984	July 1982	February 1986	February 1986
Number installed to date	Info. not available	1000	Info. not available	Info. not available
COMMENTS	Provides choice of BSC protocol conversion or asynchronous pass- through on each line. Security features in- clude IMS queue flushing, password protection per line, and inactivity disconnect	*Software-controlled via host **Also Burroughs Poll/ Select, 2740-1, TTY ***36-month warranty	*Software-controlled via host **36-month warranty	*Software-controlled via host 36-month warrant avail.

Conversion Systems/Terminal Controllers

MANUFACTURER & MODEL	Protocol Computers, Inc. Series 100 Models 176, 171, 151*	Protocol Computers, Inc. Series 100 Model 167	Protocol Computers, Inc. 71B/SNA; 75B/SNA; 3780/SNA	Protocol Computers, Inc. Series 200, Model 276
DEVICE TYPE	Protocol converter	Protocol converter	Protocol converter	Protocol converter
CONVERSION PERFORMED	ASCII to SDLC or BSC	ASCII to SDLC	BSC to SDLC	ASCII to SNA/SDLC
SPECIFIC DEVICE EMULATED	IBM 3271/76, 5251	IBM 3267	—	IBM 3274/76
SPECIFIC FUNCTIONALITY PROVIDED	ASCII devices look like IBM full-screen devices	ASCII devices talk to SNA in line-by-line mode	IBM 3271 to 3274; IBM 3275 to 3276; IBM 3780 to 3776-2	Lets ASCII CRTs, printers, and IBM PCs attach to IBM SNA networks as 3278
VIRTUAL SCREEN SIZES SUPP., in char.	1920	Not applicable	Not applicable	1920
COMMAND PORT SUPPORTED	No	No	No	Yes; full-screen config.
HOST SIDE SPECIFICATIONS				
Specific hosts supported	Any IBM host	IBM 43XX, 30XX	IBM 43XX, 30XX	IBM 43XX, 30XX, 8100
Number and type of host lines supported	1 host link	1 SNA	1 SDLC	1 SDLC
Number host sessions supported concurrently	—	—	—	—
Connections supported	Direct, point-to-point, multipoint	Direct, point-to-point, multipoint	Direct, point-to-point, multipoint	Direct, point-to-point, multipoint
Connection to host via controller	IBM FEP or communications adapter	IBM 37XX or communications adapter	IBM 37XX or communications adapter	IBM 37XX or communications adapter
TRANSMISSION SPEC. (Host Line)				
Maximum transmission, in bps	9600	9600	9600	19.2K
Synchronization	Synchronous	Synchronous	Synchronous	Synchronous
Transmission mode	Half/full duplex	Half/full duplex	Half/full duplex	Half/full duplex
Protocols supported	BSC, SDLC	SDLC	SDLC	SDLC
Codes supported	EBCDIC	EBCDIC	EBCDIC	EBCDIC
Interface	1 RS-232-C	1 RS-232-C	1 RS-232-C	1 RS-232-C
Clocking	Internal, external	Internal, external	Internal, external	Internal, external
TERMINAL SIDE SPECIFICATIONS				
Number and type of ports provided	Up to 7 async ports plus 1 dynamic printer	Up to 7 async	3 3271/3275 contr. ports; 1 3780 port	4—32 phys. ports; 8—64 concurrent LU sessions
Devices supported	Virtually any ASCII device	Virtually any ASCII device	IBM BSC devices or equivalent	Virtually any ASCII device
Connections supported	Direct, dial-up	Direct, dial-up	Direct, dial-up	Direct, dial-up
TRANSMISSION SPEC. (Terminal Line)				
Maximum transmission, in bps	9600	9600	9600	19.2K
Maximum aggregate input rate, in bps	—	—	—	—
Synchronization	Asynchronous	Asynchronous	Synchronous	Asynchronous
Transmission mode	Full duplex	Full duplex	Full duplex	Full duplex or no echo
Protocols supported	—	Not applicable	BSC	—
Codes supported	ASCII	ASCII, EBCDIC	EBCDIC	ASCII
Interfaces supported	RS-232-C	RS-232-C	RS-232-C	RS-232-C
DIAGNOSTICS	Self-test, LEDs, ASCII line tests, full trace capability	Self-tests, LEDs, ASCII, lines tests, full-trace capability	LEDs	Self-tests, status LEDs, ASCII line tests, full-trace capability
PRICING AND AVAILABILITY				
Purchase, \$	2,850—5,300	2,850—5,300	3,100—4,100	3,275—9,000
Rental, \$/month-to-month	300	300	300	From \$300
Installation, \$	—	—	—	—
Maintenance, \$ Annual	300—500	300—500	400	300-1,000
Serviced by	Vendor; distributor	Vendor; distributor	Vendor; distributor	Vendor; distributor
Availability	30 days	30 days	30 days	30 days
Date of first comm. delivery of this model	1981	1980	1982 (71B/SNA)	March 1985
Number installed to date	Info. not available	Info. not available	Info. not available	Info. not available
COMMENTS	*PCI 176 is ASCII to 3270 SDLC; PCI 171 is ASCII to 3270 BSC; and PCI 151 is ASCII to 5251 SDLC.  Upgrade to PCI Series 200 available. See columns for those models	Host-to-host graphics; videotext versions available; transparency; replaces IBM NTO or VTF software	*71B/SNA is 3271 to 3274; 75B/SNA is 3275 to 3276; 3780/SNA is 3780 to 3776-2.  ASCII printer port option available on 3780/SNA	IBM 3270-PC file transfer support using PCI Smartlink PC software; advanced security for IMS; graphics; user profiles; auto logon/logoff plus auto dial back security; DTR toggles and timers; international and translate tables; sel. scrn update

### Conversion Systems/Terminal Controllers

MANUFACTURER & MODEL	Protocol Computers, Inc. Series 200, Model 271	Protocol Computers, Inc. Series 200, Model 251	Protocol Computers, Inc. Smartnet 1000 Series*	Renex Translator RT74 Family
DEVICE TYPE	Protocol converter	Protocol converter	IBM SNA/X.25 converter/ PAD	Protocol converter
CONVERSION PERFORMED	ASCII to BSC	ASCII to SNA/SDLC	ASCII to 3270 X.25; X.25 to SNA; SNA to X.25	ASCII to 3270 BSC, ASCII to 3270 SDLC
SPECIFIC DEVICE EMULATED	IBM 3271/74	IBM 5251-12	IBM 3278-2	IBM 3274-41C, 51C, 61C; IBM 3276-2, 12
SPECIFIC FUNCTIONALITY PROVIDED	Lets ASCII CRTs, printers, and IBM PCs attach to IBM SNA networks as 3277 or 3278	Lets ASCII CRTs, printers, and IBM PCs attach to IBM S/34, S/36, S/38 as 5251	PCI 1100—ASCII to 3270 X.25; PCI 1200—X.25 to 3270 SNA; PCI 1300—3270 SNA to X.25	ASCII CRT to IBM 3278/ 79 models 2
VIRTUAL SCREEN SIZES SUPP., in char.	1920	1920	1920	1920
COMMAND PORT SUPPORTED	Yes; full-screen config.	Yes; full-screen config.	No	Yes
HOST SIDE SPECIFICATIONS	IBM 43XX, 30XX, S/370	IBM S/34, S/36, S/38	IBM 43XX, 30XX, S/36, S/38	IBM mainframes
Number and type of host lines supported	1 BSC	1 SDLC	8 SDLC	1 SDLC or BSC
Number host sessions supported concurrently	—	—	—	1
Connections supported	Direct, point-to-point, multipoint	Direct, point-to-point, multipoint	Direct, point-to-point, multipoint	Direct, multipoint, point-to-point
Connection to host via controller	IBM 37XX, 27XX	Comms adapter MLCA, ELCA, SLCA	IBM 37XX with or without NPSI; IBM ICA	—
TRANSMISSION SPEC. (Host Line)	9600	19.2K	9600	1200 to 19.2K
Maximum transmission, in bps	Synchronous	Synchronous	Synchronous	Synchronous
Synchronization	Half/full duplex	Half/full duplex	Full duplex	Half/full duplex
Transmission mode	BSC	SDLC	X.25, HDLC, SNA/SDLC	BSC, SNA/SDLC
Protocols supported	EBCDIC	EBCDIC	EBCDIC	ASCII, EBCDIC
Codes supported	1 RS-232-C	1 RS-232-C	1 RS-232-C	RS-232-C
Interface	Internal, external	Internal, external	Internal, external	Internal/external
Clocking	4—32 phys. ports; 8—64 concurrent LU sessions	4—32 phys. ports	7 async, 1 dynamic prnt port or 3 IBM clus. con	1—20
TERMINAL SIDE SPECIFICATIONS	Virtually any ASCII device	Virtually any ASCII device	Virtually any ASCII de- vice or 3270, 3770, 5250 cluster controller	Over 150 devices sup- ported
Number and type of ports provided	Direct, dial-up	Direct, dial-up	Direct, dial-up	Direct, dial-up
Devices supported	Direct, dial-up	Direct, dial-up	Direct, dial-up	Direct, dial-up
Connections supported	19.2K	19.2K	9600	19.2K w/autbd. rate det.
TRANSMISSION SPEC. (Terminal Line)	—	—	—	Not limited
Maximum transmission, in bps	Asynchronous	Asynchronous	Async/sync	Asynchronous
Maximum aggregate input rate, in bps	Full duplex or no echo	Full duplex or no echo	Full duplex	Full duplex
Synchronization	—	—	—	Various
Transmission mode	ASCII	ASCII	ASCII	ASCII or transparent
Protocols supported	RS-232-C	RS-232-C	RS-232-C	RS-232-C, RS-449
Codes supported	Self-tests, status LEDs, ASCII line tests, full- trace capability	Self-tests, status LEDs, ASCII line tests, full- trace capability	Status LEDs, diagnostic port	Self-tests; status LEDs monitor capabilities
Interfaces supported	3,450—9,950	2,975—9,750	1,650—3,800	995—10,990
DIAGNOSTICS	From \$300	From \$300	350	250—850
PRICING AND AVAILABILITY	—	—	—	300
Purchase, \$	300—1,000	300—1,000	300—500	300—1,100
Rental, \$/month-to-month	Vendor; distributor	Vendor; distributor	Vendor	Vendor, factory, third party on site
Installation, \$	30 days	30 days	30 days	30 days
Maintenance, \$ Annual	March 1985	March 1985	1983	October 1980
Serviced by	Info. not available	Info. not available	Info. not available	Info. not available
Availability	IBM 3270-PC file trans- fer support using PCI Smartlink PLC software; advanced security with user profiles; auto logon/logoff plus auto dial back security; graphics; DTR timers; international translate tables; selective screen updating	Host file transfer using SSI and PCI Smartlink PC software; advanced security; user profiles; auto logon/logoff plus auto dial back; interna- tional translate tables; selective screen up- dating; CRT/PRT inter- leaving via concurrent sessions	*PCI 1100 lets ASCII terminals, PCs, printers act as 3278 SNA devices via X.25; PCI 1200 is an IBM host SNA PAD that can replace IBM NPSI; PCI 1300 lets SNA/SDLC 3270, 3770, 5250 cluster controller use X.25 net to IBM host	Personal computer sup- port, APL support; seven-color and extended highlight; multiplex terminal and printer on same physical line; graphics passthrough for SAS, Tellagraf etc; also includes inactivity timeout and password security
Date of first comm. delivery of this model	Number installed to date	Number installed to date	Number installed to date	Number installed to date
COMMENTS				

Conversion Systems/Terminal Controllers

MANUFACTURER & MODEL	Renex Translator RT51 Family	Renex TMS-One	Shaffstall Corp. Telecom 1000	Thomas Engineering Co. MZ-80 IMIU
DEVICE TYPE	Protocol converter	Protocol converter	Protocol/code converter	Protocol/code converter emulator, concentrator
CONVERSION PERFORMED	ASCII to SDLC	ASCII to 3270 BSC (ASCII or EBCDIC), 3270 SNA, and 3767/3770 SNA	EBCDIC to ASCII, ASCII to EBCDIC, bisync to async, async to bisync	ASCII to EBCDIC, async to sync
SPECIFIC DEVICE EMULATED	IBM 5251 model 12	IBM 3274-41C, 51C, 61C IBM 3276-2 & 12, IBM 3767, 3770	IBM 2770, 2780, 3780	IBM 3271, 3274/Honeywell VIP 77XX
SPECIFIC FUNCTIONALITY PROVIDED	ASCII CRT to IBM 5251 model 11	ASCII CRT to IBM 3278/9	Not applicable	Async ASCII CRT and/or PC to IBM 3270 or VIP 77XX
VIRTUAL SCREEN SIZES SUPP., in char.	1920	All; models 1-5 and 3290	Not applicable	1920
COMMAND PORT SUPPORTED	Yes	Yes	Not applicable	Yes
HOST SIDE SPECIFICATIONS				
Specific hosts supported	IBM 43XX, 81XX, System 34/36/38	IBM 43XX, 81XX and plug-compatibles	IBM 43XX, 308X, Wang	IBM, Honeywell, others
Number and type of host lines supported	1 or 2 SDLC	2 BSC and/or SDLC	2 async or bisync	Most Honeywell, IBM
Number host sessions supported concurrently	1	5 cont. emulated/unit, 128 sessions/unit	1	1
Connections supported	Direct, multipoint, point-to-point	Direct, multipoint, point-to-point	Dial-up, point-to-point	Any combination of modem or direct connection
Connection to host via controller	—	—	Not applicable	IBM 3704/5; Datanet 355, 66, 8; GRTS-II, NPS, DNS
TRANSMISSION SPEC. (Host Line)				
Maximum transmission, in bps	1200 to 19.2K	19.2K bps (aggregate)	9600	19.2K bps
Synchronization	Synchronous	Synchronous	Async/sync	Synchronous
Transmission mode	Half/full duplex	Half/full duplex	Half/full duplex	Half/full duplex
Protocols supported	SDLC	BSC, SNA/SDLC	BSC/async	BSC, VIP
Codes supported	ASCII, EBCDIC	ASCII, EBCDIC	ASCII or EBCDIC*	ASCII, EBCDIC
Interface	RS-232-C	1 or 2 RS-232-C	2 RS-232-C, parallel	1 RS-232-C
Clocking	Internal/external	Internal/external	Internal; external (opt)	Internal/external
TERMINAL SIDE SPECIFICATIONS				
Number and type of ports provided	1—20 ports	Up to 32 physical and 128 logical ports	Not applicable	Up to 32 async ports
Devices supported	Over 150 devices sup- ported	Over 125 devices sup- ported	Any async, bisync, SDLC device	Virtually any ASCII CRT, printer, PC
Connections supported	Direct, dial-up	Direct, dial-up	Direct, dial-up	Direct, dial-up, through modem
TRANSMISSION SPEC. (Terminal Line)				
Maximum transmission, in bps	19.2K w/autbd. rate det.	19.2K w/autbd. rate det.	9600	19.2K
Maximum aggregate input rate, in bps	Not limited	Not limited	9600	80K (approx.)
Synchronization	Asynchronous	Asynchronous	Async/sync	Async/sync
Transmission mode	Full duplex	Full duplex	Half/full duplex	Full duplex
Protocols supported	—	Various	TTY, async, bisync	TTY, custom
Codes supported	ASCII	ASCII	ASCII or EBCDIC*	ASCII, EBCDIC
Interfaces supported	RS-232-C, RS-449	RS-232-C, RS-449, coax, RJ-11	RS-232-C	RS-232-C, MIL-188
DIAGNOSTICS	Self-tests; status LEDs monitor capabilities	Self-tests; status LEDs, control operator diagnostics & status	None	Self-tests, status LEDs, loadable diag., diag. port
PRICING AND AVAILABILITY				
Purchase, \$	995—10,990	7,495—19,990	5,000—7,000	4,000—10,000
Rental, \$/month-to-month	350—750	560—1,400	—	Terms vary
Installation, \$	300	400—650	750	—
Maintenance, \$ Annual	300—1,110	450—1,300	600—1,000	First yr. incl.; 500 aft
Serviced by	Vendor, factory, third party on site	Vendor, factory, third party on site	factory depot	Vendor, factory; spares
Availability	30 days	30 days	40 days	30 days
Date of first comm. delivery of this model	January 1984	February 1985	September 1984	December 1981
Number installed to date	Info. not available	Info. not available	5	1,000
COMMENTS	Multiplex terminal and printer on one physical port; inactivity timer, password security, and personal computer sup- port	Info. not available APL, 7-color, extended highlighting, allows user to have up to 5 concurrent sessions active, dynamic LU assignments thru passwords, file transfer capabilities for PC, dial-back security, and internal modems	*Custom-programmed conversions	Supports one or more printers in 3286/87 mode; menu-driven device selection; remote diag. cap., incl. software transmission; rackmount- able & field-expandable; supports optional floppy disks for local process- ing & user system devel- opment

### Conversion Systems/Terminal Controllers

MANUFACTURER & MODEL	Thomas Engineering Co. UNI-TEC	Thomas Engineering Co. MINI-TEC	Tri-Data Netway 1000A	Tymnet Asynchronous Terminal Concentrator (ATC)
DEVICE TYPE	Protocol/code converter, emulator, concen.	Protocol/code converter, emulator, concen.	Gateway	Terminal concentrator
CONVERSION PERFORMED	ASCII to EBCDIC, async to sync	ASCII to EBCDIC, async to sync	Appletalk to BSC and SNA	ASCII to Tymnet Network protocol
SPECIFIC DEVICE EMULATED	IBM 3271, 3274, Honeywell 7700, 7800	IBM 3271, 3274, Honeywell 7700, 7800	3274-61C	Asynchronous host character echoes Tymnet Network node
SPECIFIC FUNCTIONALITY PROVIDED	Async ASCII CRT and/or PC to IBM 3270 or VIP 7700/VIP 7800	Async ASCII CRT and/or PC to IBM 3270 or VIP 7700/VIP 7800	3278 Model 2	Async ASCII to Tymnet network protocol at host node conv. of Tymnet prot. to BSC/SDLC/UTS Any size, applic. cont.
VIRTUAL SCREEN SIZES SUPP., in char.	1920	1920	1920 plus status	Not applicable
COMMAND PORT SUPPORTED	Yes	Yes	No	Not applicable
HOST SIDE SPECIFICATIONS				
Specific hosts supported	IBM, Honeywell, others	IBM, Honeywell, others	IBM 4XX, 3033, 370, 308X, Tandem	Not applicable
Number and type of host lines supported	4	1	—	Not applicable
Number host sessions supported concurrently	Up to 4 (1 per host)	1	16 for hardware; 4 for terminal emulator	Not applicable
Connections supported	Any combination of modem or direct connection	Any combination of modem or direct connection	Modem linked or modem bypass to FEP	Direct, dial-up, leased line
Connection to host via controller	IBM 3704/5; Datanet 355, 66, 8; GRTS-II, NPS, DNS	IBM 3704/5; Datanet 355, 66, 8; GRTS-II, NPS, DNS	37X5, Comten, 47X5	Not applicable
TRANSMISSION SPEC. (Host Line)				
Maximum transmission, in bps	19.2K	9600	9600	9600
Synchronization	Synchronous	Synchronous	Synchronous	Synchronous
Transmission mode	Half/full duplex	Half/full duplex	Half/full duplex	Half/full duplex
Protocols supported	BSC, SNA/SDLC, VIP	BSC, VIP	BSC, SNA/SDLC	Tymnet Network
Codes supported	ASCII, EBCDIC	ASCII, EBCDIC	EBCDIC	ASCII; conv. at host node
Interface	Up to 4 RS-232-C	1 RS-232-C	1 sync RS-232-C and 1 Appletalk	2 RS-232-C/V.24
Clocking	Internal/external	Internal/external	Internal, external	Data derived
TERMINAL SIDE SPECIFICATIONS				
Number and type of ports provided	Up to 24 async	2 async ports	16 LUs on LAN	Up to 8 async
Devices supported	Virtually any ASCII device, CRT, printer, PC	Virtually any ASCII device, CRT, printer, PC	MacIntosh PC	Most async ASCII terminals and PCs
Connections supported	Direct, dial-up, modem	Direct, dial-up, modem	LAN based	Direct, dial-up, leased line
TRANSMISSION SPEC. (Terminal Line)				
Maximum transmission, in bps	19.2K	9600	230K bps	9600
Maximum aggregate input rate, in bps	80K (approx.)	19.2K	230K bps	19.2K
Synchronization	Async/sync	Asynchronous	Synchronous	Asynchronous
Transmission mode	Full duplex	Full duplex	Half duplex	Half/full duplex
Protocols supported	TTY, custom	TTY, custom	SNA	Asynchronous
Codes supported	ASCII, EBCDIC	ASCII, EBCDIC	EBCDIC	ASCII
Interfaces supported	RS-232-C, MIL STD-188	RS-232-C	RS-422	RS-232-C
DIAGNOSTICS	Self-test, status LEDs, diagnostic port	Status LEDs, diagnostic port	Self-test, LEDs	Self-tests, status LEDs, remotely accessible diag. through term port.
PRICING AND AVAILABILITY				
Purchase, \$	9,000—15,000	800—1,500	2,725	3,300
Rental, \$/month-to-month	Terms vary	Terms vary	Not applicable	Contact vendor
Installation, \$	—	—	50	From 250
Maintenance, \$ Annual	1st yr inc. then \$1,200	1st yr inc. then \$1,200	250	85—165
Serviced by	ITT Servcom, vendor, factory, spares	Vendor, factory, spares	Vendor, dealer	Vendor, depot
Availability	30 days	30 days	14 days	30—60 days
Date of first comm. delivery of this model	August 1985	1986	August 1985	1984
Number installed to date	30	Info. not available	250	300+
COMMENTS	All capabilities of MZ-80 IMIU plus multi-host access; file transfer, PC support utilities, Unix System V, CP/M emulation for up to 24 users, laser printer support	All capabilities of MZ-80 IMIU for two async ports	May 1986 additions incl MacWindows 3270 (four simultaneous sessions in each MacIntosh) and host-based file transfer	The ATC operates as a node in Tymnet network



Conversion Systems/Terminal Controllers

MANUFACTURER & MODEL	Wall Data DCF Series	Wall Data Datagate/PC		
DEVICE TYPE	Protocol converter	Protocol converter		
CONVERSION PERFORMED	ASCII to EBCDIC	ASCII to EBCDIC		
SPECIFIC DEVICE EMULATED	3274, 5251 model 12	3274, 5251 model 12		
SPECIFIC FUNCTIONALITY PROVIDED	Async ASCII CRT to IBM S/370 or S/3X	Async ASCII CRT to IBM S/370 or S/3X		
VIRTUAL SCREEN SIZES SUPP., in char.	—	—		
COMMAND PORT SUPPORTED	—	—		
HOST SIDE SPECIFICATIONS	—	—		
Specific hosts supported	System 34/36/38	System 34/36/38		
Number and type of host lines supported	—	—		
Number host sessions supported concurrently	Up to 16 SNA and/or BSC	Up to 16 SNA and/or BSC		
Connections supported	Direct, dial-up, leased	Direct, dial-up, leased		
Connection to host via controller	IBM 3274	IBM 3274		
TRANSMISSION SPEC. (Host Line)	—	—		
Maximum transmission, in bps	19.2K	19.2K		
Synchronization	Synchronous	Synchronous		
Transmission mode	Half/full duplex	Half/full duplex		
Protocols supported	BSC, SNA/SDLC	BSC, SNA/SDLC		
Codes supported	ASCII, EBCDIC	ASCII, EBCDIC		
Interface	RS-232-C	RS-232-C, RS-422		
Clocking	Internal	Internal		
TERMINAL SIDE SPECIFICATIONS	—	—		
Number and type of ports provided	Up to 17 async	Up to 5 async		
Devices supported	All major async termi- nals	All major async termi- nals		
Connections supported	Direct, dial-up	Direct, dial-up		
TRANSMISSION SPEC. (Terminal Line)	—	—		
Maximum transmission, in bps	19.2K	19.2K		
Maximum aggregate input rate, in bps	19.2K	19.2K		
Synchronization	Asynchronous	Asynchronous		
Transmission mode	Full duplex	Full duplex		
Protocols supported	Asynchronous	Asynchronous		
Codes supported	ASCII	ASCII		
Interfaces supported	RS-232-C	RS-232-C, RS-422		
DIAGNOSTICS	Via software	Via software		
PRICING AND AVAILABILITY	—	—		
Purchase, \$	3,995-5,995	2,495		
Rental, \$/month-to-month	Not applicable	Not applicable		
Installation, \$	\$500/time & expenses	Not applicable		
Maintenance, \$ Annual	500—900	350		
Serviced by	Vendor, factory	—		
Availability	—	—		
Date of first comm. delivery of this model	30 days	30 days		
Number installed to date	October 1983	February 1986		
COMMENTS	450	10		
	Multifunction communi- cations controller; provides access to multiple IBM or other hosts; dial-back security is optional	Comes with proprietary operating system that supports multiple, concurrent protocols and other communications tasks; integrated dial- back security incl.		

MEMORANDUM FOR THE RECORD

DATE: 10/10/54

RE: [Illegible]

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Conversion Systems/Terminal Controllers  
Addendum

MANUFACTURER & MODEL	Memotec Data, Inc. SP/8400 BSC 3270	Memotec Data, Inc. SP/8400 SNA/SDLC	Memotec Data, Inc. SP/8400 2780/3780	Perle Communication Systems PerleCom 350/SNA
DEVICE TYPE	Protocol converter	Protocol converter	Protocol converter	Protocol converter, commun. controller
CONVERSION PERFORMED	BSC 3270 to X.25	SNA/SDLC to X.25	2780/3780 to X.25	ASCII to EBCDIC, async to SNA/SDLC
SPECIFIC DEVICE EMULATED	—	—	—	IBM 3274 model 51C, 3276 model 12, 3770
SPECIFIC FUNCTIONALITY PROVIDED	BSC 3270 access to hosts via X.25 PDN	SNA/SDLC access to NPSI hosts via X.25 PDN	BSC 2780/3780 KJE access to host via X.25 PDN	Any ASCII CRT to IBM 3278, 3279; PC to IBM 3278, 3777, 3767, async ASCII printer to 328X 1920; others available
VIRTUAL SCREEN SIZES SUPP., in char.	1920	Unrestricted	Not applicable	No
COMMAND PORT SUPPORTED	Yes	Yes	Yes	No
HOST SIDE SPECIFICATIONS				
Specific hosts supported	Any hosts running BSC 3270 application	Any host running NPSI	Any hosts running BSC 2780/3780 application	Any IBM mainframe
Number and type of host lines supported	—	—	—	Two SNA/SDLC
Number host sessions supported concurrently	Six	Six	Six	32
Connections supported	Direct, multipoint on leased line, PTP on dial-up	Direct, multipoint on leased line, PTP on dial-up	Direct, multipoint on leased line, PTP on dial-up	Direct, multipoint, point-to-point
Connection to host via controller	37XX front-end processor	37XX front-end proces- sor with NPSI	37XX front-end processor	IBM 37X5 or equivalent
TRANSMISSION SPEC. (Host Line)				
Maximum transmission, in bps	9600	9600	9600	19.2K
Synchronization	Synchronous	Synchronous	Synchronous	Synchronous
Transmission mode	Half duplex	Half duplex	Half duplex	Half/full duplex
Protocols supported	BSC III 3270	SNA/SDLC	BSC II 2780/3780	SNA/SDLC
Codes supported	EBCDIC	—	EBCDIC	EBCDIC
Interface	Six RS-232-C	Six RS-232-C	Six RS-232-C	RS-232-C
Clocking	Internal/external	Internal/external	Internal/external	Internal/external
TERMINAL SIDE SPECIFICATIONS				
Number and type of ports provided	Up to six synchronous	Up to six synchronous	Up to six synchronous	Up to 16 asynchronous
Devices supported	IBM BSC 3270 compatible	IBM SNA/SDLC and compatible	BSC 2780/3780 and compatible	Virtually any async ASCII printer, CRT, or PC
Connections supported	Direct, dial-up	Direct, dial-up	Direct, dial-up	Direct, dial-up
TRANSMISSION SPEC. (Terminal Line)				
Maximum transmission, in bps	9600	9600	9600	19.2K
Maximum aggregate input rate, in bps	48K	48K	48K	153.6K
Synchronization	Synchronous	Synchronous	Synchronous	Asynchronous
Transmission mode	Half duplex	Half duplex	Half duplex	Half/full duplex
Protocols supported	BSC III	SDLC	BSC II	—
Codes supported	EBCDIC	—	EBCDIC	ASCII
Interfaces supported	RS-232-C, V.24	RS-232-C, V.24	RS-232-C, V.24	RS-232-C, RS-422
DIAGNOSTICS	Local/remote test, status LEDs, self tests	Local/remote test, status LEDs, self tests	Local/remote test, status LEDs, self tests	Self test or from any user port
PRICING AND AVAILABILITY				
Purchase, \$	Contact vendor	Contact vendor	Contact vendor	4,200 (U.S.)
Rental, \$/month-to-month	Contact vendor	Contact vendor	Contact vendor	—
Installation, \$	Contact vendor	Contact vendor	Contact vendor	—
Maintenance, \$ Annual	Contact vendor	Contact vendor	Contact vendor	—
Serviced by	Memotec	Memotec	Memotec	Vendor on-site, factory, third party
Availability	Contact vendor	Contact vendor	Contact vendor	14 days
Date of first comm. delivery of this model	Info. not available	Info. not available	Info. not available	June 1984
Number installed to date	Info. not available	Info. not available	Info. not available	Info. not available
COMMENTS				Concurrent, interactive and batch 3274 and 3770 emulation; support for asynchronous block-mode terminals; data encryp- tion.

Conversion Systems/Terminal Controllers  
 Addendum

MANUFACTURER & MODEL	Perle Communication Systems PerleCom 350/525	Perle Communication Systems PerleCom 350/294	Perle Communication Systems PerleCom 350/BSC	
DEVICE TYPE	Protocol converter, commun. controller	Protocol converter, commun. controller	Protocol converter, commun. controller	
CONVERSION PERFORMED	ASCII to EBCDIC, async to SNA/SDLC	ASCII to EBCDIC, async to SNA/SDLC	ASCII to EBCDIC, async to bisync	
SPECIFIC DEVICE EMULATED	Two 5251 model 12s (to host)	Up to four 5251/12s or 5294 controllers	IBM 3274 model 51C, 3276 model 12	
SPECIFIC FUNCTIONALITY PROVIDED	Any ASCII printer to 52XX printer; asynchronous ASCII terminal or PC to 5251 or 5291 m. 11	Any ASCII printer to 52XX printer; asynchronous ASCII terminal or PC to 5251 or 5291 m. 11	Any ASCII CRT to IBM 327X; async ASCII printer to IBM 328X	
VIRTUAL SCREEN SIZES SUPP., in char.	1920	1920	1920	
COMMAND PORT SUPPORTED	Yes	Yes	Yes	
HOST SIDE SPECIFICATIONS	IBM System 34, 36, 38	IBM System 34, 36, 38	Any IBM mainframe	
Specific hosts supported	IBM System 34, 36, 38	IBM System 34, 36, 38	Any IBM mainframe	
Number and type of host lines supported	One SDLC	One SDLC	One BSC	
Number host sessions supported concurrently	16	32	Not applicable	
Connections supported	Direct, multipoint, point-to-point	Direct, multipoint, point-to-point	Direct, multipoint, point-to-point	
Connection to host via controller	SLCA, MLCA, or ELCA communications adapter	SLCA, MLCA, or ELCA communications adapter	IBM 37X5 or equivalent	
TRANSMISSION SPEC. (Host Line)	9600 Synchronous	19.2K Synchronous	9600 Synchronous	
Maximum transmission, in bps	Half/full duplex	Half/full duplex	Half/full duplex	
Synchronization	SNA/SDLC	SNA/SDLC	BSC	
Transmission mode	EBCDIC	EBCDIC	EBCDIC	
Protocols supported	RS-232-C	RS-232-C	RS-232-C	
Codes supported	Interface	Interface	Interface	
Interface	Internal/external	Internal/external	Internal/external	
Clocking	Internal/external	Internal/external	Internal/external	
TERMINAL SIDE SPECIFICATIONS	Up to 16 asynchronous	Up to 16 asynchronous	Up to 16 asynchronous	
Number and type of ports provided	Virtually any async ASCII terminal, printer, PC	Virtually any async ASCII terminal, printer, PC	Virtually any async ASCII printer, CRT, or PC	
Devices supported	Direct, dial-up	Direct, dial-up	Direct, dial-up	
Connections supported	Direct, dial-up	Direct, dial-up	Direct, dial-up	
TRANSMISSION SPEC. (Terminal Line)	9600	9600	19.2K	
Maximum transmission, in bps	153.6K	153.6K	153.6K	
Maximum aggregate input rate, in bps	Asynchronous	Asynchronous	Asynchronous	
Synchronization	Half/full duplex	Half/full duplex	Full duplex	
Transmission mode	—	—	Asynchronous	
Protocols supported	ASCII	ASCII	ASCII	
Codes supported	RS-232-C, RS-422	RS-232-C, RS-422	RS-232-C, RS-422	
Interfaces supported	Self test or from any user port	Self test or from any user port	Self test, diagnostic port	
DIAGNOSTICS	Self test or from any user port	Self test or from any user port	Self test, diagnostic port	
PRICING AND AVAILABILITY	Purchase, \$ 4,760 (U.S.)	Purchase, \$ 4,760 (U.S.)	Purchase, \$ 4,760 (U.S.)	
Purchase, \$	Rental, \$/month-to-month —	Rental, \$/month-to-month —	Rental, \$/month-to-month —	
Rental, \$/month-to-month	Installation, \$ —	Installation, \$ —	Installation, \$ —	
Installation, \$	Maintenance, \$ Annual —	Maintenance, \$ Annual —	Maintenance, \$ Annual —	
Maintenance, \$ Annual	Serviced by Vendor on-site, factory, third party	Serviced by Vendor on-site, factory, third party	Serviced by Vendor on-site, factory, third party	
Serviced by	Availability 14 days	Availability 14 days	Availability 14 days	
Availability	Date of first comm. delivery of this model June 1984	Date of first comm. delivery of this model October 1985	Date of first comm. delivery of this model September 1985	
Date of first comm. delivery of this model	Number installed to date Info. not available	Number installed to date Info. not available	Number installed to date Info. not available	
Number installed to date	COMMENTS	File transfer support capability (FSU or VDISK).		
COMMENTS				

### X.25 Packet Assemblers/Disassemblers (PADs)

MANUFACTURER & MODEL	Advanced Computer Communications ACP 629	Amdahl 4440	Amdahl 4450	Amdahl 4460
NETWORK CERTIFICATION	Telenet, Tymnet, Uninet Accunet Packet Service	Telenet, Tymnet, Uninet, Accunet Packet Service, British Tele- com PSS, Itapac, Saponet	Telenet, Tymnet, Uninet, Accunet Packet Service, British Tele- com PSS, Itapac, Saponet X.25, DSP	Telenet, Tymnet, Uninet, Accunet Packet Service, British Tele- com PSS, Itapac, Saponet
CCITT RECOMMENDATION SUPPORTED				
BUFFER MEMORY CAPACITY	64K	128K	128K	512K
ADDITIONAL RAM AVAILABLE	—	—	—	—
DEVICE CONFIGURATIONS	Host, terminal con- centrator	Host/terminal concentrator	Host/terminal concentrator	Host/terminal concentrator
INPUT SPECIFICATIONS				
Number and type of devices supported	Up to 32 asynchronous terminals	Up to 40 asynchronous ports	Up to 16 bisync 2370 ports	Up to 40 ports: 16 bisync, RJE; 24 async
Connections supported	Direct connection, access via dial-up modem	Direct, dial-up	Direct connect, multi- point 3270	Direct connect, multi- point 3270
Maximum input rate per port, in bps	19.2K	19.2K	19.2K	19.2K
Maximum aggregate input rate, in bps	—	80K	100K	80K
Synchronization	Asynchronous	Asynchronous	3270 bisynchronous	Async, bisync
Transmission mode	Full duplex	Half duplex	Half duplex	Half duplex
Interface	RS-232-C	RS-232-C, V.24	RS-232-C, V.24	RS-232-C, V.24
Autospeed/autoparity available	—	Yes	—	Yes
Channel config. data downline loadable	—	Yes	Yes	Yes
Ports config. for perm./switched circ.	No, switched only	Yes, both	Yes, both	Yes, both
NETWORK CHANNEL SPECIFICATIONS				
Number X.25 channels supported	1 X.25 network trunk	Up to 8	8	8
Interface	RS-232-C, RS-422, V.35	RS-232-C, V.24	RS-232-C, V.24	RS-232-C, V.24
Maximum transmission rate, in bps	56K	19.2K	19.2K	19.2K
Synchronization	Synchronous	Synchronous	Synchronous	Synchronous
Transmission mode	Full duplex	Half/full duplex	Half/full duplex	Half/full duplex
Number virtual circuits supported	32	40	128	128
Max. window size supported, in frames	7	7	7	7
Link-level framing supported	HDLC-LAPB	HDLC	HDLC	HDLC
DIAGNOSTICS	Self-tests	On-line network diag., status LEDs	On-line network diag., status LEDs	On-line network diag., status LEDs
FEATURES				
Channel priority assignment	No	Yes	Yes	Yes
Password protection	No	Yes	Yes	Yes
Supervisory port	Yes	Yes	Yes	Yes
Echoplex	Yes	Yes	—	Yes
Autodialer supported	No	No	No	No
PRICING AND AVAILABILITY				
Purchase, \$	6,490	7,200	11,500	15,000
Rental, \$ month-to-month	None	—	—	—
Installation, \$	Time and maintenance	400	645	645
Maintenance, \$ Annual	1,164	840	1,320	1,320
Serviced by	Vendor	Vendor	Vendor	Vendor
Availability	30 days	30 days	30 days	30 days
Date of first comm. delivery of this model	1985	1982	1982	1984
Number installed to date		300	1,500	150
COMMENTS	Host resident front end supports locally attach- ed terminal access to X.25 network & remote terminal access to host from the X.25 network; supports full-screen editing terminal cap.			

### X.25 Packet Assemblers/Disassemblers (PADs)

MANUFACTURER & MODEL	BBN Communications C/10 PAD	Black Box Corp. X.25 PAD-4/X.25 PAD-8	Cableshare CSI-X.25	Cableshare LSI-X.25 IC
NETWORK CERTIFICATION	No	Telenet, Tymnet, Uninet	Telenet, Tymnet, Datapac, Uninet, Infoswitch, and others	Telenet, Tymnet, Datapac, Uninet, Infoswitch, and others
CCITT RECOMMENDATION SUPPORTED	All	X.3, X.28, X.29, X.121, X.25	X.25 1, 2, & 3; X.3, X.28, X.29	X.25 levels 1, 2, & 3; X.3, X.29
BUFFER MEMORY CAPACITY	384K + 64K/8 lines	—	256K	64K
ADDITIONAL RAM AVAILABLE	—	—	Yes	Yes
DEVICE CONFIGURATIONS	Host, terminal concentrator	Port concentrator, div. multiplexer, terminal concentrator	Host concentrator, terminal concentrator, stat mux	Host/terminal concentrator, Telex/Teletex gateway
INPUT SPECIFICATIONS				
Number and type of devices supported	Up to 64 async lines, up to 32 sync lines; 128 devices max.	4 async terminals/ 8 async terminals	Up to 16 asynchronous or synchronous	Up to 64 asynchronous or 8 synchronous teletex
Connections supported	Direct, dial-up, leased line	Direct, dedicated, dial-up terminal connections	Direct, dial-up	Direct, dial-up
Maximum input rate per port, in bps	9600	—	19.2K	9600
Maximum aggregate input rate, in bps	112K	—	—	—
Synchronization	Async/sync	Asynchronous	Sync/async	Async/sync
Transmission mode	Half/full duplex	Half/full duplex	Full duplex	Full duplex
Interface	RS-232-C, V.24	RS-232-C, V.24, V.28	RS-232-C, RS-423	RS-232-C, RS-423
Autospeed/autoparity available	Yes	—	Yes	Yes
Channel config. data downline loadable	Yes	—	Yes	Yes
Ports config. for perm./switched circ.	Yes	—	Yes	Yes
NETWORK CHANNEL SPECIFICATIONS				
Number X.25 channels supported	1 std.; 2 opt.	26	2	5
Interface	RS-232-C, V.24, V.35	RS-232-C, V.24, V.28	RS-232-C, RS-423	RS-232-C, RS-423
Maximum transmission rate, in bps	64K/channel	9600 bps	64K per channel	56K per channel
Synchronization	Synchronous	Asynchronous	Synchronous	Synchronous
Transmission mode	Full duplex	Half/full duplex	Full duplex	Full duplex
Number virtual circuits supported	128	4—8	Up to 17	Up to 64
Max. window size supported, in frames	7	—	7	7
Link-level framing supported	HDLC	DTE or DCE appearance & user definable values	HDLC	HDLC—BSC/ASCII
DIAGNOSTICS	Self-tests, LEDs, remote & local tests	Terminal test, local test, remote test, system test	Self-tests, status LEDs, remote check-out through network, central netwk. management facilities	Self-test, on-board link diag., remote loading of dial over X.25
FEATURES				
Channel priority assignment	No	—	No	No
Password protection	Yes	—	Yes; multiple levels	Yes
Supervisory port	Yes	No	Yes	Yes
Echoplex	Yes	No	Yes	Yes
Autodialer supported	No	No	Yes	Yes
PRICING AND AVAILABILITY				
Purchase, \$	4,000—24,000	2,050/2,750	1,900—4,000	5,000 (8 prt.); 1,760 each add. port
Rental, \$ month-to-month	—	None	—	—
Installation, \$	—	None	300	600
Maintenance, \$ Annual	—	None	—	300
Serviced by	Vendor on site, factory	Factory	3M	DEC
Availability	120 days	Stock	30 days	30 days
Date of first comm. delivery of this model	February 1984	1985	September 1983	1980
Number installed to date	—	—	400	800
COMMENTS	BSC 3270, 2780/3780, HASP, SDLC support available; also expandable, multiple micro-processors, automatic virtual set-up, call accounting, downline loading of configuration and software parameters.		Has 16-bit 80186 micro-processor; remote access for centralized monitoring & network management; on-line help information; supports IBM SDLC and BSC	Uses DEC LSI-II family hardware; custom-enhancement of software available; local forms storage and field editing

### X.25 Packet Assemblers/Disassemblers (PADs)

MANUFACTURER & MODEL	Cableshare LSI-X.25 Gateway	ComDesign TX-700 X.25 PAD	Commtext Cx-25 PAD	Computer Communications, Inc. CC19124 X.25 Controller
NETWORK CERTIFICATION	Telenet, Tymnet, Datapac Uninet, Infoswitch, and others	Telenet, Tymnet, Uninet, Transpac, Datapac, IPSS, Euronet	Telenet	Telenet, Tymnet
CCITT RECOMMENDATION SUPPORTED	X.25, X.3, X.28, X.29	Full 1980 X.25 LAPB, X.3, X.28, X.29	X.25 levels 1, 2, & 3; X.3, X.28, X.29	X.25 levels 1, 2, & 3; X.29
BUFFER MEMORY CAPACITY	128K	Up to 320K bytes	32K	Dynamic buffer pool
ADDITIONAL RAM AVAILABLE	Yes	—	No	—
DEVICE CONFIGURATIONS	Host/terminal	Terminal concentrator, switching multiplexer	Terminal concentrator	Host concentrator (emulation mode)
INPUT SPECIFICATIONS				
Number and type of devices supported	Up to 2 Ethernet or 48 async	Up to 32	Up to 25 async terminals microcomputers and IBM 3278s	—
Connections supported	Direct, dial-up	Direct w/wo modem, dial-up	Direct, dial-up	—
Maximum input rate per port, in bps	19.2K	9600	19.2K	—
Maximum aggregate input rate, in bps	80K	9600	—	—
Synchronization	Async/sync	Asynchronous	Asynchronous	—
Transmission mode	Full duplex	Full duplex	Full duplex	—
Interface	RS-232-C, RS-423	RS-232-C, V.24	25 RS-232-C, RS-422, CoaxA 20mA cur.lp, Coax ln.dr.	—
Autospeed/autoparity available	Yes	—	Yes	—
Channel config. data downline loadable	Yes	Yes	Yes	—
Ports config. for perm./switched circ.	Yes	Yes	Switched only	Yes
NETWORK CHANNEL SPECIFICATIONS				
Number X.25 channels supported	Up to 3	1	1	32
Interface	RS-232-C, RS-423	V.24	RS-232-C	RS-232-C
Maximum transmission rate, in bps	56K	19.2K	19.2K	9600 bps
Synchronization	Synchronous	Synchronous	Synchronous	Synchronous
Transmission mode	Full duplex	—	Full duplex	Full duplex
Number virtual circuits supported	127	33	25	240
Max. window size supported, in frames	7	Window size negotiation	8	7
Link-level framing supported	HDLC, BSC	LAPB	HDLC	HDLC
DIAGNOSTICS	Remote and local tests	Link loopback, pattern test, self-test, RAM/ROM tests, status LEDs, microprocessor test	Self tests, status LEDs call monitoring via supervisory port	LEDs
FEATURES				
Channel priority assignment	No	No	No	No
Password protection	Yes	—	Yes	No
Supervisory port	Yes	Executive port*	Yes	No
Echoplex	Yes	Yes	Yes	No
Autodialer supported	Yes	Yes	Yes	No
PRICING AND AVAILABILITY				
Purchase, \$	5,000—50,000	Contact vendor	3,050	Contact Vendor
Rental, \$ month-to-month	—	Contact vendor	Distributor determined	Contact Vendor
Installation, \$	600—2,000	Contact vendor	Distributor determined	Contact Vendor
Maintenance, \$ Annual	300—1,250	Contact vendor	Distributor determined	Contact Vendor
Serviced by	DEC	Vendor	M/A-Com, on-site	Vendor
Availability	45 days	—	60 days	90 days
Date of first comm. delivery of this model	1980	1984	1985	—
Number installed to date	250	Info. not available	—	—
COMMENTS	Gateway between Ether- net, X.25, DEC hosts, and asynchronous termi- nals.	Hardwired Executive Port provides testing and monitoring functions; features incl. abbrevi- ated addressing, support for perm. vir- tual circuits, autocal, user-configurable pro- files; options incl. int. 4800 or 9600 bps modem.	The Cx.25 is an option to the Commtext Cx-83 & Cx-86 terminal controll; in addition to outbound call generation (by name) the Cx.25 accepts incoming call to Cx-83/6 user defined rotary hunt groups	Dynamic application switching

### X.25 Packet Assemblers/Disassemblers (PADs)

MANUFACTURER & MODEL	Datagram Corp. DMX-2502	Datagram Corp. DMX-2504	Datagram Corp. DMX-2508	Datagram Corp. DMX-2516
NETWORK CERTIFICATION	Telenet, Tymnet, Datapac	Telenet, Tymnet, Datapac	Telenet, Tymnet, Datapac	Telenet, Tymnet, Datapac
CCITT RECOMMENDATION SUPPORTED	X.25 level 3	X.25 level 3	X.25 level 3	X.25 level 3
BUFFER MEMORY CAPACITY	8K Bytes	8K Bytes	16K Bytes	16K Bytes
ADDITIONAL RAM AVAILABLE	—	—	—	—
DEVICE CONFIGURATIONS	Host concentrator Terminal concentrator	Host concentrator Terminal concentrator	Host concentrator Terminal concentrator	Host concentrator Terminal concentrator
INPUT SPECIFICATIONS				
Number and type of devices supported	2	4	8	16
Connections supported	“Direct dialup”	Direct dialup	Direct dialup	Direct dialup
Maximum input rate per port, in bps	9600 bps	9600 bps	9600 bps	9600 bps
Maximum aggregate input rate, in bps	38.4K bps	38.4K bps	38.4K bps	38.4K bps
Synchronization	Asynchronous	Asynchronous	Asynchronous	Asynchronous
Transmission mode	Half/full duplex	Half/full duplex	Half/full duplex	Half/full duplex
Interface	RS-232-C, V.24	RS-232-C, V.24	RS-232-C, V.24	RS-232-C, V.24
Autospeed/autoparity available	Yes, both	Yes, both	Yes, both	Yes, both
Channel config. data downline loadable	Yes	—	—	—
Ports config. for perm./switched circ.	Yes, both	Yes, both	Yes, both	Yes, both
NETWORK CHANNEL SPECIFICATIONS				
Number X.25 channels supported	1	1	1	1
Interface	RS-232-C, V.24	RS-232-C, V.24	RS-232-C, V.24	RS-232-C, V.24
Maximum transmission rate, in bps	9600 bps	9600 bps	9600 bps	9600 bps
Synchronization	Synchronous	Synchronous	Synchronous	Synchronous
Transmission mode	Full duplex	Full duplex	Full duplex	Full duplex
Number virtual circuits supported	2	4	8	16
Max. window size supported, in frames	7	7	7	7
Link-level framing supported	HDLC	HDLC	HDLC	HDLC
DIAGNOSTICS	Interface & logical status, loopback test, RAM & program memory test & memory dumps	Interface & logical status, loopback test, RAM & program memory test & memory dumps	Interface & logical status, loopback test, RAM & program memory test & memory dumps	Interface & logical status, loopback test, RAM & program memory test & memory dumps
FEATURES				
Channel priority assignment	Yes	Yes	Yes	Yes
Password protection	Yes	Yes	Yes	Yes
Supervisory port	Yes	Yes	Yes	Yes
Echoplex	Yes	Yes	Yes	Yes
Autodialer supported	Yes	Yes	Yes	Yes
PRICING AND AVAILABILITY				
Purchase, \$	1,750	1,995	2,995	3,750
Rental, \$ month-to-month	—	—	—	—
Installation, \$	Customer installed	Customer installed	Customer installed	Customer installed
Maintenance, \$ Annual	Contact vendor	Contact vendor	Contact vendor	Contact vendor
Serviced by	Factory	Factory	Factory	Factory
Availability	30 days	30 days	30 days	30 days
Date of first comm. delivery of this model	1979	1979	1979	1979
Number installed to date	—	—	—	—
COMMENTS	Full communication protocol conversion Uniscope CCITT X.25, command language (X.28) fastcall in/outcomming call facility	Full communication protocol conversion Uniscope CCITT X.25, command language (X.28) fastcall in/outcomming call facility	Full communication protocol conversion Uniscope CCITT X.25, command language (X.28) fastcall in/outcomming call facility	Full communication protocol conversion Uniscope CCITT X.25, command language (X.28) fastcall in/outcomming call facility



### X.25 Packet Assemblers/Disassemblers (PADs)

MANUFACTURER & MODEL	Digital Communications Associates X.25/PAD	Dynpac Multi-PAD X.25	Dynapac Mono-PAD X.25	Dynapac Proto-PAD X.25
NETWORK CERTIFICATION	Telenet, Tymnet, Uninet, Autonet, Datapac, & others	Worldwide	Worldwide	Worldwide
CCITT RECOMMENDATION SUPPORTED	All	X.25 levels 1, 2, & 3; X.3, X.28, X.29, X.121	X.25 levels 1, 2, & 3; X.3, X.28, X.29, X.121	X.25 levels 1, 2, & 3; X.3, X.28, X.29, X.121
BUFFER MEMORY CAPACITY ADDITIONAL RAM AVAILABLE DEVICE CONFIGURATIONS	Approx 15K char. —	10K ROM, 14K RAM Yes; 20K Host concentrator, terminal concentrator, front end processor	10K ROM, 14K RAM No Terminal connection	16K bytes RAM No Host or cluster emulator
INPUT SPECIFICATIONS Number and type of devices supported	Up to 32 async devices	4, 8, 12, or 16 async ports	1 asynchronous device	1 3270 contr. or mult. contr. running multidrop via modem starting dev. Direct
Connections supported	Direct, dial-up via modem	Direct, dial-up via modem	Direct, dial-up via modem	Direct
Maximum input rate per port, in bps Maximum aggregate input rate, in bps Synchronization	Up to 9600 To 57.6K Asynchronous	9600 — Asynchronous	Up to 9600 — Asynchronous	9600 — Synchronous
Transmission mode Interface	Half/full duplex RS-232-C; V.24, V.28, 20 mA current loop	Full duplex RS-232-C, V.24	Full duplex RS-232-C, V.24	Full duplex 1 RS-232-C, V.24
Autospeed/autoparity available Channel config. data downline loadable Ports config. for perm./switched circ.	Yes Remote console Yes; both	Yes Yes Yes, both	Yes No SVC only	No Yes SVC only
NETWORK CHANNEL SPECIFICATIONS Number X.25 channels supported Interface	1 RS-232-C, V.24, V.28	1 RS-232-C, V.24, X.21 bis	1 X.21 bis, RS-232-C, V.24	1 RS-232-C, V.24, X.21 bis
Maximum transmission rate, in bps Synchronization Transmission mode Number virtual circuits supported Max. window size supported, in frames Link-level framing supported	Up to 19.2K Synchronous Full duplex Up to 33 1 to 7 HDLC, BSC, LAP/LAPB, DTE/DCE	9600 Synchronous Full duplex Up to 17 7 HDLC, LAPB, or LAP, BSC/ EBDIC, BSC/ASCII	9600 Synchronous Full duplex 1 7 LAP, LAPB, HDLC, BSC/ EBDIC, BSC/ASCII	9600 Synchronous Full duplex 1 7 LAPB, HDLC
DIAGNOSTICS	Status LEDs, built-in diagnostics, console	Local & remote access statistics & status LEDs	Status LEDs	Local and remote access, statistics and status LEDs
FEATURES Channel priority assignment Password protection Supervisory port Echoplex Autodialer supported	No No Yes; console port Yes No	No Yes Yes Yes Yes	No No No Yes No	No Yes Yes Yes No
PRICING AND AVAILABILITY Purchase, \$	1,895—8,445	2,205—2,905 (108); 3,415—5,500 (116)*	695—933	2,610
Rental, \$ month-to-month Installation, \$ Maintenance, \$ Annual Serviced by Availability Date of first comm. delivery of this model Number installed to date	From 76 to 338 (12 mo.) Contact vendor Contact vendor Vendor	Contact vendor Contact vendor Contact vendor Vendor or third party 30 1982 4,500	Contact Vendor Contact Vendor Contact Vendor Vendor 30 days ARO 1984 359	Contact vendor Contact vendor Contact vendor Vendor or third party 30 days ARO 1985 Information not avail.
COMMENTS	Half duplex on 2- or 4-wire circuits. Configurable from ASCII terminal console	Features include: spec. support for VT100, HP; Baudot to ASCII conver.; mnemonic addressing; also offered are X.25 switching equipment: multiswitch X.25 for low speed applications, multiswitch X.25 model 60 for high speed applications  *Prices vary depending on options and no. ports	Single port PAD, autocall feature, M-bit support	

### X.25 Packet Assemblers/Disassemblers (PADs)

MANUFACTURER & MODEL	EDA Instruments, Inc. UTX.2500 Series	EDA Instruments, Inc. ATX.2500 Series	EDA Instruments, Inc. BTX.2500 Series	EDA Instruments, Inc. PCX.2500
NETWORK CERTIFICATION  CCITT RECOMMENDATION SUPPORTED  BUFFER MEMORY CAPACITY ADDITIONAL RAM AVAILABLE DEVICE CONFIGURATIONS  INPUT SPECIFICATIONS Number and type of devices supported  Connections supported  Maximum input rate per port, in bps Maximum aggregate input rate, in bps Synchronization  Transmission mode Interface  Autospeed/autoparity available Channel config. data downline loadable Ports config. for perm./switched circ. NETWORK CHANNEL SPECIFICATIONS Number X.25 channels supported Interface  Maximum transmission rate, in bps Synchronization Transmission mode Number virtual circuits supported Max. window size supported, in frames Link-level framing supported  DIAGNOSTICS  FEATURES Channel priority assignment Password protection Supervisory port Echoplex Autodialer supported  PRICING AND AVAILABILITY Purchase, \$  Rental, \$ month-to-month Installation, \$ Maintenance, \$ Annual Serviced by Availability Date of first comm. delivery of this model Number installed to date COMMENTS	Datapak, Infoswitch, Telenet, Tymnet, Accunet, Uninet, PSS, Datex-P, Transpac, Austpac* X.3, X.28, X.29, X.25 levels 1, 2, & 3  12.5K No Host/terminal concentrator  Up to 15 logical devices running Uniscope/Sperry- link Direct, dial-up, leased  9600 38.4K Synchronous  Half/full duplex RS-232-C  Yes Yes Yes Up to 5 RS-232-C  19.2K Synchronous Full duplex 15 7 HDLC  Interface & logical chan statistics; loopback tests; RAM prog. memory test and dump  Not applicable Yes Yes Yes Yes 3,350 to 15,000  Customer installed — Factory/distributor 30 days December 1982  Data compression/ expansion; extensive network management package, soft configu- ration, switching.  *Also Datanet-1, Data- pak, Telepac	Datapak, Infoswitch, Telenet, Tymnet, Accu- net, Uninet, PSS, Datex-P, Transpac* X.3, X.28, X.29, X.25 levels 1, 2, & 3  12.5K No Host/terminal concentrator  Up to 16 ASCII async devices Direct, dial-up, leased  9600 38.4K Asynchronous  Half/full duplex RS-232-C  Yes Yes Yes Up to 2 RS-232-C  19.2K Synchronous Full duplex 16 7 HDLC  Interface & logical chan statistics; loopback tests; RAM prog. memory test and dump  Not applicable Yes Yes Yes Yes 1,850—10,450  Not applicable Customer installed — Factory/distributor 30 days 1977  Data compression/ expansion; extensive network management package, soft configu- ration, switching.  *Austpac, Datanet-1, Datapak, Telepac	Datapak, Infoswitch, Telenet, Tymnet, Accu- net, Uninet, PSS, Datex-P, Transpac* X.3, X.28, X.29, X.25 levels 1, 2, & 3  12.5K No Host/terminal concentrator  Up to 15 logical devices running Synchronous Poll/Select Direct, dial-up, leased  9600 38.4K Synchronous  Half/full duplex RS-232-C  Yes Yes Yes Up to 5 RS-232-C  19.2K Synchronous Full duplex 15 7 HDLC  Interface & logical chan statistics; loopback tests; RAM prog. memory test and dump  Not applicable Yes Yes Yes Yes 3,210—14,590  Not applicable Customer installed — Factory/distributor 30 days 1985  Data compression/ expansion; extensive network management package, soft configu- ration, switching.  *Austpac, Datanet-1, Datapak, Telepac	Datapak, Infoswitch, Telenet, Tymnet, Accu- net, Uninet, PSS, Datex-P, Transpac* X.3, X.28, X.29, X.25 levels 1, 2 & 3  4.5K—12.5K No Host/terminal concen- trator  Up to 5 ASCII async devices Direct, dial-up, leased  Internal PC rate 38.4K bps Asynchronous  — RS-232-C  Yes Yes Yes 1 RS-232-C  19.2K Synchronous Full duplex 5 7 HDLC  Interface & logical channel statistics; loopback tests; RAM prog. memory test/dump  Not applicable Yes No Yes No 695—995  Not applicable Customer installed — Factory/distributor 1986 —  No software impact; same features as ATX.2500. IBM PC compatible plug-in card.  *Austpac, Datanet-1, Datapak, Telepac

### X.25 Packet Assemblers/Disassemblers (PADs)

MANUFACTURER & MODEL	Gandalf Pin 9101E	General DataComm 2541	General DataComm 2550	General DataComm 2551
NETWORK CERTIFICATION	All major networks	Telenet, Tymnet, Data- pac, etc.	Telenet, Tymnet, Data- pac, etc.	Telenet, Tymnet, Data- pac, etc.
CCITT RECOMMENDATION SUPPORTED	X.25 LAPB levels 1, 2, & 3, X.28, X.29, X.3, Extended X.3	All	X.25 levels 1, 2, & 3	X.25 levels 1, 2, & 3
BUFFER MEMORY CAPACITY	4—12K of data	—	—	—
ADDITIONAL RAM AVAILABLE	No	—	—	—
DEVICE CONFIGURATIONS	PAD, front end to in- face async ports to network, terminal con- centrator, stat mux	Host/terminal	Host/terminal	Host/terminal
INPUT SPECIFICATIONS				
Number and type of devices supported	Up to 16 asynchronous devices	4—16 asynchronous devices	1—4 Burroughs sync	1—6 2780/3780 sync
Connections supported	Any using RS-232-C	Direct, dial-up	Direct, dial-up	Direct, dial-up
Maximum input rate per port, in bps	To 9600	19.2K	9600	9600
Maximum aggregate input rate, in bps	57.6K	153.6K	38.4K	57.6K
Synchronization	Asynchronous	Asynchronous	Synchronous	Synchronous
Transmission mode	Full duplex	Half/full duplex	Half/full duplex	Half/full duplex
Interface	RS-232-C, CCITT V.24/ V.28	RS-232-C/V.24	RS-232-C, V.24	RS-232-C, V.24
Autospeed/autoparity available	Yes	Yes	Yes	Yes
Channel config. data downline loadable	Yes	Yes	Yes	Yes
Ports config. for perm./switched circ.	Yes, either PVC or SVC	Yes, both	Yes, both	Yes, both
NETWORK CHANNEL SPECIFICATIONS				
Number X.25 channels supported	1	1 or 2	1 or 2	1 or 2
Interface	RS-232-C, V.24, V.28	RS-232-C, V.24, V.35	RS-232-C, V.24	RS-232-C, V.24
Maximum transmission rate, in bps	19.2K bps	64K	19.2K	9600
Synchronization	Synchronous	Asynchronous	Synchronous	Synchronous
Transmission mode	Full duplex	Half/full duplex	Half/full duplex	Half/full duplex
Number virtual circuits supported	16	16	6	6
Max. window size supported, in frames	10	7	7	7
Link-level framing supported	HDLC	HDLC	HDLC	HDLC
DIAGNOSTICS	Continuous test mode, loopback tests on line, internal, and external channels, status LEDs	Remote or local line tests, status LEDs, self-tests	Remote or local line tests, status LEDs, self-tests	Remote or local line tests, status LEDs, self-tests
FEATURES				
Channel priority assignment	No	Yes	Yes	Yes
Password protection	Yes	Yes	Yes	Yes
Supervisory port	Yes	Yes	Yes	Yes
Echoplex	Yes	Yes	Yes	Yes
Autodialer supported	Yes; supports external unit	Yes	Yes	Yes
PRICING AND AVAILABILITY				
Purchase, \$	1,950 (4 ch.); 2,550 (8 ch.); 3,650 (16 ch.)	3,630	5,025	3,995
Rental, \$ month-to-month	Contact vendor	—	—	—
Installation, \$	Contact vendor	745	745	745
Maintenance, \$ Annual	Contact vendor	Open	Open	Open
Serviced by	Factory	Vendor-on site	Vendor-on site	Vendor-on site
Availability	30-60 days	60—90 days ARO	60-90 days	60-90 days ARO
Date of first comm. delivery of this model	1/84 (enhanced version)	1985	1985	1985
Number installed to date	—	Info. not available	—	Info. not available
COMMENTS	Fully prompting opera- tor interface; auto-call on channel basis; flexi- ble flow control, incl. X-on/X-off plus CTS or HP ENQ/ACK protocol; provides usage statis- tics.			

### X.25 Packet Assemblers/Disassemblers (PADs)

MANUFACTURER & MODEL	General DataComm 2552	General DataComm 2553	General DataComm GEN*PAC 2520	General DataComm GEN*PAC 2530/2540
NETWORK CERTIFICATION	Telenet, Tymnet, Data-pac, etc.	Telenet, Tymnet, Data-pac, etc.	Telenet, Tymnet, Data-pac, etc.	Telenet, Tymnet, Data-pac, etc.
CCITT RECOMMENDATION SUPPORTED	X.25 levels 1, 2, & 3	X.25 levels 1, 2, & 3	All	X.25 levels 1, 2, & 3 (2530); all (2540)
BUFFER MEMORY CAPACITY	—	—	—	—
ADDITIONAL RAM AVAILABLE	—	—	—	—
DEVICE CONFIGURATIONS	Host/terminal	Host/terminal	Host/terminal	Host/terminal
INPUT SPECIFICATIONS				
Number and type of devices supported	1—6 3270 sync	1—3 SNA/SDLC sync	4 asynchronous	4-16 async
Connections supported	Direct, dial-up	Direct, dial-up	Direct, dial-up	Direct, dial-up
Maximum input rate per port, in bps	9600	19.2K	9600	9600
Maximum aggregate input rate, in bps	57.6K	57.6K	38.4K	153.6K
Synchronization	Synchronous	Synchronous	Asynchronous	Asynchronous
Transmission mode	Half/full duplex	Half/full duplex	Half/full duplex	Half/full duplex
Interface	RS-232-C, V.24	RS-232-C, V.24	RS-232-C, V.24	RS-232-C, V.24
Autospeed/autoparity available	Yes	Yes	Yes	Yes
Channel config. data downline loadable	Yes	Yes	Yes	Yes
Ports config. for perm./switched circ.	Yes, both	Yes, both	Yes, both	Yes, both
NETWORK CHANNEL SPECIFICATIONS				
Number X.25 channels supported	1 or 2	1 or 2	1	1 or 2
Interface	RS-232-C, V.24	RS-232-C, V.24, V.35	RS-232-C, V.24	RS-232-C, V.24
Maximum transmission rate, in bps	19.2K	64K	19.2K	19.2K
Synchronization	Synchronous	Synchronous	Asynchronous	Asynchronous
Transmission mode	Half/full duplex	Half/full duplex	Half/full duplex	Half/full duplex
Number virtual circuits supported	6	3	16	16+
Max. window size supported, in frames	7	7	7	7
Link-level framing supported	HDLC	HDLC	HDLC	HDLC
DIAGNOSTICS	Remote or local line tests, status LEDs, self-tests	Remote or local line tests, status LEDs, self-tests	Remote or local line tests, status LEDs, self-tests	Remote or local line tests, status LEDs, self-tests
FEATURES				
Channel priority assignment	Yes	Yes	Yes	Yes
Password protection	Yes	Yes	Yes	Yes
Supervisory port	Yes	Yes	Yes	Yes
Echoplex	Yes	Yes	Yes	Yes
Autodialer supported	Yes	Yes	Yes	Yes
PRICING AND AVAILABILITY				
Purchase, \$	3,995	5,195	1,715	3,650 (2530) 2,595 (2540)
Rental, \$ month-to-month	—	—	—	—
Installation, \$	745	745	420	745
Maintenance, \$ Annual	—	—	Open	—
Serviced by	Vendor-on site	Vendor-on site	Vendor-on site	Vendor-on site
Availability	60-90 days	60-90 days	60-90 days	60-90 days
Date of first comm. delivery of this model	1985	1985	1985	1985
Number installed to date	—	—	—	—
COMMENTS				

### X.25 Packet Assemblers/Disassemblers (PADs)

MANUFACTURER & MODEL	GTE Telenet TP3005	GTE Telenet TP3/II-3010	GTE Telenet TP3/II-3006	GTE Telenet TP3/II-3025
NETWORK CERTIFICATION	Telenet	Telenet	Telenet	Telenet
CCITT RECOMMENDATION SUPPORTED	All	All	All	All
BUFFER MEMORY CAPACITY	64K	64K	64K	64K
ADDITIONAL RAM AVAILABLE	No	No	No	No
DEVICE CONFIGURATIONS	Host/terminal concentrator	Host/terminal concentrator	Host/terminal concentrator	Concentrate 3005, 3010, & 3006 devices
INPUT SPECIFICATIONS				
Number and type of devices supported	4 or 8 async device lines	Up to 26 async lines; 8 sync lines	4 or 8 async/sync lines	4 or 8 sync X.25 lines
Connections supported	Direct, dial-up	Direct, dial-up	Direct, dial-up	Direct
Maximum input rate per port, in bps	9600	9600	9600	19.2K
Maximum aggregate input rate, in bps	38.3K	38.3K	38.3K	128K
Synchronization	Asynchronous	Async/sync	Async/sync	Synchronous X.25
Transmission mode	Half/full duplex	Half/full duplex	Half/full duplex	Full duplex
Interface	RS-232-C, V.24, V.2B	RS-232-C, V.24	RS-232-C, V.24	RS-232-C, V.24
Autospeed/autoparity available	Yes	Yes	Yes	No
Channel config. data downline loadable	Yes	Yes	Yes	Yes
Ports config. for perm./switched circ.	Switched only	Switched only	Switched only	Switched only
NETWORK CHANNEL SPECIFICATIONS				
Number X.25 channels supported	1	1	1	2
Interface	RS-232-C, V.24	RS-232-C, V.24	RS-232-C, V.24	RS-232-C, V.24, V.35
Maximum transmission rate, in bps	19.2K	19.2K	19.2K	64K
Synchronization	Synchronous, X.25	Synchronous, X.25	Synchronous, X.25	Synchronous, X.25
Transmission mode	Full duplex	Full duplex	Full duplex	Full duplex
Number virtual circuits supported	255	255	255	2040
Max. window size supported, in frames	7	7	7	7
Link-level framing supported	HDLC or BSC	HDLC or BSC	HDLC or BSC	HDLC
DIAGNOSTICS	Remote	Remote	Remote	Remote
FEATURES				
Channel priority assignment	No	No	No	Yes
Password protection	Yes	Yes	Yes	No
Supervisory port	Yes	Yes	Yes	Yes
Echoplex	Yes	Yes	Yes	Yes
Autodialer supported	Yes	Yes	Yes	No
PRICING AND AVAILABILITY				
Purchase, \$	2,500 or 3,500	5,100/2 ports 1,650/8 add'l ports	3,200 or 4,000	6,000 or 7,500
Rental, \$ month-to-month	350 or 600	800	—	—
Installation, \$	400	400	400	400
Maintenance, \$ Annual	360 or 480	780	360 or 480	480 or 600
Serviced by	Vendor on site	Vendor on site	Vendor on site	Vendor on site
Availability	—	—	—	—
Date of first comm. delivery of this model	1983	1983	1985	1985
Number installed to date	—	—	—	—
COMMENTS	Software features: error detection & recovery; autospeed detection to 1200bps; dynamic flow control; alarm messages; autoconnect cap. for directly attached term.; multiple host access; configurable parameters; Network Mgmt Features: realtime event reporting diagnostics accessible from any async terminal on network using TDT-2	Software features: error detection & recovery; autospeed detection to 1200bps; dynamic flow control; alarm messages; autoconnect cap. for directly attached term.; multiple host access; configurable parameters; Network Mgmt Features: realtime event reporting diagnostics accessible from any async terminal on network using TDT-2	Software features: error detection & recovery; autospeed detection to 1200bps; dynamic flow control; alarm messages; autoconnect cap. for directly attached term.; multiple host access; configurable parameters; Network Mgmt Features: realtime event reporting diagnostics accessible from any async terminal on network using TDT-2	Software features: error detection & recovery; autospeed detection to 1200bps; dynamic flow control; alarm messages; autoconnect cap. for directly attached term.; multiple host access; configurable parameters; Network Mgmt Features: realtime event reporting diagnostics accessible from any async terminal on network using TDT-2

### X.25 Packet Assemblers/Disassemblers (PADs)

MANUFACTURER & MODEL	GTE Telenet TP4/II-4200	Hewlett Packard HP 2334A	Infotron Infolinx.25	Memotec Data, Inc. SP/830
NETWORK CERTIFICATION	Telenet	Telenet, Tymnet, Uninet, Datapac, Transpac, and others	Telenet (testing for Tymnet)	Telenet, Tymnet
CCITT RECOMMENDATION SUPPORTED	All	X.25 levels 1, 2, & 3, X.3, X.28, X.29, X.121	X.25 levels 1, 2, & 3; X.3, X.28, X.29, X.121	X.25 Level 1, 2, 3; X.3, S.28, X.29
BUFFER MEMORY CAPACITY ADDITIONAL RAM AVAILABLE DEVICE CONFIGURATIONS	832K No Host/terminal concentrator	Up to 96K ROM, 40K RAM No Statistical multiplexer, cluster controller	— No Terminal concentrator stat. mux.	48K No Host or terminal concentrator, time division multiplexer
INPUT SPECIFICATIONS Number and type of devices supported	Up to 224 async lines; 112 sync lines	Up to 16 async devices (field upgradable)	Up to 16 asynchronous devices	Four asynchronous devices
Connections supported	Direct, dial-up	Direct connect, dial-up via modem	Direct, dial-up	Direct, dial-up
Maximum input rate per port, in bps Maximum aggregate input rate, in bps Synchronization	9600 268.8K Async/sync	9600 153.6K Asynchronous	19.2K async — Asynchronous	9600 bps 38K bps Asynchronous
Transmission mode Interface	Half/full duplex RS-232-C, V.24	Full duplex RS-232-C, V.24, V.28	Full duplex RS-232-C	Half/full duplex RS-232-C, V.24
Autospeed/autoparity available Channel config. data downline loadable Ports config. for perm./switched circ.	Yes Yes Yes, both	Yes Yes Yes	Yes Yes Yes	Yes Yes Yes; both SVC and PVC
NETWORK CHANNEL SPECIFICATIONS Number X.25 channels supported Interface	Up to 224 RS-232-C, V.24, V.35	1 RS-232-C, V.24, V.28	2 RS-232-C, RS-422	One RS-232-C, V.24
Maximum transmission rate, in bps Synchronization Transmission mode Number virtual circuits supported Max. window size supported, in frames Link-level framing supported	64K Synchronous X.25 Full duplex 224 7 HDLC or BSC	19.2K Synchronous Full duplex 64 7 HDLC/LAPB	64K per X.25 channel Synchronous Full duplex 16 7 HDLC, LAPB, or LAP	19.2K bps Synchronous Full duplex 5 7 HDLC
DIAGNOSTICS	Remote	Self-tests, remote and local live tests, status LEDs, loop back tests	Status LEDs, local and remote diagnostics and statistics	Remote/local tests; LEDs
FEATURES Channel priority assignment Password protection Supervisory port Echoplex Autodialer supported	Yes Yes Yes Yes Yes	No Yes Yes Yes Yes	Yes Yes No Yes Yes	Yes Yes Yes Yes Yes
PRICING AND AVAILABILITY Purchase, \$	40,800—74,150	1,800 (FBP)*	2,500—5,500	Contact vendor
Rental, \$ month-to-month Installation, \$ Maintenance, \$ Annual Serviced by Availability Date of first comm. delivery of this model Number installed to date	1,950—2,530 2,120 2,520—4,680 Vendor on site — 1984 —	— — 150 Hewlett Packard 4 weeks January 1985 —	— No charge 1 yr factory warranty Vendor-factory 30 days 1984 —	Contact vendor Contact vendor Contact vendor Memotec Contact vendor Info. not available Info. not available
COMMENTS	Features: multitrunks with speeds up to 64K; statistics & alarm reporting; field upgrad. to 4800 processors; full call accounting; local & transit switching; auto reconnect; call redirect to alternate destination DTE	*\$700 to \$800 per 4-port card (FBP), symbolic addressing, user definable profile, configuration menu, remote configuration	Split speed, remote diagnostics, statistics and dual 64K bps X.25 links, field upgradeable for port size	

### X.25 Packet Assemblers/Disassemblers (PADs)

MANUFACTURER & MODEL	Memotec Data, Inc. SP/8200 & SP/8300	Micom Systems Micro800 X.25 Concentrator PAD	Protocol Computers, Inc. Smartnet Series 2000 Model 2500	Protocol Computers, Inc. Smartnet Series 2000 Model 2600
NETWORK CERTIFICATION	Datapac, Uninet, Infonet	Telenet, Datapac, Uninet, Tymnet, Transpac, DN-1, PSS, DCS, Saponet, Datex-P	Accunet Packet Service, Telenet, Tymnet, Auto-net, Uninet, Datex-P	Accunet Packet Service, Telenet, Tymnet, Auto-net, Uninet, Datex-P
CCITT RECOMMENDATION SUPPORTED	X.25 Level 1, 2, 3; X.3, X.28, X.29	X.25 levels 1, 2, & 3; X.3, X.28, X.29, X.121	X.3, X.28, X.29, X.21 per CCITT 1984; X.25 levels 1, 2, & 3	X.3, X.28, X.29, X.21 per CCITT 1984; X.25 levels 1, 2, & 3
BUFFER MEMORY CAPACITY	48K	32K	170K—200K	150K—200K
ADDITIONAL RAM AVAILABLE	No	No	No	No
DEVICE CONFIGURATIONS	Host or terminal concentrator, time division multiplexer	Host, terminal concentrator	Host/terminal connector	Host/terminal connector, X.25 concentrator
INPUT SPECIFICATIONS				
Number and type of devices supported	4, 10, or 16 asynchronous devices	4, 8, 12, 16 async ports	Up to 27 asynchronous	Up to 26 asynchronous
Connections supported	Direct, dial-up	Direct	Dedicated, dial-in, dial-out, 3-wire	Dedicated, dial-in, dial-out, 3-wire
Maximum input rate per port, in bps	9600 bps	9600	9600	9600
Maximum aggregate input rate, in bps	48K bps	100K (burst mode)	—	—
Synchronization	Asynchronous	Asynchronous	Asynchronous	Asynchronous
Transmission mode	Half/full duplex	Full duplex	Half/full duplex	Half/full duplex (conf.)
Interface	RS-232-C, V.24	RS-232-C, current loop, V.24	RS-232-C, V.24	RS-232-C, V.24
Autospeed/autoparity available	Yes	Yes	Yes	Yes
Channel config. data downline loadable	Yes	Yes	Yes	Yes
Ports config. for perm./switched circ.	Yes; both SVC and PVC	Yes	Yes; both	Yes; both
NETWORK CHANNEL SPECIFICATIONS				
Number X.25 channels supported	One or two	1	1	Up to 8
Interface	RS-232-C, V.24	RS-232-C, V.24	V.35, RS-232-C, V.24	V.35, RS-232-C, V.24
Maximum transmission rate, in bps	19.2K bps	9600	9600(RS-232-C), 64K(V.35)	9600(R-232); 64K (V.35)
Synchronization	Synchronous	Synchronous	Synchronous	Synchronous
Transmission mode	Full duplex	Full duplex	Full duplex	Full duplex
Number virtual circuits supported	17	Up to 26	Up to 32	Up to 256
Max. window size supported, in frames	7	7	1—15	1—15
Link-level framing supported	HDLC	HDLC, LAPB	LAP and LAPB	LAP and LAPB
DIAGNOSTICS	Remote/locate tests, LEDs	Remote and local line tests, status LEDs, self-tests, terminal/modem loopback	Built-in local and remote diagnostics	Built-in local and remote diagnostics
FEATURES				
Channel priority assignment	Yes	Yes	Yes	Yes
Password protection	Yes	Yes	Yes	Yes
Supervisory port	Yes	Yes	Yes	Yes
Echoplex	Yes	Yes	Yes	Yes
Autodialer supported	Yes	—	Yes	Yes
PRICING AND AVAILABILITY				
Purchase, \$	Contact vendor	2,050/2,750/3,700/4,600	4,750—6,250	5,000—7,250
Rental, \$ month-to-month	Contact vendor	—	600/90 days	750/90 days
Installation, \$	Contact vendor	—	—	—
Maintenance, \$ Annual	Contact vendor	—	500—700	500—700
Serviced by	Memotec	Factory	Vendor; distributors	Vendor; distributors
Availability	Contact vendor	60 days	30 days	30 days
Date of first comm. delivery of this model	Info. not available	November 1982	—	—
Number installed to date	Info. not available	Info. not available	Info. not available	Info. not available
COMMENTS			Full software configured; parameters stored on 3½-inch diskette; parity protected memory; modulo 8 and 128 for link and packet-level communication; Network Management System software available.	Full software configured; parameters stored on 3½-inch diskette; parity protected memory; modulo 8 and 128 for link and packet-level communication; Network Management System software available.

### X.25 Packet Assemblers/Disassemblers (PADs)

MANUFACTURER & MODEL	Protocol Computers, Inc. Smartnet Series 2000 Model 2700	Protocol Computers, Inc. Smartnet 1000 Series*	Protocom Devices P2500	Protocom Devices P250
NETWORK CERTIFICATION	Accunet Packet Service, Telenet, Tymnet, Auto-net, Uninet, Datex-P	Telenet, Tymnet, Transpac, PSS, Datex-P, Datapac	Datapac, Transpac, Telenet, Tymnet, DN-1	Datapac, Transpac, Telenet, Tymnet, DN-1
CCITT RECOMMENDATION SUPPORTED	X.21 per CCITT 1984; X.25 levels 1, 2, & 3	X.25 levels 1, 2, & 3	All (1980)	All (1980)
BUFFER MEMORY CAPACITY	140K—160K	—	96K	32K
ADDITIONAL RAM AVAILABLE	No	—	Not necessary	Not necessary
DEVICE CONFIGURATIONS	X.25 switch and connector	PCI 1100—IBM SNA 3270 term. PAD; PCI 1200—IBM SNA host PAD; PCI 1300—IBM SNA cluster PAD	HPAD, TPAD, controller, port selector	HPAD, TPAD, controller
INPUT SPECIFICATIONS				
Number and type of devices supported	Not applicable	Seven async terminals or three IBM SNA cluster controllers	40 Sync term. dev: incl. 3270 BSC, SNA, Uniscope, Burroughs PS, others	10 Sync devices: 3270 BSC, SNA, Uniscope, Burroughs PS, others
Connections supported	Not applicable	Direct, dial-up	Direct, dial-up, leased line	Direct, dial-up, leased line
Maximum input rate per port, in bps	Not applicable	9600	9600	9600
Maximum aggregate input rate, in bps	Not applicable	—	38.4K	9600
Synchronization	Not applicable	Async/sync	Sync, polling sync.	Sync., polling sync.
Transmission mode	Not applicable	Full duplex	Half/full duplex	Full/half duplex
Interface	Not applicable	RS-232-C	RS-232-C	RS-232-C
Autospeed/autoparity available	Not applicable	Async autobaud	Not Applicable	Not applicable
Channel config. data downline loadable	Not applicable	No	Yes	Yes
Ports config. for perm./switched circ.	Not applicable	Yes	Yes	Yes
NETWORK CHANNEL SPECIFICATIONS				
Number X.25 channels supported	Up to 16	1	1	1
Interface	V.35, RS-232-C, V.24	RS-232-C	RS-232-C, X.21 bis	RS-232-C, X.21 bis
Maximum transmission rate, in bps	9600 (R-232), 64K (V.35)	9600	19.2K	9600
Synchronization	Synchronous	Synchronous	Synchronous	Synchronous
Transmission mode	Full duplex	Full duplex	Full duplex	Full duplex
Number virtual circuits supported	Up to 448	8	42	12
Max. window size supported, in frames	1—15	7	25	25
Link-level framing supported	LAP and LAPB	HDLC, LAP, LAPB, IBM NPSI, QLLC, PSH	HDLC, LAPB	HDLC, LAPB
DIAGNOSTICS	Built-in local and remote diagnostics	Status LEDs, diagnostic port	Local & remote diag., polling self-test, stat. LEDs, remote alarm, stat reporting, statistics	Local & remote diag., polling self-test, stat. LEDs, remote alarm, Statistics, stat. report
FEATURES				
Channel priority assignment	Yes	Not applicable	No	No
Password protection	Yes	No	Yes; dual level	Yes; dual level
Supervisory port	Yes	Not applicable	Yes; local and remote	Yes; local and remote
Echoplex	Yes	Yes	Not Applicable	Not Applicable
Autodialer supported	Yes	No	No	No
PRICING AND AVAILABILITY				
Purchase, \$	4,250—7,250	1,650—3,800	6,000—10,500	2,500—5,000
Rental, \$ month-to-month	750/90 days	350	—	—
Installation, \$	—	—	—	—
Maintenance, \$ Annual	500—800	300—500	150	100
Serviced by	Vendor; distributors	Vendor	Swapping/Vendor, 3rd party	Swapping/Vendor, 3rd party
Availability	30 days	30 days	10-60 days	10-60 days
Date of first comm. delivery of this model	—	1983	December 1983	June 1985
Number installed to date	Info. not available	Info. not available	300	New product
COMMENTS	Full software configured; parameters stored on 3½-inch diskette; parity protected memory; modulo 8 and 128 for link and packet-level communication; Network Management System software available.	*Formerly known as PCI 1076X, 73SX, and R73SX. Series incl. PCI 1100—allows ASCII term./PCs & printers to act as SNA devices via X.25; PCI 1200—an IBM host SNA PAD that can replace IBM NPSI; PCI 1300—lets SNA/SDLC 3270, 3770, 5250 cluster controllers use X.25 network to IBM host.	Fully featured session layer (based on OSI architecture), dual-level network security, end-to-end data integ., data streaming, dual sessions, network mgmt., remote configuration, polling address mapping, port pooling, auto-connect, auto-reconnect, local switching	Fully featured session layer (based on OSI architecture), dual-level network security; end-to-end data integ., data streaming, dual sessions, network mgmt, remote configuration, polling address mapping, port pooling, auto-connect, auto-reconnect, local switching



### X.25 Packet Assemblers/Disassemblers (PADs)

MANUFACTURER & MODEL	Timeplex, Inc. Microplexer X.25 PAD	Wolfdata WD212-X.25	Wolfdata PMC Plus
NETWORK CERTIFICATION	Telenet, Tymnet, Data-pac, Uninet, Accunet, interactive X.25 networks	Telenet, BOC, Uninet, CompuServe	BOC, DDN, Telenet, Uninet, Dutch DN-1
CCITT RECOMMENDATION SUPPORTED	All CCITT recommendations plus additional	X.25 levels 1, 2, & 3	All
BUFFER MEMORY CAPACITY	Up to 208K	—	Up to 256K
ADDITIONAL RAM AVAILABLE	—	No	Yes
DEVICE CONFIGURATIONS	Host computer concentrator, private X.25 networks, async device access to X.25 net	—	Switch, host concentrator, terminal concentrator, multiplexer
INPUT SPECIFICATIONS			
Number and type of devices supported	Up to 48 async devices per unit	1 async terminal	Up to 48 async or sync X.25 terminals
Connections supported	Direct connect, dial-up via modem	Direct connect	Direct connect via modem
Maximum input rate per port, in bps	Up to 9600	1200	Up to 64K
Maximum aggregate input rate, in bps	230.4K bps	1200	64K
Synchronization	Asynchronous	Asynchronous	Async/sync
Transmission mode	Full duplex	Full duplex	Full duplex
Interface	RS-232-C, V.24, MIL STD 188-114	1 RS-232-C	Up to 48 RS-232-C
Autospeed/autoparity available	Yes	No	Yes
Channel config. data downline loadable	Yes	No	Yes
Ports config. for perm./switched circ.	Yes; both	No	Yes; both
NETWORK CHANNEL SPECIFICATIONS			
Number X.25 channels supported	2 sync X.25 level 2	1	Up to 10
Interface	RS-232-C, V.24, MIL STD 188-114	Phone line	RS-232-C, RS-449, V.35
Maximum transmission rate, in bps	19.2K (1); 9600 (2)	1200	64K
Synchronization	Synchronous	Synchronous X.5	Synchronous
Transmission mode	Full duplex	Full duplex	Full duplex
Number virtual circuits supported	—	1	127
Max. window size supported, in frames	7	7	7
Link-level framing supported	X.25 level 2 LAPB	HDLC	HDLC
DIAGNOSTICS	Remote and local link-to-port, self-test, status LEDs, opt. alarm driver	Self-test, analog loop	Self-tests, status, LEDs
FEATURES			
Channel priority assignment	Yes	No	No
Password protection	Yes	No	Yes
Supervisory port	Yes	No	Yes
Echoplex	Yes	No	No
Autodialer supported	—	No	No
PRICING AND AVAILABILITY			
Purchase, \$	Starts at 1,550	595	4,750—16,000
Rental, \$ month-to-month	—	—	—
Installation, \$	—	—	—
Maintenance, \$ Annual	—	—	Not applicable
Serviced by	On site and factory	Factory	Third party
Availability	—	15 days	30 days
Date of first comm. delivery of this model	1984	June 1984	November 1985
Number installed to date	Info. not available	—	Info. not available
COMMENTS	Supports one or two independent data links to the network; features incl. independently programmable ports, autoconnect, mnemonic calling, idle port disconnect timer, programmable banner, password protection, remote access to supervisory port, etc.	Combined AT&T 212A smart modem and X.25 level 3 PAD functions in one product	Modular design to accommodate users' needs for additional ports or customer-specific protocols



### X.25 Packet Assemblers/Dissassemblers (PADs)

MANUFACTURER & MODEL	Advanced Computer Communications ACP 629	Amdahl 4440	Amdahl 4450	Amdahl 4460
NETWORK CERTIFICATION	Telenet, Tymnet, Uninet Accunet Packet Service	Telenet, Tymnet, Uninet, Accunet Packet Service, British Tele- com PSS, Itapac, Saponet	Telenet, Tymnet, Uninet, Accunet Packet Service, British Tele- com PSS, Itapac, Saponet X.25, DSP	Telenet, Tymnet, Uninet, Accunet Packet Service, British Tele- com PSS, Itapac, Saponet
CCITT RECOMMENDATION SUPPORTED				
BUFFER MEMORY CAPACITY	64K	128K	128K	512K
ADDITIONAL RAM AVAILABLE	—	—	—	—
DEVICE CONFIGURATIONS	Host, terminal con- centrator	Host/terminal concentrator	Host/terminal concentrator	Host/terminal concentrator
INPUT SPECIFICATIONS				
Number and type of devices supported	Up to 32 asynchronous terminals	Up to 40 asynchronous ports	Up to 16 bisync 2370 ports	Up to 40 ports: 16 bisync, RJE; 24 async
Connections supported	Direct connection, access via dial-up modem	Direct, dial-up	Direct connect, multi- point 3270	Direct connect, multi- point 3270
Maximum input rate per port, in bps	19.2K	19.2K	19.2K	19.2K
Maximum aggregate input rate, in bps	—	80K	100K	80K
Synchronization	Asynchronous	Asynchronous	3270 bisynchronous	Async, bisync
Transmission mode	Full duplex	Half duplex	Half duplex	Half duplex
Interface	RS-232-C	RS-232-C, V.24	RS-232-C, V.24	RS-232-C, V.24
Autospeed/autoparity available	—	Yes	—	Yes
Channel config. data downline loadable	—	Yes	Yes	Yes
Ports config. for perm./switched circ.	No, switched only	Yes, both	Yes, both	Yes, both
NETWORK CHANNEL SPECIFICATIONS				
Number X.25 channels supported	1 X.25 network trunk	Up to 8	8	8
Interface	RS-232-C, RS-422, V.35	RS-232-C, V.24	RS-232-C, V.24	RS-232-C, V.24
Maximum transmission rate, in bps	56K	19.2K	19.2K	19.2K
Synchronization	Synchronous	Synchronous	Synchronous	Synchronous
Transmission mode	Full duplex	Half/full duplex	Half/full duplex	Half/full duplex
Number virtual circuits supported	32	40	128	128
Max. window size supported, in frames	7	7	7	7
Link-level framing supported	HDLC-LAPB	HDLC	HDLC	HDLC
DIAGNOSTICS	Self-tests	On-line network diag., status LEDs	On-line network diag., status LEDs	On-line network diag., status LEDs
FEATURES				
Channel priority assignment	No	Yes	Yes	Yes
Password protection	No	Yes	Yes	Yes
Supervisory port	Yes	Yes	Yes	Yes
Echoplex	Yes	Yes	—	Yes
Autodialer supported	No	No	No	No
PRICING AND AVAILABILITY				
Purchase, \$	6,490	7,200	11,500	15,000
Rental, \$ month-to-month	None	—	—	—
Installation, \$	Time and maintenance	400	645	645
Maintenance, \$ Annual	1,164	840	1,320	1,320
Serviced by	Vendor	Vendor	Vendor	Vendor
Availability	30 days	30 days	30 days	30 days
Date of first comm. delivery of this model	1985	1982	1982	1984
Number installed to date		300	1,500	150
COMMENTS	Host resident front end supports locally attach- ed terminal access to X.25 network & remote terminal access to host from the X.25 network; supports full-screen editing terminal cap.			

### X.25 Packet Assemblers/Dissassemblers (PADs)

MANUFACTURER & MODEL	Amdahl 4470E	BBN Communications C/10 PAD	Black Box Corp. X.25 PAD-4/X.25 PAD-8	Cableshare CSI-X.25
NETWORK CERTIFICATION	Telenet, Tymnet, Uninet, Accunet Packet Service, British Telecom PSS, Itapac, Saponet X.25, NSPI	No	Telenet, Tymnet, Uninet	Telenet, Tymnet, Data-pac, Uninet, Infoswitch, and others
CCITT RECOMMENDATION SUPPORTED		All	X.3, X.28, X.29, X.121, X.25	X.25 1, 2, & 3; X.3, X.28, X.29
BUFFER MEMORY CAPACITY	128K	384K + 64K/8 lines	—	256K
ADDITIONAL RAM AVAILABLE	—	—	—	Yes
DEVICE CONFIGURATIONS	Terminal concentrator	Host, terminal concentrator	Port concentrator, div. multiplexer, terminal concentrator	Host concentrator, terminal concentrator, stat mux
INPUT SPECIFICATIONS				
Number and type of devices supported	8 sync ports (16 SNA clusters, 128 SNA logical units)	Up to 64 async lines, up to 32 sync lines; 128 devices max.	4 async terminals/ 8 async terminals	Up to 16 asynchronous or synchronous
Connections supported	Direct connect, multi-point	Direct, dial-up, leased line	Direct, dedicated, dial-up terminal connections	Direct, dial-up
Maximum input rate per port, in bps	9600	9600	—	19.2K
Maximum aggregate input rate, in bps	100K	112K	—	—
Synchronization	Synchronous	Async/sync	Asynchronous	Sync/async
Transmission mode	Half duplex	Half/full duplex	Half/full duplex	Full duplex
Interface	RS-232-C, V.24	RS-232-C, V.24	RS-232-C, V.24, V.28	RS-232-C, RS-423
Autospeed/autoparity available	—	Yes	—	Yes
Channel config. data downline loadable	Yes	Yes	—	Yes
Ports config. for perm./switched circ.	Yes, both	Yes	—	Yes
NETWORK CHANNEL SPECIFICATIONS				
Number X.25 channels supported	8	1 std.; 2 opt.	26	2
Interface	RS-232-C, V.24	RS-232-C, V.24, V.35	RS-232-C, V.24, V.28	RS-232-C, RS-423
Maximum transmission rate, in bps	9600	64K/channel	9600 bps	64K per channel
Synchronization	Synchronous	Synchronous	Asynchronous	Synchronous
Transmission mode	Half/full duplex	Full duplex	Half/full duplex	Full duplex
Number virtual circuits supported	128	128	4—8	Up to 17
Max. window size supported, in frames	7	7	—	7
Link-level framing supported	HDLC	HDLC	DTE or DCE appearance & user definable values	HDLC
DIAGNOSTICS	On-line network diag., status LEDs	Self-tests, LEDs, remote & local tests	Terminal test, local test, remote test, system test	Self-tests, status LEDs, remote check-out through network, central netwk. management facilities
FEATURES				
Channel priority assignment	Yes	No	—	No
Password protection	Yes	Yes	—	Yes; multiple levels
Supervisory port	Yes	Yes	No	Yes
Echoplex	—	Yes	No	Yes
Autodialer supported	No	No	No	Yes
PRICING AND AVAILABILITY				
Purchase, \$	12,500	4,000—24,000	2,050/2,750	1,900—4,000
Rental, \$ month-to-month	—	—	None	—
Installation, \$	645	—	None	300
Maintenance, \$ Annual	1,320	—	None	—
Serviced by	Vendor	Vendor on site, factory	Factory	3M
Availability	30 days	120 days	Stock	30 days
Date of first comm. delivery of this model	1983	February 1984	1985	September 1983
Number installed to date	30	—	—	400
COMMENTS		BSC 3270, 2780/3780, HASP, SDLC support available; also expandable, multiple micro-processors, automatic virtual set-up, call accounting, downline loading of configuration and software parameters.		Has 16-bit 80186 micro-processor; remote access for centralized monitoring & network management; on-line help information; supports IBM SDLC and BSC

**X.25 Packet Assemblers/Dissassemblers (PADs)**

MANUFACTURER & MODEL	Cableshare LSI-X.25 IC	Cableshare LSI-X.25 Gateway	ComDesign TX-700 X.25 PAD	Commtext Cx-25 PAD
NETWORK CERTIFICATION	Telenet, Tymnet, Datapac Uninet, Infoswitch, and others	Telenet, Tymnet, Datapac Uninet, Infoswitch, and others	Telenet, Tymnet, Uninet, Transpac, Datapac, IPSS, Euronet	Telenet
CCITT RECOMMENDATION SUPPORTED	X.25 levels 1, 2, & 3; X.3, X.29	X.25, X.3, X.28, X.29	Full 1980 X.25 LAPB, X.3, X.28, X.29	X.25 levels 1, 2, & 3; X.3, X.28, X.29
BUFFER MEMORY CAPACITY ADDITIONAL RAM AVAILABLE DEVICE CONFIGURATIONS	64K Yes Host/terminal concen- trator, Telex/Teletex gateway	128K Yes Host/terminal	Up to 320K bytes — Terminal concentrator, switching multiplexer	32K No Terminal concentrator
INPUT SPECIFICATIONS				
Number and type of devices supported	Up to 64 asynchronous or 8 synchronous tele- text	Up to 2 Ethernet or 48 async	Up to 32	Up to 25 aysnc terminals microcomputers and IBM 3278s
Connections supported	Direct, dial-up	Direct, dial-up	Direct w/wo modem, dial-up	Direct, dial-up
Maximum input rate per port, in bps Maximum aggregate input rate, in bps Synchronization	9600 — Async/sync	19.2K 80K Async/sync	9600 9600 Asynchronous	19.2K — Asynchronous
Transmission mode Interface	Full duplex RS-232-C, RS-423	Full duplex RS-232-C, RS-423	Full duplex RS-232-C, V.24	Full duplex 25 RS-232-C,RS-422,Coax 20mA cur.ln,Coax ln.dr.
Autospeed/autoparity available Channel config. data downline loadable Ports config. for perm./switched circ.	Yes Yes Yes	Yes Yes Yes	— Yes Yes	Yes Yes Switched only
NETWORK CHANNEL SPECIFICATIONS				
Number X.25 channels supported Interface	5 RS-232-C, RS-423	Up to 3 RS-232-C, RS-423	1 V.24	1 RS-232-C
Maximum transmission rate, in bps Synchronization Transmission mode Number virtual circuits supported Max. window size supported, in frames Link-level framing supported	56K per channel Synchronous Full duplex Up to 64 7 HDLC—BSC/ASCII	56K Synchronous Full duplex 127 7 HDLC, BSC	19.2K Synchronous — 33 Window size negotiation LAPB	19.2K Synchronous Full duplex 25 8 HDLC
DIAGNOSTICS	Self-test, on-board link diag., remote load- ing of dial over X.25	Remote and local tests	Link loopback, pattern test, self-test, RAM/ROM tests, status LEDs, microprocessor test	Self tests, status LEDs call monitoring via supervisory port
FEATURES				
Channel priority assignment Password protection Supervisory port Echoplex Autodialer supported	No Yes Yes Yes Yes	No Yes Yes Yes Yes	No — Executive port* Yes Yes	No Yes Yes Yes Yes
PRICING AND AVAILABILITY				
Purchase, \$	5,000 (8 prt.); 1,760 each add. port	5,000—50,000	Contact vendor	3,050
Rental, \$ month-to-month Installation, \$ Maintenance, \$ Annual Serviced by Availability Date of first comm. delivery of this model Number installed to date	— 600 300 DEC 30 days 1980 800	— 600—2,000 300—1,250 DEC 45 days 1980 250	Contact vendor Contact vendor Contact vendor Vendor	Distributor determined Distributor determined Distributor determined M/A-Com, on-site 60 days 1985
COMMENTS	Uses DEC LSI-II family hardware; custom-en- hancement of software available; local forms storage and field edit- ing	Gateway between Ether- net, X.25, DEC hosts, and asynchronous termi- nals.	Info. not available Hardwired Executive Port provides testing and monitoring functions; features incl. abbre- viated addressing, support for perm. vir- tual circuits, autocal, user-configurable pro- files; options incl. int. 4800 or 9600 bps modem.	The Cx.25 is an option to the Commtext Cx-83 & Cx-86 terminal contrll; in addition to outbound call generation (by name) the Cx.25 accepts incoming call to Cx-83/6 user defined rotary hunt groups

**X.25 Packet Assemblers/Dissassemblers (PADs)**

MANUFACTURER & MODEL	Computer Communications, Inc. CCI9124 X.25 Controller	Datagram Corp. DMX-2502	Datagram Corp. DMX-2504	Datagram Corp. DMX-2508
NETWORK CERTIFICATION	Telenet, Tymnet	Telenet, Tymnet, Datapac	Telenet, Tymnet, Datapac	Telenet, Tymnet, Datapac
CCITT RECOMMENDATION SUPPORTED	X.25 levels 1, 2, & 3; X.29	X.25 level 3	X.25 level 3	X.25 level 3
BUFFER MEMORY CAPACITY	Dynamic buffer pool	8K Bytes	8K Bytes	16K Bytes
ADDITIONAL RAM AVAILABLE	—	—	—	—
DEVICE CONFIGURATIONS	Host concentrator (emulation mode)	Host concentrator Terminal concentrator	Host concentrator Terminal concentrator	Host concentrator Terminal concentrator
INPUT SPECIFICATIONS				
Number and type of devices supported	—	2	4	8
Connections supported	—	"Direct dialup"	Direct dialup	Direct dialup
Maximum input rate per port, in bps	—	9600 bps	9600 bps	9600 bps
Maximum aggregate input rate, in bps	—	38.4K bps	38.4K bps	38.4K bps
Synchronization	—	Asynchronous	Asynchronous	Asynchronous
Transmission mode	—	Half/full duplex	Half/full duplex	Half/full duplex
Interface	—	RS-232-C, V.24	RS-232-C, V.24	RS-232-C, V.24
Autospeed/autoparity available	—	Yes, both	Yes, both	Yes, both
Channel config. data downline loadable	—	Yes	—	—
Ports config. for perm./switched circ.	Yes	Yes, both	Yes, both	Yes, both
NETWORK CHANNEL SPECIFICATIONS				
Number X.25 channels supported	32	1	1	1
Interface	RS-232-C	RS-232-C, V.24	RS-232-C, V.24	RS-232-C, V.24
Maximum transmission rate, in bps	9600 bps	9600 bps	9600 bps	9600 bps
Synchronization	Synchronous	Synchronous	Synchronous	Synchronous
Transmission mode	Full duplex	Full duplex	Full duplex	Full duplex
Number virtual circuits supported	240	4	4	8
Max. window size supported, in frames	7	7	7	7
Link-level framing supported	HDLC	HDLC	HDLC	HDLC
DIAGNOSTICS	LEDs	Interface & logical status, loopback test, RAM & program memory test & memory dumps	Interface & logical status, loopback test, RAM & program memory test & memory dumps	Interface & logical status, loopback test, RAM & program memory test & memory dumps
FEATURES				
Channel priority assignment	No	Yes	Yes	Yes
Password protection	No	Yes	Yes	Yes
Supervisory port	No	Yes	Yes	Yes
Echoplex	No	Yes	Yes	Yes
Autodialer supported	No	Yes	Yes	Yes
PRICING AND AVAILABILITY				
Purchase, \$	Contact Vendor	1,750	1,995	2,995
Rental, \$ month-to-month	Contact Vendor	—	—	—
Installation, \$	Contact Vendor	Customer installed	Customer installed	Customer installed
Maintenance, \$ Annual	Contact Vendor	Contact vendor	Contact vendor	Contact vendor
Serviced by	Vendor	Factory	Factory	Factory
Availability	90 days	30 days	30 days	30 days
Date of first comm. delivery of this model	—	1979	1979	1979
Number installed to date	—	—	—	—
COMMENTS	Dynamic application switching	Full communication protocol conversion Uniscope CCITT X.25, command language (X.28) fastcall in/outcomming call facility	Full communication protocol conversion Uniscope CCITT X.25, command language (X.28) fastcall in/outcomming call facility	Full communication protocol conversion Uniscope CCITT X.25, command language (X.28) fastcall in/outcomming call facility

### X.25 Packet Assemblers/Dissassemblers (PADs)

MANUFACTURER & MODEL	Datagram Corp. DMX-2516	Digital Communications Associates X.25/PAD	Dynpac Multi-PAD X.25	Dynpac Mono-PAD X.25
NETWORK CERTIFICATION	Telenet, Tymnet, Datapac	Telenet, Tymnet, Uninet, Autonet, Datapac, & others	Worldwide	Worldwide
CCITT RECOMMENDATION SUPPORTED	X.25 level 3	All	X.25 levels 1, 2, & 3; X.3, X.28, X.29, X.121	X.25 levels 1, 2, & 3; X.3, X.28, X.29, X.121
BUFFER MEMORY CAPACITY ADDITIONAL RAM AVAILABLE DEVICE CONFIGURATIONS	16K Bytes — Host concentrator Terminal concentrator	Approx 15K char. —	10K ROM, 14K RAM Yes; 20K Host concentrator, terminal concentrator, front end processor	10K ROM, 14K RAM No Terminal connection
INPUT SPECIFICATIONS Number and type of devices supported	16	Up to 32 async devices	4, 8, 12, or 16 async ports	1 asynchronous device ports
Connections supported	Direct dialup	Direct, dial-up via modem	Direct, dial-up via modem	Direct, dial-up via modem
Maximum input rate per port, in bps Maximum aggregate input rate, in bps Synchronization	9600 bps 38.4K bps Asynchronous	Up to 9600 To 57.6K Asynchronous	9600 — Asynchronous	Up to 9600 — Asynchronous
Transmission mode Interface	Half/full duplex RS-232-C, V.24	Half/full duplex RS-232-C; V.24, V.28, 20 mA current loop	Full duplex RS-232-C, V.24	Full duplex RS-232-C, V.24
Autospeed/autoparity available Channel config. data downline loadable Ports config. for perm./switched circ.	Yes, both — Yes, both	Yes Remote console Yes; both	Yes Yes Yes, both	Yes No SVC only
NETWORK CHANNEL SPECIFICATIONS Number X.25 channels supported Interface	1 RS-232-C, V.24	1 RS-232-C, V.24, V.28	1 RS-232-C, V.24, X.21 bis	1 X.21 bis, RS-232-C, V.24
Maximum transmission rate, in bps Synchronization Transmission mode Number virtual circuits supported Max. window size supported, in frames Link-level framing supported	9600 bps Synchronous Full duplex 16 7 HDLC	Up to 19.2K Synchronous Full duplex Up to 33 1 to 7 HDLC, BSC, LAP/LAPB, DTE/DCE	9600 Synchronous Full duplex Up to 17 7 HDLC, LAPB, or LAP, BSC/ EBDCIC, BSC/ASCII	9600 Synchronous Full duplex 1 7 LAP, LAPB, HDLC, BSC/ EBDIC, BSC/ASCII
DIAGNOSTICS	Interface & logical status, loopback test, RAM & program memory test & memory dumps	Status LEDs, built-in diagnostics, console	Local & remote access statistics & status LEDs	Status LEDs
FEATURES Channel priority assignment Password protection Supervisory port Echoplex Autodialer supported	Yes Yes Yes Yes Yes	No No Yes; console port Yes No	No Yes Yes Yes Yes	No No No Yes No
PRICING AND AVAILABILITY Purchase, \$	3,750	1,895—8,445	2,205—2,905 (108); 3,415—5,500 (116)*	695—933
Rental, \$ month-to-month Installation, \$ Maintenance, \$ Annual Serviced by Availability Date of first comm. delivery of this model Number installed to date	— Customer installed Contact vendor Factory 30 days 1979 —	From 76 to 338 (12 mo.) Contact vendor Contact vendor Vendor — — —	Contact vendor Contact vendor Contact vendor Vendor or third party 30 1982 4,500	Contact Vendor Contact Vendor Contact Vendor Vendor 30 days ARO 1984 359
COMMENTS	Full communication protocol conversion Uniscope CCITT X.25, command language (X.28) fastcall in/outcoming call facility	Half duplex on 2- or 4-wire circuits. Configurable from ASCII terminal console	Features include: spec. support for VT100, HP; Baudot to ASCII conver.; mnemonic addressing; also offered are X.25 switching equipment: multiswitch X.25 for low speed applications, multiswitch X.25 model 60 for high speed applications  *Prices vary depending on options and no. ports	Single port PAD, autocall feature, M-bit support

### X.25 Packet Assemblers/Dissassemblers (PADs)

MANUFACTURER & MODEL	Dynamac Proto-PAD X.25	EDA Instruments, Inc. UTX.2500 Series	EDA Instruments, Inc. ATX.2500 Series	EDA Instruments, Inc. BTX.2500 Series
NETWORK CERTIFICATION	Worldwide	Datapac, Infoswitch, Telenet, Tymnet, Accunet, Uninet, PSS, Datex-P, Transpac, Austpac* X.3, X.28, X.29, X.25 levels 1, 2, & 3	Datapac, Infoswitch, Telenet, Tymnet, Accunet, Uninet, PSS, Datex-P, Transpac* X.3, X.28, X.29, X.25 levels 1, 2, & 3	Datapac, Infoswitch, Telenet, Tymnet, Accunet, Uninet, PSS, Datex-P, Transpac* X.3, X.28, X.29, X.25 levels 1, 2, & 3
CCITT RECOMMENDATION SUPPORTED	X.25 levels 1, 2, & 3; X.3, X.28, X.29, X.121	X.25 levels 1, 2, & 3	X.25 levels 1, 2, & 3	X.25 levels 1, 2, & 3
BUFFER MEMORY CAPACITY	16K bytes RAM	12.5K	12.5K	12.5K
ADDITIONAL RAM AVAILABLE	No	No	No	No
DEVICE CONFIGURATIONS	Host or cluster emulator	Host/terminal concentrator	Host/terminal concentrator	Host/terminal concentrator
INPUT SPECIFICATIONS				
Number and type of devices supported	1 3270 contr. or mult. contr. running multidrop via modem starting dev.	Up to 15 logical devices running Uniscope/Sperry-link	Up to 16 ASCII async devices	Up to 15 logical devices running Synchronous Poll/Select
Connections supported	Direct	Direct, dial-up, leased	Direct, dial-up, leased	Direct, dial-up, leased
Maximum input rate per port, in bps	9600	9600	9600	9600
Maximum aggregate input rate, in bps	—	38.4K	38.4K	38.4K
Synchronization	Synchronous	Synchronous	Asynchronous	Synchronous
Transmission mode	Full duplex	Half/full duplex	Half/full duplex	Half/full duplex
Interface	1 RS-232-C, V.24	RS-232-C	RS-232-C	RS-232-C
Autospeed/autoparity available	No	Yes	Yes	Yes
Channel config. data downline loadable	Yes	Yes	Yes	Yes
Ports config. for perm./switched circ.	SVC only	Yes	Yes	Yes
NETWORK CHANNEL SPECIFICATIONS				
Number X.25 channels supported	1	Up to 5	Up to 2	Up to 5
Interface	RS-232-C, V.24, X.21 bis	RS-232-C	RS-232-C	RS-232-C
Maximum transmission rate, in bps	9600	19.2K	19.2K	19.2K
Synchronization	Synchronous	Synchronous	Synchronous	Synchronous
Transmission mode	Full duplex	Full duplex	Full duplex	Full duplex
Number virtual circuits supported	1	15	16	15
Max. window size supported, in frames	7	7	7	7
Link-level framing supported	LAPB, HDLC	HDLC	HDLC	HDLC
DIAGNOSTICS	Local and remote access, statistics and status LEDs	Interface & logical chan statistics; loopback tests; RAM prog. memory test and dump	Interface & logical chan statistics; loopback tests; RAM prog. memory test and dump	Interface & logical chan statistics; loopback tests; RAM prog. memory test and dump
FEATURES				
Channel priority assignment	No	Not applicable	Not applicable	Not applicable
Password protection	Yes	Yes	Yes	Yes
Supervisory port	Yes	Yes	Yes	Yes
Echoplex	Yes	Yes	Yes	Yes
Autodialer supported	No	Yes	Yes	Yes
PRICING AND AVAILABILITY				
Purchase, \$	2,610	3,350 to 15,000	1,850—10,450	3,210—14,590
Rental, \$ month-to-month	Contact vendor		Not applicable	Not applicable
Installation, \$	Contact vendor	Customer installed	Customer installed	Customer installed
Maintenance, \$ Annual	Contact vendor	—	—	—
Serviced by	Vendor or third party	Factory/distributor	Factory/distributor	Factory/distributor
Availability	30 days ARO	30 days	30 days	30 days
Date of first comm. delivery of this model	1985	December 1982	1977	1985
Number installed to date	Information not avail.			
COMMENTS		Data compression/expansion; extensive network management package, soft configuration, switching.  *Also Datanet-1, Datapak, Telepac	Data compression/expansion; extensive network management package, soft configuration, switching.  *Austpac, Datanet-1, Datapak, Telepac	Data compression/expansion; extensive network management package, soft configuration, switching.  *Austpac, Datanet-1, Datapak, Telepac



**X.25 Packet Assemblers/Dissassemblers (PADs)**

MANUFACTURER & MODEL	EDA Instruments, Inc. PCX.2500	Gandalf Pin 9101E	General DataComm 2541	General DataComm 2550
NETWORK CERTIFICATION	Datapac, Infoswitch, Telenet, Tymnet, Accu-net, Uninet, PSS, Datex-P, Transpac*	All major networks	Telenet, Tymnet, Data-pac, etc.	Telenet, Tymnet, Data-pac, etc.
CCITT RECOMMENDATION SUPPORTED	X.3, X.28, X.29, X.25 levels 1, 2 & 3	X.25 LAPB levels 1, 2, & 3, X.28, X.29, X.3, Extended X.3	All	X.25 levels 1, 2, & 3
BUFFER MEMORY CAPACITY	4.5K—12.5K	4—12K of data	—	—
ADDITIONAL RAM AVAILABLE	No	No	—	—
DEVICE CONFIGURATIONS	Host/terminal concen-trator	PAD, front end to in-face async ports to network, terminal con-centrator, stat mux	Host/terminal	Host/terminal
INPUT SPECIFICATIONS				
Number and type of devices supported	Up to 5 ASCII async devices	Up to 16 asynchronous devices	4—16 asynchronous devices	1—4 Burroughs sync
Connections supported	Direct, dial-up, leased	Any using RS-232-C	Direct, dial-up	Direct, dial-up
Maximum input rate per port, in bps	Internal PC rate	To 9600	19.2K	9600
Maximum aggregate input rate, in bps	38.4K bps	57.6K	153.6K	38.4K
Synchronization	Asynchronous	Asynchronous	Asynchronous	Synchronous
Transmission mode	—	Full duplex	Half/full duplex	Half/full duplex
Interface	RS-232-C	RS-232-C, CCITT V.24/V.28	RS-232-C/V.24	RS-232-C, V.24
Autospeed/autoparity available	Yes	Yes	Yes	Yes
Channel config. data downline loadable	Yes	Yes	Yes	Yes
Ports config. for perm./switched circ.	Yes	Yes, either PVC or SVC	Yes, both	Yes, both
NETWORK CHANNEL SPECIFICATIONS				
Number X.25 channels supported	1	1	1 or 2	1 or 2
Interface	RS-232-C	RS-232-C, V.24, V.28	RS-232-C, V.24, V.35	RS-232-C, V.24
Maximum transmission rate, in bps	19.2K	19.2K bps	64K	19.2K
Synchronization	Synchronous	Synchronous	Asynchronous	Synchronous
Transmission mode	Full duplex	Full duplex	Half/full duplex	Half/full duplex
Number virtual circuits supported	5	16	16	6
Max. window size supported, in frames	7	10	7	7
Link-level framing supported	HDLC	HDLC	HDLC	HDLC
DIAGNOSTICS	Interface & logical channel statistics; loopback tests; RAM prog. memory test/dump	Continuous test mode, loopback tests on line, internal, and external channels, status LEDs	Remote or local line tests, status LEDs, self-tests	Remote or local line tests, status LEDs, self-tests
FEATURES				
Channel priority assignment	Not applicable	No	Yes	Yes
Password protection	Yes	Yes	Yes	Yes
Supervisory port	No	Yes	Yes	Yes
Echoplex	Yes	Yes	Yes	Yes
Autodialer supported	No	Yes; supports external unit	Yes	Yes
PRICING AND AVAILABILITY				
Purchase, \$	695—995	1,950 (4 ch.); 2,550 (8 ch.); 3,650 (16 ch.)	3,630	5,025
Rental, \$ month-to-month	Not applicable	Contact vendor	—	—
Installation, \$	Customer installed	Contact vendor	745	745
Maintenance, \$ Annual	—	Contact vendor	Open	Open
Serviced by	Factory/distributor	Factory	Vendor-on site	Vendor-on site
Availability	1986	30-60 days	60—90 days ARO	60-90 days
Date of first comm. delivery of this model	—	1/84 (enhanced version)	1985	1985
Number installed to date	—	—	Info. not available	—
COMMENTS	No software impact; same features as ATX.2500. IBM PC compatible plug-in card.  *Austpac, Datanet-1, Datapak, Telepac	Fully prompting opera-tor interface; auto-call on channel basis; flexi-ble flow control, incl. X-on/X-off plus CTS or HP ENQ/ACK protocol; provides usage statis-tics.		

### X.25 Packet Assemblers/Dissassemblers (PADs)

MANUFACTURER & MODEL	General DataComm 2551	General DataComm 2552	General DataComm 2553	General DataComm GEN*PAC 2520
NETWORK CERTIFICATION	Telenet, Tymnet, Data-pac, etc.	Telenet, Tymnet, Data-pac, etc.	Telenet, Tymnet, Data-pac, etc.	Telenet, Tymnet, Data-pac, etc.
CCITT RECOMMENDATION SUPPORTED	X.25 levels 1, 2, & 3	X.25 levels 1, 2, & 3	X.25 levels 1, 2, & 3	All
BUFFER MEMORY CAPACITY	—	—	—	—
ADDITIONAL RAM AVAILABLE	—	—	—	—
DEVICE CONFIGURATIONS	Host/terminal	Host/terminal	Host/terminal	Host/terminal
INPUT SPECIFICATIONS				
Number and type of devices supported	1—6 2780/3780 sync	1—6 3270 sync	1—3 SNA/SDLC sync	4 asynchronous
Connections supported	Direct, dial-up	Direct, dial-up	Direct, dial-up	Direct, dial-up
Maximum input rate per port, in bps	9600	9600	19.2K	9600
Maximum aggregate input rate, in bps	57.6K	57.6K	57.6K	38.4K
Synchronization	Synchronous	Synchronous	Synchronous	Asynchronous
Transmission mode	Half/full duplex	Half/full duplex	Half/full duplex	Half/full duplex
Interface	RS-232-C, V.24	RS-232-C, V.24	RS-232-C, V.24	RS-232-C, V.24
Autospeed/autoparity available	Yes	Yes	Yes	Yes
Channel config. data downline loadable	Yes	Yes	Yes	Yes
Ports config. for perm./switched circ.	Yes, both	Yes, both	Yes, both	Yes, both
NETWORK CHANNEL SPECIFICATIONS				
Number X.25 channels supported	1 or 2	1 or 2	1 or 2	1
Interface	RS-232-C, V.24	RS-232-C, V.24	RS-232-C, V.24, V.35	RS-232-C, V.24
Maximum transmission rate, in bps	9600	19.2K	64K	19.2K
Synchronization	Synchronous	Synchronous	Synchronous	Asynchronous
Transmission mode	Half/full duplex	Half/full duplex	Half/full duplex	Half/full duplex
Number virtual circuits supported	6	6	3	16
Max. window size supported, in frames	7	7	7	7
Link-level framing supported	HDLC	HDLC	HDLC	HDLC
DIAGNOSTICS	Remote or local line tests, status LEDs, self-tests	Remote or local line tests, status LEDs, self-tests	Remote or local line tests, status LEDs, self-tests	Remote or local line tests, status LEDs, self-tests
FEATURES				
Channel priority assignment	Yes	Yes	Yes	Yes
Password protection	Yes	Yes	Yes	Yes
Supervisory port	Yes	Yes	Yes	Yes
Echoplex	Yes	Yes	Yes	Yes
Autodialer supported	Yes	Yes	Yes	Yes
PRICING AND AVAILABILITY				
Purchase, \$	3,995	3,995	5,195	1,715
Rental, \$ month-to-month	—	—	—	—
Installation, \$	745	745	745	420
Maintenance, \$ Annual	Open	—	—	Open
Serviced by	Vendor-on site	Vendor-on site	Vendor-on site	Vendor-on site
Availability	60-90 days ARO	60-90 days	60-90 days	60-90 days
Date of first comm. delivery of this model	1985	1985	1985	1985
Number installed to date	Info. not available	—	—	—
COMMENTS				

### X.25 Packet Assemblers/Dissassemblers (PADs)

MANUFACTURER & MODEL	General DataComm GEN*PAC 2530/2540	GTE Telenet TP3005	GTE Telenet TP3/II-3010	GTE Telenet TP3/II-3006
NETWORK CERTIFICATION	Telenet, Tymnet, Data-pac, etc.	Telenet	Telenet	Telenet
CCITT RECOMMENDATION SUPPORTED	X.25 levels 1, 2, & 3 (2530); all (2540)	All	All	All
BUFFER MEMORY CAPACITY	—	64K	64K	64K
ADDITIONAL RAM AVAILABLE	—	No	No	No
DEVICE CONFIGURATIONS	Host/terminal	Host/terminal concentrator	Host/terminal concentrator	Host/terminal concentrator
INPUT SPECIFICATIONS				
Number and type of devices supported	4-16 async	4 or 8 async device lines	Up to 26 async lines; 8 sync lines	4 or 8 async/sync lines
Connections supported	Direct, dial-up	Direct, dial-up	Direct, dial-up	Direct, dial-up
Maximum input rate per port, in bps	9600	9600	9600	9600
Maximum aggregate input rate, in bps	153.6K	38.3K	38.3K	38.3K
Synchronization	Asynchronous	Asynchronous	Async/sync	Async/sync
Transmission mode	Half/full duplex	Half/full duplex	Half/full duplex	Half/full duplex
Interface	RS-232-C, V.24	RS-232-C, V.24, V.2B	RS-232-C, V.24	RS-232-C, V.24
Autospeed/autoparity available	Yes	Yes	Yes	Yes
Channel config. data downline loadable	Yes	Yes	Yes	Yes
Ports config. for perm./switched circ.	Yes, both	Switched only	Switched only	Switched only
NETWORK CHANNEL SPECIFICATIONS				
Number X.25 channels supported	1 or 2	1	1	1
Interface	RS-232-C, V.24	RS-232-C, V.24	RS-232-C, V.24	RS-232-C, V.24
Maximum transmission rate, in bps	19.2K	19.2K	19.2K	19.2K
Synchronization	Asynchronous	Synchronous, X.25	Synchronous, X.25	Synchronous, X.25
Transmission mode	Half/full duplex	Full duplex	Full duplex	Full duplex
Number virtual circuits supported	16+	255	255	255
Max. window size supported, in frames	7	7	7	7
Link-level framing supported	HDLC	HDLC or BSC	HDLC or BSC	HDLC or BSC
DIAGNOSTICS	Remote or local line tests, status LEDs, self-tests	Remote	Remote	Remote
FEATURES				
Channel priority assignment	Yes	No	No	No
Password protection	Yes	Yes	Yes	Yes
Supervisory port	Yes	Yes	Yes	Yes
Echoplex	Yes	Yes	Yes	Yes
Autodialer supported	Yes	Yes	Yes	Yes
PRICING AND AVAILABILITY				
Purchase, \$	3,650 (2530) 2,595 (2540)	2,500 or 3,500	5,100/2 ports 1,650/8 add'l ports	3,200 or 4,000
Rental, \$ month-to-month	—	350 or 600	800	—
Installation, \$	745	400	400	400
Maintenance, \$ Annual	—	360 or 480	780	360 or 480
Serviced by	Vendor-on site	Vendor on site	Vendor on site	Vendor on site
Availability	60-90 days	—	—	—
Date of first comm. delivery of this model	1985	1983	1983	1985
Number installed to date	—	—	—	—
COMMENTS		Software features: error detection & recovery; autospeed detection to 1200bps; dynamic flow control; alarm messages; autoconnect cap. for directly attached term.; multiple host access; configurable parameters; Network Mgmt Features: realtime event reporting diagnostics accessible from any async terminal on network using TDT-2	Software features: error detection & recovery; autospeed detection to 1200bps; dynamic flow control; alarm messages; autoconnect cap. for directly attached term.; multiple host access; configurable parameters; Network Mgmt Features: realtime event reporting diagnostics accessible from any async terminal on network using TDT-2	Software features: error detection & recovery; autospeed detection to 1200bps; dynamic flow control; alarm messages; autoconnect cap. for directly attached term.; multiple host access; configurable parameters; Network Mgmt Features: realtime event reporting diagnostics accessible from any async terminal on network using TDT-2

### X.25 Packet Assemblers/Dissassemblers (PADs)

MANUFACTURER & MODEL	GTE Telenet TP3/II-3025	GTE Telenet TP4/II-4200	Hewlett Packard HP 2334A	Infotron Infolinx.25
NETWORK CERTIFICATION	Telenet	Telenet	Telenet, Tymnet, Uninet, Datapac, Transpac, and others	Telenet (testing for Tymnet)
CCITT RECOMMENDATION SUPPORTED	All	All	X.25 levels 1, 2, & 3, X.3, X.28, X.29, X.121	X.25 levels 1, 2, & 3; X.3, X.28, X.29, X.121
BUFFER MEMORY CAPACITY ADDITIONAL RAM AVAILABLE DEVICE CONFIGURATIONS	64K No Concentrate 3005, 3010, & 3006 devices	832K No Host/terminal concentrator	Up to 96K ROM, 40K RAM No Statistical multiplexer, cluster controller	— No Terminal concentrator stat. mux.
INPUT SPECIFICATIONS Number and type of devices supported	4 or 8 sync X.25 lines	Up to 224 async lines; 112 sync lines	Up to 16 async devices (field upgradable)	Up to 16 asynchronous devices
Connections supported	Direct	Direct, dial-up	Direct connect, dial-up via modem	Direct, dial-up
Maximum input rate per port, in bps Maximum aggregate input rate, in bps Synchronization	19.2K 128K Synchronous X.25	9600 268.8K Async/sync	9600 153.6K Asynchronous	19.2K async — Asynchronous
Transmission mode Interface	Full duplex RS-232-C, V.24	Half/full duplex RS-232-C, V.24	Full duplex RS-232-C, V.24, V.28	Full duplex RS-232-C
Autospeed/autoparity available Channel config. data downline loadable Ports config. for perm./switched circ.	No Yes Switched only	Yes Yes Yes, both	Yes Yes Yes	Yes Yes Yes
NETWORK CHANNEL SPECIFICATIONS Number X.25 channels supported Interface	2 RS-232-C, V.24, V.35	Up to 224 RS-232-C, V.24, V.35	1 RS-232-C, V.24, V.28	2 RS-232-C, RS-422
Maximum transmission rate, in bps Synchronization Transmission mode Number virtual circuits supported Max. window size supported, in frames Link-level framing supported	64K Synchronous, X.25 Full duplex 2040 7 HDLC	64K Synchronous X.25 Full duplex 224 7 HDLC or BSC	19.2K Synchronous Full duplex 64 7 HDLC/LAPB	64K per X.25 channel Synchronous Full duplex 16 7 HDLC, LAPB, or LAP
DIAGNOSTICS	Remote	Remote	Self-tests, remote and local live tests, status LEDs, loop back tests	Status LEDs, local and remote diagnostics and statistics
FEATURES Channel priority assignment Password protection Supervisory port Echoplex Autodialer supported	Yes No Yes Yes No	Yes Yes Yes Yes Yes	No Yes Yes Yes Yes	Yes Yes No Yes Yes
PRICING AND AVAILABILITY Purchase, \$	6,000 or 7,500	40,800—74,150	1,800 (FBP)*	2,500—5,500
Rental, \$ month-to-month Installation, \$ Maintenance, \$ Annual Serviced by Availability Date of first comm. delivery of this model Number installed to date	— 400 480 or 600 Vendor on site — 1985 —	1,950—2,530 2,120 2,520—4,680 Vendor on site — 1984 —	— — 150 Hewlett Packard 4 weeks January 1985 —	— No charge 1 yr factory warranty Vendor-factory 30 days 1984 —
COMMENTS	Software features: error detection & recovery; autospeed detection to 1200bps; dynamic flow control; alarm messages; autoconnect cap. for directly attached term.; multiple host access; configurable parameters; Network Mgmt Features: realtime event reporting diagnostics accessible from any async terminal on network using TDT-2	Features: multitrunks with speeds up to 64K; statistics & alarm reporting; field upgrad. to 4800 processors; full call accounting; local & transit switching; auto reconnect; call redirect to alternate destination DTE	*\$700 to \$800 per 4-port card (FBP), symbolic addressing, user definable profile, configuration menu, remote configuration	Split speed, remote diagnostics, statistics and dual 64K bps X.25 links, field upgradeable for port size

### X.25 Packet Assemblers/Dissassemblers (PADs)

MANUFACTURER & MODEL	Micom Systems Micro800 X.25 Concentrator PAD	Protocol Computers, Inc. Smartnet Series 2000 Model 2500	Protocol Computers, Inc. Smartnet Series 2000 Model 2600	Protocol Computers, Inc. Smartnet Series 2000 Model 2700
NETWORK CERTIFICATION	Telenet, Datapac, Uninet, Tymnet, Transpac, DN-1, PSS, DCS, Saponet, Datex-P	Accunet Packet Service, Telenet, Tymnet, Auto-net, Uninet, Datex-P	Accunet Packet Service, Telenet, Tymnet, Auto-net, Uninet, Datex-P	Accunet Packet Service, Telenet, Tymnet, Auto-net, Uninet, Datex-P
CCITT RECOMMENDATION SUPPORTED	X.25 levels 1, 2, & 3; X.3, X.28, X.29, X.121	X.3, X.28, X.29, X.21 per CCITT 1984; X.25 levels 1, 2, & 3	X.3, X.28, X.29, X.21 per CCITT 1984; X.25 levels 1, 2, & 3	X.21 per CCITT 1984; X.25 levels 1, 2, & 3
BUFFER MEMORY CAPACITY	32K	170K—200K	150K—200K	140K—160K
ADDITIONAL RAM AVAILABLE	No	No	No	No
DEVICE CONFIGURATIONS	Host, terminal concentrator	Host/terminal connector	Host/terminal connector, X.25 concentrator	X.25 switch and connector
INPUT SPECIFICATIONS				
Number and type of devices supported	4, 8, 12, 16 async ports	Up to 27 asynchronous	Up to 26 asynchronous	Not applicable
Connections supported	Direct	Dedicated, dial-in, dial-out, 3-wire	Dedicated, dial-in, dial-out, 3-wire	Not applicable
Maximum input rate per port, in bps	9600	9600	9600	Not applicable
Maximum aggregate input rate, in bps	100K (burst mode)	—	—	Not applicable
Synchronization	Asynchronous	Asynchronous	Asynchronous	Not applicable
Transmission mode	Full duplex	Half/full duplex	Half/full duplex (conf.)	Not applicable
Interface	RS-232-C, current loop, V.24	RS-232-C, V.24	RS-232-C, V.24	Not applicable
Autospeed/autoparity available	Yes	Yes	Yes	Not applicable
Channel config. data downline loadable	Yes	Yes	Yes	Not applicable
Ports config. for perm./switched circ.	Yes	Yes; both	Yes; both	Not applicable
NETWORK CHANNEL SPECIFICATIONS				
Number X.25 channels supported	1	1	Up to 8	Up to 16
Interface	RS-232-C, V.24	V.35, RS-232-C, V.24	V.35, RS-232-C, V.24	V.35, RS-232-C, V.24
Maximum transmission rate, in bps	9600	9600(RS-232-C), 64K(V.35)	9600 (R-232); 64K (V.35)	9600 (R-232), 64K (V.35)
Synchronization	Synchronous	Synchronous	Synchronous	Synchronous
Transmission mode	Full duplex	Full duplex	Full duplex	Full duplex
Number virtual circuits supported	Up to 26	Up to 32	Up to 256	Up to 448
Max. window size supported, in frames	7	1—15	1—15	1—15
Link-level framing supported	HDLC, LAPB	LAP and LAPB	LAP and LAPB	LAP and LAPB
DIAGNOSTICS	Remote and local line tests, status LEDs, self-tests, terminal/modem loopback	Built-in local and remote diagnostics	Built-in local and remote diagnostics	Built-in local and remote diagnostics
FEATURES				
Channel priority assignment	Yes	Yes	Yes	Yes
Password protection	Yes	Yes	Yes	Yes
Supervisory port	Yes	Yes	Yes	Yes
Echoplex	Yes	Yes	Yes	Yes
Autodialer supported	—	Yes	Yes	Yes
PRICING AND AVAILABILITY				
Purchase, \$	2,050/2,750/3,700/4,600	4,750—6,250	5,000—7,250	4,250—7,250
Rental, \$ month-to-month	—	600/90 days	750/90 days	750/90 days
Installation, \$	—	—	—	—
Maintenance, \$ Annual	—	500—700	500—700	500—800
Serviced by	Factory	Vendor; distributors	Vendor; distributors	Vendor; distributors
Availability	60 days	30 days	30 days	30 days
Date of first comm. delivery of this model	November 1982	—	—	—
Number installed to date	Info. not available	Info. not available	Info. not available	Info. not available
COMMENTS		Full software configured; parameters stored on 3½-inch diskette; parity protected memory; modulo 8 and 128 for link and packet-level communication; Network Management System software available.	Full software configured; parameters stored on 3½-inch diskette; parity protected memory; modulo 8 and 128 for link and packet-level communication; Network Management System software available.	Full software configured; parameters stored on 3½-inch diskette; parity protected memory; modulo 8 and 128 for link and packet-level communication; Network Management System software available.

### X.25 Packet Assemblers/Dissassemblers (PADs)

MANUFACTURER & MODEL	Protocol Computers, Inc. Smartnet 1000 Series*	Protocom Devices P2500	Protocom Devices P250	Timeplex, Inc. Microplexer X.25 PAD
NETWORK CERTIFICATION	Telenet, Tymnet, Transpac, PSS, Datex-P, Datapac	Datapac, Transpac, Telenet, Tymnet, DN-1	Datapac, Transpac, Telenet, Tymnet, DN-1	Telenet, Tymnet, Datapac, Uninet, Accunet, interactive X.25 networks
CCITT RECOMMENDATION SUPPORTED	X.25 levels 1, 2, & 3	All (1980)	All (1980)	All CCITT recommendations plus additional
BUFFER MEMORY CAPACITY	—	96K	32K	Up to 208K
ADDITIONAL RAM AVAILABLE	—	Not necessary	Not necessary	—
DEVICE CONFIGURATIONS	PCI 1100—IBM SNA 3270 term. PAD; PCI 1200—IBM SNA host PAD; PCI 1300—IBM SNA cluster PAD	HPAD, TPAD, controller, port selector	HPAD, TPAD, controller	Host computer concentrator, private X.25 networks, async device access to X.25 net
INPUT SPECIFICATIONS				
Number and type of devices supported	Seven async terminals or three IBM SNA cluster controllers	40 Sync term. dev. incl. 3270 BSC, SNA, Uniscope, Burroughs PS, others	10 Sync devices: 3270 BSC, SNA, Uniscope, Burroughs PS, others	Up to 48 async devices per unit
Connections supported	Direct, dial-up	Direct, dial-up, leased line	Direct, dial-up, leased line	Direct connect, dial-up via modem
Maximum input rate per port, in bps	9600	9600	9600	Up to 9600
Maximum aggregate input rate, in bps	—	38.4K	9600	230.4K bps
Synchronization	Async/sync	Sync, polling sync.	Sync., polling sync.	Asynchronous
Transmission mode	Full duplex	Half/full duplex	Full/half duplex	Full duplex
Interface	RS-232-C	RS-232-C	RS-232-C	RS-232-C, V.24, MIL STD 188-114
Autospeed/autoparity available	Async autobaud	Not Applicable	Not applicable	Yes
Channel config. data downline loadable	No	Yes	Yes	Yes
Ports config. for perm./switched circ.	Yes	Yes	Yes	Yes; both
NETWORK CHANNEL SPECIFICATIONS				
Number X.25 channels supported	1	1	1	2 sync X.25 level 2
Interface	RS-232-C	RS-232-C, X.21 bis	RS-232-C, X.21 bis	RS-232-C, V.24, MIL STD 188-114
Maximum transmission rate, in bps	9600	19.2K	9600	19.2K (1); 9600 (2)
Synchronization	Synchronous	Synchronous	Synchronous	Synchronous
Transmission mode	Full duplex	Full duplex	Full duplex	Full duplex
Number virtual circuits supported	8	42	12	—
Max. window size supported, in frames	7	25	25	7
Link-level framing supported	HDLC, LAP, LAPB, IBM NPSI, QLLC, PSH	HDLC, LAPB	HDLC, LAPB	X.25 level 2 LAPB
DIAGNOSTICS	Status LEDs, diagnostic port	Local & remote diag., polling self-test, stat. LEDs, remote alarm, stat reporting, statistics	Local & remote diag., polling self-test, stat. LEDs, remote alarm, Statistics, stat. report	Remote and local link-to-port, self-test, status LEDs, opt. alarm driver
FEATURES				
Channel priority assignment	Not applicable	No	No	Yes
Password protection	No	Yes; dual level	Yes; dual level	Yes
Supervisory port	Not applicable	Yes; local and remote	Yes; local and remote	Yes
Echoplex	Yes	Not Applicable	Not Applicable	Yes
Autodialer supported	No	No	No	—
PRICING AND AVAILABILITY				
Purchase, \$	1,650—3,800	6,000—10,500	2,500—5,000	Starts at 1,550
Rental, \$ month-to-month	350	—	—	—
Installation, \$	—	—	—	—
Maintenance, \$ Annual	300—500	150	100	—
Serviced by	Vendor	Swapping/Vendor, 3rd party	Swapping/Vendor, 3rd party	On site and factory
Availability	30 days	10-60 days	10-60 days	—
Date of first comm. delivery of this model	1983	December 1983	June 1985	1984
Number installed to date	Info. not available	300	New product	Info. not available
COMMENTS	*Formerly known as PCI 1076X, 73SX, and R73SX. Series incl. PCI 1100—allows ASCII term./PCs & printers to act as SNA devices via X.25; PCI 1200—an IBM host SNA PAD that can replace IBM NPSI; PCI 1300—lets SNA/SDLC 3270, 3770, 5250 cluster controllers use X.25 network to IBM host.	Fully featured session layer (based on OSI architecture), dual-level network security, end-to-end data integ., data streaming, dual sessions, network mgmt., remote configuration, polling address mapping, port pooling, auto-connect, auto-reconnect, local switching	Fully featured session layer (based on OSI architecture), dual-level network security; end-to-end data integ., data streaming, dual sessions, network mgmt, remote configuration, polling address mapping, port pooling, auto-connect, auto-reconnect, local switching	Supports one or two independent data links to the network; features incl. independently programmable ports, autoconnect, mnemonic calling, idle port disconnect timer, programmable banner, password protection, remote access to supervisory port, etc.

### X.25 Packet Assemblers/Dissassemblers (PADs)

MANUFACTURER & MODEL	Wolfdata WD212-X.25	Wolfdata PMC Plus		
NETWORK CERTIFICATION	Telenet, BOC, Uninet, CompuServe	BOC, DDN, Telenet, Uninet, Dutch DN-1		
CCITT RECOMMENDATION SUPPORTED	X.25 levels 1, 2, & 3	All		
BUFFER MEMORY CAPACITY	—	Up to 256K		
ADDITIONAL RAM AVAILABLE	No	Yes		
DEVICE CONFIGURATIONS	—	Switch, host concen- trator, terminal con- centrator, multiplexer		
INPUT SPECIFICATIONS				
Number and type of devices supported	1 async terminal	Up to 48 async or sync X.25 terminals		
Connections supported	Direct connect	Direct connect via modem		
Maximum input rate per port, in bps	1200	Up to 64K		
Maximum aggregate input rate, in bps	1200	64K		
Synchronization	Asynchronous	Async/sync		
Transmission mode	Full duplex	Full duplex		
Interface	1 RS-232-C	Up to 48 RS-232-C		
Autospeed/autoparity available	No	Yes		
Channel config. data downline loadable	No	Yes		
Ports config. for perm./switched circ.	No	Yes; both		
NETWORK CHANNEL SPECIFICATIONS				
Number X.25 channels supported	1	Up to 10		
Interface	Phone line	RS-232-C, RS-449, V.35		
Maximum transmission rate, in bps	1200	64K		
Synchronization	Synchronous X.5	Synchronous		
Transmission mode	Full duplex	Full duplex		
Number virtual circuits supported	1	127		
Max. window size supported, in frames	7	7		
Link-level framing supported	HDLC	HDLC		
DIAGNOSTICS	Self-test, analog loop	Self-tests, status, LEDs		
FEATURES				
Channel priority assignment	No	No		
Password protection	No	Yes		
Supervisory port	No	Yes		
Echoplex	No	No		
Autodialer supported	No	No		
PRICING AND AVAILABILITY				
Purchase, \$	595	4,750—16,000		
Rental, \$ month-to-month	—	—		
Installation, \$	—	—		
Maintenance, \$ Annual	—	Not applicable		
Serviced by	Factory	Third party		
Availability	15 days	30 days		
Date of first comm. delivery of this model	June 1984	November 1985		
Number installed to date	—	Info. not available		
COMMENTS	Combined AT&T 212A smart modem and X.25 level 3 PAD functions in one product	Modular design to accommodate users' needs for additional ports or customer- specific protocols		





Conversion Systems/Terminal Controllers

MANUFACTURER & MODEL	Computer Peripheral Systems, Inc. MARS	Computer Peripheral Systems, Inc. MARS, jr.	Control Concepts CC-3276	Control Concepts EM-3276
DEVICE TYPE	Protocol converter	Protocol converter	Terminal Emulator	Terminal Emulator
CONVERSION PERFORMED	ASCII to Burroughs Poll/Select; Burroughs to Burroughs	Burroughs Poll/Select to ASCII	ASCII to SNA/SDLC	ASCII to SNA/SDLC
SPECIFIC DEVICE EMULATED	TC-4000, AP-310, TD-830	TC-4000, AP-310, TD-830	IBM 3276-12	IBM 3276-2
SPECIFIC FUNCTIONALITY PROVIDED	Any ASCII or parallel device to Burroughs Poll/Select	Any ASCII or parallel device to Burroughs Poll/Select	Compatible to IBM 3276-12 with one printer port	Compatible with IBM 3276-2 with one printer port
VIRTUAL SCREEN SIZES SUPP., in char.	1920	1920	1920	1920
COMMAND PORT SUPPORTED	Yes	No	No	No
HOST SIDE SPECIFICATIONS				
Specific hosts supported	Any Burroughs Poll/Select mainframe	Any Burroughs Poll/Select mainframe	Any that support 3270 SNA/SDLC	Any that support 3270 SNA/SDLC
Number and type of host lines supported	One sync, async, or TDI	One Burroughs NDL	Any that support 3270 SNA/SDLC	Any that support 3270 SNA/SDLC
Number host sessions supported concurrently	One	Not applicable	One	One
Connections supported	TDI (direct) sync, async polled multidrop dial or leased	TDI (direct) sync, async multidrop	multipoint, point-to-point	multipoint, point-to-point
Connection to host via controller	Multiline 874, CP3687	Uniline, B-874, CP3687	37XX	37XX
TRANSMISSION SPEC. (Host Line)				
Maximum transmission, in bps	38.4K	38.4K	9600	9600
Synchronization	Async/sync	Async/sync	Synchronous	Synchronous
Transmission mode	Half duplex	Half/full duplex	Full duplex	Full duplex
Protocols supported	Burroughs Poll/Select	Burroughs Poll/Select	SNA/SDLC	SNA/SDLC
Codes supported	ASCII	ASCII	ASCII, EBCDIC	ASCII, EBCDIC
Interface	One RS-232-C or TDI	One RS-232-C or TDI	One RS-232-C	One RS-232-C
Clocking	Async—data; Sync—int/ext	External	External	External
TERMINAL SIDE SPECIFICATIONS				
Number and type of ports provided	One async, one parallel, four addtl. async opt.	One async, or one parallel	One terminal port, One printer port	One terminal port, One printer port
Devices supported	Virtually any	Any ASCII device	Any serial RS-232-C printer	Any serial RS-232-C printer
Connections supported	Direct, dial-up	Direct connection	Leased line, dial-up	Leased line, dial-up
TRANSMISSION SPEC. (Terminal Line)				
Maximum transmission, in bps	38.4K	38.4K	9600	9600
Maximum aggregate input rate, in bps	19.2K on multiports	38.4K	9600	9600
Synchronization	Async/sync	Asynchronous	Synchronous	Synchronous
Transmission mode	Half/full duplex	Half/full duplex	Full duplex	Full duplex
Protocols supported	TTY-DCP or CTX parallel	TTY II	SNA/SDLC	BSC
Codes supported	ASCII	ASCII	ASCII, EBCDIC	ASCII, EBCDIC
Interfaces supported	RS-232-C DPC or CTX parallel	RS-232-C or RS-422	RS-232-C	RS-232-C
DIAGNOSTICS	Self-test dump, 13 LED indicators	5 LEDs and test dump	Self Tests	Self Tests
PRICING AND AVAILABILITY				
Purchase, \$	1,140	795	2,395	2,195
Rental, \$/month-to-month	None	Not applicable	124—2 year lease	114—2 year lease
Installation, \$	Time plus expenses	Time plus expenses	—	—
Maintenance, \$ Annual	—	\$100 per repair	350	350
Serviced by	Factory depot replacement	Factory depot replacement	Vendor/factory	Vendor/factory
Availability	Stock to 30 days	Stock to 30 days	15 days	15 days
Date of first comm. delivery of this model	March 1982	August 1984	July 1982	September 1980
Number installed to date	Over 250	Over 200	—	—
COMMENTS	bidirectional parallel port; multi-use data comm. controller; protocol converter only one feature of unit; used as down-speed converter for secondary network, sync to TDI converter, etc.	Line speed conversion async/sync to TDI conversion. Flexible parameter change download, upload or program switches on the unit. Small package (7.5x3.5x1.5). Hangs on device by velcro strips with 6' integral connecting cable standard.	Internal 2400 bps or 4800 bps sync modem opt. Composite Video Output Printer port supports serial printer as 3287 standard feature of the IBM style keyboard	Internal 2400 bps or 4800 bps sync modem opt. Composite Video Output Printer port supports serial printer as 3287 standard feature of the IBM style keyboard optional at no add'l cost

Conversion Systems/Terminal Controllers

MANUFACTURER & MODEL	CTi Data Corporation CTi Series 1000	CTi Data Corporation CTi Series 4000	CTi Data Corporation CTi Series 5000	Datagram Corp. DM-60B
DEVICE TYPE	Terminal controller	Terminal controller remote cluster control.	Terminal/PC remote cluster controller	Micro cluster controller
CONVERSION PERFORMED	IBM EBCDIC to ASCII	ASCII or Type A coax to BSC or SNA/SDLC	ASCII or A coax to BSC or SNA/SDLC	—
SPECIFIC DEVICE EMULATED	IBM 2740 Model 2	IBM 3274-61C	IBM 3274, 7171	All Burroughs terminals
SPECIFIC FUNCTIONALITY PROVIDED	—	IBM 3178; 3278-2,3,4,5; 3179; 3262; 3287 printer	IBM 3278 model 2; VT100, 3101, ADDS, Viewpoint 78 & PC attachment cards, centron. & ser. printers	Cluster control of all Burroughs terminals
VIRTUAL SCREEN SIZES SUPP., in char.	1920	1920	1920	All supported
COMMAND PORT SUPPORTED	—	Yes	Yes	No
HOST SIDE SPECIFICATIONS				
Specific hosts supported	All IBM mainframes	IBM mainframes	IBM mainframes	All Burroughs Computers from B20 through B7900
Number and type of host lines supported	—	—	—	1 Host line operating sync, async, or TDI
Number host sessions supported concurrently	One	One	One	One per terminal
Connections supported	Multipoint leased line	Leased line, multipoint, or point-to-point	Leased line, multipoint, or point-to-point	Direct connection, multipoint, leased line, TDI
Connection to host via controller	IBM 270X/37XX	IBM 37XX or equivalent,	IBM 37XX or equivalent,	Any Burroughs FEP
TRANSMISSION SPEC. (Host Line)				
Maximum transmission, in bps	1800	2400 to 9600	2400 to 9600	19.2K
Synchronization	Asynchronous	Synchronous	Synchronous	Async/sync/TDI
Transmission mode	Half/full duplex	Half/full duplex	Half/full duplex	Full duplex
Protocols supported	IBM 2740	BSC or SNA/SDLC	BSC or SNA/SDLC	Poll/Select
Codes supported	EBCDIC	EBCDIC	EBCDIC, ASCII	ASCII
Interface	RS-232-C	RS-232-C	RS-232-C	One RS-232-C, TDI
Clocking	Internal	External	External	Internal/external
TERMINAL SIDE SPECIFICATIONS				
Number and type of ports provided	One	Up to 16 Type A coax plus 1 ASCII printer port	Up to 7 plus 1 centron. printer port	One Poll/Select
Devices supported	CTi 1000A; 1006 printer	IBM 3178; 3278-2,3,4,5; 3179; 3262; 3287	IBM 3178,3278,3101,DEC VT100,IRMA,FORTE,Centron IDEA Assoc.;compat.pntr	All Burroughs and Burr- oughs cmpat. dvces.; any ASCII device; any Micro Direct
Connections supported	Direct connection	Direct or dial-up	Direct or dial-up	Direct
TRANSMISSION SPEC. (Terminal Line)				
Maximum transmission, in bps	9600	ASCII—9600; A coax 2.3M	ASCII—9600; A coax 2.3M	19.2K
Maximum aggregate input rate, in bps	9600	9600	9600	All ports @ 19.2K
Synchronization	Asynchronous	A coax or async	A coax or async	Async, sync, or TDI
Transmission mode	Full duplex	half/full duplex	half/full duplex	Half/full duplex
Protocols supported	X-on/X-off	A coax, ASCII	A Coax, ASCII, Centronic	TTY, Poll/Select
Codes supported	ASCII	—	—	ASCII
Interfaces supported	RS-232-C	RS-232-C, RS-422, A coax	RS-232-C, RS-422, A coax	RS-232-C, V.24 TDI
DIAGNOSTICS	—	ROM based; diskette based	ROM based; diskette based	Continual self-test, standalone diagnostic routines
PRICING AND AVAILABILITY				
Purchase, \$	2,575	4,795—6,395	2,495	1,295
Rental, \$/month-to-month	127—2 year	None	None	—
Installation, \$	—	—	—	Customer installed
Maintenance, \$ Annual	300	—	—	Contact vendor
Serviced by	TRW	Third party	Third party	Factory
Availability	30 days	30 days	30 days	30 days
Date of first comm. delivery of this model	1981	1984	1985	1985
Number installed to date	950	100	—	—
COMMENTS		Support for most 3270 type terminals and printers	Support for popular PC attachment cards, and popular PC type modems, a number of ASCII term. and popular IBM 3270 type terminals and printers	Device also acts as re- mote front-end process., which independently polls the terminals; enabling the user to put up to 10 devices on a single line adaptor with excellent response time

Conversion Systems/Terminal Controllers

MANUFACTURER & MODEL	Datagram Corp. DM-600B	Datagram Corp. DM-2000B	Datagram Corp. DM2400B	Datastream 774
DEVICE TYPE	Cluster controller/ protocol converter	Cluster controller/ remote front end proc.	Data PBX for Burroughs computer systems	Protocol converter terminal emulator
CONVERSION PERFORMED	Burroughs Poll Select to ASCII	Burroughs Poll/Select ASCII	Burroughs Poll/Select— ASCII	ASCII to EBCDIC
SPECIFIC DEVICE EMULATED	All Burroughs terminals	All Burroughs terminals	All Burroughs terminals	IBM 3274-51C, 3271-2
SPECIFIC FUNCTIONALITY PROVIDED	Cluster control of all Burroughs terminals	Cluster control of all Burroughs terminals	Cluster controller & data PBX	ASCII CRT, all PCs to 3278/3277 model 2; ASCII printer to 3287
VIRTUAL SCREEN SIZES SUPP., in char.	All supported	All supported	All supported	1920
COMMAND PORT SUPPORTED	Yes	Yes	Yes	Yes
HOST SIDE SPECIFICATIONS				
Specific hosts supported	All Burroughs Computers from B20 through B7900	All Burroughs Computers from B20 through B7900	All Burroughs Computers from B800 through B7900	IBM 43XX, 360/370, 30XX, 33XX, 8100
Number and type of host lines supported	1 Host line operating sync, async, or TDI	1 Host line operating sync, async, or TDI	Up to seven sync, async, or TDI	All interactive
Number host sessions supported concurrently	One per terminal	One per terminal	One per terminal address per host	24
Connections supported	Direct connection, multipoint, leased line, TDI	Direct connection, multipoint, leased line, TDI	Direct connection, multipoint, leased line, TDI	Direct, multipoint on leased line, point-to- point on dial-up
Connection to host via controller	Any Burroughs FEP	Any Burroughs FEP	Any Burroughs FEP	IBM 37XX
TRANSMISSION SPEC. (Host Line)				
Maximum transmission, in bps	19.2K	19.2K	19.2K	9600
Synchronization	Async/sync/TDI	Async/sync/TDI	Async/sync	Synchronous
Transmission mode	Full duplex	Full duplex	Full duplex	Half duplex
Protocols supported	Poll/Select	Poll/Select	Poll/Select	BSC
Codes supported	ASCII	ASCII	ASCII	EBCDIC
Interface	One RS-232-C, TDI	One RS-232-C, TDI	RS-232-C (max of 7), TDI	Two RS-232-C
Clocking	Internal/external	Internal/external	Internal/external	Int/ext/data derived
TERMINAL SIDE SPECIFICATIONS				
Number and type of ports provided	up to 3 Poll/Select up to 7 Async ASCII	up to 18 Poll/Select up to 18 Async ASCII	24	Up to 23 async device ports, CRT, or printer
Devices supported	All Burroughs and Burr- oughs cmpat. dvces.; any ASCII device; any Micro	All Burroughs and Burr- oughs cmpat. dvces.; any ASCII device; any Micro	All Burroughs and Burr- oughs cmpat. dvces.; any ASCII device; any Micro	Over 200
Connections supported	Direct, dial-up, leased line	Direct, dial-up, leased line	Direct, dial, leased line	Direct, dial-up
TRANSMISSION SPEC. (Terminal Line)				
Maximum transmission, in bps	19.2K	19.2K	19.2K	9600
Maximum aggregate input rate, in bps	All ports @ 19.2K	All ports @ 19.2K	All ports @ 19.2K	9600 per line
Synchronization	Async, sync, or TDI	Async, sync, or TDI	Async/sync	Asynchronous
Transmission mode	Half/full duplex	Half/full duplex	Half/full duplex	Full duplex
Protocols supported	TTY, Poll/Select	TTY, Poll/Select	TTY, Poll/Select	TTY II
Codes supported	ASCII	ASCII	ASCII	ASCII
Interfaces supported	RS-232-C, V.24 TDI	RS-232-C, V.24 TDI	RS-232-C, TDI	RS-232-C
DIAGNOSTICS	Continual self-test, standalone diagnostic routines	Continual self-test, standalone diagnostic routines	Continual self-test, standalone diagnostic routines	Self-tests
PRICING AND AVAILABILITY				
Purchase, \$	1,795—3,495	8,500—20,200	16,000-30,000	Contact vendor
Rental, \$/month-to-month	—	—	—	—
Installation, \$	Customer installed	1,000	1,500	—
Maintenance, \$ Annual	Contact vendor	Contact vendor	Contact vendor	—
Serviced by	Factory	Factory	Factory, third party	Vendor, Dow Jones
Availability	30 days	30 days	30	30 days
Date of first comm. delivery of this model	1985	1979	1983	1980
Number installed to date	100+	750+	100+	3000
COMMENTS	Device also acts as re- mote front-end process., which independently polls the terminals; enabling the user to put up to 18 devices on a single line adaptor with excellent response time	Device also acts as re- mote front-end process., which independently polls the terminals; enabling the user to put up to 126 devices on a single line adaptor with excellent response time	Device also acts as re- mote front-end process., which independently polls the terminals; enables a Burr. user to put up to 126 devices on a single line adapter with excellent response time	Security software for dial-in access; inactivity monitor; multiple hosts; paper display

Conversion Systems/Terminal Controllers

MANUFACTURER & MODEL	Datastream 874	Datastream 776	Davox Series 1000/2000	Davox Series 5000 Controller
DEVICE TYPE	Protocol converter terminal emulator	Protocol converter, ter- minal controller	Terminal emulator	Terminal emulator
CONVERSION PERFORMED	ASCII to EBCDIC	ASCII to EBCDIC	—	—
SPECIFIC DEVICE EMULATED	IBM 3274-51C	IBM 3274-51C, 3271-2	IBM 3274 models 21C, 31C, 41C, 51C, 61C	IBM 3274 models 21C, 31C, 41C, 51C, 61C
SPECIFIC FUNCTIONALITY PROVIDED	Async ASCII CRT, all PCs to 3278 model 2,3,4,5 ASCII printer to 3287	ASCII CRT, all PCs to 3278/3277 model 2; ASCII printer to 3287	IBM 3278 model 2, 3178; IBM PC ASCII/TTY, DEC VT52/VT100	IBM 3278 model 2, 3178; IBM PC ASCII/TTY, DEC VT52/VT100
VIRTUAL SCREEN SIZES SUPP., in char.	1920, 2880, 3440, 3554	1920	1920	1920
COMMAND PORT SUPPORTED	Yes	Yes	—	—
HOST SIDE SPECIFICATIONS				
Specific hosts supported	IBM 43XX, 360/370, 30XX, 33XX, 8100	IBM 36/370, 43XX, 30XX, 33XX, 8100	IBM 303X, 43XX, 370X, 8100; DEC PDP 11, VAX	IBM 303X, 43XX, 370X, 8100; DEC PDP 11, VAX
Number and type of host lines supported	All interactive	All interactive	One SDLC, one BSC	One SDLC, one BSC
Number host sessions supported concurrently	44	8	One	Two
Connections supported	Direct, multipoint on leased line, point-to- point on dial-up	Direct, point-to-point, multipoint	Point-to-point on dial- up, multipoint on leased line	Point-to-point on dial- up, multipoint on leased line
Connection to host via controller	IBM 37XX	IBM 37XX	Davox 1000 controller	Davox 2000/3200 controllers
TRANSMISSION SPEC. (Host Line)				
Maximum transmission, in bps	19.2K	9600	56K sync; 19.2K async	56K sync; 19.2K async
Synchronization	Synchronous	Synchronous	Async/sync	Async/sync
Transmission mode	Half duplex	Half duplex	Half/full duplex	Half/full duplex
Protocols supported	SNA/SDLC	BSC	BSC, SNA/SDLC	BSC, SNA/SDLC
Codes supported	EBCDIC	EBCDIC	ASCII, EBCDIC	ASCII, EBCDIC
Interface	Two RS-232-C	One RS-232-C	One RS-232-C	Two RS-232-C
Clocking	Int/ext/data derived	Int/ext/data derived	External	External
TERMINAL SIDE SPECIFICATIONS				
Number and type of ports provided	Up to 15 async device ports, CRT or printer	Up to 8 device ports, CRT or printer	8 sync, up to 32 sync w/ expansion controllers	8 sync, up to 32 sync w/ expansion controllers
Devices supported	Over 200	Over 200	Davox workstations, IBM PC, any serial interface	Davox workstations, IBM PC, any serial interface
Connections supported	Direct, dial-up	Direct, dial-up	printer Dial-up	printer Dial-up
TRANSMISSION SPEC. (Terminal Line)				
Maximum transmission, in bps	19.2K	9600	400K	400K
Maximum aggregate input rate, in bps	19.2K per line	9600 per line	—	—
Synchronization	Asynchronous	Asynchronous	Async/sync	Async/sync
Transmission mode	Full duplex	Full duplex	Half/full duplex	Half/full duplex
Protocols supported	TTY II	TTY II	BSC, SNA/SDLC, TTY	BSC, SNA/SDLC, TTY
Codes supported	ASCII	ASCII	ASCII, EBCDIC	ASCII, EBCDIC
Interfaces supported	RS-232-C	RS-232-C	RS-232-C	RS-232-C
DIAGNOSTICS	Self-tests	Self tests	Self-test, status LEDs, built-in line monitors	Self-test, status LEDs, built-in line monitors
PRICING AND AVAILABILITY				
Purchase, \$	Contact vendor	Contact vendor	3,880/5,455	11,225
Rental, \$/month-to-month	—	—	210 (2 yr.); 173 (3 yr.)	432 (2 yr.)
Installation, \$	—	—	—	—
Maintenance, \$ Annual	—	—	402 (on-site); 268 (repl Factory, third party)	402(on-site); 268(repla Factory, third party)
Serviced by	Vendor, Dow Jones	Vendor, Dow Jones		
Availability	30 days	30 days	30 days ARO	30 days ARO
Date of first comm. delivery of this model	1982	1982	1982/1984	February 1985
Number installed to date	2000	1000	5000	One (as of February '85)
COMMENTS	Security software for dial-in access; LU1,2,3 support; multiple sess; workstation/system print 3270 PC file transfer SAS graphics support, color, answer back, inactivity monitor	Security software for dial-in access; paper display; inactivity monitor	Operates with terminals on coax or twisted pair; PC sharing among all terminals in config.; modular upgradeability; coax eliminator & reduc- tion; device independ- ent—can mix terminals on same controller; controller redundancy	Operates with terminals on coax or twisted pair; PC sharing among all terminals in config.; modular upgradeability; coax eliminator & reduc- tion; device independ- ent—can mix terminals on same controller; controller redundancy; V.35 option

Conversion Systems/Terminal Controllers

MANUFACTURER & MODEL	Agile 6287/6287S	Agile LC36	Air Land Systems PCU-200	Alphamatrix Model BAE-806
DEVICE TYPE	Protocol converter	Protocol converter	Protocol converter	Protocol converter
CONVERSION PERFORMED	Async ASCII to IBM 3270 coax	ASCII to Burroughs Poll/Select	User selectable protocol to protocol	Async ASCII to BSC
SPECIFIC DEVICE EMULATED	IBM 3287	—	—	IBM 2780/3780
SPECIFIC FUNCTIONALITY PROVIDED	ASCII printer/plotter to IBM 3274/3276	—	Configurable protocol emulation for RS-232-C devices	Lets async ASCII printer appear as IBM 2780/3780
VIRTUAL SCREEN SIZES SUPP., in char.	—	—	—	No screen
COMMAND PORT SUPPORTED	—	—	No	No
HOST SIDE SPECIFICATIONS				
Specific hosts supported	IBM mainframe	Burroughs Poll/Select	—	IBM or compat. supporting BSC protocol
Number and type of host lines supported	—	One Poll Select	Not applicable	One BSC
Number host sessions supported concurrently	—	—	Not applicable	Not applicable
Connections supported	—	TDI and synchronous modem	Direct, dial-up via modem	Direct, dial-up via modem
Connection to host via controller	IBM 3274, 3276	—	—	—
TRANSMISSION SPEC. (Host Line)				
Maximum transmission, in bps	—	—	See comments	To 9600
Synchronization	—	—	—	Synchronous
Transmission mode	—	—	—	Half duplex
Protocols supported	BSC, SNA/SDLC/SCS	Poll Select	—	BSC
Codes supported	—	—	—	EBCDIC
Interface	IBM Type A coax	TDI	—	RS-232-C
Clocking	Internal	Internal	—	Internal/external
TERMINAL SIDE SPECIFICATIONS				
Number and type of ports provided	RS-232-C Serial and Centronics parallel	One asynchronous	One RS-232-C or TDI; One RS-232-C or 20 mA	One async printer
Devices supported	Virtually any printer or plotter	Virtually any async ASCII device with RS-232-C	A number of devices from IBM, Sperry, Honeywell, Burroughs, and NCR	ASCII RS-232-C printers
Connections supported	Direct	Direct, dial-up	Direct, dial-up	Direct, dial-up
TRANSMISSION SPEC. (Terminal Line)				
Maximum transmission, in bps	19.2K	19.2K	50 to 19.8K	110 to 9600
Maximum aggregate input rate, in bps	—	—	—	9600
Synchronization	Asynchronous	Asynchronous	Sync/async	Asynchronous
Transmission mode	Half duplex	Half duplex	Half/full duplex	Half/full duplex
Protocols supported	IBM coax	Poll Select	TTY, BSC, SDLC, Burr.P/S	X-on/X-off
Codes supported	EBCDIC, DSC, SDS	—	—	ASCII
Interfaces supported	RS-232-C, Centronics parallel	RS-232-C	RS-232-C; TDI, or 20 mA	Current loop
DIAGNOSTICS	Self-tests, LEDs	Self-tests, LEDs	Status LEDs, test switch	Self-tests, loopback tests, status LEDs
PRICING AND AVAILABILITY				
Purchase, \$	1,595/1,395	995	1,650	1,695
Rental, \$/month-to-month	None	None	—	—
Installation, \$	None	None	—	400/day
Maintenance, \$ Annual	—	—	—	—
Serviced by	Factory	Factory	Vendor	Vendor
Availability	21 days	21 days	30 days	45-60 days
Date of first comm. delivery of this model	October 1984	1979	—	1981
Number installed to date	300/300	1250	—	300
COMMENTS	Allows any ASCII printer or plotter to attach to IBM 3274/3276 controller as LU1, LU3 type A coax device. 2 year warranty 6287 has 3287-style front panel.	Allows any RS-232-C device to interface with Burroughs Poll Select protocol either locally (TDI) or remote (sync)	Device enables inter-communication of data btwn. 2 cmprts. or cmprts. and peripherals using diff. protocols; sftwr. avail. for most maj. line communications protocols; cmpny. offers PCU-40,42,48,50,60,62 cards for insrt. into devices	For RJE applications, sign-on JCL cards can be specified as options

Conversion Systems/Terminal Controllers

MANUFACTURER & MODEL	Alphamatrix BAX-1-80/BAX-1-75	Avatar Technologies PA1000	Avatar Technologies PA1500	Black Box Catalog Model A/S-3
DEVICE TYPE	Protocol converter	Protocol converter	Protocol converter	Protocol converter
CONVERSION PERFORMED	Async ASCII to BSC	ASCII to BSC or SNA/SDLC	ASCII to BSC, SNA LU1 and LU3	ASCII to IBM 3270 BSC or SNA/SDLC
SPECIFIC DEVICE EMULATED	IBM 2780/3780 or 3275	IBM 3278-2 terminal	IBM 3287	IBM 3274 model 5K
SPECIFIC FUNCTIONALITY PROVIDED	Async ASCII to 2780/3780 (BAX 1-80) or IBM 3275 (BAX 1-75)	Async ASCII terminals, personal computers to IBM 3278 model 25	Async ASCII printers, to IBM 3287	Async ASCII to IBM BSC
VIRTUAL SCREEN SIZES SUPP., in char.	—	1920	960-3564 char. buffer	—
COMMAND PORT SUPPORTED	—	No	No	Yes
HOST SIDE SPECIFICATIONS				
Specific hosts supported	IBM or compat. supporting BSC protocol	IBM mnfrms., async hosts such as DEC, DG, Wang	IBM mainframes	Supports standard IBM operating systems
Number and type of host lines supported	One BSC	One IBM Type A coax one RS-232-C for async host	One IBM Type A coax	One BSC or one SNA
Number host sessions supported concurrently	Not applicable	Two (switch sel.)	One	One
Connections supported	Direct, dial-up	Direct, point-to-point via modem	Direct	Direct, auto-dial
Connection to host via controller	—	IBM 3274/76	IBM 3274/76	IBM 3271, 3274, 3276
TRANSMISSION SPEC. (Host Line)				
Maximum transmission, in bps	To 4800 (9600 opt.)	To 9600	To 9600	9600
Synchronization	Synchronous	Async/sync	Synchronous	Asynchronous
Transmission mode	Half duplex	—	—	Half/full duplex
Protocols supported	BSC	BSC, SNA/SDLC or async	BSC, SNA/SDLC	BSC, SNA/SDLC
Codes supported	EBCDIC	—	—	EBCDIC
Interface	RS-232-C	RS-232-C; 3270 coax	Type A coax	RS-232-C
Clocking	Internal/external	—	—	Internal/external
TERMINAL SIDE SPECIFICATIONS				
Number and type of ports provided	One async ASCII terminal or teleprinter	One term. port, one aux. port	One async ASCII printer	Four asynchronous
Devices supported	ASCII RS-232-C terminals	DEC VT100; IBM 3101; LSI ADM5, Teavid. 910, ADDS viewpoint & pers. comp.	Dot mtrx., In., ltr-qual prts. from Dataproducts, NEC, Centronics, Xerox	Any asynchronous device
Connections supported	Direct, dial-up	Direct, dial-up	Direct	Direct, auto-dial
TRANSMISSION SPEC. (Terminal Line)				
Maximum transmission, in bps	110 to 9600	300 to 9600	—	9600
Maximum aggregate input rate, in bps	9600	—	—	76K
Synchronization	Asynchronous	Asynchronous	—	Asynchronous
Transmission mode	Half/full duplex	—	—	Half/full duplex
Protocols supported	TTY	X-on/X-off, ETX/ACK	—	BSC
Codes supported	ASCII	ASCII	ASCII	ASCII
Interfaces supported	RS-232-C or parallel	RS-232-C	RS-232-C or parallel	RS-232-C
DIAGNOSTICS	Self-tests, loopback tests, status LEDs	Self-tests	—	Not applicable
PRICING AND AVAILABILITY				
Purchase, \$	1,695	995	Contact vendor	See comments
Rental, \$/month-to-month	—	—	—	None
Installation, \$	400/day	—	—	None
Maintenance, \$ Annual	—	—	—	None
Serviced by	Vendor	Vendor	Vendor	Factory
Availability	45-60 days	30 days	30 days	From stock
Date of first comm. delivery of this model	1978	February 1984	March 1984	1983
Number installed to date	200	—	New product	—
COMMENTS	Integrated modem optional	Allows one connected ASCII term. to emulate IBM 3278 and access IBM mainframe or asynchronous minicomputer, public information network, or timesharing service	Supports Transparent mode operation for specialized host applications incl. graphics, bar-code generation, alternate characters	Purchase price: two chan. dumb; \$1,695— four chan. smart; \$2,250— four chan. smart; \$2,950 eight chan. smart; \$3,850 12 chan. smart; \$4,750 Allows full operator emulation, user-specified auto log on and character set; security features on smart units

Conversion Systems/Terminal Controllers

MANUFACTURER & MODEL	Black Box Catalog Model A/S-2E	Black Box Catalog PQ-4(B)	Black Box Catalog IBM PC/3270 Terminal Emulation Board	Black Box Catalog Coax to Async Printer Protocol Converter— A/C-1(RO)
DEVICE TYPE	Protocol converter	Bidirectional protocol converter	Terminal emulator	Protocol converter terminal emulator
CONVERSION PERFORMED	BSC RJE protocols to/from async ASCII	Async ASCII to SDLC	BSC to ASCII; SNA/SDLC to ASCII	BSC to ASCII; SNA/SDLC to ASCII
SPECIFIC DEVICE EMULATED	Supports IBM 2770, 2780, 3780, 3741	IBM 5251 model 11	IBM 3278, models 2,3,4; or IBM 3279, models 2A, 2B, 3A, 3B	IBM 3287
SPECIFIC FUNCTIONALITY PROVIDED	BSC RJE protocols to/from async ASCII	Async terminal to 5251 remote model 12	IBM PC (or compatible) to IBM 3278 models 2, 3	Async parallel or serial printer to IBM 3287
VIRTUAL SCREEN SIZES SUPP., in char.	—	—	—	—
COMMAND PORT SUPPORTED	No	No	—	—
HOST SIDE SPECIFICATIONS				
Specific hosts supported	Supports IBM 2770, 2780, 3780, 3741	IBM System 34, 36, 38; Series 1	—	—
Number and type of host lines supported	One async or one BSC	IBM SDLC Twinax	PC DDS and 3270	—
Number host sessions supported concurrently	One	One	—	—
Connections supported	Direct	Direct	Bus-direct connection	—
Connection to host via controller	IBM 2770, 2780, 3780, 3741	IBM 5251 Model 12, 11	Type A coax connect. to 3274/76 clus. controller	IBM 3274/76 (or compat.) cluster controller
TRANSMISSION SPEC. (Host Line)				
Maximum transmission, in bps	9600	—	—	—
Synchronization	Bisync/async	Asynchronous	—	Asynchronous
Transmission mode	Full duplex	Half duplex	—	—
Protocols supported	BSC	SDLC	BSC, SNA/SDLC	BSC, SNA/SDLC
Codes supported	ASCII	ASCII	ASCII	ASCII
Interface	RS-232-C	RS-232-C	RS-232-C	RS-232-C
Clocking	Internal	—	—	—
TERMINAL SIDE SPECIFICATIONS				
Number and type of ports provided	Async or sync	One asynchronous	—	—
Devices supported	Any async or sync device	Any async device	IBM PC (or compatible)	Async parallel or serial printer
Connections supported	Direct	Direct	Bus-direct connection	—
TRANSMISSION SPEC. (Terminal Line)				
Maximum transmission, in bps	9600	—	—	—
Maximum aggregate input rate, in bps	—	—	—	—
Synchronization	Async/sync	Asynchronous	—	—
Transmission mode	Full duplex	Half duplex	—	—
Protocols supported	TTY	—	—	—
Codes supported	EBCDIC or BCD	ASCII	—	—
Interfaces supported	RS-232-C	RS-232-C	—	—
DIAGNOSTICS	Three LEDs	Self-test, other built- in diagnostics	—	—
PRICING AND AVAILABILITY				
Purchase, \$	1,445	1,645	895	1,495
Rental, \$/month-to-month	None	None	None	None
Installation, \$	None	None	None	None
Maintenance, \$ Annual	None	None	None	None
Serviced by	Factory	Factory	Factory	Factory
Availability	From stock	Stock to 30 days	Stock	Stock
Date of first comm. delivery of this model	1983	1983	—	—
Number installed to date	4000	100	—	—
COMMENTS	Baud rates selected independently for each port; selectable, built- in modem eliminators		Standard Type A coaxial connection to 4331 dis- play/printer adapter	

### Conversion Systems/Terminal Controllers

MANUFACTURER & MODEL	Black Box Catalog Coax to Async Terminal/PC Protocol Converter A/C-1(B)	Commercial Data Processing 440E/440E-1/440E-PC	Commtext Cx-86/Cx-83	Computer Communications Inc. 8274C
DEVICE TYPE	Protocol converter terminal emulator	Microprocessor controller	Protocol converter, term.contr/data switch	Remote cluster controller
CONVERSION PERFORMED	ASCII to BSC; ASCII to SNA/SDLC	ASCII tape format to async TTY RS-232-C; NCR packed HEX code to ASCII	Asynchronous ASCII to BSC, SNA/SDLC; Type A coax to asynchronous ASCII	ASCII to SNA/SDLC
SPECIFIC DEVICE EMULATED	IBM 3278-2	—	IBM 3274 Model 1C/21C/31C/51C or IBM 3276	IBM 3274 1C, 21C, 31C, 41C, 51C, 61C; 3276-12
SPECIFIC FUNCTIONALITY PROVIDED	Async ASCII micro computers & terminals to IBM 3278-2 terminal	NCR cassette tapes to be read by micro-, mini-, or mainframe	Async ASCII CRT or PC to IBM 3277/8/9; async prtr to IBM 3284/6/7/9; IBM 3278 to ASCII CRT	ASCII CRTs, personal computers to IBM 3270 (SDLC)
VIRTUAL SCREEN SIZES SUPP., in char.	—	Not applicable	1920	—
COMMAND PORT SUPPORTED	—	—	Yes	—
HOST SIDE SPECIFICATIONS	—	Any protocol	Any IBM, CDC, Honeywell, or Tandem host eq. 3274s	IBM/PCM SNA host
Specific hosts supported	—	One asynchronous	Various	One SNA/SDLC
Number and type of host lines supported	—	—	4	Not applicable
Number host sessions supported concurrently	Two	—	—	—
Connections supported	—	Direct, point-to-point, multipoint	Direct, point-to-point on dial-up line, multipoint on leased line	Point-to-point, multipoint
Connection to host via controller	IBM 3274/76 (or compat.) cluster controller	—	IBM 37XX or compatible	—
TRANSMISSION SPEC. (Host Line)	—	1200 (212A); 9600*	To 19.2K	To 9600
Maximum transmission, in bps	—	Asynchronous	Synchronous	Synchronous
Synchronization	Asynchronous	Asynchronous	Half/full duplex	Half/full duplex
Transmission mode	—	Full duplex	BSC or SNA/SDLC	SNA/SDLC
Protocols supported	BSC, SNA/SDLC	TTY	EBCDIC/ASCII	—
Codes supported	ASCII	ASCII, Packed HEX	Two RS-232-C	One RS-232-C
Interface	RS-232-C	RS-232-C	—	—
Clocking	—	Data derived	Internal/external	—
TERMINAL SIDE SPECIFICATIONS	—	One asynchronous	25 async/Type A (Cx-86) 10 async/Type Ac (Cx-83)	Coax Cabeltalk up to 16 ports, 1 RS-232-C port
Number and type of ports provided	—	NCR 2126, 2140, 2152, 2160, 2950, 7750	Most manufac. async terminals & micros, IBM 3278 or compatible	ADDS/Viewpoint, ADM3A, DEC VT100, IBM 3101, Televideo 910, etc.
Devices supported	Async ASCII microcomputer and terminal with extended version option; dial-up disconnect	Direct, dial-up	Direct connection or switched access	Direct
Connections supported	—	1200 or 9600	110 to 19.2K	up to 4800
TRANSMISSION SPEC. (Terminal Line)	—	—	576K	—
Maximum transmission, in bps	—	Asynchronous	Asynchronous	Asynchronous
Maximum aggregate input rate, in bps	—	Full duplex	Full duplex	—
Synchronization	—	TTY	TTY or Type A	—
Transmission mode	—	ASCII	ASCII or Scan code	—
Protocols supported	—	RS-232-C, RS-423	RS-232-C, RS-422, 20 mA cur.lp.Coax In.dr.Coax A	RS-232-C
Codes supported	—	Self-test, status LEDs, control panel	Self tests, status LEDs	Local/remote diag. tests
Interfaces supported	—	—	—	—
DIAGNOSTICS	—	—	—	—
PRICING AND AVAILABILITY	—	—	—	—
Purchase, \$	995	3,250/1,975 (440-1 & PC)	3,900—18,000	5,500—7,500
Rental, \$/month-to-month	None	None	Distributor dependent	Contact vendor
Installation, \$	None	—	Distributor dependent	Contact vendor
Maintenance, \$ Annual	None	—	Distributor dependent	Contact vendor
Serviced by	Factory	Unit exchange	On-site via M/A-Com	Vendor
Availability	Stock	Two-four weeks	30 days	30—45 days
Date of first comm. delivery of this model	—	1978/1979/1983	1980	—
Number installed to date	—	800/160/40	45,000 ports	—
COMMENTS	Extended version option \$100.	Unit designed to interface NCR cassette handler to most mainframes, minis, and micros; works in local environ. through modem elim.	Async terminal interfaces may be allocated for connection to external comm. or computing facilities, providing user access to a wide variety of TTY-compat. hosts as well as the dial net. Opt X.25 adapt integrates an Async PAD.	Cabeltalk multiplexing feature available as coax or twisted pair connection; concurrently supports 3178-type, ASCII CRT, and PC devices
		*On leased line		



## Conversion Systems/Terminal Controllers

MANUFACTURER & MODEL	Computer Peripheral Systems, Inc. MARS	Computer Peripheral Systems, Inc. MARS, jr.	Control Concepts CC-3276	Control Concepts EM-3276
DEVICE TYPE	Protocol converter	Protocol converter	Terminal Emulator	Terminal Emulator
CONVERSION PERFORMED	ASCII to Burroughs Poll/Select; Burroughs to Burroughs	Burroughs Poll/Select to ASCII	ASCII to SNA/SDLC	ASCII to SNA/SDLC
SPECIFIC DEVICE EMULATED	TC-4000, AP-310, TD-830	TC-4000, AP-310, TD-830	IBM 3276-12	IBM 3276-2
SPECIFIC FUNCTIONALITY PROVIDED	Any ASCII or parallel device to Burroughs Poll/Select	Any ASCII or parallel device to Burroughs Poll/Select	Compatible to IBM 3276-12 with one printer port	Compatible with IBM 3276-2 with one printer port
VIRTUAL SCREEN SIZES SUPP., in char.	1920	1920	1920	1920
COMMAND PORT SUPPORTED	Yes	No	No	No
HOST SIDE SPECIFICATIONS				
Specific hosts supported	Any Burroughs Poll/Select mainframe	Any Burroughs Poll/Select mainframe	Any that support 3270 SNA/SDLC	Any that support 3270 SNA/SDLC
Number and type of host lines supported	One sync, async, or TDI	One Burroughs NDL	Any that support 3270 SNA/SDLC	Any that support 3270 SNA/SDLC
Number host sessions supported concurrently	One	Not applicable	One	One
Connections supported	TDI (direct) sync, async polled multidrop dial or leased	TDI (direct) sync, async multidrop	multipoint, point-to-point	multipoint, point-to-point
Connection to host via controller	Multiline 874, CP3687	Uniline, B-874, CP3687	37XX	37XX
TRANSMISSION SPEC. (Host Line)				
Maximum transmission, in bps	38.4K	38.4K	9600	9600
Synchronization	Async/sync	Async/sync	Synchronous	Synchronous
Transmission mode	Half duplex	Half/full duplex	Full duplex	Full duplex
Protocols supported	Burroughs Poll/Select	Burroughs Poll/Select	SNA/SDLC	SNA/SDLC
Codes supported	ASCII	ASCII	ASCII, EBCDIC	ASCII, EBCDIC
Interface	One RS-232-C or TDI	One RS-232-C or TDI	One RS-232-C	One RS-232-C
Clocking	Async—data; Sync—int/ext	External	External	External
TERMINAL SIDE SPECIFICATIONS				
Number and type of ports provided	One async, one parallel, four addtl. async opt.	One async, or one parallel	One terminal port, One printer port	One terminal port, One printer port
Devices supported	Virtually any	Any ASCII device	Any serial RS-232-C printer	Any serial RS-232-C printer
Connections supported	Direct, dial-up	Direct connection	Leased line, dial-up	Leased line, dial-up
TRANSMISSION SPEC. (Terminal Line)				
Maximum transmission, in bps	38.4K	38.4K	9600	9600
Maximum aggregate input rate, in bps	19.2K on multiports	38.4K	9600	9600
Synchronization	Async/sync	Asynchronous	Synchronous	Synchronous
Transmission mode	Half/full duplex	Half/full duplex	Full duplex	Full duplex
Protocols supported	TTY-DCP or CTX parallel	TTY II	SNA/SDLC	BSC
Codes supported	ASCII	ASCII	ASCII, EBCDIC	ASCII, EBCDIC
Interfaces supported	RS-232-C DPC or CTX parallel	RS-232-C or RS-422	RS-232-C	RS-232-C
DIAGNOSTICS	Self-test dump, 13 LED indicators	5 LEDs and test dump	Self Tests	Self Tests
PRICING AND AVAILABILITY				
Purchase, \$	1,140	795	2,395	2,195
Rental, \$/month-to-month	None	Not applicable	124—2 year lease	114—2 year lease
Installation, \$	Time plus expenses	Time plus expenses	—	—
Maintenance, \$ Annual	—	\$100 per repair	350	350
Serviced by	Factory depot replacement	Factory depot replacement	Vendor/factory	Vendor/factory
Availability	Stock to 30 days	Stock to 30 days	15 days	15 days
Date of first comm. delivery of this model	March 1982	August 1984	July 1982	September 1980
Number installed to date	Over 250	Over 200	—	—
COMMENTS	bidirectional parallel port; multi-use data comm. controller; protocol converter only one feature of unit; used as down-speed converter for secondary network, sync to TDI converter, etc.	Line speed conversion async/sync to TDI conversion. Flexible parameter change download, upload or program switches on the unit. Small package (7.5x3.5x1.5). Hangs on device by velcro strips with 6' integral connecting cable standard.	Internal 2400 bps or 4800 bps sync modem opt. Composite Video Output Printer port supports serial printer as 3287 standard feature of the IBM style keyboard	Internal 2400 bps or 4800 bps sync modem opt. Composite Video Output Printer port supports serial printer as 3287 standard feature of the IBM style keyboard optional at no add'l cost

Conversion Systems/Terminal Controllers

MANUFACTURER & MODEL	CTi Data Corporation CTi Series 1000	CTi Data Corporation CTi Series 4000	CTi Data Corporation CTi Series 5000	Datagram Corp. DM-60B
DEVICE TYPE	Terminal controller	Terminal controller remote cluster control.	Terminal/PC remote cluster controller	Micro cluster controller
CONVERSION PERFORMED	IBM EBCDIC to ASCII	ASCII or Type A coax to BSC or SNA/SDLC	ASCII or A coax to BSC or SNA/SDLC	—
SPECIFIC DEVICE EMULATED	IBM 2740 Model 2	IBM 3274-61C	IBM 3274, 7171	—
SPECIFIC FUNCTIONALITY PROVIDED	—	IBM 3178; 3278-2,3,4,5; 3179; 3262; 3287 printer	IBM 3278 model 2; VT100, 3101, ADDS, Viewpoint 78 & PC attachment cards, centron. & ser. printers	—
VIRTUAL SCREEN SIZES SUPP., in char.	1920	1920	1920	All supported
COMMAND PORT SUPPORTED	—	Yes	Yes	No
HOST SIDE SPECIFICATIONS				
Specific hosts supported	All IBM mainframes	IBM mainframes	IBM mainframes	All Burroughs Computers from B20 through B7900
Number and type of host lines supported	—	—	—	All Burroughs OS
Number host sessions supported concurrently	One	One	One	One per terminal
Connections supported	Multipoint leased line	Leased line, multipoint, or point-to-point	Leased line, multipoint, or point-to-point	Direct connection, multipoint, leased line
Connection to host via controller	IBM 270X/37XX	IBM 37XX or equivalent,	IBM 37XX or equivalent,	Any Burroughs FEP
TRANSMISSION SPEC. (Host Line)				
Maximum transmission, in bps	1800	2400 to 9600	2400 to 9600	19.2K
Synchronization	Asynchronous	Synchronous	Synchronous	Async/sync/TDI
Transmission mode	Half/full duplex	Half/full duplex	Half/full duplex	Full duplex
Protocols supported	IBM 2740	BSC or SNA/SDLC	BSC or SNA/SDLC	Poll/Select
Codes supported	EBCDIC	EBCDIC	EBCDIC, ASCII	ASCII
Interface	RS-232-C	RS-232-C	RS-232-C	One RS-232-C, TDI
Clocking	Internal	External	External	Internal/external
TERMINAL SIDE SPECIFICATIONS				
Number and type of ports provided	One	Up to 16 Type A coax plus 1 ASCII printer port	Up to 7 plus 1 centron. printer port	One Poll/Select
Devices supported	CTi 1000A; 1006 printer	IBM 3178; 3278-2,3,4,5; 3179; 3262; 3287	IBM 3178,3278,3101,DEC VT100,IRMA,FORTE,Centron IDEA Assoc.;compat.pntr	All Burroughs and Burr- oughs cmpat. dvces.; any ASCII device; any Micro
Connections supported	Direct connection	Direct or dial-up	Direct or dial-up	Direct
TRANSMISSION SPEC. (Terminal Line)				
Maximum transmission, in bps	9600	ASCII—9600; A coax 2.3M	ASCII—9600; A coax 2.3M	19.2K
Maximum aggregate input rate, in bps	9600	9600	9600	All ports @ 19.2K
Synchronization	Asynchronous	A coax or async	A coax or async	Async, sync, or TDI
Transmission mode	Full duplex	half/full duplex	half/full duplex	Half/full duplex
Protocols supported	X-on/X-off	A coax, ASCII	A Coax, ASCII, Centronic	TTY, Poll/Select
Codes supported	ASCII	—	—	ASCII
Interfaces supported	RS-232-C	RS-232-C, RS-422, A coax	RS-232-C, RS-422, A coax	RS-232-C, V.24 TDI
DIAGNOSTICS	—	ROM based; diskette based	ROM based; diskette based	Continual self-test, standalone diagnostic routines
PRICING AND AVAILABILITY				
Purchase, \$	2,575	4,795—6,395	2,495	1,295
Rental, \$/month-to-month	127—2 year	None	None	—
Installation, \$	—	—	—	Customer installed
Maintenance, \$ Annual	300	—	—	Contact vendor
Serviced by	TRW	Third party	Third party	Factory
Availability	30 days	30 days	30 days	30 days
Date of first comm. delivery of this model	1981	1984	1985	1985
Number installed to date	950	100	—	—
COMMENTS		Support for most 3270 type terminals and printers	Support for popular PC attachment cards, and popular PC type modems, a number of ASCII term. and popular IBM 3270 type terminals and printers	Device also acts as re- mote front-end process., which independently polls the terminals; enabling the user to put up to 10 devices on a single line adaptor with excellent response time

Conversion Systems/Terminal Controllers

MANUFACTURER & MODEL	Datagram Corp. DM-600B	Datagram Corp. DM-2000B	Datagram Corp. DM2400B	Datastream 774
DEVICE TYPE	Cluster controller/ protocol converter	Cluster controller/ remote front end proc.	Data PBX for Burroughs computer systems	Protocol converter terminal emulator
CONVERSION PERFORMED	Burroughs Poll Select to ASCII	—	—	ASCII to EBCDIC
SPECIFIC DEVICE EMULATED	—	—	—	IBM 3274-51C, 3271-2
SPECIFIC FUNCTIONALITY PROVIDED	—	—	—	ASCII CRT, all PCs to 3278/3277 model 2; ASCII printer to 3287
VIRTUAL SCREEN SIZES SUPP., in char.	All supported	All supported	All supported	1920
COMMAND PORT SUPPORTED	No	No	Yes	Yes
HOST SIDE SPECIFICATIONS				
Specific hosts supported	All Burroughs Computers from B20 through B7900	All Burroughs Computers from B20 through B7900	All Burroughs Computers from B800 through B7900	IBM 43XX, 360/370, 30XX, 33XX, 8100
Number and type of host lines supported	All Burroughs OS	All Burroughs OS	Up to seven	All interactive
Number host sessions supported concurrently	One per terminal	One per terminal	One per terminal address per host	24
Connections supported	Direct connection, multipoint, leased line	Direct connection, multipoint, leased line	Leased line, TDI, direct	Direct, multipoint on leased line, point-to- point on dial-up
Connection to host via controller	—	—	Any Burroughs FEP	IBM 37XX
TRANSMISSION SPEC. (Host Line)				
Maximum transmission, in bps	19.2K	19.2K	19.2K	9600
Synchronization	Async/sync/TDI	Async/sync/TDI	Async/sync	Synchronous
Transmission mode	Full duplex	Full duplex	Full duplex	Half duplex
Protocols supported	Poll/Select	Poll/Select	Poll/Select	BSC
Codes supported	ASCII	ASCII	ASCII	EBCDIC
Interface	One RS-232-C, TDI	One RS-232-C, TDI	RS-232-C (max of 7), TDI	Two RS-232-C
Clocking	Internal/external	Internal/external	Internal/external	Int/ext/data derived
TERMINAL SIDE SPECIFICATIONS				
Number and type of ports provided	up to 3 Poll/Select up to 7 Async ASCII	up to 18 Poll/Select up to 18 Async ASCII	24	Up to 23 async device ports, CRT, or printer
Devices supported	All Burroughs and Burr- oughs cmpat. dvces.; any ASCII device; any Micro	All Burroughs and Burr- oughs cmpat. dvces.; any ASCII device; any Micro	All Burroughs and Burr- oughs cmpat. dvces.; any ASCII device; any Micro	Over 200
Connections supported	Direct, dial-up, leased line	Direct, dial-up, leased line	Direct, dial, leased line	Direct, dial-up
TRANSMISSION SPEC. (Terminal Line)				
Maximum transmission, in bps	19.2K	19.2K	19.2K	9600
Maximum aggregate input rate, in bps	All ports @ 19.2K	All ports @ 19.2K	All ports @ 19.2K	9600 per line
Synchronization	Async, sync, or TDI	Async, sync, or TDI	Async/sync	Asynchronous
Transmission mode	Half/full duplex	Half/full duplex	Half/full duplex	Full duplex
Protocols supported	TTY, Poll/Select	TTY, Poll/Select	TTY, Poll/Select	TTY II
Codes supported	ASCII	ASCII	ASCII	ASCII
Interfaces supported	RS-232-C, V.24 TDI	RS-232-C, V.24 TDI	RS-232-C, Current Loop, TDI	RS-232-C
DIAGNOSTICS	—	—	Continual self-test, standalone diagnostic routines	Self-tests
PRICING AND AVAILABILITY				
Purchase, \$	1,795—3,495	8,500—20,200	16,000-30,000	Contact vendor
Rental, \$/month-to-month	—	—	1,500	—
Installation, \$	Customer installed	1,000	250 plus travel	—
Maintenance, \$ Annual	Contact vendor	Contact vendor	Contact vendor	—
Serviced by	—	—	Factory, third party	Vendor, Dow Jones
Availability	30 days	30 days	30	30 days
Date of first comm. delivery of this model	1985	1979	1983	1980
Number installed to date	—	—	100+	3000
COMMENTS	Device also acts as re- mote front-end process., which independently polls the terminals; enabling the user to put up to 18 devices on a single line adaptor with excellent response time	Device also acts as re- mote front-end process., which independently polls the terminals; enabling the user to put up to 126 devices on a single line adaptor with excellent response time	Device also acts as re- mote front-end process., which independently polls the terminals; enables a Burr. user to put up to 126 devices on a single line rather than the eight devices which Burr. recommends	Security software for dial-in access; inactivity monitor; multiple hosts; paper display

Conversion Systems/Terminal Controllers

MANUFACTURER & MODEL	Datastream 874	Datastream 776	Davox Series 1000/2000	Davox Series 5000 Controller
DEVICE TYPE	Protocol converter terminal emulator	Protocol converter, terminal controller	Terminal emulator	Terminal emulator
CONVERSION PERFORMED	ASCII to EBCDIC	ASCII to EBCDIC	—	—
SPECIFIC DEVICE EMULATED	IBM 3274-51C	IBM 3274-51C, 3271-2	IBM 3274 models 21C, 31C, 41C, 51C, 61C	IBM 3274 models 21C, 31C, 41C, 51C, 61C
SPECIFIC FUNCTIONALITY PROVIDED	Async ASCII CRT, all PCs to 3278 model 2,3,4,5 ASCII printer to 3287	ASCII CRT, all PCs to 3278/3277 model 2; ASCII printer to 3287	IBM 3278 model 2, 3178; IBM PC ASCII/TTY, DEC VT52/VT100	IBM 3278 model 2, 3178; IBM PC ASCII/TTY, DEC VT52/VT100
VIRTUAL SCREEN SIZES SUPP., in char.	1920, 2880, 3440, 3554	1920	1920	1920
COMMAND PORT SUPPORTED	Yes	Yes	—	—
HOST SIDE SPECIFICATIONS				
Specific hosts supported	IBM 43XX, 360/370, 30XX, 33XX, 8100	IBM 36/370, 43XX, 30XX, 33XX, 8100	IBM 303X, 43XX, 370X, 8100; DEC PDP 11, VAX	IBM 303X, 43XX, 370X, 8100; DEC PDP 11, VAX
Number and type of host lines supported	All interactive	All interactive	One SDLC, one BSC	One SDLC, one BSC
Number host sessions supported concurrently	44	8	One	Two
Connections supported	Direct, multipoint on leased line, point-to-point on dial-up	Direct, point-to-point, multipoint	Point-to-point on dial-up, multipoint on leased line	Point-to-point on dial-up, multipoint on leased line
Connection to host via controller	IBM 37XX	IBM 37XX	Davox 1000 controller	Davox 2000/3200 controllers
TRANSMISSION SPEC. (Host Line)				
Maximum transmission, in bps	19.2K	9600	56K sync; 19.2K async	56K sync; 19.2K async
Synchronization	Synchronous	Synchronous	Async/sync	Async/sync
Transmission mode	Half duplex	Half duplex	Half/full duplex	Half/full duplex
Protocols supported	SNA/SDLC	BSC	BSC, SNA/SDLC	BSC, SNA/SDLC
Codes supported	EBCDIC	EBCDIC	ASCII, EBCDIC	ASCII, EBCDIC
Interface	Two RS-232-C	One RS-232-C	One RS-232-C	Two RS-232-C
Clocking	Int/ext/data derived	Int/ext/data derived	External	External
TERMINAL SIDE SPECIFICATIONS				
Number and type of ports provided	Up to 15 async device ports, CRT or printer	Up to 8 device ports, CRT or printer	8 sync, up to 32 sync w/ expansion controllers	8 sync, up to 32 sync w/ expansion controllers
Devices supported	Over 200	Over 200	Davox workstations, IBM PC, any serial interface printer	Davox workstations, IBM PC, any serial interface printer
Connections supported	Direct, dial-up	Direct, dial-up	Dial-up	Dial-up
TRANSMISSION SPEC. (Terminal Line)				
Maximum transmission, in bps	19.2K	9600	400K	400K
Maximum aggregate input rate, in bps	19.2K per line	9600 per line	—	—
Synchronization	Asynchronous	Asynchronous	Async/sync	Async/sync
Transmission mode	Full duplex	Full duplex	Half/full duplex	Half/full duplex
Protocols supported	TTY II	TTY II	BSC, SNA/SDLC, TTY	BSC, SNA/SDLC, TTY
Codes supported	ASCII	ASCII	ASCII, EBCDIC	ASCII, EBCDIC
Interfaces supported	RS-232-C	RS-232-C	RS-232-C	RS-232-C
DIAGNOSTICS	Self-tests	Self tests	Self-test, status LEDs, built-in line monitors	Self-test, status LEDs, built-in line monitors
PRICING AND AVAILABILITY				
Purchase, \$	Contact vendor	Contact vendor	3,880/5,455	11,225
Rental, \$/month-to-month	—	—	210 (2 yr.); 173 (3 yr.)	432 (2 yr.)
Installation, \$	—	—	—	—
Maintenance, \$ Annual	—	—	402 (on-site); 268 (repl)	402(on-site); 268(repla)
Serviced by	Vendor, Dow Jones	Vendor, Dow Jones	Factory, third party	Factory, third party
Availability	30 days	30 days	30 days ARO	30 days ARO
Date of first comm. delivery of this model	1982	1982	1982/1984	February 1985
Number installed to date	2000	1000	5000	One (as of February '85)
COMMENTS	Security software for dial-in access; LU1,2,3 support; multiple sess; workstation/system print 3270 PC file transfer SAS graphics support, color, answer back, inactivity monitor	Security software for dial-in access; paper display; inactivity monitor	Operates with terminals on coax or twisted pair; PC sharing among all terminals in config.; modular upgradeability; coax eliminator & reduction; device independent—can mix terminals on same controller; controller redundancy	Operates with terminals on coax or twisted pair; PC sharing among all terminals in config.; modular upgradeability; coax eliminator & reduction; device independent—can mix terminals on same controller; controller redundancy; V.35 option

## Conversion Systems/Terminal Controllers

MANUFACTURER & MODEL	Digital Communications Associates INA/ATC	Diversified Data Resources Hydra II	GANDALF PIN 3270E-5	GANDALF PIN 3270E-7
DEVICE TYPE	Asynchronous terminal controller	Protocol converter, controller	Protocol converter	Protocol converter
CONVERSION PERFORMED	Async ASCII to IBM 3270 BSC or SNA/SDLC	Async ASCII to 3270 BSC	ASCII to EBCDIC	ASCII to EBCDIC
SPECIFIC DEVICE EMULATED	IBM 3271, 3276, or 3274	IBM 3277, 3278, 3279, 3274, 3211, 3286	IBM 3271-2 Bisync or 3274-XC	IBM 3271-2 Bisync or 3274-XC
SPECIFIC FUNCTIONALITY PROVIDED	Async ASCII devices to IBM 327X-2 or 328X-2	ASYNC/ASCII terminal or PC to 3277, 3278, 3279	Async ASCII CRT to IBM 3277/3278 model 2	Async ASCII CRT to IBM 3277/3278 model 2
VIRTUAL SCREEN SIZES SUPP., in char.	1920	1920	—	—
COMMAND PORT SUPPORTED	—	Yes	—	—
HOST SIDE SPECIFICATIONS				
Specific hosts supported	IBM mainframes	IBM 360, 370, 4300, 303X, 308X, & compatible	—	—
Number and type of host lines supported	One BSC or SNA/SDLC	DOS, VSE, VSI, MVS, XA, SP VM	One BSC	One or two BSC
Number host sessions supported concurrently	Not applicable	2	—	—
Connections supported	Direct, point-to-point (dial-up), multipoint	Dir. conn., multipoint on leased line, point-to-point on dial-up line	Point-to-point	Direct connection, multipoint, point-to-point
Connection to host via controller	IBM 3274 models 21C, 31C, 51C, or IBM 3276-12	Direct channel attach	IBM 3271 model 2 or 3274-XC	IBM 3271 model 2 or 3274-XC
TRANSMISSION SPEC. (Host Line)				
Maximum transmission, in bps	To 9600	1.8M byte	To 9600	To 9600
Synchronization	Synchronous	Async	Synchronous	Synchronous
Transmission mode	Half/full duplex	Half/full duplex	Half duplex	Half duplex
Protocols supported	BSC or SNA/SDLC	Async/BSC/SNA	BSC	BSC
Codes supported	EBCDIC	ASCII/EBCDIC	EBCDIC	EBCDIC
Interface	RS-232-C	Up to 32 RS-232-C	One RS-232-C, V.24/V.28	One RS-232-C, V.24/V.28
Clocking	Internal/external	Internal	Internal/external	External
TERMINAL SIDE SPECIFICATIONS				
Number and type of ports provided	Up to 24 async devices	Up to 8, 16 or 32 ports (async)	Up to 4	Up to 15 asynchronous
Devices supported	Virtually any async ASCII terminal	Teletype, IBM PC 3101, Lear Siegler, VT100, and others	A number of async ASCII terminals	A number of async ASCII terminals
Connections supported	Direct, dial-up	Direct, dial-up, leased line	Direct connection	Direct connection
TRANSMISSION SPEC. (Terminal Line)				
Maximum transmission, in bps	50 to 19.2K	9600	To 9600	To 9600
Maximum aggregate input rate, in bps	—	1.8M bytes	38.4K	144K
Synchronization	Asynchronous	Asynchronous	Asynchronous	Asynchronous
Transmission mode	Half/full duplex	Full duplex	Full duplex	Full duplex
Protocols supported	—	X-on/X-off, TTY	TTY II	TTY II
Codes supported	ASCII	ASCII/EBCDIC	ASCII	ASCII
Interfaces supported	RS-232-C	RS-232-C	RS-232-C, V.24/V.28	RS-232-C, V.24/V.28
DIAGNOSTICS	Status message	Self-test, status LEDs software diagnostics	Status LEDs	Status LEDs
PRICING AND AVAILABILITY				
Purchase, \$	8,950-14,950	6,900/9,900—8/16/32 ports	4,500	7,900(E7); 13,000(E7/16)
Rental, \$/month-to-month	Contact vendor	Contact Vendor	Contact vendor	Contact vendor
Installation, \$	Contact vendor	None	Contact vendor	Contact vendor
Maintenance, \$ Annual	1,611 to 2,691*	12 percent	Contact vendor	Contact vendor
Serviced by	Vendor	Factory, 24-hour replacement	Factory	Factory
Availability	—	30 days	30-60 days	30-60 days
Date of first comm. delivery of this model	—	September 1982	—	—
Number installed to date	—	500	—	—
COMMENTS	Optional support for eight-color 3279; password protection available *On-call maintenance; other plans available	Channel attach 3211/1403 printer support; dial-up support; PC/ Host File transfer capability; remote devices appear as local, dial back security	Auto log-off; minicassette-based internal BSC line clock with selectable data rates up to 9600 bps; standalone or rackmount models	Supports one or two BSC multipoint lines; menu-driven operator response; completely user programmable; standalone or rackmount models

Conversion Systems/Terminal Controllers

MANUFACTURER & MODEL	GANDALF PIN 3270E-8	GANDALF COAX 3270	lcot 351/352	lcot 361/362
DEVICE TYPE	Protocol converter	IBM-Coax to EIA converter/emulator	Protocol converter	Protocol converter
CONVERSION PERFORMED	ASCII to EBCDIC	ASCII/IBM/COAX	ASCII to BSC/SDLC	ASCII to SDLC
SPECIFIC DEVICE EMULATED	IBM 3274-XC SNA PU 2 LU 2	IBM 3278, various ASCII terminals	IBM 3271	IBM 3274 model 51C
SPECIFIC FUNCTIONALITY PROVIDED	Async ASCII CRT to IBM 3278 Models 1-5 and/or 3287	IBM 3278 to ASCII async terminal, switching, & emulation	ASCII terminal to 3277 models 2-5	ASCII terminal to 3278 models 2-5
VIRTUAL SCREEN SIZES SUPP., in char.	—	1920	1920 to 3696	1920 to 3696
COMMAND PORT SUPPORTED	—	N/A	Yes	Yes
HOST SIDE SPECIFICATIONS Specific hosts supported	—	IBM 3274 and any ASCII async host	IBM 43XX, 30XX, 360, 370	IBM 43XX, 30XX, 360, 370
Number and type of host lines supported	One SDLC	All	Two BSC; one BSC, one SDLC	Two SDLC
Number host sessions supported concurrently	—	N/A	Two	Two
Connections supported	Direct connection, multipoint, point-to- point	Point-to-point	Direct, multipoint leased, dial-up	Direct, multipoint on leased, dial-up
Connection to host via controller	IBM 3274 Remote C	IBM 3274	IBM 270X, 37XX	IBM 270X, 37XX
TRANSMISSION SPEC. (Host Line) Maximum transmission, in bps	To 19.2K	9600	2400 to 19.2K	2400 to 19.2K
Synchronization	Synchronous	Asynchronous	Synchronous	Synchronous
Transmission mode	Half duplex	Full duplex	Full duplex	Full duplex
Protocols supported	SDLC (NRZ/NRZ1)	All	BSC, SDLC	SNA/SDLC
Codes supported	EBCDIC	ASCII	EBCDIC	EBCDIC
Interface	One RS-232-C, V.24/V.28	Coax, RS-232-C 2 ea.	Two RS-232-C, RS-422, 20 mA current loop	Two RS-232-C, RS-422, 20 mA current loop
Clocking	Internal/external	Internal	Internal/external	Internal/external
TERMINAL SIDE SPECIFICATIONS Number and type of ports provided	Up to 15	One + printer port opt.	Six/twelve asynchronous	8/16 asynchronous
Devices supported	A number of async ASCII terminals	IBM 3278/3178, all async terminals	Over 60 types CRTs, printers, personal computers	Over 60 types CRTs, printers, personal computers
Connections supported	Direct connection	All	Direct, dial-up	Direct, dial-up
TRANSMISSION SPEC. (Terminal Line) Maximum transmission, in bps	To 9600	9600	9600	19.2K
Maximum aggregate input rate, in bps	144K	9600	—	—
Synchronization	Asynchronous	Asynchronous	Asynchronous	Asynchronous
Transmission mode	Full duplex	Full duplex	Full duplex	Full duplex
Protocols supported	TTY II	TTY II	—	—
Codes supported	ASCII	ASCII	ASCII	ASCII
Interfaces supported	RS-232-C, V.24/V.28	RS-232-C, Coax Type A	RS-232-C, RS-422, 20 mA current loop	RS-232-C, RS-422, 20 mA current loop
DIAGNOSTICS	Status LEDs	Status LEDs	Memory, checksum, line wrap	Memory, checksum, line wrap
PRICING AND AVAILABILITY Purchase, \$	10,950(E8);16,950(E8/16)	695	5,800/7,600	9,800
Rental, \$/month-to-month	Contact vendor	Contact vendor	Contact vendor	Contact vendor
Installation, \$	Contact vendor	Contact vendor	Contact vendor	Contact vendor
Maintenance, \$ Annual	Contact vendor	Contact vendor	Contact vendor	Contact vendor
Serviced by	Factory	Factory	Vendor on-site, depot	Vendor on-site, depot
Availability	30-60 days	60 days	30 days	30 days
Date of first comm. delivery of this model	—	January 1985	June 1982	November 1983
Number installed to date	—	—	Over 150	Over 30
COMMENTS	Password security; minicassette-based select screen feature for emulation of large screen displays; menu- driven operator re- sponse; standalone or rackmount models	Options: printer port, customer configurator, remote downline load & rackmount configuration	Dual, concurrent sessions supported	

Conversion Systems/Terminal Controllers

MANUFACTURER & MODEL	Incaa Computers P.I.T.	Infotron VTS 351/VTS 352	Infotron VTS 361/VTS 362	Innovative Electronics MC-80/100
DEVICE TYPE	Programmable protocol converter	Terminal emulator	Protocol converter/ terminal emulator	Protocol converter
CONVERSION PERFORMED	Various speed, code, protocol conversions incl. ASCII to EBCDIC, async to BSC	Async ASCII to BSC EBCDIC	ASCII to EBCDIC, Async to SDLC/SNA	BSC to Async ASCII
SPECIFIC DEVICE EMULATED	—	IBM 3278, 3276, 3271 models 2 and 12	IBM 3274, 3276	IBM 2780 or 3780 BSC RJE
SPECIFIC FUNCTIONALITY PROVIDED	Async ASCII devices and PCs to IBM 3270; Burr. P/S to IBM and others	Async ASCII CRT to IBM 3278	Async ASCII CRT to IBM 3274, 3276	Async ASCII terminal, printer and micro/mini computer to IBM 2780/ 3780 BSC
VIRTUAL SCREEN SIZES SUPP., in char.	—	560 to 3696	up to 1920	Up to 1000 bytes*
COMMAND PORT SUPPORTED	No	Yes	No	No
HOST SIDE SPECIFICATIONS				
Specific hosts supported	A number of IBM or async hosts	Amdahl 4705, IBM 3705, Comten 3690, Memorex 1270	IBM 370X or 43XX with ICA	Not applicable
Number and type of host lines supported	One IBM, Burr. P/S, DEC, or others	Two BSC or one SDLC and one BSC	—	One BSC
Number host sessions supported concurrently	Not applicable	Two	Two	One
Connections supported	Direct, point-to-point, multipoint	Direct, multipoint, dial-up	Direct, dial-up, leased line, point-to-point	Direct connect, multi- point, point-to-point
Connection to host via controller	—	IBM 3275, 3271	IBM 3274, 3271 acts as controller	Not applicable
TRANSMISSION SPEC. (Host Line)				
Maximum transmission, in bps	To 19.2K	19.2K	19.2K	To 19.2K
Synchronization	Async/sync	Synchronous	Synchronous	Synchronous
Transmission mode	—	Full duplex	Full duplex	Half/full duplex
Protocols supported	Device dependent	BSC, SDLC, PU Type 1	SNA/SDLC	BSC
Codes supported	Device dependent	ASCII (term.), EBCDIC	EBCDIC	EBCDIC
Interface	RS-232-C	RS-232-C, V.24	Two RS-232-C	One RS-232-C
Clocking	—	Internal/external	Internal/external	Internal/external
TERMINAL SIDE SPECIFICATIONS				
Number and type of ports provided	One programmable port	Six/twelve asynchronous	Up to 8 or 16 async s	Up to two async
Devices supported	A number of async de- vices, IBM 3270, IBM/ Siemens comm. proc.	Infotron 70X terminals, many ASCII terminals, prntrs., pers. computers	Any async ASCII device	Any async terminal, printer, mini/micro- computer
Connections supported	Direct, dial-up	Direct, point-to-point, multipoint	Direct, point-to-point, multipoint, dial-up	Direct connect, dial-up
TRANSMISSION SPEC. (Terminal Line)				
Maximum transmission, in bps	50 to 19.2K	50 to 19.2K	19.2K	9600
Maximum aggregate input rate, in bps	—	Not applicable	—	9600
Synchronization	Async/sync	Synchronous	Asynchronous	Asynchronous
Transmission mode	—	Full duplex	Full duplex	Half/full duplex
Protocols supported	Device dependent	BSC, SDLC, PU Type 1	Asynchronous	Async
Codes supported	Device dependent	ASCII	ASCII	ASCII
Interfaces supported	RS-232-C	RS-232-C	RS-232-C	RS-232-C
DIAGNOSTICS	Two status LEDs, self- test	Self-tests, status LEDs	Self-tests, status LEDs	Self-test, loopback test, status LEDs
PRICING AND AVAILABILITY				
Purchase, \$	Contact vendor	5,800/7,600	6,500/9,800	1,445
Rental, \$/month-to-month	Contact vendor	None	—	Not applicable
Installation, \$	Contact vendor	Contact factory	No charge	Not applicable
Maintenance, \$ Annual	Contact vendor	Contact factory	Contact factory	Not applicable
Serviced by	—	Factory	Factory	Factory
Availability	—	60 days	30 days	In stock
Date of first comm. delivery of this model	—	May 1984	1984	June 1981
Number installed to date	—	—	—	1750
COMMENTS	Operates in program or run mode; all conversions programma- ble; third peripheral port optional	Menu-guided set-up, password security, auto- matic speed detection, automatic log-on and in- activity disconnect, non-volatile EEPROM memory set-up, dial-up capabilities, multiple 16-bit microprocessors	Menu-guided set-up, password security, auto- matic speed detection, automatic log-on and in- activity disconnect, non-volatile EEPROM memory set-up, dial-up capabilities, multiple 16-bit microprocessors	Automatic record block- ing at 80 characters; auto answer capability, auto log-on; buffer ex- pandable to over 14K bytes  *In transmission message from host

## Conversion Systems/Terminal Controllers

MANUFACTURER & MODEL	Innovative Electronics MC-80/300	Innovative Electronics MC-80/400	Instrumentation Services, Inc. ISI-87	International Business Machines 7426*
DEVICE TYPE	Protocol converter	Protocol converter	Protocol converter	Protocol converter
CONVERSION PERFORMED	BSC to Burroughs poll/ select	BSC TO NCR poll/select	EBCDIC to ASCII, LU Type 1 or LU Type 3 to ASCII	ASCII to SDLC
SPECIFIC DEVICE EMULATED	3271 cluster controller with 3277 terminals	3271 cluster controller with 3277 terminals	IBM 3787	IBM 3276-12
SPECIFIC FUNCTIONALITY PROVIDED	IBM 3270 BSC host to Burroughs teller ter- minals (poll/select)	IBM 3270 BSC host to NCR poll/select teller ter- minals	Allows any ASCII printer connection to 3274/3276 controller	IBM 3101 or TTY-compat. term. to S/370, 43XX, 30XX, 8100
VIRTUAL SCREEN SIZES SUPP., in char.	Up to 1920	Up to 1920	1920, 2560, 3440, 3564	1920
COMMAND PORT SUPPORTED	No	No	No	—
HOST SIDE SPECIFICATIONS				
Specific hosts supported	Not applicable	Not applicable	IBM mainframe through 3274/3276 controller	IBM 8100, 43XX
Number and type of host lines supported	One BSC	One BSC	Not applicable	One SNA/SDLC
Number host sessions supported concurrently	One	One	Not applicable	One
Connections supported	Direct, multipoint, point-to-point	Direct connect, multi- point, point-to-point	Not applicable	Point-to-point, multi- point
Connection to host via controller	Not applicable	NCR 751 supporting up to 13 NCR 279 tel. terms.	IBM 3274/3276	—
TRANSMISSION SPEC. (Host Line)				
Maximum transmission, in bps	To 19.2K	Up to 19.2K	75 to 9600	To 38.4K (dir. attch.)
Synchronization	Async/sync	Async/sync	Synchronous	Synchronous
Transmission mode	Half/full duplex	Half/full duplex	Half/full duplex	Half/full duplex
Protocols supported	BSC	BSC	BSC, SDLC	SNA/SDLC
Codes supported	ASCII or EBCDIC	EBCDIC or ASCII	—	EBCDIC
Interface	One RS-232-C	One RS-232-C	—	RS-232-C
Clocking	Internal/external	Internal/external avail.	Internal	—
TERMINAL SIDE SPECIFICATIONS				
Number and type of ports provided	Up to 2 async ports; TDI & mod. shar. opt. avail.	Up to two async	One receive-only printer	Four ports
Devices supported	Burroughs TT 102, TT 602, MT 355 teller term.	NCR 279 teller terminals	Any ASCII printer	Virtually any async ASCII devices incl. IBM PC
Connections supported	Direct, dial-up	Direct, dial-up	Direct coax RG 62	Direct, dial-up
TRANSMISSION SPEC. (Terminal Line)				
Maximum transmission, in bps	Up to 2400	To 2400	To 9600	9600
Maximum aggregate input rate, in bps	Up to 2400	To 2400	Not applicable	—
Synchronization	Asynchronous	Asynchronous	Asynchronous	Asynchronous
Transmission mode	Half/full duplex	Half/full duplex	—	Half/full duplex
Protocols supported	Burroughs poll/select	NCR poll/select	X-on/X-off	TTY
Codes supported	ASCII	ASCII	ASCII	ASCII
Interfaces supported	RS-232-C, TDI	RS-232-C, TDI	RS-232-C or parallel	RS-232-C, RS-422-A
DIAGNOSTICS	Self-test, status LEDs, loopback test	Self-test, loopback, status LEDs	Self-test at power-up, buffer dump with log information	Self-test
PRICING AND AVAILABILITY				
Purchase, \$	2,095	2,095	1,295	4,210/3,830(mod. 1/2)
Rental, \$/month-to-month	Not applicable	Not applicable	None	None
Installation, \$	Not applicable	Not applicable	None	—
Maintenance, \$ Annual	Not applicable	Not applicable	None	20/repair-cent. maint.
Serviced by	Factory	Factory	Factory	Vendor
Availability	In stock	In stock	In stock	—
Date of first comm. delivery of this model	December 1981	December 1981	June 1982	Fourth quarter, 1982
Number installed to date	750	750	800	—
COMMENTS	Multiple MC-80 units may reside on single multi- drop line and coexist with any other 3270 com- patible equipment; multiline sharing device permits chaining of one MC-80 to other MC-80s and/or 3270 control units at any location	Compatible with CICS, VTAM, RTAM, IMS; multi- ple MC-80 units may re- side on a single multi- drop line and coexist with any 3270-compatible equipment; multiline sharing device permits chaining of one MC-80 to other MC-80s and/or 3270 cont. units at any loc.	Has transparent mode that allows control codes to be sent to printer as plain text; can be used to drive plotters such as IBM 7, 9, or 750; use with Tektronix 4510/4692 color graphics printing system	Host downline loads microcoded control logic into 7426 RAM; users can customize 7426 for spe- cific operating environ- ments *Model 1—direct attach or data-link loop; Model 2—SDLC comm. link system



Conversion Systems/Terminal Controllers

MANUFACTURER & MODEL	International Business Machines 4994*	Kaufman Data Communications Model 871	Kaufman Data Communications Model 870 & 872	Kaufman Data Communications Model 8800
DEVICE TYPE	ASCII device control unit	Protocol converter, terminal emulator	Protocol converter, terminal emulator	Protocol converter, terminal emulator
CONVERSION PERFORMED	ASCII to 3270 BSC	ASCII to UTS 400	ASCII to EBCDIC	ASCII to 3270 SNA, 3270 BSC, UTS Uniscope
SPECIFIC DEVICE EMULATED	IBM 3272	UTS 400	3271, 3274, 3276 remote controller	IBM 3274, Sperry UTS 4000
SPECIFIC FUNCTIONALITY PROVIDED	ASCII terminals appear as IBM 3277s	ASCII CRT to UTS 400 controller	ASCII CRT to 327X remote controller	ASCII terminal to IBM 3278 and Sperry UTS 20/40
VIRTUAL SCREEN SIZES SUPP., in char.	—	1920	1920, 303X	1920
COMMAND PORT SUPPORTED	—	Yes	Yes	Yes
HOST SIDE SPECIFICATIONS				
Specific hosts supported	IBM 43XX	Sperry 90, 1100, DEC PDP11, HP 3000	IBM 370, 303X, 434X; DEC PDP11, HP 3000	IBM mainframes, Sperry mainframes
Number and type of host lines supported	—	One UTS 400	One BSC or SNA/SDLC	One-all hosts
Number host sessions supported concurrently	One	Two	Two	Four
Connections supported	Direct, point-to-point	Direct connection or multipoint on leased or dial-up line	Direct connection or multipoint on leased line or dial-up line	Direct connection or multipoint on leased line or dial-up line
Connection to host via controller	—	Model 871 emulates UTS 400 controller	Mods. 870/872 emulate BSC or SNA/SDLC rmt. con	IBM 37XX, ICA, Sperry DCP
TRANSMISSION SPEC. (Host Line)				
Maximum transmission, in bps	—	19.2K per line	19.2K per line	19.2K per line
Synchronization	—	Async/sync	Async/sync	synchronous
Transmission mode	—	Half duplex	Half duplex	Half duplex
Protocols supported	—	UTS 400	BSC, SNA/SDLC	BSC, SNA/SDLC, Uniscope
Codes supported	—	ASCII	ASCII, EBCDIC	ASCII, EBCDIC
Interface	Attch. to block mux chan. on IBM 43XX	One RS-232-C	One RS-232-C	Four RS-232-C
Clocking	—	Internal/external	Internal/external	Int/ext/data derived
TERMINAL SIDE SPECIFICATIONS				
Number and type of ports provided	Up to 16, 32, or 48 ports	Eight asynchronous ports	Eight asynchronous ports	28 asynchronous ports
Devices supported	Wide range of ASCII term., print., plotters incl. IBM PC & IBM 3101	ASCII terminals, word processors, some personal computers	ASCII terminals, word processors, some personal computers	Variety
Connections supported	Direct, dial-up	Direct, remote access	Direct, remote access	Direct, Dial-up
TRANSMISSION SPEC. (Terminal Line)				
Maximum transmission, in bps	To 19.2K	19.2K	19.2K	19.2K
Maximum aggregate input rate, in bps	—	153.6K	153.6K	—
Synchronization	Asynchronous	Asynchronous	Asynchronous	Asynchronous
Transmission mode	Full duplex	Full duplex	Full duplex	Full duplex
Protocols supported	—	TTY ANSI 3.64	TTY ANSI 3.64	Asynchronous
Codes supported	ASCII	ASCII	ASCII	ASCII
Interfaces supported	RS-232-C, V.24, mA curr. loop	RS-232-C	RS-232-C	RS-232-C
DIAGNOSTICS	—	Poll, Data, Error LEDs	Poll, Data, Error LEDs	Local and remote interactive tests
PRICING AND AVAILABILITY				
Purchase, \$	16,735/25,850/32,300**	3,395-8,295	3,395-8,295	4,000-10,000
Rental, \$/month-to-month	897/A; 1,395/B; 1,745/C	10 percent of pur. price	10 percent of pur. price	—
Installation, \$	—	—	—	—
Maintenance, \$ Annual	195/A; 257/B; 313/C	350	350	—
Serviced by	Vendor	Factory	Factory	Factory
Availability	—	30-40 days	30-40 days	30 days
Date of first comm. delivery of this model	March 1984	1979	1981	—
Number installed to date	—	Over 300	Over 300	—
COMMENTS	Used with host-loaded Yale ASCII communications system software; allows attch. of ASCII devices to IBM proc. running VM/SP 2.1 or 3 *Model A supports up to 16 devices; Model B up to 32 devices; Model C up to 48 devices **Model A/B/C, respect.	Block mode allows use in packet-switching network; side door enables terminal to talk to two computers; Displayphone capability	See comments for model 871	8800 can run multiple host protocols simult. Online configuration via terminal. Async pass-through connections

Conversion Systems/Terminal Controllers

MANUFACTURER & MODEL	KMW Systems Series II 3270A/B*	KMW Systems Series II 2780/3780	KMW Systems Series II 3770 SNA/SDLC	KMW Systems Series II HASP
DEVICE TYPE	Protocol converter	Protocol converter	Protocol converter	Protocol converter
CONVERSION PERFORMED	ASCII to EBCDIC	Async ASCII to BSC EBCDIC	Asynchronous to SNA/SDLC ASCII to EBCDIC	Asynchronous to BSC ASCII to EBCDIC
SPECIFIC DEVICE EMULATED	IBM 3274 or 3271	IBM 2780, 3780 RJE's	IBM 3776 models 3 and 4; IBM 3777 model 3	IBM 360 model 20 HASP RJE workstation
SPECIFIC FUNCTIONALITY PROVIDED	Async ASCII CRT or printer to IBM 3277/3278	ASCII or EBCDIC peripherals to IBM 2780, 3780 card reader, card punch, or printer	Async peripherals appear as 3770 workstation	Async peripherals appear as HASP workstation
VIRTUAL SCREEN SIZES SUPP., in char.	To 2048	—	—	—
COMMAND PORT SUPPORTED	—	Yes	Yes	Yes
HOST SIDE SPECIFICATIONS				
Specific hosts supported	IBM mainframes	Any IBM 2780 or 3780 compatible device	IBM mainframes	IBM mainframes CDC mainframes
Number and type of host lines supported	One BSC or SNA/SDLC	One	One SNA/SDLC	One BSC
Number host sessions supported concurrently	—	Not applicable	8 LU sessions	—
Connections supported	Switched or dedicated, point-to-point or multi-point	Switched or dedicated, point-to-point or multi-point	Switched or dedicated, point-to-point or multi-point IBM 37XX	Switched or dedicated, point-to-point or multi-point IBM 37XX
Connection to host via controller	—	—	—	—
TRANSMISSION SPEC. (Host Line)				
Maximum transmission, in bps	To 19.2K (56K optional)	To 19.2K	To 19.2K (56K opt.)	To 19.2K (56K opt.)
Synchronization	Synchronous	Synchronous	Synchronous	Synchronous
Transmission mode	Half duplex	Half/full duplex	Half/full duplex	Half/full duplex
Protocols supported	SNA/SDLC, BSC	BSC	SNA/SDLC	BSC
Codes supported	EBCDIC	EBCDIC	EBCDIC	EBCDIC
Interface	RS-232-C	RS-232-C	RS-232-C, V.35 on 56K	RS-232-C, V.35 on 56K
Clocking	Internal/external	Internal/external	Internal/external	Internal/external
TERMINAL SIDE SPECIFICATIONS				
Number and type of ports provided	Up to 8 asynchronous	Up to 8 asynchronous devices	Up to seven async devices + 1 console	Up to seven async devices + 1 console
Devices supported	Virtually any async ASCII CRTs or printers	ASCII or EBCDIC peripheral devices in serial async or parallel format	Virtually any ASCII or EBCDIC peripheral device	Virtually any ASCII or EBCDIC peripheral devices
Connections supported	Direct, dial-up	Direct, dial up	Direct, dial-up	Direct, dial-up
TRANSMISSION SPEC. (Terminal Line)				
Maximum transmission, in bps	To 19.2K	To 19.2K	To 19.2K	To 19.2K
Maximum aggregate input rate, in bps	—	—	—	—
Synchronization	Asynchronous	Asynchronous	Asynchronous	Asynchronous
Transmission mode	Full duplex	Half/full duplex	Half/full duplex	Half/full duplex
Protocols supported	—	X-on/X-off, CTS, prompt	X-on/X-off, CTS, Prompt	X-on/X-off, CTS, Prompt
Codes supported	ASCII	ASCII, EBCDIC	ASCII, EBCDIC	ASCII, EBCDIC
Interfaces supported	RS-232-C; parallel	RS-232-C, parallel	RS-232-C, parallel	RS-232-C, parallel
DIAGNOSTICS	Status LEDs	Status LEDs, PROM/RAM checks, self-test, ASCII line test, int. loopback	Status LEDs, self tests, internal loopback, ASCII line tests	Status LEDs, self tests, internal loopback, ASCII line tests
PRICING AND AVAILABILITY				
Purchase, \$	Contact vendor	Contact vendor	Contact vendor	Contact vendor
Rental, \$/month-to-month	Contact vendor	Contact vendor	Contact vendor	Contact vendor
Installation, \$	Contact vendor	Contact vendor	Contact vendor	Contact vendor
Maintenance, \$ Annual	Contact vendor	Contact vendor	Contact vendor	Contact vendor
Serviced by	Vendor; third party, depot	Vendor, third party, depot	Vendor, third party, depot	Vendor, third party, depot
Availability	30 days	30 days	30 days	30 days
Date of first comm. delivery of this model	10/81(3270A); 11/82(3270B)	October 1981	October 1981	October 1981
Number installed to date	Approx. 2500-all models	Approx. 2500-all models	Approx. 2500 (all mods.)	Approx. 2500 (all mods.)
COMMENTS	Device maintains separate buffer for each device; device address assigned sequentially for each port at start-up; programmable setup mode	Optional modem eliminator configuration for local attachment; programmable setup mode; UL, FCC & CSA conform.	Optional modem eliminator config. for local attachment; conforms to PU2, LU1; programmable setup mode; UL, FCC, & CSA conformance	Optional modem eliminator config. for local attachment, setup mode through console port, UL, FCC, and CSA conformance
	*3270A is dedicated BSC; 3270B is dedicated SDLC			

Conversion Systems/Terminal Controllers

MANUFACTURER & MODEL	KMW Systems Twinax	KMW Systems Series II 3287/Coax	Local Data, Inc. DataLynx/3274 (SNA or BSC)*	Local Data, Inc. DataLynx/3780
DEVICE TYPE	Protocol converter	Protocol converter	Protocol converter	Protocol converter
CONVERSION PERFORMED	ASCII to EBCDIC	Async ASCII to 3287 Coax	Async ASCII to SNA/SDLC or BSC	ASCII to EBCDIC
SPECIFIC DEVICE EMULATED	IBM 5251 model II or 522X	IBM 3278 printer	IBM 3274-51C	IBM 2770, 2780, 3770, and 3741 remote batch terminal
SPECIFIC FUNCTIONALITY PROVIDED	Async ASCII CRT or printer to IBM 5251 or 522X	Async ASCII output devices to IBM 3287	Async ASCII CRT/mini/micro to IBM 3278-2, ASCII printer to IBM 3287	Async ASCII printer as remote batch printer and async ASCII CRT as remote batch terminal
VIRTUAL SCREEN SIZES SUPP., in char.	1920	—	960, 1920	—
COMMAND PORT SUPPORTED	Yes	No	No	No
HOST SIDE SPECIFICATIONS				
Specific hosts supported	IBM system 34/36/38	IBM mainframes	3704, 3705, 3725 or any oth. 3270 front end proc	IBM Systems 34/38, 43XX, 308X
Number and type of host lines supported	—	—	One SDLC or one BSC; one or two BSC/SDLC on deluxe	One BSC
Number host sessions supported concurrently	—	One	Nine	One
Connections supported	Direct connections	Direct connections	Direct connect, multi-point, point-to-point	Direct connect, dial-up
Connection to host via controller	IBM system 34/36/38	IBM 3274	IBM 370X	IBM 3704, 3705, 3725
TRANSMISSION SPEC. (Host Line)				
Maximum transmission, in bps	19.2K	19.2K	19.2K	19.2K
Synchronization	—	—	Synchronous	Synchronous
Transmission mode	Half duplex	—	Full duplex	Half/full duplex
Protocols supported	5251 Model II, 522X	3287 Coax	SNA/SDLC or BSC	BSC
Codes supported	EBCDIC	3287 Coax	EBCDIC	EBCDIC
Interface	One twinax I/F with cable-through	One 3287 Coax	RS-232-C, Current loop	Three RS-232-C
Clocking	Internal	—	Internal/external	Internal/external
TERMINAL SIDE SPECIFICATIONS				
Number and type of ports provided	Up to seven async RS232-C or parallel	One async serial or parallel port	Up to 9 async ports (32 logic. unit addresses)	One sync, two async RS-232-C
Devices supported	Virtually any CRT or printer	Virtually any async serial or parallel output device	Virtually any async ASCII	Any async ASCII printer, CRT, mini/microcomputer
Connections supported	Direct, dial-up	Direct, dial-up	Direct, dial-up	Direct connect, dial-up
TRANSMISSION SPEC. (Terminal Line)				
Maximum transmission, in bps	To 19.2K	To 19.2K	19.2K	19.2K
Maximum aggregate input rate, in bps	—	—	—	19.2K
Synchronization	Asynchronous	Asynchronous	Asynchronous	Asynchronous
Transmission mode	Half/full duplex	Half duplex	Full duplex	Full duplex
Protocols supported	X-on/X-off, CTS	X-on/X-off, CTS	—	Asynchronous
Codes supported	ASCII	ASCII	ASCII	ASCII
Interfaces supported	RS-232-C, parallel	RS-232-C, parallel	RS-232-C, current loop	RS-232-C
DIAGNOSTICS	Status LEDs, self tests, ASCII line tests	Status LEDs, self tests, ASCII line tests	Multi-tasking watchdog timer, front-panel LED for EIA signals	Self-test on power up
PRICING AND AVAILABILITY				
Purchase, \$	Contact vendor	Contact vendor	3,000-4,000;3,500-6,000*	1,495
Rental, \$/month-to-month	Contact vendor	Contact vendor	Leasing available	Leasing available
Installation, \$	Contact vendor	Contact vendor	—	—
Maintenance, \$ Annual	Contact vendor	Contact vendor	350-600 per year	140/year
Serviced by	Vendor, third party depot	Vendor, third party depot	Vendor/R&R advance exch.	Return to factory/advance exch.
Availability	30 days	30 days	Stock to 60 days	Stock to 30 days
Date of first comm. delivery of this model	1985	1984	December 1982	1981
Number installed to date	—	—	450+	1000
COMMENTS			Full SNA/SDLC code, SNA inbound/outbound pacing, menu driven configuration, forced log off, dual-level security, inactivity disconnect timer, CPU to CPU support; BSC model upgradeable to SNA/SDLC; *Deluxe models available	Selectable "host" interface mode for mini/microcomputers; supports transparency; has built-in modem eliminator option and flow control options, automatic sign-on; front panel LEDs, reset, sign-on, and test buttons on front panel

Conversion Systems/Terminal Controllers

MANUFACTURER & MODEL	Local Data, Inc. InterLynx/3278	Local Data, Inc. InterLynx/3287	Local Data, Inc. VersaLynx 3278	Micom Systems Micro7400
DEVICE TYPE	Protocol converter	Protocol convertor	Protocol converter	Protocol converter
CONVERSION PERFORMED	IBM Type A coax to ASCII	IBM 3274/76 control unit thru Type A coax to ASCII	IBM 3278/3178 terminals via coax to RS-232-C async ASCII	ASCII to BSC 3270, ASCII to SNA 3270
SPECIFIC DEVICE EMULATED	IBM 3278-2	IBM 3287/89 printer	VT 100/102, IBM 3101, ADM-3A HP 26XX from factory	IBM 3274 model 61c
SPECIFIC FUNCTIONALITY PROVIDED	Allows async ASCII CRT/mini/micro to emulate IBM 3278-2 on IBM control unit	Async ASCII printer to IBM 3287/89 printer emulation	IBM 3278/3178 terminal to serial async ASCII	Async. ASCII CRT to IBM 3278 models 2, 3, 4, 5; Async ASCII printer to IBM 3287
VIRTUAL SCREEN SIZES SUPP., in char.	1920	—	1920	1920-3564
COMMAND PORT SUPPORTED	No	No	No	Yes
HOST SIDE SPECIFICATIONS				
Specific hosts supported	Cncts. to any IBM cntrl. unit w/Type A coax	All supporting 3270	Most ASCII mini/micro-computers	IBM 360, 370, 43XX, 30XX, 8100
Number and type of host lines supported	One coax line	One coax port	One	Two BSC or two SNA
Number host sessions supported concurrently	One	One	One	Sixteen
Connections supported	Coax	Coax	Direct, dial-up, point-to-point	Direct, point-to-point, multipoint
Connection to host via controller	IBM 3274, 3276, 4701	IBM 3274, 3276, 4701	Any async controller	All IBM, IBM-compatible
TRANSMISSION SPEC. (Host Line)				
Maximum transmission, in bps	2.5M	2.5 M	19.2K	19.2K
Synchronization	Synchronous	Synchronous	Asynchronous	Synchronous
Transmission mode	Full duplex	Full duplex	Full duplex	Half duplex
Protocols supported	BSC, SNA/SDLC	SCS (LU1) or BSC (LU3)	Async CRT personality	BSC, SNA/SDLC
Codes supported	EBCDIC	EBCDIC	ASCII	EBCDIC, ASCII
Interface	RG62A/U coax	RG62A/U Type A coax	One RS-232-C	Two RS-232-C
Clocking	—	—	Internal	Internal/external
TERMINAL SIDE SPECIFICATIONS				
Number and type of ports provided	One main RS-232-C port; 1 pass-thru RS-232-C prt	One RS-232-C and one parallel	One coax, two RS-232-C	2, 4, 8, 12, 16 async + 1 async command port
Devices supported	Virtually any	Any async ASCII serial or Centronics/Data Prod. parallel	IBM 3278/3178 terminals	A number of async ASCII devices
Connections supported	Direct, dial-up	Direct connect, dial-up	Direct connect to terminal	Direct, dial-up
TRANSMISSION SPEC. (Terminal Line)				
Maximum transmission, in bps	19.2K	19.2K	2.5M Hz	9600
Maximum aggregate input rate, in bps	19.2K	19.2K	2.5M Hz	76,800
Synchronization	Asynchronous	Asynchronous	Coax buffer code	Asynchronous
Transmission mode	Full duplex	Full duplex	Full duplex	Full duplex
Protocols supported	Asynchronous display	—	IBM 3278 coax	TTY
Codes supported	ASCII	ASCII	IBM scan code	ASCII
Interfaces supported	RS-232-C	RS-232-C or parallel	IBM Type A coax	RS-232-C, current loop
DIAGNOSTICS	Self-test at power up	Printer test	—	Self-test, line trace, status LEDs
PRICING AND AVAILABILITY				
Purchase, \$	1,395	1,750	695	1,650 (2ch)—5,650 (16ch)
Rental, \$/month-to-month	Leasing available	Leasing available	Leasing available	Not applicable
Installation, \$	—	—	—	Not applicable
Maintenance, \$ Annual	140	140 per year	75 per year	Not applicable
Serviced by	Ret. to fac./adv. exch.	Return to factory/advance exch.	Factory	Factory
Availability	Stock to 60 days	Stock to 90 days	Stock to 60 days	30 days
Date of first comm. delivery of this model	March 1983	March 1983	July 1984	February 1984
Number installed to date	1500	1,500	—	1000
COMMENTS	Full one year warranty; extensive flow control options, dial-up security, forced log-off, numeric lock override, async pass-thru port, menu-driven configuration, remote optioning	Front panel LED optioning, serial and parallel ports, 3287 lookalike front panel on standard model; model without front panel avail.; unit supports pseudo-transparency feature for graphics, page-length choice, baud rate, parity	User may develop other terminal personality emulation; options stored in non-volatile memory; may be used with InterLynx and DataLynx products to improve system flexibility; menu set up available; host addressable auxiliary printer port.	Options: dual sync host, async host, integ. modems, current loop, ASCII BSC, large-screen support, IBM PC support; unique capabilities: inbound priority, automatic logon, banner/broadcast messages, draft document prep., extensive security feat.

## Conversion Systems/Terminal Controllers

MANUFACTURER & MODEL	Modemsplus SNAP	Modemsplus BRITE II	Modemsplus SMRTE	Modemsplus SMRTE
DEVICE TYPE	Protocol converter, terminal emulator	Protocol converter, terminal emulator	Protocol converter	Protocol converter
CONVERSION PERFORMED	ASCII to SDLC/SNA	ASCII to Burroughs	SDLC/SNA to 3275 BSC	SDLC/SNA to DDCMP
SPECIFIC DEVICE EMULATED	IBM 3274 or 3276 IBM 3776 or 3777	Any Burroughs VDU	IBM 3274 or 3276	IBM 3776 or 3777, Decnet Gateway
SPECIFIC FUNCTIONALITY PROVIDED	IBM 3278, 3287	Any Burroughs CRT or printer	IBM 3278, 3287	377X workstation
VIRTUAL SCREEN SIZES SUPP., in char.	1920	1920	1920	Not applicable
COMMAND PORT SUPPORTED	Yes	Yes	Yes	Yes
HOST SIDE SPECIFICATIONS				
Specific hosts supported	All	All	All	All
Number and type of host lines supported	One SDLC	One Burroughs	One SDLC	One SDLC, one DDCMP
Number host sessions supported concurrently	Two	Two	Six	Two
Connections supported	Direct, multipoint, point-to-point	Direct, multipoint, point-to-point	Direct, multipoint, point-to-point	Direct, multipoint, point-to-point
Connection to host via controller	—	—	—	—
TRANSMISSION SPEC. (Host Line)				
Maximum transmission, in bps	To 19.2K	To 19.2K	To 19.2K	To 19.2K
Synchronization	Sync, isosync	Sync/async/isosync	Sync/isosync	Sync/isosync
Transmission mode	Half/full duplex	Half/full duplex	Half/full duplex	Half/full duplex
Protocols supported	SDLC/SNA	Burroughs	—	—
Codes supported	ASCII, EBCDIC	ASCII	ASCII, EBCDIC	ASCII, EBCDIC
Interface	One RS-232-C-NRZI, one RS-232-C	One TDI, one RS-232-C	One RS-232-C	One RS-232-C
Clocking	Int/ext/data derived	Int/ext/data derived	Int/ext/data derived	Int/ext/data derived
TERMINAL SIDE SPECIFICATIONS				
Number and type of ports provided	One async with dynamic printer	One async with dynamic printer	Three sync or isosyn	One async or sync
Devices supported	All ASCII TTY devices	All ASCII TTY devices	Any 3275 and emulator	Any DECNET Gateway device
Connections supported	Direct, dial-up	Direct, dial-up	Direct, dial-up	Direct, dial-up
TRANSMISSION SPEC. (Terminal Line)				
Maximum transmission, in bps	To 19.2K	To 19.2K	To 19.2K	To 19.2K
Maximum aggregate input rate, in bps	19.2K	19.2K	19.2K	19.2K
Synchronization	Asynchronous	Asynchronous	Sync/isosync	Async/isosync
Transmission mode	Half/full duplex	Half/full duplex	Half/full duplex	Half/full duplex
Protocols supported	TTY/ASCII	TTY/ASCII	BSC 3275	DDCMP
Codes supported	ASCII	ASCII	ASCII, EBCDIC	ASCII, EBCDIC
Interfaces supported	One RS-232-C	One RS-232-C	Three RS-232-C	One RS-232-C
DIAGNOSTICS	RAM, EPROM Status LEDs	RAM, EPROM Status LEDs	RAM, EPROM Status LEDs	RAM, EPROM Status LEDs
PRICING AND AVAILABILITY				
Purchase, \$	1,295	1,295	3,995	3,995
Rental, \$/month-to-month	None	None	None	None
Installation, \$	None	None	None	None
Maintenance, \$ Annual	120	120	240	240
Serviced by	Factory	Factory	Factory	Factory
Availability	30	30	30	30
Date of first comm. delivery of this model	May 1984	May 1984	August 1983	March 1984
Number installed to date	80	50	15	50
COMMENTS	Menu-driven batch and interactive	Menu-driven batch interactive; replaces BRITE I; three-year delivery 3000		

Conversion Systems/Terminal Controllers

MANUFACTURER & MODEL	Modemplus SMRTE	Modemplus Sna Sna	Netlink Technology, Inc. 3703	Perle Systems PDS 300-327
DEVICE TYPE	Protocol converter	Protocol converter	Network processor, cluster controller	Protocol converter, com- munications controller
CONVERSION PERFORMED	SDLC/SNA to IBM 2780, 3780	SDLC/SNA dial up to leased line	ASCII to EBCDIC LU1, LU2; BSC 3271, 3275 to LU1, LU2; BSC 1 RJE MLU to LU0, LU1	ASCII to EBCDIC, bisync to async
SPECIFIC DEVICE EMULATED	IBM 3776, 3777	IBM 3274, 3276, 3776 or 3777	Full function PUT2 with multiple LU types (8100)	IBM 3271
SPECIFIC FUNCTIONALITY PROVIDED	377X workstation	Allows multiple dial-up lines on 1 port off the IBM 3705 or 3275	Dynamic, based on bind parameters LU0, 1, 2, or 3	Async ASCII CRT to IBM 3277; async ASCII print- er to IBM 328X
VIRTUAL SCREEN SIZES SUPP., in char.	—	—	3278 (2, 3, 4, 5)	1920
COMMAND PORT SUPPORTED	Yes	No	Host program loaded	Yes
HOST SIDE SPECIFICATIONS				
Specific hosts supported	IBM 43XX, 8100, DEC PDP-11	All IBM hosts	IBM 370 VTAM, 8100	Any IBM mainframe
Number and type of host lines supported	One SDLC	All	One SDLC	One BSC
Number host sessions supported concurrently	Three	32	40	Not applicable
Connections supported	Direct, multipoint, point-to-point	Direct, multipoint, point-to-point	Direct, point-to-point, multipoint	Direct, multipoint, point-to-point
Connection to host via controller	—	—	IBM 3705, 3725, or equivalent	IBM 3705
TRANSMISSION SPEC. (Host Line)				
Maximum transmission, in bps	To 19.2K	To 19.2K	19.2K	9600
Synchronization	Sync/isosync	Sync/isosync	Synchronous	Synchronous
Transmission mode	Half/full duplex	Half/full duplex	Half/full duplex	Half/full duplex
Protocols supported	SDLC/SNA, BSC2780/3780	SNA/SDLC	SNA/SDLC	BSC
Codes supported	ASCII, EBCDIC	ASCII, EBCDIC	EBCDIC	EBCDIC
Interface	One RS-232-C	One RS-232-C with NRZI or non-NRZI	RS-232-C	One RS-232-C
Clocking	Int/ext/data derived	Int/ext/data derived	Switch selectable	Internal/external
TERMINAL SIDE SPECIFICATIONS				
Number and type of ports provided	One sync or isosync	One SNA/SDLC dial up	6 sync, 12 async	Up to 16 asynchronous
Devices supported	Any 2780, 3780 emulator	All SNA/SDLC devices	Any terminal supporting cursor addressing*	Virtually any async ASCII printer, CRT, or PC
Connections supported	Direct, dial-up	Direct, dial-up	Direct, point-to-point, dial-up	Direct, dial-up
TRANSMISSION SPEC. (Terminal Line)				
Maximum transmission, in bps	To 19.2K	To 19.2K	9600	9600
Maximum aggregate input rate, in bps	19.2K	19.2K	20K	153.6K
Synchronization	Sync/isosync	Synchronous	Async/sync	Asynchronous
Transmission mode	Half/full duplex	Half/full duplex	Half/full duplex	Full duplex
Protocols supported	IBM 2780, 3780	SNA/SDLC	327X, 2780, 3780, 2770**	Asynchronous
Codes supported	ASCII, EBCDIC	ASCII, EBCDIC	ASCII, EBCDIC	ASCII
Interfaces supported	One RS-232-C	One RS-232-C	RS-232-C	RS-232-C
DIAGNOSTICS	RAM, EPROM status LEDs	RAM, EPROM, Status LEDs	Self-tests, host-based network diagnostics	Self-test, diagnostic port
PRICING AND AVAILABILITY				
Purchase, \$	3,995	995 per channel	8,500-12,500	4,560 (U.S.)
Rental, \$/month-to-month	None	—	Contact Vendor	—
Installation, \$	None	—	1,000 (optional)	—
Maintenance, \$ Annual	240	60 by replacement	—	—
Serviced by	Factory	Factory	Depot	Vendor on site, factory third party
Availability	30	30	30 days	30 days
Date of first comm. delivery of this model	March 1984	March 1985	July 1982	1981
Number installed to date	10	1	500	—
COMMENTS		Allows dial-up SNA/SDLC to leased line SNA/SDLC for backup, port savings or phone bill savings; provides 254 PU 2 type addresses from a single leased line FEP port	*Software-controlled via host **Also Burroughs Poll/ Select, 2740-1, TTY	

Conversion Systems/Terminal Controllers

MANUFACTURER & MODEL	Perle Systems PDS 350-SNA	Perle Systems PDS 350/525	Protocol Computers, Inc. R-73SX	Protocol Computers, Inc. 74D
DEVICE TYPE	Protocol converter, communications controller	Protocol converter, communications controller	Protocol converter	Protocol converter (deconverter)
CONVERSION PERFORMED	ASCII to EBCDIC, async to SNA/SDLC	ASCII to EBCDIC, async to SDLC	ASCII to SDLC; SDLC to SDLC through X.25	SDLC to ASCII
SPECIFIC DEVICE EMULATED	IBM 3274 model 51C, 3276 model 12, 3770	Emulates two 5251 model 12s (to host)	—	TTY or VT-100 devices
SPECIFIC FUNCTIONALITY PROVIDED	Any ASCII CRT to IBM 3278, 3279; PC to IBM 3278, 3777, 3767; async ASCII printer to 328X 1920, others avail.	Async ASCII printer to 52XX printer; async ASCII terminal or PC to 5251 or 5291 model 11 1920	Lets up to three 3274/6 controllers comm. with SDLC host through X.25	IBM 3270 term. appear as VT-100 or TTY compat.
VIRTUAL SCREEN SIZES SUPP., in char.	No	Yes	—	—
COMMAND PORT SUPPORTED	No	Yes	—	—
HOST SIDE SPECIFICATIONS				
Specific hosts supported	Any IBM mainframe	IBM System 34, 36, 38	IBM mainframes	IBM mainframe
Number and type of host lines supported	Two SNA/SDLC	One SDLC	One SDLC	One SDLC, six ASCII
Number host sessions supported concurrently	32	Not applicable	Not applicable	—
Connections supported	Direct, multipoint, point-to-point	Direct, multipoint, point-to-point	Direct, point-to-point	Direct, point-to-point
Connection to host via controller	IBM 3705	SLCA or MLCA comm. adapter	Cncts. up to three 3274s thru X.25 to SDLC host	IBM 3274/6 (term. side), 270X/37XX (host side)
TRANSMISSION SPEC. (Host Line)				
Maximum transmission, in bps	19.2K	9600	To 9600	To 9600
Synchronization	Synchronous	Synchronous	Synchronous	Synchronous
Transmission mode	Half/full duplex	Half/full duplex	Full duplex	Full duplex
Protocols supported	SNA/SDLC	SDLC	SNA/SDLC	—
Codes supported	EBCDIC	EBCDIC	—	—
Interface	One RS-232-C	One RS-232-C	RS-232-C	RS-232-C
Clocking	Internal/external	Internal/external	—	—
TERMINAL SIDE SPECIFICATIONS				
Number and type of ports provided	Up to 16 asynchronous	Up to 16 asynchronous	Up to three controllers supp. on one SDLC port	One SDLC port;
Devices supported	Virtually any async ASCII printer, CRT, or PC	Virtually any async ASCII terminal, printer, PC	IBM 3274/76 (up to three)	IBM 3274/6 and equiv.
Connections supported	Direct, dial-up	Direct, dial-up	Direct, dial-up	Direct, dial-up
TRANSMISSION SPEC. (Terminal Line)				
Maximum transmission, in bps	19.2K	9600	To 9600	To 9600
Maximum aggregate input rate, in bps	153.6K	153.6K	—	—
Synchronization	Asynchronous	Asynchronous	Synchronous	Synchronous
Transmission mode	Half/full duplex	Half/full duplex	Full duplex	Full duplex
Protocols supported	—	—	SNA/SDLC	SNA/SDLC
Codes supported	ASCII	ASCII	—	—
Interfaces supported	RS-232 C, RS-422	RS-232-C	RS-232-C	RS-232-C
DIAGNOSTICS	Self-test or from any user port	Self-test, or from any user port	—	—
PRICING AND AVAILABILITY				
Purchase, \$	4,500	4,500	5,500	5,200
Rental, \$/month-to-month	—	—	None	None
Installation, \$	—	—	—	—
Maintenance, \$ Annual	—	—	520	—
Serviced by	Vendor on-site, factory, third party	—	Vendor	Vendor
Availability	30 days	30 days	—	—
Date of first comm. delivery of this model	June 1984	June 1984	1983	March 1984
Number installed to date	—	—	—	—
COMMENTS	Concurrent, interactive, and batch 3274 and 3770 emulation; support for asynchronous block-mode terminals; data encrypt.	—	R73SX used with 73SX; lets up to three IBM or equiv. 3274/6-type controllers comm. with SDLC host; creates independ. virtual circuit through network to 73SXs at up to three host sites	Enables IBM 3270-type terminal to access DEC hosts, other ASCII computers, and networks; lets 3270 operate in ASCII and SNA mode

**Conversion Systems/Terminal Controllers**

<b>MANUFACTURER &amp; MODEL</b>	<b>Protocol Computers, Inc. 151</b>	<b>Protocol Computers, Inc. 167</b>	<b>Protocol Computers, Inc. 176</b>	<b>Protocol Computers, Inc. Videotext 67</b>
<b>DEVICE TYPE</b>	Protocol converter	Protocol converter	Protocol converter	Protocol converter
<b>CONVERSION PERFORMED</b>	ASCII to SDLC	ASCII to SNA/SDLC	ASCII to SNA/SDLC	ASCII to SNA/SDLC
<b>SPECIFIC DEVICE EMULATED</b>	IBM 5251-12	IBM 3767 (PU Type 1)	IBM 3276 (PU Type 2)	IBM 3767 SDLC (PU Type 1)
<b>SPECIFIC FUNCTIONALITY PROVIDED</b>	Lets ASCII CRTs or printers attach. to System 34/36/38	Lets ASCII devices appears as 3767s	Lets ASCII CRTs or printers appear as IBM 3278/3287s	To link async videotext terminals to IBM SDLC host
<b>VIRTUAL SCREEN SIZES SUPP., in char.</b>	—	—	—	—
<b>COMMAND PORT SUPPORTED</b>	No	No	No	No
<b>HOST SIDE SPECIFICATIONS</b>				
Specific hosts supported	IBM System 34/36/38	IBM mainframe	IBM mainframes	IBM mainframes
Number and type of host lines supported	One	One	One	One
Number host sessions supported concurrently	Not applicable	Not applicable	Not applicable	Not applicable
Connections supported	Point-to-point, multi-point, direct	Point-to-point, multi-point, direct	Point-to-point, multi-point, direct	Multipoint
Connection to host via controller	—	—	No	No
<b>TRANSMISSION SPEC. (Host Line)</b>				
Maximum transmission, in bps	To 9600	To 9600	To 9600	To 9600
Synchronization	Synchronous	Synchronous	Synchronous	Synchronous
Transmission mode	Half/full duplex	Half/full duplex	Half/full duplex	Half/full duplex
Protocols supported	SNA/SDLC	SNA/SDLC	SNA/SDLC	SNA/SDLC
Codes supported	EBCDIC	EBCDIC	EBCDIC	EBCDIC
Interface	RS-232-C (SDLC)	RS-232-C (SDLC)	RS-232-C (SDLC)	RS-232-C (SDLC)
Clocking	—	—	—	—
<b>TERMINAL SIDE SPECIFICATIONS</b>				
Number and type of ports provided	1, 3, 5, 7 ports; one dynamic printer port	1, 3, 5, 7 ports; one dynamic printer port	1, 3, 5, or 7 ports; one dynamic printer port	1, 3, 5, or 7 ports; one dynamic printer port
Devices supported	Virtually any ASCII device	Virtually any async ASCII device	Virtually any async ASCII CRTs, printers	Async Videotext terminals
Connections supported	Direct, dial-up	Direct, dial-up	Direct, dial-up	Direct, dial-up
<b>TRANSMISSION SPEC. (Terminal Line)</b>				
Maximum transmission, in bps	To 9600	To 9600	To 9600	To 9600
Maximum aggregate input rate, in bps	—	—	—	—
Synchronization	Asynchronous	Asynchronous	Asynchronous	Asynchronous
Transmission mode	Full duplex	Full duplex	Full duplex	Full duplex
Protocols supported	—	—	—	—
Codes supported	ASCII	ASCII	ASCII	ASCII
Interfaces supported	RS-232-C	RS-232-C	RS-232-C	RS-232-C
<b>DIAGNOSTICS</b>	Self-test, built-in diag. line monitors, trace cap.	Self-test, built-in diag. line monitors, trace cap	Self-test, built-in diag. line monitors, trace cap.	Self-test, built-in diag. line monitors
<b>PRICING AND AVAILABILITY</b>				
Purchase, \$	2,850/1; 3,900/3*	2,850/1; 3,900/3*	1,850/1; 2,900/3*	Contact vendor
Rental, \$/month-to-month	None	None	None	None
Installation, \$	—	—	—	—
Maintenance, \$ Annual	195/300/360/420**	195/300/360/420**	195/300/360/420**	Contact vendor
Serviced by	Vendor	Vendor	Vendor	Vendor
Availability	—	—	—	—
Date of first comm. delivery of this model	September 1982	First quarter 1980	October 1981	—
Number installed to date	Approx. 1500 (all mods.) * 4,600 (5 ports); 5,300 (7 ports).	Approx. 1500 (all mods.) Alternative to IBM's NTO software	Approx. 1500—all models *3,650 (5 ports); 4,300 (7 ports)	—
<b>COMMENTS</b>	Includes paper CRT opt. ** for 1, 3, 5, or 7 ports, respectively	*4,600 (5 ports); 5,300 (7 ports) **for 1, 3, 5, or 7 ports, respectively	**for 1, 3, 5, or 7 ports, respectively. Includes graphics and paper CRT options.	Eliminates need to purchase IBM Videotext Facility and NTO software



Conversion Systems/Terminal Controllers

MANUFACTURER & MODEL	Protocol Computers, Inc. 171	Protocol Computers, Inc. 71B/SNA; 75B/SNA; 3780/SNA*	Protocol Computers, Inc. 73SX	Protocol Computers, Inc. 251
DEVICE TYPE	Protocol converter	Protocol converter	Protocol converter	Protocol converter
CONVERSION PERFORMED	ASCII to BSC	BSC to SDLC	ASCII to SDLC	ASCII to SNA/SDLC
SPECIFIC DEVICE EMULATED	IBM 3271	—	IBM 3274/76	IBM 5251-12
SPECIFIC FUNCTIONALITY PROVIDED	Lets ASCII terminals operate in BSC network	IBM 3271 to 3274; IBM 3275 to 3276; 3780/SNA lets 3780s appear as 3776-2	Links SDLC host to X.25 node	Lets ASCII CRTs, PCs, & printers attach to System 34/36/38
VIRTUAL SCREEN SIZES SUPP., in char.	—	—	—	—
COMMAND PORT SUPPORTED	No	No	—	—
HOST SIDE SPECIFICATIONS				
Specific hosts supported	IBM mainframes	IBM mainframes	IBM SDLC hosts	IBM System 34/36/38
Number and type of host lines supported	One	One	One SDLC	One
Number host sessions supported concurrently	Not applicable	Not applicable	Not applicable	Not applicable
Connections supported	Point-to-point, multi-point, direct	Point-to-point, multi-point, direct	Direct, point-to-point	Direct, point-to-point, multipoint
Connection to host via controller	—	—	—	—
TRANSMISSION SPEC. (Host Line)				
Maximum transmission, in bps	To 9600	To 9600	To 9600	To 19.2K
Synchronization	Synchronous	Synchronous	Synchronous	Synchronous
Transmission mode	Half/full duplex	Half/full duplex	Full duplex	Half/full duplex
Protocols supported	BSC	SNA/SDLC	SNA/SDLC	SNA/SDLC
Codes supported	—	—	—	EBCDIC
Interface	RS-232-C (BSC)	RS-232-C	RS-232-C	RS-232-C
Clocking	—	—	—	—
TERMINAL SIDE SPECIFICATIONS				
Number and type of ports provided	1, 3, 5, or 7 ports; one dynamic printer port	Up to three BSC ports or 1 SDLC port & 1 BSC port	Up to eight virtual circuits	8 physical; 8 LUs
Devices supported	Virtually any ASCII terminal	IBM 3271s and equiv.	Up to eight 1076X or R73SX units	Virtually any ASCII device
Connections supported	Direct, dial-up	Direct, dial-up	Direct, dial-up	Direct, dial-up
TRANSMISSION SPEC. (Terminal Line)				
Maximum transmission, in bps	To 9600	To 9600	1200	To 19.2K
Maximum aggregate input rate, in bps	—	—	—	—
Synchronization	Asynchronous	Bisynchronous	—	Asynchronous
Transmission mode	Full duplex	—	Full duplex	—
Protocols supported	—	BSC	X-on/X-off	X-on/X-off
Codes supported	ASCII	—	—	ASCII
Interfaces supported	RS-232-C	RS-232-C	RS-232-C	RS-232-C
DIAGNOSTICS	Self-test, built-in diag. line monitors, trace cap.	—	—	Self test, built-in diag. line monitors, trace capability
PRICING AND AVAILABILITY				
Purchase, \$	1,850/1; 2,900/3*	3,100	5,500	5,800
Rental, \$/month-to-month	None	None	None	None
Installation, \$	—	—	—	—
Maintenance, \$ Annual	195/300/360/420**	320	520	640
Serviced by	Vendor	Vendor	Vendor	Vendor
Availability	—	—	—	—
Date of first comm. delivery of this model	June 1982	June 1982 (71B/SNA)	1983	March 1985
Number installed to date	Approx. 1500—all models *3,650 (5 ports); 4,300 (7 ports).	Approx. 1500—all models	—	—
COMMENTS	**for 1, 3, 5, or 7 ports, respectively. Includes graphics and paper CRT options.	Extend life of BSC terminal in SNA environment  *71B/SNA conv. is 3271 to 3274; 75B/SNA conv. is 3275 to 3276; 3780/SNA conv. is 3780 to 3776-2	Emulates 3274/76 controller; links SDLC host to X.25 node; supports up to eight 1076X or R73SX units; 73SX only accepts calls	Advanced security feats. soft-configuration; auto speed detect

## Conversion Systems/Terminal Controllers

MANUFACTURER & MODEL	Protocol Computers, Inc. 276	Protocol Computers, Inc. 271	Renex Translator RT74 Family	Renex Translator RT51 Family
DEVICE TYPE	Protocol converter	Protocol converter	Protocol converter	Protocol converter
CONVERSION PERFORMED	ASCII to SDLC	ASCII to BSC	ASCII to 3270 BSC, ASCII to 3270 SDLC, ASCII to 3770/3767	ASCII to SDLC
SPECIFIC DEVICE EMULATED	IBM 3274/76 (PU Type 2)	IBM 3271	IBM 3274-41C, 51C, 61C; IBM 3276-2, 12	IBM 5251 model 12
SPECIFIC FUNCTIONALITY PROVIDED	Lets ASCII CRTs, PCs, & printers connect to SNA network	Interfaces ASCII devices to IBM BSC network	ASCII CRT to IBM 3278 models 2, 5	ASCII CRT to IBM 5251 model 11
VIRTUAL SCREEN SIZES SUPP., in char.	—	—	1920, 3168	1920
COMMAND PORT SUPPORTED	Yes	Yes	Yes	Yes
HOST SIDE SPECIFICATIONS				
Specific hosts supported	IBM mainframes	IBM mainframes	IBM 43XX,308X,303X,360, 370& plg-cmptbl	System 34, 36, 38
Number and type of host lines supported	One	One	One or two; SDLC or BSC	One or two SDLC
Number host sessions supported concurrently	Not applicable	Not applicable	One	One
Connections supported	Direct, point-to-point, multipoint	Direct, point-to-point, multipoint	Direct, multipoint, point-to-point	Direct, multipoint, point-to-point
Connection to host via controller	No	No	Channel-attached IBM 270X, 37XX	Communication adapter, twinaxial
TRANSMISSION SPEC. (Host Line)				
Maximum transmission, in bps	To 19.2K	To 19.2K	2400 to 19.2K	2400 to 19.2K
Synchronization	Synchronous	Synchronous	Synchronous	Synchronous
Transmission mode	Half/full duplex	Half/full duplex	Half/full duplex	Half/full duplex
Protocols supported	SNA/SDLC	BSC	BSC, SNA/SDLC	SDLC
Codes supported	EBCDIC	EBCDIC	ASCII, EBCDIC	ASCII, EBCDIC
Interface	RS-232-C	RS-232-C	One or two RS-232-C	One or two RS-232-C
Clocking	—	—	Internal/external	Internal/external
TERMINAL SIDE SPECIFICATIONS				
Number and type of ports provided	8 physical; 32 LUs	8 physical; 32 LUs	Up to 32 logical asynchronous	Up to 24 logical ports
Devices supported	Virtually any ASCII device	Virtually any ASCII device	Over 100 devices supported	Over 100 devices supported
Connections supported	Direct, dial-up	Direct, dial-up	Direct, dial-up	Direct, dial-up
TRANSMISSION SPEC. (Terminal Line)				
Maximum transmission, in bps	To 19.2K	To 19.2K	19.2K w/autbd. rate det.	19.2K w/autbd. rate det.
Maximum aggregate input rate, in bps	—	—	Not applicable	Not applicable
Synchronization	Asynchronous	Asynchronous	Asynchronous	Asynchronous
Transmission mode	—	—	Full duplex	Full duplex
Protocols supported	X-on/X-off	X-on/X-off	—	—
Codes supported	ASCII	ASCII	ASCII	ASCII
Interfaces supported	RS-232-C	RS-232-C	RS-232-C, RS-449	RS-232-C, RS-449
DIAGNOSTICS	Self test, built-in diag line monitors, trace capability	Self test, built-in diag. line monitors, trace capability	Self-tests; status LEDs monitor capabilities	Self-tests; status LEDs monitor capabilities
PRICING AND AVAILABILITY				
Purchase, \$	5,800	5,800	2,900-15,990	3,950-12,990
Rental, \$/month-to-month	None	None	250-850	350-750
Installation, \$	—	—	300	300
Maintenance, \$ Annual	640	640	300-1,100	300-1,110
Serviced by	Vendor	Vendor	Vendor on site, factory, third party	Vendor on site, factory, third party
Availability	—	—	30 days	30 days
Date of first comm. delivery of this model	March 1985	March 1985	October 1980	January 1984
Number installed to date	—	—	14,000 ports	300 ports
COMMENTS	Advanced security feats. soft-configuration; auto speed detect	Advanced security feats. soft-configuration; auto speed detect	Personal computer support, APL support; seven-color and extended highlight; multiplex terminal and printer on same physical line; graphics passthrough for SAS, Tellagraf etc; also includes inactivity timeout and password security	Multiplex terminal and printer on one physical port; inactivity timer, password security, and personal computer support

Conversion Systems/Terminal Controllers

MANUFACTURER & MODEL	Renex TMS-One	Shaffstall Corp. Telecom 1000	Thomas Engineering Co. MZ-80 IMIU	Thomas Engineering Co. PCU
DEVICE TYPE	Protocol converter	Protocol/code converter	Protocol/code converter emulator, concentrator	Protocol/code converter emulator, concentrator
CONVERSION PERFORMED	ASCII to EBCDIC Async to Sync	EBCDIC to ASCII, ASCII to EBCDIC, bisync to async, async to bisync	ASCII to EBCDIC, async to sync	ASCII to EBCDIC, async to sync
SPECIFIC DEVICE EMULATED	IBM 3274-41C, 51C, 61C IBM 3276-2, 12	IBM 2770, 2780, 3780 SNA/SDLC	IBM 3271, 3274/Honeywell VIP 77XX	IBM 3271, 3274/Honeywell VIP 77XX
SPECIFIC FUNCTIONALITY PROVIDED	ASCII CRT to IBM 3276- 2 thru 5; IBM 3279	Not applicable	Async ASCII CRT and/or PC to IBM 3270 or VIP 77XX	Async ASCII CRT and/or PC to IBM 3270 or VIP 77XX, file, transfer
VIRTUAL SCREEN SIZES SUPP., in char.	All	Not applicable	1920	1920
COMMAND PORT SUPPORTED	Yes	Not applicable	Yes	Yes
HOST SIDE SPECIFICATIONS				
Specific hosts supported	IBM 43XX, 308X, 303X, 360, 370& plg-compatible	Not applicable	IBM, Honeywell, others	IBM, Honeywell, others
Number and type of host lines supported		Two async or bisync	Most Honeywell, IBM	Most Honeywell, IBM
Number host sessions supported concurrently	Two	Not applicable	One	Up to 4 (1 per host)
Connections supported	Direct, multipoint, point-to-point	Dial-up, point-to-point	Any combination of modem or direct connection	Any combination of modem or direct connection
Connection to host via controller	IBM 270X, IBM 37XX	Not applicable	IBM 3704/5; Datanet 355, 66, 8; GRTS-II, NPS, DNS	IBM 3704/5; Datanet 355, 66, 8; GRTS-II, NPS, DNS
TRANSMISSION SPEC. (Host Line)				
Maximum transmission, in bps	19.2K	9600	19.2K bps	19.2K bps
Synchronization	Synchronous	Async/sync	Synchronous	Synchronous
Transmission mode	Half/full duplex	Half/full duplex	Half/full duplex	Half/full duplex
Protocols supported	BSC, SNA/SDLC	BSC/SDLC/async	BSC, VIP	BSC, SDLC, VIP
Codes supported	ASCII, EBCDIC	ASCII or EBCDIC*	ASCII, EBCDIC	ASCII, EBCDIC
Interface	Up to 32 ports RS-232-C	Two RS-232-C, parallel	One RS-232-C	Up to 4 RS-232-C
Clocking	Internal/external	Internal; external (opt)	Internal/external	Internal/external
TERMINAL SIDE SPECIFICATIONS				
Number and type of ports provided	Up to 32 physical and 120 logical ports	Not applicable	Up to 32 async ports	Up to 32 async ports
Devices supported	Over 125 devices sup- ported	Any async, bisync, SDLC device	Virtually any ASCII CRT, printer, PC	Virtually any ASCII CRT, printer, PC
Connections supported	Direct, dial-up	Direct, dial-up	Direct, dial-up, through modem	Direct, dial-up, through modem
TRANSMISSION SPEC. (Terminal Line)				
Maximum transmission, in bps	19.2K w/autbd. rate det.	9600	19.2K	19.2K
Maximum aggregate input rate, in bps	Not applicable	9600	80K (approx.)	80K (approx.)
Synchronization	Asynchronous	Async/sync	Async/sync	Async/sync
Transmission mode	Full duplex	Half/full duplex	Full duplex	Full duplex
Protocols supported	—	TTY, async, bisync	TTY, custom	TTY, custom
Codes supported	ASCII	ASCII or EBCDIC*	ASCII, EBCDIC	ASCII, EBCDIC
Interfaces supported	RS-232-C, RS-449	RS-232-C	RS-232-C, MIL-188	RS-232-C, MIL-188
DIAGNOSTICS	Self-tests; status LEDs, control operator diagnostics	None	Self-tests, status LEDs, loadable diag., diag. port	Self-tests, status LEDs, loadable diag., diag. port
PRICING AND AVAILABILITY				
Purchase, \$	7,990—19,990	5,000-7,000	4,000—10,000	6,000—15,000
Rental, \$/month-to-month	560—1,400	—	Terms vary	Terms vary
Installation, \$	400—650	750	—	—
Maintenance, \$ Annual	450—1,300	600-1,000	First yr. incl.; 500 aft	First yr. incl.; 500 aft
Serviced by	Vendor on site, factory, third party	factory depot	Vendor, factory; spares	Vendor, factory; spares
Availability	30 days	40 days	30 days	30 days
Date of first comm. delivery of this model	February 1985	September 1984	December 1981	March 1985
Number installed to date	5	5	1,000	10
COMMENTS	APL, 7-color, extended highlighting, allows user to have up to five concurrent sessions, active, dynamic LU assignments thru passwords, file transfer capabilities for PC	*Custom-programmed conversions	Supports one or more printers in 3286/87 mode; menu-driven device selection; remote diag. cap., incl. software transmission; rackmount- able & field-expandable; supports optional floppy disks for local process- ing & user system devel- opment	All capabilities of MZ-80 IMIU plus multi- host access; file trans- fer; PC support utilities

Conversion Systems/Terminal Controllers

MANUFACTURER & MODEL	Tri-Data Corp. Netway 200			
DEVICE TYPE	Cluster controller remote concentrator			
CONVERSION PERFORMED	ASCII to EBCDIC			
SPECIFIC DEVICE EMULATED	IBM 3274 BSC and SNA/ SDLC			
SPECIFIC FUNCTIONALITY PROVIDED	ASCII CRT to IBM 327X-2, or Burroughs TD 830/ ET1100			
VIRTUAL SCREEN SIZES SUPP., in char.	1920			
COMMAND PORT SUPPORTED	Yes			
HOST SIDE SPECIFICATIONS	Specific hosts supported			
Number and type of host lines supported	IBM mnfrms.; Burr.B6800, B7900; HP3000, DEC VAX			
Number host sessions supported concurrently	Netway Communications Operating System (NCOS) Four			
Connections supported	Direct, multipoint (leased), point-to-point (dial-up)			
Connection to host via controller	IBM 270X, 37XX			
TRANSMISSION SPEC. (Host Line)	Maximum transmission, in bps			
Synchronization	19.2K			
Transmission mode	Async/sync			
Protocols supported	Half/full duplex			
Codes supported	BSC;SNA/SDLC;X.25;Bu.P/S			
Interface	ASCII, EBCDIC			
Clocking	16 RS-232-C			
TERMINAL SIDE SPECIFICATIONS	Internal/external			
Number and type of ports provided	Six RS-232-C, one Centronics parallel			
Devices supported	ADDs 60,90,78, VT100, Televideo 925/950/970, Qume 102/108/109,others			
Connections supported	Direct, dial-up, leased			
TRANSMISSION SPEC. (Terminal Line)	Maximum transmission, in bps			
Maximum aggregate input rate, in bps	19.2K			
Synchronization	—			
Transmission mode	Async/sync			
Protocols supported	Half/full duplex			
Codes supported	TTY II;BSC;SNA;Poll/Sel.			
Interfaces supported	ASCII RS-232-C			
DIAGNOSTICS	Power-on, status LEDs			
PRICING AND AVAILABILITY	Purchase, \$			
Rental, \$/month-to-month	6,880			
Installation, \$	—			
Maintenance, \$ Annual	—			
Serviced by	Factory, third party			
Availability	30 days			
Date of first comm. delivery of this model	1983			
Number installed to date	200			
COMMENTS	Multi-host product supports up to four dissimilar processors; can be used as gateway, cluster controller, in X.25 PAD to nodal pro- cessor; modular design, field upgradeable			

Conversion Systems/Terminal Controllers

MANUFACTURER & MODEL	Agile 5278	Agile LC36	Air Land Systems PCU-200	Alphamatrix Model BAE-806
DEVICE TYPE	Protocol converter	Protocol converter	Protocol converter	Protocol converter
CONVERSION PERFORMED	Async ASCII to IBM 3270 coax	ASCII to Burroughs Poll/Select	User selectable protocol to protocol	Async ASCII to BSC
SPECIFIC DEVICE EMULATED	IBM 3287	—	—	IBM 2780/3780
SPECIFIC FUNCTIONALITY PROVIDED	ASCII printer/plotter to IBM 3274/3276	—	Configurable protocol emulation for RS-232-C devices	Lets async ASCII printer appear as IBM 2780/3780
VIRTUAL SCREEN SIZES SUPP., in char.	—	—	—	—
COMMAND PORT SUPPORTED	—	—	No	—
HOST SIDE SPECIFICATIONS				
Specific hosts supported	IBM mainframe	Burroughs Poll/Select	—	IBM or compat. supporting BSC protocol
Number and type of host lines supported	—	One Poll Select	Not applicable	One BSC
Number host sessions supported concurrently	—	—	Not applicable	Not applicable
Connections supported	—	TDI and synchronous modem	Direct, dial-up via modem	Direct, dial-up via modem
Connection to host via controller	IBM 3274, 3276	—	—	—
TRANSMISSION SPEC. (Host Line)				
Maximum transmission, in bps	—	—	See comments	To 9600
Synchronization	—	—	—	Synchronous
Transmission mode	—	—	—	Half duplex
Protocols supported	BSC or SNA/SDLC	Poll Select	—	BSC
Codes supported	—	—	—	EBCDIC
Interface	IBM Type A coax	TDI	—	RS-232-C
Clocking	Internal	Internal	—	Internal/external
TERMINAL SIDE SPECIFICATIONS				
Number and type of ports provided	One RO printer port	One asynchronous	One RS-232-C or TDI; One RS-232-C or 20 ma	One async printer
Devices supported	Virtually any printer or plotter	Virtually any async ASCII with RS-232-C	A number of devices from IBM, Sperry, Honeywell, Burroughs, and NCR	ASCII RS-232-C printers
Connections supported	Direct	Direct, dial-up	Direct, dial-up	Direct, dial-up
TRANSMISSION SPEC. (Terminal Line)				
Maximum transmission, in bps	19.2K	19.2K	50 to 19.8K	110 to 9600
Maximum aggregate input rate, in bps	—	—	—	—
Synchronization	Asynchronous	Asynchronous	Sync/async	Asynchronous
Transmission mode	Half duplex	Half duplex	Half/full duplex	Half/full duplex
Protocols supported	IBM coax	Poll Select	TTY, BSC, SDLC, Burr.P/S	Xon/Xoff
Codes supported	EBCDIC, SDS	—	—	ASCII
Interfaces supported	RS-232-C, parallel	RS-232-C	RS-232-C; TDI, or 20 ma	Current loop
DIAGNOSTICS	Self-tests, LEDs	Self-tests, LEDs	Status LEDs, test switch	Self-tests, loopback tests, status LEDs
PRICING AND AVAILABILITY				
Purchase, \$	2,500	995	1,650	Contact vendor
Rental, \$/month-to-month	None	None	—	Contact vendor
Installation, \$	None	None	—	Contact vendor
Maintenance, \$ Annual	—	—	—	Contact vendor
Serviced by	Factory	Factory	Vendor	Vendor
Availability	21 days	21 days	30 days	—
Date of first comm. delivery of this model	1980	1979	—	1981
Number installed to date	1500	1250	—	—
COMMENTS	Allows any RS-232-C or Centronix parallel printer/plotter to interface with IBM 3274/76 Controller as LU1, LU3 Type A coax device	Allows any RS-232-C device to interface with Burroughs Poll Select protocol either locally (TDI) or remote (sync)	Devices enables inter-communication of data btwn. 2 cmprts. or cmprts. and peripherals using diff. protocols; sftwr. avail for most maj. line communications protocols; cmpny. offers PCU-40,42,48,50,60,62 cards for insrt. into devices	For RJE applications, sign-on JCL cards can be specified as options

### Conversion Systems/Terminal Controllers

MANUFACTURER & MODEL	Alphamatrix BAX-1-80/BAX-1-75	Avatar Technologies PA1000	Avatar Technologies PA1500	Black Box Catalog Model A/S-3
DEVICE TYPE	Protocol converter	Protocol converter	Protocol converter	Protocol converter
CONVERSION PERFORMED	Async ASCII to BSC	ASCII to BSC or SNA/SDLC	ASCII to BSC, SNA LU1 and LU3	ASCII to IBM 3270 BSC or SNA/SDLC
SPECIFIC DEVICE EMULATED	IBM 2780/3780 or 3275	IBM 3278-2 terminal	IBM 3287	IBM 3274 model 5K
SPECIFIC FUNCTIONALITY PROVIDED	Async ASCII to 2780/3780 (BAX 1-80) or IBM 3275 (BAX 1-75)	Async ASCII terminals, personal computers to IBM 3278 model 25	Async ASCII printers, to IBM 3287	Async ASCII to IBM BSC
VIRTUAL SCREEN SIZES SUPP., in char.	—	1920	960-3564 char. buffer	—
COMMAND PORT SUPPORTED	—	No	No	Yes
HOST SIDE SPECIFICATIONS				
Specific hosts supported	IBM or compat. supporting BSC protocol	IBM mnfrms., async hosts such as DEC, DG, Wang	IBM mainframes	Supports standard IBM operating systems
Number and type of host lines supported	One BSC	One IBM Type A coax one RS-232-C for async host	One IBM Type A coax	One BSC or one SNA
Number host sessions supported concurrently	Not applicable	Two (switch sel.)	One	One
Connections supported	Direct, dial-up	Direct, point-to-point via modem	Direct	Direct, auto-dial
Connection to host via controller	—	IBM 3274/76	IBM 3274/76	IBM 3271, 3274, 3276
TRANSMISSION SPEC. (Host Line)				
Maximum transmission, in bps	To 4800 (9600 opt.)	To 9600	To 9600	9600
Synchronization	Synchronous	Async/sync	Synchronous	Asynchronous
Transmission mode	Half duplex	—	—	Half/full duplex
Protocols supported	BSC	BSC, SNA/SDLC or async	BSC, SNA/SDLC	BSC, SNA/SDLC
Codes supported	EBCDIC	—	—	EBCDIC
Interface	RS-232-C	RS-232-C; 3270 coax	Type A coax	RS-232-C
Clocking	Internal/external	—	—	Internal/external
TERMINAL SIDE SPECIFICATIONS				
Number and type of ports provided	One async ASCII terminal or teleprinter	One term. port, one aux. port	One async ASCII printer	Four asynchronous
Devices supported	—	DEC VT100; IBM 3101; LSI ADM5, Televid. 910, ADDS viewpoint & pers. comp.	Dot mtrx., In., ltr-qual prts. from Dataproducts, NEC, Centronics, Xerox	Any asynchronous device
Connections supported	Direct, dial-up	Direct, dial-up	Direct	Direct, auto-dial
TRANSMISSION SPEC. (Terminal Line)				
Maximum transmission, in bps	110 to 9600	300 to 9600	—	9600
Maximum aggregate input rate, in bps	—	—	—	76K
Synchronization	Asynchronous	Asynchronous	—	Asynchronous
Transmission mode	Half/full duplex	—	—	Half/full duplex
Protocols supported	TTY	Xon/Xoff, ETX/ACK	—	BSC
Codes supported	ASCII	ASCII	ASCII	ASCII
Interfaces supported	RS-232-C or parallel	RS-232-C	RS-232-C or parallel	RS-232-C
DIAGNOSTICS	Self-tests, loopback tests, status LEDs	Self-tests	—	Not applicable
PRICING AND AVAILABILITY				
Purchase, \$	2,285	995	Contact vendor	See comments
Rental, \$/month-to-month	Contact vendor	—	—	None
Installation, \$	Contact vendor	—	—	None
Maintenance, \$ Annual	Contact vendor	—	—	None
Serviced by	Vendor	Vendor	Vendor	Factory
Availability	—	30 days	30 days	From stock
Date of first comm. delivery of this model	—	February 1984	March 1984	1983
Number installed to date	—	—	New product	—
COMMENTS	Integrated modem optional	Allows one connected ASCII term. to emulate IBM 3278 and access IBM mainframe or asynchronous minicomputer, public information network, or timesharing service	Supports Transparent mode operation for specialized host applications incl. graphics, bar-code generation, alternate characters	Purchase price: \$1,695—two chan. dumb; \$2,250—two chan. smart; \$2,950—four chan. smart Allows full operator emulation, user-specified auto log on and character set; security features on smart units

Conversion Systems/Terminal Controllers

MANUFACTURER & MODEL	Black Box Catalog Model A/S-25	Black Box Catalog PQ-4(B)	Commercial Data Processing 440E/440E-1/440E-PC	Commtext Cx-86/Cx-83
DEVICE TYPE	Protocol converter	Bidirectional protocol converter	Microprocessor controller	Protocol converter, terminals controller
CONVERSION PERFORMED	BSC RJE protocols to/from async ASCII	Async ASCII to SDLC	ASCII tape format to async TTY RS-232-C; NCR packed HEX code to ASCII	Asynchronous ASCII to BSC, SNA/SDLC
SPECIFIC DEVICE EMULATED	Supports IBM 2770, 2780, 3780, 3741	IBM 5251 model 11	—	—
SPECIFIC FUNCTIONALITY PROVIDED	BSC RJE protocols to/from async ASCII	Async terminal to 5251 remote model 12	NCR cassette tapes to be read by micro-, mini-, or mainframe	Async ASCII device to IBM 3270
VIRTUAL SCREEN SIZES SUPP., in char.	—	—	Not applicable	—
COMMAND PORT SUPPORTED	No	No	—	—
HOST SIDE SPECIFICATIONS				
Specific hosts supported	Supports IBM 2770, 2780, 3780, 3741	IBM System 34, 36, 38; Series 1	Any protocol	Any IBM 3270 or TTY-compatible host
Number and type of host lines supported	One async or one BSC	IBM SDLC Twinax	One asynchronous	SNA or BSC
Number host sessions supported concurrently	One	One	—	—
Connections supported	Direct	Direct	Direct, point-to-point, multipoint	—
Connection to host via controller	IBM 2770, 2780, 3780, 3741	IBM 5251 Model 12, 11	—	—
TRANSMISSION SPEC. (Host Line)				
Maximum transmission, in bps	9600	—	1200 (212A); 9600*	To 19.2K
Synchronization	Bisync/async	Asynchronous	Asynchronous	Synchronous
Transmission mode	Full duplex	Half duplex	Full duplex	Half duplex
Protocols supported	BSC	SDLC	TTY	BSC or SNA/SDLC
Codes supported	ASCII	ASCII	ASCII, Packed HEX	EBCDIC
Interface	RS-232-C	RS-232-C	RS-232-C	—
Clocking	Internal	—	Data derived	—
TERMINAL SIDE SPECIFICATIONS				
Number and type of ports provided	Async or sync	One asynchronous	One asynchronous	25 async, 2 sync (Cx-86) 10 async, 2 sync (Cx-83)
Devices supported	Any async or sync device	Any async device	NCR 2126, 2140, 2152, 2160, 2950, 7750	A number of async ASCII CRTs and microcomputers
Connections supported	Direct	Direct	Direct, dial-up	—
TRANSMISSION SPEC. (Terminal Line)				
Maximum transmission, in bps	9600	—	1200 or 9600	110 to 19.2K
Maximum aggregate input rate, in bps	—	—	—	—
Synchronization	Async/sync	Asynchronous	Asynchronous	Asynchronous
Transmission mode	Full duplex	Half duplex	Full duplex	Half-duplex
Protocols supported	TTY	—	TTY	—
Codes supported	EBCDIC or BCD	ASCII	ASCII	ASCII
Interfaces supported	RS-232-C	RS-232-C	RS-232-C, RS-423	—
DIAGNOSTICS	Three LEDs	Self-test, other built-in diagnostics	Self-test, status LEDs, control panel	—
PRICING AND AVAILABILITY				
Purchase, \$	1,495	1,885	4,250/1,975 (440-1 & PC)	5,850/3,900
Rental, \$/month-to-month	None	None	None	270 (One yr.)
Installation, \$	None	None	—	Contact distributor
Maintenance, \$ Annual	None	None	—	Contact distributor
Serviced by	Factory	Factory	Unit exchange	M/A-Com (USA); Datamex (Canada)
Availability	From stock	Stock to 30 days	Two-four weeks	—
Date of first comm. delivery of this model	1983	1983	1978/1979/1983	February 1981
Number installed to date	4000	100	800/160/40	—
COMMENTS	Baud rates selected independently for each port; selectable, built-in modem eliminators		Unit designed to interface NCR cassette handler to most mainframes, minis, and micros; works in local envior. through modem elim.  *On leased line	Local processing option (CP/M) for personal computing; networking option for larger configurations; 3270 emulation/host file transfer option for IBM and compatible personal computers

### Conversion Systems/Terminal Controllers

MANUFACTURER & MODEL	Computer Communications Inc. 8274C	Computer Peripheral Systems MARS/MARS jr.	CTi Data Corporation CTi 1000A	CTi Data Corporation CTi 3000/1
DEVICE TYPE	Remote cluster controller	Protocol converter	Terminal controller	Terminal controller
CONVERSION PERFORMED	ASCII to SNA/SDLC	ASCII to Burroughs Poll/Select; Burroughs to Burroughs	IBM EBCDIC to ASCII	ASCII or A Coax to BSC or SNA/SDLC
SPECIFIC DEVICE EMULATED	IBM 3274 1C, 21C, 31C, 41C, 51C, 61C; 3276 12	TC-4000, AP-310, TD-830	IBM 2740 Model 2	IBM 3274
SPECIFIC FUNCTIONALITY PROVIDED	ASCII CRTs, personal computers to IBM 3270 (SDLC)	Any ASCII or parallel device to Burroughs Poll/Select	—	ASCII to IBM 3278 Model 2, IBM A Coax and equiv. devices
VIRTUAL SCREEN SIZES SUPP., in char.	—	1920	1920	1920
COMMAND PORT SUPPORTED	—	Yes	—	—
HOST SIDE SPECIFICATIONS				
Specific hosts supported	IBM/PCM SNA host	Any Burroughs Poll/Select mainframe	All IBM mainframes	IBM mainframes
Number and type of host lines supported	One SNA/SDLC	One sync, async, or TDI	One SNA/SDLC	One BSC or one SDLC
Number host sessions supported concurrently	Not applicable	One	One	One
Connections supported	Point-to-point, multipoint	TDI (direct) sync, async polled multidrop dial or leased	Multipoint leased line	Leased line, multipoint, or point-to-point
Connection to host via controller	—	Multiline 874, CP3687	IBM 270X/37XX	IBM 37XX or equivalent, 270X
TRANSMISSION SPEC. (Host Line)				
Maximum transmission, in bps	To 9600	38.4K	1800	2400 to 9600
Synchronization	Synchronous	Async/sync	Asynchronous	Synchronous
Transmission mode	Half/full duplex	Half duplex	Half/full duplex	Half/full duplex
Protocols supported	SNA/SDLC	Burroughs Poll/Select	IBM 2740	BSC or SNA/SDLC
Codes supported	—	ASCII	EBCDIC	EBCDIC
Interface	One RS-232-C	One RS-232-C or TDI	RS-232-C	RS-232-C
Clocking	—	Async—data; Sync—int/ext	Internal	External
TERMINAL SIDE SPECIFICATIONS				
Number and type of ports provided	One coax; three RS-232-C support 16 devices each	One async, one parallel, four addtl. async opt.	One	Up to 16 A coax or up to 16 ASCII
Devices supported	ADDS/Viewpoint, ADM3A, DEC VT100, IBM 3101, Televideo 910, etc.	Virtually any	CT 1005/CT 1006 printer	IBM 3270 A coax or equiv. adds V.B. 78, CTi 3078, 3087
Connections supported	Direct, dial-up	Direct, dial-up	Direct connection	Direct or dial-up
TRANSMISSION SPEC. (Terminal Line)				
Maximum transmission, in bps	1200	38.4K	9600	A-coax-2.3MB, ASCII-9600
Maximum aggregate input rate, in bps	—	19.2K on multiports	9600	9600
Synchronization	Asynchronous	Async/sync	Asynchronous	A-coax or async
Transmission mode	—	Half/full duplex	Full duplex	Full
Protocols supported	—	TTY-DCP or CTX parallel	Xon/Xoff	A-coax-Viewpoint 78
Codes supported	—	ASCII	ASCII	—
Interfaces supported	RS-232-C	RS-232-C DPC or CTX parallel	RS-232-C	RS-232-C, RS-422, A-coax
DIAGNOSTICS	Local/remote diag. tests	Self-test dump, 13 LED indicators (5 on MAC jr.)	—	Self-tests and off-line diagnostics
PRICING AND AVAILABILITY				
Purchase, \$	Contact vendor	1,140/795	2,575	6,650
Rental, \$/month-to-month	Contact vendor	None	None	None
Installation, \$	Contact vendor	Time plus expenses	—	—
Maintenance, \$ Annual	Contact vendor	—	260	—
Serviced by	Vendor	Factory depot replacement	TRW	Third party
Availability	—	Stock to 30 days	30 days	60 days
Date of first comm. delivery of this model	—	March 1982/MARS jr.-1984	—	—
Number installed to date	—	Over 250 MARS	—	—
COMMENTS	Cabletalk multiplexing feature available as coax or twisted pair connection; concurrently supports 3178-type, ASCII CRT, and PC devices	MARS jr. is subset of larger MARS; bidirectional parallel port; multi-use data comm. controller; protocol converter only one feature of unit; used as down-speed converter for secondary network, sync to TDI converter, etc.	CTi 1006 printer, document-insertion device	Multi-user local processor unit running MP/M-86 or CP/M-86; up to two 320K floppy disks; One 10 meg. Winchester disk



Conversion Systems/Terminal Controllers

MANUFACTURER & MODEL	Datagram Corp. DM1600B	Datagram Corp. DM2400B	Datastream 774/MPC	Datastream 874
DEVICE TYPE	Clus. cntrl., rmt. frt-end prces., prot.conver.	Clus. cntrl., rmt. frt-end prces., prot. conver	Protocol converter	Protocol converter
CONVERSION PERFORMED	Burroughs Poll Select to ASCII	Burroughs Poll Select to ASCII	ASCII to EBCDIC	ASCII to EBCDIC
SPECIFIC DEVICE EMULATED	—	—	IBM 3274 51C, 61C	IBM 3274 51C, 61C
SPECIFIC FUNCTIONALITY PROVIDED	—	—	IBM PC to 3278-2; async ASCII CRT to 3278-2	Async ASCII CRT, PC, or printer to IBM 3278-2, 3, 4, 5
VIRTUAL SCREEN SIZES SUPP., in char.	All supported	All supported	1920	1920, 2560, 3440, 3564
COMMAND PORT SUPPORTED	Yes	Yes	Yes	Yes
HOST SIDE SPECIFICATIONS				
Specific hosts supported	All Burroughs Computers from B800 through B7900	All Burroughs Computers from B800 through B7900	IBM 43XX, 370, 303X, and others	IBM 43XX, 370, 303X, and others
Number and type of host lines supported	One	Up to seven	Two BSC	Two SDLC
Number host sessions supported concurrently	One per terminal	One per terminal	Two	Two
Connections supported	Leased line, dial-up	Leased line, dial-up	Direct, multipoint on leased line, point-to-point on dial-up	Direct, multipoint on leased line, point-to-point on dial-up
Connection to host via controller	Any Burroughs FEP	Any Burroughs FEP	Not applicable	Not applicable
TRANSMISSION SPEC. (Host Line)				
Maximum transmission, in bps	19.2K	19.2K	9600	19.2K
Synchronization	Async/sync	Async/sync	Synchronous	Synchronous
Transmission mode	Full duplex	Full duplex	Half duplex	Half duplex
Protocols supported	Poll/Select	Poll/Select	BSC, async	SNA, async
Codes supported	ASCII	ASCII	EBCDIC	EBCDIC
Interface	RS-232-C, TDI	RS-232-C, TDI	RS-232-C	RS-232-C
Clocking	Internal/external	Internal/external	Internal	Internal
TERMINAL SIDE SPECIFICATIONS				
Number and type of ports provided	16	24	Up to 24 asynchronous	Up to 16 asynchronous
Devices supported	All Burroughs and Burroughs cmpat. dvces.; any ASCII device; any Micro	All Burroughs and Burroughs cmpat. dvces.; any ASCII device; any Micro	Over 100 async ASCII devices	Over 100 async ASCII devices
Connections supported	Direct, dial, leased line	Direct, dial, leased line	Direct, dial-up	Direct, dial-up
TRANSMISSION SPEC. (Terminal Line)				
Maximum transmission, in bps	9600	9600	9600	19.2K
Maximum aggregate input rate, in bps	All ports @ 9600	All ports @ 9600	Dep. upon config.	Dep. upon config.
Synchronization	Async/sync	Async/sync	Asynchronous	Asynchronous
Transmission mode	Full duplex	Full duplex	Full duplex	Full duplex
Protocols supported	TTY, Poll/Select	TTY, Poll/Select	TTY II	TTY II
Codes supported	ASCII	ASCII	ASCII	ASCII
Interfaces supported	RS-232-C, Current Loop, TDI	RS-232-C, Current Loop, TDI	RS-232-C	RS-232-C
DIAGNOSTICS	Continual self-test, standalone diagnostic routines	Continual self-test, standalone diagnostic routines	Self-tests, LEDs, remote & line tests	Self-tests, LEDs, remote & line tests
PRICING AND AVAILABILITY				
Purchase, \$	5,700-16,000	16,000-30,000	Contact vendor	Contact vendor
Rental, \$/month-to-month	—	—	Contact vendor	Contact vendor
Installation, \$	250 plus travel	250 plus travel	—	—
Maintenance, \$ Annual	Contact vendor	Contact vendor	875	963
Serviced by	Factory, third party	Factory, third party	Third party	Third party
Availability	30	30	Two weeks	Two weeks
Date of first comm. delivery of this model	1979	1983	1980	1982
Number installed to date	500+	50+	1000	600
COMMENTS	Device also acts as remote front-end process., which independently polls the terminals; enables a Burr. user to put up to 40 devices on a single line rather than the eight devices which Burr. recommends	Device also acts as remote front-end process., which independently polls the terminals; enables a Burr. user to put up to 40 devices on a single line rather than the eight devices which Burr. recommends	Comprehensive security, multiple hosts, asynchronous host access	Graphics—models 2-5; multiple sessions, CRT-attached system and local print, KSR support, IBM PC file transfer, color, comprehensive access and on-line security, async host access, printer authorization matrix, answer-back, inactivity monitor

### Conversion Systems/Terminal Controllers

MANUFACTURER & MODEL	Datastream MPC-B	Davox Communications Series 100 Controller	Digital Communications Associates INA/ATC	Diversified Data Resources Hydra II
DEVICE TYPE	Protocol converter, terminal controller	Terminal emulator	Asynchronous terminal controller	Protocol converter, controller
CONVERSION PERFORMED	Async ASCII to 3270 BSC, EBCDIC to ASCII	—	Async ASCII to IBM 3270 BSC or SNA/SDLC	ASCII to EBCDIC
SPECIFIC DEVICE EMULATED	IBM 3271, 3274 BSC	IBM 3274 models 21C, 31C, 41C, 51C, 61C	IBM 3271, 3276, or 3274	IBM 3277, 3278, 3279, 3274, 3211, 3286
SPECIFIC FUNCTIONALITY PROVIDED	Async ASCII CRT to IBM 3270 BSC	IBM 3278 model 2, 3178; IBM PC ASCII/TTY, DEC VT52/VT100	Async ASCII devices to IBM 327X-2 or 328X-2	ASYNC/ASCII terminal or pers. com. to 3277/3278/3279
VIRTUAL SCREEN SIZES SUPP., in char.	1920	1920	1920	1920
COMMAND PORT SUPPORTED	—	—	—	No
HOST SIDE SPECIFICATIONS				
Specific hosts supported	IBM & plug-compatible mnfrms., var. mincmprts.	IBM 303X, 43XX, 370X, 8100; DEC PDP 11, VAX	IBM mainframes	IBM 360, 370, 4300, 303X, 308X, & compatible
Number and type of host lines supported	One or two BSC; multiple async	One SDLC, one BSC	One BSC or SNA/SDLC	8 or 16 port/chan. attach
Number host sessions supported concurrently	Not applicable	One	Not applicable	16
Connections supported	Direct, point-to-point, multipoint	Point-to-point on dial-up, multipoint on leased line	Direct, point-to-point (dial-up), multipoint	Dir. conn., multipoint on leased line, point-to-point on dial-up line
Connection to host via controller	—	Davox 1000 controller	IBM 3274 models 21C, 31C, 51C, or IBM 3276-12	Direct channel attach
TRANSMISSION SPEC. (Host Line)				
Maximum transmission, in bps	9600	56K sync; 19.2K async	To 9600	9600
Synchronization	—	Async/sync	Synchronous	Async
Transmission mode	Full duplex	Half/full duplex	Half/full duplex	Half/full duplex
Protocols supported	BSC	BSC, SNA/SDLC	BSC or SNA/SDLC	Async
Codes supported	EBCDIC	ASCII, EBCDIC	ASCII, EBCDIC	ASCII
Interface	RS-232-C	One RS-232-C	RS-232-C	RS-232-C
Clocking	Internal/external	External	Internal/external	Internal
TERMINAL SIDE SPECIFICATIONS				
Number and type of ports provided	Up to 23 asynchronous*	8 sync, up to 32 sync w/ expansion controllers	Up to 24 async devices	Up to 8 or 16 ports (async)
Devices supported	Virtually any async ASCII CRT, PC, printers	Davox workstations, IBM PC, any serial interface printer	Virtually any async ASCII terminal	Teletype, IBM PC 3101, Lear Siegler, and others
Connections supported	Direct, dial-up	Dial-up	Direct, dial-up	Direct, dial-up, leased line
TRANSMISSION SPEC. (Terminal Line)				
Maximum transmission, in bps	To 9600	400K bps	50 to 19.2K	300 to 9600/port
Maximum aggregate input rate, in bps	28.8K	—	—	9600/port
Synchronization	Asynchronous	Async/sync	Asynchronous	Asynchronous
Transmission mode	Full duplex	Half/full duplex	Half/full duplex	Full duplex
Protocols supported	TTY II, Xon/Xoff	BSC, SNA/SDLC, TTY	—	—
Codes supported	ASCII	ASCII, EBCDIC	ASCII	ASCII
Interfaces supported	RS-232-C	RS-232-C	RS-232-C	RS-232-C
DIAGNOSTICS	Software-loaded diagnostics	Self-test, status LEDs, built-in line monitors	Status message	Self-test, status LEDs
PRICING AND AVAILABILITY				
Purchase, \$	Contact vendor	3,880	8,950-14,950	6,900/9,990 (8/16 port)
Rental, \$/month-to-month	Contact vendor	150 (2 yr.); 123 (3 yr.)	Contact vendor	None
Installation, \$	None	—	Contact vendor	None
Maintenance, \$ Annual	Contact vendor	402 (on-site); 268 (repl)	1,611 to 2,691*	Ten percent
Serviced by	Vendor	Factory, third party	Vendor	Factory, 24-hour replacement
Availability	—	30 days ARO	—	45 days
Date of first comm. delivery of this model	January 1984	1982	—	September 1982
Number installed to date	5	1200	—	250
COMMENTS	*Device must be native-mode compatible with minicomputer host; password security avail.; 8-, 12-, 16-, and 24-port versions available	Operates with terminals on coax or twisted pair; PC sharing among all terminals in config.; modular upgradeability; coax eliminator & reduction; device independent—can mix terminals on same controller; controller redundancy	Optional support for eight-color 3279; password protection available *On-call maintenance; other plans available	Channel attach 3211/1403 printer support; dial-up support; PC/ Host File transfer capability; remote devices attach to async modem or byte mux

Conversion Systems/Terminal Controllers

MANUFACTURER & MODEL	GANDALF PIN 3270E-5	GANDALF PIN 3270E-7	GANDALF PIN 3270E-8	Icot 351/352
DEVICE TYPE	Protocol converter	Protocol converter	Protocol converter	Protocol converter
CONVERSION PERFORMED	ASCII to EBCDIC	ASCII to EBCDIC	ASCII to EBCDIC	ASCII to BSC/SDLC
SPECIFIC DEVICE EMULATED	IBM 3271-2 Bisync or 3274-XC	IBM 3271-2 Bisync or 3274-XC	IBM 3274-XC SNA PU 2 LU 2	IBM 3271
SPECIFIC FUNCTIONALITY PROVIDED	Async ASCII CRT to IBM 3277/3278 model 2	Async ASCII CRT to IBM 3277/3278 model 2	Async ASCII CRT to IBM 3278 Models 1-5 and/or 3287	ASCII terminal to 3277 models 2-5
VIRTUAL SCREEN SIZES SUPP., in char.	—	—	—	1920 to 3696
COMMAND PORT SUPPORTED	—	—	—	Yes
HOST SIDE SPECIFICATIONS				
Specific hosts supported	—	—	—	IBM 43XX, 30XX, 360, 370
Number and type of host lines supported	One BSC	One or two BSC	One SDLC	Two BSC; one BSC, one SDLC
Number host sessions supported concurrently	—	—	—	Two
Connections supported	Point-to-point	Direct connection, multipoint, point-to-point	Direct connection, multipoint, point-to-point	Direct, multipoint leased, dial-up
Connection to host via controller	IBM 3271 model 2 or 3274-XC	IBM 3271 model 2 or 3274-XC	IBM 3274 Remote C	IBM 270X, 37XX
TRANSMISSION SPEC. (Host Line)				
Maximum transmission, in bps	To 9600	To 9600	To 19.2K	2400 to 19.2K
Synchronization	Synchronous	Synchronous	Synchronous	Synchronous
Transmission mode	Half duplex	Half duplex	Half duplex	Full duplex
Protocols supported	BSC	BSC	SDLC (NRZ/NRZ1)	BSC, SDLC
Codes supported	EBCDIC	EBCDIC	EBCDIC	EBCDIC
Interface	One RS-232-C, V.24/V.28	One RS-232-C, V.24/V.28	One RS-232-C, V.24/V.28	Two RS-232-C, RS-422, 20 ma current loop
Clocking	Internal/external	External	Internal/external	Internal/external
TERMINAL SIDE SPECIFICATIONS				
Number and type of ports provided	Up to 4	Up to 15 asynchronous	Up to 15	Six/twelve asynchronous
Devices supported	A number of async ASCII terminals	A number of async ASCII terminals	A number of async ASCII terminals	Over 60 types CRTs, printers, personal computers
Connections supported	Direct connection	Direct connection	Direct connection	Direct, dial-up
TRANSMISSION SPEC. (Terminal Line)				
Maximum transmission, in bps	To 9600	To 9600	To 9600	9600
Maximum aggregate input rate, in bps	38.4K	144K	144K	—
Synchronization	Asynchronous	Asynchronous	Asynchronous	Asynchronous
Transmission mode	Full duplex	Full duplex	Full duplex	Full duplex
Protocols supported	TTY II	TTY II	TTY II	—
Codes supported	ASCII	ASCII	ASCII	ASCII
Interfaces supported	RS-232-C, V.24/V.28	RS-232-C, V.24/V.28	RS-232-C, V.24/V.28	RS-232-C, RS-422, 20 ma current loop
DIAGNOSTICS	Status LEDs	Status LEDs	Status LEDs	Memory, checksum, line wrap
PRICING AND AVAILABILITY				
Purchase, \$	4,500	7,900(E7); 13,000(E7/16)	10,950(E8); 16,950(E8/16)	5,800/7,600
Rental, \$/month-to-month	Contact vendor	Contact vendor	Contact vendor	—
Installation, \$	Contact vendor	Contact vendor	Contact vendor	—
Maintenance, \$ Annual	Contact vendor	Contact vendor	Contact vendor	—
Serviced by	Factory	Factory	Factory	Vendor on-site, depot
Availability	30-60 days	30-60 days	30-60 days	30 days
Date of first comm. delivery of this model	—	—	—	June 1982
Number installed to date	—	—	—	Over 150
COMMENTS	Auto log-off; minicassette-based internal BSC line clock with selectable data rates up to 9600 bps; standalone or rackmount models	Supports one or two BSC multipoint lines; menu-driven operator response; completely user programmable; standalone or rackmount models	Password security; minicassette-based select screen feature for emulation of large screen displays; menu-driven operator response; standalone or rackmount models	Dual, concurrent sessions supported

### Conversion Systems/Terminal Controllers

MANUFACTURER & MODEL	Icot 362	Incaa Computers P.I.T.	Infotron VTS 351/VTS 352	Innovative Electronics MC-80/100
DEVICE TYPE	Protocol converter	Programmable protocol converter	Terminal emulator	Protocol converter
CONVERSION PERFORMED	ASCII to SDLC	Various speed, code, protocol conversions incl. ASCII to EBCDIC, async to BSC	Async ASCII to BSC EBCDIC	BSC to Async ASCII
SPECIFIC DEVICE EMULATED	IBM 3274 model 51C	—	IBM 3278, 3276, 3271 models 2 and 12	IBM 2780 or 3780 BSC RJE
SPECIFIC FUNCTIONALITY PROVIDED	ASCII terminal to 3278 models 2-5	Async ASCII devices and PCs to IBM 3270; Burr. P/S to IBM and others	Async ASCII CRT to IBM 3278	Async ASCII terminal, printer and micro/mini computer to IBM 2780/3780 BSC
VIRTUAL SCREEN SIZES SUPP., in char.	1920 to 3696	—	560 to 3696	Up-1000 bytes*
COMMAND PORT SUPPORTED	Yes	No	Yes	No
HOST SIDE SPECIFICATIONS				
Specific hosts supported	IBM 43XX, 30XX, 360, 370	A number of IBM or async hosts	Amdahl 4705, IBM 3705, Comten 3690, Memorex1270	Not applicable
Number and type of host lines supported	Two SDLC	One IBM, Burr. P/S, DEC, or others	Two BSC or one SDLC and one BSC	One BSC
Number host sessions supported concurrently	One	Not applicable	Two	One
Connections supported	Direct, multipoint on leased, dial-up	Direct, point-to-point, multipoint	Direct, multipoint, dial-up	Direct connect, multipoint, point-to-point
Connection to host via controller	IBM 270X, 37XX	—	IBM 3275, 3271	Not applicable
TRANSMISSION SPEC. (Host Line)				
Maximum transmission, in bps	2400 to 19.2K	To 19.2K	19.2K	To 19.2K
Synchronization	Synchronous	Async/sync	Synchronous	Synchronous
Transmission mode	Full duplex	—	Full duplex	Half/full duplex
Protocols supported	SNA/SDLC	Device dependent	BSC, SDLC, PU Type 1	BSC
Codes supported	EBCDIC	Device dependent	ASCII (term.), EBCDIC	EBCDIC
Interface	Two RS-232-C, RS-422, 20 ma current loop	RS-232-C	RS-232-C, V.24	One RS-232-C
Clocking	Internal/external	—	Internal/external	Internal/external
TERMINAL SIDE SPECIFICATIONS				
Number and type of ports provided	16 asynchronous	One programmable port	Six/twelve asynchronous	Up to two async
Devices supported	Over 60 types CRTs, printers, personal computers	A number of async devices, IBM 3270, IBM/Siemens comm. proc.	Infotron 70X terminals, many ASCII terminals, printers, pers. computers	Any async terminal, printer, mini/micro-computer
Connections supported	Direct, dial-up	Direct, dial-up	Direct, point-to-point, multipoint	Direct connect, dial-up
TRANSMISSION SPEC. (Terminal Line)				
Maximum transmission, in bps	19.2K	50 to 19.2K	50 to 19.2K	9600
Maximum aggregate input rate, in bps	—	—	Not applicable	9600
Synchronization	Asynchronous	Async/sync	Synchronous	Asynchronous
Transmission mode	Full duplex	—	Full duplex	Half/full duplex
Protocols supported	—	Device dependent	BSC, SDLC, PU Type 1	Async
Codes supported	ASCII	Device dependent	ASCII	ASCII
Interfaces supported	RS-232-C, RS-422, 20 ma current loop	RS-232-C	RS-232-C	RS-232-C
DIAGNOSTICS	Memory, checksum, line wrap	Two status LEDs, self-test	Self-tests, status LEDs	Self-test, loopback test, status LEDs
PRICING AND AVAILABILITY				
Purchase, \$	9,800	Contact vendor	5,800/7,600	1,445
Rental, \$/month-to-month	—	Contact vendor	None	Not applicable
Installation, \$	—	Contact vendor	Contact factory	Not applicable
Maintenance, \$ Annual	—	Contact vendor	Contact factory	Not applicable
Serviced by	Vendor on-site, depot	—	Factory	Factory
Availability	30 days	—	60 days	In stock
Date of first comm. delivery of this model	November 1983	—	May 1984	June 1981
Number installed to date	Over 30	—	—	1750
COMMENTS		Operates in program or run mode; all conversions programmable; third peripheral port optional	Menu-guided set-up, password security, automatic speed detection, automatic log-on and inactivity disconnect, non-volatile EEPROM memory set-up, dial-up capabilities, multiple 16-bit microprocessors	Automatic record blocking at 80 characters; auto answer capability, auto log-on; buffer expandable to over 14K bytes
				*In transmission message from host

Conversion Systems/Terminal Controllers

MANUFACTURER & MODEL	Innovative Electronics MC-80/200	Innovative Electronics MC-80/300	Innovative Electronics MC-80/400	Innovative Electronics MC-80/500
DEVICE TYPE	Protocol converter	Protocol converter	Protocol converter	Protocol converter
CONVERSION PERFORMED	Burroughs poll/select to ASCII	BSC to Burroughs poll/select	BSC TO NCR poll/select	IBM 3270 BSC to IBM 2260 poll/select
SPECIFIC DEVICE EMULATED	Not applicable	3271 cluster controller with 3277 terminals	3271 cluster controller with 3277 terminals	3271 cluster controller with 3277 terminals
SPECIFIC FUNCTIONALITY PROVIDED	Async ASCII to Burroughs poll/select	IBM 3270 BSC host to Burroughs teller terminals (poll/select)	IBM 3270 BSC host to NCR poll/select teller terminals	IBM 3270 host to IBM 2260 P/S teller terminals
VIRTUAL SCREEN SIZES SUPP., in char.	Up to 2K char.	Up to 1920	Up to 1920	Up to 1920
COMMAND PORT SUPPORTED	No	No	No	No
HOST SIDE SPECIFICATIONS Specific hosts supported	Not applicable	Not applicable	Not applicable	Not applicable
Number and type of host lines supported	One synchronous	One BSC	One BSC	One BSC
Number host sessions supported concurrently	One	One	One	One
Connections supported	Direct connect, multi-point	Direct, multipoint, point-to-point	Direct connect, multi-point, point-to-point	Multipoint, direct connect
Connection to host via controller	Not applicable	Not applicable	NCR 751 supporting up to 13 NCR 279 tel. terms.	IBM 2848 w/up to 24 IBM teller terminals attach.
TRANSMISSION SPEC. (Host Line) Maximum transmission, in bps Synchronization Transmission mode Protocols supported Codes supported Interface	9600 Synchronous Full duplex Burroughs poll/select ASCII One RS-232-C	To 19.2K Async/sync Half/full duplex BSC ASCII or EBCDIC One RS-232-C	Up to 19.2K Async/sync Half/full duplex BSC EBCDIC or ASCII One RS-232-C	19.2K Synchronous Half/full duplex BSC ASCII, EBCDIC One RS-232-C
Clocking	Internal/external	Internal/external	Internal/external avail.	Internal/external
TERMINAL SIDE SPECIFICATIONS Number and type of ports provided	Up to two async	Up to 2 async ports; TDI & mod. shar. opt. avail.	Up to two async	Up to two sync
Devices supported	Any async terminal, printer or mini/micro-computer	Burroughs TT 102, TT 602, MT 355 teller term.	NCR 279 teller terminals	IBM 2260 poll/select teller terminals
Connections supported	Direct connect, dial-up	Direct, dial-up	Direct, dial-up	Dial-up, direct connect
TRANSMISSION SPEC. (Terminal Line) Maximum transmission, in bps Maximum aggregate input rate, in bps Synchronization Transmission mode Protocols supported Codes supported Interfaces supported	9600 9600 Asynchronous Half/full duplex Async ASCII RS-232-C	Up to 2400 Up to 2400 Asynchronous Half/full duplex Burroughs poll/select ASCII RS-232-C, TDI	To 2400 To 2400 Asynchronous Half/full duplex NCR poll/select ASCII RS-232-C, TDI	9600 9600 Asynchronous Half/full duplex Poll/select ASCII RS-232-C
DIAGNOSTICS	Self-tests, loopback test, status LEDs	Self-test, status LEDs, loopback test	Self-test, loopback, status LEDs	Self-test, loopback test, status LEDs
PRICING AND AVAILABILITY Purchase, \$ Rental, \$/month-to-month Installation, \$ Maintenance, \$ Annual Serviced by	1,445 Not applicable Not applicable Not applicable Factory	2,095 Not applicable Not applicable Not applicable Factory	2,095 Not applicable Not applicable Not applicable Factory	2,095 Not applicable Not applicable Not applicable Factory
Availability Date of first comm. delivery of this model Number installed to date	In stock June 1981 500	In stock December 1981 750	In stock December 1981 750	In stock June 1981 500
COMMENTS	One or two ports with separate line addresses and terminal characteristics	Multiple MC-80 units may reside on single multi-drop line and coexist with any other 3270 compatible equipment; multiline sharing device permits chaining of one MC-80 to other MC-80s and/or 3270 control units at any location	Compatible with CICS, VTAM, RTAM, IMS; multiple MC-80 units may reside on a single multi-drop line and coexist with any 3270-compatible equipment; multiline sharing device permits chaining of one MC-80 to other MC-80s and/or 3270 cont. units at any loc.	Compatible with CICS, VTAM, RTAM, IMS; built-in modem sharing option to allow connection of multiple MC-80's or IBM clusters/terminals

### Conversion Systems/Terminal Controllers

MANUFACTURER & MODEL	Innovative Electronics MC-80/600	Innovative Electronics MC-80/602	Instrumentation Services, Inc. ISI-87	International Business Machines 7426*
DEVICE TYPE	Protocol converter, terminal emulator	Protocol converter	Protocol converter	Protocol converter
CONVERSION PERFORMED	IBM 3270 BSC to async ASCII	IBM 3270 BSC to async ASCII	EBCDIC to ASCII, LU Type 1 or LU Type 3 to ASCII	ASCII to 3270 SNA/SDLC
SPECIFIC DEVICE EMULATED	IBM 3274-51C remote BSC control unit	IBM 3276 model 1 and 2, IBM 3271 model 1 and 2, IBM 3274-51C remote BSC control unit	IBM 3787	IBM 3276-12
SPECIFIC FUNCTIONALITY PROVIDED	Emulation of IBM 3274- 51C BSC contr. w/3277-1, 3277-2, 3278-1, 3278-2 display stations attach.	3270 BSC host to KSR (async) device, 3270 BSC host to ASCII host	Allow any ASCII printer connection to 3274/3276 controller	IBM 3101 or TTY-compat. term. to 3270
VIRTUAL SCREEN SIZES SUPP., in char.	480, 960, 1920	Up to 1920	1920, 2560, 3440, 3564	1920
COMMAND PORT SUPPORTED	No	No	No	—
HOST SIDE SPECIFICATIONS				
Specific hosts supported	Not applicable	Not applicable	IBM mainframe through 3274/3276 controller	IBM 8100, 4300
Number and type of host lines supported	One BSC	One BSC	Not applicable	One SNA/SDLC
Number host sessions supported concurrently	One per display station	One	Not applicable	One
Connections supported	Point-to-point, dial-up	Direct connect, point- to-point	Not applicable	Point-to-point, multi- point
Connection to host via controller	Not applicable	Not applicable	IBM 3274/3276	—
TRANSMISSION SPEC. (Host Line)				
Maximum transmission, in bps	9600 bps	19.2K	75 to 9600	To 38.4K (dir. attach.)
Synchronization	Synchronous	Synchronous	Synchronous	Synchronous
Transmission mode	Half/full duplex	Half/full duplex	Half/full duplex	Half/full duplex
Protocols supported	BSC	BSC	BSC, SDLC	SNA/SDLC
Codes supported	EBCDIC or ASCII	EBCDIC, ASCII	—	EBCDIC
Interface	One RS-232-C	One RS-232-C	—	RS-232-C
Clocking	Internal/external	Internal/external	Internal	—
TERMINAL SIDE SPECIFICATIONS				
Number and type of ports provided	Up to two async config. for term. or printers	One async	One receive-only printer	Four ports
Devices supported	DEC VT100, 101, 131; Televid. 920/925/950; IBM 3101 term/; any ASCII	DEC 11/70, VAX 780, TRS 80, IBM PC; or KSR dev. such as: LA120, NEC 5520	Any ASCII printer	Virtually any async ASCII devices incl. IBM PC
Connections supported	Dial-up	Dial-up, direct connect	Direct coax RG 62	Direct, dial-up
TRANSMISSION SPEC. (Terminal Line)				
Maximum transmission, in bps	9600	9600	To 9600	9600
Maximum aggregate input rate, in bps	9600	9600	Not applicable	—
Synchronization	Asynchronous	Asynchronous	Asynchronous	Asynchronous
Transmission mode	Half/full duplex	Half/full duplex	—	Half/full duplex
Protocols supported	Asynchronous	Asynchronous	X-on/X-off	TTY
Codes supported	ASCII	ASCII	ASCII	ASCII
Interfaces supported	RS-232-C	RS-232-C	RS-232-C or parallel	RS-232-C, RS-422-A
DIAGNOSTICS	Self-tests, loopback tests, status LEDs	Self-test, loopback test, status LEDs	Self-test at power-up, buffer dump with log information	Self-test
PRICING AND AVAILABILITY				
Purchase, \$	1,495	1,650	1,775	4,210/3,830(mod. 1/2)
Rental, \$/month-to-month	Not applicable	Not applicable	None	None
Installation, \$	Not applicable	Not applicable	None	—
Maintenance, \$ Annual	Not applicable	Not applicable	None	20/repair-cent. maint.
Serviced by	Factory	Factory	Factory	Vendor
Availability	In stock	In stock	Four weeks	—
Date of first comm. delivery of this model	December 1981	December 1982	June 1982	Fourth quarter, 1982
Number installed to date	1500	750	800	—
COMMENTS	Modem sharing option available	Allows any ASCII host or KSR dev. to trans. data w/a 3270 BSC host; aprs. to BSC host as 3271 mod. 1, 2, 3276 mods. 1, 2, 3274-51C w/attachd. 3277/ 3278 dsply. stas.; file- trans. mode supts. block., time-out, seq. features of all async ASCII device commands	Has transparent mode that allows control codes to be sent to printer as plain text; can be used to drive plotters such as IBM 7, 9, or 750; has on/off switch	Host downline loads microcoded control logic into 7426 RAM; users can customize 7426 for spe- cific operating environ- ments *Model 1—direct attach or data-link loop; Model 2—SDLC comm. link

Conversion Systems/Terminal Controllers

MANUFACTURER & MODEL	International Business Machines 4994*	Kaufman Data Communications Model 871	Kaufman Data Communications Model 870 & 872	KMW Systems Series II 3270A/B*
DEVICE TYPE	ASCII device control unit	Protocol converter, terminal emulator	Protocol converter, terminal emulator	Protocol converter
CONVERSION PERFORMED	ASCII to 3270 BSC	ASCII to UTS 400	ASCII to EBCDIC	ASCII to EBCDIC (SNA/SDLC)
SPECIFIC DEVICE EMULATED	IBM 3272	UTS 400	3271, 3274, 3276 remote controller	IBM 3274 or 3271
SPECIFIC FUNCTIONALITY PROVIDED	ASCII terminals appears as IBM 3277s	ASCII CRT to UTS 400 controller	ASCII CRT to 327X remote controller	Async ASCII CRT or printer to IBM 3277/3278
VIRTUAL SCREEN SIZES SUPP., in char.	—	1920	1920, 303X	To 2048
COMMAND PORT SUPPORTED	—	Yes	Yes	—
HOST SIDE SPECIFICATIONS				
Specific hosts supported	IBM 43XX	Sperry 90, 1100, DEC PDP11, HP 3000	IBM 370, 303X, 434X; DEC PDP11, HP 3000	IBM mainframes
Number and type of host lines supported	—	One UTS 400	One BSC or SNA/SDLC	One
Number host sessions supported concurrently	One	Two	Two	Not applicable
Connections supported	Direct, point-to-point	Direct connection or multipoint on leased or dial-up line	Direct connection or multipoint on leased line or dial-up line	Switched or dedicated, point-to-point or multipoint
Connection to host via controller	—	Model 871 emulates UTS 400 controller	Mods. 870/872 emulate BSC or SNA/SDLC rmt. con	—
TRANSMISSION SPEC. (Host Line)				
Maximum transmission, in bps	—	19.2K per line	19.2K per line	To 19.2K
Synchronization	—	Async/sync	Async/sync	Synchronous
Transmission mode	—	Half duplex	Half duplex	Half duplex
Protocols supported	—	UTS 400	BSC, SNA/SDLC	SNA/SDLC, BSC
Codes supported	—	ASCII	ASCII, EBCDIC	EBCDIC
Interface	Attch. to block mux chan. on IBM 43XX	One RS-232-C	One RS-232-C	RS-232-C
Clocking	—	Internal/external	Internal/external	—
TERMINAL SIDE SPECIFICATIONS				
Number and type of ports provided	Up to 16, 32, or 48 ports	Eight asynchronous ports	Eight asynchronous ports	Up to 8 asynchronous
Devices supported	Wide range of ASCII term., print., plotters incl. IBM PC & IBM 3101	ASCII terminals, word processors, some personal computers	ASCII terminals, word processors, some personal computers	Virtually any async ASCII CRTs or printers
Connections supported	Direct, dial-up	Direct, remote access	Direct, remote access	Direct, dial-up
TRANSMISSION SPEC. (Terminal Line)				
Maximum transmission, in bps	To 19.2K	19.2K	19.2K	To 19.2K
Maximum aggregate input rate, in bps	—	153.6K	153.6K	—
Synchronization	Asynchronous	Asynchronous	Asynchronous	Asynchronous
Transmission mode	Full duplex	Full duplex	Full duplex	Half duplex
Protocols supported	—	TTY ANSI 3.64	TTY ANSI 3.64	—
Codes supported	ASCII	ASCII	ASCII	ASCII
Interfaces supported	RS-232-C, ma current loop	RS-232-C	RS-232-C	RS-232-C; parallel
DIAGNOSTICS	—	Poll, Data, Error LEDs	Poll, Data, Error LEDs	Status LEDs
PRICING AND AVAILABILITY				
Purchase, \$	16,735/A; 25,850/B; 32,300	3,395-8,295	3,395-8,295	Contact vendor
Rental, \$/month-to-month	897 (A); 1,395 (B); 1,74	10 percent of pur. price	10 percent of pur. price	Contact vendor
Installation, \$	—	—	—	Contact vendor
Maintenance, \$ Annual	195/A; 257/B; 313/C	350	350	Contact vendor
Serviced by	Vendor	Factory	Factory	Vendor; third party, depot
Availability	—	30-40 days	30-40 days	30 days
Date of first comm. delivery of this model	March 1984	1979	1981	10/81(3270A); 11/82(3270B)
Number installed to date	—	Over 300	Over 300	Approx. 2500-all models
COMMENTS	Used with host-loaded Yale ASCII communications system software; allows attch. of ASCII devices to IBM proc. running VM/SP 2.1 or 3 *Model A supports up to 16 devices; Model B up to 32 devices; Model C up to 48 devices	Block mode allows use in packet-switching network; side door enables terminal to talk to two computers; Displayphone capability	See comments for model 871	Device maintains separate buffer for each device; device address assigned sequentially for each port at start-up; device type determined by internal switches *3270A is dedicated BSC; 3270B is dedicated SDLC

**Conversion Systems/Terminal Controllers**

<b>MANUFACTURER &amp; MODEL</b>	<b>KMW Systems Series II 2780/3780</b>	<b>KMW Systems Series II 3770 SNA/SDLC</b>	<b>KMW Systems Series II HASP</b>	<b>Local Data, Inc. DataLynx/3274 (SNA or BSC)*</b>
DEVICE TYPE	Protocol converter	Protocol converter	Protocol converter	Protocol converter
CONVERSION PERFORMED	Async ASCII to BSC	Asynchronous to SNA/SDLC	Asynchronous to BSC	Async ASCII to SNA/SDLC or BSC
SPECIFIC DEVICE EMULATED	IBM 2780, 3780 RJE's	IBM 3776 models 3 and 4; IBM 3777 model 3	IBM 360/370 HASP RJE workstation	IBM 3274-51C
SPECIFIC FUNCTIONALITY PROVIDED	ASCII or EBCDIC peripherals to IBM 2780, 3780 devices	—	—	Async ASCII CRT/mini/micro to IBM 3278-2, ASCII printer to IBM 3287
VIRTUAL SCREEN SIZES SUPP., in char.	—	—	—	960, 1920
COMMAND PORT SUPPORTED	Opt. oper. console sup.	By setup mode on console	By setup mode on console	No
HOST SIDE SPECIFICATIONS				
Specific hosts supported	IBM 360, 370	IBM mainframes	IBM mainframes	3704, 3705, 3725 or any oth. 3270 front end proc
Number and type of host lines supported	One	One SNA/SDLC	One BSC	One SDLC or one BSC; one or two BSC/SDLC on delux
Number host sessions supported concurrently	Not applicable	—	—	Nine
Connections supported	Switched or dedicated, point-to-point or multi-point	Switched or dedicated, point-to-point or multi-point	Switched or dedicated, point-to-point or multi-point	Direct connect, multi-point, point-to-point
Connection to host via controller	—	—	—	IBM 370X
TRANSMISSION SPEC. (Host Line)				
Maximum transmission, in bps	To 19.2K	To 19.2K (56K opt.)	To 19.2K (56K opt.)	19.2K
Synchronization	Synchronous	Synchronous	Synchronous	Synchronous
Transmission mode	Half/full duplex	Half/full duplex	Half/full duplex	Full duplex
Protocols supported	BSC	SNA/SDLC	BSC	SNA/SDLC or BSC
Codes supported	EBCDIC	—	—	EBCDIC
Interface	RS-232-C	RS-232-C, V.35 on 56K	RS-232-C, V.35 on 56K	RS-232-C, Current loop
Clocking	—	—	—	Internal/external
TERMINAL SIDE SPECIFICATIONS				
Number and type of ports provided	Up to 8 asynchronous	Up to seven async devices	Up to seven async devices	Up to 9 async ports (32 logic. unit addresses
Devices supported	ASCII or EBCDIC peripheral devices in serial async or parallel format	Virtually any ASCII or EBCDIC peripheral device	Virtually any ASCII or EBCDIC peripheral devices	Virtually any async ASCII
Connections supported	Direct, dial up	Direct, dial-up	Direct, dial-up	Direct, dial-up
TRANSMISSION SPEC. (Terminal Line)				
Maximum transmission, in bps	To 19.2K	To 19.2K	To 19.2K	19.2K
Maximum aggregate input rate, in bps	—	—	—	—
Synchronization	Asynchronous	Asynchronous	Asynchronous	Asynchronous
Transmission mode	Half/full duplex	Half/full duplex	Half/full duplex	Full duplex
Protocols supported	—	Xon/Xoff	Xon/Xoff	—
Codes supported	ASCII, EBCDIC	ASCII, EBCDIC	ASCII, EBCDIC	ASCII
Interfaces supported	RS-232-C, parallel	RS-232-C, parallel	RS-232-C, parallel	RS-232-C, current loop
DIAGNOSTICS	Status LEDs, PROM and RAM checks, self-test	Status LEDs	Status LEDs, PROM and RAM checks	Multi-tasking watchdog timer, front-panel LED for EIA signals
PRICING AND AVAILABILITY				
Purchase, \$	Contact vendor	Contact vendor	Contact vendor	3,000-4,000;3,500-6,000*
Rental, \$/month-to-month	Contact vendor	Contact vendor	Contact vendor	Leasing available
Installation, \$	Contact vendor	Contact vendor	Contact vendor	—
Maintenance, \$ Annual	Contact vendor	Contact vendor	Contact vendor	350-600 per year
Serviced by	Vendor, third party, depot	Vendor, third party, depot	Vendor, third party depot	Vendor/R&R advance exch.
Availability	30 days	30 days	30 days	Stock to 60 days
Date of first comm. delivery of this model	October 1981	October 1981	October 1981	December 1982
Number installed to date	Approx. 2500-all models	Approx. 2500 (all mods.)	Approx. 2500 (all mods.)	450+
COMMENTS	Input devices such as card readers, paper tape devices, digitizers, or magnetic tape units appear to host as card readers; output devices such as line printers or pen plotters appear as card punches; operator console optional	Optional modem eliminator config. for local attachment; conforms to PU2, LU1	Optional modem eliminator config. for local attachment	Full SNA/SDLC code, SNA inbound/outbound pacing, menu driven configuration, forced log off, dual-level security, inactivity disconnect timer, CPU to CPU support; BSC model upgradeable to SNA/SDLC; *Deluxe models available



Conversion Systems/Terminal Controllers

MANUFACTURER & MODEL	Local Data, Inc. DataLynx/3780	Local Data, Inc. InterLynx/3278	Local Data, Inc. InterLynx/3287	Local Data, Inc. VersaLynx 3278
DEVICE TYPE	Protocol converter	Protocol converter	Protocol converter	Protocol converter
CONVERSION PERFORMED	ASCII to EBCDIC	IBM Type A coax to ASCII	IBM 3274/76 control unit thru Type A coax to ASCII	IBM 3278/3178 terminals via coax to RS-232-C async ASCII
SPECIFIC DEVICE EMULATED	IBM 2770, 2780, 3770, and 3741 remote batch terminal	IBM 3278-2	IBM 3287/89 printer	VT100/102, IBM 3101, ADM-3A HP 26XX from factory
SPECIFIC FUNCTIONALITY PROVIDED	Async ASCII printer as remote batch printer and async ASCII CRT as remote batch terminal	Allows async ASCII CRT/mini/micro to emulate IBM 3278-2 on IBM control unit	Async ASCII printer to IBM 3287/89 printer emulation	IBM 3278/3178 terminal to serial async ASCII
VIRTUAL SCREEN SIZES SUPP., in char.	—	1920	—	1920
COMMAND PORT SUPPORTED	No	No	No	No
HOST SIDE SPECIFICATIONS				
Specific hosts supported	IBM Systems 34/38, 43XX, 308X	Cncts. to any IBM cntrl. unit w/Type A coax	All supporting 3270	Most ASCII mini/micro-computers
Number and type of host lines supported	One BSC	One coax line	One coax port	One
Number host sessions supported concurrently	One	One	One	One
Connections supported	Direct connect, dial-up	Coax	Coax	Direct, dial-up, point-to-point
Connection to host via controller	IBM 3704, 3705, 3725	IBM 3274, 3276, 4701	IBM 3274, 3276, 4701	Any async controller
TRANSMISSION SPEC. (Host Line)				
Maximum transmission, in bps	19.2K	2.5M	2.5	19.2K
Synchronization	Synchronous	Synchronous	Synchronous	Asynchronous
Transmission mode	Both	Full duplex	Full duplex	Full duplex
Protocols supported	BSC	BSC, SNA/SDLC	SCS (LU1) or BSC (LU3)	Async CRT personality
Codes supported	EBCDIC	EBCDIC	EBCDIC	ASCII
Interface	Three RS-232-C	RG62A/U coax	RG62A/U Type A coax	One RS-232-C
Clocking	Internal/external	—	—	Internal
TERMINAL SIDE SPECIFICATIONS				
Number and type of ports provided	One sync, two async RS-232-C	One main RS-232-C port; 1 pass-thru RS-232-C prt	One RS-232-C and one parallel	One coax, two RS-232-C
Devices supported	Any async ASCII printer, CRT, mini/microcomputer	Virtually any	Any async ASCII serial or Centronics/Data Prod. parallel	IBM 3278/3178 terminals
Connections supported	Direct connect, dial-up	Direct, dial-up	Direct connect, dial-up	Direct connect to terminal
TRANSMISSION SPEC. (Terminal Line)				
Maximum transmission, in bps	19.2K	19.2K	19.2K	2.5M Hz
Maximum aggregate input rate, in bps	19.2K	19.2K	19.2K	2.5M Hz
Synchronization	Asynchronous	Asynchronous	Asynchronous	Coax buffer code
Transmission mode	Full duplex	Full duplex	Full duplex	Full duplex
Protocols supported	Asynchronous	Asynchronous display	—	IBM 3278 coax
Codes supported	ASCII	ASCII	ASCII	IBM scan code
Interfaces supported	RS-232-C	RS-232-C	RS-232-C or parallel	IBM Type A coax
DIAGNOSTICS	Self-test on power up	Self-test at power up	Printer test	—
PRICING AND AVAILABILITY				
Purchase, \$	1,495	1,395	1,750	695
Rental, \$/month-to-month	Leasing available	Leasing available	Leasing available	Leasing available
Installation, \$	—	—	—	—
Maintenance, \$ Annual	140/year	140	140 per year	75 per year
Serviced by	Return to factory/advance exch.	Ret. to fac./adv. exch.	Return to factory/advance exch.	Factory
Availability	Stock to 30 days	Stock to 60 days	Stock to 90 days	Stock to 60 days
Date of first comm. delivery of this model	1981	March 1983	March 1983	July 1984
Number installed to date	1000	1500	1,500	—
COMMENTS	Selectable "host" interface mode for mini/microcomputers; supports transparency; has built-in modem eliminator option and flow control options, automatic sign-on; front panel LEDs, reset, sign-on, and test buttons on front panel	Full one year warranty; extensive flow control options, dial-up security, forced log-off, numeric lock override, async pass-thru port, menu-driven configuration, remote optioning	Front panel LED optioning, serial and parallel ports, 3287 lookalike front panel on standard model; model without front panel avail.; unit supports pseudo-transparency feature for graphics, page-length choice, baud rate, parity	User may develop other terminal personality emulation; options stored in non-volatile memory; may be used with InterLynx and DataLynx products to improve system flexibility; menu set up available; host addressable auxiliary printer port.

Conversion Systems/Terminal Controllers

MANUFACTURER & MODEL	Micom Systems Micro 7400	Modemsplus SNAP	Modemsplus BRITE II	Modemsplus SMRTE
DEVICE TYPE	Protocol converter	Protocol converter, terminal emulator	Protocol converter, terminal emulator	Protocol converter
CONVERSION PERFORMED	ASCII to BSC 3270, ASCII to SNA 3270	ASCII to SDLC/SNA	ASCII to Burroughs	SDLC/SNA to IBM 2780, 3780
SPECIFIC DEVICE EMULATED	IBM 3275 model 51c	IBM 3274 or 3276 IBM 3776 or 3777	Any Burroughs VDU	IBM 3776, 3777
SPECIFIC FUNCTIONALITY PROVIDED	Async. ASCII CRT to IBM 3278 models 2, 3, 4, 5	IBM 3278, 3287	Any Burroughs CRT or printer	377X workstation
VIRTUAL SCREEN SIZES SUPP., in char.	1920	1920	1920	—
COMMAND PORT SUPPORTED	Yes	Yes	Yes	Yes
HOST SIDE SPECIFICATIONS				
Specific hosts supported	IBM 360, 370, 43xx, 30xx, 8100	All	All	IBM 43xx, 8100, DEC PDP-11
Number and type of host lines supported	Two BSC or two SNA	One SDLC	One Burroughs	One SDLC
Number host sessions supported concurrently	Twelve	Two	Two	Three
Connections supported	Direct, point-to-point, multipoint	Direct, multipoint, point-to-point	Direct, multipoint, point-to-point	Direct, multipoint, point-to-point
Connection to host via controller	All IBM, IBM-compatible	—	—	—
TRANSMISSION SPEC. (Host Line)				
Maximum transmission, in bps	19.2K	To 19.2K	To 19.2K	To 19.2K
Synchronization	Synchronous	Sync, isosync	Sync, async, isosync	Sync/isosync
Transmission mode	Half duplex	Half/full duplex	Half/full duplex	Half/full duplex
Protocols supported	BSC, SNA/SDLC	SDLC/SNA	Burroughs	SDLC/SNA, BSC2780/3780
Codes supported	EBCDIC, ASCII	ASCII, EBCDIC	ASCII	ASCII, EBCDIC
Interface	Two RS-232-C	One RS-232-C-NRZI, one RS-232-C	One TDI, one RS-232-C	One RS-232-C
Clocking	Internal/external	Int./ext. data derived	Int./ext. data derived	Int./ext., data derived
TERMINAL SIDE SPECIFICATIONS				
Number and type of ports provided	2, 4, 8, 12 async + 1 async command port	One async with dynamic printer	One async with dynamic printer	One sync or isosync
Devices supported	A number of async ASCII devices	All ASCII TTY devices	All ASCII TTY devices	Any 2780, 3780 emulator
Connections supported	Direct, dial-up	Direct, dial-up	Direct, dial-up	Direct, dial-up
TRANSMISSION SPEC. (Terminal Line)				
Maximum transmission, in bps	9600	To 19.2K	To 19.2K	To 19.2K
Maximum aggregate input rate, in bps	9600 per channel	19.2K	19.2K	19.2K
Synchronization	Asynchronous	Asynchronous	Asynchronous	Sync/isosync
Transmission mode	Full duplex	Half/full duplex	Half/full duplex	Half/full duplex
Protocols supported	TTY	TTY/ASCII	TTY/ASCII	IBM 2780, 3780
Codes supported	ASCII	ASCII	ASCII	ASCII, EBCDIC
Interfaces supported	RS-232-C, current 100	One RS-232-C	One RS-232-C	One RS-232-C
DIAGNOSTICS	Self-test, line trace, status LEDs	RAM, EPROM Status LEDs	RAM, EPROM Status LEDs	RAM, EPROM status LEDs
PRICING AND AVAILABILITY				
Purchase, \$	1,650 (2ch)—4,750 (12ch)	1,295	1,295	3,995
Rental, \$/month-to-month	Not applicable	None	None	None
Installation, \$	Not applicable	None	None	None
Maintenance, \$ Annual	Not applicable	120	120	240
Serviced by	Factory	Factory	Factory	Factory
Availability	90 days	30	30	30
Date of first comm. delivery of this model	February 1984	May 1984	May 1984	March 1984
Number installed to date	100	18	1	—
COMMENTS	Options: dual sync host, async host, integ. modems, current loop, ASCII BSC, large-screen support, IBM PC support; unique capabilities: inbound priority, automatic logon, banner/broadcast messages, draft document prep., extensive security	Menu-driven batch and interactive	Menu-driven batch interactive; replaces BRITE I; three-year delivery 3000	

Conversion Systems/Terminal Controllers

MANUFACTURER & MODEL	Modemsplus SMRTE	Modemsplus SMRTE	Netlink Technology, Inc. 3703	NuData Model 720*
DEVICE TYPE	Protocol converter	Protocol converter	Network processor, cluster controller	Protocol converter
CONVERSION PERFORMED	SDLC/SNA to 3275 BSC	SDLC/SNA to DDCMP	ASCII to EBCDIC LU1, LU2; BSC 3271, 3275 to LU1, LU2; BSC 1 RJE MLU to LU0, LU1	Any ASCII to SDLC or BSC combination
SPECIFIC DEVICE EMULATED	IBM 3274 or 3276	IBM 3776 or 3777, Decnet Gateway	Full function PUT2 with multiple LU types (8100)	—
SPECIFIC FUNCTIONALITY PROVIDED	IBM 3278, 3287	377X workstation	Dynamic, based on bind parameters LU0, 1, 2, or 3	ASCII terminal to IBM 3270, 2780, 3780
VIRTUAL SCREEN SIZES SUPP., in char.	1920	Not applicable	3278 (2, 3, 4, 5)	—
COMMAND PORT SUPPORTED	Yes	Yes	Host program loaded	—
HOST SIDE SPECIFICATIONS				
Specific hosts supported	All	All	IBM 370 VTAM, 8100	IBM mainframes
Number and type of host lines supported	One SDLC	One SDLC, one DDCMP	One SDLC	—
Number host sessions supported concurrently	Six	Two	40	—
Connections supported	Direct, multipoint, point-to-point	Direct, multipoint, point-to-point	Direct, point-to-point, multipoint	Direct, multipoint, point-to-point
Connection to host via controller	—	—	IBM 3705, 3725, or equivalent	—
TRANSMISSION SPEC. (Host Line)				
Maximum transmission, in bps	To 19.2K	To 19.2K	19.2K	—
Synchronization	Sync, isosync	Sync, isosync	Synchronous	Synchronous
Transmission mode	Half/full duplex	Half/full duplex	Half/full duplex	Full duplex
Protocols supported	—	—	SNA/SDLC	BSC, SNA/SDLC
Codes supported	ASCII, EBCDIC	ASCII, EBCDIC	EBCDIC	EBCDIC
Interface	One RS-232-C	One RS-232-C	RS-232-C	—
Clocking	Int./ext. data derived	Int./ext. data derived	Switch selectable	—
TERMINAL SIDE SPECIFICATIONS				
Number and type of ports provided	Three sync or isosync	One async or sync	6 sync, 12 async	Up to three ser. prts., two 8-bit parallel prts.
Devices supported	Any 3275 and emulator	Any DECNET Gateway device	Any terminal supporting cursor addressing*	—
Connections supported	Direct, dial-up	Direct, dial-up	Direct, point-to-point, dial-up	—
TRANSMISSION SPEC. (Terminal Line)				
Maximum transmission, in bps	To 19.2K	To 19.2K	9600	—
Maximum aggregate input rate, in bps	19.2K	19.2K	20K	—
Synchronization	Sync/isosync	Async/isosync	Async/sync	Async/sync
Transmission mode	Half/full duplex	Half/full duplex	Half/full duplex	Full display
Protocols supported	BSC 3275	DDCMP	TTY, 327X, 2780, 3780, 2770	—
Codes supported	ASCII, EBCDIC	ASCII, EBCDIC	ASCII, EBCDIC	—
Interfaces supported	Three RS-232-C	One RS-232-C	RS-232-C	RS-232-C, V.24 & others
DIAGNOSTICS	RAM, EPROM Status LEDs	RAM, EPROM Status LEDs	Self-tests, host-based network diagnostics	—
PRICING AND AVAILABILITY				
Purchase, \$	3,995	3,995	6,000-10,000	Contact vendor
Rental, \$/month-to-month	None	None	None	Contact vendor
Installation, \$	None	None	1,000 (optional)	Contact vendor
Maintenance, \$ Annual	240	240	—	Contact vendor
Serviced by	Factory	Factory	Depot	Contact vendor
Availability	30	30	30 days	Contact vendor
Date of first comm. delivery of this model	August 1983	March 1984	July 1982	1984
Number installed to date	—	—	300	—
COMMENTS			*Software-controlled via host **Also Burroughs Poll/ Select, 2740-1	*Variety of protocol conversions performed by combining standard or custom hardware/software modules; modular soft- ware configures ports to application and emulates higher protocol levels

Conversion Systems/Terminal Controllers

MANUFACTURER & MODEL	Peripheral Technology, Inc. Scat 2/2501	Peripheral Technology, Inc. Scat 2/2303	Perle Systems PDS 300-327	Perle Systems PDS 300-SNA/350-SNA
DEVICE TYPE	Protocol converter, terminal controller	Protocol converter	Protocol converter, communications controller	Protocol converter, communications controller
CONVERSION PERFORMED	ASCII to SNA/SDLC or BSC	ASCII to SNA/SDLC or BSC	ASCII to EBCDIC, bisync to async	ASCII to EBCDIC, async to SNA/SDLC
SPECIFIC DEVICE EMULATED	IBM 3271, 3274, 3276 controller	IBM 3271, 3274, 3276 controller	IBM 3271	IBM 3274 model 51C, 3276 model 12, 3770
SPECIFIC FUNCTIONALITY PROVIDED	ASCII devices look like IBM 3278s	ASCII devices look like IBM 3278s	Async ASCII CRT to IBM 3277; async ASCII printer to IBM 328X	Any ASCII CRT to IBM 3278, 3279; PC to IBM 3278, 3777, 3767; async ASCII printer to 328X
VIRTUAL SCREEN SIZES SUPP., in char.	1920	1920	1920	1920, others avail.
COMMAND PORT SUPPORTED	No	No	Yes	No
HOST SIDE SPECIFICATIONS				
Specific hosts supported	IBM mainframes	IBM mainframe and asynchronous host	Any IBM mainframe	Any IBM mainframe
Number and type of host lines supported	One SNA/SDLC or BSC	Two	One BSC	One SNA/SDLC
Number host sessions supported concurrently	Not applicable	Two-switched sel.	Not applicable	Not applicable
Connections supported	Point-to-point, multi-point	Point-to-point, multi-point	Direct, multipoint, point-to-point	Direct, multipoint, point-to-point
Connection to host via controller	—	—	IBM 3705	IBM 3705
TRANSMISSION SPEC. (Host Line)				
Maximum transmission, in bps	To 9600	To 9600	9600	9600/19.2K
Synchronization	Synchronous	Synchronous	Synchronous	Synchronous
Transmission mode	Half/full duplex	Half/full duplex	Half/full duplex	Half/full duplex
Protocols supported	SNA/SDLC, BSC	SNA/SDLC, BSC	BSC	SNA/SDLC
Codes supported	EBCDIC	EBCDIC	EBCDIC	EBCDIC
Interface	RS-232-C	RS-232-C	One RS-232-C	One RS-232-C
Clocking	—	—	Internal/external	Internal/external
TERMINAL SIDE SPECIFICATIONS				
Number and type of ports provided	From one to five asynchronous	One async host prt; three async device ports	Up to 16 asynchronous	Up to 16 asynchronous
Devices supported	Virtually any async ASCII device	Virtually any async ASCII device	Virtually any async ASCII printer, CRT, or PC	Virtually any async ASCII printer, CRT, or PC
Connections supported	Direct, dial-up	Direct, dial-up	Direct, dial-up	Direct, dial-up
TRANSMISSION SPEC. (Terminal Line)				
Maximum transmission, in bps	To 9600	To 9600	9600	19.2K
Maximum aggregate input rate, in bps	—	—	153.6K	153.6K
Synchronization	Asynchronous	Asynchronous	Asynchronous	Asynchronous
Transmission mode	—	—	Full duplex	Half/full duplex
Protocols supported	—	—	Asynchronous	—
Codes supported	ASCII	ASCII	ASCII	ASCII
Interfaces supported	RS-232-C, RS-422 (opt)	RS-232-C, RS-422 (opt.)	RS-232-C	RS-232-C, RS-422 (350 only)
DIAGNOSTICS	Internal/external diagnostics	Internal/external diagnostics	Self-test, diagnostic port	Self-test or from any user port
PRICING AND AVAILABILITY				
Purchase, \$	2,995	2,995	4,560 (U.S.)	4,800
Rental, \$/month-to-month	None	None	—	—
Installation, \$	None	None	—	—
Maintenance, \$ Annual	100	100	—	—
Serviced by	Factory	Factory	Vendor on site, factory	Vendor on-site, factory, third party
Availability	—	30 days	30 days	30 days
Date of first comm. delivery of this model	1982	—	1981	February 1983/June 1984
Number installed to date	1000	—	—	—
COMMENTS	Expandable to 25 ports using Scat 2 SNC network controller; modem eliminator optional; password security available *Scat 1 conversion boards avail. to OEMs	Allows switching from sync to async host through menu selection	—	Concurrent, interactive, and batch 3274 and 3770 emulation; support for asynchronous block-mode terminals; 350-SNA has data encryption

## Conversion Systems/Terminal Controllers

MANUFACTURER & MODEL	Perle Systems PDS 300-525	Protocol Computers, Inc. R-73SX	Protocol Computers, Inc. 74D	Protocol Computers, Inc. 1051/151*
DEVICE TYPE	Protocol converter, communications controller	Protocol converter	Protocol converter (deconverter)	Protocol converter
CONVERSION PERFORMED	ASCII to EBCDIC, async to SDLC	ASCII to SDLC; SDLC to SDLC through X.25	SDLC to ASCII	ASCII to SDLC
SPECIFIC DEVICE EMULATED	Emulates two 5251 model 12s (to host)	—	TTY or VT-100 devices	IBM 5251-12
SPECIFIC FUNCTIONALITY PROVIDED	Async ASCII printer to 52XX printer; async ASCII terminal or PC to 5251 or 5291 model 11	Lets up to three 3274/6 controllers comm. with SDLC host through X.25	IBM 3270 term. appear as VT-100 or TTY compat.	Lets ASCII CRTs or printers attach. to System 34/38
VIRTUAL SCREEN SIZES SUPP., in char.	1920	—	—	—
COMMAND PORT SUPPORTED	Yes	—	—	No
HOST SIDE SPECIFICATIONS				
Specific hosts supported	IBM System 34, 36, 38	IBM mainframes	IBM mainframe	IBM System 34/38
Number and type of host lines supported	One SDLC	One SDLC	One SDLC, six ASCII	One
Number host sessions supported concurrently	Not applicable	Not applicable	—	Not applicable
Connections supported	Direct, multipoint, point-to-point	Direct, point-to-point	Direct, point-to-point	Point-to-point, multipoint, direct
Connection to host via controller	SLCA or MLCA comm. adapter	Cncts. up to three 3274s thru X.25 to SDLC host	IBM 3274/6 (term. side), 270X/37XX (host side)	—
TRANSMISSION SPEC. (Host Line)				
Maximum transmission, in bps	9600	To 9600	To 9600	To 9600
Synchronization	Synchronous	Synchronous	Asynchronous	Synchronous
Transmission mode	Half/full duplex	Full duplex	Full duplex	Half/full duplex
Protocols supported	SDLC	SNA/SDLC	—	SNA/SDLC
Codes supported	EBCDIC	—	—	EBCDIC
Interface	One RS-232-C	RS-232-C	RS-232-C	RS-232-C (SDLC)
Clocking	Internal/external	—	—	—
TERMINAL SIDE SPECIFICATIONS				
Number and type of ports provided	Up to 16 asynchronous	Up to three controllers supp. on one SDLC port	One SDLC port;	1, 3, 5, 7 ports; one dynamic printer port
Devices supported	Virtually any async ASCII terminal, printer, PC	IBM 3274/76 (up to three)	IBM 3274/6 and equiv.	Virtually any async ASCII CRT or printer
Connections supported	Direct, dial-up	Direct, dial-up	Direct, dial-up	Direct, dial-up
TRANSMISSION SPEC. (Terminal Line)				
Maximum transmission, in bps	9600	To 9600	To 9600	To 9600
Maximum aggregate input rate, in bps	153.6K	—	—	—
Synchronization	Asynchronous	Synchronous	Synchronous	Asynchronous
Transmission mode	Half/full duplex	Full duplex	Full duplex	Full duplex
Protocols supported	—	SNA/SDLC	SNA/SDLC	—
Codes supported	ASCII	—	—	ASCII
Interfaces supported	RS-232-C	RS-232-C	RS-232-C	RS-232-C
DIAGNOSTICS	Self-test, or from any user port	—	—	Self-test, built-in diag. line monitors, trace cap.
PRICING AND AVAILABILITY				
Purchase, \$	4,800	5,500	5,200	3,100/1; 4,500/3**
Rental, \$/month-to-month	—	None	None	None
Installation, \$	—	—	—	—
Maintenance, \$ Annual	—	50	—	30/45/50/65***
Serviced by	—	Vendor	Vendor	Vendor
Availability	—	—	—	—
Date of first comm. delivery of this model	September 1982	1983	March 1984	September 1982
Number installed to date	—	—	—	Approx. 1500 (all mods.)
COMMENTS	—	R73SX used as 73SX; lets up to three 3M or equiv. 3274, 3275 type controllers comm. with SDLC host; create independent virtual circuit through network to 73SXs at up to three host sites	Enables IBM 3270-type terminal to access DEC hosts, other ASCII computers, and networks; lets 3270 operate in ASCII and SNA mode	*Recently announced 151 is economically priced unit with basic cap of the 1051. **5,800 (5 ports); 7,000 (7 ports) ***for 1, 3, 5, or 7 ports, respectively

### Conversion Systems/Terminal Controllers

MANUFACTURER & MODEL	Protocol Computers, Inc. 1067/167*	Protocol Computers, Inc. 1076/176*	Protocol Computers, Inc. Videotext 67	Protocol Computers, Inc. 1071/171*
DEVICE TYPE	Protocol converter	Protocol converter	Protocol converter	Protocol converter
CONVERSION PERFORMED	ASCII to SNA/SDLC	ASCII to SNA/SDLC	ASCII to SNA/SDLC	ASCII to BSC
SPECIFIC DEVICE EMULATED	IBM 3767 (PU Type 1)	IBM 3276	IBM 3767 SDLC (PU Type 1)	IBM 3271
SPECIFIC FUNCTIONALITY PROVIDED	Lets ASCII devices appears as 3767s	Lets ASCII CRTs or printers appear as IBM 3278/3287s	To link async videotext terminals to IBM SDLC host	Lets ASCII terminals operate in BSC network
VIRTUAL SCREEN SIZES SUPP., in char.	—	—	—	—
COMMAND PORT SUPPORTED	No	No	No	No
HOST SIDE SPECIFICATIONS				
Specific hosts supported	IBM mainframe	IBM mainframes	IBM mainframes	IBM mainframes
Number and type of host lines supported	One	One	One	One
Number host sessions supported concurrently	Not applicable	Not applicable	Not applicable	Not applicable
Connections supported	Point-to-point, multi-point, direct	Point-to-point, multi-point, direct	Multipoint	Point-to-point, multi-point, direct
Connection to host via controller	—	No	No	—
TRANSMISSION SPEC. (Host Line)				
Maximum transmission, in bps	To 9600	To 9600	To 9600	To 9600
Synchronization	Synchronous	Synchronous	Synchronous	Synchronous
Transmission mode	Half/full duplex	Half/full duplex	Half/full duplex	Half/full duplex
Protocols supported	SNA/SDLC	SNA/SDLC	SNA/SDLC	BSC
Codes supported	EBCDIC	EBCDIC	EBCDIC	—
Interface	RS-232-C (SDLC)	RS-232-C (SDLC)	RS-232-C (SDLC)	RS-232-C (BSC)
Clocking	—	—	—	—
TERMINAL SIDE SPECIFICATIONS				
Number and type of ports provided	1, 3, 5, 7 ports; one dynamic printer port	1, 3, 5, or 7 ports; one dynamic printer port	1, 3, 5, or 7 ports; one dynamic printer port	1, 3, 5, or 7 ports; one dynamic printer port
Devices supported	Virtually any async ASCII device	Virtually any async ASCII CRTs, printers	Async Videotext terminals	Virtually any ASCII terminal
Connections supported	Direct, dial-up	Direct, dial-up	Direct, dial-up	Direct, dial-up
TRANSMISSION SPEC. (Terminal Line)				
Maximum transmission, in bps	To 9600	To 9600	To 9600	To 9600
Maximum aggregate input rate, in bps	—	—	—	—
Synchronization	Asynchronous	Asynchronous	Asynchronous	Asynchronous
Transmission mode	Full duplex	Full duplex	Full duplex	Full duplex
Protocols supported	—	—	—	—
Codes supported	ASCII	ASCII	ASCII	ASCII
Interfaces supported	RS-232-C	RS-232-C	RS-232-C	RS-232-C
DIAGNOSTICS	Self-test, built-in diag. line monitors, trace cap	Self-test, built-in diag. line monitors, trace cap.	Self-test, built-in diag. line monitors	Self-test, built-in diag. line monitors, trace cap.
PRICING AND AVAILABILITY				
Purchase, \$	3,100/1; \$4,500/3**	4,600/1; 6,000/3**	Contact vendor	3,100/1; 4,500/3**
Rental, \$/month-to-month	None	None	None	None
Installation, \$	—	—	—	—
Maintenance, \$ Annual	30/45/50/65	30/45/50/65	Contact vendor	30/45/50/65
Serviced by	Vendor	Vendor	Vendor	Vendor
Availability	—	—	—	—
Date of first comm. delivery of this model	First quarter 1980	October 1981	—	June 1982
Number installed to date	Approx. 1500 (all mods.)	Approx. 1500—all models	—	Approx. 1500—all models
COMMENTS	*Recently announced 167 is economically priced unit with basic cap of 1067 Alternative to IBM's NTD software **5,800 (5 ports); 7,000 (7 ports)	*Recently announced 176 is economically priced unit with basic cap. of the 1076 **7,300 (5 ports); 8,500 (7 ports)	Eliminates need to purchase IBM Videotext Facility and NTO software	*New 171 is economically priced unit with basic cap. of the 1071 **5,000 (5 ports); 7,000 (7 ports)

Conversion Systems/Terminal Controllers

MANUFACTURER & MODEL	Protocol Computers, Inc. 71B/SNA; 75B/SNA; 3780/SNA*	Protocol Computers, Inc. 73SX	Racal-Telesystems Model RT5	Racal-Telesystems Model 202/Model 404*
DEVICE TYPE	Protocol converter	Protocol converter	Protocol and code converter	Protocol and code converters
CONVERSION PERFORMED	BSC to SDLC	ASCII to SDLC	Async to BSC, ASCII to EBCDIC	Word processor to word processor
SPECIFIC DEVICE EMULATED	—	IBM 3274/76	—	—
SPECIFIC FUNCTIONALITY PROVIDED	IBM 3271 to 3274; IBM 3275 to 3276; 3780/SNA lets 3780s appear as 3776-2	Links SDLC host to X.25 node	Async ASCII TTY device to IBM 2770, 2780, and 3780	Allows comm. among incompatible word processors
VIRTUAL SCREEN SIZES SUPP., in char.	—	—	—	—
COMMAND PORT SUPPORTED	No	—	No	No
HOST SIDE SPECIFICATIONS Specific hosts supported	IBM mainframes	IBM SDLC hosts	Bisync mainframe	—
Number and type of host lines supported	One	One SDLC	One	—
Number host sessions supported concurrently	Not applicable	Not applicable	Not applicable	—
Connections supported	Point-to-point, multi-point, direct	Direct, point-to-point	Direct connection	Direct connection
Connection to host via controller	—	—	Not applicable	Not applicable
TRANSMISSION SPEC. (Host Line) Maximum transmission, in bps	To 9600	To 9600	50 to 9600	50 to 4800
Synchronization	Synchronous	Synchronous	Synchronous	—
Transmission mode	Half/full duplex	Full duplex	Half/full duplex	—
Protocols supported	SNA/SDLC	SNA/SDLC	BSC	—
Codes supported	—	—	EBCDIC	—
Interface	RS-232-C	RS-232-C	RS-232-C	RS-232-C
Clocking	—	—	—	—
TERMINAL SIDE SPECIFICATIONS Number and type of ports provided	Up to three BSC ports or 1 SDLC port & 1 BSC port	Up to eight virtual circuits	One async port	One RS-232-C
Devices supported	IBM 3271s and equiv.	Up to eight 1076X or R73SX units	Virtually any async ASCII TTY	Virtually any word processor
Connections supported	Direct, dial-up	Direct, dial-up	Direct connection	Direct connection
TRANSMISSION SPEC. (Terminal Line) Maximum transmission, in bps	To 9600	1200	50 to 9600	50 to 4800
Maximum aggregate input rate, in bps	—	—	Not applicable	—
Synchronization	Bisynchronous	—	Asynchronous	—
Transmission mode	—	Full duplex	—	—
Protocols supported	BSC	X-on/X-off	TTY	—
Codes supported	—	—	ASCII	—
Interfaces supported	RS-232-C	RS-232-C	RS-232-C	RS-232-C
DIAGNOSTICS	—	—	Self-test, performance monitoring, LED display	Self-test, status LEDs
PRICING AND AVAILABILITY Purchase, \$	3,100	5,500	1,595	2,695/3,695
Rental, \$/month-to-month	None	None	—	—
Installation, \$	—	—	—	—
Maintenance, \$ Annual	35	50	—	—
Serviced by	Vendor	Vendor	Vendor	Vendor
Availability	—	—	—	—
Date of first comm. delivery of this model	June 1982 (71B/SNA)	1983	April 1983	—
Number installed to date	Approx. 1500—all models	—	—	—
COMMENTS	Extend life of BSC terminal in SNA environment  *71B/SNA conv. is 3271 to 3274; 75B/SNA conv. is 3275 to 3276; 3780/SNA conv. is 3780 to 3776-2	Emulates 3274/76 controller; links SDLC host to X.25 node; supports up to eight 1076X or R73SX units; 73SX only accepts calls	User-selectable translation direction is standard	*Model 202 allows mult. wp systems to communicate; Model 404 allows mult. wp to communicate with central wp; Model 202 req. one software conv. cartridge; Model 404 req. two; cartridge price—\$500

Conversion Systems/Terminal Controllers

MANUFACTURER & MODEL	Renex Translator RT74 Family	Renex Translator RT51 Family	Shaffstall Corp. Protocol/Code Converter	Thomas Engineering Co. MZ-80 Line
DEVICE TYPE	Protocol converter	Protocol converter	Protocol/code converter	Protocol converter, incl. code conv. & emul.
CONVERSION PERFORMED	ASCII to 3270 BSC, ASCII to 3270 SDLC, ASCII to 3770/3767	ASCII to SDLC	EBCDIC to ASCII, ASCII to EBCDIC, bisync to async, async to bisync	ASCII to EBCDIC, async to sync
SPECIFIC DEVICE EMULATED	IBM 3274-41C, 51C, 61C; IBM 3276-2, 12	IBM 5251 model 12	IBM 2770, 2780, 3780	IBM 3271, 3274/Honeywell VIP 77XX
SPECIFIC FUNCTIONALITY PROVIDED	ASCII CRT to IBM 3278 models 2, 5	ASCII CRT to IBM 5251 model 11	Not applicable	Async ASCII CRT and/or PC to IBM 3270 or VIP 77XX
VIRTUAL SCREEN SIZES SUPP., in char.	1920, 3168	1920	Not applicable	1920
COMMAND PORT SUPPORTED	Yes	Yes	Not applicable	Yes
HOST SIDE SPECIFICATIONS				
Specific hosts supported	IBM 43XX,308X,303X,360, 370& plg-cmptbl	System 34, 36, 38	Not applicable	IBM 43XX,37X,30XX,Ser.1 or cmp. hosts;
Number and type of host lines supported	One or two; SDLC or BSC	One or two SDLC	Two async or bisync	One BSC, one SDLC; or one VIP sync
Number host sessions supported concurrently	One	One	Not applicable	Not applicable
Connections supported	Direct, multipoint, point-to-point	Direct, multipoint, point-to-point	Dial-up, point-to-point	Any combination of modem or direct connection
Connection to host via controller	Channel-attached IBM 270X, 37XX	Communication adapter, twinaxial	Not applicable	IBM 3704/5; Datanet 355, 66, 8; GRTS-II, NPS, DNS
TRANSMISSION SPEC. (Host Line)				
Maximum transmission, in bps	2400 to 19.2K	2400 to 19.2K	9600	19.2K bps
Synchronization	Synchronous	Synchronous	Async/sync	Synchronous
Transmission mode	Half/full duplex	Half/full duplex	Half/full duplex	—
Protocols supported	BSC, SNA/SDLC	SDLC	BSC async	BSC, SDLC, or VIP
Codes supported	ASCII, EBCDIC	ASCII, EBCDIC	ASCII or EBCDIC*	ASCII, EBCDIC
Interface	One or two RS-232-C	One or two RS-232-C	Two RS-232-C, parallel	RS-232-C
Clocking	Internal/external	Internal/external	Internal; external (opt)	Internal/external
TERMINAL SIDE SPECIFICATIONS				
Number and type of ports provided	Up to 32 logical asynchronous	Up to 24 logical ports	Not applicable	32 async ports for serial (ASCII) device
Devices supported	Over 100 devices supported	Over 100 devices supported	—	Virtually any ASCII CRT, printer, PC
Connections supported	Direct, dial-up	Direct, dial-up	Direct, dial-up	Direct, dial-up, through modem
TRANSMISSION SPEC. (Terminal Line)				
Maximum transmission, in bps	19.2K w/autbd. rate det.	19.2K w/autbd. rate det.	9600	19.2K
Maximum aggregate input rate, in bps	Not applicable	Not applicable	9600	80K (approx.)
Synchronization	Asynchronous	Asynchronous	Async/sync	Asynchronous
Transmission mode	Full duplex	Full duplex	Half/full duplex	Full duplex
Protocols supported	—	—	TTY, async, bisync	TTY
Codes supported	ASCII	ASCII	ASCII or EBCDIC*	ASCII, EBCDIC
Interfaces supported	RS-232-C, RS-449	RS-232-C, RS-449	RS-232-C	RS-232-C
DIAGNOSTICS	Self-tests; status LEDs monitor capabilities	Self-tests; status LEDs monitor capabilities	None	Self-tests, status LEDs, loadable diag., diag. port
PRICING AND AVAILABILITY				
Purchase, \$	2,900-15,990	3,950-12,990	5,000	5,120/4; 9,870/16
Rental, \$/month-to-month	250-850	350-750	—	Terms vary
Installation, \$	300	300	750	—
Maintenance, \$ Annual	300-1,100	300-1,110	None	First yr. incl.; 500 aft
Serviced by	Vendor on site, factory, third party	Vendor on site, factory, third party	—	Vendor, factory; spares
Availability	30 days	30 days	40 days	30 days
Date of first comm. delivery of this model	October 1980	January 1984	In stock	December 1981
Number installed to date	14,000 ports	300 ports	5	500
COMMENTS	Personal computer support, APL support; seven-color and extended highlight; multiplex terminal and printer on same physical line; graphics passthrough for SAS, TellaGRAF etc; also includes inactivity timeout and password security	Multiplex terminal and printer on one physical port; inactivity timer, password security, and personal computer support	*Custom-programmed conversions	Supports one or more printers in 3286/87 mode; menu-driven device selection; remote diag. cap., incl. software transmission; rackmountable & field-expandable; supports optional floppy disks for local processing & user system development



Conversion Systems/Terminal Controllers

MANUFACTURER & MODEL	Tri-Data Corp. Netway 274			
DEVICE TYPE	Cluster controller			
CONVERSION PERFORMED	ASCII to EBCDIC, ASCII to Burroughs Poll/Select			
SPECIFIC DEVICE EMULATED	IBM 3274 BSC and SNA/SDLC			
SPECIFIC FUNCTIONALITY PROVIDED	ASCII CRT to IBM 3278-2, or Burroughs TD 830/ET1100			
VIRTUAL SCREEN SIZES SUPP., in char.	1920			
COMMAND PORT SUPPORTED	Yes			
HOST SIDE SPECIFICATIONS				
Specific hosts supported	IBM mnfrms.; Burr.B6800, B7900; HP3000, DEC VAX			
Number and type of host lines supported	Six lines in any combination			
Number host sessions supported concurrently	Six			
Connections supported	Direct, multipoint (leased), point-to-point (dial-up)			
Connection to host via controller	IBM 270X, 37XX			
TRANSMISSION SPEC. (Host Line)				
Maximum transmission, in bps	19.2K			
Synchronization	Async/sync			
Transmission mode	Half/full duplex			
Protocols supported	BSC, SNA/SDLC, Burr. P/S			
Codes supported	ASCII, EBCDIC			
Interface	16 RS-232-C			
Clocking	Internal/external			
TERMINAL SIDE SPECIFICATIONS				
Number and type of ports provided	Six RS-232-C, one Centronics parallel			
Devices supported	Many pls. comp, terminals, and printers			
Connections supported	Direct, dial-up, leased			
TRANSMISSION SPEC. (Terminal Line)				
Maximum transmission, in bps	19.2K			
Maximum aggregate input rate, in bps	—			
Synchronization	Async/sync			
Transmission mode	Half/full duplex			
Protocols supported	TTY II, Burr. Poll/Sel.			
Codes supported	ASCII			
Interfaces supported	RS-232-C			
DIAGNOSTICS	Self-test, status LEDs			
PRICING AND AVAILABILITY				
Purchase, \$	8,950			
Rental, \$/month-to-month	—			
Installation, \$	—			
Maintenance, \$ Annual	—			
Serviced by	Factory, third party			
Availability	30 days			
Date of first comm. delivery of this model	March 1984			
Number installed to date	10			
COMMENTS	Multi-host product supports up to four dissimilar processors; can be used as gateway, cluster controller, in X.25 PAD to nodal processor; modular design, field upgradeable			



**X.25 Packet Assemblers/Disassemblers (PADs)**

MANUFACTURER & MODEL	Advanced Computer Communications IF-11/X.25 Plus	Amdahl 4440	Amdahl 4450	Amdahl 4460
NETWORK CERTIFICATION	Telenet, Tymnet, Uninet	Telenet, Tymnet, Uninet, Accunet X.25, British Telecom PSS, Itapac, Saponet	Telenet, Tymnet, Uninet, Accunet X.25, British Telecom PSS, Itapac, Saponet X.25, DSP	Telenet, Tymnet, Uninet, Accunet X.25, British Telecom PSS, Itapac, Saponet
CCITT RECOMMENDATION SUPPORTED	X.3, X.28, X.29	All supported		All supported
BUFFER MEMORY CAPACITY	24K	128K	128K	512K
ADDITIONAL RAM AVAILABLE	No	—	—	—
DEVICE CONFIGURATIONS	Host, terminal concentrator	Host/terminal concentrator	Host/terminal concentrator	Host/terminal concentrator
INPUT SPECIFICATIONS				
Number and type of devices supported	Up to 32 asynchronous terminals	Up to 40 asynchronous ports	Up to 16 bisync 2370 ports	Up to 40 ports: 16 bisync, RJE; 24 async
Connections supported	Direct connection, access via dial-up modem	direct and dial-up	direct connect, multi-point 3270	direct connect, multi-point 3270
Maximum input rate per port, in bps	9600	19.2K	19.2K	19.2K
Maximum aggregate input rate, in bps	32K bps	80K	100K	80K
Synchronization	Asynchronous	Asynchronous	3270 bisynchronous	Async, bisync
Transmission mode	Full duplex	Half duplex	Half duplex	Half duplex
Interface	RS-232-C	RS-232-C, V.24	RS-232-C, V.24	RS-232-C, V.24
Autospeed/autoparity available	No	Yes	—	Yes
Channel config. data downline loadable	No; X.29 param. set cap	Yes	Yes	Yes
Ports config. for perm./switched circ.	No, switched only	Yes, both	Yes, both	Yes, both
NETWORK CHANNEL SPECIFICATIONS				
Number X.25 channels supported	One X.25 network trunk	Up to 8	8	8
Interface	RS-232-C, MIL-118-C 114, MIL-188C, RS-422/423	RS-232-C, V.24	RS-232-C, V.24	RS-232-C, V.24
Maximum transmission rate, in bps	56K	19.2K	19.2K	19.2K
Synchronization	Synchronous	Synchronous	Synchronous	Synchronous
Transmission mode	Full duplex	Half/full duplex	Half/full duplex	Half/full duplex
Number virtual circuits supported	32	40	128	128
Max. window size supported, in frames	7	7	7	7
Link-level framing supported	HDLC-LAPB	HDLC	HDLC	HDLC
DIAGNOSTICS	Host resident board level diagnostics	On-line network diag., status LEDs	On-line network diag., status LEDs	On-line network diag., status LEDs
FEATURES				
Channel priority assignment	No	Yes	Yes	Yes
Password protection	No	Yes	Yes	Yes
Supervisory port	Yes	Yes	Yes	Yes
Echoplex	Yes	Yes	—	Yes
Autodialer supported	No	No	No	No
PRICING AND AVAILABILITY				
Purchase, \$	6,400—8,6900	7,200	11,500	15,000
Rental, \$ month-to-month	None	—	—	—
Installation, \$	None	400	645	645
Maintenance, \$ Annual	None	840	1,320	1,320
Serviced by	Factory	Vendor	Vendor	Vendor
Availability	30 days	30 days	30 days	30 days
Date of first comm. delivery of this model	1982	1982	1982	1984
Number installed to date		300	1,500	150
COMMENTS	Host resident front end supports locally attached terminal access to X.25 network & remote terminal access to host from the X.25 network; supports full-screen editing terminal cap.			

### X.25 Packet Assemblers/Disassemblers (PADs)

MANUFACTURER & MODEL	Amdahl 4470	Amdahl 4415	BBN Communications C/10 PAD	Black Box Catalog X.25 PAD-4/X.25 PAD-8
NETWORK CERTIFICATION	Telenet, Tymnet, Uninet, Accunet X.25, British Telecom PSS, Itapac, Saponet	Telenet, Tymnet, Uninet, Accunet X.25, British Telecom PSS, Itapac, Saponet	No	Telenet, Tymnet, Uninet
CCITT RECOMMENDATION SUPPORTED	X.25, NSPI	X.25	All	X.3, X.28, X.29, X.121, X.25
BUFFER MEMORY CAPACITY	128K	128K	256K + 64K/8 lines	—
ADDITIONAL RAM AVAILABLE	—	—	Yes—addtl. 128K	—
DEVICE CONFIGURATIONS	Terminal concentrator	X.25 concentrator	Host, terminal concentrator	Port concentrator, div. multiplexor, terminal concentrator
INPUT SPECIFICATIONS				
Number and type of devices supported	8 sync ports (16 SNA clusters, 128 SNA logical units)	40 X.25 links	Up to 64 async lines, up to 32 sync lines; 128 devices max.	4 async terminals/ 8 async terminals
Connections supported	direct connect, multi-point	direct connect	Direct, dial-up, leased line	direct, dedicated, dial-up terminal connections
Maximum input rate per port, in bps	9600	19.2K	9600	—
Maximum aggregate input rate, in bps	100K	100K	112K	—
Synchronization	synchronous	synchronous	Async/sync	Asynchronous
Transmission mode	Half duplex	Half/full duplex	Half/full duplex	Half/full duplex
Interface	RS-232-C, V.24	RS-232-C, V.24	RS-232-C; V.24	RS-232-C, V.24, V.28
Autospeed/autoparity available	—	—	Yes	—
Channel config. data downline loadable	Yes	Yes	Yes	—
Ports config. for perm./switched circ.	Yes, both	Yes, both	Yes	—
NETWORK CHANNEL SPECIFICATIONS				
Number X.25 channels supported	8	40	One std.; two opt.	26
Interface	RS-232-C, V.24	RS-232-C, V.24	RS-232-C, V.24, V.35	RS-232-C, V.24, V.28
Maximum transmission rate, in bps	9600	19.2K	56K/Channel	9600 bps
Synchronization	Synchronous	Synchronous	Synchronous	Asynchronous
Transmission mode	Half/full duplex	Half/full duplex	Full duplex	Half/full duplex
Number virtual circuits supported	128	40	128	Four to eight
Max. window size supported, in frames	7	7	7	—
Link-level framing supported	HDLC	HDLC	HDLC	DTE or DCE appearance & user definable values
DIAGNOSTICS	On-line network diag., status LEDs	On-line network diag., status LEDs	Self-tests, LEDs, remote & local tests	Terminal test, local test, remote test, system test
FEATURES				
Channel priority assignment	Yes	Yes	No	—
Password protection	Yes	Yes	Yes	—
Supervisory port	Yes	Yes	Yes	No
Echoplex	N/A	—	Yes	No
Autodialer supported	No	No	No	No
PRICING AND AVAILABILITY				
Purchase, \$	12,500	15,000	4,000—24,000	2,050/2,750
Rental, \$ month-to-month	—	—	—	None
Installation, \$	645	645	—	None
Maintenance, \$ Annual	1,320	1,320	—	None
Serviced by	Vendor	Vendor	Vendor on site, factory	Factory
Availability	30 days	30 days	120 days	Stock
Date of first comm. delivery of this model	1983	1985	February 1984	1985
Number installed to date	30	—	—	—
COMMENTS			Multiple protocol support, expandable hardware, multiple microprocessors, automatic virtual-circuit set-up, call accounting downline loading of config. & software parameters	

### X.25 Packet Assemblers/Disassemblers (PADs)

MANUFACTURER & MODEL	Cableshare CSI-X.25	Cableshare LSI-X.25 IC	Cableshare LSI-X.25 Gateway	Commtext Cx.25 PAD
NETWORK CERTIFICATION	Telenet, Tymnet, Datapac, FIPS100	Telenet, Tymnet, Datapac FIPS100	All	Telenet
CCITT RECOMMENDATION SUPPORTED	X.25 (1, 2, & 3); X.3, X.28, X.29	X.25 (1, 2, & 3); X.3, X.29	X.25, X.3, X.28, X.29	X.25 levels 1, 2, 3; X.3 X.28, X.29
BUFFER MEMORY CAPACITY ADDITIONAL RAM AVAILABLE DEVICE CONFIGURATIONS	Up to 128K Yes Host concentrator, terminal concentrator, stat mux	64K Yes Host/terminal concen- trator, Telex/Teletex gateway	128K Yes Host/terminal	32K No Terminal concentrator
INPUT SPECIFICATIONS Number and type of devices supported	Up to 16 asynchronous or synchronous	Up to 64 asynchronous or 8 synchronous tele- text	Up to 2 Ethernet or 48 async	Up to 25 aysnc terminals microcomputers and IBM 3278s
Connections supported	Direct, dial-up	Direct, dial-up	Direct, dial-up	Direct or dial-up
Maximum input rate per port, in bps Maximum aggregate input rate, in bps Synchronization	19.2K — Sync/async	9600 — Async/sync	19.2K 80K Async/sync	19.2K — Asynchronous
Transmission mode Interface	Full duplex RS-232-C, RS-423	Full duplex RS-232-C, RS-423	Full duplex RS-232-C, RS-423	Full duplex 25 RS-232-C, RS-422, Coax A 20mA cur.lp.Coax ln.dr.
Autospeed/autoparity available Channel config. data downline loadable Ports config. for perm./switched circ.	Yes Yes Yes	Yes Yes Yes	Yes Yes Yes	Yes Yes Switched only
NETWORK CHANNEL SPECIFICATIONS Number X.25 channels supported Interface	Two RS-232-C, RS-423	Five RS-232-C, RS-423	Up to 3 RS-232-C, RS-423	One RS-232-C
Maximum transmission rate, in bps Synchronization Transmission mode Number virtual circuits supported Max. window size supported, in frames Link-level framing supported	64K per channel Synchronous Full duplex Up to 17 7 HDLC	56K per channel Synchronous Full duplex Up to 64 7 HDLC—BSC/ASCII	56K Synchronous Full duplex 127 7 HDLC, BSC	19.2K Synchronous Full duplex 25 8 HDLC
DIAGNOSTICS	Self-tests, status LEDs, remote check-out through network	Self-test, on-board link diag., remote load- ing of dial, over X.25	Remote and local tests	Self tests, status LEDs call monitoring via supervisory port
FEATURES Channel priority assignment Password protection Supervisory port Echoplex Autodialer supported	No Yes; multiple levels Yes Yes Yes	No Yes Yes Yes Yes	No Yes Yes Yes Yes	No Yes Yes Yes Yes
PRICING AND AVAILABILITY Purchase, \$	2,500—4,000	5,000 (8 prt.); 1,760 each add. port	5,000—50,000	3,050
Rental, \$ month-to-month Installation, \$ Maintenance, \$ Annual Serviced by Availability Date of first comm. delivery of this model Number installed to date	— 300 — 3M 30 days September 1983 400	— 600 300 DEC 30 days 1980 800	— 600—2,000 300—1,250 DEC 45 days 1985 5	Distributor determined Distributor determined Distributor determined M/A-Com, on-site 60 days 1985 —
COMMENTS	Has 16-bit 8088 micro- processor; remote access for centralized monitor- ing & network manage- ment; on-line help in- formation; supports IBM SDLC and BSC	Uses DEC LSI-II family hardware; custom-en- hancement of software available; local forms storage and field edit- ing	Lat-II Ethernet support gateway between Ether- net, X.25, DEC hosts, and asynchronous termin- als	The Cx.25 is an option to the Commtext Cx-83 & Cx-86 terminal controll. In addition to outbound call generation (by name) the Cx.25 accepts incoming call to Cx-83/6 user defined rotary hunt groups.

### X.25 Packet Assemblers/Disassemblers (PADs)

MANUFACTURER & MODEL	Computer Communications Inc. CCI9124 X.25 Controller	Datagram Corp. DMX-2502	Datagram Corp. DMX-2504	Datagram Corp. DMX-2508
NETWORK CERTIFICATION	Telenet, Tymnet	Telenet, Tymnet, Datapac	Telenet, Tymnet, Datapac	Telenet, Tymnet, Datapac
CCITT RECOMMENDATION SUPPORTED	X.25 levels 1, 2, 3; X.29	X.25 Level 3	X.25 Level 3	X.25 Level 3
BUFFER MEMORY CAPACITY	Dynamic buffer pool	8K Bytes	8K Bytes	16K Bytes
ADDITIONAL RAM AVAILABLE	—	—	—	—
DEVICE CONFIGURATIONS	Host concentrator (emulation mode)	Host concentrator Terminal concentrator	Host concentrator Terminal concentrator	Host concentrator Terminal concentrator
INPUT SPECIFICATIONS				
Number and type of devices supported	—	Two	Four	Eight
Connections supported	—	Direct dialup	Direct dialup	Direct dialup
Maximum input rate per port, in bps	—	9600	9600	9600
Maximum aggregate input rate, in bps	—	38.4K	38.4K	38.4K
Synchronization	—	Asynchronous	Asynchronous	Asynchronous
Transmission mode	—	Half/full duplex	Half/full duplex	Half/full duplex
Interface	—	RS-232-C, V.24	RS-232-C, V.24	RS-232-C, V.24
Autospeed/autoparity available	—	Yes, both	Yes, both	Yes, both
Channel config. data downline loadable	—	Yes	—	—
Ports config. for perm./switched circ.	Yes	Yes, both	Yes, both	Yes, both
NETWORK CHANNEL SPECIFICATIONS				
Number X.25 channels supported	32	One	One	One
Interface	RS-232-C	RS-232-C, V.24	RS-232-C, V.24	RS-232-C, V.24
Maximum transmission rate, in bps	9600	9600	9600	9600
Synchronization	Synchronous	Synchronous	Synchronous	Synchronous
Transmission mode	Full duplex	Full duplex	Full duplex	Full duplex
Number virtual circuits supported	240	2	4	8
Max. window size supported, in frames	7	7	7	7
Link-level framing supported	HDLC	HDLC	HDLC	HDLC
DIAGNOSTICS	LEDs	Interface & logical status, loopback test, RAM & program memory test & memory dumps	Interface & logical status, loopback test, RAM & program memory test & memory dumps	Interface & logical status, loopback test, RAM & program memory test & memory dumps
FEATURES				
Channel priority assignment	No	Yes	Yes	Yes
Password protection	No	Yes	Yes	Yes
Supervisory port	No	Yes	Yes	Yes
Echoplex	No	Yes	Yes	Yes
Autodialer supported	No	Yes	Yes	Yes
PRICING AND AVAILABILITY				
Purchase, \$	Contact Vendor	1,750	1,995	2,995
Rental, \$ month-to-month	Contact Vendor	—	—	—
Installation, \$	Contact Vendor	Customer installed	Customer installed	Customer installed
Maintenance, \$ Annual	Contact Vendor	Contact vendor	Contact vendor	Contact vendor
Serviced by	Vendor	Factory	Factory	Factory
Availability	90 days	30 days	30 days	30 days
Date of first comm. delivery of this model	—	1979	1979	1979
Number installed to date	—	—	—	—
COMMENTS	Dynamic application switching	Full communication protocol conversion Uniscope CCITT X.25, command language (X.28) fastcall in/outcoming call facility	Full communication protocol conversion Uniscope CCITT X.25, command language (X.28) fastcall in/outcoming call facility	Full communication protocol conversion Uniscope CCITT X.25, command language (X.28) fastcall in/outcoming call facility

**X.25 Packet Assemblers/Disassemblers (PADs)**

MANUFACTURER & MODEL	Datagram Corp. DMX-2516	Digital Communications Associates X.25/PAD	Dynatech Packet Technology, Inc. Multi-Pad X.25	Dynatech Packet Technology, Inc. Mono-PAD X.25
NETWORK CERTIFICATION	Telenet, Tymnet, Datapac	Telenet, Tymnet, Uninet, Autonet, Datapac, & others	Worldwide	Worldwide
CCITT RECOMMENDATION SUPPORTED	X.25 Level 3	All rec. supported	X.25 Levels 1, 2, 3; X.3, X.28, X.29, X.121	X.25 Levels 1, 2, 3; X.3, X.28, X.29, X.121
BUFFER MEMORY CAPACITY ADDITIONAL RAM AVAILABLE DEVICE CONFIGURATIONS	16K Bytes — Host concentrator Terminal concentrator	Approx 15K char. —	10K ROM, 14K RAM Yes; 20K Host concentrator, terminal concentrator, front end processor	10K ROM, 14K RAM No Terminal connection
INPUT SPECIFICATIONS Number and type of devices supported	16	Up to 32 async devices	4, 8, 12, or 16 async ports	One asynchronous device
Connections supported	Direct dialup	Direct, via dial-up model	Direct, dial-up via modem	Direct, dial-up via modem
Maximum input rate per port, in bps Maximum aggregate input rate, in bps Synchronization	9600 38.4K Asynchronous	Up to 9600 To 57.6K Asynchronous	9600 — Asynchronous	To 9600 — Asynchronous
Transmission mode Interface	Half/full duplex RS-232-C, V.24	Half/full duplex RS-232-C; V.24, V.28, 20 MA	Full duplex RS-232-C, V.24	Full duplex RS-232-C, V.24
Autospeed/autoparity available Channel config. data downline loadable Ports config. for perm./switched circ.	Yes, both — Yes, both	Yes — Yes; both	Yes Yes Yes, both	Yes No SVC only
NETWORK CHANNEL SPECIFICATIONS Number X.25 channels supported Interface	One RS-232-C, V.24	One RS-232-C, V.24, V.28, 20 MA	One RS-232-C, V.24, X.21 bis	One X.21 bis, RS-232-C, V.24
Maximum transmission rate, in bps Synchronization Transmission mode Number virtual circuits supported Max. window size supported, in frames Link-level framing supported	9600 Synchronous Full duplex 16 7 HDLC	Up to 19.2K Synchronous Full duplex Up to 32 One to seven HDLC, BSC	9600 Synchronous Full duplex Up to 17 7 HDLC, LAPB, or LAP, BSC/ EBCDIC, BSC/ASCII Local & remote access statistics & status LEDs	9600 Synchronous Full duplex One Seven LAP, LAPB, HDLC, BSC/ EBDIC, BSC/ASCII Status LEDs
DIAGNOSTICS	Interface & logical status, loopback test, RAM & program memory test & memory dumps	Status LEDs, built-in diagnostics	Local & remote access statistics & status LEDs	Status LEDs
FEATURES Channel priority assignment Password protection Supervisory port Echoplex Autodialer supported	Yes — Yes Yes Yes	— — Console port Yes —	No Yes Yes Yes Yes	No No No Yes No
PRICING AND AVAILABILITY Purchase, \$	3,750	1,895—8,445	Contact vendor	Contact Vendor
Rental, \$ month-to-month Installation, \$ Maintenance, \$ Annual Serviced by Availability Date of first comm. delivery of this model Number installed to date	— Customer installed Contact vendor Factory 30 days 1979 —	From 76 to 338 (12 mo.) Contact vendor Contact vendor Vendor — — —	Contact vendor Contact vendor Contact vendor Vendor or third party 30 1982 3,000	Contact Vendor Contact Vendor Contact Vendor Vendor 30 1984 300
COMMENTS	Full communication protocol conversion Uniscopes CCITT X.25, command language (X.28) fastcall in/outcoming call facility	Half duplex on two or four wire circuits. Configurable from ASCII terminal console	Features include: spec. support for VT100, HP; Baudot to ASCII conver.; Mnemonic addressing; also offered are X.25 switching equipment: multiswitch X.25 for low speed applications, multiswitch X.25 model 60 for high speed applications	Single port PAD, autocall feature M-bit support

## X.25 Packet Assemblers/Disassemblers (PADs)

MANUFACTURER & MODEL	EDA Instruments, Inc. UTX.2500 Series	EDA Instruments, Inc. ATX.2500 Series	EDA Instruments, Inc. BTX.2500 Series	Gandalf Pin 9101E
NETWORK CERTIFICATION	Tymnet, Telenet, Datapac Datex-P, Transpac, PSS	Tymnet, Telenet, Datapac Datex-P, Transpac, PSS	Datapac, Infoswitch	Telenet, Tymnet, Uninet, Datapac, PSS
CCITT RECOMMENDATION SUPPORTED	X.3, X.28, X.29, X.25 (levels 1, 2, 3)	X.3, X.28, X.29, X.25 (levels 1, 2, 3)	X.3, X.28, X.29, X.25 (levels 1, 2, 3)	All supported
BUFFER MEMORY CAPACITY ADDITIONAL RAM AVAILABLE DEVICE CONFIGURATIONS	12.5K No Host/terminal concentrator	12.5K No Host/terminal concentrator	12.5K No Host/terminal concentrator	— No Host concentrator, terminal concentrator, TDM
INPUT SPECIFICATIONS				
Number and type of devices supported	Up to 15 logical devices running Uniscope/Sperry- link	Up to 16 ASCII async devices	Up to 15 logical devices running Synchronous Poll/Select	Up to 16 asynchronous channels
Connections supported	Direct, dial-up, leased	Direct, dial-up, leased	Direct, dial-up, leased	Local remote, dial & private-line modems
Maximum input rate per port, in bps Maximum aggregate input rate, in bps Synchronization	9600 38.4K Synchronous	9600 38.4K Asynchronous	9600 38.4K Synchronous	50 to 9600 57.6K Asynchronous
Transmission mode Interface	Half/full duplex One RS-232-C	Half/full duplex One RS-232-C	Half/full duplex One RS-232-C	Half/full duplex RS-232-C, CCITT V.24/ V.28
Autospeed/autoparity available Channel config. data downline loadable Ports config. for perm./switched circ.	Yes Yes Switched only	Yes Yes Switched only	Yes Yes Switched only	Yes Yes Yes, either PVC or SVC
NETWORK CHANNEL SPECIFICATIONS				
Number X.25 channels supported Interface	One RS-232-C	One RS-232-C	One RS-232-C	One RS-232-C, V.24/V.28
Maximum transmission rate, in bps Synchronization Transmission mode Number virtual circuits supported Max. window size supported, in frames Link-level framing supported	9600 Synchronous Full duplex 15 7 HDLC	9600 Synchronous Full duplex 16 7 HDLC	9600 Synchronous Full duplex 15 7 HDLC	19.2K Synchronous Half duplex 16 128 HDLC, LAPB
DIAGNOSTICS	Interface & logical chan statistics; loopback tests; RAM prog. memory test and dump	Interface & logical chan statistics; loopback tests; RAM prog. memory test and dump	Interface & logical chan statistics; loopback tests; RAM prog. memory test and dump	Status LEDs, self-tests, local & remote tests
FEATURES				
Channel priority assignment Password protection Supervisory port Echoplex Autodialer supported	— Yes Yes Yes Yes	— Yes Yes Yes Yes	— Yes Yes Yes Yes	Yes Yes Yes Yes Yes
PRICING AND AVAILABILITY				
Purchase, \$	3,960 (2501-3); 5,500 (2508-5); 6,730 (2515-6)	1,875—3,750	3,500—5,930	1,950—3,650 depending on model
Rental, \$ month-to-month Installation, \$ Maintenance, \$ Annual Serviced by Availability Date of first comm. delivery of this model Number installed to date	— Customer installed — Factory 30 days December 1982	— Customer installed — Factory 30 days 1977	— Customer installed — Factory 30 days 1984	— Contact vendor Contact vendor Contact vendor Vendor on site 4-6 weeks —
COMMENTS	Data compression/ expansion; extensive network management package.	Data compression/ expansion; extensive network management package.	Data compression/ expansion; extensive network management package.	Autocall feature and password protected remote console access



**X.25 Packet Assemblers/Disassemblers (PADs)**

MANUFACTURER & MODEL	GTE Telenet TP3005	GTE Telenet TP3/II-3010	GTE Telenet TP3/II-3006	GTE Telenet TP3/II-3025
NETWORK CERTIFICATION	Telenet	Telenet	Telenet	Telenet
CCITT RECOMMENDATION SUPPORTED	All supported	All supported	All supported	All supported
BUFFER MEMORY CAPACITY	64K	64K	64K	64K
ADDITIONAL RAM AVAILABLE	No	No	No	No
DEVICE CONFIGURATIONS	Host/terminal concentrator	Host/terminal concentrator	Host/terminal concentrator	Concentrate 3005, 3010, & 3006 devices
INPUT SPECIFICATIONS				
Number and type of devices supported	4 or 8 async device lines	Up to 26 async lines; 8 sync lines	4 or 8 async/sync lines	4 or 8 sync X.25 lines
Connections supported	Direct or dial-up	Direct or dial-up	Direct or dial-up	Direct
Maximum input rate per port, in bps	9600	9600	9600	19.2K
Maximum aggregate input rate, in bps	38.3K	38.3K	38.3K	128K
Synchronization	Asynchronous	Async/sync	Async/sync	Synchronous X.25
Transmission mode	Half/full duplex	Half/full duplex	Half/full duplex	Full duplex
Interface	RS-232-C, V.24/V.2B	RS-232-C, V.24	RS-232-C, V.24	RS-232-C, V.24
Autospeed/autoparity available	Yes	Yes	Yes	No
Channel config. data downline loadable	Yes	Yes	Yes	Yes
Ports config. for perm./switched circ.	Switched only	Switched only	Switched only	Switched only
NETWORK CHANNEL SPECIFICATIONS				
Number X.25 channels supported	One	One	One	Two
Interface	RS-232-C, V.24	RS-232-C, V.24	RS-232-C, V.24	RS-232-C, V.24, V.35
Maximum transmission rate, in bps	19.2K	19.2K	19.2K	64K
Synchronization	Synchronous, X.25	Synchronous, X.25	Synchronous, X.25	Synchronous, X.25
Transmission mode	Full duplex	Full duplex	Full duplex	Full duplex
Number virtual circuits supported	255	255	255	2040
Max. window size supported, in frames	7	7	7	7
Link-level framing supported	HDLC or BSC	HDLC or BSC	HDLC or BSC	HDLC
DIAGNOSTICS	Remote	Remote	Remote	Remote
FEATURES				
Channel priority assignment	No	No	No	Yes
Password protection	Yes	Yes	Yes	No
Supervisory port	Yes	Yes	Yes	Yes
Echoplex	Yes	Yes	Yes	Yes
Autodialer supported	Yes	Yes	Yes	No
PRICING AND AVAILABILITY				
Purchase, \$	2,500 or 3,500	5,100/2 ports 1,650/8 add'l ports	3,200 or 4,000	6,000 or 7,500
Rental, \$ month-to-month	350 or 600	800	—	—
Installation, \$	400	400	400	400
Maintenance, \$ Annual	360 or 480	780	360 or 480	480 or 600
Serviced by	Vendor on site	Vendor on site	Vendor on site	Vendor on site
Availability	—	—	—	—
Date of first comm. delivery of this model	1983	1983	1985	1985
Number installed to date	—	—	—	—
COMMENTS	Software features: error detection & recovery; autospeed detection to 1200bps;dynamic flow control; alarm messages; autoconnect cap. for directly attached term.; multiple host access; configurable parameters; Network Mgmt Features: realtime event reporting diagnostics accessible from any async terminal on network using TDT-2	Software features: error detection & recovery; autospeed detection to 1200bps;dynamic flow control; alarm messages; autoconnect cap. for directly attached term.; multiple host access; configurable parameters; Network Mgmt Features: realtime event reporting diagnostics accessible from any async terminal on network using TDT-2	Software features: error detection & recovery; autospeed detection to 1200bps;dynamic flow control; alarm messages; autoconnect cap. for directly attached term.; multiple host access; configurable parameters; Network Mgmt Features: realtime event reporting diagnostics accessible from any async terminal on network using TDT-2	Software features: error detection & recovery; autospeed detection to 1200bps;dynamic flow control; alarm messages; autoconnect cap. for directly attached term.; multiple host access; configurable parameters; Network Mgmt Features: realtime event reporting diagnostics accessible from any async terminal on network using TDT-2

### X.25 Packet Assemblers/Disassemblers (PADs)

MANUFACTURER & MODEL	GTE Telenet TP4/II-4200	Hewlett Packard HP 2334A	Icot 44X	Infotron Infolinx.25
NETWORK CERTIFICATION	Telenet	Telenet, Tymnet, Uninet, Datapac, Transpac, and others	Telenet, Tymnet, Uninet	Telenet (testing for Tymnet)
CCITT RECOMMENDATION SUPPORTED	All supported	X.25 (Levels 1, 2, & 3), X.3, X.28, X.29, X.121	X.3, X.21, X.25, X.28, X.29	X.25 Level 1, 2, and 3; X.3, X.28, X.29, X.121
BUFFER MEMORY CAPACITY ADDITIONAL RAM AVAILABLE DEVICE CONFIGURATIONS	832K No Host/terminal concentrator	Up to 96K ROM, 40K RAM — Host/terminal concentrator, statistical TDM	Up to 128K No Host/line concentrator, network host access, async PBX, interface: X.25 digital PBX	— No Terminal concentrator stat. mux.
INPUT SPECIFICATIONS				
Number and type of devices supported	Up to 224 async lines; 112 sync lines	Up to 16 async devices (field upgradable)	4, 8, 12, or 16 async terminals or printers	Up to 16 asynchronous devices
Connections supported	Direct or dial-up	Direct connect, dial-up via modem	Direct, dial-up via modem, PBX interface	Direct or dial-up
Maximum input rate per port, in bps	9600	9600	19.2K	19.2K async
Maximum aggregate input rate, in bps	268.8K	153.6K	—	—
Synchronization	Async/sync	Asynchronous	Asynchronous	Asynchronous
Transmission mode	Half/full duplex	Full duplex	Full duplex	Full duplex
Interface	RS-232-C, V.24	RS-232-C, V.24, V.28	RS-232-C, V.24	RS-232-C
Autospeed/autoparity available	Yes	Yes	Yes, split speed	Yes
Channel config. data downline loadable	Yes	Yes	Yes	Yes
Ports config. for perm./switched circ.	Yes, both	Yes	Yes, both	Yes
NETWORK CHANNEL SPECIFICATIONS				
Number X.25 channels supported	Up to 224	One	Two	Two
Interface	RS-232-C, V.24, V.35	RS-232-C, V.24, V.28	RS-232-C, V.24	RS-232-C or RX-422
Maximum transmission rate, in bps	64K	19.2K	56K	64K per X.25 channel
Synchronization	Synchronous X.25	Synchronous	Synchronous	Synchronous
Transmission mode	Full duplex	Full duplex	Full duplex	Full duplex
Number virtual circuits supported	224	64	4, 8, 12, 16	16
Max. window size supported, in frames	7	7	7	7
Link-level framing supported	HDLC or BSC	LAPB	HDLC	HDLC, LAPB, or LAP
DIAGNOSTICS	Remote	Self-tests, remote and local live tests, status LEDs, loop back tests	Link loopback test, H/w self test, term. alphas test, status LEDs, self test, remote & local tst	Status LEDs, local and remote diagnostics and statistics
FEATURES				
Channel priority assignment	Yes	No	Yes	Yes
Password protection	Yes	Yes	Yes	Yes
Supervisory port	Yes	Yes	Yes	No
Echoplex	Yes	Yes	Yes	Yes
Autodialer supported	Yes	Yes	Yes	Yes
PRICING AND AVAILABILITY				
Purchase, \$	40,800—74,150	1,800 (FBP)*	—	2,500—5,500
Rental, \$ month-to-month	1,950—2,530	—	—	—
Installation, \$	2,120	—	Contact vendor	No charge
Maintenance, \$ Annual	2,520—4,680	150	Contact vendor	1 yr factory warranty
Serviced by	Vendor on site	Hewlett Packard	Vendor or third party	Vendor-factory
Availability	—	6 weeks	30	30 days
Date of first comm. delivery of this model	1984	January 1985	—	1984
Number installed to date	—	—	—	—
COMMENTS	Features: multitrunks with speeds up to 64K; statistics & alarm reporting; field upgrad. to 4800 processors; full call accounting; local & transit switching; auto reconnect; call redirect to alternate destination DTE	*\$700 to \$800 per 4-port card (FBP), symbolic addressing, user definable profile, configuration menu, remote configuration	Network certification CSA, UL	Split speed, remote diagnostics, statistics and dual 64K bps X.25 links, field upgradeable for port size

### X.25 Packet Assemblers/Disassemblers (PADs)

MANUFACTURER & MODEL	Micom Systems Micro800 X.25 Concentrator PAD	Protocol Computers, Inc. 1076X	Protocol Computers, Inc. 73SX	Protocol Computers, Inc. R73SX
NETWORK CERTIFICATION	Telenet, Datapac, Uninet, Tymnet, Transpac, DN-1, PSS, DCS, Saponet, Datex-P	—	—	—
CCITT RECOMMENDATION SUPPORTED	X.25 (Levels 1, 2, 3), X.3, X.28, X.29, X.121	All	All	All
BUFFER MEMORY CAPACITY	32K	—	—	—
ADDITIONAL RAM AVAILABLE	No	—	—	—
DEVICE CONFIGURATIONS	Host, terminal concentrator	—	—	—
INPUT SPECIFICATIONS				
Number and type of devices supported	4, 8, 12, 16 async ports	Up to seven ASCII devices	Up to eight SNA/SDLC devices	Up to three SNA/SDLC physical unit connections
Connections supported	Direct	Direct, access via dial-up modem	Direct connect, dial-up or leased	Direct connect, dial-up or leased
Maximum input rate per port, in bps	9600	1200	1200	1200
Maximum aggregate input rate, in bps	100K (burst mode)	—	—	—
Synchronization	Asynchronous	Asynchronous	Asynchronous	Asynchronous
Transmission mode	Full duplex	Full duplex	Full duplex	Full duplex
Interface	RS-232-C, current loop, V.24	RS-232-C	RS-232-C	RS-232-C
Autospeed/autoparity available	Yes	—	—	—
Channel config. data downline loadable	Yes	—	—	—
Ports config. for perm./switched circ.	Yes	Yes (switch sel.)	Yes (switch sel.)	Yes (switch sel.)
NETWORK CHANNEL SPECIFICATIONS				
Number X.25 channels supported	One	One	One	One
Interface	RS-232-C, V.24	RS-232-C	RS-232-C	RS-232-C
Maximum transmission rate, in bps	9600	9600	9600	9600
Synchronization	Synchronous	Asynchronous	Asynchronous	Asynchronous
Transmission mode	Full duplex	Full duplex	Full duplex	Full duplex
Number virtual circuits supported	Up to 26	Seven	Eight	Three
Max. window size supported, in frames	7	—	Seven	Seven
Link-level framing supported	HDLC, LAPB	—	—	—
DIAGNOSTICS	Remote and local line tests, status LEDs, self-tests, terminal/modem loopback	—	—	—
FEATURES				
Channel priority assignment	Yes	—	—	—
Password protection	Yes	—	—	—
Supervisory port	Yes	—	—	—
Echoplex	Yes	—	—	—
Autodialer supported	—	—	—	—
PRICING AND AVAILABILITY				
Purchase, \$	2,050/2,750/3,700/4,600	3,350/1 prt; 4,300/3 prt 5,150/5 prt; 5,800/7 prt	5,500	5,500
Rental, \$ month-to-month	—	None	—	—
Installation, \$	—	—	—	—
Maintenance, \$ Annual	—	320/460/520/680	520	520
Serviced by	Factory	Vendor	Vendor	Vendor
Availability	60 days	—	—	—
Date of first comm. delivery of this model	November 1982	1983	1983	1983
Number installed to date	1200	—	—	—
COMMENTS		Provides interface between X.25 network and ASCII terminals to ASCII or SDLC host; also provides ASCII-to-SDLC conversion	An SNA/SDLC to X.25 protocol converter for host connections; works with PCI 1076X and/or PCI R73SX to provide complete X.25 access in SNA/SDLC environment	An SNA/SDLC to X.25 protocol converter for SNA/SDLC devices; also supports nonSNA or non-3270-type devices when connected via other PCI protocol converters

**X.25 Packet Assemblers/Disassemblers (PADs)**

MANUFACTURER & MODEL	Protocom Devices P2500	Protocom Devices P250	Tymnet Asynchronous Terminal Concentrator (ATC)
NETWORK CERTIFICATION	Datapac, Transpac, Telenet, Tymnet, DN-1	Datapac, Transpac, Telenet, Tymnet, DN-1	Tymnet
CCITT RECOMMENDATION SUPPORTED	All supported (1980)	All supported (1980)	All
BUFFER MEMORY CAPACITY ADDITIONAL RAM AVAILABLE DEVICE CONFIGURATIONS	96K Not necessary HPAD, TPAD, controller, port selector	32K Not necessary HPAD, TPAD, controller	— — Terminal concentrator
INPUT SPECIFICATIONS Number and type of devices supported	40 Sync term. dev: incl. 3270 BSC, SNA, Uniscope, Burroughs PS, others	10 Sync devices: 3270 BSC, SNA, Uniscope, Burroughs PS, others	Up to 8 Async ASCII devices (terminals, PCs)
Connections supported	Direct, dial-up, leased line	Direct, dial-up, leased line	Direct, dial-up, via modem
Maximum input rate per port, in bps Maximum aggregate input rate, in bps Synchronization	9600 38.4K Sync, polling sync.	9600 9600 Sync., polling sync.	9600 — Asynchronous
Transmission mode Interface	Half/full duplex RS-232-C	Full/half duplex RS-232-C	Half/full duplex RS-232-C, V.24
Autospeed/autoparity available Channel config. data downline loadable Ports config. for perm./switched circ.	Not Applicable Yes Yes	Not applicable Yes Yes	Standard — Yes
NETWORK CHANNEL SPECIFICATIONS Number X.25 channels supported Interface	One RS-232-C, X.21 bis	One RS-232-C, X.21 bis	Two RS-232-C
Maximum transmission rate, in bps Synchronization Transmission mode Number virtual circuits supported Max. window size supported, in frames Link-level framing supported	19.2K Synchronous Full duplex 42 25 HDLC, LAPB	9600 Synchronous Full duplex 12 25 HDLC, LAPB	9600 Synchronous Half/full duplex — — —
DIAGNOSTICS	Local & remote diag., polling self-test, stat. LEDs, remote alarm, stat reporting, statistics	Local & remote diag., polling self-test, stat. LEDs, remote alarm, Statistics, stat. report	Self tests, status LEDs, line monitor
FEATURES Channel priority assignment Password protection Supervisory port Echoplex Autodialer supported	No Yes; dual level Yes; local and remote Not Applicable No	No Yes; dual level Yes; local and remote Not Applicable No	— In network NCC Preconfig. to N.C.C. Yes —
PRICING AND AVAILABILITY Purchase, \$	6,000—10,500	2,500—5,000	3,300
Rental, \$ month-to-month Installation, \$	— —	— —	85-165 250
Maintenance, \$ Annual Serviced by Availability	150 Swapping/Vendor, 3rd party 10-60 days	100 Swapping/Vendor, 3rd party 10-60 days	Contact Vendor Vendor-depot 60—90 days
Date of first comm. delivery of this model Number installed to date	December 1983 300	June 1985 New product	August 1984 100
COMMENTS	Fully featured session layer (based on OSI architecture), dual-level network security, end-to-end data integ., data streaming, dual sessions, network mgmt., remote configuration, polling address mapping, port pooling, auto-connect, auto-reconnect, local switching	Fully featured session layer (based on OSI architecture), dual-level network security; end-to-end data integ., data streaming, dual sessions, network mgmt, remote configuration, polling address mapping, port pooling, auto-connect, auto-reconnect, local switching	Device operates with Tymnet network only; used as end node in packet-switched network.

**X.25 Packet Assemblers/Disassemblers (PADs)**

MANUFACTURER & MODEL	Advanced Computer Communications IF-11/X.25 Plus	BBN Communications C/10 PAD	Cableshare CSJ—X.25	Cableshare LSI—X.25
NETWORK CERTIFICATION	Telenet, Tymnet, Uninet	No	Telenet, Tymnet, Data-pac, FIPS100	—
CCITT RECOMMENDATION SUPPORTED	X.3, X.28, X.29	All	X.25 (1, 2, & 3); X.3, X.28, X.29	X.25 (1, 2, & 3); X.3, X.29
BUFFER MEMORY CAPACITY	12K	256K + 64K/8 lines	Up to 128K	24K
ADDITIONAL RAM AVAILABLE	No	Yes—addtl. 128K	Yes	Yes
DEVICE CONFIGURATIONS	Terminal concentrator	Host, terminal concentrator	Host concentrator, terminal concentrator, stat mux	Host/terminal concentrator, Telex/Teletex gateway
INPUT SPECIFICATIONS				
Number and type of devices supported	Up to 32 asynchronous terminals	Up to 64 async lines, up to 32 sync lines; 128 devices max.	Up to 16 asynchronous	Up to 64 asynchronous or 8 synchronous teletex
Connections supported	Direct connection, access via dial-up modem	Direct, dial-up, leased line	Direct, dial-up	Direct, dial-up
Maximum input rate per port, in bps	9600	9600	19.2K	9600
Maximum aggregate input rate, in bps	32K bps	112K	—	—
Synchronization	Asynchronous	Async/sync	Asynchronous	Async/sync
Transmission mode	Full duplex	Half/full duplex	Full duplex	Full duplex
Interface	RS-232-C	RS-232-C; V.24	RS-232-C, RS-423	RS-232-C, RS-423
Autospeed/autoparity available	No	Yes	Yes	Autospeed
Channel config. data downline loadable	No; X.29 param. set cap	Yes	Yes	Yes
Ports config. for perm./switched circ.	No, switched only	Yes	Switched only	Yes
NETWORK CHANNEL SPECIFICATIONS				
Number X.25 channels supported	One X.25 network trunk	One std.; two opt.	Two	Five
Interface	RS-232-C, MIL-118-C 114, MIL-188C, RS-422/423	RS-232-C, V.24, V.35	RS-232-C, RS-423	RS-232-C, RS-423
Maximum transmission rate, in bps	56K	56K/Channel	64K per channel	56K per channel
Synchronization	Synchronous	Synchronous	Synchronous	Synchronous
Transmission mode	Full duplex	Full duplex	Full duplex	Full duplex
Number virtual circuits supported	32	128	Up to 17	Up to 64
Max. window size supported, in frames	7	7	7	7
Link-level framing supported	HDLC-LAPB	HDLC	HDLC	HDLC—BSC/ASCII
DIAGNOSTICS	Host resident board level diagnostics	Self-tests, LEDs, remote & local tests	Self-tests, status LEDs, remote check-out through network	Self-test, on-board link diag., remote loading of dial, over X.25
FEATURES				
Channel priority assignment	No	No	No	No
Password protection	No	Yes	Yes; multiple levels	Yes
Supervisory port	No	No	Yes	Yes
Echoplex	No	Yes	Yes	Yes
Autodialer supported	No	No	Yes	Yes
PRICING AND AVAILABILITY				
Purchase, \$	9,000—24,000	4,000	2,500—4,000	7,710 (8 prt.); 1,760 each add. port
Rental, \$ month-to-month	None	—	—	—
Installation, \$	None	—	300	600
Maintenance, \$ Annual	None	—	—	300
Serviced by	Factory	Vendor on site, factory	Third party	DEC
Availability	45 days	120 days	30 days	30 days
Date of first comm. delivery of this model	1982	February 1984	September 1983	1980
Number installed to date	—	—	150	800
COMMENTS	Host resident front end supports locally attached terminal access to X.25 network & remote terminal access to host from the X.25 network	Multiple protocol support, expandable hardware, multiple microprocessors, automatic virtual-circuit set-up, call accounting downline loading of config. & software parameters	Has 16-bit 8088 microprocessor; remote access for centralized monitoring & network management; on-line help information	Uses DEC LSI-II family hardware; custom-enhancement of software available; local forms storage and field editing

### X.25 Packet Assemblers/Disassemblers (PADs)

MANUFACTURER & MODEL	Digital Communications Associates INA/TIP*	Dynapac Multi-Pad X.25	Dynapac Protopad X.25*	Gandalf Pin 9101E
NETWORK CERTIFICATION	Telenet, Tymnet, Uninet, Autonet, Datapac, & others	Telenet, Tymnet, Uninet, Datapac, Telepac	Telenet, Tymnet, Uninet, Datapac, Telepac	Telenet, Tymnet, Uninet, Datapac, PSS
CCITT RECOMMENDATION SUPPORTED	All rec. supported	X.25 Levels 1, 2, 3; X.3, X.28, X.29	X.25 Levels 1, 2, 3; X.3, X.28, X.29	All supported
BUFFER MEMORY CAPACITY ADDITIONAL RAM AVAILABLE DEVICE CONFIGURATIONS	Approx 15K char. —	10K ROM, 14K RAM Yes; 20K Host concentrator, statistical tdm, terminal concentrator, front-end processor	— — Multiplexing at logical-channel level using Datapac 3033 procd.; host/cluster emulation	— No Host concentrator, terminal concentrator, TDM
INPUT SPECIFICATIONS Number and type of devices supported	Up to 32 async devices	Four or eight async ports	IBM 3270 BSC devices; up to 32 devices on 16 contr. units	Up to 16 asynchronous channels
Connections supported	Direct, via dial-up model	Direct, dial-up via modem	Direct, dial-up via modem	Local remote, dial & private-line modems
Maximum input rate per port, in bps Maximum aggregate input rate, in bps Synchronization	Up to 9600 To 57.6K Asynchronous	110 to 9600 — Asynchronous	To 9600 — Async/sync	50 to 9600 57.6K Asynchronous
Transmission mode Interface	Full duplex RS-232-C; V.24, V.28, 20 ma Yes	Full duplex RS-232-C Yes	Full duplex RS-232-C, V.24 opt. Autobaud to 1200 bps	Half/full duplex RS-232-C, CCITT V.24/V.28 Yes Yes
Autospeed/autoparity available Channel config. data downline loadable Ports config. for perm./switched circ.	Yes; both	Switched	Yes	Yes, either PVC or SVC
NETWORK CHANNEL SPECIFICATIONS Number X.25 channels supported Interface	One RS-232-C, V.24, V.28, 20 ma	One RS-232-C, V.24 opt.*	One One RS-232-C; V.24, X.21 bis opt.	One RS-232-C, V.24/V.28
Maximum transmission rate, in bps Synchronization Transmission mode Number virtual circuits supported Max. window size supported, in frames Link-level framing supported	Up to 19.2K Synchronous Full duplex Up to 32 One to seven HDLC, BSC	9600 Synchronous Full duplex — One to seven HDLC-LAPB or LAP, BSC (Switch sel.)	1200 to 19.2K Synchronous Full duplex — LAP or LAPB	19.2K bps Synchronous Half duplex 16 128 HDLC, LAPB
DIAGNOSTICS	Status LEDs, built-in diagnostics	Software diagnostic port	Diagnostic port	Status LEDs, self-tests, local & remote tests
FEATURES Channel priority assignment Password protection Supervisory port Echoplex Autodialer supported	— — Controller module Yes —	— Yes — Yes Yes	— Yes Diag./config. port — —	Yes Yes Yes Yes —
PRICING AND AVAILABILITY Purchase, \$	1,895—8,445	Contact vendor	1,400	2,650—5,250 depending on model
Rental, \$ month-to-month Installation, \$ Maintenance, \$ Annual Serviced by Availability Date of first comm. delivery of this model Number installed to date	From 76 to 338 (12 mo.) Contact vendor Contact vendor Vendor — — —	Contact vendor Contact vendor Contact vendor Vendor 30 1982 —	— — — Vendor 45 March 1984 New product	Contact vendor Contact vendor Contact vendor Vendor on site 4-6 weeks — —
COMMENTS	Feat. incl. dynamic buffer allocation, bi-directional data flow  *INA-TIP-S supports two, four, six, or eight ports; INA/TIP-L supports up to 32 ports.	Company also offers Multi-Switch X.25 for trunk switching of 4, 8, or 12 trunk config.  *Field kits avail. to convert to V.35	*Model 301-1—one sync port; 341-1—one sync and 3 async ports; 381-1—one sync and 7 async ports; 304-4—four sync ports; 344-4—four sync and four async ports; 388-4—four sync and eight async ports	

## X.25 Packet Assemblers/Disassemblers (PADs)

MANUFACTURER & MODEL	Hewlett Packard HP 2334A	Micom Systems Micro 800 X.25 Models M854/M858/ M8512/M8516	Protocol Computers, Inc. 1076X	Protocom Devices P2500
NETWORK CERTIFICATION	Telenet, Tymnet, Transpac, Datex-P, DN-1, Telepac, PSS, DCS	Telenet, Datapac, Uninet, Tymnet, Transpac and others	—	Datapac, Transpac, Telenet, Tymnet
CCITT RECOMMENDATION SUPPORTED	All supported	X.25 (Levels 1, 2, 3), X.3, X.28	Yes; all	All supported (1980)
BUFFER MEMORY CAPACITY	32K	64K	—	32K
ADDITIONAL RAM AVAILABLE	No	No	—	Not necessary
DEVICE CONFIGURATIONS	Terminal concentrator	Host, terminal concentrator	—	HPAD, TPAD
INPUT SPECIFICATIONS				
Number and type of devices supported	Up to 16 async devices	4, 8, 12, 16 async ports	Up to seven ASCII devices	40 Synchronous terminal devices
Connections supported	Direct connect	Dedicated using modems, modem eliminators, dial-in, dial-out direct	Direct, access via dial-up modem	Direct, dial-up, leased line
Maximum input rate per port, in bps	9600	9600	1200	9600
Maximum aggregate input rate, in bps	—	100K (burst mode)	—	38.4K
Synchronization	Async	Asynchronous	Asynchronous	Synchronous
Transmission mode	Full duplex	Full duplex	Full duplex	Full duplex
Interface	RS-232-C, V.24, V.28	RS-232-C, current loop, V.24	RS-232-C	RS-232-C
Autospeed/autoparity available	Yes	Yes	—	Not Applicable
Channel config. data downline loadable	No	Yes	—	Yes
Ports config. for perm./switched circ.	Yes	Yes	Yes (switch sel.)	Yes
NETWORK CHANNEL SPECIFICATIONS				
Number X.25 channels supported	One	One	One	One
Interface	RS-232-C, V.24, V.28	RS-232-C, V.24	RS-232-C	RS-232-C, X.21
Maximum transmission rate, in bps	19.2K	9600	9600	19.2K
Synchronization	Synchronous	Synchronous	Asynchronous	Synchronous
Transmission mode	Full duplex	Full duplex	Full duplex	Full duplex
Number virtual circuits supported	64	Up to 26	Seven	128
Max. window size supported, in frames	7	7	—	7
Link-level framing supported	LAPB	HDLC	—	HDLC, LAPB
DIAGNOSTICS	Self-tests, remote diagnostics, local switches tests, terminal/modem loop back tests, sts LED	Remote and local line tests, status LEDs, self-tests	—	Watchdog timer, status LEDs, remote test
FEATURES				
Channel priority assignment	No	Yes	—	No
Password protection	No	Yes	—	Yes; dual level
Supervisory port	Yes	Yes	—	Yes
Echoplex	Yes	Yes	—	Not Applicable
Autodialer supported	No	Yes	—	Not Applicable
PRICING AND AVAILABILITY				
Purchase, \$	2,350 (US), 2,150 (FBP)*	2,050/2,750/3,700/4,600	4,600 (1 prt.); 6,000 (3 prt.); 7300(5 prt.)*	5,000—9,800
Rental, \$ month-to-month	—	—	None	None
Installation, \$	—	—	—	Negotiable
Maintenance, \$ Annual	156	—	30/45/50/65	150
Serviced by	Vendor, on site	Factory	Vendor	Swapping/Vendor, 3rd party
Availability	8 weeks	60 days	—	30-60 days
Date of first comm. delivery of this model	—	November 1982	1983	December 1983
Number installed to date	—	1200	—	100
COMMENTS	*Above price without terminal interface card,—\$500 (US) or \$550 (FBP) per channel card; support HP workstation line printers; statistical information		Provides interface between X.25 network and ASCII terminals to ASCII or SDLC host; also provides ASCII-to-SDLC conversion  *\$8,500 (8 prt.)	Fully featured session layer (based on OSI architecture), dual-level network security, datastreaming, multiple windows, network management, error handling, supervisory control port, remote diagnostics, remote polling, auto-connect

X.25 Packet Assemblers/Disassemblers (PADs)

MANUFACTURER & MODEL	Protocom Devices P250	SR Systems Inc. SRS 3000 Series*	Tymnet Asynchronous Terminal Concentrator
NETWORK CERTIFICATION	Datapac, Transpac, Telenet, Tymnet	Datapac, Transpac, Telenet, Tymnet, Datex-P, PSS	Tymnet
CCITT RECOMMENDATION SUPPORTED	All supported (1980)	X.25 Levels 1, 2, 3; X.3, X.28, X.29	All
BUFFER MEMORY CAPACITY	32K	—	—
ADDITIONAL RAM AVAILABLE	Not necessary	—	—
DEVICE CONFIGURATIONS	HPAD, TPAD	Terminal concentrator, td multiplexer, port selector	Terminal concentrator, host processor
INPUT SPECIFICATIONS			
Number and type of devices supported	10 Sync terminal devices	Up to 16 async ASCII devices (four-port incr.)	TTY, IBM 2741, ASCII CRT-up to 8
Connections supported	Direct, dial-up, leased line	Direct, access via dial-up modem	Direct, dial-up, via modem
Maximum input rate per port, in bps	9600	50 to 9600	9600
Maximum aggregate input rate, in bps	38.4K	100K	—
Synchronization	Synchronous	Asynchronous	Asynchronous
Transmission mode	Full duplex	RS-232-C	Half/full duplex
Interface	RS-232-C	Yes	RS-232-C, V.24
Autospeed/autoparity available	Not applicable	Yes	—
Channel config. data downline loadable	Yes	—	—
Ports config. for perm./switched circ.	Yes	—	—
NETWORK CHANNEL SPECIFICATIONS			
Number X.25 channels supported	One	One	Two
Interface	RS-232-C, X.21	RS-232-C	RS-232-C
Maximum transmission rate, in bps	19.2K	To 9600 (19.2K opt.)	9600
Synchronization	Synchronous	—	Synchronous
Transmission mode	Full duplex	Full duplex	Half/full duplex
Number virtual circuits supported	128	—	—
Max. window size supported, in frames	7	—	—
Link-level framing supported	HDLC, LAPB	HDLC	—
DIAGNOSTICS	Watchdog timer, status leads, remote test	Port and link diagnostics, status LEDs	Self tests, status LEDs, line monitor
FEATURES			
Channel priority assignment	No	—	—
Password protection	Yes; dual level	—	—
Supervisory port	Yes	Yes	Preconfig. to N.C.C.
Echoplex	Not Applicable	Yes	—
Autodialer supported	Not Applicable	—	—
PRICING AND AVAILABILITY			
Purchase, \$	1,500—3,000	Contact vendor	3,300
Rental, \$ month-to-month	None	Contact vendor	165
Installation, \$	Negotiable	Contact vendor	210
Maintenance, \$ Annual	150	Contact vendor	65-45
Serviced by	Swapping/Vendor, 3rd party	Vendor	Vendor-depot
Availability	60-90 days	—	—
Date of first comm. delivery of this model	April 1984	—	August 1984
Number installed to date	10	—	New product
COMMENTS	Fully featured session layer (based on OSI architecture), dual-level network security; datastreaming, Multiple windows, network management, error handling, supervisory control port, remote diagnostics, remote polling, auto-connect	*Model 3100—one to four-port OEM config.; Model 3200—one to four-port standalone; Model 3300 four- to sixteen-port standalone	Device operates with Tymnet network only; used as end node in packet-switched network; provides ASCII to EBCDIC and Correspondence to EBCDIC conv.