LANPC MICRONET TM NETWORKING FOR THE IBM PC From Intercontinental Micro Systems

Intercontinental Micro's LANPC provides a simplified interface between IBM-PCs™ and MicroNet Local Area Networks. It complies with the IBM PC bus standard and can also be used with some PC Compatibles. The LANPC board can also be used to interface with other ARCnet systems and software. The board contains the complete controller for an ARCnet[™] modified token passing network. The LANPC is ideal for converting PC's to LAN Intelligent Workstations, Diskless Workstations and File Processors. The LANPC can also be delivered with an optional 64 KBytes of onboard RAM, expandable to 256K. Onboard RAM can be used to expand system memory, thus allowing you to have both MicroNet and RAM capability into one PC slot. MicroNet protocols allow linking up to 255 nodes per network, each node can be an individual IBM-PC, or any other computer with MicroNet capability. Nodes can also be Individual Workstations, or Bus Structured Networks with up to 16 Slaves per Master. The LANPC has been specifically designed to interface with other ICM hardware and the TurboDOS operating system using the revolutionary TurboLAN™ software drivers. Using Intercontinental's LANPC, and other Intercontinental products you can build a fast, reliable multi-user network with up to 4000 users.

STANDARD FEATURES

- □ 64 or 256 KBytes of Dynamic RAM. (Optional)
- □ 2/4/8 KByte EPROM with network related software.
- □ Fully Interrupt Driven.
- Compatible with ICM's LANS100, S-100
- Bus ARCnet Controller and other ARCnet Controllers.
- □ 16 bit CRC check and generation.
- No host processor overhead for link control.

MICRONET & TURBODOS NETWORK ARCHITECTURE

Intercontinental's revolutionary MicroNET multiuser architecture uses the sophisticated cost effective TurboDOS Operating System. MicroNET provides the flexibility of building multi-user systems with S-100 BUS Structured Networks and ARCnet protocol Local Area Networks.

MicroNET offers:

- Ability to network S-100 Bus Systems, IBM-PC's, some PC Compatibles, ICM's Diskless Workstations.
- Uses Master Processor/File Server such as Intercontinental's CPZ Single Board Computer.

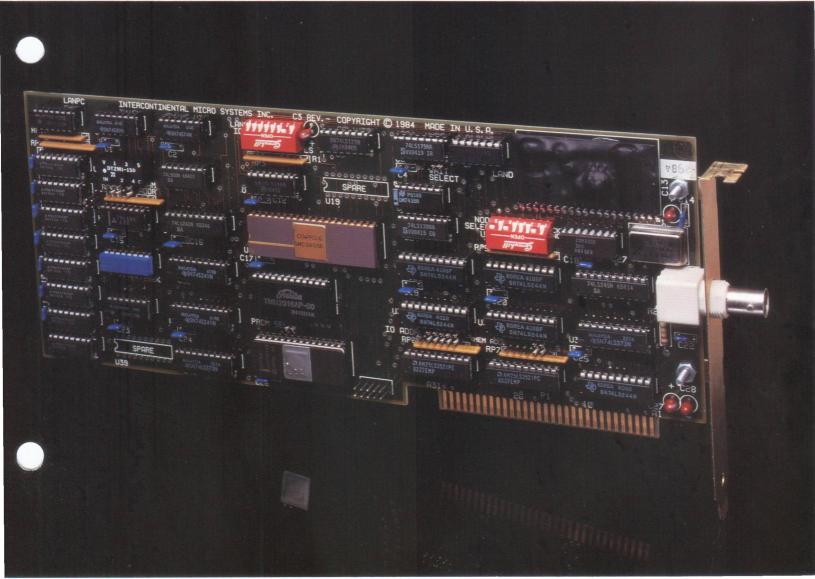
- Up to 4000 users per network with 255 nodes per network.
- Network self configures and efficiency increases as nodes are added.

Up to 40 miles between processors (Active Hub) or 2300 FT. (Passive Hub)

- □ 2.5 MBIT/SEC data transfers.
- □ Communication across S-100 BUS, Coax cable, or twisted pair.

TURBODOS OPERATING SYSTEM

TurboDOS is a true multi-user Operating System because it was designed from its beginnings to handle multiple computers running simultaneously on one



or more networks. Each user is assigned an individual PC or a terminal attached to a Single board Computer/ Processor. This PC or individual processor is called a Slave Processor in the TurboDOS architecture and acts independently of all other slaves on the network. A Master Processor, also known as a File Server, controls the network by downloading the operating system to each slave. The Master also downloads system files and orchestrates the use of all common peripherals. With its modular architecture, TurboDOS can increase the number of users or add peripherals on the network with a general software command that "links and patches." TurboDOS is the most sophisticated, yet cost effective Multi-user operating system available today. It offers FEATURES such as:

- □ Compatible with many OS's Application Software: CP/M, CP/M-86, PC-DOS, MS-DOS, MP/M, MP/M 86, CP/M PLUS, CONCURRENT CP/M 86.
- □ Ability to mix Z-80, 8-bit; and 8086, 16-bit families of processors.
- □ Flexibility to build Bus Structured (Tightly Coupled) Networks and Local Area (Loosely Coupled) Networks using ICM's TurboLAN.
- □ Record and File Locking with File Sharing among multiple users.
- □ Typically 300% faster than CP/M, MP/M, Oasis or similar multi-user, single-processor, multitasking OS's.
- □ 16 Logical Disk Drives per Master Processor/ File Server.
- □ Up to 1000 MB per drive and 134 MB per file.
- □ 32 user areas (file libraries) on each disk.
- □ 25% to 30% more floppy disk capacity.
- □ Sharing of costly peripherals and disk drives.
- Read after Write verification of Floppy Disks and Hard Disks.
- Logon/Logoff & Privileged/Non-privileged Security.
- Background processing & Archival Back-up files.
- Queueing of multiple tasks-processing or printing.
- □ Automatic Print Spooling.
- □ Each individual TurboDOS OS has 4 Circuit Drivers with 255 nodes (slaves) per circuit driver = 1020users per OS.
- □ Multiple File Servers can be linked together with ICM's TurboLAN drivers-theoretically no limit to the number of users on a single network.



Performance Specifications

64/256 KBYTE DYNAMIC RAM:

. none required Wait states . 2/4/8 KBYTE EPROM: Provided with monitor which signs on at reset.

Also provided with software to integrate workstation into TurboDOS network.

NETWORK INTERFACE:

Modified Token Passing Local Area Network.

(ARCnet Protocol)

Transmission Mode Baseband
Transmission MediumCoaxial Cable/RG62 (93 ohm)
Transmission Distance
Without repeaters
With repeaters
Transmission Speed 2.5 Mbps, Typical
Transmission Voltage
Transmit Mode
Receive Mode 6.7V P-P Typical
ATA PACKET BUFFER 2 Kbyte x 8 Bit Statis RAM
Memory transparent during message transfer mode

DA Memory transparent during message transfer mode

POWER REOUIREMENTS:

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Voltages +5 VDC @ 1.0 A (max)
-5 VDC @ 25 MA (max)
Power
OPERATING ENVIRONMENT:
Temperature 0 to 45 Degrees Celsius
Relative Humidity0 to 95%
CONSTRUCTION:
Circuit Board
Vacrel Solder over Bare Copper.
All IC's in Sockets
DIMENSIONS 10 inches x 6 inches
TESTING Completely tested and
24 hour burned-in
WARRANTY.
(Parts and Labor)

TurboDOS is a Trademark of Software 2,000, Inc.

- ARCnet is a Trademark of Datapoint. CP/M, CP/M 86, MP/M, MP/M 86, CP/M PLUS, Concurrent CP/M 86
- are Trademarks of Digital Research
- PC-DOS, IBM-PC are Trademarks of International Business Machines. MS-DOS is a Trademark of Microsoft.
- TurboLAN, MicroNET are Trademarks of Intercontinental Micro Systems

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