# Siemens System 7.800

## MANAGEMENT SUMMARY

With its announcement of the System 7.800 series in October 1978, Siemens became the second mainframe vendor to announce that it was going to market IBM-compatible mainframes as well as its own mainframes. But unlike Control Data and the other vendors of IBM-compatible mainframes, Siemens also announced an IBM-compatible operating system and said it would provide customers with both hardware and software support.

Currently consisting of four models, the large-scale 7.800 range is manufactured by Fujitsu and bears a kissing-cousin relationship to the Amdahl systems. Fujitsu is a major stockholder in and subcontractor to Amdahl. In Japan, Fujitsu markets the systems as the M-180-II AD and M-200 and the operating system as the OS IV/F4.

Siemens has long recognized IBM's ability to set de facto industry standards, and both Siemens old System 4004 and current System 7.500 and System 7.700 ranges are highly compatible with IBM 4300, System/360, and System/370 ranges. But, as any user who has made a conversion knows, compatibility tends to be black and white. You either have it, or you don't. So now Siemens is offering full compatibility, including BS3000, the functional equivalent of IBM's OS/VS2 (MVS).

Originally intended to offer a better price/performance ratio and more power than the IBM 370/168-3, the System 7.800 range was developed at the same time as the IBM 303X series. Thus the 7.800 systems represent carefully planned products, not ones rushed to market after the IBM 303X announcements.

In estimated performance, the 7.870 and 7.872 fall between the 3032 and 3033, the 7.880 falls between the 3033 and the 3033MP, and the 7.882 falls above the 3033MP. The

**Designed as compatible upgrades for IBM System 360 and 370 users, the large-scale System 7.800 computers are competitive with the IBM 3032 and 3033 processors. Available in single and dual processor versions, the 7.800 systems run under BS3000, an operating system compatible with IBM's MVS.**

## CHARACTERISTICS

**SUPPLIER: Siemens Aktiengesellschaft, Bereich Datenverarbeitung, Hofmannstrasse 51, Postfach 70 00 78, D-8000 Munich 70, West Germany. Telephone (089) 722-1. Telex 5 288-0.**

**MANUFACTURER: Fujitsu Ltd., 6-1, Marunouchi 2-chome, Chiyoda-ku, Tokyo, Japan 100. Telephone (03) 216-3211.**

**MODELS: Systems 7.870, 7.872, 7.880, and 7.882.**

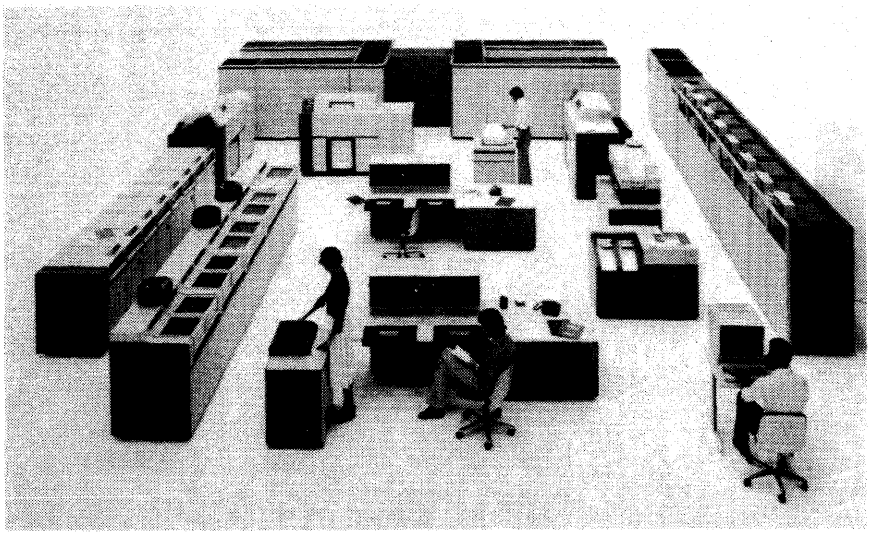
### DATA FORMATS

**BASIC UNIT: The 8-bit byte. Each byte can represent 1 alphanumeric character or 2 BCD digits. Two bytes represent a half-word, 4 bytes a word, and 8 bytes a double-word.**

**FIXED POINT OPERANDS: A half-word can represent a 15-bit signed integer, a word can represent a 31-bit signed integer.**

**FLOATING POINT OPERANDS: A word is used to represent a signed, short floating point number with a 7-bit characteristic and a 24-bit mantissa. A signed, long floating point number can be represented in a double-word with a 7-bit characteristic and a 56-bit mantissa. For extended floating point representation, two 64-bit double-words are used to provide a 7-bit characteristic and a 112-bit mantissa.**

**INSTRUCTIONS: System 7.800 processors have a superset of the IBM System/370 instruction set. The additional 10 instructions are hardware-implemented machine instructions that combine the functions of a number of instructions to reduce overhead.**



Currently the largest model in the Siemens System 7.800 series, the dual-processor 7.882 is designed as a compatible upgrade for large IBM System 360 and System 370 systems.

# Siemens System 7.800

## CHARACTERISTICS OF THE SIEMENS SYSTEM 7.800 SERIES

| MODEL | 7.870 | 7.872 | 7.880 | 7.882 |
|---|---|---|---|---|
| SYSTEM CHARACTERISTICS | | | | |
| Date of introduction | October 1978 | October 1978 | October 1978 | October 1978 |
| Date of first delivery | Late 1979 | Late 1979 | Late 1979 | Late 1979 |
| Number of central processors | 1 | 2 | 1 | 2 |
| Principal operating systems | BS3000 | BS3000 | BS3000 | BS3000 |
| Production status | New production | New production | New production | New production |
| Purchase price, typical system | DM 6,000,000 | DM 8,000,000 | DM 10,000,000 | DM 12,000,000 |
| MAIN STORAGE | | | | |
| Storage type | MOS | MOS | MOS | MOS |
| Read cycle time, nanoseconds | — | — | — | — |
| Write cycle time, nanoseconds | — | — | — | — |
| Bytes fetched per cycle | 8 | 8 | 8 | 8 |
| Storage interleaving | 4-way | 4-way | 4 x 16 max. | 4 x 16 max. |
| Minimum capacity, bytes | 2,097,152 | 4,194,304 | 4,194,304 | 4,194,304 |
| Maximum capacity, bytes | 8,388,608 | 16,777,216 | 16,777,216 | 16,777,216 |
| Increment size, bytes | 1,048,576 | 1,048,576 | 2,097,152 | 2,097,152 |
| Error correcting memory | Standard | Standard | Standard | Standard |
| BUFFER STORAGE | | | | |
| Cycle time, nanoseconds | 70 | 70 | 52 | 52 |
| Bytes fetched per cycle | 4, 8 | 4, 8 | 4, 8 | 4, 8 |
| Capacity, bytes | 16,384 | 16,384 x 2 | 65,536 | 65,536 x 2 |
| Time to fetch 8 bytes, nanoseconds | 140 | 140 | 52 | 52 |
| RELOADABLE CONTROL STORAGE | | | | |
| Capacity | 8,192 96-bit words | 8,192 96-bit words per CPU | — | — |
| PROCESSING UNIT | | | | |
| Machine cycle time, nanoseconds | 70 | 70 | 26 | 26 |
| Relative performance level (est.) | 1 | 1.67 | 2.6 | 4.25 |
| Instruction prefetching | Standard | Standard | Standard | Standard |
| Processing unit features | | | | |
| Clock Comparator and CPU Timer | Standard | Standard | Standard | Standard |
| Dynamic Address Translation | Standard | Standard | Standard | Standard |
| Floating-Point | Standard | Standard | Standard | Standard |
| Direct Control | Standard | Standard | Standard | Standard |
| Instruction Retry Hardware | Standard | Standard | Standard | Standard |
| Multiprocessor systems | | | | |
| Tightly coupled | No | Yes | No | Yes |
| Loosely coupled | — | No | — | No |
| Attached processor system | — | No | — | No |
| Integrated storage control | Optional | Optional | — | — |
| I/O CONTROL | | | | |
| Integrated channels, standard | 6 | 6 | 12 | 12 |
| Integrated channels, optional | 6 | 6 | 4 | 8 |
| Selector channels | None | None | None | None |
| Data rates, bytes per second | | | | |
| Byte multiplexer | 40,000 | 40,000 | 110,000 | 110,000 |
| Block multiplexer | 1,500,000 | 1,500,000 | 1.6M/3.2M | 1.6M/3.2M |
| Maximum I/O data rate, bytes/second | 12,000,000 | 24,000,000 | 20,000,000 | 20,000,000 |

CPU cycle time of the 7.87X machines is 12.5 percent faster than that of the 3032, and the cycle time of the 7.88X processors is 54.4 percent faster than that of the 3033 and 3033MP. However, the 7.870, 7.880, and 7.882 have lower maximum input/output data rates than the 3032, 3033, and 3033MP, respectively. The significance to the user of these and other differences in design can only be determined in the context of specific applications.

Not all of the Siemens software is compatible with the IBM software, and users of IBM's IMS and SNA software would have to decide whether to stay with the IBM software or convert to Siemens' Advanced Information

**INTERNAL CODE: EBCDIC.**

### MAIN STORAGE

**STORAGE TYPE: N-MOS semiconductor memory composed of 16K-bit chips is used for all models.**

**CAPACITY: See Characteristics Table.**

**CYCLE TIME: See Characteristics Table.**

**CHECKING: Error detection and single-bit-error correction are standard on all models. If an error is detected and corrected during a data transfer from main memory to the buffer memory, the corrected data is then automatically written back to main memory to eliminate the error.**

# Siemens System 7.800

Management (AIM) system and Future Network Architecture (FNA). The trade-off is IBM compatibility versus what Siemens considers better software. AIM follows the Codasyl specifications for data base management and FNA supports links to non-IBM-compatible equipment.

The good news, of course, is that a user could bring in a System 7.800 and run it under the IBM system software for a limited time. Conversions to Siemens system software could be scheduled at the user's convenience.

Siemens is proud of the advanced technology of the System 7.800, but the vendor is basically selling three benefits: compatibility, a better price/performance ratio, and early delivery.

## COMPETITIVE POSITION

Siemens calls the System 7.800 range "the alternative." It could be called the "complete alternative," because Siemens, at this time, is the only vendor to offer both IBM-compatible hardware and software and support for both. (Fujitsu's version of the operating system is not completely compatible with IBM's MVS.) Siemens cautions, however, that while the majority of IBM Program Products will run under BS3000, the degree of compatibility above the user-interface level varies from product to product.

In the CPU-replacement market, the 7.800 series will be competing with the Amdahl 470 Systems and the Itel Advanced Systems. Potential customers are sites that want to upgrade their CPU's or add additional CPU's. But in the system-conversion market, composed of sites that are considering switching from another vendor to IBM, the System 7.800 offers the only complete alternative.

Deliveries of 7.800 systems are scheduled to begin in late 1979. Because of the backlog of orders for 303X systems, users may find that the most important advantage of the 7.800 systems is availability.□

**STORAGE PROTECTION: Each 2K block of memory has a 7-bit key that includes a 4-bit access code, a reference bit, an alteration bit, and a write-protection bit.**

## CENTRAL PROCESSORS

**There are currently two CPU models in the 7.800 series, each of which can be ordered in a single or dual processor configuration. Both models have a separate channel processor and a separate service processor. In addition, the smaller model has 8K 96-bit words of reloadable control storage and, optionally, an integrated disk controller. The larger model cycles more than twice as fast, has four times as much cache memory, and twice as many standard channels.**

**REGISTERS: Both models have 16 general purpose, 32-bit registers; 16 32-bit control registers; and 4 64-bit floating point registers.**

**INSTRUCTION REPERTOIRE: The System 7.800 instruction set includes the System/370 Univeral Instruction Set plus ten "macro-instructions" used by the operating system to reduce overhead.**

**CACHE MEMORY: All System 7.800 models have a buffer memory of either 16K or 64K bytes. Data is transferred from main memory to the buffer 32 bytes at a time (four blocks of 8 bytes each), and from the buffer to the CPU 4 or 8 bytes at a time.**

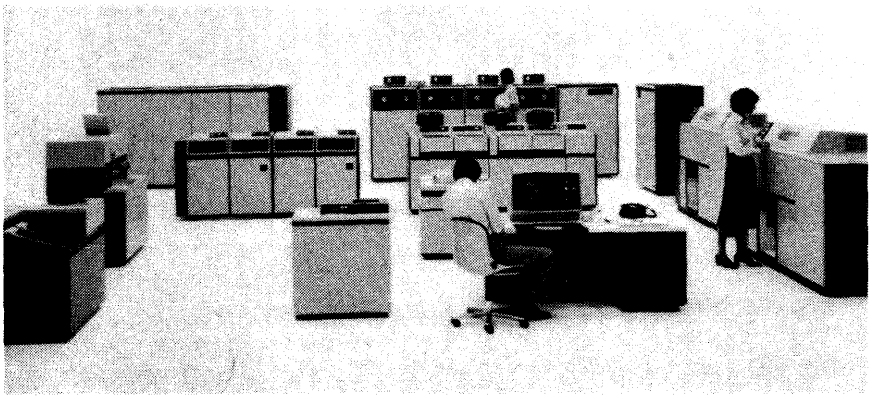
**CONTROL STORAGE: The smaller processor has 8K 96-bit words of reloadable control storage. The larger processor is hard-wired.**

**DYNAMIC ADDRESS TRANSLATION: The 7.870 can support 15 virtual memory spaces of 16 megabytes each, and the 7.880 can support up to 128 virtual memory spaces of 16 megabytes each. Virtual addresses, composed of an 8-bit segment number, a 4-bit page number, and a 12-bit displacement number, are translated by hardware in the Storage Control Unit. To reduce the need to fetch tables from memory, a translation lookaside buffer holds information on the most recently used 256 pages. A segment table origin stack is used to keep track of which virtual space each page belongs.**

**COMPATIBILITY FEATURES: The 7.800 series are software compatible with the IBM System/370 and 303X processors running under MVS.**

**SIMULTANEITY: The 7.870 executes one instruction and preprocesses the next instruction at the same time. The 7.880 has a six-stage pipeline and can execute one instruction while preprocessing up to five more instructions at the same time. When a branch instruction is identified by the 7.880, both the next instruction and the instruction located at the branch address are preprocessed.**

**Memory on the 7.87X models is four-way interleaved, and the Storage Control Unit fetches 8 bytes at a time from each**



A single-processor system, the 7.870 is the smallest model in the Siemens System 7.800 series of IBM-compatible mainframes. Currently comprised of four models, the System 7.800 family offers a competitive alternative to the IBM 303X series.

# Siemens System 7.800

The 3807 console for the 7.870 includes a color display and an integrated cartridge disk drive for loading diagnostic software. Dual-processor 7.872 models require two 3807 consoles.

memory block, transferring 32 bytes at a time to the cache memory. Interleaving on 7.88X models depends on installed capacity and can be up to 4 x 16-way interleaving.

## INPUT/OUTPUT CONTROL

CONSOLE I/O: Each processor is equipped with a console that includes a service processor, a color display, a keyboard, and a cartridge disk drive. Consoles on the 7.880 have two displays, two keyboards, and two disk drives, so a 7.882 system has four displays, four keyboards, and four disk drives. The console processor handles operator communications with the system and also runs diagnostic programs. To simplify communications, the operator can use a light pen to select operations from lists displayed by the system.

3807 CONSOLE: This desk-sized unit contains a single display, single keyboard, and single disk drive for loading diagnostic software. One 3807 is required for the 7.870 and two for the dual-processor 7.872.

3808 CONSOLE: This desk-sized unit contains two displays, two keyboards, and two disk drives for loading diagnostic software. Normally, one station is used for operation and the other for maintenance activities. One 3808 is required for the 7.880 and two for the dual-processor 7.882. On 7.882 systems, either console can access any part of either system.

I/O CONTROL: Peripherals are attached to 7.800 systems via independent Input/Output Processors (IOP's) which support both byte multiplexer and block multiplexer channels and which include their own dynamic address translation hardware for channel commands.

A 7.870 system has one IOP with one byte multiplexer and five block multiplexer channels. Up to six channels and four integrated disk controllers can be added. Byte multiplexers have a transfer rate of 40 kilobytes/second, (200 kilobytes per second total in multiplexer or burst mode), block multiplexers 1.5 megabytes/second, and the file controller 806 kilobytes/second. The total transfer rate of the IOP is 12 megabytes/seconds.

A 7.872 system has two IOP's, each accessible to either processor.

A 7.880 system has one IOP with two byte multiplexer and 10 block multiplexer channels. Up to four more channels can be added, and the IOP can support up to 1,024 subchannels. Byte multiplexers have a transfer rate of 110 kilobytes/second, and block multiplexers 1.6 megabytes/second, or, with the two-byte feature, 3.2 megabytes/second. The total transfer rate of the IOP is 20 megabytes/second.

A 7.882 system has two IOP's, each accessible to either processor.

## MASS STORAGE

Siemens currently offers two types of IBM-compatible disk drives with the 7.800 systems: removable disk pack drives with a capacity of 200 megabytes per drive and fixed media drives with a capacity of 317 megabytes per drive.

## MAGNETIC TAPE UNITS

Siemens currently offers IBM-compatible tape drives with recording densities of 800, 1,600, or 6,250 bits/inch.

## HIGH SPEED PRINTERS

3833 PRINTER: A chain printer, the 3833 can print at rates up to 3,500 lines/minute when equipped with a 16-character set and 2,000 lines/minute with a 48-character set. Other sets available have 60, 63, and 120 characters, respectively, resulting in maximum printing rates of 1,477 and 1,060 lines/minute, respectively. Lines can be 132 or 136 characters long, or, optionally, 150 characters long. Printing is 10 characters/inch at 6 or 8 lines/inch. An optional two-channel adapter allows the printer to be switched between two 7.800 systems. Character chains are packaged in interchangeable cassettes.

## PUNCHED CARD UNITS

3815 CARD READER: This unit reads 80-column cards at up to 1,250 cards/minute. The hopper holds 2,000 cards and each of the two stackers holds 1,800 cards. The unit can be optionally equipped to read mark sense cards and cards containing both punches and marks. A two-channel option also is available.

3816 CARD PUNCH: This unit punches 80-column cards at up to 250 cards/minute and has a 2,000-card hopper, two 1,000-card stackers, and a 200-card reject pocket. The unit can be optionally equipped to print up to 25 lines of up to 64 characters each on cards as it punches them. A two-channel option also is available.

## TERMINAL SUBSYSTEMS

3880 TERMINAL SYSTEM: This subsystem is composed of a 3881 cluster controller, 3886 display terminals, and, optionally, 3888 printer terminals.

3881 CLUSTER CONTROLLER: Connectable to either a byte or block multiplexer channel of a 7.800 system, the controller may be located up to 100 meters from the system. Terminals may be connected to the controller by coaxial cable up to 600 meters long. Able to support four terminals, the controller can be expanded, in steps of four, to support a total of 32 terminals. Maximum data throughput is 600 kilobytes/second.

3886 DATA DISPLAY TERMINAL: Using a 7 x 9 dot matrix, the unit can display up to 1,920 characters in 24 lines of 80 characters. Features include two levels of brightness, flashing, blanking, protected fields, and numeric and alphanumeric fields. The keyboard can be optionally equipped with a function keypad and a numeric keypad. Other options include a light pen and a badge reader. The display comes with a 63-character set.

# Siemens System 7.800

**3888 PRINTER TERMINAL: Connected directly to the cluster controller, the printer is treated as an independent terminal. Equipped with a 1,920-character buffer to match the characteristics of the display terminals, the 3888 prints at up to 150 lines/minute. The unit prints at 10 characters/inch, 136 characters to the line, and 6 or 8 lines/inch using a 63-character set.**

## DATA COMMUNICATIONS

**3892 COMMUNICATION CONTROL PROCESSOR: A programmable subsystem with 128K to 1,024K bytes of memory, the 3892 can support up to 512 asynchronous or synchronous half-duplex lines at speeds up to 9,600 bits/second. The processor uses the IBM 3705-II instruction set and supports IBM BSC communication protocol. Data is transferred to and from the host 7.800 system in burst mode via a channel adapter and either a byte or block multiplexer channel. The 3892 has one to four communications scanners, each of which can support up to 32 line sets. Each line set can support up to four lines.**

**The 3892 runs under a Network Control Program (NCP) generated on the 7.800 by selecting macros from a range of functions. The NCP is downline loaded to the 3892.**

## SOFTWARE

**BS3000 OPERATING SYSTEM: BS3000, the functional equivalent of and compatible with IBM's OS/VS2 (MVS), is a virtual memory control system that supports batch, interactive, and multi-user jobs in a multiprogrammed environment composed of multiple virtual storage spaces. Each job can have up to 16 megabytes of virtual memory, provided that the system has sufficient disk storage space.**

**LANGUAGES: Siemens offers IBM-compatible compilers for COBOL, FORTRAN, and PL/1 plus ALGOL, BASIC and an Assembler.**

**UTILITIES: Siemens offers a full complement of IBM-compatible utilities.**

**DATA BASE MANAGEMENT SYSTEM: The 7.800 systems use the Advanced Information Management system (AIM) which satisfies the same requirements as IBM's IMS but which follows the Codasyl standard.**

**DATA COMMUNICATIONS SOFTWARE: The 7.800 systems support Future Network Architecture (FNA), the functional equivalent of IBM's SNA.**

## PRICING

**System 7.800 systems are available for purchase and on one-year rental and three and four-year lease plans. Listed below are Datapro's estimates of the prices that were in effect in the German Federal Republic at the time this report was written. This information was acquired from publicly available sources and has not been approved by Siemens. For pricing in other countries, please contact the local Siemens office.**

## EQUIPMENT PRICES [1]

| | | Purchase Price DM | Rental [2] (1-year lease) DM | Rental [2] (3-year lease) DM | Rental [2] (4-year lease) DM | Monthly Maintenance DM |
|---|---|---|---|---|---|---|
| **SYSTEM 7.870** | | | | | | |
| 7870 | Central Processor, 2048K Bytes of Main Memory | 3,619,170 | 102,080 | — | 92,590 | 18,810 |
| 87080-30 | Main Memory Extension to 3072K Bytes | 179,200 | 8,290 | — | 7,520 | 510 |
| 87080-40 | Main Memory Extension to 4096K Bytes | 179,200 | 8,290 | — | 7,520 | 510 |
| 87080-50 | Main Memory Extension to 5120K Bytes | 179,200 | 8,290 | — | 7,520 | 510 |
| 87080-60 | Main Memory Extension to 6144K Bytes | 179,200 | 8,290 | — | 7,520 | 510 |
| 87080-70 | Main Memory Extension to 7168K Bytes | 179,200 | 8,290 | — | 7,520 | 510 |
| 87080-80 | Main Memory Extension to 8192K Bytes | 179,200 | 8,290 | — | 7,520 | 510 |
| 87050-2 | Second Byte Multiplexor Channel | 102,303 | 3,015 | — | 2,735 | 227 |
| 87050-3 | Third Byte Multiplexor Channel | 102,303 | 3,015 | — | 2,735 | 227 |
| 87060-6 | Sixth Block Multiplexor Channel | 123,772 | 3,647 | — | 3,308 | 275 |
| 87060-7 | Seventh Block Multiplexor Channel | 123,772 | 3,647 | — | 3,308 | 275 |
| 87060-8 | Eighth Block Mulitplexor Channel | 123,772 | 3,647 | — | 3,308 | 275 |
| 87060-9 | Ninth Block Multiplexor Channel | 123,772 | 3,647 | — | 3,308 | 275 |
| 87060-10 | Tenth Block Multiplexor Channel | 123,772 | 3,647 | — | 3,308 | 275 |
| 87065-1 | First Integrated Disc Controller | 157,770 | 3,638 | — | 3,300 | 405 |
| 87065-2 | Second Integrated Disc Controller | 157,770 | 3,638 | — | 3,300 | 405 |
| 87065-3 | Third Integrated Disc Controller | 157,770 | 3,638 | — | 3,300 | 405 |
| 87065-4 | Fourth Integrated Disc Controller | 157,770 | 3,638 | — | 3,300 | 405 |
| 87066-1 | Extension of First Integrated Disc Controller | 42,560 | 992 | — | 900 | 38 |
| 87066-2 | Extension of Second Integrated Disc Controller | 42,560 | 992 | — | 900 | 38 |
| 87066-3 | Extension of Third Integrated Disc Controller | 42,560 | 992 | — | 900 | 38 |
| 87066-4 | Extension of Fourth Integrated Disc Controller | 42,560 | 992 | — | 900 | 38 |
| 87072 | Multiprocessor Control | 589,680 | 24,210 | — | 21,960 | 603 |
| 87040 | Channel Extension | [3] | [3] | — | [3] | [3] |
| 87051 | Subchannel Extension to Byte Multiplexor | [3] | [3] | — | [3] | [3] |
| 87061 | Subchannel Extension to Block Multiplexor | [3] | [3] | — | [3] | [3] |
| **SYSTEM 7.872** | | | | | | |
| 7872 | Central Processor, 4096K Bytes of Main Memory | 7,828,020 | 228,380 | — | 207,140 | 37,590 |

[1] All prices have been estimated by DATAPRO from publicly available information and have not been approved by Siemens.

[2] Prices include maintenance.

[3] Price not set.

# Siemens System 7.800

## EQUIPMENT PRICES [1]

| | | Purchase Price DM | Rental [2] (1-year lease) DM | Rental [2] (3-year lease) DM | Rental [2] (4-year lease) DM | Monthly Maintenance DM |
|---|---|---|---|---|---|---|
| **SYSTEM 7.880** | | | | | | |
| 7880 | Central Processor, 4096K Bytes of Main Memory | 6,001,060 | 153,380 | — | 139,120 | 21,100 |
| 88080-60 | Main Memory Extension to 6144K Bytes | 358,400 | 16,580 | — | 15,040 | 1,020 |
| 88080-80 | Main Memory Extension to 8192K Bytes | 358,400 | 16,580 | — | 15,040 | 1,020 |
| 88080-100 | Main Memory Extension to 10240K Bytes | 358,400 | 16,580 | — | 15,040 | 1,020 |
| 88080-120 | Main Memory Extension to 12288K Bytes | 358,400 | 16,580 | — | 15,040 | 1,020 |
| 88080-140 | Main Memory Extension to 14336K Bytes | 358,400 | 16,580 | — | 15,040 | 1,020 |
| 88080-160 | Main Memory Extension to 16384K Bytes | 358,400 | 16,580 | — | 15,040 | 1,020 |
| 88050-3 | Third Byte Multiplexor Channel | 158,142 | 5,051 | — | 4,243 | 289 |
| 88050-4 | Fourth Byte Multiplexor Channel | 158,142 | 5,051 | — | 4,243 | 289 |
| 88050-5 | Fifth Byte Multiplexor Channel | 158,142 | 5,051 | — | 4,243 | 289 |
| 88050-6 | Sixth Byte Multiplexor Channel | 158,142 | 5,051 | — | 4,243 | 289 |
| 88060-11 | Eleventh Block Multiplexor Channel | 158,142 | 5,051 | — | 4,243 | 289 |
| 88060-12 | Twelfth Block Multiplexor Channel | 158,142 | 5,051 | — | 4,243 | 289 |
| 88060-13 | Thirteenth Block Multiplexor Channel | 158,142 | 5,051 | — | 4,243 | 289 |
| 88060-14 | Fourteenth Block Multiplexor Channel | 158,142 | 5,051 | — | 4,243 | 289 |
| 88062 | Two-Byte Feature | 2,768 | 85 | — | 77 | 3 |
| 88041 | Subchannel Extension for I/O Processor | [3] | [3] | — | [3] | [3] |
| 88082 | Expansion Processor | 5,898,210 | 135,160 | — | 122,590 | 18,850 |
| **SYSTEM 7.882** | | | | | | |
| 7882 | Central Processor, 4096K Bytes of Main Memory | 11,899,270 | 288,550 | — | 261,710 | 39,950 |
| 88280-60 | Main Memory Extension to 6144K Bytes | 358,400 | 16,580 | — | 15,040 | 1,020 |
| 88280-80 | Main Memory Extension to 8192K Bytes | 358,400 | 16,580 | — | 15,040 | 1,020 |
| 88280-100 | Main Memory Extension to 10240K Bytes | 358,400 | 16,580 | — | 15,040 | 1,020 |
| 88280-120 | Main Memory Extension to 12288K Bytes | 358,400 | 16,580 | — | 15,040 | 1,020 |
| 88280-140 | Main Memory Extension to 14336K Bytes | 358,400 | 16,580 | — | 15,040 | 1,020 |
| 88280-160 | Main Memory Extension to 16384K Bytes | 358,400 | 16,580 | — | 15,040 | 1,020 |
| 3879 | Power Supply Controller | [3] | [3] | — | [3] | [3] |
| 3807 | Service Processor | 193,697 | 5,377 | — | 4,875 | 830 |
| 3803 | Console Printer | [3] | [3] | — | [3] | [3] |
| 3808 | Service Processor | 499,376 | 12,549 | — | 11,378 | 1,440 |
| 3815 | Card Reader 1250 cpm | 76,931 | 2,840 | 2,386 | — | 570 |
| 38152 | Two-Channel Switch | 8,815 | 252 | 212 | — | 47 |
| 38155 | Mark Sheet Reader | 27,276 | 789 | 663 | — | 173 |
| 3816 | Card Punch 250 cpm | 67,949 | 2,571 | 2,160 | — | 461 |
| 38162 | Two-Channel Switch | 8,858 | 281 | 236 | — | 43 |
| 38164 | Multiline Printing Feature | 46,638 | 1,770 | 1,487 | — | 430 |
| 3817 | Floppy Disc | 56,794 | 1,792 | 1,505 | — | 120 |
| 38172 | Two-Channel Switch | 8,222 | 215 | 181 | — | 13 |
| 3833 | Chain Printer | 192,778 | 7,852 | 6,596 | — | 2,254 |
| 38335 | Expansion of Print to 150 | 6,493 | 264 | 222 | — | 60 |
| 38332 | Two-Channel Switch | 15,505 | 476 | 400 | — | 23 |
| 38336-1 | Train Cartridge | 26,859 | 1,268 | 1,065 | — | 680 |
| 38336-2 | Train Cartridge | 26,859 | 1,268 | 1,065 | — | 680 |
| 38336-3 | Train Cartridge | 26,859 | 1,268 | 1,065 | — | 680 |
| 3850-1 | Magnetic Tape Controller | 89,647 | 3,060 | 2,570 | — | 445 |
| 38502-1 | Two-Channel Switch | 13,221 | 445 | 374 | — | 20 |
| 38508-1 | 800-bpi Recording Density Feature | 8,017 | 270 | 227 | — | 4 |
| 3850-2 | Magnetic Tape Controller (2 Channels) | 196,658 | 6,705 | 5,633 | — | 930 |
| 38502-2 | Two-Channel Switch | 26,442 | 892 | 749 | — | 40 |
| 38506-2 | Attachment for Expansion to 16 Drives | 17,363 | 585 | 492 | — | 40 |
| 38508-2 | 800-bpi Recording Density Feature | 16,034 | 540 | 454 | — | 8 |
| 3850-3 | Magnetic Tape Controller (3 Channels) | 291,272 | 9,935 | 8,345 | — | 1,396 |
| 38502-3 | Two-Channel Switch | 39,663 | 1,337 | 1,123 | — | 60 |
| 38506-3 | Attachment for Expansion to 16 Drives | 22,329 | 754 | 633 | — | 60 |
| 38508-3 | 800-bpi Recording Density Feature | 24,051 | 810 | 681 | — | 12 |
| 3850-4 | Magnetic Tape Controller (4 Channels) | 384,634 | 13,119 | 11,020 | — | 1,840 |

[1] All prices have been estimated by DATAPRO from publicly available information and have not been approved by Siemens.

[2] Prices include maintenance.

[3] Price not set.

# Siemens System 7.800

**3888 PRINTER TERMINAL:** Connected directly to the cluster controller, the printer is treated as an independent terminal. Equipped with a 1,920-character buffer to match the characteristics of the display terminals, the 3888 prints at up to 150 lines/minute. The unit prints at 10 characters/inch, 136 characters to the line, and 6 or 8 lines/inch using a 63-character set.

## DATA COMMUNICATIONS

**3892 COMMUNICATION CONTROL PROCESSOR:** A programmable subsystem with 128K to 1,024K bytes of memory, the 3892 can support up to 512 asynchronous or synchronous half-duplex lines at speeds up to 9,600 bits/second. The processor uses the IBM 3705-II instruction set and supports IBM BSC communication protocol. Data is transferred to and from the host 7.800 system in burst mode via a channel adapter and either a byte or block multiplexer channel. The 3892 has one to four communications scanners, each of which can support up to 32 line sets. Each line set can support up to four lines.

The 3892 runs under a Network Control Program (NCP) generated on the 7.800 by selecting macros from a range of functions. The NCP is downline loaded to the 3892.

## SOFTWARE

**BS3000 OPERATING SYSTEM:** BS3000, the functional equivalent of and compatible with IBM's OS/VS2 (MVS), is a virtual memory control system that supports batch, interactive, and multi-user jobs in a multiprogrammed environment composed of multiple virtual storage spaces. Each job can have up to 16 megabytes of virtual memory, provided that the system has sufficient disk storage space.

**LANGUAGES:** Siemens offers IBM-compatible compilers for COBOL, FORTRAN, and PL/1 plus ALGOL, BASIC and an Assembler.

**UTILITIES:** Siemens offers a full complement of IBM-compatible utilities.

**DATA BASE MANAGEMENT SYSTEM:** The 7.800 systems use the Advanced Information Management system (AIM) which satisfies the same requirements as IBM's IMS but which follows the Codasyl standard.

**DATA COMMUNICATIONS SOFTWARE:** The 7.800 systems support Future Network Architecture (FNA), the functional equivalent of IBM's SNA.

## PRICING

System 7.800 systems are available for purchase and on one-year rental and three and four-year lease plans. Listed below are Datapro's estimates of the prices that were in effect in the German Federal Republic at the time this report was written. This information was acquired from publicly available sources and has not been approved by Siemens. For pricing in other countries, please contact the local Siemens office.

## EQUIPMENT PRICES

| | | Purchase Price DM | Rental [1] (1-year lease) DM | Rental [1] (3-year lease) DM | Rental [1] (4-year lease) DM | Monthly Maintenance DM |
|---|---|---|---|---|---|---|
| **SYSTEM 7.870** | | | | | | |
| 7870 | Central Processor, 2048K Bytes of Main Memory | 2,253,400 | 80,115 | | 72,660 | 19,429 |
| 87080-30 | Main Memory Extension to 3072K Bytes | 148,000 | 8,704 | | 7,896 | 550 |
| 87080-40 | Main Memory Extension to 4096K Bytes | 148,000 | 8,704 | | 7,896 | 550 |
| 87080-50 | Main Memory Extension to 5120K Bytes | 148,000 | 8,704 | | 7,896 | 550 |
| 87080-60 | Main Memory Extension to 6144K Bytes | 148,000 | 8,704 | | 7,896 | 550 |
| 87080-70 | Main Memory Extension to 7168K Bytes | 148,000 | 8,704 | | 7,896 | 550 |
| 87080-80 | Main Memory Extension to 8192K Bytes | 148,000 | 8,704 | | 7,896 | 550 |
| 87050-2 | Second Byte Multiplexor Channel | 102,303 | 3,165 | | 2,871 | 245 |
| 87050-3 | Third Byte Multiplexor Channel | 102,303 | 3,165 | | 2,871 | 245 |
| 87060-3 | Third Block Multiplexor Channel | 123,772 | 3,829 | | 3,473 | 297 |
| 87060-4 | Fourth Block Multiplexor Channel | 123,772 | 3,829 | | 3,473 | 297 |
| 87060-5 | Fifth Block Multiplexor Channel | 123,772 | 3,829 | | 3,473 | 297 |
| 87060-6 | Sixth Block Multiplexor Channel | 123,772 | 3,829 | | 3,473 | 297 |
| 87060-7 | Seventh Block Multiplexor Channel | 123,772 | 3,829 | | 3,473 | 297 |
| 87060-8 | Eighth Block Multiplexor Channel | 123,772 | 3,829 | | 3,473 | 297 |
| 87060-9 | Ninth Block Multiplexor Channel | 123,772 | 3,829 | | 3,473 | 297 |
| 87060-10 | Tenth Block Multiplexor Channel | 123,772 | 3,829 | | 3,473 | 297 |
| 87065-1 | First Integrated Disc Controller | 157,770 | 3,819 | | 3,465 | 437 |
| 87065-2 | Second Integrated Disc Controller | 157,770 | 3,819 | | 3,465 | 437 |
| 87065-3 | Third Integrated Disc Controller | 157,770 | 3,819 | | 3,465 | 437 |
| 87065-4 | Fourth Integrated Disc Controller | 157,770 | 3,819 | | 3,465 | 437 |
| 87066-1 | Extension of First Integrated Disc Controller | 42,560 | 1,041 | | 945 | 41 |
| 87066-2 | Extension of Second Integrated Disc Controller | 42,560 | 1,041 | | 945 | 41 |
| 87066-3 | Extension of Third Integrated Disc Controller | 42,560 | 1,041 | | 945 | 41 |
| 87066-4 | Extension of Fourth Integrated Disc Controller | 42,560 | 1,041 | | 945 | — |
| 87067-1 | First Integrated Disc Controller | 189,945 | 5,687 | | 5,158 | 508 |
| 87067-2 | Second Integrated Disc Controller | 189,945 | 5,687 | | 5,158 | 508 |
| 87067-3 | Third Integrated Disc Controller | 189,945 | 5,687 | | 5,158 | 508 |
| 87067-4 | Fourth Integrated Disc Controller | 189,945 | 5,687 | | 5,158 | 508 |
| 87072 | Multiprocessor Control | 394,120 | 12,635 | | 11,460 | 651 |
| 87040 | Channel Extension | [2] | — | | — | — |
| 87051 | Subchannel Extension to Byte Multiplexor | [2] | | | | — |
| 87061 | Subchannel Extension to Block Multiplexor | [2] | | | | — |
| **SYSTEM 7.872** | | | | | | |
| 7872 | Central Processor, 4096K Bytes of Main Memory | 4,900,920 | 172,860 | | 156,780 | 38,815 |

[1] Prices include maintenance.
[2] Price not set.

# Siemens System 7.800

## EQUIPMENT PRICES

| | | Purchase Price DM | Rental [1] (1-year lease) DM | Rental [1] (3-year lease) DM | Rental [1] (4-year lease) DM | Monthly Maintenance DM |
|---|---|---|---|---|---|---|
| **SYSTEM 7.880** | | | | | | |
| 7880 | Central Processor, 4096K Bytes of Main Memory | 4,860,000 | 144,942 | | 131,460 | 22,788 |
| 88080-60 | Main Memory Extension to 6144K Bytes | 296,000 | 17,409 | | 15,792 | 1,101 |
| 88080-80 | Main Memory Extension to 8192K Bytes | 296,000 | 17,409 | | 15,792 | 1,101 |
| 88080-100 | Main Memory Extension to 10240K Bytes | 296,000 | 17,409 | | 15,792 | 1,101 |
| 88080-120 | Main Memory Extension to 12288K Bytes | 296,000 | 17,409 | | 15,792 | 1,101 |
| 88080-140 | Main Memory Extension to 14336K Bytes | 296,000 | 17,409 | | 15,792 | 1,101 |
| 88080-160 | Main Memory Extension to 16384K Bytes | 296,000 | 17,409 | | 15,792 | 1,101 |
| 88050-3 | Third Byte Multiplexor Channel | 158,142 | 5,303 | | 4,455 | 312 |
| 88050-4 | Fourth Byte Multiplexor Channel | 158,142 | 5,303 | | 4,455 | 312 |
| 88050-5 | Fifth Byte Multiplexor Channel | 158,142 | 5,303 | | 4,455 | 312 |
| 88050-6 | Sixth Byte Multiplexor Channel | 158,142 | 5,303 | | 4,455 | 312 |
| 88060-11 | Eleventh Block Multiplexor Channel | 158,142 | 5,303 | | 4,455 | 312 |
| 88060-12 | Twelfth Block Multiplexor Channel | 158,142 | 5,303 | | 4,455 | 312 |
| 88060-13 | Thirteenth Block Multiplexor Channel | 158,142 | 5,303 | | 4,455 | 312 |
| 88060-14 | Fourteenth Block Multiplexor Channel | 158,142 | 5,303 | | 4,455 | 312 |
| 88062 | Two-Byte Feature | 2,768 | 89 | | 80 | 3 |
| 88041 | Subchannel Extension for I/O Processor | [2] | — | | — | — |
| 88082 | Expansion Processor | 4,970,300 | 138,705 | | 125,811 | 20,358 |
| **SYSTEM 7.882** | | | | | | |
| 7882 | Central Processor, 4096K Bytes of Main Memory | 9,830,300 | 283,647 | | 275,271 | 43,146 |
| 88280-60 | Main Memory Extension to 6144K Bytes | 296,000 | 17,409 | | 15,792 | 1,101 |
| 88280-80 | Main Memory Extension to 8192K Bytes | 296,000 | 17,409 | | 15,792 | 1,101 |
| 88280-100 | Main Memory Extension to 10240K Bytes | 296,000 | 17,409 | | 15,792 | 1,101 |
| 88280-120 | Main Memory Extension to 12288K Bytes | 296,000 | 17,409 | | 15,792 | 1,101 |
| 88280-140 | Main Memory Extension to 14336K Bytes | 296,000 | 17,409 | | 15,792 | 1,101 |
| 88280-160 | Main Memory Extension to 16384K Bytes | 296,000 | 17,409 | | 15,792 | 1,101 |
| 3879 | Power Supply Controller | [2] | — | | | — |
| 3806 | Workstation | 97,500 | 3,055 | | 2,772 | 421 |
| 3807 | Service Processor | 153,020 | 5,645 | | 5,118 | 896 |
| 3808 | Service Processor | 394,510 | 11,854 | | 10,752 | 1,555 |
| 3803-65 | Console Printer | 21,563 | 1,134 | | 952 | 332 |
| 3803 | Console Printer | [2] | — | | — | — |
| 3815 | Card Reader 1250 cpm | 79,238 | 2,982 | 2,505 | | 615 |
| 38152 | Two-Channel Switch | 9,079 | 264 | 222 | | 50 |
| 38155 | Mark Sheet Reader | 28,094 | 828 | 696 | | 186 |
| 3816 | Card Punch 250 cpm | 69,987 | 2,699 | 2,268 | | 497 |
| 38162 | Two-Channel Switch | 9,123 | 295 | 247 | | 46 |
| 38164 | Multiline Printing Feature | 48,037 | 1,858 | 1,561 | | 464 |
| 3817 | Floppy Disc | 58,497 | 1,881 | 1,580 | | 129 |
| 38172 | Two-Channel Switch | 8,468 | 225 | 190 | | 14 |
| 3833 | Chain Printer | 198,561 | 8,244 | 6,925 | | 2,434 |
| 38335 | Expansion of Print to 150 | 6,687 | 277 | 233 | | 64 |
| 38332 | Two-Channel Switch | 15,970 | 499 | 420 | | 132 |
| 38336-1 | Train Cartridge | 27,664 | 1,331 | 1,118 | | 734 |
| 38336-2 | Train Cartridge | 27,664 | 1,331 | 1,118 | | 734 |
| 38336-3 | Train Cartridge | 27,664 | 1,331 | 1,118 | | 734 |
| 38336-4 | Train Cartridge | 27,664 | 1,331 | 1,118 | | 734 |
| 38336-5 | Train Cartridge | 27,664 | 1,331 | 1,118 | | 734 |
| 3814 | Switch | 77,157 | 1,911 | 1,606 | | 151 |
| 38141-11 | Expansion Module | 16,171 | 462 | 388 | | 32 |
| 38141-12 | Expansion Module | 11,113 | 294 | 252 | | 10 |
| 38141-13 | Expansion Module | 16,171 | 462 | 388 | | 32 |
| 38141-14 | Expansion Module | 21,568 | 609 | 514 | | 43 |
| 3850-1 | Magnetic Tape Controller | 92,336 | 3,213 | 2,698 | | 480 |
| 38502-1 | Two-Channel Switch | 13,617 | 467 | 392 | | 21 |
| 38508-1 | 800-bpi Recording Density Feature | 8,257 | 283 | 238 | | 4 |
| 3850-2 | Magnetic Tape Controller (2 Channels) | 202,557 | 7,040 | 5,914 | | 1,004 |
| 38502-2 | Two-Channel Switch | 27,235 | 936 | 786 | | 43 |
| 38506-2 | Attachment for Expansion to 16 Drives | 17,883 | 614 | 516 | | 43 |
| 38508-2 | 800-bpi Recording Density Feature | 16,515 | 567 | 476 | | 8 |
| 3850-3 | Magnetic Tape Controller (3 Channels) | 300,010 | 10,431 | 8,762 | | 1,507 |
| 38502-3 | Two-Channel Switch | 40,852 | 1,403 | 1,179 | | 64 |
| 38506-3 | Attachment for Expansion to 16 Drives | 22,998 | 791 | 664 | | 64 |
| 38508-3 | 800-bpi Recording Density Feature | 24,772 | 850 | 715 | | 12 |
| 3850-4 | Magnetic Tape Controller (4 Channels) | 396,173 | 13,774 | 11,571 | | 1,987 |

[1] Prices includes maintenance.
[2] Price not set.

# Siemens System 7.800

## EQUIPMENT PRICES

| SYSTEM 7.882 | | Purchase Price DM | Rental [1] (1-year lease) DM | Rental [1] (3-year lease) DM | Rental [1] (4-year lease) DM | Monthly Maintenance DM |
|---|---|---|---|---|---|---|
| 38502-4 | Two-Channel Switch | 54,470 | 1,872 | | 1,572 | 86 |
| 38506-4 | Attachment for Expansion to 16 Drives | 26,827 | 922 | | 774 | 64 |
| 38508-4 | 800-bpi Recording Density Features | 33,030 | 1,134 | | 953 | 17 |
| 3854 | Magnetic Tape Unit 160/320KBS | 68,578 | 2,493 | | 2,094 | 500 |
| 3857 | Magnetic Tape Unit 200/780KBS | 67,449 | 2,282 | | 1,917 | 403 |
| 3859 | Magnetic Tape Unit 320/1250KBS | 73,952 | 2,647 | | 2,223 | 520 |
| 3848 | Drum Controller | 184,733 | 8,565 | | 7,195 | 1,640 |
| 38482-1 | First Two-Channel Switch | 14,867 | 693 | | 581 | 42 |
| 38482-2 | Second Two-Channel Switch | 21,083 | 981 | | 825 | 59 |
| 38484 | Expansion to 4 Drums | 15,333 | 712 | | 598 | 43 |
| 3849 | Drum Store | 410,665 | 18,096 | | 15,200 | 2,666 |
| 3840 | Disc Controller | 139,554 | 6,261 | | 5,260 | 518 |
| 38402-1 | First Two-Channel Switch | 12,978 | 541 | | 455 | 43 |
| 38402-2 | Second Two-Channel Switch | 12,978 | 541 | | 455 | 43 |
| 38403 | 317MB Option for 3840 Controller | 15,133 | 719 | | 603 | 47 |
| 38406 | Attachment for Expansion to 64 Drives | 34,906 | 1,463 | | 1,229 | 97 |
| 38404 | Controller Adapter | 22,709 | 927 | | 779 | 75 |
| 38405-1 | Dynamic Trunk Switch | 16,735 | 667 | | 560 | 42 |
| 38405-2 | Manual Trunk Switch | 9,727 | 326 | | 274 | 27 |
| 38408 | Controller Adapter | 69,237 | 2,318 | | 1,947 | 189 |
| 38409-1 | Dynamic Trunk Switch | 38,903 | 1,303 | | 1,094 | 105 |
| 38409-2 | Manual Trunk Switch | 19,453 | 651 | | 547 | 54 |
| 3842 | Removable Disk Storage Unit (2X200MB) | 119,346 | 5,856 | | 4,919 | 692 |
| 38424 | Disc Storage Interface | 8,309 | 428 | | 360 | 48 |
| 38428 | Disc Storage Interface for Simultaneous Access | 21,111 | 893 | | 750 | 99 |
| 3843-1 | Fixed Disc Storage Unit (2X31 7MB) | 102,987 | 4,056 | | 3,407 | 691 |
| 3843-14 | Fixed Disc Storage Unit (2X31 7MB including 2X1.144MB Fixed Head Storage) | 128,544 | 5,068 | | 4,256 | 891 |
| 3843-2 | Fixed Disc Storage Unit (2X317MB) | 81,556 | 3,219 | | 2,703 | 518 |
| 3843-24 | Fixed Disc Storage Unit (2X317MB including 2X1.44MB Fixed Head Storage) | 107,113 | 4,231 | | 3,554 | 718 |
| 3843-3 | Fixed Disc Storage Unit (2X317MB) | 102,987 | 4,056 | | 3,407 | 691 |
| 3843-34 | Fixed Disc Storage Unit (2X317MB including 2X1.44MB Fixed Head Storage) | 128,544 | 5,068 | | 4,256 | 891 |
| 38438-1 | Disc Storage Interface for Simultaneous Access | 19,575 | 775 | | 651 | 118 |
| 38438-2 | Disc Storage Interface for Simultaneous Access | 9,733 | 389 | | 327 | 56 |
| 38438-3 | Disc Storage Interface for Simultaneous Access | 19,575 | 775 | | 651 | 118 |
| 38439-1 | Dynamic Trunk Storage | 11,893 | 455 | | 383 | 32 |
| 38439-3 | Dynamic Trunk Store | 11,893 | 455 | | 383 | 32 |
| 3892-1 | Communication Control Processor | 231,785 | 7,743 | | 6,504 | 1,521 |
| 3891-1 | Communication Control Processor | 128,770 | 4,299 | | 3,612 | 845 |
| 38921-2 | Channel Adapter | 15,870 | 556 | | 467 | 49 |
| 38921-3 | Channel Adapter | 31,730 | 1,113 | | 934 | 62 |
| 38922-2 | Communication Scanner | 71,310 | 2,429 | | 2,041 | 225 |
| 38912-2 | Second Communication Scanner | 39,615 | 1,349 | | 1,134 | 125 |
| 38923-2 | Extension to 128K Bytes | 22,400 | 1,349 | | 1,134 | 69 |
| 38924-1 | Line Interface Base | 3,840 | 136 | | 115 | 15 |
| 38924-2 | Line Interface Base | 19,200 | 668 | | 561 | 75 |
| 38925-1 | Line Set | 5,835 | 191 | | 160 | 25 |
| 38925-2 | Line Set | 7,660 | 266 | | 223 | 57 |
| 38925-3 | Line Set | 14,150 | 499 | | 420 | 58 |
| 38925-4 | Line Set | 12,740 | 399 | | 336 | 52 |
| 38925-5 | Line Set | 7,170 | 212 | | 178 | 27 |
| 38926 | Expansion Module | 58,770 | 1,979 | | 1,663 | 122 |
| 38927-1 | Two-Channel Switch | 5,535 | 189 | | 159 | 15 |

[1] Prices include maintenance.
[2] Price not set.

# Siemens System 7.800

## New Product Announcement

In February 1980, Siemens expanded the 7.800 range by the addition of a fifth, low-end model that performs 1.4 million instructions per second and has 30 percent more power than the IBM 3031.

Called the 7.865, the entry-level model is fully upward compatible with the larger 7.800 models, runs under the same BS 3000 operating system, and supports the same array or peripherals.

With the new model, Siemens continues to emphasize reliability, availability, and serviceability. The 7.865 has error detection/correction facilities and a programmable service processor that executes system maintenance routines. Error information is stored on two dedicated floppy disk drives integrated into the operator console.

The 7.865 system is composed of a CPU with a cycle time of 70 nanoseconds, a writable 98,304-byte control memory, an 8,192-byte cache memory, main memory, and an independent input/output system. Main memory is composed of 16K-bit chips and ranges in capacity from 2,097,152 to 6,291,456 bytes. Memory is partitioned, supporting 4-way interleaving.

The 7.865 input/output system consists of one channel control unit with one byte multiplexor channel and up to eight block multiplexor channels. The maximum input/output data transfer rate is 12 megabytes/second. □

## EQUIPMENT PRICES

| SYSTEM 7.865 | | Purchase Price DM | Rental* (1-year lease) DM | Rental* (4-year lease) DM | Monthly Maintenance DM |
|---|---|---|---|---|---|
| 7865 | Central Processor, 2048K Bytes of Main Memory | 1,222,100 | 51,030 | 46,263 | 9,093 |
| 86580-30 | Main Memory Extension to 3072K Bytes | 148,000 | 8,704 | 7,896 | 550 |
| 86580-40 | Main Memory Extension to 4096K Bytes | 148,000 | 8,704 | 7,896 | 550 |
| 86580-50 | Main Memory Extension to 5120K Bytes | 148,000 | 8,704 | 7,896 | 550 |
| 86580-60 | Main Memory Extension to 6144K Bytes | 148,000 | 8,704 | 7,896 | 550 |
| 86550 | Second Byte Multiplexor Channel | 68,980 | 2,338 | 2,121 | 170 |
| 86560-3 | Third Byte Multiplexor Channel | 68,980 | 2,338 | 2,121 | 170 |
| 86560-4 | Fourth Byte Multiplexor Channel | 68,980 | 2,338 | 2,121 | 170 |
| 86560-5 | Fifth Byte Multiplexor Channel | 68,980 | 2,338 | 2,121 | 170 |
| 86560-6 | Sixth Byte Multiplexor Channel | 68,980 | 2,338 | 2,121 | 170 |
| 86560-7 | Seventh Byte Multiplexor Channel | 68,980 | 2,338 | 2,121 | 170 |
| 86567-1 | First Integrated Disc Controller | 135,150 | 4,196 | 3,806 | 382 |
| 86567-2 | Second Integrated Disc Controller | 135,150 | 4,196 | 3,806 | 382 |
| 86567-3 | Third Integrated Disc Controller | 135,150 | 4,196 | 3,806 | 382 |
| 86540 | Channel Extension | 24,000 | 510 | 462 | 47 |

*Prices include maintenance.

# Siemens System 7.800

## EQUIPMENT PRICES [1]

| | | Purchase Price DM | Rental [2] (1-year lease) DM | Rental [2] (3-year lease) DM | Rental [2] (4-year lease) DM | Monthly Maintenance DM |
|---|---|---|---|---|---|---|
| **SYSTEM 7.882** | | | | | | |
| 38502-4 | Two-Channel Switch | 52,884 | 1,783 | 1,498 | — | 80 |
| 38506-4 | Attachment for Expansion to 16 Drives | 26,046 | 879 | 738 | — | 60 |
| 38508-4 | 800-bpi Recording Density Feature | 32,068 | 1,080 | 908 | — | 16 |
| 3854 | Magnetic Tape Unit 160/320KBS | 66,581 | 2,375 | 1,995 | — | 463 |
| 3857 | Magnetic Tape Unit 200/780KBS | 65,485 | 2,174 | 1,826 | — | 374 |
| 3859 | Magnetic Tape Unit 320/1250KBS | 71,799 | 2,521 | 2,118 | — | 482 |
| 3848 | Drum Controller | 179,353 | 8,158 | 6,853 | — | 1,519 |
| 38482-1 | First Two-Channel Switch | 14,434 | 660 | 554 | — | 39 |
| 38482-2 | Second Two-Channel Switch | 20,469 | 935 | 786 | — | 55 |
| 38484 | Expansion to 4 Drums | 14,887 | 679 | 570 | — | 40 |
| 3849 | Drum Store | 398,704 | 17,235 | 14,477 | — | 2,469 |
| 3840 | Disc Controller | 135,490 | 5,963 | 5,010 | — | 480 |
| 38402-1 | First Two-Channel Switch | 12,600 | 516 | 434 | — | 40 |
| 38402-2 | Second Two-Channel Switch | 12,600 | 516 | 434 | — | 40 |
| 38403 | 317MB Option for 3840 Controller | 14,693 | 685 | 575 | — | 44 |
| 38406 | Attachment for Expansion to 64 Drives | 33,890 | 1,394 | 1,171 | — | 90 |
| 38404 | Controller Adapter | 22,048 | 883 | 742 | — | 70 |
| 38405-1 | Dynamic Trunk Switch | 16,248 | 636 | 534 | — | 39 |
| 38405-2 | Manual Trunk Switch | 9,444 | 311 | 261 | — | 25 |
| 38408 | Controller Adapter | 67,221 | 2,208 | 1,855 | — | 175 |
| 38409-1 | Dynamic Trunk Switch | 37,770 | 1,241 | 1,042 | — | 98 |
| 38409-2 | Manual Trunk Switch | 18,887 | 620 | 521 | — | 50 |
| 3842 | Removable Disc Storage Unit (2X200MB) | 115,870 | 5,578 | 4,685 | — | 641 |
| 38424 | Disc Storage Interface | 8,067 | 408 | 343 | — | 45 |
| 38428 | Disc Storage Interface for Simultaneous Access | 20,497 | 851 | 715 | — | 92 |
| 3843-1 | Fixed Disc Storage Unit (2X317MB) | 99,988 | 3,863 | 3,245 | — | 640 |
| 3843-14 | Fixed Disc Storage Unit (2X317MB including 2X1.44MB Fixed Head Storage) | 124,800 | 4,827 | 4,054 | — | 825 |
| 3843-2 | Fixed Disc Storage Unit (2X317MB) | 79,181 | 3,066 | 2,575 | — | 480 |
| 3843-24 | Fixed Disc Storage Unit (2X317MB including 2X1.44MB Fixed Head Storage) | 103,994 | 4,030 | 3,385 | — | 665 |
| 3843-3 | Fixed Disc Storage Unit (2X317MB) | 99,988 | 3,863 | 3,245 | — | 640 |
| 3843-34 | Fixed Disc Storage Unit (2X317MB including 2X1.44MB Fixed Head Storage) | 124,800 | 4,827 | 4,054 | — | 825 |
| 38438-1 | Disc Storage Interface for Simultaneous Access | 19,005 | 739 | 620 | — | 110 |
| 38438-2 | Disc Storage Interface for Simultaneous Access | 9,450 | 371 | 312 | — | 52 |
| 38438-3 | Disc Storage Interface for Simultaneous Access | 19,005 | 739 | 620 | — | 110 |
| 38439-1 | Dynamic Trunk Store | 11,547 | 434 | 365 | — | 30 |
| 38439-3 | Dynamic Trunk Store | 11,547 | 434 | 365 | — | 30 |
| 3881 | Cluster Controller | 17,489 | 620 | 523 | — | 103 |
| 3882 | Cluster Controller | 16,267 | 544 | 457 | — | 53 |
| 38804-1 | Drive Extension | 2,434 | 168 | 141 | — | 2 |
| 38804-2 | Drive Extension | 2,434 | 168 | 141 | — | 2 |
| 3886-1 | Display Terminal | 7,714 | 210 | 177 | — | 35 |
| 3887-1 | Display Terminal | 7,714 | 210 | 177 | — | 35 |
| 38810-1 | Keyboard | 1,287 | 36 | 30 | — | 7 |
| 38810-2 | Keyboard | 1,750 | 50 | 42 | — | 9 |
| 38810-3 | Keyboard | 1,287 | 36 | 30 | — | 7 |
| 38802-1 | Light Pen Feature | 1,524 | 42 | 35 | — | 3 |
| 38803-1 | Badge Reader | 1,887 | 57 | 48 | — | 23 |
| 3888-1 | Printer Terminal | 21,563 | 1,080 | 907 | — | 308 |
| 3888-2 | Printer Terminal | 21,563 | 1,080 | 907 | — | 308 |
| 3892-1 | Communication Control Processor | 231,785 | 7,375 | 6,195 | — | 1,409 |
| 3891-1 | Communication Control Processor | 128,770 | 4,095 | 3,440 | — | 783 |
| 38921-2 | Channel Adapter | 15,870 | 530 | 445 | — | 46 |
| 38921-3 | Channel Adapter | 31,730 | 1,060 | 890 | — | 58 |
| 38922-2 | Communication Scanner | 71,310 | 2,314 | 1,944 | — | 209 |

[1] All prices have been estimated by DATAPRO from publicly available information and have not been approved by Siemens.

[2] Prices include maintenance.

[3] Price not set.

# Siemens System 7.800

## EQUIPMENT PRICES [1]

| | | Purchase Price DM | Rental [2] (1-year lease) DM | Rental [2] (3-year lease) DM | Rental [2] (4-year lease) DM | Monthly Maintenance DM |
|---|---|---|---|---|---|---|
| **SYSTEM 7.882** | | | | | | |
| 38912-2 | Second Communication Scanner | 39,615 | 1,285 | 1,080 | — | 116 |
| 38923-2 | Extension to 128K Bytes | 22,400 | 1,285 | 1,080 | — | 64 |
| 38924-1 | Line Interface Base | 3,840 | 130 | 110 | — | 14 |
| 38924-2 | Line Interface Base | 19,200 | 637 | 535 | — | 70 |
| 38925-1 | Line Set | 5,835 | 182 | 153 | — | 24 |
| 38925-2 | Line Set | 7,660 | 254 | 213 | — | 53 |
| 38925-3 | Line Set | 14,150 | 476 | 400 | — | 54 |
| 38925-4 | Line Set | 12,740 | 380 | 320 | — | 49 |
| 38925-5 | Line Set | 7,170 | 202 | 170 | — | 25 |
| 38926 | Expansion Module | 58,770 | 1,885 | 1,584 | — | 113 |
| 38927-1 | Two-Channel Switch | 5,535 | 180 | 152 | — | 14 |

[1] All prices have been estimated by DATARPRO from publicly available information and have not been approved by Siemens.
[2] Prices include maintenance.
[3] Price not set.