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Minicomputers

M09-065-**301**

Supermicrocomputer
Systems

ADDS Mentor 7000: Product Profile

In this report:

System Overview
The Mentor 7000 32-bit supermicro-computer, based on the latest NCR Tower family platform, comes bundled with the latest release of the Mentor Pick operating system (Release 2.6). Office automation and database management software are also included. The Mentor 7000 is oriented toward a range of office functions including office automation, wholesale distribution, and direct mail processing.

Introduced late in 1989, the Mentor 7000 provides increased memory, storage, and performance over the Mentor 6000; the Mentor 7000 will effectively replace the older system in ADDS' product offerings.

The Mentor 7000 comprises Models 3/20, 5/20, 5/30, and 10/30.

Vendor
Applied Digital Data Systems (ADDS)
100 Marcus Boulevard
Hauppauge, NY 11788
(516) 231-5400

Price
Basic configurations cost up to $165,330.

GSA Schedule
No.

Competition
The Mentor 7000 competes with a variety of supermicrocomputer systems, including products from IBM, Altos, Alpha Micro, Prime, and Mc-Donnell Douglas.

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Characteristics

See Table 1 for a comparison of system characteristics.

Specifications

Main Memory
The Mentor 7000 supermicrocomputers provide main storage of up to 64M bytes in 4M- and 16M-byte increments.

Processing Components
The 32-bit CPU is based on either a 20MHz MC68030 chip that provides 16K bytes of cache, or a 30MHz MC68030 chip that provides 32K bytes of copy-back cache.

Peripherals
See Table 2 for specifications on mass storage devices.

Tape Drives
All tape drives communicate with the Mentor 7000 system via a Small Computer System Interface (SCSI).

The M6-TPS reel-to-reel tape drive uses ½-inch media and writes in 1600 bit-per-inch (bpi) mode at 25 or 100 inches per second (ips), or in 3200 bpi mode at 50 ips. This drive has a maximum storage capacity of 92M bytes and a peak data transfer rate of 160K bytes per second.

The M6-TP8MM helical scan digital tape subsystem uses a 5¼-inch form factor and features a streaming speed of 150 ips and a linear density of 43,000 bpi. This compact tape drive (4½ inches high, 6½ inches wide, and 14½ inches deep) is ideally suited for backup and archival storage of data. It provides a maximum storage capacity of 2G bytes and has a peak data transfer rate of 246K bytes per second.

The TP6250CD is an integrated, reel-to-reel tape subsystem with a disk subsystem. The tape drive uses ½-inch media and writes in 6250 bpi mode. An adaptive velocity control feature allows the drive to automatically switch speeds depending on the data transfer rate from the host. This drive has a maximum storage capacity of 180M bytes and a peak data transfer rate of 469K bytes per second. Up to four 850M-byte disks can be installed in the disk subsystem, for a total storage capacity of 3.4G bytes.

Table 1. System Comparison

Model	3/20	5/20	5/30	10/30
System Characteristics				
Min./Max. Memory (bytes)	4-32M	4-64M	4-64M	4-64M
Min./Max. Storage (bytes)	126M/1.1G	170M/15G	170M/15G	380M/15G
Number of Processors	1	1	1	1
Number of Terminals				
Direct Connect/Shared Access	—	—	—	—
Max./Recommended No. of Users	128	192	512	512
Date First Installed	2/90	2/90	12/89	12/89
Central Processing Unit & Memory				
Computer Type	32-bit	32-bit	32-bit	32-bit
Processor Model	Motorola 68030	Motorola 68030	Motorola 68030	Motorola 68030
Memory Type	ECC	ECC	ECC	ECC
Floating-Point Co-Processor	NA	NA	NA	NA
Cache Memory (bytes)	Optional 16K	16K	32K	32K
Performance Characteristics				
Multiprocessing Capability (Y/N)	N	N	N	N
MIPS	—	—	—	—
Proc. Clock Speed (MHz)	20	20	30	30
I/O Transfer Rate	—	—	—	

Note: A dash (—) in a column indicates that the information is unavailable from the vendor.

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Table 2. Mass Storage Devices

Model	M6-DSS2	M6-DSS4	TP6250CD
Size	5¼	5¼	5¼
Formatted capacity (bytes)	660M	2.6G	695M
Interface/controller	—	—	—
Average access time (ms.)	25	16	16
Data transfer rate (bytes/second)	1.2M	1.5M	2.46M

Note: A dash (—) in a column indicates that the information is unavailable from the vendor.

Terminals/Workstations

Several video display terminals are available for
the Mentor 7000.

Model M1010 offers a 14-inch, flat display
screen etched for reduced glare. The screen format
is 80 characters per line, and the keyboard features
27 programmable key modes. The terminal fea-
tures an RS-232-C serial interface and a parallel
printer port.

Model M2020 also features a 14-inch flat,
reduced-glare screen. The screen format is 80 or
132 characters per line by 26 lines. The keyboard
offers 44 programmable keys with 88 modes. The
terminal features an RS-232-C serial interface and
a printer port which can be used for either a paral-
lel or serial printer. Windowed desk accessories are
available and include a clock, a calculator, and a
calendar.

Model 4000 is a dual-host, 14-inch terminal
which allows a user to access two hosts simulta-
neously by dividing the screen into two windows.
The terminal also features one serial port which
can be used for a second host or a printer, and one
parallel printer port.

ADDS also offers touch screen terminals, fea-
turing double-size characters and 80- or 132-
column formats. These terminals are oriented
toward health care, education, point-of-sale, and
manufacturing applications.

Communications

Protocols Supported: TTY, BSC, SDLC.

Network Applications Supported: BSC 2780/3780.

LANs Supported: None.

Software

The Mentor 7000 operating system is based on the
generic Pick operating system. Pick is designed
around a relational database, incorporating virtual
memory and addressing capabilities.

All Mentor systems are bundled with the
Mentor Pick operating system, including a rela-
tional database, an inquiry language (Info Access),
a Basic compiler, an editor, and a JCL processor
(PROC). Also included in the bundled software
package are an application builder (Implementor)
and an office automation package consisting of
word processing, a multiuser spreadsheet, and
other office automation tools.

New Operating System

ADDS has just released a new Mentor operating
system that represents something of a break-
through; the Mentor M/ix operating system runs
both Pick and NCR UNIX concurrently on the
same system.

The operating system, which runs on the
Mentor 7000, consists of three major components:
the Mentor Pick operating system, NCR UNIX
V.3, and the Mentor M/ix Bridge. This results in
an operating environment with an easy interface
between the two operating systems. Hot-key
switching between Pick and UNIX is available on
any terminal.

Since Mentor M/ix is based on standard
UNIX (NCR UNIX V.3 is compliant with AT&T
System V.3 Interface Definition [SVID] as well as
X/OPEN standards) and Pick operating systems, it
is source and object code compatible with each of
the two operating environments.

Optional communications software includes
SNA, X.25, Ethernet, token-ring, BISYNC, and
Novell NetWare, as well as many other programs.

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Communications

ADDS offers three communications packages for the Mentor 7000.

- *Protege II*—a PC-to-Mentor communications system which includes file transfer, Viewpoint terminal emulation, and print and file server capabilities.

- *Mentor Link*—a Mentor-to-Mentor data transfer utility which allows multiple systems to co-exist in a Mentor network.

- *Mentor/Bisync*—a Mentor-to-mainframe communications system using IBM protocols.

Other Software

Over 1,000 Pick proprietary and third-party applications will run on the Mentor 7000. These include a variety of office automation packages such as spreadsheets, word processing, and business graphics.

Operating Environment

All Mentor 7000 systems can operate between 50 and 104 degrees Fahrenheit and within a humidity range of 20 to 80 percent (noncondensing). The Mentor 7000 requires standard power of 100/127 V AC or 220/240 V AC at 50 to 60 Hz. The physical specifications of the Mentor 7000 are highlighted in the following table.

Physical Specifications				
Model	Height (in.)	Width (in.)	Depth (in.)	Weight (lb.)
3/20	24	5	21	100
5/20	29	7	27	123
5/30	29	7	27	123
10/30	29	7	27	123

Sample Configuration Pricing

Sample Mentor 7000 configurations and prices are outlined below. Information on an entry-level configuration including the Mentor 7000 Model 3/20 was not available from the vendor.

Intermediate-Level System: Model 5/30		
Description	Product ID	Price ($)
CPU	30MHz CPU	—
Main Memory	4M-byte RAM	—
Console	2020 System Console	—
I/O Ports	16 Ports	—
Disk Controller	SMSC	—
Disk Drive	380M-byte drive	—
Tape Controller	SMSC	—
Tape Drive	150M-byte, ¼-inch	—
Workstation Controller	—	—
Printer	—	—
Workstation Display	—	—
Total Hardware	—	60,830
Monthly Maintenance	—	390
Operating System	Mentor O/S	Included
Languages	Databasic	Included
DBMS	Included in O/S	Included
Total	—	60,830

Large System: Model 10/30		
Description	Product ID	Price ($)
CPU	30MHz CPU	—
Main Memory	8M-byte RAM	—
Console	2020 System Console	—
I/O Ports	16 Ports	—
Disk Controller	SMSC	—
Disk Drive	380M-byte drive	—
Tape Controller	SMSC	—
Tape Drive	150M-byte, ¼-inch	—
Workstation Controller	—	—
Printer	—	—
Workstation Display	—	—
Total Hardware	—165,330	
Monthly Maintenance	—	935
Operating System	Mentor O/S	Included
Languages	Databasic	Included
DBMS	Included in O/S	Included
Total	—	165,330

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