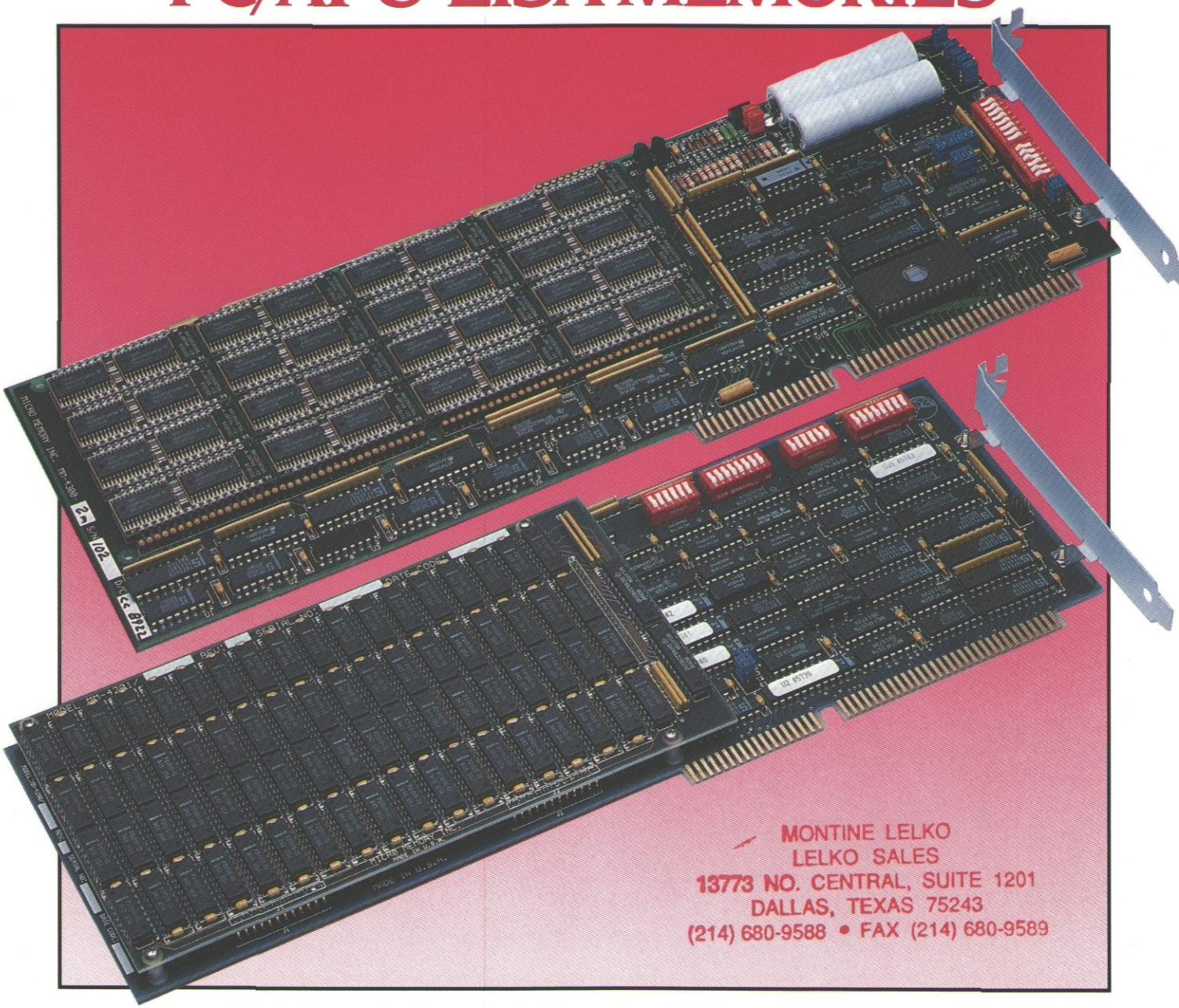
PC/AT & EISA MEMORIES



MONTINE LELKO
LELKO SALES
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DALLAS, TEXAS 75243
(214) 680-9588 • FAX (214) 680-9589

Part Number	Capacity, Bytes	Compatibility	Remarks
MM-4I00C	IM - 8M	IBM PC/AT and equivalent	Pseudo-static RAM disk; "C" or "D" drive; on-board battery backup and firmware
MM-4200D	4M - I6M	IBM PC/AT and equivalent	Extended and LIM/EMS 4.0 compatible; backfill capability
MM-4300C	IM - 4M	IBM PC/AT and equivalent	CMOS RAMdisk; "C" or "D" drive; on-board battery backup and firmware
MM-4600D	2M - 8M	Intel **iSBC386AT, SYP301, SYP301Z** Microcomputers	Error Detection and Correction with 32 data bits
MM-4700D	4M - 32M	Intel **iSBC386AT/25A, SYP302** Microcomputers	Parity generation and checking; Over 24 Mbytes/sec data transfer rate with 32 data bits

Micro Memory Inc. also supplies a full line of VMEbus, Multibus I and II, and Sun Workstation Memory Boards.
Multibus is a trademark of Intel Corp., PC/AT is a trademark of IBM Corp., Sun is a trademark of Sun Microsystems Inc.

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MM-4100C

8 MBYTE, PC/AT*-COMPATIBLE, HIGH-SPEED, RAM DISK WITH ON-BOARD BATTERIES

A RAM-disk memory module, the MM-4100C replaces rotating memories in industrial IBM PC/AT* applications, providing an order of magnitude improvement in speed and greater reliability. Also, the MM-4100C RAM disk does not require a disk controller.

A RAM firmware driver, stored in an EPROM within the I/O field, controls operation. After formatting, the system can "boot" off the RAM disk in a manner similar to that of drive "C" or "D" in a PC/AT system.

Systems can use up to four MM-4100C memory modules with 8M bytes capacity, a total of 32M bytes. The memory requires one wait-state and provides a data transfer rate greater than 40M bits/sec.

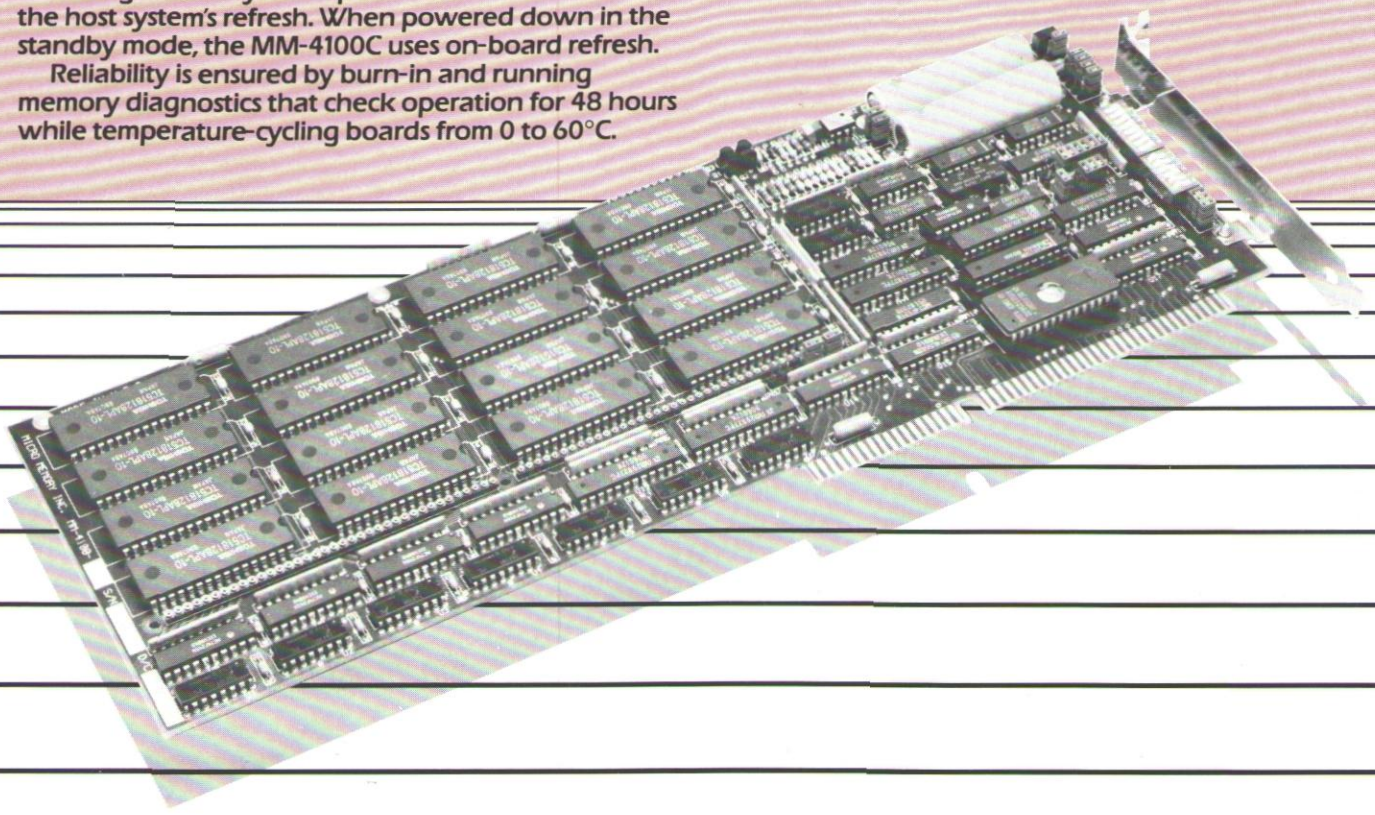
Two redundant, on-board NiCAD batteries support data retention if system power fails or is removed. The board monitors battery voltage and displays battery condition on on-board LEDs. The MM-4100C also stores battery condition status in an I/O register (CSR) for use by the system.

During normal system operation the MM-4100C uses the host system's refresh. When powered down in the standby mode, the MM-4100C uses on-board refresh.

Reliability is ensured by burn-in and running memory diagnostics that check operation for 48 hours while temperature-cycling boards from 0 to 60°C.

FEATURES:

- Capacity: 1M, 2M, 4M, 8M bytes
- RAM disk is PC/AT-compatible at the BIOS level
- Configurable as drive "C" or "D"
- On-board EPROM contains firmware drive for disk emulation
- Allows a total of 32M bytes per system using multiple memory boards
- System may "boot" directly from the MM-4100C without a disk controller
- Direct replacement for rotating media, with higher reliability and speed
- Two on-board, redundant, fused batteries with battery charger, LED indicators and CSR for status reporting
- Data retention: 72 hours with rechargeable NiCAD batteries



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*IBM PC/AT is a trademark of IBM Corp.

MM-4100C SPECIFICATIONS

Parameter	Specification
Capacity	1M, 2M, 4M, 8M bytes
Word Size	16 data bits
Board Selection	Fixed I/O port address at 320_H - 327_H
Compatibility	PC/AT-compatible and configurable as drive "C" or "D"
RAM Disk Driver	Firmware stored in on-board EPROM
RAM Disk Expansion	Up to 32 Mbytes per system using multiple MM-4100C
On-Board Batteries	Two redundant, fused, high-temperature batteries; each battery has its own charger, voltage detector and LED indicator
Batteries	NiCAD (rechargeable) 100 mA/hr, data retention is 72 hours (powered down)
Operating Temperature	0 to +60°C
Storage Temperature	–40 to +85°C
Relative Humidity	Up to 95% without condensation
Power Requirements	5V @ 1.2A (fully populated)

ORDERING INFORMATION

Part Number	Memory Capacity	Memory Device Type
MM-4100C/XX	XX = 1M, 2M bytes	128K x 8 Monolithic
MM-4100C/YY	YY = 4M, 8M bytes	512 x 8 DIP Modules

MM-4200D

IBM PC/AT EMS/EXTENDED MEMORY MODULE WITH UP TO 16 MEGABYTES CAPACITY

A high-quality memory expansion board for industrial applications of the IBM* PC/AT*, the MM-4200D uses 1M DRAM DIPs to provide capacities up to 16 Mbytes. The MM-4200D is completely compatible with all operating systems and applications that use extended memory, such as MS-DOS*, PC-DOS*, OS/2*, UNIX*, and XENIX*. The MM-4200D meets all the requirements of LIM/EMS 4.0.

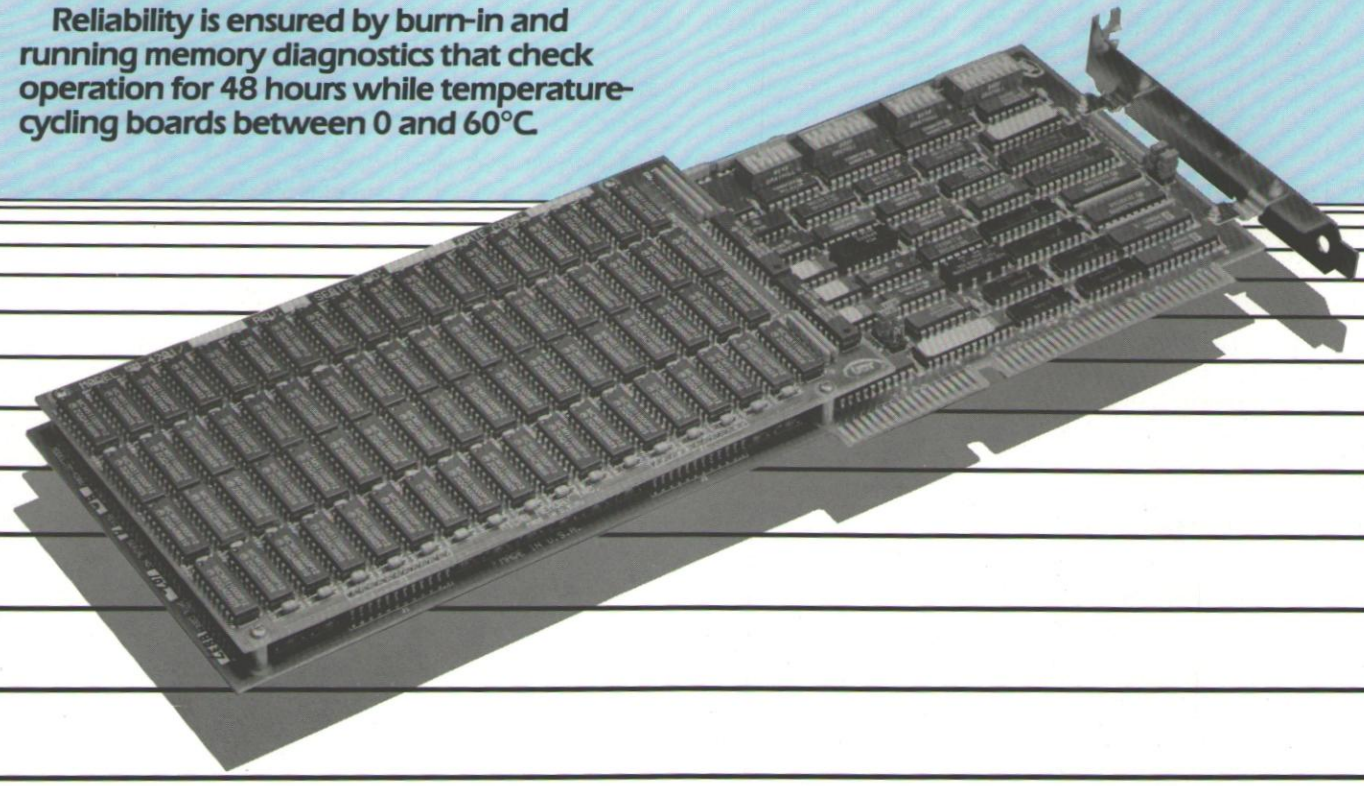
The MM-4200D main board holds 4 or 8 Mbytes and its MM-4201 daughter board holds 4 or 8 Mbytes.

On-board switches allow selection of the I/O port address for EMS operation. The Extended Memory starting address may be set from 1M to 16M bytes on 128 Kbyte boundaries.

Reliability is ensured by burn-in and running memory diagnostics that check operation for 48 hours while temperature-cycling boards between 0 and 60°C.

FEATURES:

- Capacity: 4M, 8M, 12M, 16M bytes
- Meets LIM/EMS 4.0 specification
- Switch-selectable extended address space on 128K boundaries
- Occupies single PC/AT* card slot
- 256K to 640K backfill capability for conventional MS-DOS/PC-DOS memory
- LIM 4.0 software driver and RAM disk driver included on diskette
- RAM disk can accommodate up to two 16 Mbyte boards and is significantly faster than VDISK
- Lifetime warranty



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MM-4600D

8 MBYTE, 32-BIT RAM EXPANSION WITH ERROR CORRECTION
COMPATIBLE WITH iSB386AT, SYP301 AND SYP301Z MICROCOMPUTERS

The MM-4600D Error Detection and Correction (EDC) memory module is a direct replacement for Intel's RAM expansion iSBC386MEM020 memory module. It is also completely compatible with Intel's SYP301 and SYP301Z microcomputers.

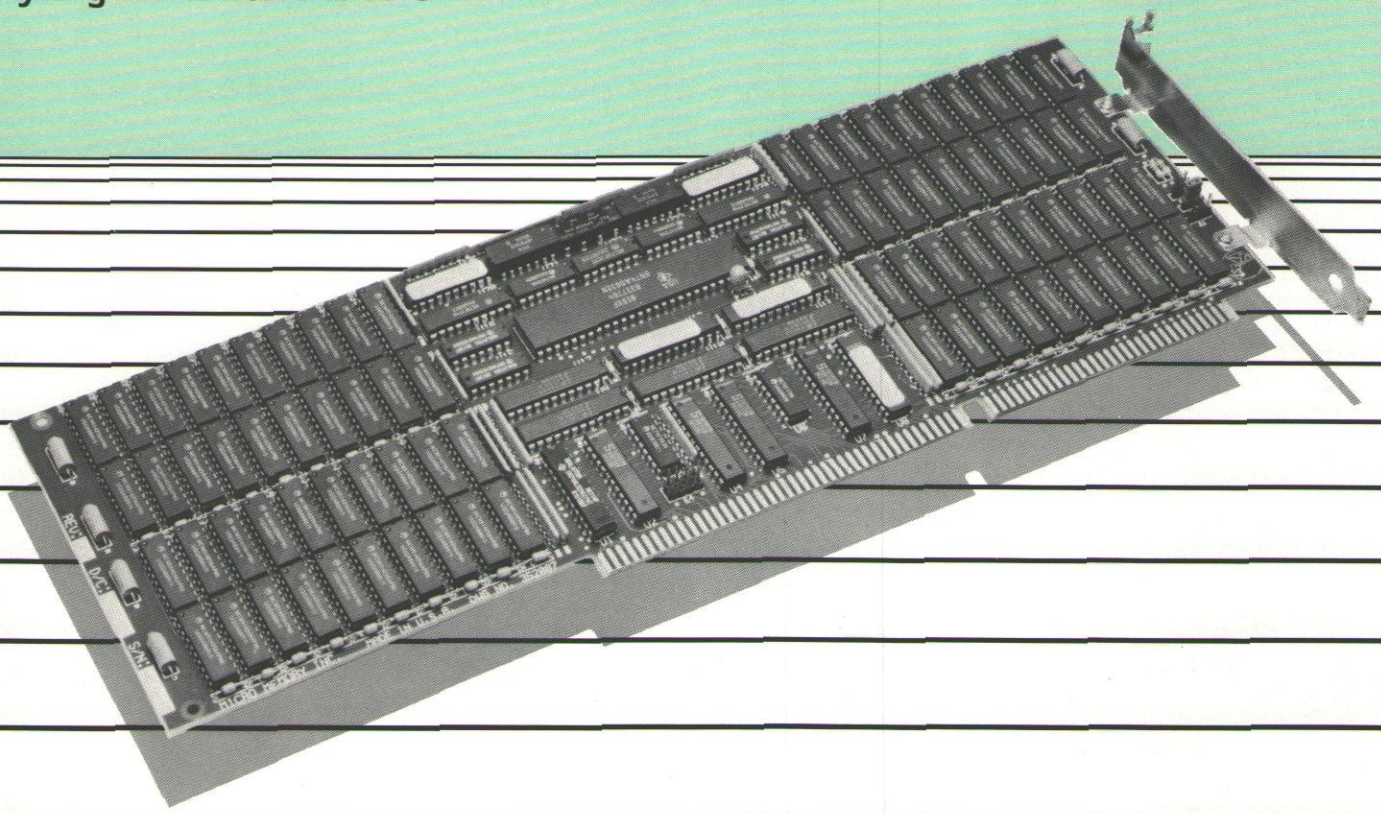
The MM-4600D provides high-speed data transfer with its 32-bit data path for the 80386. On-board interleave provides one wait-state for the 16 MHz 80386.

EDC circuits correct all single-bit errors and detect multiple-bit errors. A control status register (CSR) stores and reports error logging on the 8-bit XT-bus.

Reliability is ensured by burn-in and running memory diagnostics that check operation for 48 hours while temperature-cycling boards from 0 to 60°C.

FEATURES:

- Capacity: 2M, 4M, 8M bytes RAM expansion
- Error Detection and Correction for single-bit errors
- Detects multiple-bit errors
- One wait-state for 16 MHz 80386 processor
- 32-bit data path
- Bank interleave on 1 Mbyte boundaries
- Control status register for error reporting and logging
- Lifetime Warranty



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MM-4600D SPECIFICATIONS

Parameter	Specification
Capacity	2M, 4M, 8M bytes
Error Correction	Single-bit correction and multiple-bit detection
Compatibility	Plug-compatible with RAM EXPANSION slots for the iSBC386AT base board; and SYP301 and SYP301Z systems
Word Size	32 data bits + 7 syndrome/check bits
Speed	One wait-state for 16 MHz 80386
System Expansion	Two 8M byte boards for a total of 16M bytes in the RAM EXPANSION slots
Operating Temperature	0 to +60°C
Storage Temperature	–40 to +85°C
Relative Humidity	Up to 95% without condensation
Power Requirements	5V @ 3.8A (fully populated)

ORDERING INFORMATION

Part Number	Memory Capacity
MM-4600D/XX	XX = 2M, 4M and 8M bytes

MM-4700D

32 MBYTE, HIGH-SPEED DRAM MEMORY COMPATIBLE WITH INTEL iSBC386AT/25A AND SYP302 MICROCOMPUTERS

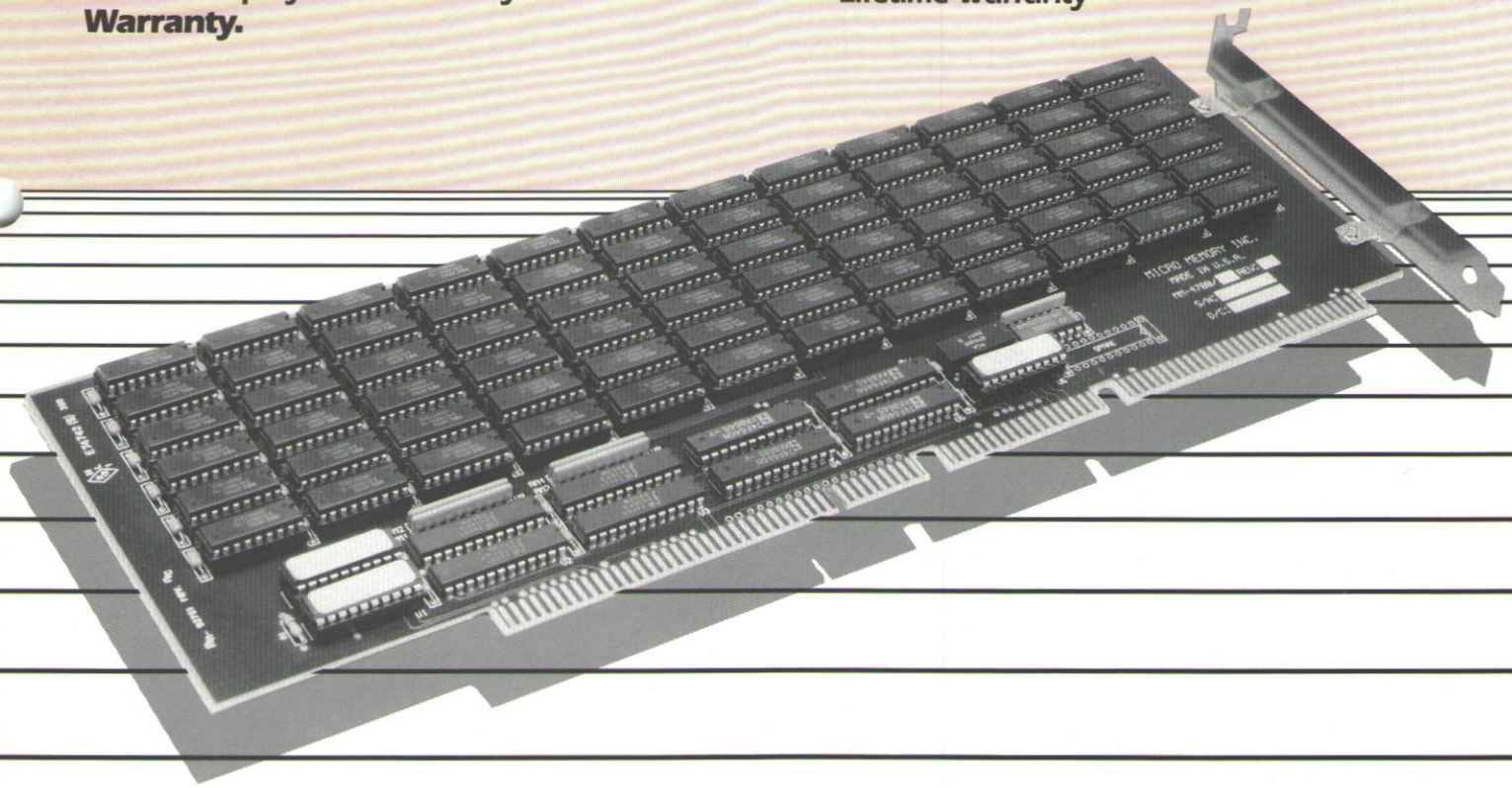
A high-speed memory module with a 32-bit data bus, the MM-4700D is completely compatible with Intel's iSBC386AT/25A and SYP302 systems. It is also a direct replacement for the ATEM8 expansion memory module.

Among the MM-4700D's features are greater than 24 Mbytes/sec data transfer rate with its 32-bit data path and 150 nsec cycle time in the page mode. Parity is generated and written for each byte, then detected for all reads.

Reliability is ensured by burn-in and running memory diagnostics that check operation for 48 hours while temperature-cycling boards from 0 to 60°C. Also, reliability is backed up by Micro Memory's **Lifetime Warranty.**

FEATURES:

- Capacity: 4M, 8M, 16M, 32M bytes RAM expansion
- Cycle Time:
  Page Mode: 150 nsec
  Random Access: 450 nsec
  Refresh: 290 nsec
- Compatible with SYP302 systems and iSBC386AT/25A motherboard
- Direct replacement for the ATEM8 expansion memory module
- Over 24 Mbytes data transfer rate in page mode
- 32-bit data path
- Parity generation and checking
- Lifetime Warranty



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MM-4700D SPECIFICATIONS

Parameter	Specification
Capacity	4M, 8M, 16M, 32M bytes
Error Detection	Parity generation and checking
Compatibility	Plug compatible with Intel's RAM expansion board for the iSBC386AT base board and SYP302 systems
Word Size	32 data bits plus 4 parity bits
Speed (Cycle Time)	Page Mode: 150 nsec Random Access: 450 nsec Refresh: 290 nsec
System Expansion	Two 32 Mbyte boards for a total of 64 Mbytes in the RAM expansion slots
Operating Temperature	0 to +60°C
Storage Temperature	–40 to +80°C
Relative Humidity	Up to 95% without condensation
Power Requirements: +5V (Fully-Populated)	Operate 2.2A

ORDERING INFORMATION

Part Number	Memory Capacity
MM-4700/XX	XX = 4M, 8M bytes (1M bit DRAM) XX = 16M, 32M bytes (4M bit DRAM)