The M/System.™

**New levels of performance
in an
efficient package.**

Performance plus

The M/System is based on Micromation's M/NET™ concept, a master/satellite configuration using Micromation's unique Z-64™ board. This single board contains a Z80A™ CPU running at 4 MHz, plus 64K bytes of dynamic RAM with 200ns access time. One Z-64 serves as master and includes a clock-calendar chip. Additional satellite processors are used for each user terminal. Floppy and Winchester-type disks provide storage capacity that matches usage.

As your needs grow so does the M/System, supporting up to 8 on-line users and a variety of terminals and printers without suffering response time delays common to other multiuser, micro-based systems.

Upgrading is quick and easy. A single-user system can become a multiple-user system, on-site, in minutes by installing additional satellites.

Efficient packaging

All M/System components are housed in sleek 19-inch enclosures suitable for installation in standard RETMA racks (with optional slide mount kits) or for stacking or placing side by side on a table top.

A key determines OFF, ON and RESET positions. The key may be removed in either ON or OFF positions.

Twin fans and efficient design allow for excellent ventilation. The air filter is easily removed for routine cleaning.

Two convenience outlets in the rear of the CPU allow peripherals to be powered up, and down, with the CPU chassis.

Choice of software

The M/System is available with either CP/M™ or MP/M™, or Micromation's AMDOS™, a CP/M compatible OS with embedded DBMS. This disk operating system has features generally found on larger computer systems.

Reliable, proven design

Benefiting from Micromation's M/NET concept, the M/System delivers bigger system performance in a multitasking environment while realizing the proven reliability and economies of 8-bit technology. CP/M compatibility lets you choose from a wide range of applications software.

If you're serious about using computers to help your business, contact us for the name of your nearest Micromation distributor. And, if you're serious about expanding your market coverage and customer base, be sure to inquire about our dealer support program.

M/System specifications

DIMENSIONS
All modules have steel enclosures with cast aluminum front bezels measuring:
Standard 19 inches RETMA (48.3cm) W x 20¼ inches (51.4cm) D x 7 inches (17.8cm) H

WEIGHT
CPU—Approximately 45 pounds (20.45kg)
Peripherals—Depending on components, approximately 60 pounds (27.27kg)

POWER
110 V at 60 Hz or 220 V at 50 Hz

POWER SUPPLY
Constant voltage, ferro-resonant transformer

CHASSIS FEATURES
Key positions
OFF, ON, RESET (Key may be taken out in either ON or OFF positions)
Air filter is easily removed to aid routine cleaning

Two convenience outlets in rear of CPU allow peripherals to be powered up, and down, with the CPU chassis

All modules are the same size for easy planning of future space requirements
Optional slides for rack mounting

OPERATING ENVIRONMENT
32°F (0°C) to 130°F (55°C)

PROCESSOR CARDS
Master processor—Micromation Z-64
Z80A 4 MHz processor
64K bytes of 16Kx1 dynamic RAM
Memory access 200ns
Transparent refresh, no wait states
Vectored priority interrupt encoder
Satellite processors—Micromation MicroSat™
Z80A processor
64K bytes of 16Kx1 dynamic RAM
RS-232 serial port (USART)
Memory access 200ns
Transparent refresh, no wait states
CP/M and MP/M emulator PROM

PERIPHERALS
Floppy disk drives
Shugart SA801 single-sided (.5Mb)
Qume DataTrak 8™ double-sided (1Mb)
Winchester disk
Fujitsu M2302 (21Mb), 512K bytes per sector
Tape cartridge
Streaming, ¼ inch, 30 i.p.s., total storage capacity 20Mb on 4 tracks

CONTROLLERS
Floppy controller—Micromation 4116 Doubler™
2708 EPROM controller firmware
Format
Single density—IBM 3740
Double density—128 bytes/sector modified IBM 2D
Programmed data transfer
Hard disk—Micromation 4117 Disk Controller
1K bytes on board RAM
Data transfer at 593K bytes/second
Tape cartridge—Micromation MicroTape™
Controller is located on the Multi I/O card

SYSTEM I/O
Primary—Micromation M/NET I/O™
Four serial USART's (8251), individually selectable baud rates (150–9600 BPS)
50-pin parallel port
Two 67S374 output drivers
8255 Parallel Peripheral Interface
8253 Programmable interval timer
5832 Time-of-day clock with battery back up
Secondary—Micromation Multi I/O™
Four serial USART's (8251), individually selectable baud rates (150–9600 BPS)
50-pin parallel port
Two 67S374 output drivers
8255 Parallel Peripheral Interface
8253 Programmable interval timer

BACKPLANE
17 slot motherboard
Faraday shielding
Active termination

OPTIONAL
Intelligent Console Processor
Used in place of serial ports on satellites
Z80A running at 4 MHz
1K RAM buffer
Eight RS-232 serial ports for user terminals
Handles console control and I/O for terminals at up to 19.2K baud

SOFTWARE
Operating system
Single user—CP/M
Multiuser—choice of either:
Modified and enhanced MP/M
AMDOS (CP/M-compatible OS with integral DBMS)