



Remote Monitor and Control System

RMC-1147/B

Product Bulletin 104014-1

The RMC-1147/B Remote Monitor and Control System is based on the Motorola 68030 microprocessor, the VMEbus standard and the UNIX System V. It is a high-performance, multi-user system capable of controlling up to 192 equipments over asynchronous RS-232/RS-422 digital datalinks. In addition to its fast 25MHz processing speed, the RMC-1147/B features 600Mb SCSI Winchester hard disk drives for on-line databases, 150Mb streaming tape drives for backup, up to 8Mb of main memory and up to 1.2Gb of disk storage for historical records.



The RMC-1147/B system consists of four interconnected processors: two located at remote sites and two located at a command site. The two command processors run in parallel - one acting as the master controller and the second in "hot" standby, linked to the master by high-speed block-mode memory cards with transfer rates of up to 20Mb per second. The two remote controllers are physically located with the controlled equipment and are connected to the master controller over serial datalinks operating at up to

19.2Kbps. The datalinks can be hardwire, microwave or fiber-optic channels depending on the available circuits.

The RMC-1147/B is a master-slave system. For messages outbound to the remote sites, the master computer receives formatted words from any one of the 32 operator terminals. The outbound message is first logged to the database and then

directed to remote computers based on assignments previously entered into the system. The remote computer interprets the outbound message, converts it to a format recognizable by the controlled equipment, and begins its command sequence. The final status message generated by the controlled equipment is re-formatted and passed back to the master computer where it is again logged to the database and displayed on the initiating terminal. Periodic polling and exception interrupts combine to identify status changes in near-real-time. Critical interrupts activate an alarm and reports to the system printer.



Each control computer is housed in a VME-compatible card cage mounted to an air-cooled, rack-mount chassis. The computers allow system growth in a modular fashion to meet future needs. Any expansion beyond the basic chassis requires an additional I/O distribution module. All peripheral devices required in the RMC-1147/B are installed in the basic chassis.

THE TECHNICAL MATERIEL CORPORATION

PRINCIPAL COMPONENTS

Master/Backup Controller Computers

MVME-141 Microcomputer
MVME-224 4/8/16Mb DRAM
MVME-327 SCSI Bus Adapter
MVME-332 Asynchronous Controller(s)
MVME-413 Block Mode Adapter
Transition Modules, Cables and Chassis

Remote Controller Computers

MVME-147 Microcomputer
MVME-332 Asynchronous Controller(s)
Transition Modules, Cables and Chassis

System and Application Software

UNIX V68 Operating System
TMS-201 Command Control Program

Display Terminals and Peripheral Devices

150Mb Streaming Tape Drive
150Mb Winchester Hard Disk
1.2Mb Floppy Disk Drive
DST-3179 Color Graphics Terminal(s)

System Dimensions

12.2H X 19.0W X 19.75D inches; 61.5 lbs typical
(31.0H X 48.3W X 50.2D cm; 29Kg typical)

Electrical Characteristics

Input Voltage 90-132VAC or 186-264VAC, 47-63Hz
Input Power 6A at 115VAC; 3A at 230VAC.

Environmental Conditions

Altitude 10,000 feet ASL
Acoustic Noise Level 55dBA maximum
Temperature 5°C to 40°C operating
Relative Humidity 10-80%RH, non-condensing

MVME-147 Applications Processor Features

Motorola MC68030 processor
20/25MHz clock rate
256-byte instruction/data cache
Two address/32-bit data busses
Floating point co-processor
Paged memory management
Time-of-day clock, battery-backed
SCSI bus interface
RS-232C Aynchronous ports (4)
Parallel printer port (1)

MVME-141 Applications Processor Features

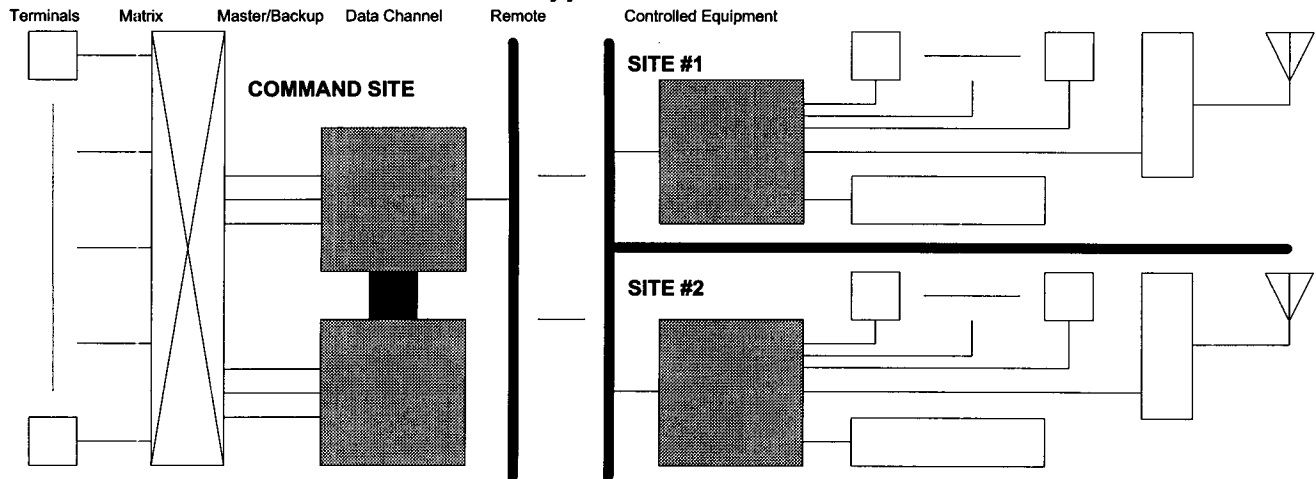
Motorola MC68030 processor
Data watchdog/block transfer timers
25/33.3/50MHz clock rate
64-byte instruction/data cache
Two address/32-bit data busses
Floating point co-processor
Paged memory management
Time-of-day clock, battery-backed
SCSI bus interface
RS-232C/RS-422 Aynchronous ports (2)
Parallel printer port (1)

MVME-332 Serial I/O Controller Features

Eight (8) asynchronous RS-232C/RS-422 ports
One (1) parallel printer port
192Kb no-wait state SRAM
512Kb EPROM, 64Kb dual-ported SRAM
Local line discipline handling
Local character processing
Port-selectable parity, bits, control

Specifications are subject to change without notice - Please verify accuracy with TMC Customer Service.

Typical Installation



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