MiniModule™ ESB
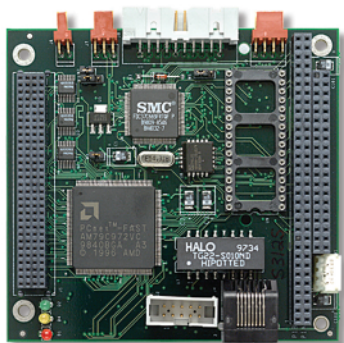
High-speed 10/100BaseT Ethernet, Serial, Bytewide Socket module

FEATURES
- PCI Fast Ethernet controller (AMD AM79C972):
  - Onboard RJ45 twisted-pair interface
  - 10 or 100Mbps, autodetected
  - Full-duplex operation
- Dual serial ports:
  - 16550 FIFO-buffered, with full handshaking
  - One port configurable for RS232/RS485
  - Other port configurable for RS232/TTL
  - Supports optional interrupt sharing
- Socket for bootable DiskOnChip 2000 SSD
- PC/104-Plus compliant form-factor

The MiniModule™ ESB multifunction module provides a "Fast" (100Mbps) Ethernet interface, two serial ports, and an SSD expansion socket in a single highly integrated PC/104-Plus compliant module.

PCI "Fast" Ethernet

The Ethernet subsystem is based on a PCI interfaced AM79C972 controller, and supports both 10 and 100 megabits per second full-duplex data transfer. 10/100BaseT twisted pair media connection is via an onboard industry standard RJ45 connector. The Ethernet interface is well supported by a wide range of operating systems including DOS, Windows® 98, Windows NT, Windows CE, QNX™, VxWorks™, and other leading RTOSs.

Serial

Two PC-compatible serial ports are implemented with 16C550-type UARTs that have 16-byte FIFO buffers for fast throughput. One serial port can be configured for either RS232 or RS485 operation; the other is configurable for RS232C or TTL-level signaling.

Bytewide Socket

A socket is provided for an M-Systems DiskOnChip2000® solid state disk. This device provides up to 144MB of highly rugged, non-rotating flash disk storage, and is compatible with most commercial and real-time operating systems.

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I/O
- Ethernet –
  - Controller
    - AM79C972 PCI Ethernet controller
  - Topology –
    - Ethernet bus, using CSMA/CD
    - 10/100BaseT (twisted pair) via onboard RJ-45 connector
  - Operation –
    - 10 or 100Mbps, autodetected
    - Large receive-and-transmit FIFOs
    - Supports full duplex operation
    - Port may be disabled with a hardware jumper
- Serial –
  - UART –
    - Two serial ports implemented using 16550 equivalent UARTs with 16 byte data FIFOs
    - Supports full handshaking
  - Interface Options –
    - Serial port one is software-configurable for RS232 or RS485
    - Serial port two is software-configurable for RS232 or TTL
    - Flexible software selection of interrupts
    - Configuration supports optional interrupt sharing
    - Both ports may be disabled through software
- Bytewide Socket –
  - Supports M-Systems DiskOnChip2000® bootable SSD
  - Occupies 64k address space at 0D0000H or 0E0000H when enabled
  - Socket may be disabled through software

Bus Interface
- PC/104-Plus bus (PCI), PC/104 bus (ISA)

Mechanical
- Size – 90x96mm (3.6x3.8") PC/104-Plus
- Power – (typical)
  - Full up: 0.43A @ +5V
  - Ethernet only: 0.27A @+5V
- Environmental – Operating temperature: 0° to 70°C standard; –40° to +85°C extended

Warranty
- 3-year warranty

ORDERING INFORMATION

MODEL	DESCRIPTION
MM3-ESB-K-00	QuickStart Kit (cables, documentation, software, no board)
MM3-ESB-Q-81	MiniModule ESB, Full up
MM3-ESB-Q-82	MiniModule ESB, Ethernet only

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