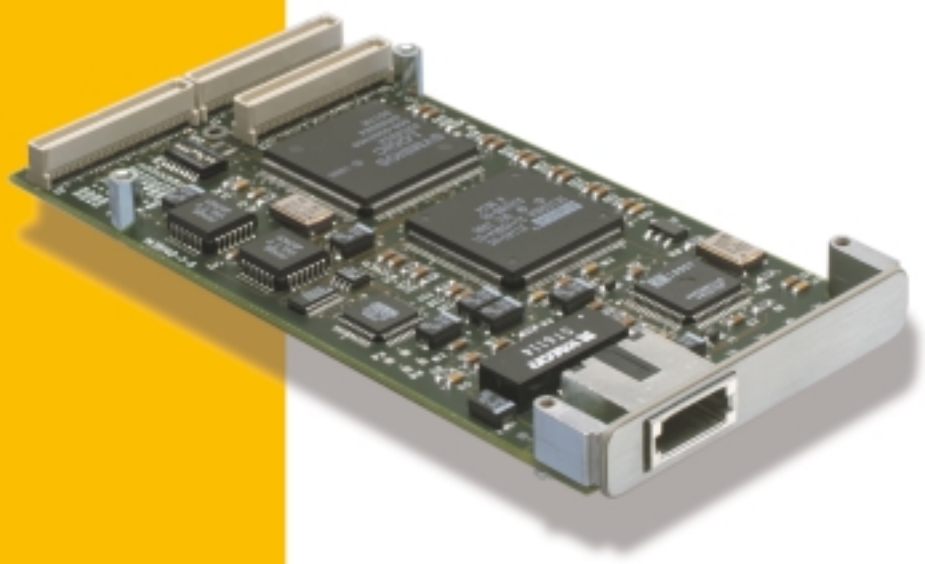
PM/SE

High-performance SCSI and Ethernet interfaces for PMC-based systems



- Support for 16-bit SCSI-2 with on-card active termination
- Internal 536-byte SCSI buffer allows maximum bus bandwidth utilization
- SCSI I/O processor provides complex SCSI bus operations independent of CPU
- Support for 10BaseT and 100BaseTx Ethernet network ports via front panel connector
- Provides DMA and buffer management to minimize CPU load
- Standard single-width 32-bit PMC module conforms to IEEE P1386.1 PCI Mezzanine Card specification
- Drivers for VxWorks real-time operating system
- Quality assured by 25 years of experience, ISO-9001 certification and exclusive Gauntlet testing

The Artesyn PM/SE SCSI/Ethernet module is a high-performance adaptor for PCI Mezzanine Card (PMC) based systems which provides a flexible and convenient means of providing SCSI and Ethernet functionality on standard VMEbus boards such as the Artesyn Baja family (Baja68K, Baja4700E, and BajaPPC), CompactPCI (CPCI) boards, or proprietary designs.

The PM/SE module provides a single-ended 8 and 16-bit SCSI interface based on the Symbios Logic SYM53C825A SCSI I/O Processor, and also provides a 10 or 100 Mbit/sec Ethernet interface based on the Digital Equipment Corporation 21140A Fast Ethernet Controller. This module integrates both functions on a single-width PMC form factor to accommodate applications where additional PMC slots are necessary. All SCSI I/O is routed via the P14 back panel connector, and all Ethernet I/O is routed via a front panel interface. This module is also available in a SCSI-only configuration.

The PM/SE makes full use of the IEEE P1386.1 PMC (PCI Mezzanine Card) architecture. It is a standard single-width module with PCI-compliant interface, and it conforms to PCI local bus specifications for configuration of PCI devices. The open PMC form factor and standard subsystem interface means greater compatibility, faster system development, and lower overall costs.

For quality in real-time, choose the performance, reliability and responsiveness of Artesyn Communication Products. Our engineers and support group are available to answer your questions. Please call 1-800-356-9602 for more details.

ARTESYN TECHNOLOGIES

Artesyn Communication Products, Inc.
8310 Excelsior Drive, Madison, WI 53717-1935
voice: 608-831-5500 or 800-356-9602 fax: 608-831-4249
email: info@artesyncp.com web: www.artesyncp.com

PM/SE

technical specifications

SCSI-2 interface

- Symbios Logic SYM53C825A PCI-SCSI I/O Processor
- Performs fast & wide SCSI bus transfers in single-ended mode
- 20 MB/sec synchronous transfers
- 14 MB/sec asynchronous transfers
- SCRIPTS Instruction Prefetch
- 536-byte buffer allows burst length of up to 128 transfers
- 4 KB static RAM for SCRIPTS instruction storage
- 32 scratchpad registers for user-defined functions
- Selectable IRQ disable
- High-level programming interface (SCSI SCRIPTS)
- Tailored SCSI sequences can be executed from main memory or SRAM
- Low-level access to all registers and all SCSI bus signals
- All SCSI I/O routed through P14 rear panel connector
- SCSI-only configuration available

Ethernet interface

- Digital 21140A Fast Ethernet LAN Controller operates at either 10 Mbit/sec or 100 Mbit/sec
- 100BaseTx or 10BaseT
- Parallel cut through bus master architecture
- Ethernet capture effect avoidance
- Programmable PCI bus burst size to optimize system data transfer efficiency
- Large on-chip Tx and Rx FIFOs
- Highly efficient linked-list, Bus Master DMA engine
- Flexible address filtering modes
- External and internal loopback capability
- Complies with Fast Ethernet Standards: IEEE P802.3u/D3 and ANSI TP-PMD v2.0 UTP CAT 5
- Ethernet I/O routed through front panel interface

PMC architecture

- Standard single-width 32-bit PMC module conforms to IEEE P1386.1
- PCI 2.1-compliant interface

physical characteristics

- Board size:
  Width: 149.0 mm (5.87")
  Depth: 74.0 mm (2.91")
- Base board and module fit in a single 0.8” VMEbus slot
- Power requirements:
  +5 VDC @ 0.8A maximum
  +12 VDC @ 0.1A maximum
  -12 VDC @ 0.1A maximum
- Operating range: 0° - 55°C, 5-95% relative humidity (non-condensing)
- Storage temperature: -40° to +70°C

software support

- Software drivers for Wind River Systems' VxWorks real-time operating system
- HKmon monitor software

target applications

- Network connectivity
- Mass storage access

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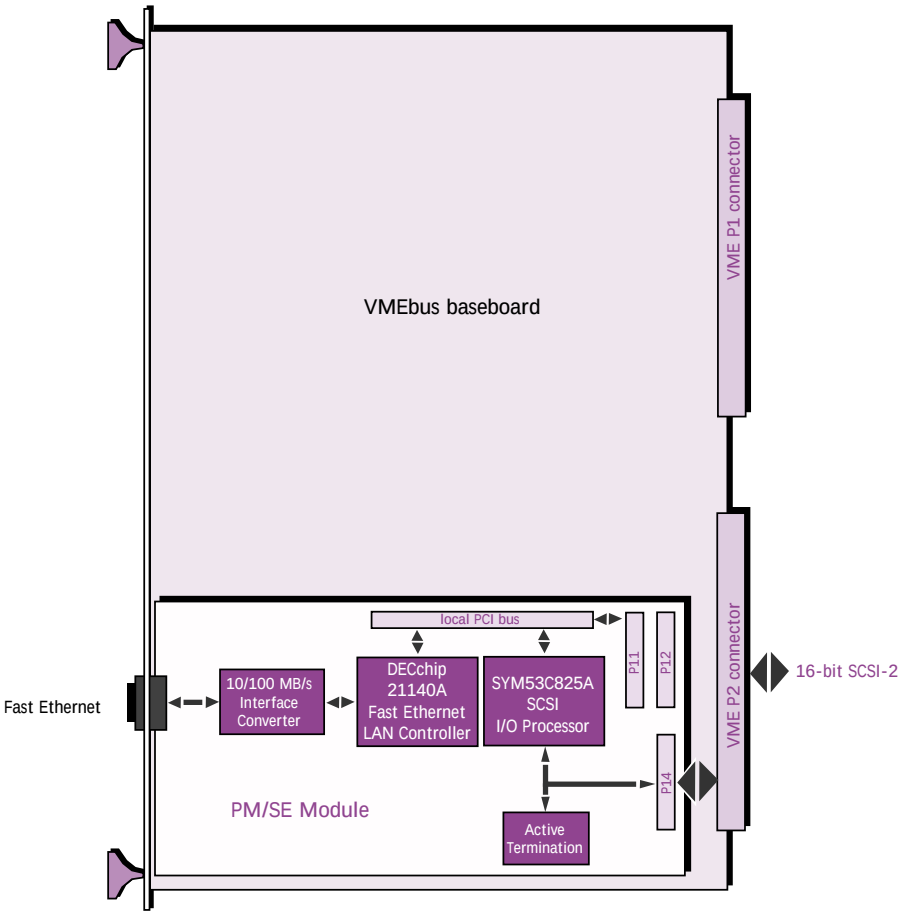

PM/SE block diagram

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