

- On-board high-speed processor
- 32-bit, 33 MHz 5 V PCI bus compatible
- PMC form factor
- 2 Mbyte memory (DRAM)
- 512 Kbyte Flash ROM
- Transfer rate of 5 Mbit/s
- Scan ControlNet I/O under SoftLogix
- Link to OPC/DDE for process control
- ControlNet connectivity for RSLinx and RSNetWorx
- PCI Local Bus Specification Rev. 2.2 compliant
- CI, UL, CE compliant

OPERATING SYSTEM/DRIVER SUPPORT

- Windows NT®
- RSLinx and RSNetWorx for ControlNet

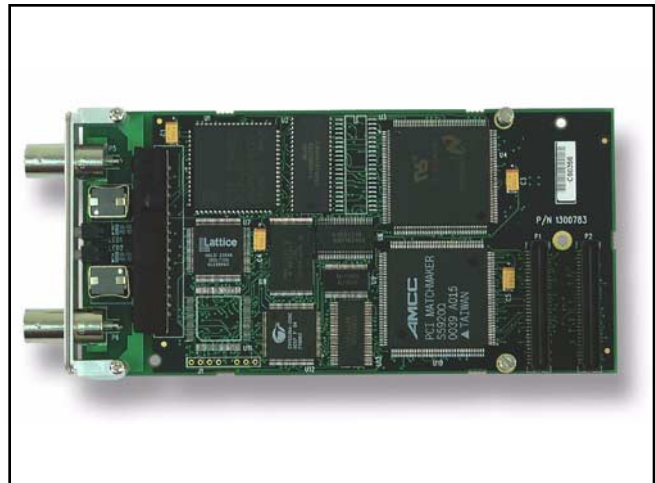
INTRODUCTION — The VMIPMC-6003 is a 32-bit, 33 MHz PCI mezzanine card (PMC) ControlNet module. The module provides capabilities to scan ControlNet I/O under SoftLogix. A block diagram (Figure 1) of the VMIPMC-6003 is shown on page 2.

PRODUCT OVERVIEW — Utilizing the PCI bus, the VMIPMC-6003 provides connectivity to single-board computers (SBCs) offered by VMIC. This permits the host computer to communicate over ControlNet. The PMC ControlNet module emulates Rockwell Automation's 1784-PCICS ControlNet module and is designed to be fully compatible with Rockwell Automation's SoftLogix 5800 running under Windows NT. The PMC ControlNet module can be used to scan I/O using Rockwell Automation's SoftLogix 5800 control software. The VMIPMC-6003 appears to SoftLogix as a Rockwell Automation 1784-PCICS.

PCI LOCAL BUS — The VMIPMC-6003 is based on the PCI Local Bus Specification Rev. 2.2. On the PCI bus, the ControlNet module will be identified as a 1784-PCICS. The VMIPMC-6003 interfaces with the PCI local bus via a PCI bus interface chip. This chip supports 5 V signaling only. The PCI interface chip provides the PCI configuration information. It also provides the logic and timing necessary to access the shared memory on the module via the PCI bus.

ControlNet — The VMIPMC-6003 contains two BNC ControlNet connectors. Redundant media is supported. The ControlNet interface supports 5 Mbit/s transfer operation, and is compatible with the ControlNet Specification standard.

SHARED MEMORY (RAM) — Shared memory (RAM) provides the data interface between the embedded microprocessor and the PCI Local bus. PCI local bus accesses to the shared memory are controlled by handshaking signals provided by the PCI interface chip. Embedded microprocessor accesses to the shared memory are controlled by logic in a Programmable Logic Device on the module.



Simultaneous access to the shared memory is controlled internally by the shared memory. Either the PCI interface chip or the embedded microprocessor is placed in wait states until the contention is removed.

EMBEDDED MICROPROCESSOR — An NS486SXF microprocessor is used as the embedded microprocessor for the module. The embedded microprocessor's firmware manages data transfers across the ControlNet network and the shared memory.

The embedded microprocessor is also responsible for maintaining the network. It manages the I/O devices, performs I/O scans, and organizes the I/O devices.

MEMORY (RAM) — The VMIPMC-6003 has 2 Mbyte of Dynamic RAM (DRAM) for use as program memory by the embedded microprocessor.

FLASH ROM — The VMIPMC-6003 has 512 Kbyte of Flash ROM for the storage of the firmware. This Flash memory device also may contain nonvolatile information required for use by the network. The Flash ROM is reprogrammable so that firmware updates are possible.

ControlNet PORTS — There are two ports available on the front bezel of the VMIPMC-6003 (Ports A and B). ControlNet Port A is used as the primary ControlNet network port. The ControlNet Port B is used for redundant media. If

Ordering Options							
May 23, 2002 800-756003-000 C	A	B	C	—	D	E	F
VMIPMC-6003	—	0	0	0	—		
ABC = 000 (Options reserved for future use)							
For Ordering Information, Call: 1-800-322-3616 or 1-256-880-0444 • FAX (256) 882-0859 E-mail: info@vmic.com Web Address: www.vmic.com Copyright © January 2002 by VMIC Specifications subject to change without notice.							

redundant media is not used, the network should be connected to ControlNet Port A and ControlNet Port B is left unconnected.

SPECIFICATIONS

Memory Size: 2 Mbyte DRAM

Flash ROM: 512 Kbyte

TRANSFER SPECIFICATION

Network Transfer Rate: 5 Mbit/s

CABLES

Coaxial: Quad-shield RG-6 coaxial cable

PHYSICAL/ENVIRONMENTAL

Temperature Range: 0 to 60 °C, operating with forced air cooling. -40 to 85 °C, storage

Relative Humidity: 20 to 80 percent, noncondensing

Power Requirements: 0.7 A maximum at +5 VDC

TRADEMARKS

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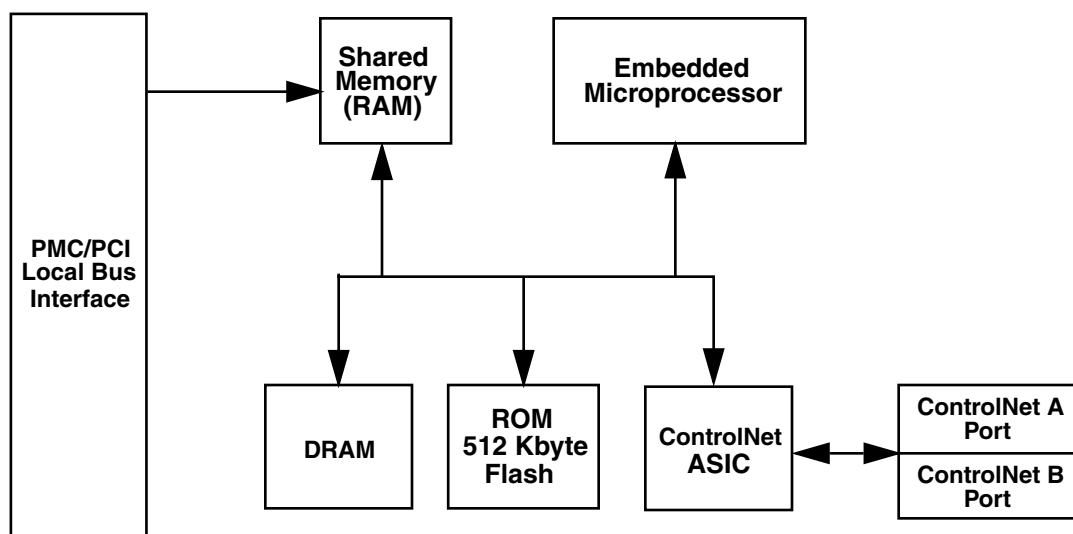


Figure 1. VMIPMC-6003 Functional Block Diagram