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Data Sheet

August 15, 2026

ABACO SYSTEMS / VMIC

Abaco Systems / VMIC VMIPMC-5565-110 Ultrahigh Speed Fiber-Optic Reflective Memory with Interrupts Module

The Abaco Systems / VMIC VMIPMC-5565-110 is a PMC-based fiber-optic reflective memory module that enables deterministic, low-latency data sharing across optical ring-based networks of up to 256 nodes. Data written to onboard SDRAM is automatically broadcast via high-speed fiber-optic links to all connected systems, independent of their bus architecture or operating system. The module operates transparently to host software, eliminating CPU overhead and I/O bottlenecks during network transactions. Compatibility & Integration The VMIPMC-5565-110 integrates into PCI-based host systems via standard mezzanine connectors. Fiber-optic isolation provides electrical independence across network nodes. DMA capability offloads memory operations from host CPU, enabling other processing tasks during network transactions. Aumictech offers NIST-traceable calibration and repair for the Abaco Systems /



MODEL

**Abaco Systems /
VMIC VMIPMC-
5565-110**

CALIBRATION

**Available on
request**

CONDITION

Used

STATUS

In stock

RFQ / SKU

VMIPMC-5565-110

LISTING

<https://aumictechlabs.com/products/vmipmc-5565-110-2/>

NIST-traceable cal

SAM registered

30-day returns

NAICS 423690 • 811210 • 541380

This unit

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Technical Specifications

Form Factor: PMC (PCI Mezzanine Card), single-width, 3.3V or 5V

Onboard Memory: 64 Mbyte, 128 Mbyte, or 256 Mbyte SDRAM (configurable)

Network Data Rate: 43 Mbyte/s (4-byte packets); 174 Mbyte/s (64-byte packets)

Serial Data Rate: 2.12 Gbaud

Packet Size: Dynamic, 4 to 64 bytes

Maximum Nodes: Up to 256

Bus Interface: PCI 64-bit 66 MHz, single-width mezzanine

Fiber-Optic Connectivity: RX/TX ports with multimode (300 m maximum) or single-mode (10 km maximum) fiber support

Key Features

- Two independent DMA channels; DMA engine acts as PCI initiator for block transfers
- Automatic packet fragmentation prevents PCI bus monopolization
- Simultaneous read and write DMA capability
- PCI interrupt generation upon DMA completion
- Transmit and Receive FIFO buffering for peak-rate optimization
- Software-transparent operation reduces processor overhead
- Deterministic data propagation across network

Typical Applications

- Multi-system real-time data synchronization
- Distributed defense and aerospace platforms
- Low-latency inter-board communication in deterministic environments
- High-speed telemetry networks requiring predictable timing

Compatibility & Integration

The VMIPMC-5565-110 integrates into PCI-based host systems via standard mezzanine connectors. Fiber-optic isolation provides electrical independence across network nodes. DMA capability offloads memory operations from host CPU, enabling other processing tasks during network transactions.

VMIPMC5565110 Characteristics / Specifications

PARAMETER	VALUE
Model	VMIPMC-5565
Instrument Type	fiber optic reflective memory PMC
Form Factor	PMC single width
Serial Link Rate	2.12 Gbaud
Maximum Nodes	256
Memory Options	64 Mbyte or 128 Mbyte SDRAM
Transfer Rate 4 Byte Packets	43 Mbyte/s
Transfer Rate 64 Byte Packets	174 Mbyte/s
Packet Size Dynamic	4 to 64 bytes
PCI Interface	64 bit 66 MHz
PCI Signaling	3.3 V or 5 V
DMA Channels	2 independent
Multimode Fiber Distance	up to 300 m
Single Mode Fiber Distance	up to 10 km
Processor Overhead	none for network transfers
Redundant Transfer Mode	available
Error Detection	yes
Network Topology	fiber optic daisy chain ring
Family Nodes	compatible with PCI-5565 VME-5565
Primary Role	reflective shared memory networking
Interrupt To All Nodes	single command broadcast
Host Bus Independence	yes
Network Transparency	software transparent writes

VMIPMC5565110 Specifications

PARAMETER	VALUE
Two point twelve Gbaud serial fiber link	Up to 256 network nodes
Technical Specifications	Model: VMIPMC-5565
Notes	Numeric rows from Abaco/VMIC PMC-5565 / VMIPMC-5565 reflective memory product literature.

Full OEM specifications

Complete technical content extracted from the manufacturer datasheet. Sparse OEM tables are reconstructed as tables below; other text is preserved as paragraphs.

Specifications	
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Available from Aumictech

Used and refurbished unit evaluated in-house. Calibration: Available on request. Used · In stock.

Request a quote: sales@aumictech.com · +1 (484) 841-9341

Aumictech

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Technical content from manufacturer specifications. Unit photo/stock from Aumictech listing when available. Specifications subject to OEM documentation and unit condition.