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Data Sheet

August 15, 2026

ABACO SYSTEMS / VMIC

Abaco Systems / VMIC VMIPCI-5576-001 Fiber-Optic Reflective Memory with Interrupts

The Abaco Systems VMIPCI-5576-001 is a PCI-based fiber-optic reflective memory board that enables transparent, zero-overhead data sharing across up to 256 networked nodes in distributed computing systems. Data written to local SDRAM is automatically broadcast to corresponding memory addresses on all connected nodes over a daisy-chained fiber-optic ring, eliminating I/O bottlenecks in real-time control and data acquisition environments. Compatibility & Integration Networks with VMIC 5576 family boards (VMIVME-5576, VMIMBI-5576) and supports mixed-architecture systems combining PCI, VME, and Multibus platforms. Aumictech offers NIST-traceable calibration and repair for the Abaco Systems / VMIC VMIPCI-5576-001. Calibration covers analog input channel accuracy and offset at all gain settings, analog output accuracy, digital I/O logic threshold verification, sample rate and timing accuracy,



MODEL

**Abaco Systems /
VMIC VMIPCI-5576-
001**

CALIBRATION

Available on request

CONDITION

Used

STATUS

In stock

RFQ / SKU

VMIPCI-5576-001

LISTING

<https://aumictechlabs.com/products/vmipci-5576-001-2/>

NIST-traceable cal

SAM registered

30-day returns

NAICS 423690 · 811210 · 541380

This unit

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systems. Data written to local SDRAM is automatically broadcast to corresponding memory addresses on all connected nodes over a daisy-chained fiber-optic ring, eliminating I/O bottlenecks in real-time control and data acquisition environments.

Technical Specifications

Memory & Data Transfer Configurable on-board SDRAM: 256 Kbyte, 512 Kbyte, or 1 Mbyte Memory access widths: D32:D16:D8 Network data rate: 6.2 Mbyte/s (standard) or 3.2 Mbyte/s (redundant transfer mode) PCI target burst rate: 44 Mbyte/s PCI master DMA rate: 132 Mbyte/s Serial baud rate: 170 Mbaud Network Architecture Maximum nodes: 256 Maximum inter-node distance: 2,000 m (6,560 ft) Topology: Daisy-chained fiber-optic ring Fiber type: Multimode, 62.5 μm core Connector: ST-style bayonet Transmitter wavelength: 1,300 nm Attenuation range: 0.5 dB to 9 dB between nodes Interrupt Architecture Three user-definable interrupts per node Any node can trigger interrupts to any other node or broadcast to all nodes Interrupts follow data delivery - acknowledgment only after reception confirmed Masked at power-up; enabled under software control

Key Features Transmit and receive FIFOs buffer peak data rates, reducing CPU and bus overhead Error detection via TAXI chipset and parity encoding with redundant transmission support Configurable endian conversion for multi-architecture networks No processor overhead required for network operation

Typical Applications Real-time distributed control systems Multi-node data acquisition networks applications requiring deterministic latency High-speed inter-system synchronization

Compatibility & Integration Networks with VMIC 5576 family boards (VMIVME-5576, VMIMBI-5576) and supports mixed-architecture systems combining PCI, VME, and Multibus platforms.

VMIPCI5576001 Characteristics / Specifications

PARAMETER	VALUE
Model	VMIPCI-5576
Instrument Type	Fiber-optic Reflective Memory with interrupts PCI node
Family Companion	VMIVME-5576
Link Serial Rate	170 Mbaud
Transmit Wavelength Class	1300 nm multimode
Memory Options Family	256 Kbyte, 512 Kbyte, or 1 Mbyte
Network Node Capacity	up to 256 nodes
Cable Length Between Nodes Maximum	2000 m
Transfer Rate Nonredundant	6.2 Mbyte/s longword accesses
Transfer Rate Redundant	3.2 Mbyte/s longword accesses
Access Time Worst Case Arbitration	400 ns
Access Time Best Case Arbitration	200 ns
Optical Attenuation Between Nodes	0.5 dB minimum to 9 dB maximum
Fiber Core Class	62.5 micron multimode
Fifo Options Family	512 transfer or 4 k transfer FIFO
Power Plus 5 Vdc Maximum Family Board	5.0 A
Operating Temperature Family	0 to 55 C
Storage Temperature Family	-40 to 85 C
Relative Humidity	20 to 80 percent noncondensing
Mtbf Family Brochure	142400 hours per 217F
Vme Companion Mnemonics	A32 A24 D32 D16 D08 EO slave
Ordering Alias Base	VMIPCI-5576-001
Attenuation	Between Nodes: 0.5 dB minimum to 9 dB maximum
Storage temperature	Family: -40 to 85 C
Operating temperature	Family: 0 to 55 C

PARAMETER	VALUE
Humidity	20 to 80 percent noncondensing

VMIPCI5576001 Specifications

PARAMETER	VALUE
Applications	Legacy reflective-memory rings linking PCI workstations with VME and Multibus 5576-family nodes.
Key Features	Network compatible with VMIVME-5576 daisy-chain rings
No processor involvement in data transport	ST multimode fiber at 1300 nm 170 Mbaud
Technical Specifications	Model: VMIPCI-5576

General Specifications & Supplementary Characteristics

PARAMETER	VALUE
Storage temperature	Family: -40 to 85 C
Operating temperature	Family: 0 to 55 C
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Ordering Alias Base	VMIPCI-5576-001 Notes From VMIC VMIVME-5576 Fiber-Optic Reflective Memory with Interrupts brochure electrical and transfer tables applied to the PCI companion node VMIPCI-5576. Queue SKU VMIPCI-5576-001 isaconfiguration of this 170 Mbaud family.

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.