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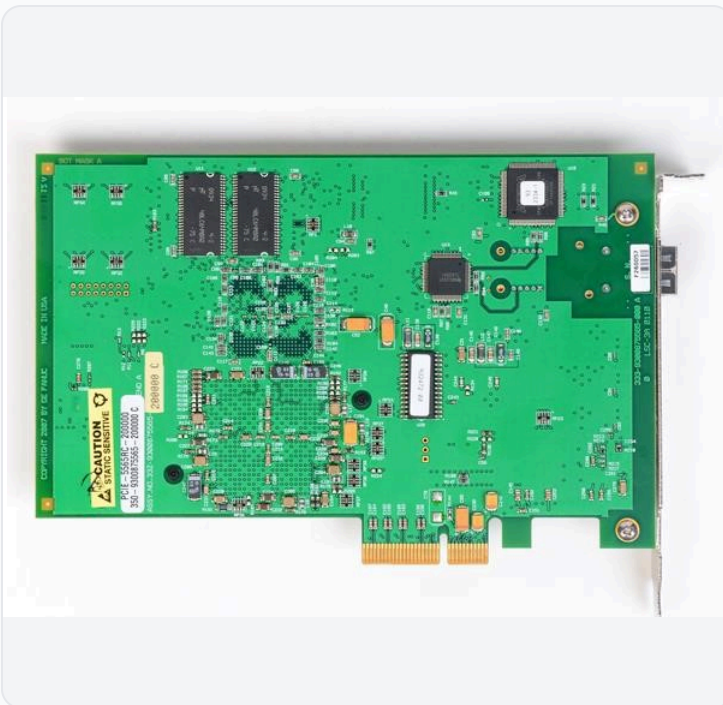
Data Sheet

August 15, 2026

ABACO SYSTEMS

Abaco Systems PCIE-5565RC-200000 PCI Express (PCIe) Reflective Memory (RFM) Node Interface Card

The Abaco Systems PCIE-5565RC-200000 is a PCI Express node interface card that implements Reflective Memory (RFM) technology for deterministic, low-latency data sharing across distributed systems. The card creates an optical ring-based shared memory network where data written to onboard memory is automatically broadcast to all connected nodes with minimal host processor overhead. This transparent data transfer mechanism eliminates I/O bottlenecks and optimizes system performance for real-time applications requiring sub-microsecond inter-node latency. Compatibility & Integration The card integrates into PCI Express slots via standard PCIe connector. High-speed optical fiber links support both multimode and single-mode deployments for flexible network distances. Aumictech offers NIST-traceable calibration and repair for the Abaco Systems PCIE-5565RC-200000. Calibration covers analog input



MODEL

**Abaco Systems
PCIE-5565RC-
200000**

CALIBRATION

**Available on
request**

CONDITION

Used

STATUS

In stock

RFQ / SKU

**PCIE-5565RC-
200000**

LISTING

<https://aumictechlabs.com/products/pcie-5565rc-200000-2/>

NIST-traceable cal

SAM registered

30-day returns

NAICS 423690 • 811210 • 541380

This unit

The Abaco Systems PCIE-5565RC-200000 is a PCI Express node interface card that implements Reflective Memory (RFM) technology for deterministic, low-latency data sharing across distributed systems. The card creates an optical ring-based shared memory network where data written to onboard memory is automatically broadcast to all connected nodes with minimal host processor overhead. This transparent data transfer mechanism eliminates I/O bottlenecks and optimizes system performance for real-time applications requiring sub-microsecond inter-node latency.

Technical Specifications

Form Factor: PCI Express (PCIe), low profile

Network Topology: Optical ring-based shared memory

Maximum Nodes: Up to 256

Onboard Memory: 128 MB or 256 MB SDRAM

Sustained Data Rate: Up to 170 MB/s

Serial Connection Speed: 2.12 Gbaud

Inter-Node Latency: 450–500 nanoseconds

Packet Size: 4 to 64 bytes (dynamic)

Fiber Optic Range: Multimode up to 300 m; single mode up to 10 km

DMA Channels: One independent channel

Interface Standard: PCI Express 1.0a to PCI Bridge, PCI Local Bus Specification v2.2

Compliance: RoHS

Key Features

- Software-transparent operation with no I/O overhead
- Interrupt generation capability: any node can trigger interrupts to single or multiple targets
- Transmit and Receive FIFOs buffer peak-rate data
- Built-in error detection and management
- Multi-platform OS support: Linux, VxWorks, Windows
- Independent operation across different bus structures and operating systems

Typical Applications

- Real-time data distribution in distributed avionics and defense systems
- Low-latency inter-process communication across multiple chassis
- Deterministic memory sharing in time-critical embedded environments
- Ring-topology sensor networks requiring microsecond-level synchronization

Compatibility & Integration

The card integrates into PCI Express slots via standard PCIe connector. High-speed optical fiber links support both multimode and single-mode deployments for flexible network distances.

PCIE5565RC200000 Characteristics / Specifications

PARAMETER	VALUE
Model	PCIE-5565RC-200000
Instrument Type	Fiber-optic Reflective Memory PCI Express node
Card Form Factor	PCI Express
Memory This Config	256 MByte SDRAM multimode
Link Serial Rate	2.12 Gbaud
Nonredundant Transfer Rate	43 MByte/s single longword to 170 MByte/s 64-byte bursts
Redundant Transfer Rate	20 MByte/s single longword to 87 MByte/s 64-byte bursts
Sustained Data Rate Maximum	up to 170 MByte/s
Node To Node Latency	450 to 500 ns
Dynamic Packet Size	4 to 64 bytes
Pci Express Transfer Rate Family	4 lanes at 2.5 Gbit/s
Legacy Pci Rate 33 Mhz 32 Bit	132 MByte/s
Legacy Pci Rate 33 Mhz 64 Bit Or 66 Mhz 32 Bit	264 MByte/s
Legacy Pci Rate 66 Mhz 64 Bit	528 MByte/s
Board Length	6.6 in
Board Height	4.2 in
Mass	0.4 lb
Cooling Requirement	300 LFM
Operating Temperature	0 to plus 65 C with forced air cooling
Storage Temperature	-40 to plus 85 C
Relative Humidity	20 to 80 percent noncondensing
Power Plus 12 Vdc Maximum	0.6 A plus or minus 5 percent
Power Plus 3.3 Vdc Maximum	1.6 A
Mtbf Bellcore	607680 hours
Simplex Cable Distance	up to 820 ft (250 m)

PARAMETER	VALUE
Duplex Cable Distance	up to 721 ft (219.76 m)
Network Node Capacity	up to 256 nodes
Ordering Examples	PCIE-5565RC-100000 128 MByte multimode; PCIE-5565RC-200000 256 MByte multimode
Data Rate	Maximum: up to 170 MByte/s
Humidity	20 to 80 percent noncondensing

General Specifications & Supplementary Characteristics

PARAMETER	VALUE
Storage temperature	40 to plus 85 C
Operating temperature	0 to plus 65 C with forced air cooling
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Humidity	20 to 80 percent noncondensing
Relative Humidity	20 to 80 percent noncondensing
Power Plus 12 Vdc Maximum	0.6 A plus or minus 5 percent
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Mtbf Belcore	607680 hours
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Ordering Examples	PCIE-5565RC-100000 128 MByte multimode; PCIE-5565RC-200000 256 MByte multimode Notes From Abaco/Artisan PCIE-5565RC Reflective Memory datasheet tables for transfer rates, latency, mechanicals, power, and ordering memory codes.

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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Notes
From Abaco/Artisan PCIE-5565RC Reflective Memory datasheet tables for transfer rates, latency, mechanicals, power, and ordering memory codes.

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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NIST-traceable calibration · SAM registered ·
30-day returns
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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.