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Data Sheet

August 15, 2026

AMETEK / ORTEC

Ametek / Ortec MCS-PCI Multichannel Scaler Card

Ametek / Ortec Data Acquisition Systems (DAQ). Accuracy: ± 100 ppm over operating temperature range, Accuracy: 100 ppm crystal-controlled.



MODEL

**Ametek / Ortec
MCS-PCI**

CALIBRATION

**Available on
request**

CONDITION

Used

STATUS

In stock

RFQ / SKU

MCS-PCI

LISTING

<https://aumictechlabs.com/products/mcs-pci-3/>

NIST-traceable cal

SAM registered

30-day returns

NAICS 423690 • 811210 • 541380

This unit

The Ametek/Ortec MCS-PCI is a multichannel scaler card for PCI bus systems that transforms a personal computer into a data acquisition instrument for nuclear and physics experiments. It delivers precise timing and counting capabilities with zero dead time between channels, supporting counting rates up to 150 MHz at the fast analog input and 1 MHz at the Single-Channel Analyzer input. Technical Specifications Counting Performance Maximum counting rate: 150 MHz (fast analog input), 1 MHz (SCA input) Input pulse width: Minimum 3.5 ns at discriminator threshold Dead time: Zero between channels and zero end-of-pass Input pulse amplitude requirement: >30 mV to trigger Dwell Time Range: 100 ns to 1,300 seconds per channel Fine adjustment: 100 ns to 1.3 ms in 20 ns steps; 1.3 ms to 1.3 s in 20 μ s steps; 1.3 s to 1,300 s in 20 ms steps Accuracy: ± 100 ppm over operating temperature range External dwell time supported with 100 ns minimum per channel Channel Configuration Selectable channels per scan: 4 to 65,536

(65,536 with ramp output inactive; 4 to 32,768 with ramp output active) Memory: 65,536 channels total Fast Analog Input Amplitude: ± 5 V on rear-panel BNC Threshold: Computer adjustable from –1.6 V to +3 V in 1.5 mV steps Slope selection: Positive or negative triggering, computer controlled Input impedance: Selectable 50 Ω or 1,000 Ω , DC-coupled Timing and Control Clock accuracy: 100 ppm crystal-controlled Trigger: Internal or external start for each pass Ramp output: Sawtooth or triangular wave, adjustable start/mid/end points

Key Features Dual-port memory allows uninterrupted data access during acquisition Single-Channel Analyzer with computer-controlled upper and lower levels Flexible input source selection between SCA and discriminator inputs Zero dead time architecture for continuous counting without loss Auto-clear mode for pre-acquisition data clearing

Typical Applications Nuclear spectroscopy, time-resolved counting experiments, multi-parameter data acquisition, and physics research requiring synchronized multichannel analysis with microsecond-scale timing precision.

Compatibility & Integration PCI bus interface. Operates under Windows 98 or NT version 4 with MCS-32 software control. On-screen displays enable manipulation of all controls and spectral data.

MCSPCI Characteristics / Specifications

PARAMETER	VALUE
Model	MCS-PCI
Instrument Type	Multichannel scaler card
Bus	PCI
Measurement Class	multichannel scaling / time-binned pulse counting
Application Class	LIDAR, time-of-flight, and fluorescence lifetime
Manufacturer	Ortec / Ametek
Use Case	PCI MCS
Literature	Ortec/Ametek MCS-PCI multichannel scaler listings
Family	Ortec MCS
Documentation Type	OEM MCS-PCI listing
Brand Lineage	Ortec Ametek
System Role	PCI multichannel scaler
Form Factor	PCI card
Detector Class	photon/ion pulse input
Operating Temperature Class	laboratory PC
Year Class	Ortec PCI MCS family
Vendor Path	Ortec Ametek
Documentation Class	OEM MCS catalog
Control Class	PC software MCS control
Replacement Class	desktop PCI versus NIM crate MCS
I/O Class	pulse input plus PCI host
Timing Class	time-binned scaling
Companion Role	PC-based nuclear/photon counting
Operating temperature	Class: laboratory PC

General Specifications & Supplementary Characteristics

PARAMETER	VALUE
Operating temperature	Class: laboratory PC
Operating Temperature	Class: laboratory PC
Operating Temperature Class	laboratory PC
Year Class	Ortec PCI MCS family
Vendor Path	Ortec Ametek
Documentation Class	OEM MCS catalog
Control Class	PC software MCS control
Replacement Class	desktop PCI versus NIM crate MCS
I/O Class	pulse input plus PCI host
Timing Class	time-binned scaling
Companion Role	PC-based nuclear/photon counting Notes From Ortec/Ametek MCS-PCI listings (PCI multichannel scaler). Dwell time, number of bins, and maximum count rate are on the MCS-PCI specification sheet.

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.