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Data Sheet

August 15, 2026

ABACO SYSTEMS / CONDOR ENGINEERING

Abaco Systems / Condor Engineering PCI-1553-SS MIL-STD-1553 PCI Interface

MIL-STD-1553 PCI interface card designed for simulating, monitoring, and testing MIL-STD-1553 data buses.

**MODEL**

**Abaco Systems /
Condor
Engineering PCI-
1553-SS**

CALIBRATION

**Available on
request**

CONDITION

Used

STATUS

In stock

RFQ / SKU

PCI-1553-SS

LISTING

<https://aumictechlabs.com/products/pci-1553-ss-2/>

NIST-traceable cal

SAM registered

30-day returns

NAICS 423690 • 811210 • 541380

This unit

The Abaco Systems / Condor Engineering PCI-1553-SS is a PCI interface card for simulating, monitoring, and testing MIL-STD-1553 data buses in avionics applications. It supports both MIL-STD-1553A/B and MacAir protocols, enabling engineers and system integrators to perform comprehensive 1553 bus validation and emulation. The card operates simultaneously across three functional modes: Bus Controller, Remote Terminal, and Bus Monitor, making it suitable for complex protocol development and integration testing.

Technical Specifications

Protocol Support: MIL-STD-1553A/B, MacAir

Bus Interface: PCI

Channels: 1 to 2 dual-redundant channels

Timetagging: 45-bit resolution at microsecond precision

Memory: 1 MB RAM per channel

Operating Modes: Simultaneous Bus Controller, up to 31 Remote Terminals, and Bus Monitor

Operating Systems: Windows 2000/Me/NT/98/95, Linux, LabWindows/CVI, Visual Basic, VxWorks

Key Features

- Bus Controller (BC) Mode Real-time bus playback with selective RT editing
- Aperiodic message insertion capability
- Error injection and detection
- Conditional branching logic
- Oneshot operation mode
- Internal dual-redundant channel emulation
- Remote Terminal (RT) Mode
- Support for up to 31 simultaneous RTs
- Bus Monitor (BM) Mode 100% traffic capture on fully loaded 1553 or MacAir buses
- Time-tagged capture with error status reporting
- Extensive filtering and triggering options

Integration & Synchronization

Host software synchronization to external timing sources (IRIG, GPS)

Advanced API for Windows and real-time operating systems

Typical Applications

Aircraft avionics development, 1553 protocol validation, bus emulation testing, legacy system integration, and multi-mode bus simulation.

Compatibility & Integration

Supports Windows NT/2000/95/98/Me, Linux, LabWindows/CVI, Visual Basic, and VxWorks environments via PCI slot attachment.

Product Status: Legacy designs only. Last Time Buy window; sales cease end of June 2011.

PCI1553SS Characteristics / Specifications

PARAMETER	VALUE
Model	PCI-1553-SS
Instrument Type	MIL-STD-1553 PCI interface module
Card Form Factor	PCI
Mil Std Protocol	MIL-STD-1553A/B Notice II class with MacAir support family
Dual Redundant Channels This Config	1
Operating Mode This Config	single-function with external timing sync
Remote Terminals Emulated	up to 31
Simultaneous Bc Rt Monitor	supported on multi-function versions
Time Tag Width	45 bit
Bus Monitor Loading	100 percent of fully loaded buses
Real Time Bus Playback	supported with RT edit mode
Aperiodic Message Insertion	supported
Error Injection Detection	supported
Conditional Bc Branching	supported
Oneshot Bc Operation	supported
Irig Synchronization	host synchronization to external IRIG GPS class pulses
Variable Output Voltage Family	yes
Analyzer Software Family	BusTools
Temperature Class	commercial
Ordering Alias	PCI-1553-SS
Form Factor Class	PCI
Application Class	lab simulation test
Analyzer Software	BusTools
Variable Voltage Family	yes
Remote Terminals Maximum	31

PARAMETER	VALUE
Macair Protocol Family	supported
Api Platforms	Windows Linux LabWindows/CVI Visual Basic VxWorks

PCI1553SS Specifications

PARAMETER	VALUE
Applications	MIL-STD-1553 lab simulation integration and maintenance on PCI hosts needing BC RT and monitor roles with API-driven test automation.
Aperiodic message insertion and Oneshot BC operation	100 percent Bus Monitor capture of fully loaded buses
Technical Specifications	Model: PCI-1553-SS

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/Condor PCI-1553 product specifications and Artisan Condor PCI-1553 feature tables for channel modes, 45-bit time-tags, BC/RT/BM concurrency, and playback/error features. PCI-1553-SS adds host synchronization to external timing sources per Condor product descriptions.

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.