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Data Sheet

August 15, 2026

ABACO SYSTEMS / CONDOR ENGINEERING

Abaco Systems / Condor Engineering CEI520A-1616P ARINC Interface for PCI

ARINC interface card for PCI bus systems. Provides connectivity for ARINC 429 and 717 protocols.



MODEL

Abaco Systems /
Condor
Engineering
CEI520A-1616P

CALIBRATION

Available on
request

CONDITION

Used

STATUS

In stock

RFQ / SKU

CEI520A-1616P

LISTING

<https://aumictechlabs.com/products/cei520a-1616p-2/>

NIST-traceable cal

SAM registered

30-day returns

NAICS 423690 • 811210 • 541380

This unit

The Abaco Systems / Condor Engineering CEI520A-1616P is a PCI bus ARINC interface card delivering multi-protocol avionics databus connectivity. It supports 16 independent receive and 16 independent transmit ARINC 429 channels operating at 12.5 KHz or 100 KHz data rates, plus 16 input and 16 output avionics-level discretes. The card integrates on-board message scheduling, label filtering, multiple buffering, time-tagging, and error injection/detection on a single processor platform. Input discretes accept TTL to avionics voltage conversion; output discretes switch up to 0.5 ampere. Signal levels are programmable across a wide range, with receive thresholds from ± 0.1 to ± 13.5 VDC (A to B) and transmit outputs from 0 to ± 10 VDC (A to B). The CEI520A variant supports universal PCI signaling (3.3V or 5V); the CEI-520 model operates at 5V only. Beyond

ARINC 429 and 717, the interface handles ARINC 419, 561, 571, 573, 575, 582, and CSDB protocols. Parity support includes odd, even, or none, with parity error reporting. Fully independent channel operation delivers maximum simultaneous throughput across all channels. Connectors include 68-pin receptacle (SCSI-3 compatible) for databus and 50-pin IDC-style for discrete I/O. Technical Specifications Protocols Supported: ARINC 429, 419, 561, 571, 573, 575, 582, 717; CSDB Channels: 16 Rx + 16 Tx (ARINC 429); fully independent operation Data Rates: 12.5 KHz or 100 KHz Discrete I/O: 16 inputs (TTL/avionics compatible), 16 outputs (0.5 A max per channel) Receive Signal Levels: Standard ± 6.5 to ± 13 VDC (A to B); parametric ± 0.1 to ± 13.5 VDC (A to B) Transmit Signal Levels: Standard ± 10 VDC (A to B); parametric 0 to ± 10 VDC (A to B) Parity Modes: Odd, even, or none; parity error reporting enabled PCI Support: Universal (3.3V/5V) on CEI520A; 5V only on CEI-520 Host Interface: PCI (Peripheral Component Interconnect) Connectors: 68-pin receptacle (SCSI-3), 50-pin IDC discrete I/O Key Features On-board message scheduling and label filtering Multiple buffering options and time-tagging Error injection and detection capabilities Programmable receive level thresholds and adjustable transmit voltages Large intelligent buffers with processor Maximum simultaneous throughput across all channels Compatibility & Integration Operating Systems: Windows (XP, 2000, Me, NT, 98, 95); Linux Kernel (2.4, 2.6); VxWorks API: High-level software API included Extended Versions: Ruggedized configurations available for extended operating temperatures

CEI520A1616P Characteristics / Specifications

PARAMETER	VALUE
Model	CEI520A-1616P
Instrument Type	Intelligent ARINC 429 PCI interface with parametrics
Card Form Factor	PCI short card 6.8 in x 4.2 in
Arinc Receive Channels This Config	16
Arinc Transmit Channels This Config	16
Discrete Inputs This Config	16
Discrete Outputs This Config	16
Receive Data Rates	12.5 kHz or 100 kHz
Transmit Data Rates	12.5 kHz or 100 kHz
Standard Receive Input Levels	plus or minus 6.5 to plus or minus 13 VDCAtBParametric Threshold Levels: plus or minus 0.1 to plus or minus 13.5 VDCAtBStandard Transmit Output Level: plus or minus 10 VDCAtBParametric Transmit Output Voltages: 0 to plus or minus 10 VDCAtBReceive Filtering: label and or SDI
Parity Modes	odd even or none
Processor	100 MHz Intel 80960
Shared Memory	512 KB
Operating Temperature Standard	0 to plus 70 C
Discrete Output Sink Capability	0.5 A low-side switch each
Power Plus 5 Vdc Typical	780 mA
Power Plus 12 Vdc Typical	100 mA
Power Minus 12 Vdc Typical	100 mA
Pci Signaling	Universal 3.3 V or 5 V CEI-520A
PciXCompatibility	PCI-X 1.0 and PCI slots
Parametric Option	enabled on this order code
Error Injection Option	parity gap high or low bit count
Operating temperature	Standard: 0 to plus 70 C

CEI520A1616P Specifications

PARAMETER	VALUE
Applications	ARINC 429 lab and integration work needing adjustable receive thresholds and transmit amplitudes on a full 16×16 channel PCI card.
Dedicated buffered and merged receive storage modes	Universal 3.3 V or 5 V PCI signaling on CEI-520A
Technical Specifications	Model: CEI520A-1616P

General Specifications & Supplementary Characteristics

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Pci Signaling	Universal 3.3 V or 5 V CEI-520A
PciXCompatibility	PCI-X 1.0 and PCI slots
Parametric Option	enabled on this order code
Error Injection Option	parity gap high or low bit count Notes From GE Intelligent Platforms CEI-520/CEI-520A datasheet ordering row CEI-520A-1616-P and family electrical tables. Parametric voltage control is the distinguishing option versus non-P 1616.

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

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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.