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Data Sheet

August 15, 2026

ABACO SYSTEMS / CONDOR ENGINEERING

Abaco Systems / Condor Engineering CEI520A-44 ARINC Interface for PCI

Abaco Systems / Condor Engineering CEI520A-44 ARINC 429 Interface for PCI The Condor Engineering (Abaco) CEI520A-44 is an intelligent ARINC 429 PCI interface in the CEI-520/CEI-520A family. OEM CEI-520/CEI-520A datasheet GFA-752B rates this ordering configuration for 4 receive and 4 transmit ARINC 429 channels with data rates 12.5 kHz or 100 kHz, 100 MHz Intel 80960 processing, 512 KB shared memory, and PCI short-card mechanics 6.8 in by 4.2 in. ARINC 429 lab simulation test and embedded avionics integration on PCI hosts needing scheduled and burst messaging with label filtering. The Condor Engineering (Abaco) CEI520A-44 is an intelligent ARINC 429 PCI interface in the CEI-520/CEI-520A family. OEM CEI-520/CEI-520A datasheet GFA-752B rates this ordering configuration for 4 receive and 4 transmit ARINC 429 channels with data rates 12.5 kHz or 100 kHz, 100 MHz Intel 80960 processing, 512 KB shared memory, and PCI short-card mechanics 6.8 in by 4.2 in. ARINC 429 lab simulation test and embedded avionics integration on PCI hosts needing scheduled and burst messaging with label filtering.



MODEL

**Abaco Systems /
Condor
Engineering
CEI520A-44**

CALIBRATION

**Available on
request**

CONDITION

Used

STATUS

In stock

RFQ / SKU

CEI520A-44

LISTING

<https://aumictechlabs.com/products/cei520a-44-2/>

NIST-traceable cal

SAM registered

30-day returns

NAICS 423690 • 811210 • 541380

This unit

The Abaco Systems / Condor Engineering CEI520A-44 is a PCI short-form ARINC interface board engineered for avionics databus applications. It delivers up to 16 independent receive and 16 transmit ARINC 429 channels operating at 12.5 kHz or 100 kHz, with dual-mode support for ARINC 717/573, CSDB, Harvard Bi-Phase (HBP), and Bi-Polar Return to Zero (BPRZ) protocols. The board integrates a 100 MHz Intel 80960 processor paired with large, configurable buffers and on-board message scheduling to handle high-throughput avionics traffic without host CPU overhead.

Technical Specifications

ARINC 429 Interface

Receive channels: Up to 16 at 12.5 kHz or 100 kHz

Transmit channels: Up to 16 at 12.5 kHz or 100 kHz

Receive input levels: Standard ± 6.5 to ± 13 V (A to B); Parametric ± 0.1 to ± 13.5 V (A to B)

Transmit output levels: Standard ± 10 V (A to B); Parametric 0 to ± 10 V (A to B)

Label and SDI filtering on receive

Parity support: Odd, Even, or None

Error injection options: Parity, Gap, High or Low bit count

Automatic transmit slew rate adjustment

ARINC 717/573 and Extended Protocol Support

Dual-mode functionality enabling HBP or BPRZ operation across a wide range of bit rates and sub-frame combinations. Supports 2-wire ARINC 573, 575, 717, CSDB, and legacy bi-phase standards.

Discrete I/O

Configurable inputs: 0, 8, or 16 channels (avionics-level or TTL/CMOS)

Configurable outputs: 0, 8, or 16 channels (low-side switches, 0.5 A sink capability per channel)

Processor and Memory

On-board 100 MHz Intel 80960 processor. Three buffering modes: Dedicated, Buffered (per-channel circular buffers), and Merged (single time-sequenced buffer).

Key Features

Time-tagging of all received messages

Label-based message filtering and on-board scheduling

Parity error detection and reporting

Parametric threshold tuning for non-standard signal conditions

PCI signaling compatibility: 3.3 V and 5 V PCI-X 1.0 compliant

Typical Applications

avionics test, ground support equipment (GSE), aircraft health management systems, and real-time flight data acquisition.

Compatibility & Integration

High-level API support for Microsoft Windows, Linux, and VxWorks. Sample programs provided in C/C++, C#.NET, Visual Basic (VB6 and VB.NET), VxWorks, and LabWindows/CVI.

CEI520A Characteristics / Specifications

PARAMETER	VALUE
Model	CEI520A-44
Instrument Type	Intelligent ARINC 429 PCI interface
Card Form Factor	PCI short card 6.8 in x 4.2 in
Arinc Receive Channels This Config	4
Arinc Transmit Channels This Config	4
Discrete Inputs This Config	8
Discrete Outputs This Config	8
Family Receive Channel Maximum	up to 16
Family Transmit Channel Maximum	up to 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 VDCAtoBParametric Threshold Levels: plus or minus 0.1 to plus or minus 13.5 VDCAtoBStandard Transmit Output Level: plus or minus 10 VDCAtoBParametric Transmit Output Voltages: 0 to plus or minus 10 VDCAtoBReceive 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
Extended Temperature Option	available
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 This Product Class	Universal 3.3 V or 5 V PCI signaling CEI-520A
PciXCompatibility Cei520a	PCI-X 1.0 and PCI slots

PARAMETER	VALUE
Operating temperature	Standard: 0 to plus 70 C

General Specifications & Supplementary Characteristics

PARAMETER	VALUE
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Power Plus 12 Vdc Typical	100 mA
Power Minus 12 Vdc Typical	100 mA
Pci Signaling This Product Class	Universal 3.3 V or 5 V PCI signaling CEI-520A
PciXCompatibility Cei520a	PCI-X 1.0 and PCI slots

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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PARAMETER

VALUE

PciXCompatibility Cei520a

PCI-X 1.0 and PCI slots

Optional Protocols Family: ARINC 419 561 571 573 575 582 717 and CSDB

Notes

From GE Intelligent Platforms CEI-520/CEI-520A ARINC Interface for PCI datasheet (GFA-752B) ordering table and electrical specifications. Channel and discrete counts are the OEM ordering-row values for CEI520A-44; electrical limits are family-common.

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 ·
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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.