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**Data Sheet**

August 15, 2026

ABACO SYSTEMS / CONDOR ENGINEERING

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

ARINC interface card for PCI bus systems. Designed for avionics and aerospace applications.

**MODEL**

Abaco Systems /  
Condor  
Engineering  
CEI520A-1616

**CALIBRATION**

Available on  
request

**CONDITION**

Used

**STATUS**

In stock

**RFQ / SKU**

CEI520A-1616

**LISTING**

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

NIST-traceable cal

SAM registered

30-day returns

NAICS 423690 • 811210 • 541380

## This unit

The Abaco Systems / Condor Engineering CEI520A-1616 is a PCI-based ARINC interface card engineered for avionics and aerospace databus applications. This intelligent card delivers up to 16 independent receive and 16 independent transmit channels supporting ARINC 429 at 12.5 KHz or 100 KHz data rates, plus additional ARINC protocols including 419, 561, 571, 573, 575, 582, 717, and CSDB. The card features on-board message scheduling, configurable label and SDI filtering, multiple buffering modes, time-tagged message capture, and error injection and detection capabilities.

Technical Specifications

ARINC 429 Interface

Receive channels: Up to 16

Transmit channels: Up to 16

Data rates: 12.5 KHz or 100 KHz

Input levels (standard):  $\pm 6.5$  to  $\pm 13$  VDC (A to B)

Input levels (parametric threshold):  $\pm 0.1$  to  $\pm 13.5$  VDC (A to B)

Output level (standard):  $\pm 10$  VDC (A to B)

Output voltages (parametric): 0 to  $\pm 10$  VDC (A to B)

Parity options: Odd, even, or none

Error reporting: Parity detection Slew rate adjustment: Automatic on transmit channels Discrete I/O Discrete inputs: 0, 8, or 16 (avionics-level and TTL/CMOS compatible) Discrete outputs: 0, 8, or 16 (low-side switches, 0.5 A sink capability per channel) Physical & Bus Interface Form factor: PCI short card (6.8 in. × 4.2 in.) PCI signaling: CEI520A supports 3.3V or 5V; earlier CEI-520 supports 5V only

**Key Features** Fully independent operation across all channels on-board processor Label and/or SDI filtering Multiple buffering modes: dedicated, buffered, and merged Error injection options: parity, gap, high or low bit count Dual-Mode functionality (ARINC 573/717) supporting Harvard Bi-Phase (HBP) or Bi-Polar Return to Zero (BPRZ) Time-tagged message capture Optional ruggedized configurations for extended operating temperatures Programmable receive level thresholds (parametric option) Adjustable transmit output voltages (parametric option)

**Typical Applications** Avionics databus integration, aerospace test and development, real-time message processing, multi-protocol ARINC system validation.

**Compatibility & Integration** The CEI520A-1616 integrates into standard PCI systems with universal voltage signaling support, enabling deployment across legacy 5V platforms and modern 3.3V infrastructure.

## CEI520A1616 Characteristics / Specifications

| PARAMETER                           | VALUE                                                                                                                                                                                                                                                                                  |
|-------------------------------------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Model                               | CEI520A-1616                                                                                                                                                                                                                                                                           |
| 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  | 16                                                                                                                                                                                                                                                                                     |
| Arinc Transmit Channels This Config | 16                                                                                                                                                                                                                                                                                     |
| Discrete Inputs This Config         | 16                                                                                                                                                                                                                                                                                     |
| Discrete Outputs This Config        | 16                                                                                                                                                                                                                                                                                     |
| 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                                         |
|----------------------------------|-----------------------------------------------|
| Operating temperature            | Standard: 0 to plus 70 C                      |
| Operating Temperature            | Standard: 0 to plus 70 C                      |
| 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                       |

# 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                                                                                                                                                                                                                                                                                                        |                                               |
|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-----------------------------------------------|
| Specifications                                                                                                                                                                                                                                                                                                        |                                               |
| PARAMETER                                                                                                                                                                                                                                                                                                             | VALUE                                         |
| Model                                                                                                                                                                                                                                                                                                                 | CEI520A-1616                                  |
| 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                                                                                                                                                                                                                                                                                    | 16                                            |
| Arinc Transmit Channels This Config                                                                                                                                                                                                                                                                                   | 16                                            |
| Discrete Inputs This Config                                                                                                                                                                                                                                                                                           | 16                                            |
| Discrete Outputs This Config                                                                                                                                                                                                                                                                                          | 16                                            |
| 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 |                                               |
| Specifications                                                                                                                                                                                                                                                                                                        |                                               |
| PARAMETER                                                                                                                                                                                                                                                                                                             | VALUE                                         |
| 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 |

| 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-1616; 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](mailto:sales@aumictech.com) · +1 (484) 841-9341

#### Aumictech

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<https://aumictechlabs.com>

NIST-traceable calibration · SAM registered ·  
30-day returns  
NAICS 423690 · 811210 · 541380  
Generated August 15, 2026

Technical content from manufacturer specifications. Unit photo/stock from Aumictech listing when available. Specifications subject to OEM documentation and unit condition.