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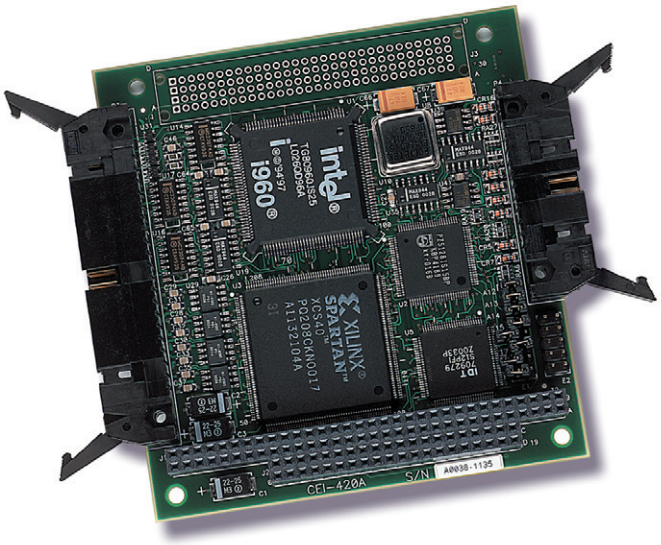
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Find the *Abaco Systems / Condor Engineering CEI-420A-44R* at our website: *Click HERE*



CEI-420A

Interface for PC/104

Hardware

Available in a range of configurations to match your needs, the intelligent CEI-420A provides complete, integrated databus functionality for ARINC 429/575 and related avionics protocols in embedded PC/104 applications. The 420A supports maximum data throughput on all channels while providing on-board message scheduling, label filtering, multiple buffering options, timetagging and I/O discretes that handle avionics-level voltages. Ruggedized configurations with extended operating temperatures and a configuration with PC/104-Plus passthrough connector are optional.

Software

Abaco software tools and solutions significantly reduce the time required to integrate ARINC 429 and other avionics protocols into your application. Included with the CEI-420A is our flexible, high-level API (Application Programming Interface) supporting 32-bit Windows NT/XP, VxWorks 5.5/6.x, and Linux kernels 2.4/2.6. A wide variety of sample programs are included, providing direct support for C/C++, C#.NET, Visual Basic (VB6 and VB.NET), VxWorks, and LabWindows/CVI development. This powerful API supports multiple cards, and is compatible with CEI-x20 API support on PCI, PC/AT, CompactPCI and PMC platforms. Optional software includes LabVIEW support and BusTools/ARINC, Abaco's easy-to-use, Windows-based GUI solution for ARINC 429 analysis, simulation and data logging.

Architecture

Controlled by a powerful Intel 80960 CPU, the CEI-420 features independent channels, selectable data rates and parity, along with automatic slew rate adjustment. Other standard features include error detection, small PC/104 bus memory footprint and latching, keyed I/O connections. Up to sixteen input discretes support TTL to avionicslevel voltages, while up to eight low-side switched output discretes can handle up to 0.5 ampere.

FEATURES:

- Up to 16 input discretes or 8 Rx and 8 Tx ARINC 429 channels
- Intelligent interface with large buffers
- Advanced, high-level software API included for Microsoft® Windows®, Linux, and VxWorks
- Easy-to-use BusTools/ARINC Windows-based GUI bus analyzer available
- PC/104-Plus pass-through connectors available
- Up to 16 input and 8 output discretes
- High-performance processor
- Fully independent channel operation
- Support for ARINC 573 or 717 optional

abaco SYSTEMS

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CEI-420A *Interface for PC/104*

Specifications

ARINC 429 Receive Channels
- Number of channels: up to 8
- Data rates: 12.5 KHz or 100 KHz
- Standard input levels: ± 6.5 to ±13 VDC (A to B)
- Buffering: 2 KB per channel
- Parity: odd, even or none
- Error reporting: parity

ARINC 429 Transmit Channels
- Number of channels: 8
- Data rates: 12.5 KHz or 100 KHz
- Standard output level: ±10 VDC (A to B)
- Buffering: 2 Kbyte per channel
- Parity: odd, even or none

Software
- API
  - Includes high-level API for Windows, Linux, and VxWorks
  - Source code API library included
  - Examples – includes C/C++, C#.NET, Visual Basic (VB6 and VB.NET), VxWorks, and LabWindows/CVI sample programs
- LabVIEW - Support optional

Additional Protocol Support
- ARINC 573/717 Bi-Polar RZ and Harvard Bi-Phase

Architecture
- Processor: Intel 80960
- RAM: 64 Kbyte dual-port SRAM
- 4 KB PC/104 bus memory footprint
- Uses 16-bit PC/104 bus signals
- PC/104-Plus pass-through connector optional

Physical/Environmental
- Standard PC/104 card size (3.7" x 3.5")
- Standard operating temperature: 0°C to +70°C
- Extended temperature range available
- Latching I/O connectors

Discrete Inputs
- Number of inputs: 8
- Supports avionics-level (open/gnd or high/low) and TTL/CMOS

Multi-purpose Discrete Input/Output Channels
- Number of outputs: 8
- Each channel can be individually configured as an input or output
- Low side switches, each capable of sinking 0.5 ampere

Power (typical)
- +5 VDC:750 mA
- +12 VDC:100 mA
- -12 VDC:80 mA

Warranty
- 3 year limited hardware warranty

Software Features

On-board firmware, large data buffers and a high-level API are integrated to provide total flexibility in receiving and generating ARINC bus traffic. Filter data by label and/or SDI for each receive channel. Three different methods are provided to buffer received data: Buffered Mode utilizes a separate circular buffer for each channel; Merged Mode combines all received data into a single, timesequenced circular buffer; and Dedicated Mode provides a snapshot of the very latest data. Transmit messages are automatically scheduled on-board or transmitted from a FIFO.

Tools

API Support

Flexible, high-level utility libraries are included with the CEI-420A (see "Software" section on reverse side for details). Our easy-to use API (Application Programming Interface) speeds application development by providing simplified access to all configuration, initialization, transmit and receive functionality. Contact Abaco for a copy of the API User Manual to see how this robust and flexible C programming interface can reduce development, integration and life cycle maintenance efforts. LabVIEW VI support is also available.

Bus Analysis

BusTools/ARINC is our easy-to-use Windows-based ARINC 429 Bus Analysis/Simulation/Data Logging solution available for the CEI-420A. Monitor multiple channels in real-time. Display time-tagged data in hex, binary or engineering units (standard or custom). Filter received data by label and/or SDI. View discrete descriptors and user-bit-encoded values. Quickly create and display historical and real-time charts of individual labels. Record and playback data over transmit buses.

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