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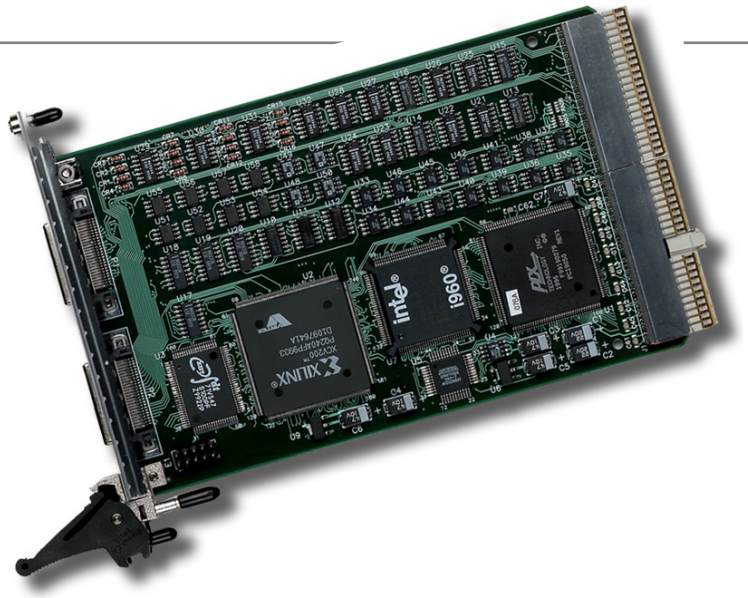
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CEI-620

Interface for cPCI

Hardware

Available in a range of configurations to match your needs, the intelligent CEI-620 provides complete, integrated databus functionality for ARINC 429 and related avionics protocols on the CompactPCI bus. It supports maximum data throughput on all channels while providing on-board message scheduling, label filtering, multiple buffering options, time-tagging, error detection and avionics-level I/O discretes. Programmable receive level thresholds, adjustable transmit output voltages, error injection and ruggedized configurations with extended operating temperatures are optional. Support for other avionics protocols including ARINC 419, 561, 568, 571, 573, 582, 717 and CSDB is available.

Software

Abaco software tools and solutions significantly reduce the time required to integrate various avionics protocols into your application. Included with the CEI-620 is our flexible, high-level API (Application Programming Interface) supporting Microsoft Windows NT/2000 as well as all 32-bit and 64-bit versions of Windows XP/ Vista/Server 2008/7. VxWorks 5.5/6.x and Linux kernels 2.4/2.6 are also supported. 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, PC/104, and PMC platforms. Optional software includes Solaris drivers, LabVIEW support and BusTools/ARINC, Abaco's easy-to-use, Windowsbased GUI solution for ARINC 429 analysis, simulation and data logging.

Architecture

Controlled by a powerful Intel 80960 CPU, the CEI-620 features automatic slew rate adjustment along with independent selection of data rate and parity. Input discretes support TTL to avionics voltage levels, while output discretes can switch up to 0.5 amp. Support for additional protocols include ARINC 561 (6-wire), 419, 568, 571, 573, 575, 582, 717, CSDB and RS-422/423. Other standard features for ATE include error injection/detection, programmable receive input thresholds and adjustable transmit output voltages (on 4 Tx channels).

Software Features

On-board firmware, large data buffers and a high-level API are integrated to provide total flexibility in monitoring 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, time-sequenced 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.

FEATURES:

- Up to 16 Rx and 16 Tx ARINC 429 channels
- 3U CompactPCI form factor
- Front panel or backplane I/O configurations
- Intelligent interface with large buffers
- Easy-to-use BusTools/ARINC™ Windows-based GUI bus analyzer available
- Advanced, high-level software API included for Microsoft® Windows®, Linux, and VxWorks
- Supports maximum data throughput on all channels simultaneously
- Programmable receive thresholds and variable transmit output voltages available
- Up to 16 input and 16 output discretes that handle avionics–level voltages
- High performance processor
- Fully independent channel operation
- Support for ARINC 561, 573, 717, CSDB, +
- Solaris, VxWorks and LabVIEW support available

abaco SYSTEMS

CEI-620 *Interface for cPCI*

Specifications

ARINC 429 Receive Channels
- Number of channels: up to 16
- Data rates: 12.5 KHz or 100 KHz
- Standard input levels: ± 6.5 to ±13 VDC (A to B)
- Parametric threshold levels: ± 0.1 to ± 13.5 VDC (A to B)
- Filtering: label and/or SDI
- Parity: odd, even or none
- Error reporting: parity

ARINC 429 Transmit Channels
- Number of channels: up to 16
- Data rates: 12.5 KHz or 100 KHz
- Automatic slew rate adjustment
- Standard output level: ±10 VDC (A to B)
- Parametric output voltages: 0 to ±10 VDC (A to B)
- Parity: odd, even or none
- Error injection option: parity, gap, high or low bit count

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
- GUI - Optional BusTools/ARINC GUI bus analyzer

Architecture
- Processor: 100 MHz Intel 80960
- RAM: 512 KB shared memory

Physical/Environmental
- 3U CompactPCI
- Operating temperature range: 0°C to +70°C
- Extended operating temperature range available
- Front panel and/or backplane I/O configurations

Discrete Inputs
- Number of inputs: 0, 8 or 16
- Supports avionics-level (open/gnd or high/low) and TTL/CMOS

Discrete Outputs
- Number of outputs: 0, 8 or 16
- Low side switches, each capable of sinking 0.5 ampere

Optional Configurations
- ARINC 573/717 Bi-Polar RZ and Harvard Bi-Phase
- Contact factory about ARINC 561, 568 or CSDB support

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

Warranty
- 3 year limited hardware warranty

Ordering information

CEI-620-22	ARINC 429 Intelligent 3U CompactPCI card with 2 Rx, 2 Tx channels
CEI-620-44	ARINC 429 Intelligent 3U CompactPCI card with 4 Rx, 4 Tx channels, 8 input, 8 output discretes
CEI-620-88	ARINC 429 Intelligent 3U CompactPCI card with 8 Rx, 8 Tx channels, 8 input, 8 output discretes
CEI-620-1608	ARINC 429 Intelligent 3U CompactPCI card with 16 Rx, 8 Tx channels, 16 input, 16 output discretes
CEI-620-0816	ARINC 429 Intelligent 3U CompactPCI card with 8 Rx, 16 Tx channels, 16 input, 16 output discretes
CEI-620-1616	ARINC 429 Intelligent 3U CompactPCI card with 16 Rx, 16 Tx channels, 16 input, 16 output discretes
CEI-620-1508J	Intelligent 3U CompactPCI card with 15 Rx, 8 Tx ARINC 429 channels, and 1 Rx, 1 Tx dual-mode (either HBP or BPRZ) ARINC 573/717 channels
CEI-620-1514J	Intelligent 3U CompactPCI card with 15 Rx, 14 Tx ARINC 429 channels, and 1 Rx, 1 Tx dual-mode (either HBP or BPRZ) ARINC 573/717 channels
-B suffix	For rear panel I/O (no front panel)
-H suffix	For 6U front panel

Optional Software

BusTools/ARINC	Bus analysis and simulation software for Microsoft Windows
CEI-LV	LabVIEW support for ARINC 429

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