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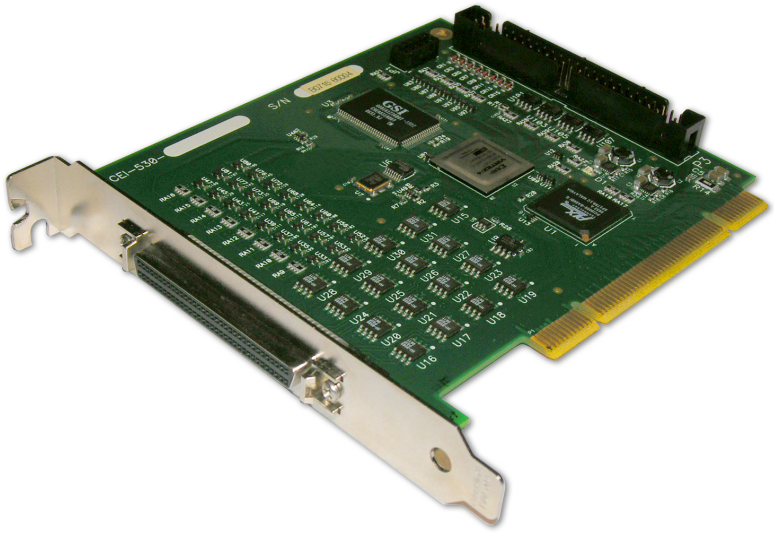
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Find the *Abaco Systems RCONSCSI3-6* at our website: ***Click HERE***



RCEI-530

RoHS ARINC Interface for PCI

Hardware

Available in a range of configurations to match your needs, the 32 channel RCEI-530 provides complete, integrated databus functionality for ARINC 429, ARINC 575 and selected 2-wire, 32-bit protocols. The RCEI-530 supports maximum data throughput on all channels while providing onboard message scheduling, label filtering, multiple buffering options, time-tagging, error detection and avionics-level I/O discretes, with support for either 33 MHz or 66 MHz PCI interfaces. Configurations with support for ARINC 717, ARINC 573, and IRIG-B Receiver (AM or /DC/ TTL) and Generator (DC/TTL) support are optional. The IRIG-B DC level signal can be utilized to synchronize time stamps across multiple boards. Several CEI-530 configurations offer combinations of ARINC 429 channels along with ARINC 717/573 Dual-Mode functionality. Dual-Mode functionality programmatically supports either HBP (Harvard Bi-Phase) or BPRZ (Bi-Polar Return to Zero) across a very wide range of Bit Rate/ Subframe combinations.

Software

Abaco Systems' software tools and solutions significantly reduce the time required to integrate ARINC 429 and other avionics protocols into your application. Included with the RCEI-530 is our flexible, high-level, API (Application Programming Interface) support for: 32-bit/64-bit Microsoft Windows 7, 8, 8.1, 10, Server 2012 R1/R2, Vista and XP as well as VxWorks and Linux Kernel Versions 2.4 and 2.6 (optional support for LabVIEW and LabVIEW Real-Time). This powerful API supports multiple cards, and is compatible with Abaco Systems API support on PCI, PC/AT, PC/104-Plus, CompactPCI and PCMCIA 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

RCEI-530 features include independent, software programmable data rates and parity, error detection and automatic transmit channel slew rate adjustment. 2 MBytes of on-board RAM provide large transmit and receive data buffers. All channels operate independently. Discretes support TTL to 16 avionics-level inputs and 16 outputs while open-collector outputs enhance application flexibility.

Data Handling

On-board firmware, large data buffers, and a high-level API are integrated to provide total flexibility in monitoring and generating ARINC bus traffic. Simultaneous Scheduled and Burst Mode (FIFO) messaging is supported on all ARINC 429 transmit channels. Each ARINC 429 receive channel provides simultaneous Dedicated and Buffered Mode storage, along with label/SDI filtering.

Three different methods are provided to bufer 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.
- Dedicated Mode provides a snapshot of the very latest data.

FEATURES:

- Up to 16 Rx and 16 Tx ARINC 429 channels
- High performance, high density interface with large buffers
- Easy-to-use BusTools/ARINC Windows-based GUI Bus Analyzer available
- Advanced, high-level software API for 32-bit/64-bit Microsoft® Windows® 7, 8, 8.1, 10, Server 2012 R1/R2, Vista®, XP®, Linux®, VxWorks® and INTEGRITY® operating system included.
- Supports maximum data throughput on all channels simultaneously
- 16 input and 16 output discretes that handle avionics–level voltages
- Independent, software-programmable bit rates for all channels
- Error injection/detection
- Support for 2-wire ARINC 573, 575, and 717
- IRIG-B Receiver/Generator optional
- Supports 66MHz, 32-bit PCI operation
- PCI-X compatible

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RCEI-530 *RoHS ARINC Interface for PCI*

Specifications

ARINC 429 Receive Channels

- Number of channels: up to 16
- Data rates: 12.5 KHz, 100 KHz or 5 KHz to 150 KHz programmable
- Standard input levels: ± 6.5 to ±13 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, 100 KHz or 5 KHz to 150 KHz programmable
- Automatic slew rate adjustment
- Output level: ±10 VDC typical (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:
  - 32-bit/64-bit Microsoft Windows 7, 8, 8.1, 10, Server 2012 R1/R2, Vista and XP
  - Linux Kernel Version 2.4 and 2.6
  - VxWorks
- GUI – Optional BusTools/ARINC GUI bus analyzer
- Please check with Sales for the latest supported versions

Physical/Environmental

- PCI short card (5.0 in. x 4.2 in.)
- Operating temperature range: 0 to +70° C
- Extended operating temperature range available

Discrete Inputs and Outputs

- Number of inputs: 16
- Supports monitoring of TTL/CMOS/ Avionics level voltages
- Number of outputs: 16
- Low side switches, each capable of sinking 0.5 ampere

Optional Configurations

- A wide range of Rx/Tx combinations
- ARINC 573/717 Bi-Polar RZ and Harvard Bi-Phase
- IRIG-B

Power (typical)

- +3.3 VDC: 500 mA
- +5 VDC: 50 mA
- +12 VDC: 100 mA (no loads)
- -12 VDC: 100 mA (no loads)

PCI Signaling Voltage Compatibility

- Universal signaling (3.3V or 5V)
- 66/33 MHz PCI bus operation
- Compatible with PCI-X 1.0 and PCI slots

Ordering information

RCEI-530-22	ARINC 429 High Density PCI card with 2 Rx, 2 Tx channels, and 16 discretes
RCEI-530-44	ARINC 429 High Density PCI card with 4 Rx, 4 Tx channels, and 16 discretes
RCEI-530-88	ARINC 429 High Density PCI card with 8 Rx, 8 Tx channels, and 16 discretes
RCEI-530-1616	ARINC 429 High Density PCI card with 16 Rx, 16 Tx channels, and 16 discretes
RCEI-530-1608	ARINC 429 High Density PCI card with 16 Rx, 8 Tx channels, and 16 discretes
RCEI-530-0816	ARINC 429 High Density PCI card with 8 Rx, 16 Tx channels, and 16 discretes
RCEI-530-22J	High Density PCI card with 2 Rx,/2 Tx channels of ARINC 429, and 1 Rx,/1Tx ARINC 717/573 Dual Mode, and 16 discretes
RCEI-530-44J	High Density PCI card with 4 Rx,/4 Tx channels of ARINC 429, and 1 Rx,/1Tx ARINC 717/573 Dual Mode, and 16 discretes
RCEI-530-88J	High Density PCI card with 8 Rx,/8 Tx channels of ARINC 429, and 1 Rx, 1Tx ARINC 717/573 Dual Mode, and 16 discretes
RCEI-530-1515J	High Density PCI card with 15 Rx,/15 Tx channels of ARINC 429, and 1 Rx, 1Tx ARINC 717/573 Dual Mode, and 16 discretes
-K suffix	Conformal coated
-R suffix	Ruggedized, ext temp
-W suffix	IRIG Timing

Optional Software

BT-ARINC	BusTools ARINC Windows GUI software for ARINC Bus Analysis, Simulation and Datalogging.
CEI-DL	ARINC 615-3 Data Loader GUI
CEI-LV	LabVIEW support for ARINC 429

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Americas: 866-OK-ABACO or +1-866-652-2226 **Asia & Oceania:** +81-3-5544-3973

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