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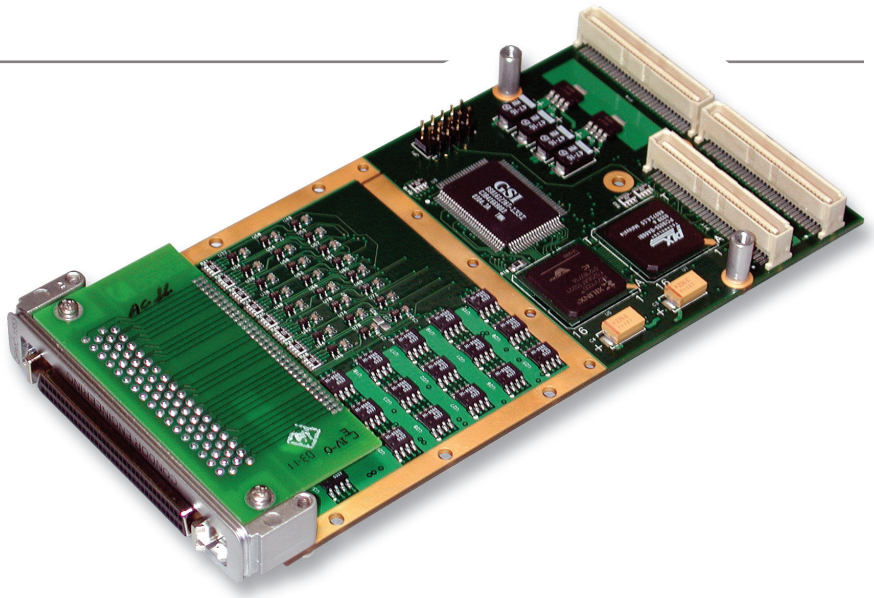
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Find the *Abaco Systems / Condor Engineering CEI-830-1616W* at our website: *Click HERE*



CEI-830

ARINC High Density Interface for PMC

Hardware

Available in a range of configurations to match your needs, the 32 channel CEI-830 provides complete, integrated databus functionality for ARINC 429, ARINC 575 and selected 2-wire, 32-bit protocols. The CEI-830 supports maximum data throughput on all channels while providing on-board message scheduling, label filtering, multiple buffering options, time-tagging and error detection with support for either 33 MHz or 66 MHz PCI/PMC 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. Ruggedized and conductively cooled configurations with extended operating temperatures are available. Several CEI-830 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. Contact Abaco Systems for PCI, CPCI or other platform support of these ARINC protocols.

Software

Abaco's software tools and solutions significantly reduce the time required to integrate ARINC 429 and other avionics protocols into your application. Included with the CEI-830 is our flexible, high-level, API (Application Programming Interface) support for Microsoft Windows®, VxWorks®, INTEGRITY®, and Linux®, (contact Abaco Systems for the specific O/S versions supported). This powerful API supports multiple cards, and is compatible with Abaco's API support on PCI Express®, Mini-PCIe, ExpressCard, PCI, PC/104-Plus, CompactPCI, PMC and XMC platforms. Optional software includes LabVIEW support and BusTools/ARINC, Abaco's reasy-to-use, Windows-based GUI solution for ARINC 429 analysis, simulation and data logging.

Architecture

CEI-830 features include independent, software programmable data rates and parity, error detection and automatic transmit channel slew rate adjustment. 2 MBytes of on-board RAM. All channels operate independently. Standard configuration has both front bezel and P14 mezzanine connector I/O. Configurations with only P14 I/O are available.

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 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
- 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
- Ruggedized, extended temp configurations optional
- Ruggedized, conductively cooled versions available
- Advanced, high-level software API included
- Supports maximum data throughput on all channels simultaneously
- Independent, software-programmable bit rates for all channels
- 66/33 MHz PCI and PCI-X bus operation
- Fully independent channel operation
- IRIG-B Receiver/Generator optional

abaco SYSTEMS

CEI-830 *ARINC High Density Interface for PMC*

Specifications

ARINC 429 Receive Channels
- Number of channels: up to 16 (max. 15 on P14 connector)
- 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 (max. 15 on P14 connector)
- Data rates: 12.5 KHz, 100 KHz or 5 KHz to 150 KHz programmable
- Automatic slew rate adjustment
- Output level: ±10 VDC (A to B)
- Parity: odd, even or none
- Error injection option: parity, gap, high or low bit count

Software
- API
  - Distribution includes source code for all supported operating systems (CEI-x30-SW)
- GUI - Optional BusTools/ARINC GUI bus analyzer
- LabVIEW - Optional CEI-LV support is available

Physical
- PMC Mezzanine Card (74 mm x 149 mm without bezel)
- Front bezel and P14 mezzanine connector I/O

Environmental
- Standard operating temperature range: 0°C to +70°C
- Relative humidity: 5 to 90% (non-condensing)
- Storage temperature range: -55°C to +105°C
- Optional ruggedized, extended temp and conductively cooled configurations

Option Configurations
- A range of ARINC 429 Rx/Tx combinations
- Optional front bezel or P14 I/O only
- Optional ruggedized, -40°C to +85°C operating temperature range
- Optional ruggedized, VITA compliant conductive cooling (max +71°C rail temp)
- Optional conformal coating
- Optional IRIG-B Receiver (AM or DC/TTL) and Generator (DC/TTL)
- Available mounted on a PCI, 3U/6U CompactPCI carrier board

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

PCI Signal Compatibility
- Universal (5V or 3.3V)
- 66/33 MHz PCI bus operation

Ordering information

CEI-830-44	ARINC 429 High Density PMC card with 4 Rx, 4 Tx channels, front and P14 I/O
CEI-830-44C	ARINC 429 High Density PMC card with 4 Rx, 4 Tx channels, P14 I/O, ruggedized, ext temp, conductively cooled
CEI-830-88	ARINC 429 High Density PMC card with 8 Rx, 8 Tx channels, front and P14 I/O
CEI-830-88C	ARINC 429 High Density PMC card with 8 Rx, 8 Tx channels, P14 I/O, ruggedized, ext temp, conductively cooled
CEI-830-1616	ARINC 429 High Density PMC card with 16 Rx, 16 Tx on front I/O or 15 Rx, 15 Tx on P14 I/O
CEI-830-1515C	ARINC 429 High Density PMC card with 15 Rx, 15 Tx channels, P14 I/O, ruggedized, ext temp, conductively cooled
CEI-830-0116	ARINC 429 High Density PMC card with 1 Rx, 16 Tx channels, front and P14 I/O
CEI-830-1601	ARINC 429 High Density PMC card with 16 Rx, 1 Tx channels, front and P14 I/O
-R suffix	Ruggedized, ext temp
-W suffix	IRIG-B Receiver (AM or DC/TTL)Generator (DC/TTL)
-G suffix	P14 I/O only, ruggedized, ext temp
-H suffix	No P14 I/O
-N suffix	Discretes 4 IN / 4 OUT
-K suffix	Conformal coated
-X suffix	PCI (mounted on PCI carrier card) is compatible with PCI-X 1.0 and PCI slots
-3 suffix	3U cPCI (mounted on 3U cPCI carrier card)
-U suffix	PCI Express (mounted on PCI Express carrier card)

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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