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Find the *Abaco Systems / Condor Engineering CEI-820-44* at our website: *Click HERE*

ARINC

Interface for PMC

CEI-820

FEATURES

- Up to 8 Rx and 8 Tx ARINC 429 channels
- Intelligent, high performance interface with large buffers
- Extended operating temperature range optional
- Conductive cooling optional
- Full featured API included for Windows XP, 2000, Me, NT, 98, 95, Linux Kernel (2.4 and 2.6), VxWorks, LabWindows/CVI and Visual Basic
- Supports maximum data throughput on all channels simultaneously
- Programmable receive thresholds on all channels
- Up to 16 bi-directional discretes that handle avionics-level voltages
- Fully independent channel operation
- Support for ARINC 419, 561, 573, 575, 582, 717, + available



Hardware

Available in a range of configurations to match your needs, the intelligent CEI-820 provides complete, integrated databus functionality for ARINC 429 and related avionics protocols. The CEI-820 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 are standard. Ruggedized and conductively cooled configurations with extended operating temperatures are optional. Support for 2-wire avionics protocols including ARINC 419, 561, 571, 573, 575, 582 and 717 is available. Contact the factory about CSDB, RS-422 and ARINC 561 6-wire support.

Software

Condor software tools and solutions significantly reduce the time required to integrate ARINC 429 and other avionics protocols into your application. Included with the CEI-820 is our flexible, high-level, API (Application Programming Interface) support for Windows XP, 2000, NT, Me, 98, 95, Linux Kernel (2.4 and 2.6), LabWindows/CVI, VxWorks and Visual Basic. This powerful API supports multiple cards, and is compatible with Condor API support on PCI, PC/AT, PC/104, CompactPCI and PCMCIA platforms.

Architecture

Controlled by a powerful Intel 80960 CPU, CEI-820 features include independent selection of data rate and parity, error detection and automatic transmit channel slew rate adjustment. All channels operate independently and receive channels have programmable receive thresholds. Input discretes support TTL to avionics voltage levels, while output discretes can switch up to 0.5 ampere.

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ARINC

Interface for PMC

CEI-820

DATA HANDLING

On-board firmware, large data buffers and a high-level API are integrated together 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.

SPECIFICATIONS

ARINC 429 Receive Channels

- Number of channels: up to 8
- Data rates: 12.5 KHz, 100 KHz or 5 KHz to 200 KHz programmable
- 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 8
- Data rates: 12.5 KHz, 100 KHz or 5 KHz to 200 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

Architecture

- Processor: 100 MHz Intel 80960
- RAM: 1 Mbyte shared memory

AVAILABLE CONFIGURATIONS

CEI-820-22	ARINC 429 Intelligent PMC card with 2 Rx, 2 Tx channels, no discretes
CEI-820-44	ARINC 429 Intelligent PMC card with 4 Rx, 4 Tx channels, 8 bi-directional discretes
CEI-820-88	ARINC 429 Intelligent PMC card with 8 Rx, 8 Tx channels, 16 bi-directional discretes
CEI-820-44-LA	ARINC 429 Intelligent PMC card with 4 Rx, 4 Tx channels, 1 Rx channel of 6-wire ARINC 561, 16 bi-directional discretes
CEI-820-77-J	Intelligent PMC card with 7 Rx, 7 Tx ARINC 429 channels and 1 Rx, 1 Tx ARINC 717 channels, 16 bi-directional discretes

Software

- API - Includes high-level API for Windows XP, 2000, Me, NT, 98, 95, Linux Kernel (2.4 and 2.6), LabWindows/CVI, VxWorks and Visual Basic
  - Source code API library included

Physical

- PMC Mezzanine Card (74mm 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)
- Optional ruggedized, extended temp and conductively cooled configurations

I/O Discretes

- Number of bi-directional discretes: 0, 8 or 16
- Maximum of 8 discretes to front bezel connector (all 16 to P14)
- Inputs support avionics-level (open/gnd or high/low) and TTL/CMOS
- Outputs are low side switches, each capable of sinking 0.5 ampere

Optional Configurations

- A range of ARINC 429 Rx/Tx combinations
- Optional ARINC 573/717 BPRZ and Harvard Bi-Phase support
- Optional ARINC 561/6-wire Receive support
- 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

Power (typical)

- +3.3 VDC: 1.2A max.
- +5 VDC: 300 mA
- +12 VDC: 75 mA
- -12 VDC: 75 mA

PCI Signal Compatibility

- Universal PCI Signaling (5V or 3.3V)

Warranty: 3 year limited hardware warranty

See our on-line Commercial Products Configuration Guide for available configurations.
http://www.condoreng.com

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