



R830RX-32

RoHS ARINC High Density Interface for PMC

Features

- Up to 32 Receive ARINC 429 channels
- High performance, high density interface with large buffers
- Advanced, high-level software API included for Windows XP, 2000, Me, NT, 98, 95, Linux Kernel (2.4 and 2.6), VxWorks, and Visual Basic
- Supports maximum data throughput on all channels simultaneously
- Independent, software-programmable bit rates for all channels
- Parity error detection
- Support for 2-wire ARINC 575
- IRIG-B Receiver (front panel)

Hardware

Available in a range of configurations to match your needs, the 32 channel R830RX provides complete, integrated databus functionality for ARINC 429, ARINC 575 and other selected 2-wire, 32-bit protocols. The R830RX supports maximum data throughput on all channels while providing onboard label filtering, multiple buffering options, time-tagging, and error detection, with support for either 33 MHz or 66 MHz PCI interfaces. IRIG-B Receiver (AM or DC/TTL) can be utilized to synchronize time stamps across multiple boards.

Software

GE Fanuc Embedded Systems' software tools and solutions significantly reduce the time required to integrate ARINC 429 and other avionics protocols into your application. Included with the R830RX is our flexible, high-level, API (Application Programming Interface) support for Windows XP, 2000, NT, Me, 98, 95, VxWorks and Linux Kernel Versions 2.4 and 2.6. This powerful API supports multiple cards, and is compatible with GE Fanuc Embedded Systems API support on PCI, PC/AT, PC/104-Plus, CompactPCI and PCMCIA platforms. Optional software includes LabVIEW support for ARINC 429 analysis, simulation and data logging.

Architecture

R830RX features include independent, software programmable data rates and parity, and parity error detection. 2 MBytes of on-board RAM provide large receive data buffers. All channels operate independently.

Data Handling

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

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Specifications

ARINC 429 Receive Channels

- Number of channels: 32
- Channel 32 is user configurable for alternate IRIG Rx input
- 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)
- Filtering: label and/or SDI
- Parity: odd, even or none
- Error reporting: parity
- IRIG-B Receiver (Front Panel)

Software

- API
 - Includes high-level API for Windows XP, 2000, Me, NT, 98, 95, Linux, VxWorks and Visual Basic
- LabVIEW - Optional CEI-LV and LV-x30 support is available

Physical/Environmental

- PMC Mezzanine Card (74 mm x 149 mm without bezel)
- Operating temperature range: 0 to +70° C
- Extended operating temperature range available

Optional Configurations

- Optional no front bezel 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
- Available mounted on a PCI or 3U/6U CompactPCI or PCI Express carrier board

Power (typical)

- +3.3 VDC: 250 mA
- +5 VDC: 10 mA

PCI Signaling Voltage Compatibility

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

Ordering Information

R830RX	ARINC 429 High Density PCI card with 32 Receive channels and 16 I/O discretes
-R suffix	Ruggedized, ext temp
-K suffix	Conformal coating
-C suffix	Conduction cooled, Conformal coated, extended temp, no front I/O
-E suffix	P14 I/O only, ruggedized, ext temp

Carrier options

-3 suffix	Mounted on 3U cPCI carrier
-F suffix	Mounted on 6U cPCI carrier
-X suffix	Mounted on PCI carrier
R830RX (on a PCI carrier) is compatible with PCI-X 1.0 and PCI slots	
-U suffix	Mounted on PCI Express carrier

Contact factory for combinations of optional suffixes

Optional Software

CEI-LV	LabVIEW ARINC Libraries for Windows XP/2000/Me/NT/98/95
LV-x30	LabVIEW support for real time application development for CEI-x30 product line

About GE Fanuc Intelligent Platforms

GE Fanuc Intelligent Platforms is a leading global provider of embedded computing solutions for a wide range of industries and applications. Our comprehensive product offering includes many types of I/O, single board computers, high performance signal processors, fully integrated, rugged systems including flat panel displays, plus high speed networking and communications products. The company is headquartered in the U.S. and has design, manufacturing and support offices throughout the world. Whether you're looking for one of our standard products or a fully custom solution, GE Fanuc Intelligent Platforms has the breadth, experience and 24/7 support to deliver what you need. For more information, visit www.gefanuc.com.

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Additional Resources

For more information, please visit the GE Fanuc Intelligent Platforms web site at:

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