



# R830RX-32

## RoHS ARINC High Density Interface for PMC

### 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

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 R830RX is our flexible, high-level, API (Application Programming Interface) support for Microsoft Windows 7, 8, 8.1, 10, Server 2012 R1/R2, Vista, XP (32-bit/64-bit), Linux Kernel (2.4 and 2.6) and VxWorks (optional support for LabVIEW and LabVIEW Real-Time). This powerful API supports multiple cards, and is compatible with Abaco's 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.

### FEATURES:

- Up to 32 Receive ARINC 429 channels
- High performance, high density interface with large buffers
- Advanced, high-level software API included for Microsoft® Windows® 7, 8, 8.1, 10, Server 2012 R1/R2, Vista, XP (32-bit/64-bit), Linux® Kernel (2.4 and 2.6) and VxWorks®
- 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)

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### Specifications

#### ARINC 429 Receive Channels

- Number of channels: 32
- Channel 32 user configurable for alternate IRIG Rx input
- Data rates: 12.5 KHz, 100 KHz or 5 KHz to 200 KHz programmable
- Standard input levels:  $\pm 6.5$  to  $\pm 13$  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 Microsoft Windows 7, 8, 8.1, 10, Server 2012 R1/R2, Vista, XP (32-bit/64-bit), Linux Kernel (2.4 and 2.6) and VxWorks
- 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

<b>R830RX-32</b>	ARINC 429 Intelligent PMC card with 32 RX channels, Front and rear I/O, Ext temp, with IRIG, ROHS compliant
<b>R830RX-32K</b>	ARINC 429 Intelligent PMC card with 32 RX channels, Front and rear I/O, Ext temp, Conformal Coated, with IRIG, ROHS compliant
<b>R830RX-32R</b>	ARINC 429 Intelligent PMC card with 32 RX channels, Rear I/O, Ext temp, with IRIG, ROHS compliant
<b>R830RX-32RK</b>	ARINC 429 Intelligent PMC card with 32 RX channels, Rear I/O, Ext temp, Conformal Coated, with IRIG, ROHS compliant
<b>R830RX-32C</b>	ARINC 429 Intelligent PMC card with 32 RX channels, Rear I/O, Ext temp, Conformal Coated, Conductive cooled, with IRIG, ROHS compliant
<b>R830RX-32-U</b>	ARINC 429 Intelligent PMC card mounted on a PCI Express carrier, with 32 RX channels, front panel only, with IRIG, ROHS compliant
<b>R830RX-32-X</b>	ARINC 429 Intelligent PMC card mounted on a PCI carrier, with 32 RX channels, front panel only, with IRIG
<b>R830RX-32-3</b>	ARINC 429 Intelligent PMC card mounted on a 3U CPCI carrier, with 32 RX channels, front panel only, with IRIG, ROHS compliant

Contact factory for additional embedded configurations

### Optional Software

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

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