



## RCEI-715A

### Interface for PCMCIA

#### Features

- Up to 8 Rx, 4 Tx ARINC 429 channels
- Available with ARINC 429, 573, 717, CSDB and ARINC 561 6-wire on same card
- 4 bi-directional avionics-level discretes
- Configuration available with ARINC 429, avionics-level discretes and digital I/O
- Fully independent channel operation
- Type II PC Card (PCMCIA)
- Easy-to-use BusTools/ARINC Windows-based GUI Bus Analyzer available
- ARINC 615 Data Loader GUI available
- High-level Microsoft® Windows® XP, 2000, Me, NT, 98, 95, Visual Basic and LabWindows/CVI software API support
- 64-bit, 1 microsecond time-tagging
- Available with ARINC 615 Data Loader and ARINC 615 cabling

The GE Intelligent Platforms RCEI-715A is an intelligent, high-density, Type II PC Card (PCMCIA) interface that provides up to 12 fully independent ARINC 429/575 channels, along with up to 4 bi-directional avionics level I/O discretes. Features include programmable data rates and parity, error detection, multiple buffering modes, timetagging and automatic transmit slew rate adjustment. Hardware interrupts are not supported.

Configuration options include selection of channel count, along with a mix of ARINC 429, ARINC 573/717, CSDB and ARINC 561 6-wire protocols.

#### Software

GE software tools significantly reduce the time required to integrate ARINC protocols and I/O discretes into your portable application. Included with the RCEI-715A is high-level API (Application Programming Interface) library support for Microsoft Windows XP, 2000, Me, NT, 98, 95 and Visual Basic and LabWindows/CVI software development. BusTools/ARINC, GE's Windows-based GUI solution for bus analysis, simulation and data logging, is optionally available. It provides an easy-to-use interface to avionics data. ARINC 615 Data Loader and LabVIEW support are optionally available.

#### Architecture

The flexible design of the RCEI-715A provides a powerful hardware foundation that supports multiple avionic protocols in a single, integrated, portable package. Bi-directional discretes support TTL to avionics-level inputs while open-collector outputs enhance application flexibility.

GE's powerful API libraries provide total flexibility in receiving and generating ARINC bus traffic. API support for the RCEI-715A is compatible with the software API on GE's CEI-220/300/420/500/520/600/620 and 820 products for PC/AT, PC/104, PCI, CompactPCI and PMC platforms.

#### Tools and Solutions

BusTools/ARINC is an easy-to-use, Windows XP/2000/Me/NT/98/95-based ARINC 429 bus analysis, simulation and data monitoring solution that is optionally available on the portable RCEI-715A and other GE Intelligent Platforms hardware products. Monitor multiple channels in real-time. Display and enter time-tagged data in hex, binary or engineering units (standard or userdefined). Filter received data by label and/or SDI. View discrete descriptors and user-bit-encoded values. Display historical and real-time charts of individual labels. Use BusTools/ARINC to send multiple messages of varying sizes with automatic ramping. Log all time-tagged data from multiple channels to a single disk file. Replay recorded data on transmit buses.



# RCEI-715A – Interface for PCMCIA

## Specifications

### ARINC 429 Receive Channels

- Number of channels: up to 8
- Baud rates: Programmable 5 KHz to 200 KHz
- Input levels:  $\pm 6.5$  to  $\pm 13$  VDC (A to B)
- Parity: odd, even or none
- Error reporting: parity
- Buffering: 2048 labels per channel

### ARINC 429 Transmit Channels

- Number of channels: up to 4
- Baud rates: Programmable 5 KHz to 200 KHz
- Automatic slew rate adjustment
- Output level:  $\pm 10$  VDC (A to B)
- Parity: odd, even or none
- Buffering: 2048 labels per channel

### Receive Channel Buffering

- 2048 labels per channel or merged mode buffer, independently selectable for each channel
- 64-bit, 1  $\mu$ second resolution time-tag with each word

### Software

- API – High-level API libraries for Windows XP, 2000, Me, NT, 98, 95, Visual Basic and LabWindows/CVI included
- GUI – Optional BusTools/ARINC GUI bus analyzer
- ARINC 615 Data Loader – Optional GUI
- LabVIEW – Support optional

### Physical / Environmental

- Type II PC Card (PCMCIA 2.1 compatible)
- Cabling to 37-pin D-type receptacle connector provided (part number RCONCEI-715A)
- Operating temperature range: 0 to  $+40^{\circ}$  C
- Extended temperature range available
- Relative humidity: 5 to 90% (non-condensing)

### Discrete Inputs/Outputs

- Number of bi-directional lines: 4
- Inputs: support avionics-levels (open/gnd or high/low)
- Outputs: low side switches, each capable of sinking 0.5 ampere

### Additional Protocols Supported

- ARINC 573/717 Bi-Polar RZ and Harvard Bi-Phase, (Rx and Tx)
- ARINC 561/568 6-wire receive, (Rx only)
- CSDB, (Rx and Tx)

### Power (typical)

- +5 VDC: 250 mA (RCEI-715A-84)

### MTBF

- 304,000 hours at  $+25^{\circ}$ C, ground benign environment

## Ordering Information

<b>RCEI-715A-22</b>	ARINC 429 PCMCIA card with 2 RX, 2 TX channels; no discretes, ROHS compliant, card with RCONCEI-715A cable
<b>RCEI-715A-42</b>	ARINC 429 PCMCIA card with 4 RX, 2 TX channels; 1 Bi-Directional discretes, ROHS compliant, card with RCONCEI-715A cable
<b>RCEI-715A-44</b>	ARINC 429 PCMCIA card with 4 RX, 4 TX channels; 4 Bi-Directional discretes, ROHS compliant, card with RCONCEI-715A cable
<b>RCEI-715A-84</b>	ARINC 429 PCMCIA card with 8 RX, 4 TX channels; 4 Bi-Directional discretes, ROHS compliant, card with RCONCEI-715A cable
<b>RCEI-715A-M</b>	PCMCIA card with 2 RX, 2 TX channels OF ARINC 429; 1 RX, 1 TX of either ARINC 717 HBP/BPRZ or CSDB; 1 RX of ARINC 561 6-wire; 4 Bi-Directional discretes, card with RCONCEI-715A CABLE, ROHS compliant
<b>BTA-R715A-44</b>	ARINC 429 Bus Analyzer bundle (Includes RCEI-715A-44 hardware and BT-ARINC software)

## Optional Software

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

## About GE Intelligent Platforms

GE Intelligent Platforms is a division of GE that offers software, control systems, services, and expertise in automation and embedded computing. We offer a unique foundation of agile and reliable technology providing customers a sustainable competitive advantage in the industries they serve, including energy, water, consumer packaged goods, oil and gas, government and defense, and telecommunications. GE Intelligent Platforms is headquartered in Charlottesville, VA. For more information, visit [www.ge-ip.com](http://www.ge-ip.com).

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