

# CompactRIO ARINC-429 Receiver Module

## cRIO-A429-4Rx **NEW!**

- 4 ARINC-429 receiver channels
- 500 V channel-to-chassis isolation
- D-Sub connector type
- Hot-swappable operation
- Overvoltage protection
- -40 to 85 °C operating range
- Independent operation of channels
- Support for ARINC 575/573/717 standard (optional)
- Damp-proof design (optional)



Product	Number of Channels	Rate	Input Range	Filters	Isolation	Connector
cRIO-A429-4Rx	4	11 - 101 kbps	±10 V	Label, SDI, SSM	500 V	Screw Terminal, D-Sub

Table 1. CompactRIO Arinc-429 Modules Selection Guide

## Overview

cRIO-A429-4Rx signal input module for the National Instruments CompactRIO™ embedded systems and R Series expansion chassis provide high-performance measurements and simulation for a wide variety of industrial, in-vehicle and laboratory ARINC-429 interfaces. Each module provides built-in signal processing.

## Advanced Features

The cRIO-A429-4Rx module is controlled by a high speed C51-series compatible CPU, provides up to 4 ARINC-429 receivers with independent data rate selection. Input buffers support TTL to avionics voltage levels. The cRIO-A429-4Rx supports on-board label filtering, multiple buffering options, error detection. Each receiving channel could be programmed to particular time characteristics. Bit and word intervals can be set with the precision up to 1/256 of bit period.

CompactRIO™ ARINC-429 input modules are directly connected to reconfigurable I/O (RIO) FPGA hardware for creating high-performance embedded systems that provides the optimization and flexibility of a custom electrical circuit completely dedicated to your I/O application.

The RIO FPGA hardware provides unlimited options for timing, triggering, synchronization and decision making. For instance, you can use a CompactRIO™ system to implement a circuit to decode the ARINC-429 bus information.

## Key Features

- On board data filtering (Label, SSM, SDI)
- Channel errors calculation
- Wide data rate (11 - 101 kbps)
- Screw terminals or D-Sub connector. D-Sub Connector Kit optional.
- Built-in self test

# CompactRIO Module Accessories

## Connectivity Accessories

The A429-4Rx module is designed to provide flexible options for low-cost field wiring and cabling. The Figure below shows the connector blocks available for ARINC-429 CompactRIO I/O modules.



*Figure 1. 25-Pin D-Sub Connector Kit with Strain Relief*

**Note: To meet shock and vibration requirements, you must affix ferrules to the ends of the wires on all screw-terminal connector**

The accessory includes an optional DC-DC converter to reduce power consumption from cRIO platform. Over-voltage protection circuits and a screw-terminal connector with strain relief as well.

Also the NI9934 is compatible with A429-4Rx. It includes a screw-terminal connector with strain relief as well as a D-Sub solder cup backshell for creating custom cable assemblies for any module with a 25-pin D-Sub connector.



*Figure 2. NI9934 25-Pin D-Sub Connector Kit with Strain Relief and D-Sub Shell*