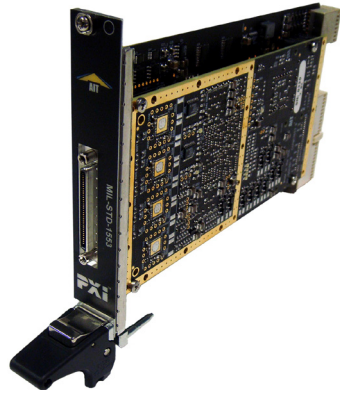


DATA SHEET



PXI-c429

ADVANCED 4, 8, 16 OR 32 CHANNEL ARINC
429 TEST AND SIMULATION PXI HYBRID MODULE

FEATURES

Four, Eight, 16, or 32 Software Programmable Tx/Rx Channels

Programmable High/Low Speed Operation

Concurrent operation of all Tx/Rx Channels at
High Speed rates

PXI Interrupts, Star Trigger, and PXI Clock

Full Error Injection and Detection

Rate-oriented Label Transmission

Label Selective Trigger for Capture/Filtering

IRIG-B Time Code Encoder/Decoder

Real-Time Recording and Post Analysis of Multiple Channels

Application Interface supporting C++, C#, and .net
Development

Device Driver Support: Windows, Linux, VxWorks and other
operating systems



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RELIABLE DATA FIRST TIME EVERY TIME

OVERVIEW

The PXI-C429 module is an ARINC 429 test and simulation module. This module is a 3U PXI Hybrid Slot compatible instrument that is designed to enable monitoring, analysis, simulation, and testing of ARINC 429 data channels. The PXI-C429 module supports up to 32 fully programmable (as inputs or outputs) ARINC 429 channels. The PXI-C429 provides full error injection and detection capabilities.

Software Support

The PXI-C429 is delivered with an ARINC 429 Software Development Kit (SDK) which includes software driver support for Windows, Linux, and LabVIEW RT. The SDK provides multiple application interfaces including support for C/C++, C#, and VB.NET. High-level LabVIEW Virtual Instruments (VI) are provided with each module in support of intuitive application development. A simple soft front panel Graphical User Interface (GUI) application is also delivered with each module.

PXI Features

The PXI-C429 is 3U PXI Hybrid Slot compatible module which supports synchronization of its onboard time tagging clock to either the PXI 10MHz system clock or an IRIG-B input signal. When using the PXI system clock, the time-tagging clock can be reset via the PXI star trigger.

Additionally, the module supports input and output of triggers to and from the PXI trigger bus. PXI triggers can be generated by the module based on detected ARINC 429 bus events and PXI triggers can be used as input to initiate the start of ARINC 429 data simulation operations, data captures, and many other operations.

Receiver Channel Operation

The PXI-C429 provides real-time simulation of up to 32 ARINC 429 Receiver (Rx) Channels concurrently.

- Label/SDI selective receive, sequential receive modes
- Multi-buffering with real-time data buffer updates
- Triggering and filtering :
 - Upper and lower limit check
 - Trigger on specific or any error
 - Label content and sequential dependent trigger
 - Filter for label and label data contents
 - Interrupt for selected labels and label data contents

Transmitter Channel Operation

The PXI-C429 provides real-time simulation of up to 32 ARINC 429 Transmitter (Tx) Channels concurrently. Bit transmission rates and duty cycles are selectable for each channel and the 12.5 kbits/sec and 100 kbits/sec transmit modes are supported. Associated rise and fall times are in accordance with the ARINC 429 electrical specification.

- Rate Oriented, Block, and Acyclic Label Transmission modes support all simulation needs
- Error injection for each Label Transfer: short gap, parity, bit count, coding
- Programmable gaps between Labels

ARINC 429 Transceiver Interface

PXI-C429 card has integrated ARINC 429 line transmitter/receivers programmable by software for Rx or Tx mode and selectable transmission rate for each channel independently. All ARINC 429 channels and controls are available at the front panel output connector.

Bus Coupling

The use of an embedded processor allows user specific functions to be processed onboard, significantly off-loading the host processor. This new concept allows users to implement application specific system level functionality on a single interface card. In addition, the card has the potential to host simple user applications.

Remote Object Services

Remote Object Services (ROS) makes PXI-C429 hardware available to network clients running in other processes or on other hosts in the network. It runs on its host as either a Window's service or as a Linux daemon. This client/server application and a user library allows for the easy creation of distributed multi-process and distributed applications.

Detailed Specifications

CHANNELS

PXI-C429-32: 32 channels

PXI-C429-16: 16 channels

PXI-C429-8: 8 channels

PXI-C429-4: 4 channels

CONNECTORS

68-pin VHDCI front

MEMORY

128 MB DDR2 SDRAM

OPERATING TEMPERATURE

0° to 45°C

HUMIDITY

0 to 95% non-condensing

STORAGE TEMPERATURE

-40° to 85°C

Notes:

- 1) All specifications are typical unless otherwise noted.
- 2) For current detailed specification please refer to the on-line manual at www.vtiinstruments.com.
- 3) All specifications subject to change without notice.
- 4) Distributed product. These products are manufactured and supported by other leading suppliers.

Ordering Information

PXI-C429-4	Advanced 4 Channel ARINC 429 Test and Simulation PXI Hybrid Module
PXI-C429-8	Advanced 8 Channel ARINC 429 Test and Simulation PXI Hybrid Module
PXI-C429-16	Advanced 16 Channel ARINC 429 Test and Simulation PXI Hybrid Module
PXI-C429-32	Advanced 32 Channel ARINC 429 Test and Simulation PXI Hybrid Module

RELATED PRODUCTS

CMX09	9-slot, 3U PXI Express Chassis
CMX18	18-slot 3U PXI Express Chassis

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