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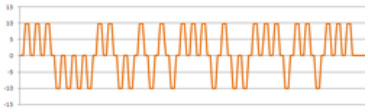
Find the *Alta Data Technologies PCI-A429-30-T* at our website: ***Click HERE***

# PCI-A429

## High Density ARINC Interface for PCI Systems



SCSI to Flying Lead Cable Provided



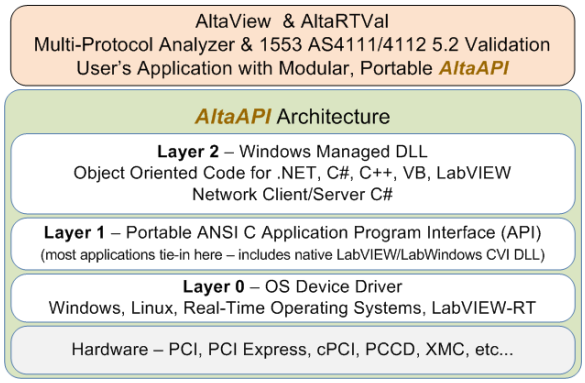
Wave Form Data Shown on Excel Graph
Auto Signal Capture with AltaView!

Alta Data Technologies' PCI-A429 interface modules offer a variety of ARINC-419/429/575/573/717 channel configurations with software selectable Rx/Tx channels, baud rates, bit encoding and word configurations (Start/Sync/Stop length, Parity, bits/word, MSB/LSB). *Encode or decode almost any ARINC-429 physical layer signal.*

The card design is based on the industry's most advanced 32-bit ARINC FPGA protocol engine, ***AltaCore***™, and a feature-rich application programming interface, ***AltaAPI***™, which is a multi-layer ANSI C and Windows .NET (MSVS 2005/08/10 C++, C#, VB .NET, LabVIEW, RTOS) architecture. This hardware and software package provides increased system performance and flexibility while reducing integration time.

The PCI-A429 Transmit (TX) capability includes both simple and complete frequency control options for each channel and Playback and Signal Generator modes. Three Receive (RX) functions including channel and multi channel levels.

***AltaCore*** is guaranteed ARINC-419/429/575/573/717 compliant and all cards are manufactured to the highest IPC Class 3 standards and ISO 9001:2008 processes. Alta is committed to provide each customer with a risk free integration and will help with any level of your system development.




Alta's Advanced Software Architecture

### Key Features:

- ARINC-419/429/575/717 Configurations:
  - 4 RX/TX Shared Channels
  - 8 RX/TX Shared Channels
  - 16 Channels: 8 RX/TX Shared – 8 RX
  - 30 Channels: 16 RX/TX Shared – 14 RX
  - For Shared Channels, RX Function is Always Available and TX is Software Selectable.
  - Channels Can Be Fixed on Request
- 8-bit, 1 uSec A/D Signal Capture on First Two RX Channels!
- Dual or Quad ARINC-717 RX/TX Selectable
  - Replaces Corresponding 429 Channels
- Fully Programmable Label/Word Encoding and Decoding
  - Word Length, Start/Sync/Stop Bits, MSB/LSB, RX/TX Bit (Baud) Rates, Parity, Bit Encoding Types.
- Commercial, Industrial (Extended) Temperature Parts
- One Mbyte of Memory per 16 Channel Bank for RX/TX Buffering
- Channel Independent TX Label/Word Frequency Control
- Dual RX Buffering at Channel and Multi-Channel Level with 64-bit, 20 nsec Time Tags
- Advanced, Multi-layer ***AltaAPI*** Provided at No Cost with Source Code
- Windows, Linux, RTOS, LabVIEW & RT
  - .NET Managed DLLs
  - Contact Factory for Latest RTOS Support
- True HW Playback
- Industry First: 1 uSec Signal Generation
  - Bit Construction
  - Supports Advanced Validation Testing
- IRIG-B RX PAM or RX/TX PPS Ext Clock
- 8 Avionics, One TTL, One Trigger In/Out and One RS-485 Discretes
- Advanced BIT Features and Temp Sensors
- Full HW Interrupt Features
- PCI 32 Bit, 33/66MHz & PCI-X Compatible

**www.altadt.com**

4901 Rockaway Blvd., Building A Rio Rancho, NM 87124 USA
(In US): 888-429-1553 (Outside US): 505-994-3111 Fax: 805-504-8588

Multi-Channel (4-30)
**PCI-A429** Specifications

## General

- 32-Bit PCI 33/66MHz/PCI-X Compatible
  - PCI-SIG PCI 2.1 Compliant
- 8-bit, 1 uSec A/D Signal Capture on First Two RX Channels!!
- Encode or decode almost any ARINC-429 physical layer signal.
- Full Word/Label Encoding/Decoding
  - Bit Rates 500 to 200K (12.5, 50K & 100K Compliant)
  - Bit Types, Length, Start/Stop and Parity Settings (most advanced in industry)
- One Megabyte Per 16 Channel Bank
- Weight: 4oz/120grams
- Power (Estimated @ Max Bandwidth)
  - 4CH@4.5W, 8CH@5.0W, 16CH@6.0W, 30CH@7.0W
- Parts Temp (C) : -55 to +120 Storage, 0 to +70 Commercial; -40 to +85 Industrial Extended
- SCSI 3 Connector with “Flying Leads” 36” Cable Provided.
- 2 Triggers (one in/one out) and One TTL and RS-485 Discrete (J1 SCSI), and 8 Avionics Discretes (on J3 Header Connector)
- Advanced BIT, Loop-Back and Dual Temp Sensors
- IRIG-B RX PAM and RX/TX PPS Time Sync
- IPC Level 3 and ISO 9001:2015 Processes

## TX Features

- Simple or Detailed Frequency (Hz) Control Per Label/Word List
- ARINC-717 Frame Support
- Interrupts, External Trigger
- Full Error Injection

## RX Features – Three Buffering Modes

- Channel Level Label/Word Tables
- Channel Level Current Value Tables
- Multi Channel Data Tables for All Channels
- ARINC 717 Frame Support
- 64-Bit, 20 nsec Time Tags
- Interrupts, External Trigger
- Full Error Detection

## Playback/Signal Generator (TX)

- Real Hardware Playback from Archive Files
- H/W Playback Timing to 10 usec.
- Signal Vector Generation at 1 uSec **INDUSTRY FIRST**
  - Construct Bit Encoding
  - Ideal for Test Validation

## Software: *AltaAPI & AltaView*

- Multi-Layer ***AltaAPI*** Architecture to Support Windows and C Linux, VxWorks, LabVIEW, etc..
  - Contact Factory For RTOS Platforms
- Optional ***AltaView*** is Based on the Latest Windows MS Office 2007 User Interface Style with Ribbon-Bar
  - Full Analyzer Integration Tool
  - Multi Language Support

## Part Numbers

**PCI-A429-4-T** (1 Mbyte RAM)
- 4 Shared RX/TX Channels – Software Selectable
- 2 RX/2TX ARINC-717 Selectable Channels
  - (Each 717 RX or TX Replaces Two 429 Channels)

**PCI-A429-8-T** (1 Mbyte RAM)
- 8 Shared RX/TX Channels – Software Selectable
- 2 RX/2TX ARINC-717 Selectable Channels
  - (Each 717 RX or TX Replaces Two 429 Channels)

**PCI-A429-16-T** (1 Mbyte RAM)
- 8 Shared RX/TX Channels – Software Selectable
- 8 RX Channels
- 2 RX/2TX ARINC-717 Selectable Channels
  - (Each 717 RX or TX Replaces Two 429 Channels)

**PCI-A429-30-T** (2 Mbyte RAM)
- 16 Shared RX/TX Channels – Software Selectable
- 14 RX Channels
- 4 RX/4TX ARINC-717 Selectable Channels
  - (Each 717 RX or TX Replaces Two 429 Channels)

Options: -E for Ext Temp Parts (-40 to +85C); -A for AltaView. NOTE: On shared channels: TX lines have an extra RX load; when powered-off, RX channels can have severe voltage drain – use only dedicated RX channels for critical systems.

**5 Year Limited Warranty!**

EU and China RoHS Compliant

Contact Alta for Special Lead Build Configurations

***AltaAPI*** Software with ANSI C Source and .Net 2.0 DLL with Client/Server provided at No Cost.

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