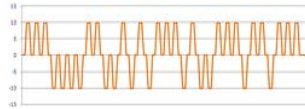


CPCIC-A429

High Density ARINC Interface For CompactPCI (cPCI) Systems



SCSI-Flying Lead
Cable Provided



Wave Form Signal Capture
with AltaView!

Alta Data Technologies' CPCIC-A429 interface modules (PMC on 3U/6U CompactPCI Carrier) 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 CPCIC-A429 card 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 2.0 (MSVS 2005/08/10 C++, C#, VB .NET) architecture. This hardware and software package provides increased system performance and flexibility while reducing integration time.

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.

AltaView & AltaRTVal
Multi-Protocol Analyzer & 1553 AS4111/4112 5.2 Validation
User's Application with Modular, Portable **AltaAPI**

AltaAPI Architecture

Layer 2 – Windows Managed DLL
Object Oriented Code for .NET, C#, C++, VB, LabVIEW
Network Client/Server C#

Layer 1 – Portable ANSI C Application Program Interface (API)
(most applications tie-in here – includes native LabVIEW/LabWindows CVI DLL)

Layer 0 – OS Device Driver
Windows, Linux, Real-Time Operating Systems, LabVIEW-RT

Hardware – PCI, PCI Express, cPCI, PCCD, XMC, etc...

Alta's Advanced Software Architecture

Key Features:

- ARINC-419/429/575/573/717 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
 - Rear Panel only 12 RX
 - For Shared Channels, RX Function is Always Available and TX is Software Selectable.
 - Channels Can Be Fixed on Request
- 3U or 6U Configurations. PXI Compatible
- 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
- Commercial, Industrial (Extended) Temp
 - Conduction Cooled, Conformal Coated, Rear Panel Configurations
- 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
- 2 Avionics/ One RS-485 Discretes
- Advanced BIT Features and Temp Sensors
- Full HW Interrupt Features
- PCI 32 Bit, 33/66MHz & PCI-X Compatible

Multi-Channel (4-30) CPCIC-A429 Specifications

General

- 32-Bit PCI 33/66MHz/PCI-X Compatible
 - PCI-SIG PCI 2.1 Compliant
 - ANSI/VITA 20-2001 Compliant
- 8-bit, 1 uSec A/D Signal Capture on First Two RX Channels!
- 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)
- PMC on 3U or 6U cPCI Carrier
- 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 (Front Panel). Rear Panel Options.
- Parts Temp (C) : -55 to +120 Storage, 0 to +70 Commercial, -40 to + 85 Extended
- Flying Lead Cable Provided (User Configured)
- 2 Avionics, 2 RS-485, One TTL In and Out
- Power-Up, Loop-Back and User BIT
- IRIG-B RX PAM and RX/TX PPS Time Sync
- IPC Level 3 and ISO 9001:2008 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

CPCIC3/6-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)

CPCIC3/6-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)

CPCIC3/6-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)

CPCIC3/6-A429-30-T (2 Mbyte RAM)

- 16 Shared RX/TX Channels – Software Selectable
- 14 RX Channels (Rear Panel Only 12 RX Channels)
- 4 RX/4TX ARINC-717 Selectable Channels
 - (Each 717 RX or TX Replaces Two 429 Channels)

NOTE: For Shared Channels, RX Function is Always Available and TX is Software Selectable. One RX Electrical Load on Each TX Channel.

Please note 3U or 6U card configurations available (3 or 6 in "3/6" part number) Options: -E for Ext Temp Parts (-40 to +85C), -C for Ext Temp, Conduction Cooled/Conformal Coated/Rear Panel, -R for Rear Panel P4 Commercial and -A for AltaView.

5 Year Limited Warranty!

EU and China RoHS Compliant

Contact Alta for Special Lead Build Configurations

AltaAPI Software with ANSI C Source, .Net and LabVIEW & RT provided at No Cost.

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