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Find the *Alta Data Technologies PC104P-A429-4* at our website: *Click HERE*

PC104P-A429

High Density ARINC Interface For PC104-Plus Systems

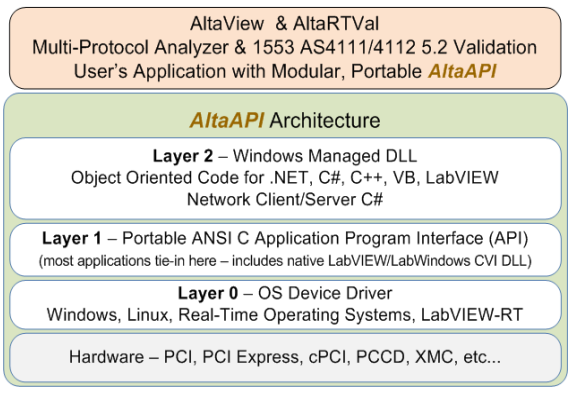


Alta Data Technologies' PC104P-A429 interface module provides support for a variety of ARINC-419/429/575/573/717 channel configurations with shared, software selectable RX/TX channels, programmable baud rates, bit encoding and word configurations (Start/Sync/Stop length, Parity, bits/word, MSB/LSB). *Encode or decode almost any ARINC-429 physical layer signal.*

The PC104P-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.

The PC104P-A429 Transmit (TX) capability includes both simple and complete frequency control options for each channel. TX also includes Playback and Signal Generator operations. Dual Receive (RX) functions include independent simultaneous channel level buffering and multi channel level buffering.

AltaCore is guaranteed ARINC-419/429/575/573/717 compliant and all cards are manufactured to the highest IPC-Level 3 standards and certified 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-419/429/575/573/717 Configurations:
  - 4 RX/TX Shared Channels
  - 8 RX/TX Shared Channels
  - 16 Channels: 8 RX/TX Shared – 8 RX
  - 24 Channels: 12 RX/TX Shared – 12 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 TTL Clock
- 6 Avionics and one RS-485 Discrete
- Advanced BIT Features and Temp Sensors
- Full HW Interrupt Features
- PCI 32 Bit, 33/66MHz & PCI-X Compatible

Multi-Channel (4-24)
PC104P-A429 Specifications

General

- PC/104-Plus Compliant
- 32-Bit PCI 33/66MHz/PCI-X Compatible
  - PCI-SIG PCI 2.1 Compliant
- Full Word/Label Encoding/Decoding
  - Bit Rates 512 to 200K (12.5, 50K & 100K Compliant)
  - Bit Types, Length, Start/Stop and Parity Settings (most advanced in industry)
- One Megabyte RAM per 16 Channel Bank
- Weight: 4oz/120grams
- Power (Estimated @ Max Bandwidth)
  - 4CH@3.5W, 8CH@4W, 16CH@5W, 24CH@6W
- Molex 50-Pin Locking for ARINC channels
  - AUX 10-Pin Molex for Discretes/Triggers
- Parts Temp (C) : -55 to +120 Storage, 0 to +70 Commercial, -40 to + 85 Extended
- 6 Avionics, One 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 Latest 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

PC104P-A429-4 (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)

PC104P-A429-8 (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)

PC104P-A429-16 (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)

PC104P-A429-24 (2 Mbyte RAM)
- 12 Shared RX/TX Channels – Software Selectable
- 12 RX Channels
- 4 RX/4TX ARINC-717 Selectable Channels
  - (Each 717 RX or TX Replaces Two 429 Channels)
  -

Options: Example Part Number PC104P-A429-AEF
- --A for AltaView, -E for Ext Temp Parts (-40 to +85C), -F for Conformal Coating, -G for No ISA Pass Through, -N NVRAM Write Disable, -5V for 5 Volt Only PC104P.
- 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!

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Contact Alta for Special Lead Build Configurations

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

Alta Data Technologies LLC
4901 Rockaway Blvd., Building A
Rio Rancho, NM 87124 USA
888-429-1553 (in US)
505-994-3111 (outside US)
www.altadt.com
alta.sales@altadt.com

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