Alta Data Technologies’ PCI-E4L-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-E4L-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.
General
- ½ Size, 4 Lane PCI Express 1.1
  - Supports MSI interrupts (OS dependent)
- 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
PCIE4L-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)

PCIE4L-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)

PCIE4L-A429-16-T (1 Mbyte RAM)
- 16 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)

PCIE4L-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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