Alta Data Technologies’ PXI Express interface modules offer a wide range of MIL-STD-1553, ARINC and WMUX configuration options using Alta's PMC cards on a single-slot PXI Express 3U carrier. The cards are based on the industry’s most advanced 32-bit FPGA protocol engines, AltaCore™, and by a feature-rich application programming interface, AltaAPI™ (with LabVIEW SDK).

The product is an ideal fit for your own control code, or National Instruments LabVIEW™, RT, LabWindows, TestBench, VeriStand and other test and control software environments. Native LabVIEW VISA level package with many examples makes LabVIEW and RT integration easy.

AltaCore-1553 is guaranteed 1553B Notice II & IV compliant and all cards are manufactured to the highest IPC-Class 3 standards and ISO 9001:2015 processes. Cards are available in dual-function (BC/Mon or multi-RT/Monitor) or full-function (BC, mRT and Mon) configurations. Playback and Signal Generation are part of BC operations. Alta is committed to a risk free integration and will be glad to help with any level of your system development.

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**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:
- 1-5 MIL-STD-1553 Dual Redundant Channels (Dual or Full Function)
- 4-48 ARINC-429 Channels.
  Configurable and Shared Channels.
- 1-2 Wings of PP194 WMUX
- Various Alta PMC-1553, PMC-MA4, PMC-A429/HD, PMC-WMUX Cards for PXIe 3U.

- **Capture 1553 & ARINC Waveforms**
  - First 1553 Channel & First Two ARINC RX Channels
  - 8-bit, 50 nSec for 1553 – 1 uSec for ARINC A/D for Voltage Measurements

- Advanced BC & ARINC TX Frequency Controls: 1553 Framing/Subframing;
  - RT/ARINC RX Full Buffering with 64-bit 20 nsec Time Tags.
  - Various ARINC-717 Channel Support.

- Advanced, Multi-layer AltaAPI Provided at No Cost with Source Code
  - Native VISA LabVIEW & RT
  - .NET or DLL Support for Your Control Code, LabWindows, TestBench, etc.
  - Numerous Examples for Fast Integration

- True HW Playback (BC or TX)
- Industry First: 20/1000 ns Signal Generation
- IRIG-B RX PAM or RX/TX PPS Ext Clock
- Avionics/ RS-485 Discretes
- Advanced BIT Features and Dual Temperature Sensors
- Full HW Interrupt Features
- PXI Express Compatible

Contact Alta for Various Configurations. Straight 1553 or ARINC or Multi Protocol Models Available.
Multi-Channel, Multi-Protocol Avionics
1553, ARINC and WMUX PXI Express

General
- 3U PXI Express Compatible, Single Slot
- 1-5 1553 Channels
- 4-48 ARINC Shared RX/TX Channels
- Multi 1553/429 Configurations Available
- 1-2 Wings of PP194 WMUX
- Dual and Full Function 1553 Channels
- ARINC-429 and 717 Support
- Weight: 10oz/300grams
- Power (Estimated @ Max Bandwidth) 8-10W
- Various Avionics Discretes, IRIG RX, Triggers, etc…
- Loop-Back & User BIT, Dual Temp Sensors
- IRIG-B RX PAM and RX/TX PPS Time Sync
- IPC Class 3 and ISO 9001:2015 Certified

BC & ARINC TX Features
- Variable Framing and Subframing
- Schedule Message Timing in Frames or Intermessage/Label Gap Spacing
- Low and High Priority Aperiodic Scheduling
- ARINC TX Has Complete Frequency Control Per Channel – No Framing/SubFraming
- Infinite Linked Data Buffers
- Interrupts, No-Ops, Ext Trigger
- 1553 Legal and Reserved Mode Codes
- 1553A and 1553B Support
- 64-Bit, 20 ns Time Tags
- Full Error Injection/Detection

1553 RT Features
- Infinite Linked Data Buffers
- Legal and Reserved Mode Codes
- 1553A and 1553B Support
- Full Buffering of All Mode Codes
- 64-Bit, 20 ns Time Tags
- Full Error Injection/Detection

ARINC RX Features – 3 RX Modes
- Channel Level Label/Word Tables
- Multi Channel Data Tables for All Channels
- Channel Level Current Value Tables
- ARINC 717 Frame Support
- 64-Bit, 20 nsec Time Tags
- Full Error Detection

Playback/Signal Vector (BC or TX)
- Real Hardware Playback from Archive Files.
- Signal Vector Generation at 20/1000 (1553/ARINC) nsecs **INDUSTRY FIRST**
- 20 nSec 1553 Vectors and 1 uSec ARINC Vectors

1553 Monitor
- Sequential and RT Mapped Monitoring with Infinite Linked CDP Data Buffers
- Available with All Card Models
- 64-Bit, 20 ns Time Tags, Interrupts, Triggers
- Full Error Detection
- 8-bit, 50 nSec 1553 and 1 uSec A/D Waveform Signal Capture. 1st Channel 1553 and First 2 RX of ARINC
- AltaView Software is Ideal for Signal Display

Software - AltaAPI and LabVIEW Support.
AltaView Analyzer and AltaRTVal RT Testing
- No Cost AltaAPI-LV Native VISA Package for LabVIEW and RT
- Multi-Layer AltaAPI Architecture Ideal for LabWindows, TestBench Veristand, etc…
- Optional AltaView Windows Analyzer Based
- Optional AltaRTVal provides full AS4111/4112 5.2 RT Validation GUI and Reports

Part Numbers
Various COTS PMC-1553, MA4, A429 and WMUX Card Configurations. Please contact Alta for Part Number Guidance. Please let us know required channel counts of 1553 and/or ARINC-429.

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

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