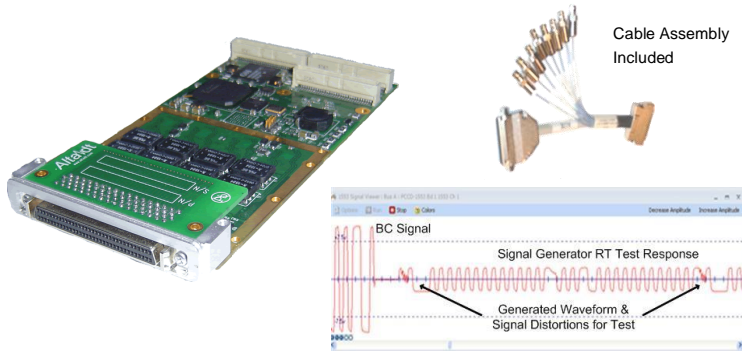




PMC-MA4

Multi-Channel, Multi-Protocol 1553 and ARINC PMC for Systems/Carriers

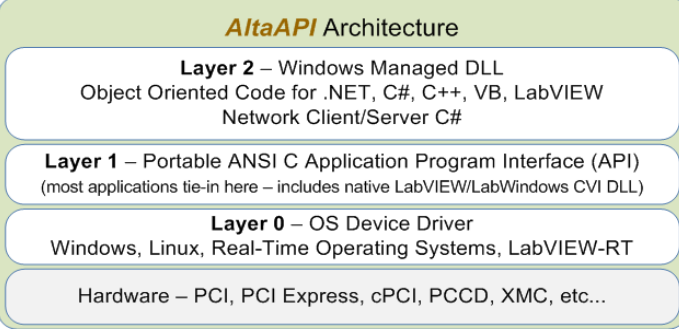


A/D Signal Capture on First 1553 Channel & First Two ARINC RX

Alta Data Technologies' PMC-MA4 interface module is a multi-channel, multi-protocol combo 1553 and ARINC PMC card, utilized across 100s of aerospace platforms. The product is based on the industry's most advanced FPGA protocol engine, **AltaCore™**, and by a feature-rich application programming interface, **AltaAPI™**, which is a real-time, multi-layer ANSI C (MSVS C++, .NET, C#, VB, Linux, RTOSes) architecture. These packages increase system performance and reduce integration time.

AltaCore-1553/ARINC is a guaranteed 1553A/B/C, and ARINC-429/717 compliant protocol engine on all Alta products. Alta is one of the few companies that executes full SAE AS4111 5.2 validation on all 1553 products. Manufacturing is to the highest IPC-Level 3 standards and ISO 9001 certified processes. 1553 products are available in dual-function (BC/Mon or multi-RT/Monitor) or full-function (BC, mRT and Mon) models. Alta is committed to a risk-free integration and will be glad to assist with any level of your project.

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



Key Features

- **One to Five Independent, Dual Redundant MIL-STD-1553 Channels**
- Dual Function 1553 (BC/Mon or mRT/Mon) or Full Function (BC/mRT/Mon)
- 512 Kbyte RAM per 1553 Channel
- **ARINC – 8 Channels Total:**
 - 4 Shared TX/RX & 4 Dedicated RX
 - 512 Kbyte of RAM for all Channels
- ****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
- PCI, cPCI/cPCIe, PXI/PXIe, Carriers Available
- Channels May be Factory Configured to fix ARINC RX/TX or Monitor Only 1553.
- Commercial, Industrial (Extended) Temperature and Conduction Cooled
- Front or Rear Panel (P4) Configurations
- Advanced BC & ARINC TX Frequency Controls: 1553 Framing/Subframing;
- RT/ARINC RX Full Buffering with 64-bit 20 nsec Time Tags
- Advanced, Multi-layer **AltaAPI** Provided at No Cost with Source Code
- Windows, Linux, RTOS, LabVIEW & RT
 - Contact Factory for Latest RTOS Support
- True HW Playback (BC or TX)
- Industry First: 20/1000 ns Signal Generation
 - Bit Construction
 - Supports RT or ARINC Validation Testing
- IRIG-B RX PAM or RX/TX PPS Ext Clock
- Avionics/ RS-485 Discrettes
- Advanced BIT Features and Dual Temperature Sensors
- Full HW Interrupt Features
- PCI 32 Bit, 33/66MHz & PCI-X Compatible

Multi-Channel, Multi-Protocol Avionics PMC-MA4 Specifications

General

- 32-Bit PCI 33/66MHz/PCI-X Compatible
 - PCI-SIG PCI 2.1 Compliant
 - ANSI/VITA 20-2001 Compliant
- 1-5 MIL-STD-1553A/B/C Dual Redundant (A/B) Channels
- 4 Shared RX/TX & 4 RX ARINC Channels
- Dual and Full Function 1553 Channels
- Weight: 6oz/180grams
- Power (Estimated @ Max Bandwidth) 8-10W
- Parts Temp (°C): -55 to +120 Storage, 0 to +70 Commercial, -40 to + 85 Extended
- 6 Avionics and 1 RS-485 Discrettes
- Loop-Back & User BIT, Dual Temp Sensors
- IRIG-B RX PAM and RX/TX PPS Time Sync
- IPC Class 3 and ISO 9001:2008 Processes

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
 - 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, AltaView, AltaRTVal**

- Multi-Layer **AltaAPI** Architecture to Support Windows, .NET and ANSI C Linux, VxWorks, Integrity, etc...
 - Contact Factory For RTOS Platforms
 - LabVIEW & RT No Cost
- Optional Windows **AltaView** Analyzer
 - Full Analyzer Integration Tool
 - Multi Language Support
- Optional **AltaRTVal** provides full AS4111/4112 5.2 RT Validation GUI and Reports

Part Numbers

Add Suffix **#D** or **#F** for 1553 Dual or Full Function Channel Count (#). Further add **"8"** for ARINC.

Example: PMC-MA4-5F8-T

Contact Factory for Desired Channel Configuration.

Options: -A AltaView, -B AltaRTVal, -C Conduction Cooled/Coated, -D Direct Coupling, -E Ext Temp Parts, -F Conformal Coating, -I TX Inhibit (BM only), -N NVRAM Disable, -R Rear Panel, -X cPCIe/PXIe. (**Example: PMC-MA4-5F8-ABDXT**).

NOTE: On shared ARINC channels: TX lines have an extra RX load; When powered-off, shared 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

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