Alta Data Technologies’ PMC-MA4 interface module is a multi-channel, multi-protocol 1553 and ARINC PMC card supported by the latest software technologies. The PMC card is based on the industry’s most advanced 32-bit FPGA protocol engine, AltaCore™, and by 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) architecture. This hardware and software package provides increased system performance and reduces integration time.

AltaCore-1553 is guaranteed 1553B Notice II & IV and ARINC compliant and all cards are manufactured to the highest IPC Class 3 standards and ISO 9001:2008 processes. Cards are available in 1553 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 and Waveform Capture is for Monitor only operation. Alta is committed to a risk free integration and will be glad to help with any level of your system development.

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  
  
- 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  
  - .NET Managed DLLs  
  - 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 Discretes  
- 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-1553B Notice II & IV 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 Discretes
- 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
  - 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, AltaView, AltaRTVal
- Multi-Layer AltaAPI Architecture to Support Windows ,
  .NET and ANSI C Linux, VxWorks, Integrity, etc…the
  - Contact Factory For RTOS Platforms
  - LabVIEW & RT No Cost
- Optional AltaView is Based on the Latest Windows MS
  Office User Interface Style with Ribbon-Bar
  - 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-MA4-4D8-T
Contact Factory for Desired Channel Configuration.

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, -A for AltaView and –B for AltaRTVal

5 Year Limited Warranty!
EU and China RoHS Compliant
Contact Alta for Special Lead Build Configurations

AltaAPI Software with ANSI C Source, .Net Managed DLLs
and LabVIEW & LabVIEW-RT Provided at No Cost.

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