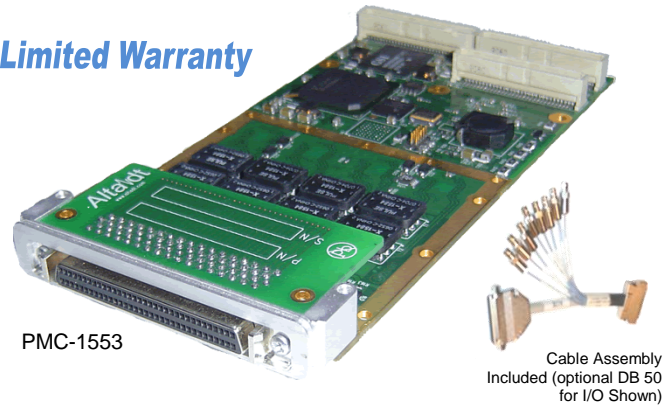


**Key Features:**

- One to Four Independent, Dual Redundant MIL-STD-1553 Channels
- Dual Function (BC/Mon or mRT/Mon) or Full Function (BC/mRT/Mon)
- One Mbyte of QDR Memory per Channel
- Fully Compliant to MIL-STD-1553B Notice II/IV, MIL-STD-1760, 1553A and Link-16
- Commercial, Industrial (Extended) Temperature and Conduction Cooled
- **\*\*Industry First\*\***
  - Full Loop-Back Transmission Verification
- Advanced 32-bit BC, RT and Monitor FPGA Design – Full 32 bit Memory.
- BC Framing/Subframing/Aperiodic
- Common Data Packets for BC, RT and Monitor
- Advanced, Multi-layer **AltaAPI** Provided at No Cost with Source Code
- Windows, Linux, RTOS, Labview Support
  - .NET 2.0 Client/Server
  - Contact Factory for Latest RTOS Support
- True HW Playback (BC)
- Industry First: 20ns Signal Generation
  - Bit Construction
  - Supports RT Validation Testing
- IRIG-B or PPS Ext Clock
- Avionics/ RS-485 Discrettes
  - 1760 Ext RT Addressing
- Advanced BIT Features and Temperature Sensors
- Full HW Interrupt Features
- PCI 32 Bit, 33/66MHz & PCI-X Compatible

**5 Year Limited Warranty**



PMC-1553

Cable Assembly Included (optional DB 50 for I/O Shown)

Alta Data Technologies' PMC-1553 interface modules (PCI Mezzanine Card for Carriers and Single Board Computers) are multi-channel (1-4) 1553 cards supported by the latest software technologies. These PMC cards are based on the industry's most advanced 32-bit 1553 FPGA protocol engine, **AltaCore™**, and by a feature-rich application programming interface, **AltaAPI™**, which is a multi-layer ANSI C and Windows .NET 2.0 (MSVS 2005 C++, C#, VB .NET) architecture. This hardware and software package provides increased system performance and reduces integration time.

The PMC-1553's BC capability, including variable message framing/subframing with transmission scheduling provides the most advanced BC control operations. RT, Monitor, Playback and Signal Generator functions also include industry leading functions to meet the most demanding requirements.

**AltaCore** is guaranteed 1553B Notice II & IV compliant and all cards are manufactured to the highest IPC-Level 3 standards and certified ISO-9001 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. We are committed to a risk free integration and will be glad to help with any level of your system development.

Interface Cards are  
Provided with the Advanced  
**AltaAPI** for ANSI  
C/Linux/RTOS and .NET  
2.0.  
Optional **AltaView** Analyzer  
& **AltaRTVal™**

**AltaView**  
Multi-Protocol Analyzer GUI with XML db,  
Real-time Views, Controls and Archiving  
Customer Windows GUI/Application/Labview

**AltaAPI** Architecture  
Layer 2: Windows Managed DLL  
OOO for .Net 2.0, C#, C++, VB, Labview  
Network Client/Server Layer

Layer 1: Portable ANSI C API  
Real-time & Linux Applications

Layer 0: OS Device Driver  
Windows, Linux, RTOS

Hardware - PCI, PCI Express or Other

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# Multi-Channel (1-4) **AltaCore** 1553 **PMC-1553 Specifications**



## **General**

- 32-Bit PCI 33/66MHz/PCI-X Compatible
  - PCI-SIG PCI 2.1 Compliant
  - ANSI/VITA 20-2001 Compliant
- Fast Memory (150 ns/32-bit worst case)
  - One Megabyte per Channel
  - Common Data Packets (CDPs) for all BC, RT and Monitor Functions
- MIL-STD-1553B Notice II & IV
  - MIL-STD-1760, 1553A and Link-16
- Weight: 4oz/120grams
- Power (Estimated @ Max Bandwidth)
  - 1CH@5.5W, 2CH@6.5W, 3CH@7.5W, 4CH@8.5W
- Parts Temp (C) : -55 to +120 Storage, 0 to +70 Commercial, -40 to + 85 Extended
- Cable Assembly with 1553 3-Plug Stub Cables Provided. DB50 Optional for I/O Discretes/Time.
  - SCSI-3 or P4 Connector on Card
- 14 Avionics and Two RS-485 Discretes
  - 1 Channel 1760 Ext RT Address
- Power-Up, Loop-Back and User BIT
- IRIG-B PAM and PPS Time Sync Input
- IPC Level 3 and ISO-9001 Manufacturing

## **BC Features**

- Variable Framing and Subframing
- Up to 15 Retries Per Message
- Schedule Message Timing in Frames\_or Intermessage Gap Spacing
- Low and High Priority Aperiodic Scheduling
- Infinite Linked Data Buffers
- Real-time Assignment of CDP data Lists for Messages
- Interrupts, No-Ops, Ext Trigger
- Legal and Reserved Mode Codes
  - 1553A and 1553B Support
- 64-Bit, 20 ns Time Tags
- Full Error Injection/Detection

## **Playback/Signal Vector (BC)**

- Real Hardware Playback from Archive Files
- Accurate Timing to 1 usec.
- Signal Vector Generation at 20 nsecs
  - \*\*INDUSTRY FIRST\*\*
    - Construct 1553 Bit Signals at 20 nsecs
    - \*\*AS4111 5.2 RT Val Protocol Capability

## **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

## **Monitor**

- Sequential and RT Mapped Monitor
  - Available with All Card Models
  - Hardware Trigger
- 64 bit, 20ns Time Tags

## **AltaAPI, AltaView, AltaRTVal Software**

- Multi-Layer **AltaAPI** Architecture to Support Windows (.Net 2.0) and ANSI C Linux
  - For RTOS Platforms, Contact Factory
- Optional **AltaView** is Based on the Latest Windows MS Office 2007 User Interface Style with Ribbon-Bar
  - Full Analyzer Integration Tool
  - Multi Language Support
- Optional **AltaRTVal** provides full AS4111 and AS4112 5.2 Protocol RT Validation GUI and Reports – Releases Q4 2007

## **Part Numbers**

Dual Function: BC/Mon or mRT/Mon

- PMC-1553-1D/2D/3D/4D

Full Function: BC, mRT and Monitor

- PMC-1553-1F/2F/3F/4F

Environment 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

## **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.



data technologies

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