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 Discretes
  - 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
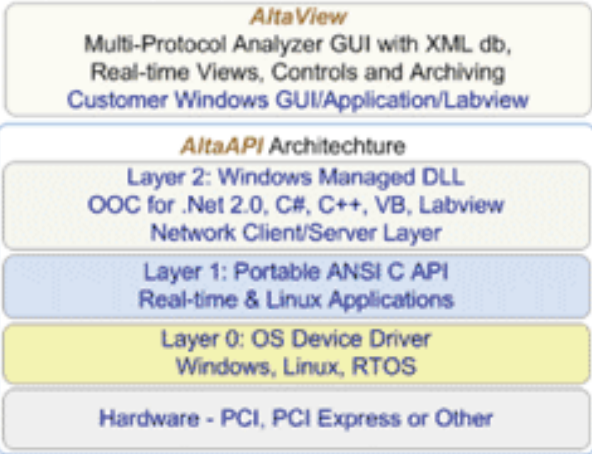Included (optional DB 50
for I/O Shown)

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 Architechture
Layer 2: Windows Managed DLL
OOC 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

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

Alta dt data technologies

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.

Alta dt data technologies
Alta Data Technologies LLC
4075 Aloe Circle NE
Rio Rancho, NM 87144 USA
(In US): 888-429-1553
(Outside US): 505-994-3111
Fax: 805-504-8588
Cage Code: 4RK27 • NAICS: 334418
www.altadt.com • alta.sales@altadt.com

ACTTECHNICO

Available through ACT/Technico
(215) 956-1200 • sales@acttechnico.com
www.acttechnico.com