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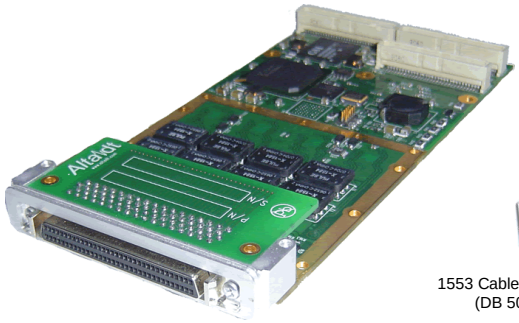
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Alta data technologies

PMC-1553

Multi-Channel 1553 Interface for PMC SBCs/Carriers



1553 Cable Assemblies Optional
(DB 50 with AUX /O Shown)

Alta Data Technologies' PMC-1553 card/board (PCI Mezzanine Card for Single Board Computers and Carriers) is a multi-channel (1-4) interface, and one the industry's most popular 1553 products with 1000's utilized on almost every major program. The product is based on the industry's most advanced 1553 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 is a guaranteed 1553A/B/C 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. Manufactering 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***

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...

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 Memory per Channel (Buffering for 4000+ messages)
- Fully Compliant to MIL-STD-1553A/B/C, MIL-1760, Link-16/JTIDS
- PCI, cPCI/cPCIe, PXI/PXIe Carriers Available

- **1000's Deployed on Almost Every Major Platform Worldwide - 5 Year Warranty!**
- Commercial or Industrial Extended Temperature Parts, Conduction Cooled and Rear Panel Optional
- Flexible FPGA Design to Minimize Obsolesce Issues
- Advanced BIT Features and Dual Temperature Sensors
- BC Framing/Subframing/Aperiodic
- Common Data Packets (CDP) for BC, RT and Monitor – Detailed Message Status
- 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 – HW Sync Channels
- Industry First: 20ns Signal Generation
  - Bit Construction – 1553 PHY TX
  - Supports RT Validation Testing

- IRIG-B RX PAM or RX/TX PPS Ext Clock
- Avionics Level & RS-485 Discretes/Clk
  - 1760 Ext RT Addressing

- Full HW Interrupt Features
- PCI 32 Bit, 33/66MHz & PCI-X Compatible

4901 Rockaway Blvd., Building A Rio Rancho, NM 87124 USA
(In US): 888-429-1553 (Outside US): 505-994-3111 Fax: 805-504-8588

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

General

- 32-Bit PCI 33/66MHz/PCI-X Compatible
  - PCI-SIG PCI 2.1 Compliant
  - ANSI/VITA 20-2001 Compliant
- Common Data Packets (CDPs) for all BC, RT and Monitor Functions. Provides Detailed Message Timing and Error Detection Information.
- MIL-STD-1553A/B/C Guaranteed Compliant
  - MIL-STD-1760, Link-16/JTIDS
  - SAE AS4111/4112 5.2 RT Validated
- One Megabyte RAM per Channel (Buffering for 4000+/1Sec+ Messages)
- 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 Temp
- 14 Avionics and Two RS-485 Discretes
- 1 Channel 1760 Ext RT Address Power-Up
- IRIG-B RX PAM and TX/RX PPS Time Sync
- Optional SCSI 3 Cable Assembly with 1553 3-Plug, BJ-77 Stubs. DB50 Optional for Trig/Clk/IO.
- Loop-Back & User BIT, Dual Temp Sensors
- IPC Class 3 and ISO Certifed Processes

BC Features

- Simple One-Shot Lists to Advanced Message Framing and Subframing
- Message Timing with 100 nSec Accuracy
- Infinite Linked CDP Data Buffers
  - 64-Bit, 20 ns Time Tags, Interrupts, Triggers
- Low and High Priority Aperiodic Messages
- Multi Branching Per Message, No-Ops, Delays, Ext Trigger In/Out, Interrupts etc…
- Up to 15 Retries Per Message
- Legal and Reserved Mode Codes
- Full Error Injection/Detection

Playback/Signal Vector PHY TX

- Real Hardware Playback from Archive Files
- Multi Channel and Multi Card Playback Sync
- Signal Vector Generation at 20 nSecs **INDUSTRY FIRST**
  - Construct 1553 Bit Signals
  - **AS4111 5.2 RT Val Protocol Capability

RT Features

- Infinite Linked CDP Data Buffers
  - 64-Bit, 20 nSec Time Tags, Interrupts, Triggers
- Legal and Reserved Mode Codes
  - Full Buffering of All Mode Codes
- Full Error Injection/Detection

Monitor

- Sequential and RT Mapped Monitoring with Infinite Linked CDP Data Buffers
  - Available with All Card Models
  - 64-Bit, 20 nSec Time Tags, Interrupts, Triggers
  - Full Error Detection

Software: *AltaAPI*, *AltaView, AltaRTVal*

- Multi-Layer ***AltaAPI*** Architecture Supports Windows, Linux, VxWorks, Integrity, etc.
  - Contact Factory for Supported RTOS Platforms
  - LabVIEW & RT Support (Veristand/Test Bench)
- Optional ***AltaView*** Analyzer – Windows
  - Reduce Integration Time – Full Archive & Test
  - Multi Language Support
- Optional ***AltaRTVal*** provides full AS4111/4112 5.2 RT Validation GUI and Test Reports

Part Numbers

Dual Function Models (D): BC/Mon or mRT/Mon

- **PMC-1553-#D-T (# = 1-4 Channels)**

Full Function Models (F): BC, mRT and Monitor

- **PMC-1553-#F-T (# = 1-4 Channels)**

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-1553-4F-ABDXT).**

Ask sales about optional cables assembles.

5 Year Limited Warranty!

EU and China RoHS Compliant

Contact Alta for Special Lead Build Configurations

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Alta dt data technologies

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