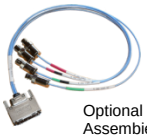
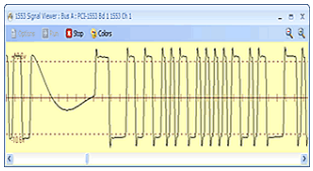
PCIE1L-1553

Multi-Channel 1553 Interface for Single Lane PCI Express Systems



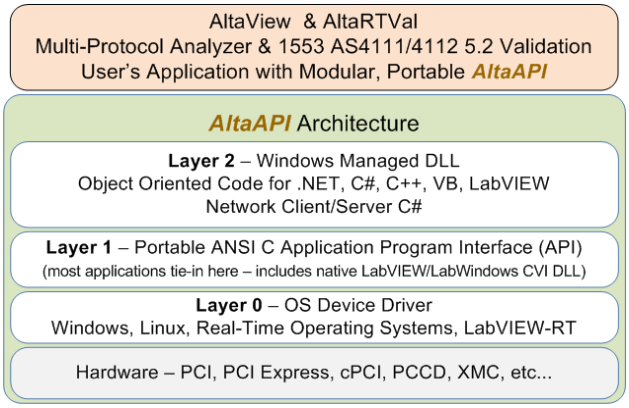
Optional Cable Assembies, 1553 Jack and DB15



Standard A/D Signal Capture on First Channel

Alta Data Technologies' PCIE1L-1553 interface module is a multi-channel (1-2), ½ size, **Low Profile**, **One Lane** PCI Express 1553 card with the latest software technologies. The PCI Express card is 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 (MSVS 2005/08/10 C++, C#, VB .NET) architecture. This package provides increased system performance and reduces integration time.

AltaCore-1553 is **guaranteed** 1553B Notice II & IV **compliant** and all cards are manufactured to the highest IPC Class 3 standards and ISO 9001:2008 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. Alta is committed to a risk free integration and will be glad to help with any level of your system development.



Alta's Advanced Software Architecture

Key Features:

- One or Two 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
- Variable Voltage 1553 TX Optional
- Fully Compliant to MIL-STD-1553B Notice II/IV, MIL-STD-1760,1553A and Link-16
- Commercial or Industrial Extended Temperature Parts
- ***One Channel of A/D Signal Capture – View 1553 Waveforms with **AltaView**!***
  - 8-bit, 50 nSec A/D for Voltage Measurements
- Advanced 32-bit BC, RT and Monitor FPGA Design – Full 32 bit Memory.
- BC Framing/Subframing/Aperiodic
- Common Data Packets (CDP) for BC, RT and Monitor – Complete Message Info
- 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 – 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
- Advanced BIT Features and Dual Temperature Sensors
- 1/2 Size, **Low Profile, One Lane** PCI Express 1.1
  - MSI & Regular HW Interrupt Support

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 (1-2)
PCIE1L-1553 Specifications

General

- ½ Size, **Low Profile**, **One Lane** PCI Express 1.1
  - Full Profile Front Panel also Provided
- One Megabyte RAM per Channel
- TX Variable Voltage Optional
- Common Data Packets (CDPs) for all BC, RT and Monitor Functions – Industry First
- MIL-STD-1553B Notice II & IV
  - MIL-STD-1760,1553A and Link-16
- Weight: 4oz/120grams (without cable)
- Power (Estimated @ Max Bandwidth)
  - 1CH@5W, 2CH@6.W
- Parts Temp (C) : -55 to +120 Storage, 0 to +70 Commercial, -40 to + 85 Extended Parts
- Cable Assembly with 1553 3-Plug Stub Sold Separately. DB15 Optional for Discrete/Clocks/Triggers.
- Micro D Honda Thumb Screw Connector
- Card Header Connector for Additional I/O
- 8 Avionics and Two RS-485 Discretes
- 1 Channel 1760 Ext RT Address Power-Up
- Loop-Back & User BIT, Dual Temp Sensors
- IRIG-B RX PAM and TX/RX PPS Time Sync
- IPC Class 3 and ISO 9001:2008 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
- 1553A and 1553B Support
- Full Error Injection/Detection

Playback/Signal Vector PHY TX

- Real Hardware Playback from Archive Files
- Multi Channel and Multi Card Playback Clock Synchronization - 100 nSec Accuracy
- Signal Vector Generation at 20 nsecs **INDUSTRY FIRST**
  - Construct 1553 Bit Signals at 20 nsecs
  - **AS4111 5.2 RT Val Protocol Capability
  - Advanced BC, RT or any 1553 PHY Signal TX

RT Features

- Infinite Linked CDP Data Buffers
  - 64-Bit, 20 ns Time Tags, Interrupts, Triggers
- Legal and Reserved Mode Codes
  - 1553A and 1553B Support
  - 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 ns Time Tags, Interrupts, Triggers
  - Full Error Detection
- 8-bit, 50 nSec A/D Waveform Signal Capture with Trigger on Words or Errors - First Channel Only
  - ***AltaView*** Software is Ideal for Signal Display

Software: *AltaAPI*, *AltaView, AltaRTVal*

- Multi-Layer ***AltaAPI*** Architecture to Support Windows (.Net 2.0) and ANSI C Linux, VxWorks, Integrity, etc…
  - Contact Factory For RTOS Platforms – LabVIEW & RT
- 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

Dual Function Models: BC/Mon or mRT/Mon

- **PCIE1L-1553-1D/2D**

Full Function Models: BC, mRT and Monitor

- **PCIE1L-1553-1F/2F**

Options: -E for Ext Temp Parts (-40 to +85C); -V for Variable Voltage Output, -A for AltaView and –B for AltaRTVal
Cable Options: **PCCDCAB-1553-X-01** or **PCCDCAB-1553-X-AUX01** (DB15 Included for AUX I/O). **X= 1553 Channel Count (1 or 2).** Cables Sold Separately.

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.

Alta Data Technologies LLC
4901 Rockaway Blvd., Building A
Rio Rancho, NM 87124 USA
888-429-1553 (in US)
505-994-3111 (outside US)
alta.sales@altadt.com
www.altadt.com

Alta dt data technologies