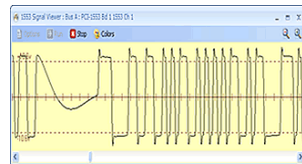


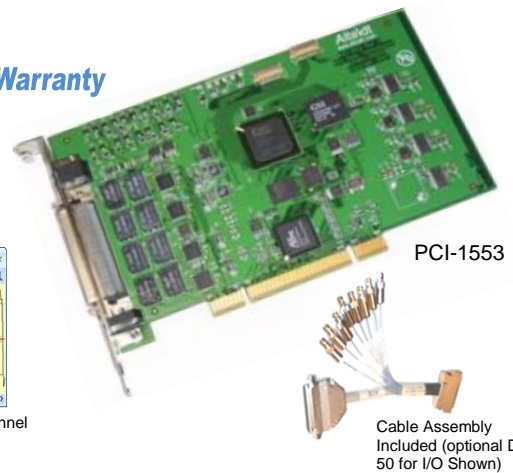
## Key Features:

- 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 or Industrial (Extended) Temperature
- **\*\*One Channel of A/D Signal Capture – View 1553 Waveforms with AltaView!\*\***
  - 8-bit 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 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



Standard A/D Signal Capture on First Channel



Alta Data Technologies' PCI-1553 and PCIC-1553 (PMC on PCI carrier) interface modules are multi-channel (1-4) 1553 cards supported by the latest software technologies. These PCI 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 PCI-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 and Waveform Capture is for Monitor only operation. We are committed to a risk free integration and will be glad to help with any level of your system development.

### 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  
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

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

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



## General

- 32-Bit PCI 33/66MHz/PCI-X Compatible
  - PCI-SIG PCI 2.1 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
- Dimensions: Standard ½ Size
- 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
- SCSI 3 Cable Assembly with 1553 3-Plug Stub Cables Provided. DB50 Optional for I/O-Time.
- 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 Receiver
- 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
  - Full AS4111 5.2 RT Val 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
- 8-bit A/D Waveform Signal Capture on First Channel  
- *AltaView* Software is Ideal for Display

## AltaAPI, AltaView, AltaRTVal Software

- Multi-Layer *AltaAPI* Architecture to Support Windows (.Net 2.0), Linux and RTOS Platforms
- 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 AS4111/4112 5.2 RT Validation GUI and Reports

## Part Numbers

Dual Function: BC/Mon or mRT/Mon

- PCI-1553-1D/2D/3D/4D
- PCIC-1553-1D/2D/3D/4D (PMC on Carrier)

Full Function: BC, mRT and Monitor

- PCI-1553-1F/2F/3F/4F
- PCIC-1553-1F/2F/3F/4F (PMC on Carrier)

-E for Ext Temp Parts (-40 to +85C); -V for Variable Voltage Output

## 5 Year Limited Warranty!

EU and China RoHS Compliant

Contact Alta for Special Lead Build Configurations

(Note: PMC on Carrier is not PCI 2.1 compliant, but has been tested in most common platforms. This is common industry practice.)

*AltaAPI* Software with ANSI C Source and .Net 2.0 DLL with Client/Server provided at No Cost.



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