Alta Data Technologies’ XMC-1553 interface module is a high density 1553 interface configurable with 1-10 1553 channels. The XMC-1553 card is based on the industry’s most advanced 32-bit FPGA protocol engine, AltaCore™, and by a feature-rich application programming interface, AltaAPI™, which is a multi-layer ANSI C and Windows .NET (MSVS 2005/08/10/15 C++, C#, VB .NET) architecture. This hardware and software package provides increased system performance and reduces integration time.

AltaCore-1553 is guaranteed 1553B Notice II & IV and ARINC compliant and all cards are manufactured to the highest IPC-610 Class 3 standards and ISO 9001:2008 processes. Cards are available in 1553 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. Alta is committed to a risk free integration and will be glad to help with any level of your system development.

Key Features:

- 1-10 Independent, Dual Redundant MIL-STD-1553 Channels
- Each Channel is Independent to Allow Multiple Applications (one per channel).
- Dual Function 1553 (BC/BM or mRT/BM) or Full Function (BC/mRT/BM)
- One Mbyte RAM per 1553 Channel
- Signal Capture on Channel One! Industry First!
- Ideal for SBCs or Carriers for VPX, VME, PCIe, Rackmount, cPCI or PXI
- Commercial or Industrial (Extended) Temperature and Conduction Cooled
- Front or Rear Panel (XMC P6) Configurations
- Regular or Rugged XMC 2.0 Connectors Available
- AltaAPI Windows, Linux, RTOS, LabVIEW & RT
  - .NET Managed DLLs
  - Contact Factory for Latest RTOS Support
  - Full Hardware Interrupt Features
- IRIG-B RX PAM or RX/TX PPS Ext Clock
- 8 Avionics/ RS-485 Discretes/Triggers
- Ext RT Address for 1760 support on Channel One
- Advanced BIT Features and Dual Temperature Sensors
- VITA 42–Single Width XMC (2.0 Optional), 4 Lane PCI Express 2.1 Gen 2.5 GHz

Alta’s Advanced Software Architecture

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...
High Density, Multi-Protocol Avionics
XMC-1553 Specifications

General
- 1-10 MIL-STD-1553B Notice II & IV Channels
- 4 Lane PCI Express 2.1 Gen 2, 5 GHz
- VITA 42 XMC Single Width. XMC 2.0 Optional
- Loop-Back & User BIT, Dual Temp Sensors
- Optional HD to 1553 Jack and DB AUX I/O Front Panel Cable. Assemblies.
- Optional Rear Panel XMC P6 Connector
- Dual and Full Function 1553 Channels
- Weight: 8-10oz
- 3.3V Power (Estimated @ Max Bandwidth) 8-13W with max channels. Estimate 0.8W Per Channel. These numbers are subject to change with Alta factory testing.
- Parts Temp (C) : -55 to +120 Storage, 0 to +70 Commercial, -40 to + 85 Extended
- 8 Avionics, 2 RS-485 Discretes, Triggers
- IRIG-B RX PAM, TTL/RS-485 PPS Time Sync
- IPC Class 3 and ISO 9001:2015 Processes

1553 Monitor (Mon or BM)
- 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

Software: AltaAPI & AltaView
- Multi-Layer AltaAPI Architecture to Support Windows, .NET and ANSI C Linux, VxWorks, GHS Integrity, etc…
- Contact Factory For RTOS Platforms
- LabVIEW & RT No Cost
- Optional AltaView is Based on the Latest Windows MS Office User Interface Style with Ribbon-Bar
- Full Analyzer Integration Tool
- Multi Language Support

Part Numbers
Example: XMC-1553-6F-T
Change the color number-letter for channel count and Dual (D) or Full (F) Function Operations.

1553 Dual Function = BC/BM or Multi RT(mRT)/BM
1553 Full Function = BC/mRT and BM
All functions are software selectable. Optional Cables Assemblies

Options (number and alpha order): -E for Ext Temp Parts (-40 to +85C), -F for Conformal Coating, -C for Ext Temp, Conduction Cooled/Conformal Coated/Rear Panel, -6 for P6 XMC Rear Panel, -A for AltaView, -W for XMC 2.0 Connectors, -N for NVRAM Write Protect.
Example: XMC-1553-5F-6ACNW

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.

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