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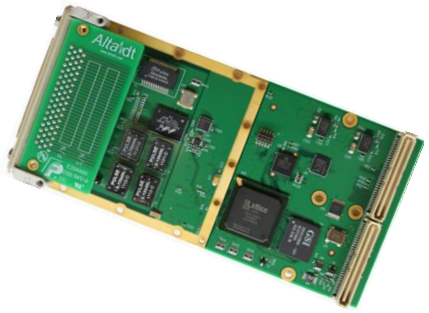
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Find the *Alta Data Technologies PMCE-1553-1D-T* at our website: *Click HERE*

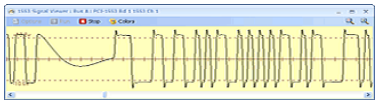
Alta dt
data technologies

PMCE-1553™

1553 Operations for Ethernet Backplane Systems



A/D Signal Capture Included in Industry's First Ethernet<->1553



- 10/100/1000 Ethernet <-> MIL-STD-1553
- Ethernet Backplane Only!
- Open VPX and VITA Standards or Custom Backplanes
- One or Two 1553 Dual Redundant Channels
- Connectors: P4 Ethernet/1553/IO; P2 for 3.3V Power.
- May Eliminate DO-178 Software Certification Requirements! Use Certified BSD Stack.
- Thin-Server, Real-Time UDP Ethernet to/from 1553 **
- Remote 1553 Devices on the LAN – Small Size
- Auto Load BC, RT and BM Images for Fast Startup
- Auto BM Mode for 1553->Ethernet Bridging
- 300-900 mAmp max/300-700 mAmp typical. 1760 Startup
- Ideal for Lab or Rugged Deployed Applications
- IRIG-B Rx Decode, PPS, Triggers, Discretes

PMCE-1553™ is an innovative product that provides 1553 operations via 10/100/1000 Ethernet IP/UDP local area networks (LAN) backplane. PMCE-1553 is a standard PMC form factor card, but instead of PCI backplane, PMCE-1553 uses the P4 connector for Ethernet based control and communications.

Alta has combined the industry's most advanced 32-bit 1553 FPGA protocol engine, ***AltaCore***™, with a real-time IP/UDP thin server. The customer can implement their application with the same feature-rich application programming interface, ***AltaAPI***™, as used with standard cards – often without even recompiling - the utlimate in code portability.

For systems that require DO-178 level compliant software, PMCE-1553 is ideal because you can utilize the operating system's compliant IP/socket level functions. PMCE-1553 can be flash programmed with 1553 predefined buffers and the application code simply performs standard socket access to 1553 BC, RT or Monitor buffer. No need to have extra compliant level application or driver stack!

****NOTE: PMCE-1553 (server) is a real-time Ethernet/1553 device, but your computers' (client) IP stack may not be!** The PMCE-1553 device provides real-time UDP receive and transmit requests to 1553 buffers, but the SBC/client's IP/UDP stack will induce path delays as compared to PCI backplane cards. For many applications (<100-1000 packets per second), this product will provide unparalleled flexibility in 1553 configurations (much better than USB devices). Contact Alta for more information.

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...

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.

www.altadt.com

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

AltaCore-1553
PMCE-1553™ Specifications

General

- Ethernet P4, PMC Form Factory.
  P2 Required for 3.3V Power. No P1.
- Standard 10/100/1000 Ethernet UDP
- One or Two 1553 Channels
  (Contact Factory for Two Channel Support)
- Power 1000E @ 50% Load: 800 mAmps
  Power 100E @ 50% Load: 400 mAmps
- One Megabyte RAM for 1553 Buffering
- Common Data Packets (CDPs) for all BC, RT and Monitor Functions
- Transmit and BC Hardware Inhibit
- Flash Disable Factory Setting for Secure Mem
- MIL-STD-1553/1553B Notice II & IV
- MIL-STD-1760, 1553A and Link-16
- Parts Temp: -55 to +120 Storage, 0 to +70 Commercial, -40 to + 85 Extended Temp
- 6 Avionics Discretes/Ext RT Addressing
- Two RS-485 & 1 TTL Discretes/Ext Clock
- Advanced Startup, User and Continuous BIT
- IRIG-B PAM RX or 1, 5, 10 MHz PPS

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
- Polling 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
- Synchronized Playback with Other Alta Channels and Cards!
- Signal Vector Generation at 20 nsecs
  INDUSTRY FIRST
  - Construct 1553 Bit Signals at 20 nsecs

RT Features

- Infinite Linked Data Buffers Legal and Reserved Mode Codes
- 1553A and 1553B Support – 1760 Startup
- Full Buffering of All Mode Codes 64-Bit, 20 ns Time Tags with Full Error Injection/Detection

Monitor

- Sequential and RT Mapped Monitor
  - **Autostart for 1553 UDP Broadcasts**
- Hardware Trigger (Input and Output)
- 64 bit, 20ns Time Tags, IRIG, Ext Clock Source

AltaAPI, *AltaView* Software

- Multi-Layer, Portable ***AltaAPI*** Software Tool Kit. Windows™, .NET, LabVIEW™, ANSI C, Linux
- Most RTOS Platforms, Contact Factory
- Optional ***AltaView*** Analyzer .NET Windows
  - Full Analyzer Integration Tool
  - Multi Language Support Optional

Part Numbers

Dual Function: BC/Mon or mRT/Mon

- **PMCE-1553-1D**

Full Function: BC, mRT and Monitor

- **PMCE-1553-1F**

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; -A for AltaView

Contact Factory for Two Channel Support

2 Year Limited Warranty

EU and China RoHS Compliant

Contact Alta for Special Lead Build Configurations

Non-Public Telcom/CE Device

Alta Data Technologies LLC
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888-429-1553 or 505-994-3111

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We're here to make your life easier. How can we help you today?

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