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Find the *Alta Data Technologies ENETX-MA4-1D4* at our website: *Click HERE*

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eNetX-MA4™

Rugged, Multi-Channel 1553 and ARINC for **Real-Time** Ethernet Connectivity

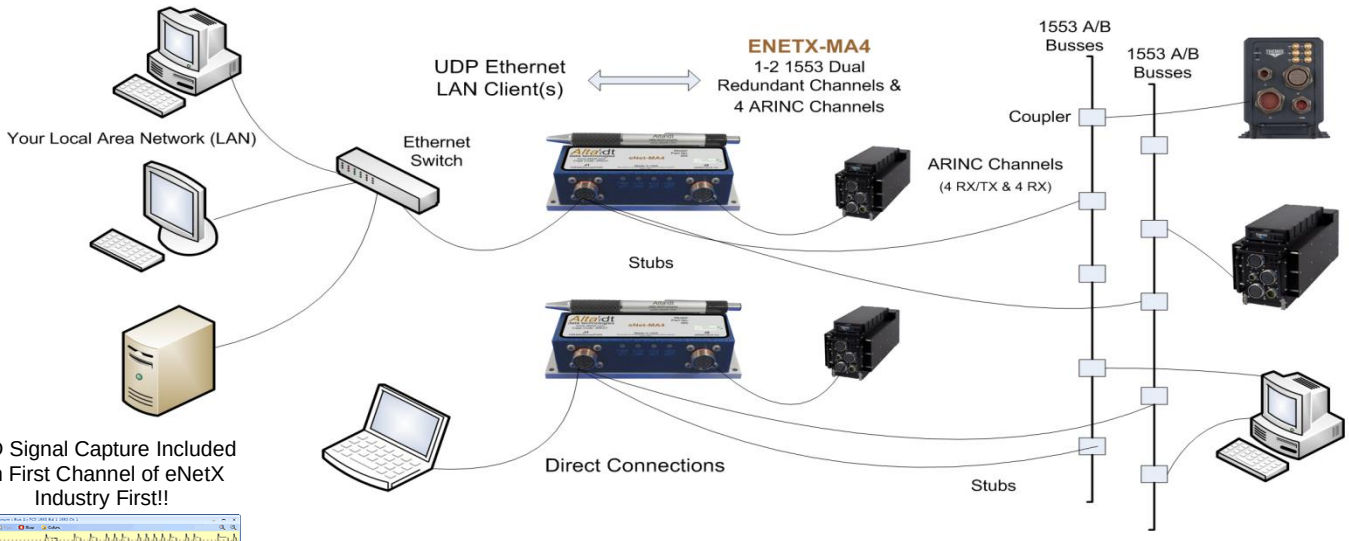


Only 14.2 x 7 x 3.5 cm & 270 grams
Small, Rugged Appliance
10/100/1000 Ethernet
Ready to Deploy!

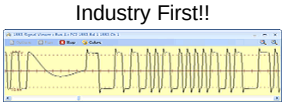
- **Real-Time Ethernet-1553 Bridge Convertor**
- **Up to Two Independent, Dual Redundant 1553 Busses**
  - Dual or Full Function Modes
- **Up to Four ARINC-429/717 Channels**
  - 4 RX/TX (or RX fixed); First 2 Channels Share 717
- **Tested to MIL-STD-704F/810G/461F/DO160 Sec 22**
- Thin-Server, Real-Time UDP Ethernet **
- FPGA State Machine – No Processor or Stack – Virus Proof
- Auto BM/RX Mode for Auto 1553-ARINC->Ethernet Bridging
- 5-32 VDC; 5V @ 7W Typical; One Channel < 5W; BM < 3W

Alta's ENETX-MA4 Provides Real-Time Ethernet Connectivity to Multiple MIL-STD-1553 Busses & ARINC-429 Channels

Incredibly Small, Rugged Ethernet Appliance for Multi Protocol Applications



A/D Signal Capture Included on First Channel of eNetX
Industry First!!



eNetX-MA4™ is an innovative product for "remoting" 1553 & ARINC-429/717 operations on 10/100/1000 Ethernet local area networks (LAN). eNetX-MA4 is a very small, low-power, rugged device that provides real-time UDP connectivity to for 1-2 dual redundant 1553 (A/B) busses and 4 ARINC channels. Tested to MIL-STD-704F/810G/461F and DO160.

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 ultimate in code portability.

****NOTE: eNetX-MA4 (server) is a real-time Ethernet/1553 device, but your computers' (client) IP stack may not be!** The eNetX-MA4 device provides real-time UDP receive and transmit requests (<10 uSecs) to data buffers, but the client's IP/UDP stack will induce path delays as compared to backplane cards. For most applications, this product will provide unparalleled flexibility in avionics configurations (much better than USB devices). Contact Alta for test results on various OS and computer configurations – your system results may vary.

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/ARINC eNetX-MA4™ Specifications

General

- **Small 14.2 x 7 x 3.5cm, 270g without cabling**.
- 1-2 Dual Redundant Independent 1553 Busses
- 4 ARINC Channels: 4 RX/TX (or RX Fixed)
- Standard 10/100/1000 Ethernet UDP
- Glenair Mighty Mouse Connectors 801-011-02M10-26PA/B Mates
- One Megabyte RAM Buffering Per Channel/Bank
- Transmit Inhibit and ARINC RX Only Optional
- Flash Disable Factory Setting for Secure Mem
- Parts Temp (C) : -55 to +120 Storage, 0 to +70 Commercial, -40 to + 85 Extended Temp
- Seven Avionics Discretes, TTL Clock, Trigger
- IEEE-1588, IRIG-B PAM RX or 1, 5, 10 MHz PPS
- Advanced Startup, User and Continuous BIT
- Full Error Injection/Detection at All Levels
- Shared ARINC TX Channels Add Electrical Load
- A/D Signal Capture on First Channel(s)
- IP Fragmentation NOT supported

BC & ARINC TX (Playback and Signal Vector)

- 1553 Framing, Subframing, Scheduling, Aperiodic
- ARINC TX Complete Frequency Control
- Circular Linked Data Buffers
- Polling Interrupts, No-Ops, Ext Trigger
- 1553 Legal and Reserved Mode Codes
  - 1553A and 1553B Support
- 64-Bit, 20 ns Time Tags
- Full Hardware Playback and Signal Generator

1553 RT Features

- Circular Linked Data Buffers
- Legal and Reserved (1553A) Mode Codes
- 64-Bit, 20 ns Time Tags

1553 BM

- Sequential and Simultaneous Map Monitoring
- Auto Ethernet TX of 1553 BM Message to User Defined IP Address
- 64-bit, 20 ns Time Tags with IEEE-1588, IRIG or PPS Additional Time Stamps

ARINC RX Features – 3 RX Modes

- Channel Level Label/Word Tables
- Multi-Channel Data Tables for All Channels
- ARINC 717 Frame Support
- 64-bit, 20 ns Time Tags with IEEE-1588, IRIG or PPS Additional Time Stamps

Enviromentals: Rugged, Tested, Ready to Deploy

- Power (5-32 VDC Input): 7 Watts @ 5V, 2 Channels transmitting 75%, ARINC TX channels 1ms labels to 1 RX load. Est Power 1 Channel 1553 TX 75% (no ARINC) 4.4W @ 5V. 1553/ARINC Mon/RX Only 3W
- Tested to: MIL-STD-704F 28V; MIL-STD-810G Shock, Vibe and Temp; MIL-STD-461F EMC CE/RE 102; RTCA DO-160G Sec. 22 Level 3 Pin Injection (Ethernet, 1553 and ARINC)
- SAE AS4111 5.2 Protocol (1553) Tested
- Contact Factory for Test Reports

Software: *AltaAPI & AltaView Windows Analyzer*

- Multi-Layer ***AltaAPI*** Architecture to Support Windows, .NET and ANSI C Linux, VxWorks, etc…
  Supports Almost Any OS with Straight BSD Sockets
- **By-Pass API with Straight UDP for Your DO-178 Requirements (not an Alta product/support).**
- Optional ***AltaView*** is Based on the Latest Windows MS Office User Interface Style with Ribbon-Bar

Part Numbers

1553 Full Function (F) = BC/mRT and BM
1553 Dual Function (D) = BC/Monitor or mRT/Monitor
(Can be ordered with/without 1553 or ARINC channels)

- **ENETX-MA4-1D4 or ENETX-MA4-2D4**
- **ENETX-MA4-1F4 or ENETX-MA4-2F4**

Options: Add -E for Ext Temp Parts (-40 to +85C), -N for NVRAM Write Protection, -F for Conformal Coating, -I for TX Inhibit and –A for AltaView Analyzer Software.
Example: ENETX-MA4-2F4-AEFIN

Optional Cables:

- **ENETXCAB-MA4-J1-01**
  - ARINC Channels DB26 & USB Power Cable
- **ENETXCAB-MA4-J2-00/01/02**
  - 1553 Channels, Ethernet, Auxiliary DB-26

5 Year Limited Warranty – Best in Industry

EU RoHS Compliant

Contact Alta for Special Lead Build Configurations
Non-Public Telcom/CE Device. Non-Safety/Mission Critical.

Alta Data Technologies LLC
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