Alta dt
data technologies

ENETX-1553™
3 or 4 Channels (Buses) of 1553 for Real-Time Ethernet Connectivity

Only 14.2 x 7 x 3.5 cm & 280 grams
Small, Rugged Appliance

- **3 or 4 Independent, Dual Redundant 1553 Buses**
- **Ideal for BM and Light-Moderate BC/RT Operations (<50% Bus Loading All Channels)**
  - <2000 Total Ethernet Packets/Sec for Most Computer OSes (200-500 uSec Path Delay).
- 10/100/1000 Ethernet <-> MIL-STD-1553 Applications
- Thin-Server, Real-Time UDP Ethernet to/from 1553 **
- Remote 1553 Devices on the LAN – Small Size, Rugged
- Auto Load BC, RT and BM Images for Fast Startup
- Auto BM Mode for 1553->Ethernet Bridging
- Ideal for Lab or Rugged Deployed Applications
- IRIG-B RX Decode, PPS, Triggers, Discretes

Alta's ENETX-1553 Provides Real-Time Ethernet Connectivity to 3 or 4 MIL-STD-1553 Buses
Incredibly Small, Rugged Ethernet Appliance
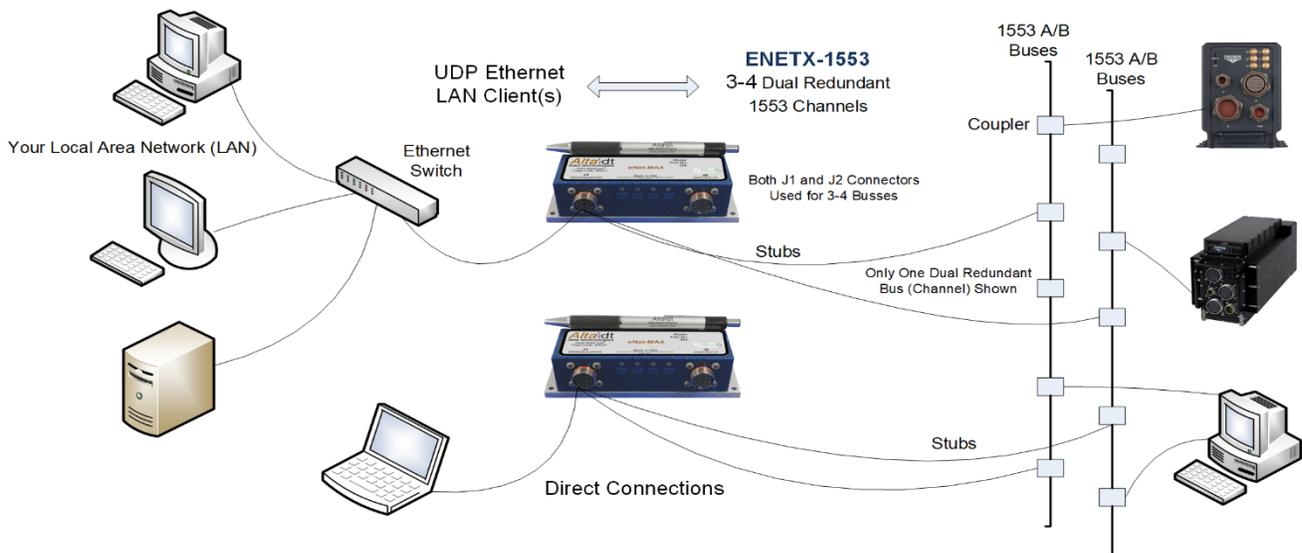
ENETX-1553™ is an innovative product that provides "remoting" of 1553 operations on 10/100/1000 Ethernet IP/UDP local area networks (LAN). ENETX-1553 is a small, low-power, rugged device that provides real-time Ethernet connectivity to for **three or four** dual redundant 1553 (A/B) buses (channels). Ideal for remoting 1553 connections for in-field applications or point-point lab usage.

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-1553 (server) is a real-time Ethernet/1553 device, but your computers' (client) IP stack may not be! The ENETX-1553 device provides real-time UDP receive and transmit requests to 1553 buffers, but the client's IP/UDP stack will induce path delays as compared to backplane cards. For many applications (<2000 packets per second), this product will provide unparalleled flexibility in 1553 configurations (much better than USB devices). Contact Alta for test results on various OS and computer NIC configurations –system results may greatly vary.**

www.altadt.com

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(In US): 888-429-1553 (Outside US): 505-994-3111 Fax: 805-504-8588
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AltaCore-1553
ENETX-1553™ Specifications

General

- Small 14.2 x 7 x 3.5cm, 280g without cabling
- 3 or 4 Dual Redundant, Independent Buses
- Standard 10/100/1000 Ethernet UDP
- <2000 Ethernet Packets/Sec for Most OSes
- 5-32 VDC Conditioned Power
  - USB 5V 3 AMP
  - 13W 4-Channels Fully Loaded
- Temp 0-70°C Standard. Storage -55 to 120°C
- Extended Temp Parts with –E Option
  - -40°C to +85°C Bus Monitor Only
  - -40°C to +71°C Transmitting (Bus Controller or Remote Terminal)
- MIL-STD-1553/1553B Notice II & IV
- MIL-STD-1760, 1553A and Link-16
- Glenair Mighty Mouse Connectors
  - 801-011-02M10-26PA/B Mates
- One Megabyte RAM Buffering Per Channel
- Common Data Packets (CDPs) for all BC, RT and Monitor Functions
- Optional Transmit Inhibit – BM Only
- Flash Disable Factory Setting for Secure Mem
- 7 Avionics Discretes/Ext RT Addressing
- One RS-485 & 1 TTL Discretes/Ext Clock
- Advanced Startup, User and Continuous BIT
- IRIG-B PAM RX or 1, 5, 10 MHz PPS
- Static, Programmable IP Addressing
- IPV4. IP Fragmentation NOT supported

BC Features – Full Featured

- Light-Moderate BC Packet Rates Supported
- Framing, Subframing, Retries
- 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
- Only Light Rates Supported for All Channels

RT Features

- Light-Moderate RT Packet Rates Supported
- Infinite Linked Data/Mode Code Buffers
- 1553A and 1553B Support – 1760 Startup
- Time Tags with Full Error Injection/Detection

Monitor (BM)

- Sequential and RT Mapped Monitor
  - **Auto start 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
- **Highly Portable BSD Socket Layer for Almost Any Operating System (OS). Contact Factory**
- Optional *AltaView* Analyzer Windows
  - Full Analyzer Integration Tool
  - Multi Language Support

Part Numbers

Dual Function: BC/Mon or mRT/Mon
- **ENETX-1553-3D** or **ENETX-1553-4D**

Full Function: BC, mRT and Monitor
- **ENETX-1553-3F** or **ENETX-1553-4F**

Options: Add -E for Ext Temp Parts (-40 to +85C), -I TX Inhibit (BM Only), -N for NVRAM Write Protection, -F for Conformal Coating, -D Direct Coupling and –A for AltaView Analyzer.
Example: ENETX-1553-4F-ADEFIN

Optional Cables (ordered separately):

- **ENETXCAB-1553-J1-01/02**
  - 3-4 1553 Channels, Mini DB-26 & USB Power
- **ENETXCAB-MA4-J2-02**
  - First 2 Channels of 1553, Ethernet RJ-45 & Mini DB-26

5 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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