

**eNet2-1553™**

**Dual-Channel 1553 for Real-Time Ethernet Connectivity**

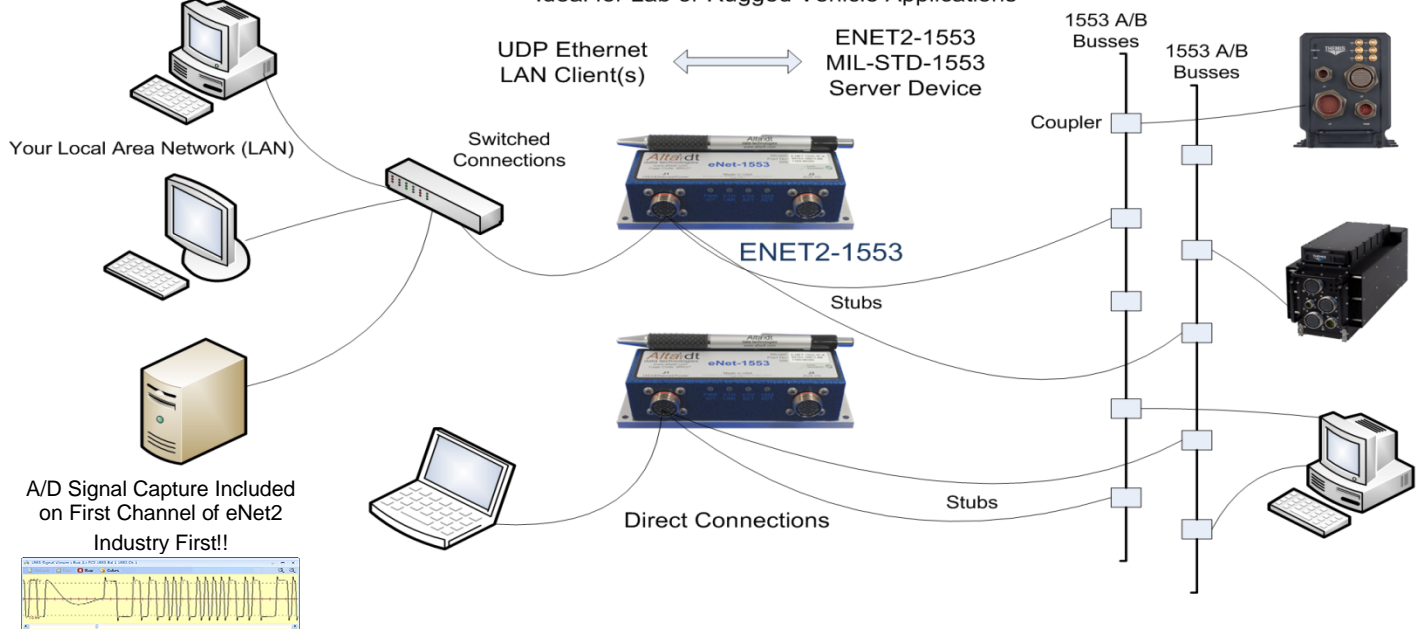


Only 13.5 x 3.7 x 4 cm  
& 200 grams  
Small, Rugged Appliance

- 10/100/1000 Ethernet <-> MIL-STD-1553 Applications
- **Two Independent, Dual Redundant 1553 Busses**
- 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
- 5-30 VDC, 300-900 mA max/300-700 mA typical. 200g Weight, POE Optional, 1760 Startup
- Ideal for Lab or Rugged Deployed Applications
- IRIG-B RX Decode, PPS, Triggers, Discretes

**Alta's ENET2-1553 Provides Real-Time Ethernet Connectivity to Multiple MIL-STD-1553 Busses**

Two Independent Dual Redundant 1553 Busses  
Ideal for Lab or Rugged Vehicle Applications



**eNet2-1553™** is an innovative product that provides “remoting” of 1553 operations on 10/100/1000 Ethernet IP/UDP local area networks (LAN). eNet2-1553 is a small, low-power, rugged device that provides real-time Ethernet connectivity to for **two** dual redundant 1553 (A/B) busses. 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: eNet2-1553 (server) is a real-time Ethernet/1553 device, but your computers' (client) IP stack may not be!** The eNet2-1553 device provides real-time UDP receive and transmit requests (<10 uSecs) to 1553 buffers, but the client's IP/UDP stack will induce path delays as compared to backplane cards. For many applications (<100-2000 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 configurations – your system results may vary.

# AltaCore-1553

## eNet2-1553™ Specifications

### General

- 13.5 x 3.7 x 4cm, 200g without cabling.
- Two Dual Redundant, Independent Busses
- Standard 10/100/1000 Ethernet UDP
- Power 1000E @ 50% Load: 700 mAmps (1ch)  
Power 100E @ 50% Load: 400 mAmps (1ch)  
Power 1000E @ 50% Load: 900 mAmps (2ch)  
Power 100E @ 50% Load: 600 mAmps (2ch)  
5-30 VDC Conditioned Power
- POE Optional (+55C Ambient Max Temp).  
USB Powered OK (1000+ mAmps Source).
- 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
- 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 (C) : -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
- IP Fragmentation NOT supported.

### BC Features – Full Featured

- 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 with Other Channels/Devices
- Signal Vector Generation at 20 nsecs
  - Construct 1553 Bit Signals

### RT Features

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

### AltaAPI, AltaView, AltaRTVal Software

- Multi-Layer, Portable **AltaAPI** Software Tool Kit.  
Windows™, .NET, LabVIEW™, ANSI C, Linux
- Most RTOS Platforms, Contact Factory
- Optional **AltaView** Analyzer Windows
  - Full Analyzer Integration Tool
  - Multi Language Support
- SAE AS4111 5.2 RT Validation!  
**AltaRTVal** Optional Software

### Part Numbers

Dual Function: BC/Mon or mRT/Mon

- **ENET2-1553-2D**

Full Function: BC, mRT and Monitor

- **ENET2-1553-2F**

Options: Add -E for Ext Temp Parts (-40 to +85C), -N for NVRAM Write Protection, -F for Conformal Coating and -P for POE. Add -A for AltaView Analyzer.  
Example: ENET2-1553-2F-AEFNP

### Optional Cables:

- **ENETCAB-1553-J1-02**
  - 1553, Ethernet & USB Power
- **ENETCAB-J2-01**
  - Auxiliary Mini DB-26

### 5 Year Limited Warranty

EU and China RoHS Compliant

Contact Alta for Special Lead Build Configurations  
Non-Public Telcom/CE Device

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