Alta dt
data technologies

# eNet2-1553™

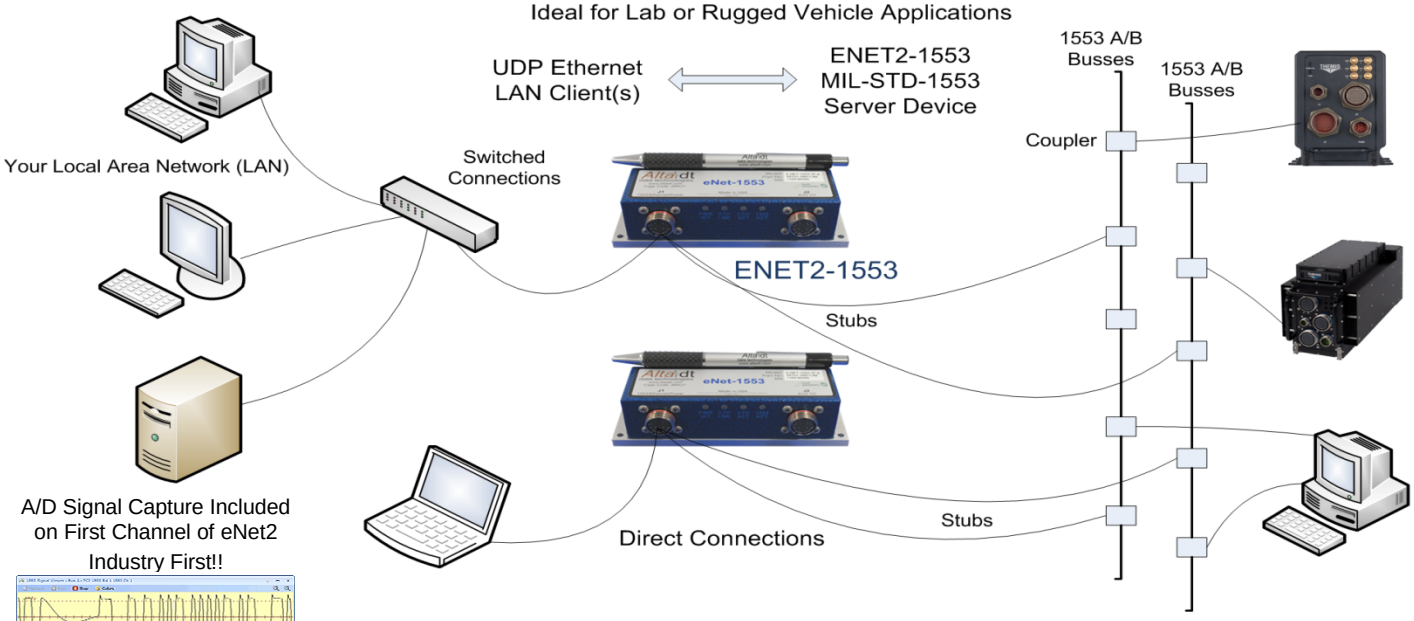
## Dual-Channel 1553 for Real-Time Ethernet Connectivity


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

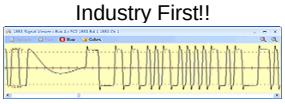
- 10/100/1000 Ethernet <-> MIL-STD-1553 Applications
- **One or Two Independent, Dual Redundant 1553 Busses**
- Thin-Server, Real-Time UDP Ethernet to/from 1553 **
- Remote 1553 Devices on the LAN – Small Size
- Auto Load BC, RT and BM Images for Fast Startup
- Auto BM Mode for 1553->Ethernet Bridging
- 5-30 VDC, 300-900 mAmp max/300-700 mAmp 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




A/D Signal Capture Included
on First Channel of eNet2
Industry First!!



**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 **one or 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 utlimate 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 (<20 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.

**www.altadt.com**

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# AltaCore-1553
# eNet2-1553™ Specifications

## General

- 13.5 x 3.7 x 4cm, 200g without cabling.
- 1-2 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+ mAmp 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

- **ENET2-1553-1D** or **ENET2-1553-2D**

Full Function: BC, mRT and Monitor

- **ENET2-1553-1F** or **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-J1-01/02**
  - 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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