eNet-1553™ is an innovative product that provides “remoting” of 1553 operations on 10/100/1000 Ethernet IP/UDP local area networks (LAN). eNet-1553 is a small, low-power, rugged device that provides connectivity for one dual redundant 1553 bus and is 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: eNet-1553 (server) is a real-time Ethernet/1553 device, but your computers' (client) IP stack may not be!** The eNet-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 (<100-1000 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

### eNet-1553™ Specifications

### General
- 13.5 x 3.7 x 4cm, 200g without cabling. Rugged Mountable MIL 810G Tested.
- Standard 10/100/1000 Ethernet UDP
- Power 1000E @ 50% Load: 800 mAmPs
  Power 100E @ 50% Load: 400 mAmPs
  5-30 VDC Input Accepted.
- POE Optional (+55C Ambient Max Temp).
- USB Powered OK (1000 mAmp Source).
- Glenair Mighty Mouse Connectors. 801-011-02M10-26PA/B Mates.
- One Dual Redundant MIL-STD-1553 Interface
- 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 (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
- 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, AltaRTVal 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
  - Add “-A” Option to End of Part Number
- Optional AltaRTVal provides full AS4111 and AS4112 5.2 Protocol RT Validation/Testing (on 2 Channel Alta Cards – not on eNet).

### Part Numbers
- Dual Function: BC/Mon or mRT/Mon
- **eNet-1553-1D**
  - Full Function: BC, mRT and Monitor
- **eNet-1553-1F**
  - Options: Add -E for Ext Temp Parts (-40 to +85C) and -P for POE. Add –A for AltaView Analyzer.
  - Example: ENET-A429-8-AE

### Optional Cables:
- **ENETCAB-1553-J1-01**
  - 1553, Ethernet & USB Power
- **ENETCAB-J2-01**
  - Auxiliary Mini DB-26

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**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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