Alta dt
data technologies

eNet-MA4™

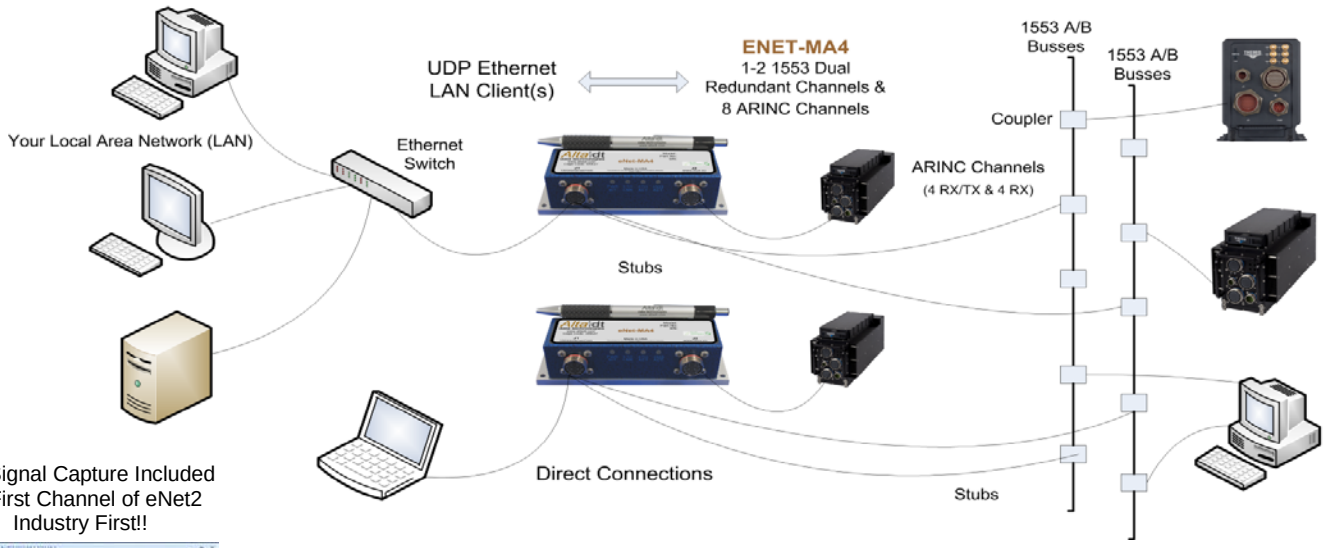
Multi-Channel 1553 and ARINC for Real-Time Ethernet Connectivity

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

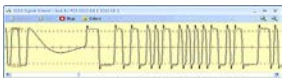
- 10/100/1000 Ethernet <-> 1553 & ARINC Converter/Bridge
- **Two Independent, Dual Redundant 1553 Busses**
  - Dual or Full Function Modes
- **Eight ARINC-429/717 Channels**
  - 4 RX/TX & 4 RX; First 2 Channels Share 717
- Thin-Server, Real-Time UDP Ethernet to/from 1553 **
- Auto BM/RX Mode for 1553-ARINC->Ethernet Bridging
- 5-30 VDC, 500-1200 mAmp max/400-800 mAmp typical. 200g Weight, 13.5 x 3.7 x 4 cm – Small & Rugged
- Ideal for Lab or Rugged Deployed Applications
- IRIG-B RX Decode, IEEE-1588, PPS & Triggers

Alta's ENET-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 eNet2 Industry First!!



eNet-MA4™ is an innovative product for "remoting" 1553 & ARINC-429/717 operations on 10/100/1000 Ethernet local area networks (LAN). eNet-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 8 ARINC channels.

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: eNet-MA4 (server) is a real-time Ethernet/1553 device, but your computers' (client) IP stack may not be!** The eNet-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

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

AltaCore-1553/ARINC
eNet-MA4™ Specifications

General

- 13.5 x 3.7 x 4cm, 200g without cabling.
- 1-2 Dual Redundant Independent 1553 Busses
- 8 ARINC Channels: 4 RX/TX & 4 RX
- Standard 10/100/1000 Ethernet UDP
- Power 1000E @ 50% Load: 800 mAmps (1ch)
  Power 1000E @ 50% Load: 1 Amp (2ch)
  5-30 VDC Conditioned Power
  USB Power OK (2000+ mAmp Source).
- Glenair Mighty Mouse Connectors.
  801-011-02M10-26PA/B Mates.
- One Megabyte RAM Buffering Per Channel
- Transmit Inhibit Optional
- Flash Disable Factory Setting for Secure Mem
- Parts Temp (C) : -55 to +120 Storage, 0 to +70 Commercial, -40 to + 85 Extended Temp
- Two Avionics Discretes, TTL Clock, Trigger
- IRIG-B PAM RX, IEEE-1588 or 1, 5, 10 MHz PPS
- Shared ARINC TX Channels Add Electrical Load
- Advanced Startup, User and Continuous BIT
- IP Fragmentation NOT supported.

BC & TX ARINC

- 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 Error Injection/Detection

1553 RT Features

- Circular Linked Data Buffers
- Legal and Reserved Mode Codes
  - 1553A and 1553B Support
  - Full Buffering of All Mode Codes
- 64-Bit, 20 ns Time Tags
- Full Error Injection/Detection

ARINC RX Features – 3 RX Modes

- Channel Level Label/Word Tables
- Multi-Channel Data Tables for All Channels
- Channel Level Current Value Tables
- ARINC 717 Frame Support
- 64-Bit, 20 nsec Time Tags
- Full Error Detection

Playback/Signal Vector (BC or TX)

- Real Hardware Playback from Archive Files.
- Signal Vector Generation at 20/1000 (1553/ARINC) nsecs **INDUSTRY FIRST**
  20 nSec 1553 Vectors and 1 uSec ARINC Vectors
- Sequential and RT Mapped Monitoring with Infinite Linked CDP Data Buffers
- 8-bit, 50 nSec 1553 and 1 uSec A/D Waveform Signal Capture. 1st Channel 1553 and First 2 RX of ARINC

Software: *AltaAPI & AltaView Analyzer*

- Multi-Layer ***AltaAPI*** Architecture to Support Windows .NET and ANSI C Linux, VxWorks, Integrity, LabVIEW, etc…
  - Contact Factory For RTOS Platforms
- Optional ***AltaView*** is Based on the Latest Windows MS Office User Interface Style with Ribbon-Bar
  - Full Analyzer Integration Tool
  - Multi Language Support

Part Numbers

Dual Function: BC/Monitor or mRT/Monitor

- **ENET-MA4-1D8 or ENET-MA4-2D8**

Full Function: BC, mRT and Monitor

- **ENET-MA4-1F8 or ENET-MA4-2F8**

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: ENET-MA4-2F8-AEFIN

Optional Cables:

- **ENETCAB-1553-J1-01/02**
  - 1553 Channels, Ethernet & USB Power
- **ENETCAB-J2-01**
  - ARINC Channels, 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/Non Safety-Mission

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