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**NLINE-E1553™**

1-2 Channel 1553, Rugged In-Line Real-Time Ethernet Converter

- One or Two Independent, Dual Redundant 1553 Busses
- 10/100/1000 Ethernet <-> MIL-STD-1553 Applications
- Thin-Server, Real-Time UDP Ethernet to/from 1553 **
- Remote 1553 Devices on the LAN – VERY Small Size
- Auto Load BC, RT and BM Images for Fast Startup
- Auto BM Mode for 1553->Ethernet Bridging: No Programming Needed.
- 5-32 VDC, 500-1500 mAmp 5V typical. 6W max with 2 channels 100% TX.
- IRIG-B RX Decode. RX MIL-STD-1760 RT Addressing.

Quick-Disconnect Lemo to BJ77 TRB 1553 Jack Cables & AUX Assemblies (optional with and without DB15 for Aux Signals). Easily Make Your Own 1553 Connections.

Female Lemo, RJ-45 and USB Power Connectors Included/Attached.

Ideal for Deployed Applications: MIL-810G (including 512.6 operational water immersion - not connectors); MIL-461F EMC.

Custom Cable Assemblies (e.g. 38999) Optionally Available

**NLINE-E1553™** is an innovative product that provides “remoting” of 1553 operations on 10/100/1000 Ethernet IP/UDP local area networks (LAN). NLINE-E1553 is a small, low-power, rugged device that provides real-time Ethernet connectivity to for **one or two** dual redundant 1553 (A/B) busses/channels. Ideal for rugged, in-field 1553 connections.

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: NLINE-E1553 (server) is a real-time Ethernet/1553 device, but your computers’ (client) IP stack may not be!”** The NLINE-E1553 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
Infinite Linked Data
2048, 50nSec, 8
IP Fragmentation NOT supported.
Most
Variable Framing and Subframing
Multi Language Support
Full Analyzer Integration Tool
Common Data Packets (CDPs) for
Multi
Standard 10/100/1000 Ethernet UDP
Flash Disable Secure Mem
Legal and Reserved Mode Codes
Low and High Priority Aperiodic Scheduling
Hardware Trigger
Advanced Startup, User and Continuous BIT
One Megabyte RAM
6
Time Tags Full Error Injection/Detection
MIL
64 bit, 20ns Time Tags
Parts Temp (C)
Altitude
1
Optional
Polling
Troubleshoot Cabling and Model Topology for
1553A and 1553B Support 64
Transmit Inhibit
OS Portable
Time Tags
Auto Start
Up to 15 Retries
1553A and 1553B Support
Optional
Full BC/mRT/BM Function or
IRIG
Sequential and RT Mapped Monitor
Schedule Message Timing in Frames
Interrupts, No
Ops, Ext Trigger
Legal and Reserved Mode Codes
1553A and 1553B Support 64-Bit, 20 ns
Time Tags Full Error Injection/Detection

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
  o Auto Start for 1553 UDP Conversion (no coding required!)
• 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
• Most RTOS Platforms, Contact Factory
• OS Portable – No OS Obsolescence – DO178
• Optional AltaView Analyzer Windows
  o Full Analyzer Integration Tool
  o Multi Language Support

Part Numbers (also select 1553 cables below)
Dual Function: BC/Mon or mRT/Mon
• NLINE-E1553-1D or NLINE-E1553-2D
Full Function: BC, mRT and Monitor
• NLINE-E1553-1F or NLINE-E1553-2F
Options: Add -E for Ext Temp Parts (-40 to +85C), -N for NVRAM Write Protection, -D for Direct Coupling, -I Transmit Inhibit, -A for AltaView Analyzer.
Example: NLINE-E1553-2F-ADIEIN

Optional 1553 Connector Assemblies
Part Numbers (Male Lemo to 1553/DB15)
• NLCAB-1553-P1-X-01 or NLCAB-1553-P1-X-AUX01
  X = Channel Count (1 or 2). AUX is DB15 for RX Av Discretes, Trigger, etc…Signals.

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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Rio Rancho, NM 87124 USA
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888-429-1553 or 505-994-3111

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