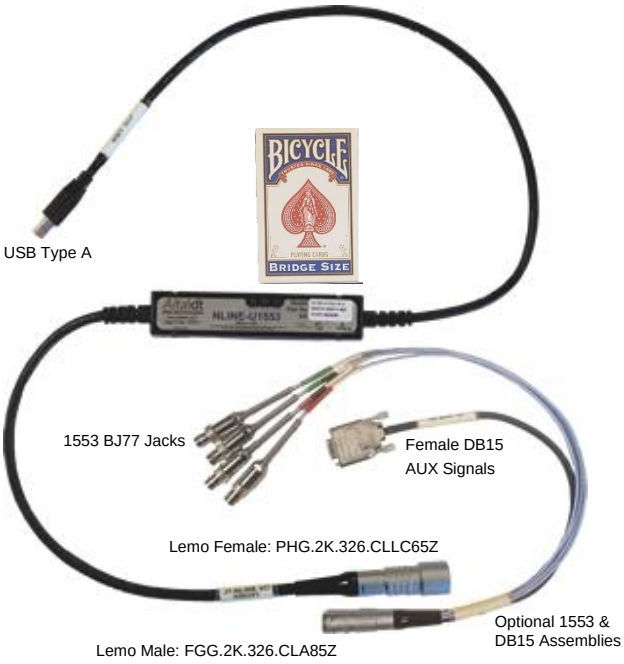
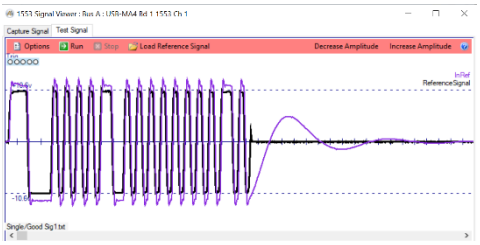
NLINE-U1553™

1-2 Channel MIL-STD-1553 Rugged, In-Line USB Interface

- **One or Two Independent, Dual Redundant 1553 Busses**
- Full BC, RT and BM Controls. Operational Read & Write Capability While Transmitting.
- Auto Load BC, RT and BM Images for Fast Startup
- IRIG-B RX Decode.
- Avionics Inputs for MIL-STD-1760 RT Addressing.
- **USB SuperSpeed 3.0. Compatible with USB 2**
  - **Recommend USB 3.0 SuperSpeed (SS Trident Logo) for all applications. ~5-10K Packets/Sec Total.**
  - USB 2.0 for slow bus rates only. Hubs are not recommended.
- **AltaAPI SDK Provides Easy Integration** – Quickly code your application with our modular, portable Windows & Linux SDK. Single application only, and other applications may affect performance.

Rugged, In-Line 1553 USB Interface. Full BC, RT and BM Controls.





A/D Signal Capture Included on First Channel of NLINE.
In-Field Signal Troubleshooting!
Use AtaView or your Own Code to Scope/Compare Signals.

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

Female Lemo, USB Type A Attached.

Ideal for Deployed Applications: MIL-810G (including 512.6 operational water immersion – excluding connectors).

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

NLINE-U1553 is a small, low-power, rugged device that provides USB 3 SuperSpeed connectivity 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.

AltaCore-1553
NLINE-U1553™ Specifications

General
- USB 3.0 SuperSpeed Recommended
  - Compatible with USB 2, but NOT recommended
- 1-2 Dual Redundant Independent 1553 Busses
- One Megabyte RAM Buffering Per Channel
- **USB 3.0 Spec 5V @ 2A Bus Power**
  - **USB 2 Connections Must Supply Full 2A Power**
- 2 Temp Sensors: TX and FPGA
- Operating Temp (C): 0-70 with Optional -40 to +85 Ext Temp Parts (-E). Storage -55 to +120
- Transmit Inhibit Optional
- Flash Disable Factory Setting for Secure Mem
- 6 SE Avionics Discrete Inputs (MIL 1760), One RS-485 Discrete, TTL Clock, Triggers
- IRIG-B DC or PAM RX
- Advanced Startup, User and Continuous BIT
- Single Application Support Only
- Polling Interrupts Only

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

Signal Capture on First Channel!
- 2048, 50nSec, 8-bit Capture
- Troubleshoot Cabling and Model Topology for Security Analysis

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
  - 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
- Optional *AltaView* Analyzer Windows
  - Full Analyzer Integration Tool
  - Multi Language Support

Part Numbers (also select 1553 cables below)

Dual Function: BC/Mon or mRT/Mon
- **NLINE-U1553-1D** or **NLINE-U1553-2D**

Full Function: BC, mRT and Monitor
- **NLINE-U1553-1F** or **NLINE-U1553-2F**

Options: -N for NVRAM Write Protection, -D for Direct Coupling, -E for Ext Temp Parts, -I Transmit Inhibit, –A for AltaView Analyzer.
Example: NLINE-U1553-2F-ADEIN

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

Metromatics

For further information or pricing, please contact us:

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