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.

www.altadt.com
AltaCore-1553
NLINe-U1553™ Specifications

General
• USB 3.0 SuperSpeed Recommended
  o 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
  o 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
  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
• 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-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
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