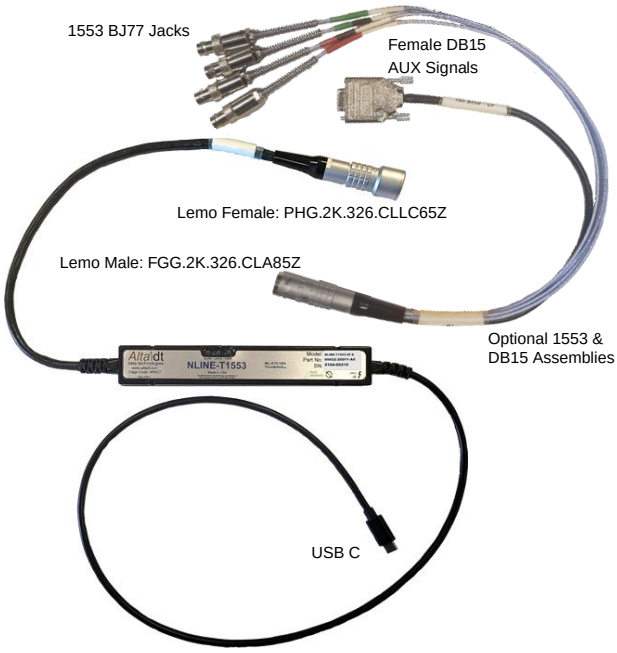
NLINE-T1553™

1-2 Channel 1553, Rugged In-Line Thunderbolt™ 3 Interface

- **One or Two Independent, Dual Redundant 1553 Busses**
- Dual (BC/BM or mRT/BM) or Full (BC, mRT & BM) Models
- Thunderbolt 3 Technology
  1 Lane PCIe Bus Power - Industry First!!
- Auto Load BC, RT and BM Images for Fast Startup
- IRIG-B RX Decode. RX MIL-STD-1760 RT Addressing.
- Same AltaAPI SDK as Interface Cards.
  Can run executables without recompile.
  100s of Examples Templates.
- Hardware Interrupts
- Windows and x86 Linux Support

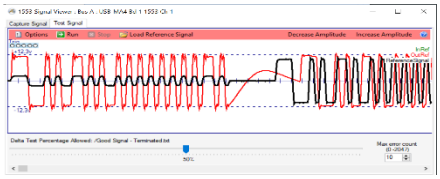
Rugged, Real-Time In-Line 1553 to Thunderbolt (PCIe) Interface.

Replace Interface Cards with NLINE Convenience



Female Lemo and USB-C Jack Standard.

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



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

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

Add AltaView Windows Analyzer for the most Advanced Test and Debug Tool in the Industry. Used on dozens of Cyber Security Applications.

www.altadt.com

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AltaCore-1553
NLINE-T1553™ Specifications

General
- 1-2 Dual Redundant, Independent Busses
- Full BC/mRT/BM Function or Dual BC/BM or mRT/BM Function Modes
- USB C Thunderbolt 3 (1xPCIe) 7 Watt Max – Normal for Thunderbolt 3
- Optional 553 Jack Cables and DB15 AUX. Female Lemo – See HW Manual for Details
- One Megabyte RAM Buffering Per Channel
- Common Data Packets (CDPs) for BC/RT/BM
- Parts Temp (C): -55 to +120 Storage, 0 to +55 Commercial Operating
- Transmit Inhibit Optional
- Flash Disable Secure Mem Optional
- MIL-STD-1553A/B/C Notice II & IV, Link 16
- 6 Avionics RX Discretes/RX 1760 Addressing, LVTTL Trigger In and Out
- Advanced Startup, User and Continuous BIT
- IRIG-B PAM RX
- Hardware Interrupts – Same as PCIe
- IPC Level 3 and ISO 9001:2015

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
- 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
- Windows & Linux 32/64 Bit SDK Support
- 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-T1553-1D** or **NLINE-T1553-2D**

Full Function: BC, mRT and Monitor
- **NLINE-T1553-1F** or **NLINE-T1553-2F**

Options: -N for NVRAM Write Protection, -D for Direct Coupling, -I Transmit Inhibit, –A for AltaView Analyzer. Example: NLINE-E1553-2F-ADIN

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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