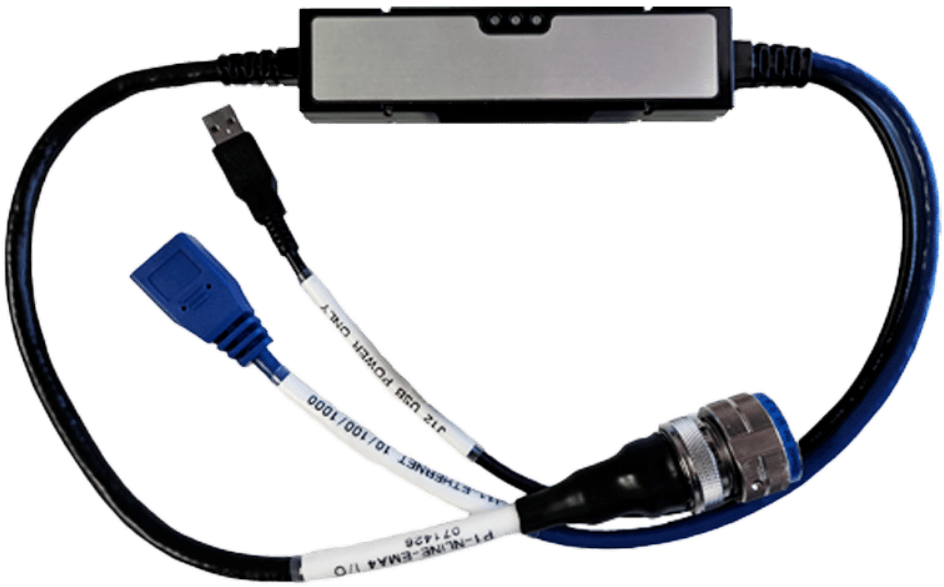
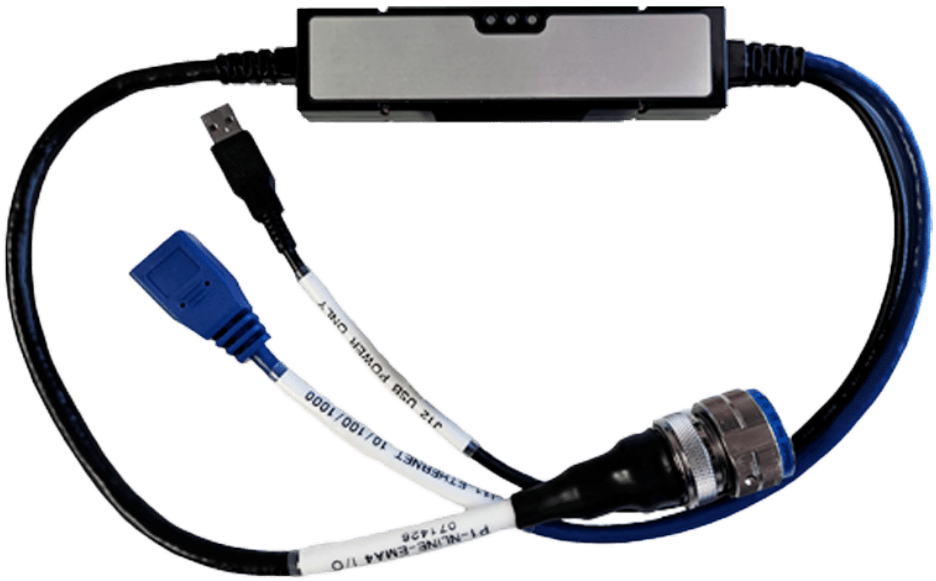
Blue Line Multi-Protocol Avionics Ethernet Converter



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Blue Line Multi-Protocol Avionics Ethernet Converter



Highlights

The Blue Line Multi-Protocol Avionics Ethernet Converter simplifies the integration of your existing avionics systems into modern Ethernet networks. Combining MIL-STD-1553, ARINC-429 and selectable ARINC-717 connectivity, it enables real-time communication with low latency. The rugged cable design with integrated FPGA-based electronics reduces installation space and system complexity.
Simplify your system integration with the Blue Line Multi-Protocol Avionics Ethernet Converter. Combining configurable MIL-STD-1553 and ARINC channels in one solution, you can connect existing avionics equipment to

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modern Ethernet networks.

FPGA-based processing enables UDP packet turnaround below 20 µs, while automatic data bridging, standard socket communication and SDK support reduce the complexity of software integration.

Make the most of your available installation space with conversion electronics integrated directly into a rugged cable assembly, eliminating the need for a separate converter enclosure.

Integrated signal capture simplifies troubleshooting and maintenance, while external synchronization and trigger interfaces support coordinated data collection. Flexible channel configurations and optional extended temperature components allow you to adapt the solution to your specific application requirements.

- Real-time avionics Ethernet conversion
- MIL-STD-1553, ARINC-429 and selectable ARINC-717 support
- UDP packet turnaround below 20 µs
- Up to 2 dual-redundant MIL-STD-1553 channels
- 4 configurable ARINC-429 RX/TX channels
- FPGA-based communication architecture
- Automatic data bridging without programming
- Compact and rugged cable design
- Integrated signal capture for diagnostics
- External synchronization and trigger support
- Wide 5 to 32V DC power input
- Optional extended temperature components

Specifications

Model Type

Multi-protocol avionics Ethernet converter

Form Factor

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Blue Line Multi-Protocol Avionics Ethernet Converter

Compact in-line cable design

Construction

Rugged cable assembly with integrated conversion electronics

Environment

Commercial or extended temperature components available

Extended temperature components: ?40°C to +85°C

Certification

SAE AS4111, section 5.2, RT validation tested

Input / Output

1 or 2 dual-redundant MIL-STD-1553 channels

4 shared ARINC-429 RX/TX channels

Selectable ARINC-717: 2 RX and 2 TX channels

Each selected ARINC-717 RX/TX channel replaces two ARINC-429 channels

Overmolded RJ45 Ethernet connector

D38999/26WD35PN male avionics connector

6 discrete RX inputs for general use or MIL-STD-1760 RT addressing

IRIG RX

External clock and trigger

- USB Type-A (power only)

Special Function

FPGA-based UDP thin server

UDP packet turnaround below 20 µs

Automatic MIL-STD-1553 and ARINC data bridging to Ethernet UDP without programming

Dual function (BC/BM or mRT/BM) or full function (BC, mRT and BM)

Signal capture on the first MIL-STD-1553 channel and first two ARINC channels

SDK and standard socket interface

Optional direct coupling

Optional transmit inhibit and NVRAM write protection

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Power Supply

5 to 32 VDC, conditioned power required

Power Consumption

500 to 1700 mA at 5 VDC (typical)

Max. 7W with two channels at 100% transmission

Accessories Optional

Avionics breakout cable

MIL-STD-1553 bus connection kits

Bus terminators

Warranty and After Sales Support

Standard 1 year (option for 3 years)

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