

CTF-4G-4TXRX 19N

FEATURES

- + 4 lanes of 4.25Gbps copper to fiber conversion
- + 4 lanes of 4.25Gbps fiber to copper conversion
- + Configurable pre-emphasis (0, 3, 6, and 9 dB)

BENEFITS

- + Compliant with IEEE 802.3ba Ethernet Standards and Specifications
- + Protocol agnostic to support multiple clock embedded protocols
- + 8b/10b compatible
- + 5W max utilizing all channels

RUGGEDIZATION

- + Natural convection cooled (no fan)
- + Operational temperature -40°C to 85°C
- + EMI/EMC compatible
- + Refer to page 4 for additional details

APPLICATIONS

- + 1000 BASE-SX
- + 10G BASE-KX4
- + 10G BASE-CX4
- + Data Aggregation
- + Backplane and Proprietary Protocol and Density Applications
- + High Performance and High Productivity Computer Interconnects

CONTACT US:

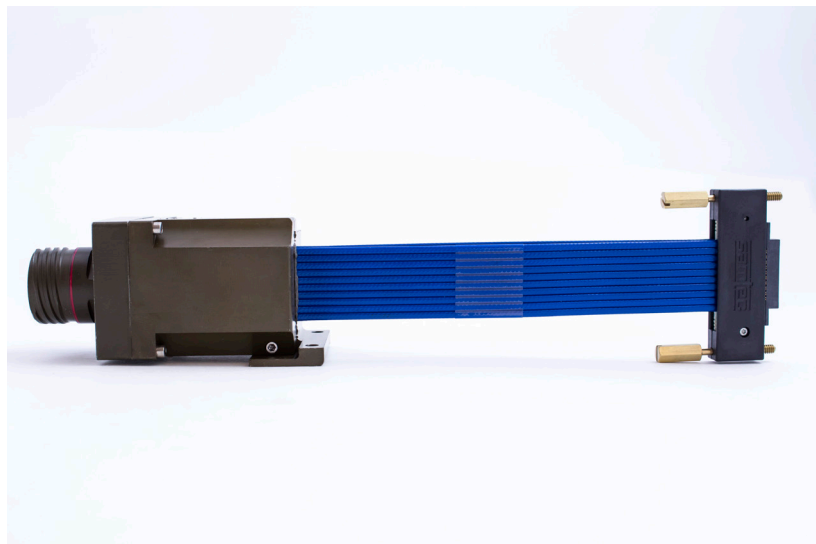
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OVERVIEW

Amphenol Aerospace adds the CTF-4G-4TXRX protocol agnostic fiber to copper converter to the Integrated Electronics Product Line. It features 4 lane Rx 4 lane Tx each at 4.25Gbps. This product line is rugged, flexible, and affordable with many options available. The converter couples fiber optics and copper conversion with a new level of ruggedization.



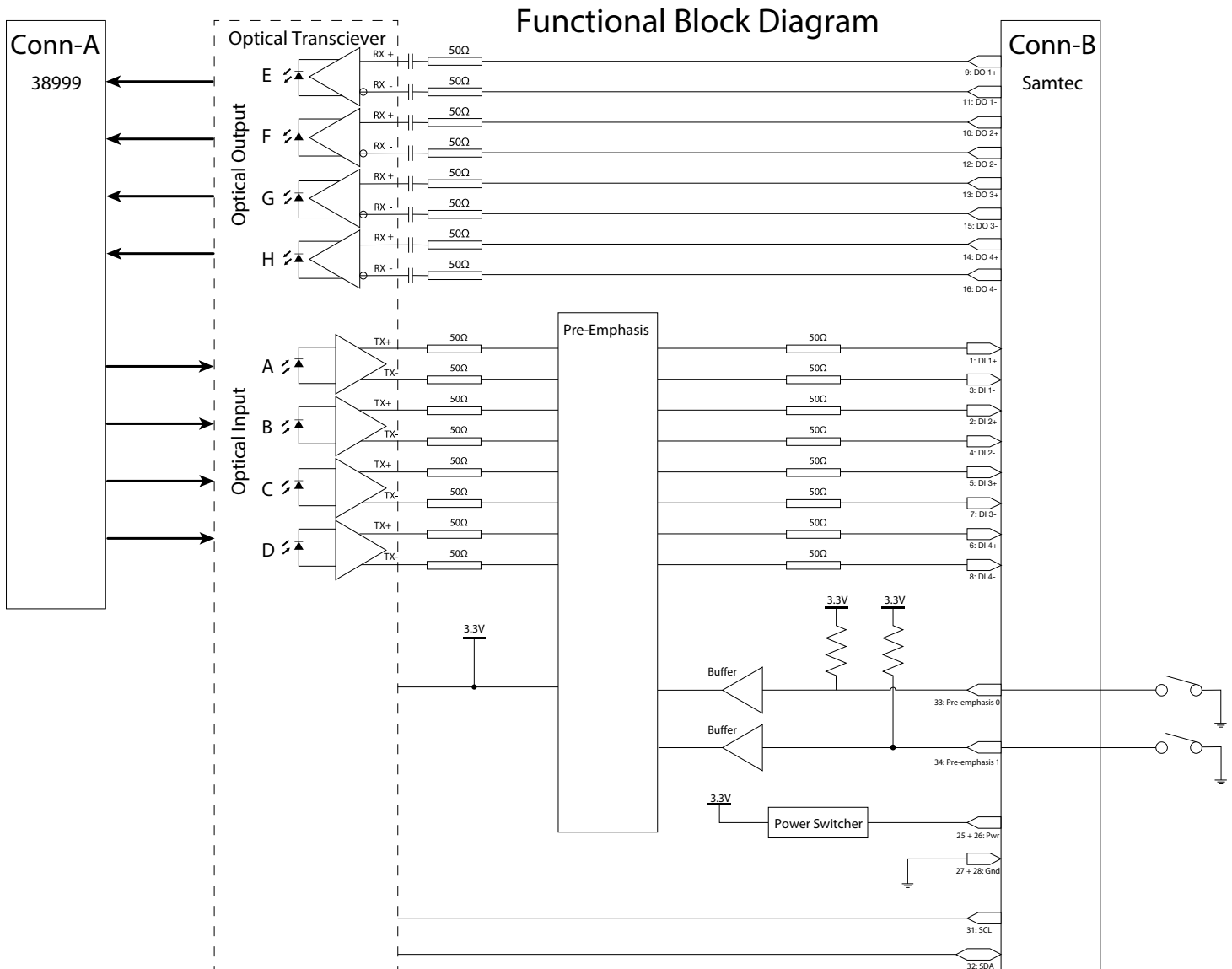
FIBER INTERFACE

The fiber optic connector uses a MIL-DTL 38999 style connector featuring size 20 fiber optic termini. Behind the connector interface are four mounting holes for panel or wall mount configuration.

COPPER INTERFACE

The ribbon coming off of the CTF-4G-4TXRX is part of the Samtec Q Series High Speed Cable Assembly and vertical mount board connectors. The condensed ribbon allows 20 differential pairs for all 8 channel conversions. There are also included monitor pins, configuration pins, and pre-emphasis pins.

CTF-4G-4TXRX Functional Diagram



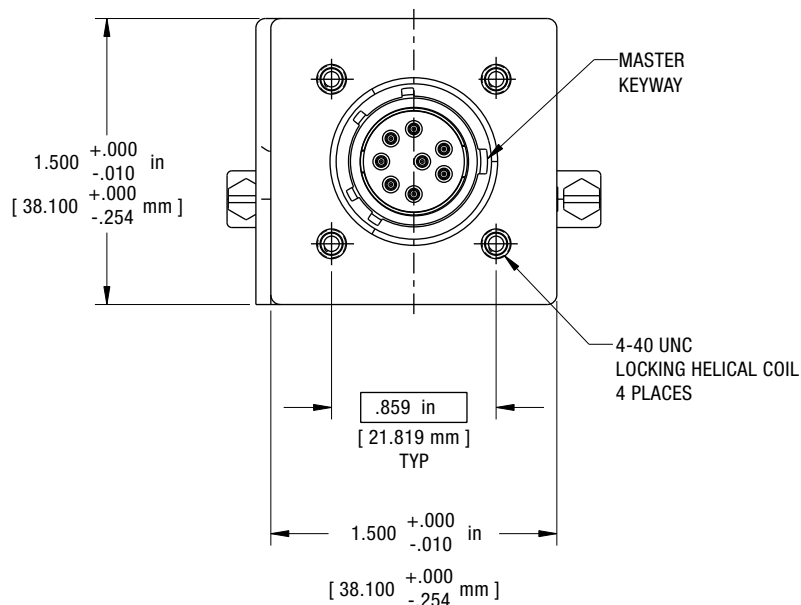
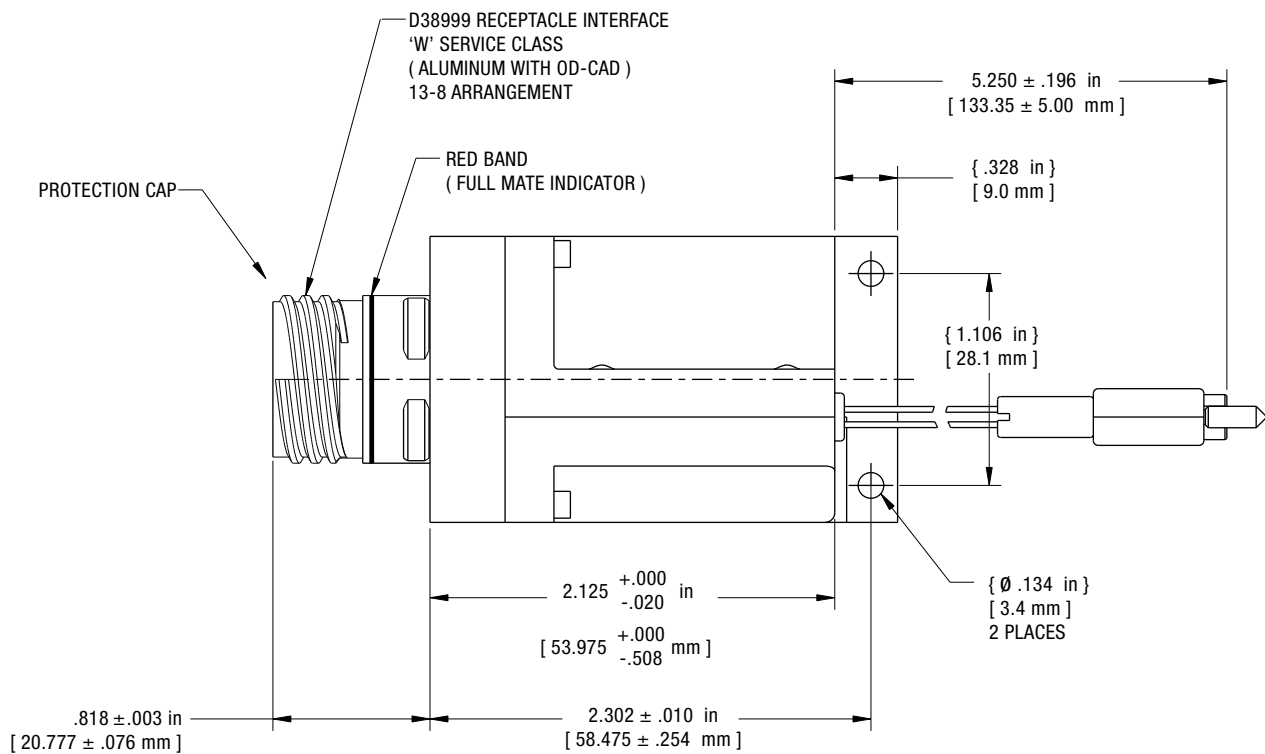
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CTF-4G-4TXRX Drawing



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Overview

Amphenol integrated electronic products are designed and manufactured to our Ruggedization guidelines listed below. These guidelines ensure years of reliable operation in harsh environment applications where extreme operating temperatures, shock, vibration and corrosive atmospheres are regularly experienced

Temperature

- Operating Temperature - Thermal Cycles between -40°C and 85°C while device is operating
- Temperature is measured at chassis housing or card edge
- Storage Temperature - Thermal Cycles between -55°C and 125°C

Humidity

- Operating Humidity – Humidity cycle between 0-100% non-condensing humidity while device is operating
- Storage Humidity – Humidity cycle between 0-100% condensing humidity

Sealing

- Sealing can be optionally provided at the MIL-DTL-38999 interface with up to 10-5 cc/sec performance

Fluids Susceptibility

- MIL-DTL-38999 receptacle interface per EIA-364-10E

Vibration & Shock

- Sine Vibration – 10 g Peak, 5-2,000Hz
 - Based on a sine sweep duration of 10 minutes per axis in each of three mutually perpendicular axes. May be displacement limited from 5 to 44 Hz, depending on specific test.
- Random Vibration - 0.005@5Hz, 0.1@15Hz, 0.1@2,000Hz
 - 60 minutes per axis, in each of three mutually perpendicular axes.
- 40 G Peak Shock Cycle
 - Three hits in each axis, both directions, ½ sine and terminal-peak saw tooth, Total 36 hits.

Altitude

- -1,500 to 60,000 ft Altitude Testing w/ Rapid Depressurization

Electromagnetic Compatibility

- Designed to comply with MIL-STD-461E

Printed Circuit Board Assemblies

- Conformal Coat
 - Amphenol performs Conformal Coating to both sides of printed circuit board assemblies using HUMISEAL IB31 in accordance with IPC-610, Class 3.
- Printed Circuit Board Rigidity
 - Amphenol printed circuit boards are fabricated in accordance with IPC-6012, Class 3.
- Printed Circuit Board Fabrication
 - Amphenol printed circuit boards acceptance criteria is in accordance with IPC-610, Class 3.

Reliability Predictions (MTBF)

Amphenol can perform Mean Time Between Failure (MTBF) reliability analysis in full compliance with MIL-HDBK-217F-1 Parts Count Prediction and MIL-HDBK-217F-1 Parts Stress Analysis Prediction. We can also perform reliability analyses in full compliance of ANSI/MTA 51.1 if it is required or preferred over the later method.

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