Amphenol® Aerospace

PDS-271

CTF-RJ45

APPLICATIONS
+ 10BASE-T
+ 100BASE-T
+ 1000BASE-T
+ 10GBASE-T

FEATURES AND BENEFITS
+ Standard contacts and connectors
+ Extend a 1000BASE-T communication line up to 120km
+ Simple integration
+ Low power consumption: 1-2 Watts
+ Reduce system weight with fiber optics
+ Small form factor
+ Virtually eliminates any EMI/RFI interference

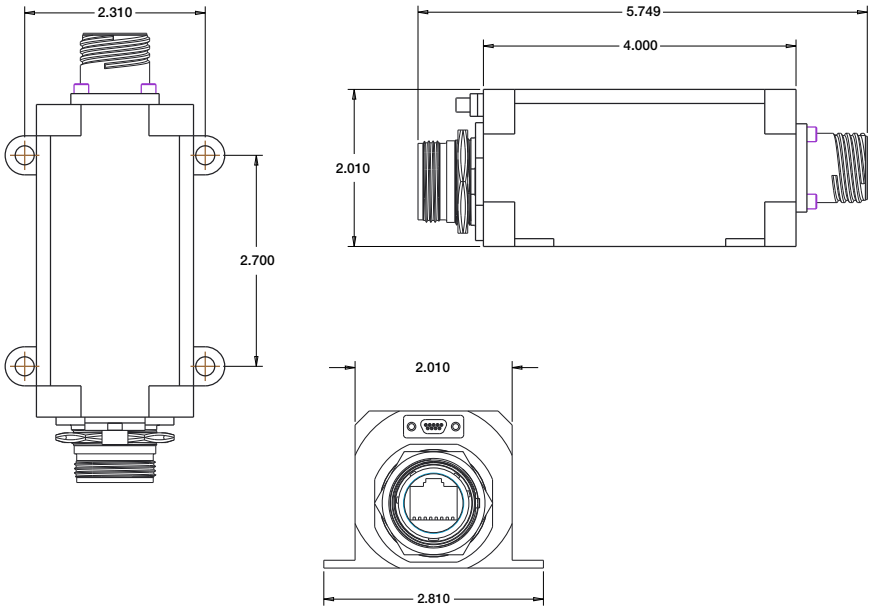
RUGGEDIZATION
+ Industry standard rugged transmitters and receivers -40°C to +85°C
+ PCB securely mounted within chassis

CONTACT US:
Jared Sibrava
E-mail: jsibrava@amphenol-aao.com
Phone: 607-643-1845

OVERVIEW
Amphenol Aerospace adds CTF-RJ45 to the CTF (Copper to Fiber) Media Converter Product Family. This product line utilizes standard fiber and copper connectors and contacts.

FIBER INTERFACE
+ Industry standard M29504 contacts
+ Also available in MT or ARINC-801 configuration
+ Multimode or Single Mode fiber
+ MM up to 500 m | SM up to 120 km
+ Standard MIL-DTL 38999 13-4 connector

COPPER INTERFACE
+ Compatible with Ethernet IEEE 802.3
+ Standard RJ45 interface
+ Standard MIL-DTL 38999 size 13 shell



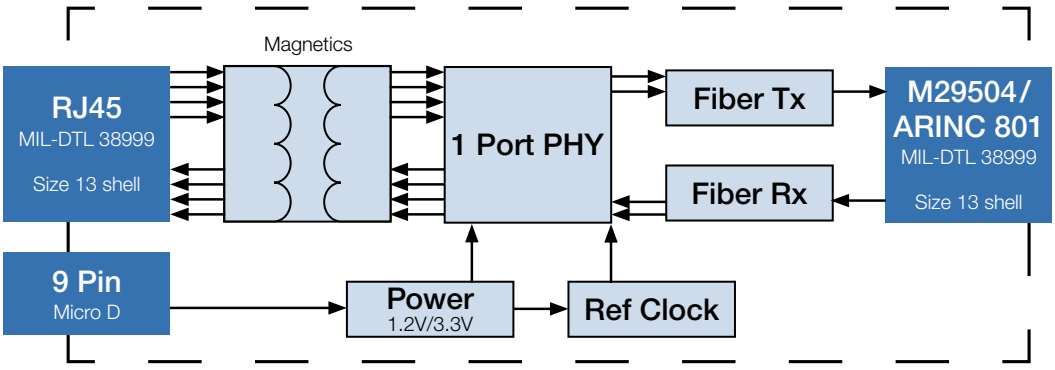
When do you need CTF-RJ45?

Distance Comparison					
Copper			Fiber		
Standard	CAT 5	CAT 6a	850nm	1310nm	1550nm
1000 BASE T	100 m		500 m	10km	70km
10GBASE T		100 m	300 m	10km	80-120km

Part Numbers:

Part Number	Copper Standard	Copper Connect	Fiber Standard	Media To	Wavelength
CF-020010-341	1000 BASE T	RJ45	1000BASE-LX/LH	SM	1310nm
CF-020010-342	1000 BASE T	RJ45	1000BASE-ZX	SM	1550nm
CF-020010-343	1000 BASE T	RJ45	1000BASE-SX	MM	850nm
CF-020010-344	10GBASE T	RJ45	10GBASE-LR	SM	1310nm
CF-020010-345	10GBASE T	RJ45	10GBASE-ER/ZR	SM	1550nm
CF-020010-346	10GBASE T	RJ45	10GBASE-SR	MM	850nm

Block Diagram:



CONTACT US:
Jared Sibrava
E-mail: jsibrava@amphenol-aao.com
Phone: 607-643-1845

AMPHENOL INTEGRATED ELECTRONIC PRODUCTS RUGGEDIZATION DESIGN

Amphenol Aerospace

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/VITA 51.1 if it is required or preferred over the later method.

CONTACT US:

Jared Sibrava

E-mail: jsibrava@amphenol-aao.com

Phone: 607-643-1845