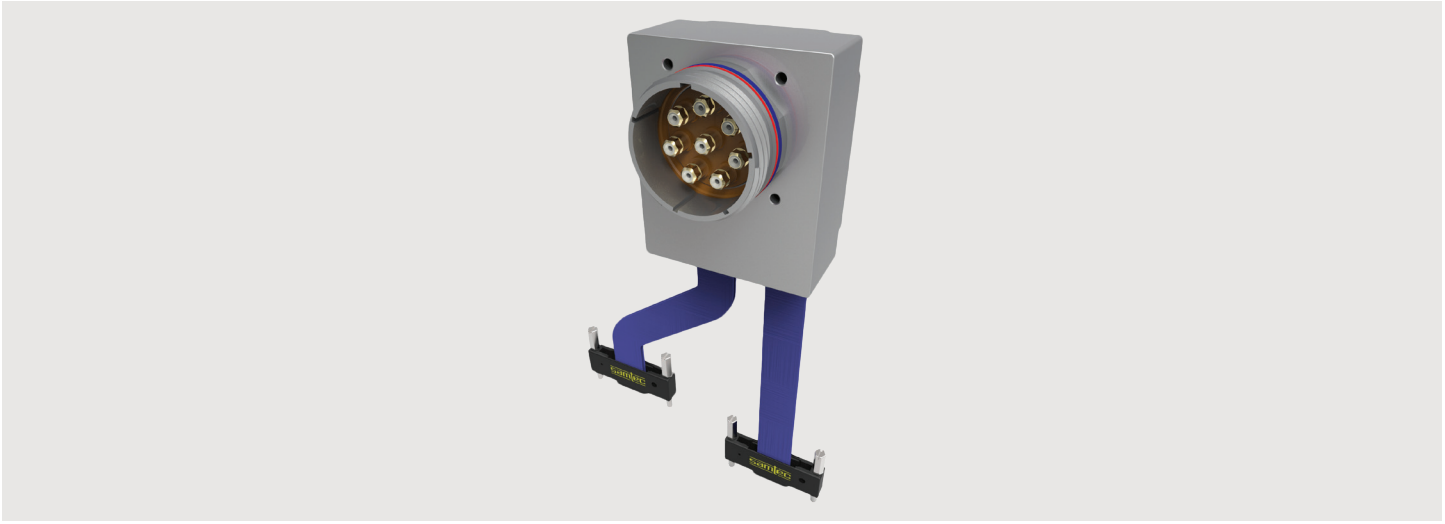
CTF-10G-4-SM

PDS - 263-1



Amphenol Aerospace adds the CTF-10G-4-SM fiber to copper converter to the Integrated Electronics Product Line. This product line is rugged, flexible, and affordable with many options available.

The converter is an integrated media converter and SERDES interfacing with both four channels of XAUI and four channels of single mode bi-directional 10G Ethernet.

FEATURES:

- 4 channels (4 Tx, 4 Rx) 10GbE on Single Mode Fiber Converted Bi-Directionally to 4 Channels of XAUI
- D38999 Shell Size 25

RUGGEDIZATION:

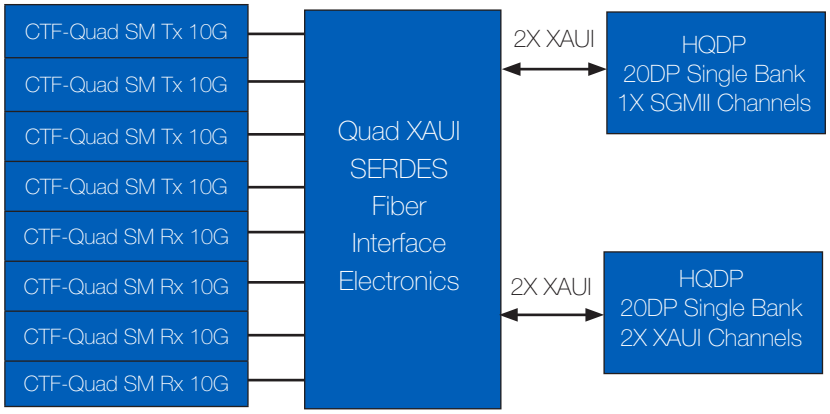
- Natural Convection Cooled (no fan)
- Operational Temperature -40ºC to +85ºC
- Storage Temperature -40ºC to +125ºC
- EMI/EMC Compatible
- Refer to Page 4 for Additional Details

FIBER INTERFACE:

- D38999 Shell Size 25 Receptacle with CTF-QUAD Single Mode 1310nm Fiber
- 4 Tx and 4 Rx 1310nm Single Mode Fiber Embedded ito Size 8 Contacts with 1.25mm Industry Standard Ceramic Interface

COPPER INTERFACE:

- Samtec Q Series High Speed Cable Assembly and Vertical Mount Board Connectors
- Two Hanging Cable Assembles for Distributed Connections Across the Subsyste, and Backplane
- Low Power Consumption
- MDIO Serial Interface for Built-In Test and Diagnostics



Jared Sibrava • Phone: +1 (607) 643-1845 • Email: jsibrava@amphenol-aao.com
amphenol-aerospace.com • amphenolmao.com

CTF-10G-4-SM DRAWING

1.	2.	3.	4.	5.
Part Number Suffix	Cable 1 Length (inches)	Cabe 3 Length (inches)	Shell Rotation	Clocking
CF-1200	01	01	N	W

STEP 1 :
Choose a Part Number Suffix

Connector Type
CF-1200

STEP 2 :
Choose Cable 1 Length

Cable 1 Length (Inches)
01-99

STEP 3 :
Choose Cable 2 Length

Cable 2 Length (Inches)
01-99

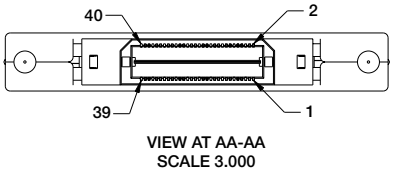
Other finishes available please consult Amphenol Aerospace's factory. Customer defined Samtec lengths

STEP 4 :
Choose a Shell Rotation

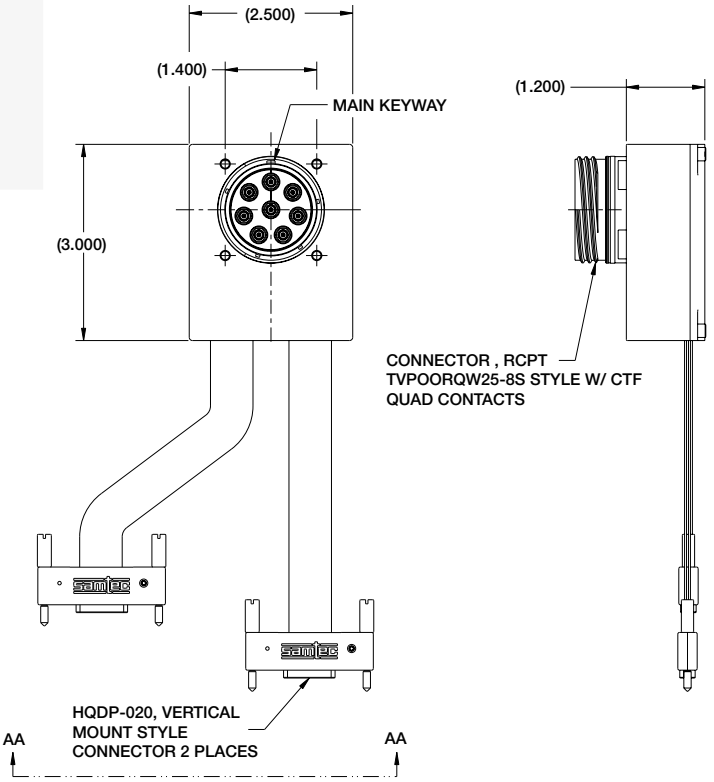
Shell Rotation
N
A
B
C
D
E

STEP 5 :
Choose a Clocking

Clocking
W
X
Y
Z



VIEW AT AA-AA
SCALE 3.000



Jared Sibrava • Phone: +1 (607) 643-1845 • Email: jsibrava@amphenol-aao.com
amphenol-aerospace.com • amphenolmao.com

CTF-10G-4-SM

Amphenol Aerospace

Samtec HQDP-020 (20 pairs; 40 signals)1			
Pin	Description	Pin	Description
1	CH1 XAUI 1 Tx+	2	CH2 XAUI 1 Tx+
3	CH1 XAUI 1 Tx-	4	CH2 XAUI 1 Tx-
5	CH1 XAUI 1 Rx+	6	CH2 XAUI 1 Rx+
7	CH1 XAUI 1 Rx-	8	CH2 XAUI 1 Rx-
9	CH1 XAUI 2 Tx+	10	CH2 XAUI 2 Tx+
11	CH1 XAUI 2 Tx-	12	CH2 XAUI 2 Tx-
13	CH1 XAUI 2 Rx+	14	CH2 XAUI 2 Rx+
15	CH1 XAUI 2 Rx-	16	CH2 XAUI 2 Rx-
17	CH1 XAUI 3 Tx+	18	CH2 XAUI 3 Tx+
19	CH1 XAUI 3 Tx-	20	CH2 XAUI 3 Tx-
21	CH1 XAUI 3 Rx+	22	CH2 XAUI 3 Rx+
23	CH1 XAUI 3 Rx-	24	CH2 XAUI 3 Rx-
25	CH1 XAUI 4 Tx+	26	CH2 XAUI 4 Tx+
27	CH1 XAUI 4 Tx-	28	CH2 XAUI 4 Tx-
29	CH1 XAUI 4 Rx+	30	CH2 XAUI 4 Rx+
31	CH1 XAUI 4 Rx-	32	CH2 XAUI 4 Rx-
33	5V Power	34	5V Power
35	Ground	36	Ground
37	MDIO	38	MDC
39	LOS	40	Transmit Disable
Ribbon Connector - QTH-020-01-H-D-DP-EM2			
Board Connector - QSH-020-01-H-D-DP-K			
Board Connector must be used with SO-0165-0401-02 Screw Mounts with correct spacing			

Samtec HQDP-020 (20 pairs; 40 signals)1			
Pin	Description	Pin	Description
1	CH3 XAUI 1 Tx+	2	CH4 XAUI 1 Tx+
3	CH3 XAUI 1 Tx-	4	CH4 XAUI 1 Tx-
5	CH3 XAUI 1 Rx+	6	CH4 XAUI 1 Rx+
7	CH3 XAUI 1 Rx-	8	CH4 XAUI 1 Rx-
9	CH3 XAUI 2 Tx+	10	CH4 XAUI 2 Tx+
11	CH3 XAUI 2 Tx-	12	CH4 XAUI 2 Tx-
13	CH3 XAUI 2 Rx+	14	CH4 XAUI 2 Rx+
15	CH3 XAUI 2 Rx-	16	CH4 XAUI 2 Rx-
17	CH3 XAUI 3 Tx+	18	CH4 XAUI 3 Tx+
19	CH3 XAUI 3 Tx-	20	CH4 XAUI 3 Tx-
21	CH3 XAUI 3 Rx+	22	CH4 XAUI 3 Rx+
23	CH3 XAUI 3 Rx-	24	CH4 XAUI 3 Rx-
25	CH3 XAUI 4 Tx+	26	CH4 XAUI 4 Tx+
27	CH3 XAUI 4 Tx-	28	CH4 XAUI 4 Tx-
29	CH3 XAUI 4 Rx+	30	CH4 XAUI 4 Rx+
31	CH3 XAUI 4 Rx-	32	CH4 XAUI 4 Rx-
33	5V Power	34	5V Power
35	Ground	36	Ground
37	MDIO	38	MDC
39	LOS	40	Transmit Disable
Ribbon Connector - QTH-020-01-H-D-DP-EM2			
Board Connector - QSH-020-01-H-D-DP-K			
Board Connector must be used with SO-0165-0401-02 Screw Mounts with correct spacing			

MIL-DTL-38999 SHell Size 25 with CTF-QUAD			
A	CH1 Tx	E	CH3 Tx
B	CH1 Rx	F	CH3 Rx
C	CH2 Tx	G	CH4 Tx
D	CH2 Rx	H	CH4 Rx

Jared Sibrava • Phone: +1 (607) 643-1845 • Email: jsibrava@amphenol-aao.com
amphenol-aerospace.com • amphenolmao.com

AMPHENOL INTEGRATED ELECTRONIC PRODUCTS RUGGEDIZATION DESIGN

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

HUMIDITY:

- Operating Humidity- Humidity cycle between 0-100% non-condensing humidity while device 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 SUSEPTIBILITY:

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

VIBRATION & SHOCK:

- Sine Vibration - 10g 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 - 0.0005 @ 5Hz, 0.1 @ 15 Hz, 0.1 @ 2,000 Hz

  60 minutes per axis, in each of three mutually perendicular 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 Coting to both sides of printed circuit board assemblies using HUSMISEAL 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.

Jared Sibrava • Phone: +1 (607) 643-1845 • Email: jsibrava@amphenol-aao.com

amphenol-aerospace.com • amphenolmao.com