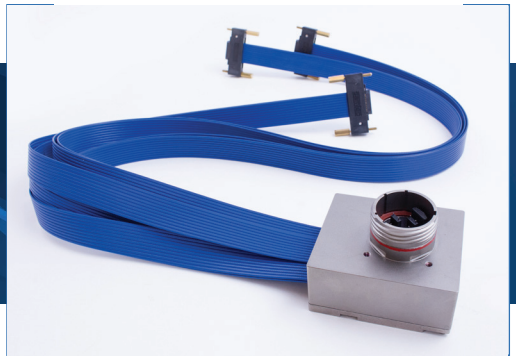


PDS-262-1

CTF-5G-24TXRX
24 Channel GbE Converter

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)

Three hanging cable assemblies for distributed connections across the subsystem and backplane

+ Low power consumption < 5W
+ I2C serial interface for Built-In Test and Diagnostics

RUGGEDIZATION

+ Natural convection cooled (no fan)
+ Operational temperature -40°C to +85°C
+ Storage temperature -50°C to +125°C
+ EMI/EMC compatible
+ Refer to page 4 for additional details

CONTACT US:

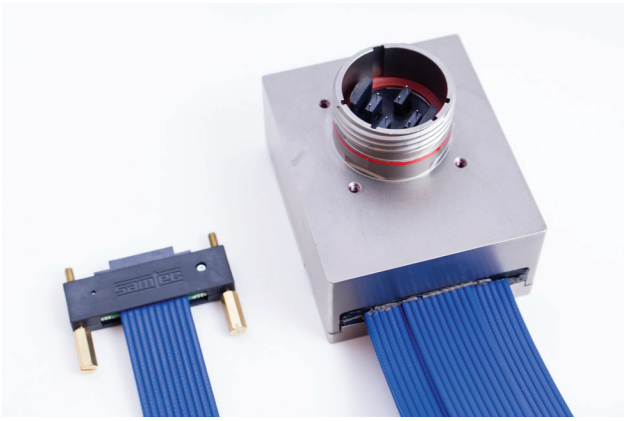
Jared Sibrava

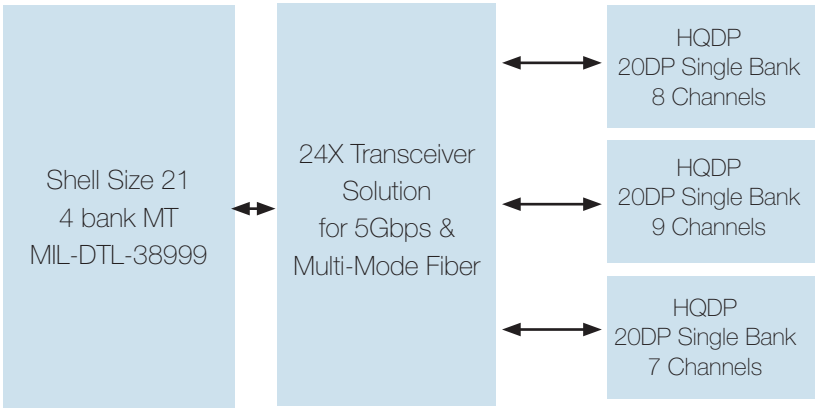
E-mail: jsibrava@amphenol-aao.com

Phone: 607-643-1845

OVERVIEW

Amphenol Aerospace adds the CTF-5G-24TXRX protocol agnostic fiber to copper converter to the Integrated Electronics Product Line. 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.





CTF-5G-24TXRX DRAWING

1. Part Number Suffix:	2. Cable 1 Length:	3. Cable 2 Length:	4. Cable 3 Length:	5. Shell Rotation:	6. Clocking:	7. Material & Plating
CF-11	01	01	01	N	W	Y

1. Part Number Suffix
CF-11

2. Cable 1 Length Range
01-99

3. Cable 2 Length Range
01-99

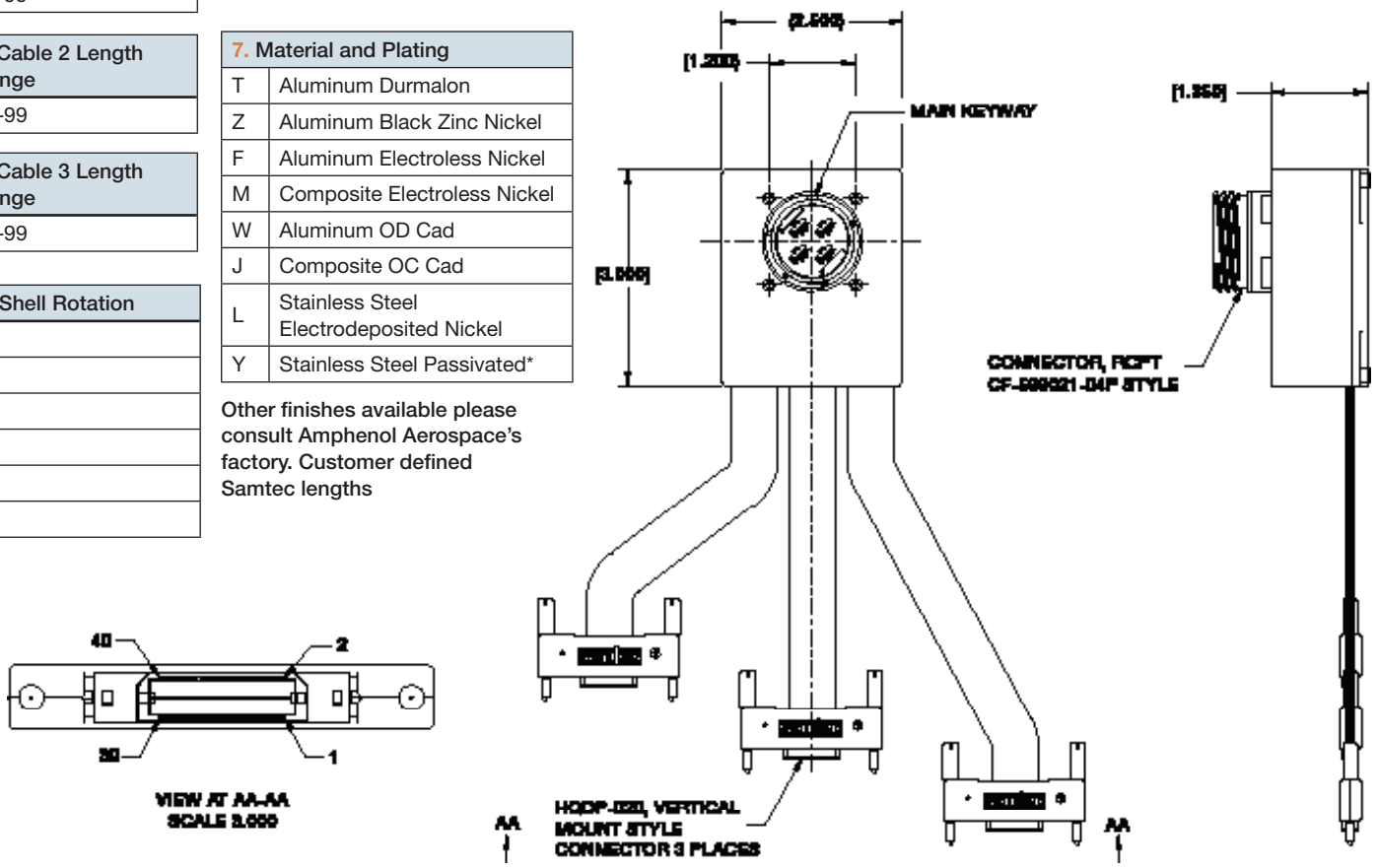
4. Cable 3 Length Range
01-99

5. Shell Rotation
N
A
B
C
D
E

6. Clocking	
W	0°
X	90°
Y	180°
Z	270°

7. Material and Plating	
T	Aluminum Durmalon
Z	Aluminum Black Zinc Nickel
F	Aluminum Electroless Nickel
M	Composite Electroless Nickel
W	Aluminum OD Cad
J	Composite OC Cad
L	Stainless Steel Electrodeposited Nickel
Y	Stainless Steel Passivated*

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



VIEW AT AA-AA
SCALE 2.000

Test Cable for CF-11342032-NWY = CF-901200-548
Mating connector = CF-599621-04S
Test Board = CF-980062-034
Consult Amphenol Aerospace's Factory for other configurations.

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

CTF-5G-24TXRX PINOUTS

Samtec HQDP-020 (20 pairs; 40 signals) 1			
Pin	Description	Pin	Description
1	CH1 Tx+	2	CH5 Tx+
3	CH1 Tx-	4	CH5 Tx-
5	CH1 Rx+	6	CH5 Rx+
7	CH1 Rx-	8	CH5 Rx-
9	CH2 Tx+	10	CH6 Tx+
11	CH2 Tx-	12	CH6 Tx-
13	CH2 Rx+	14	CH6 Rx+
15	CH2 Rx-	16	CH6 Rx-
17	CH3 Tx+	18	CH7 Tx+
19	CH3 Tx-	20	CH7 Tx-
21	CH3 Rx+	22	CH7 Rx+
23	CH3 Rx-	24	CH7 Rx-
25	CH4 Tx+	26	CH8 Tx+
27	CH4 Tx-	28	CH8 Tx-
29	CH4 Rx+	30	CH8 Rx+
31	CH4 Rx-	32	CH8 Rx-
33	5V Power	34	5V Power
35	Ground	36	Ground
37	Spare	38	Spare
39	Spare	40	Spare
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-0165-04-01-02 screw mounts with correct spacing			

Samtec HQDP-020 (20 pairs; 40 signals) 2			
Pin	Description	Pin	Description
1	CH9 Tx+	2	CH13 Tx+
3	CH9 Tx-	4	CH13 Tx-
5	CH9 Rx+	6	CH13 Rx+
7	CH9 Rx-	8	CH13 Rx-
9	CH10 Tx+	10	CH14 Tx+
11	CH10 Tx-	12	CH14 Tx-
13	CH10 Rx+	14	CH14 Rx+
15	CH10 Rx-	16	CH14 Rx-
17	CH11 Tx+	18	CH15 Tx+
19	CH11 Tx-	20	CH15 Tx-
21	CH11 Rx+	22	CH15 Rx+
23	CH11 Rx-	24	CH15 Rx-
25	CH12 Tx+	26	CH16 Tx+
27	CH12 Tx-	28	CH16 Tx-
29	CH12 Rx+	30	CH16 Rx+
31	CH12 Rx-	32	CH16 Rx-
33	5V Power	34	5V Power
35	Ground	36	Ground
37	CH24 Tx+	38	CH24 Rx+
39	CH24 Tx-	40	CH24 Rx-
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-0165-04-01-02 screw mounts with correct spacing			

Samtec HQDP-020 (20 pairs; 40 signals) 3			
Pin	Description	Pin	Description
1	CH17 Tx+	2	CH19 Tx+
3	CH17 Tx-	4	CH19 Tx-
5	CH17 Rx+	6	CH19 Rx+
7	CH17 Rx-	8	CH19 Rx-
9	I2C SLC 1	10	CH20 Tx+
11	I2C SDA 1	12	CH20 Tx-
13	I2C SLC 2	14	CH20 Rx+
15	I2C SDA 2	16	CH20 Rx-
17	I2C SLC 3	18	CH21 Tx+
19	I2C SDA 3	20	CH21 Tx-
21	I2C SLC 4	22	CH21 Rx+
23	I2C SDA 4	24	CH21 Rx-
25	CH18 Tx+	26	CH22 Tx+
27	CH18 Tx-	28	CH22 Tx-
29	CH18 Rx+	30	CH22 Rx+
31	CH18 Rx-	32	CH22 Rx-
33	5V Power	34	5V Power
35	Ground	36	Ground
37	CH23 Tx+	38	CH23 Rx+
39	CH23 Tx-	40	CH23 Rx-
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-0165-04-01-02 screw mounts with correct spacing			

MIL-DTL-38999 with Quad MT			
Pin	Description	Pin	Description
A	CH1 Tx	B	CH1 Rx
A	CH2 Tx	B	CH2 Rx
A	CH3 Tx	B	CH3 Rx
A	CH4 Tx	B	CH4 Rx
A	CH5 Tx	B	CH5 Rx
A	CH6 Tx	B	CH6 Rx
A	CH7 Tx	B	CH7 Rx
A	CH8 Tx	B	CH8 Rx
A	CH9 Tx	B	CH9 Rx
A	CH10 Tx	B	CH10 Rx
A	CH11 Tx	B	CH11 Rx
A	CH12 Tx	B	CH12 Rx
C	CH13 Tx	D	CH13 Rx
C	CH14 Tx	D	CH14 Rx
C	CH15 Tx	D	CH15 Rx
C	CH16 Tx	D	CH16 Rx
C	CH17 Tx	D	CH17 Rx
C	CH18 Tx	D	CH18 Rx
C	CH19 Tx	D	CH19 Rx
C	CH20 Tx	D	CH20 Rx
C	CH21 Tx	D	CH21 Rx
C	CH22 Tx	D	CH22 Rx
C	CH23 Tx	D	CH23 Rx
C	CH24 Tx	D	CH24 Rx

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