

CTF-ENET-QUAD-10GBASE-SR



FEATURES AND BENEFITS

- + 4 10GBASE-SR Fiber system connections
- + 4 XAUI subsystem connections
- + XAUI Interface
- + Compliant with IEEE 802.3 Ethernet Standards and Specifications

10GBASE-SR FIBER INTERFACE

- + D389999 Shell Size 11
- + Standard M29504 termini

XAUI COPPER INTERFACE

- + Samtec Q Series® High Speed Cable Assembly
- *Consult factory for specific type required

POWER SPECIFICATIONS

- + 5V power connection in Samtec connector
- + Low power consumption

RUGGEDIZATION

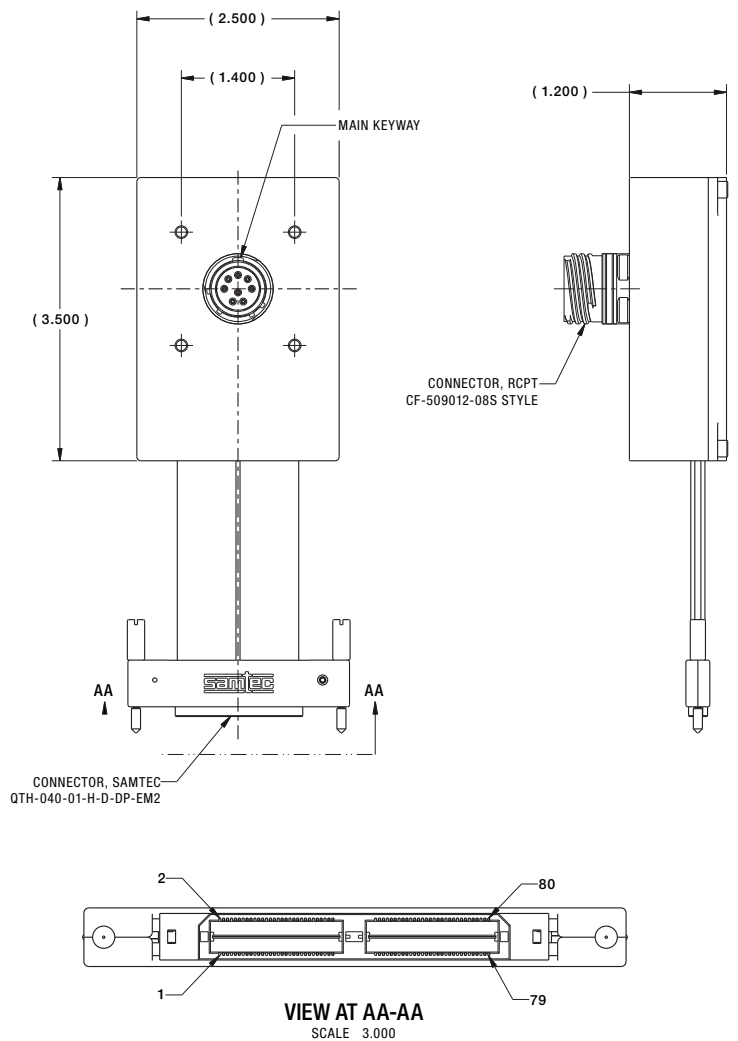
- + Natural convection cooled (no fan)
- + Operational temperature -40°C to +85°C
- + Storage temperature -50°C to +125°C
- + EMI/EMC compatible

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OVERVIEW

Amphenol Aerospace adds the CTF-ENET-QUAD-10G 10GBASE-SR to XAUI Converter to the Integrated Electronic Products Line. This product line is rugged, flexible, and affordable with many options available. The 10GBASE-SR to XAUI Converter couples fiber optics and protocol conversion in a ruggedized package.



Pinout

Samtex HQDP-040 (40 pairs; 80signals)							
Pin	Description	Pin	Description	Pin	Description	Pin	Description
1	CH1XAUI 1Tx+	2	CH2XAUI 1Tx+	41	CH3XAUI 1Tx+	42	CH4XAUI 1Tx+
3	CH1XAUI 1Tx-	4	CH2XAUI 1Tx-	43	CH3XAUI 1Tx-	44	CH4XAUI 1Tx-
5	CH1XAUI 1Rx+	6	CH2XAUI 1Rx+	45	CH3XAUI 1Rx+	46	CH4XAUI 1Rx+
7	CH1XAUI 1Rx-	8	CH2XAUI 1Rx-	47	CH3XAUI 1Rx-	48	CH4XAUI 1Rx-
9	CH1XAUI 2Tx+	10	CH2XAUI 2Tx+	49	CH3XAUI 2Tx+	50	CH4XAUI 2Tx+
11	CH1XAUI 2Tx-	12	CH2XAUI 2Tx-	51	CH3XAUI 2Tx-	52	CH4XAUI 2Tx-
13	CH1XAUI 2Rx+	14	CH2XAUI 2Rx+	53	CH3XAUI 2Rx+	54	CH4XAUI 2Rx+
15	CH1XAUI 2Rx-	16	CH2XAUI 2Rx-	55	CH3XAUI 2Rx-	56	CH4XAUI 2Rx-
17	CH1XAUI 3Tx+	18	CH2XAUI 3Tx+	57	CH3XAUI 3Tx+	58	CH4XAUI 3Tx+
19	CH1XAUI 3Tx-	20	CH2XAUI 3Tx-	59	CH3XAUI 3Tx-	60	CH4XAUI 3Tx-
21	CH1XAUI 3Rx+	22	CH2XAUI 3Rx+	61	CH3XAUI 3Rx+	62	CH4XAUI 3Rx+
23	CH1XAUI 3Rx-	24	CH2XAUI 3Rx-	63	CH3XAUI 3Rx-	64	CH4XAUI 3Rx-
25	CH1XAUI 4Tx+	26	CH2XAUI 4Tx+	65	CH3XAUI 4Tx+	66	CH4XAUI 4Tx+
27	CH1XAUI 4Tx-	28	CH2XAUI 4Tx-	67	CH3XAUI 4Tx-	68	CH4XAUI 4Tx-
29	CH1XAUI 4Rx+	30	CH2XAUI 4Rx+	69	CH3XAUI 4Rx+	70	CH4XAUI 4Rx+
31	CH1XAUI 4Rx-	32	CH2XAUI 4Rx-	71	CH3XAUI 4Rx-	72	CH4XAUI 4Rx-
33	5V Power	34	5V Power	73	5V Power	74	5V Power
35	Ground	36	Ground	75	Ground	76	Ground
37	MDIO	38	MDC	77	Spare	78	Spare
39	Spare	40	Spare	79	Spare	80	Spare
Ribbon Connector - QTH-040-01-H-D-DP-EM2							
Board Connector -QSH-040-01-H-D-DP-K							
Board connector must be used with SO-0165-04-01-02 screw mounts, with correct spacing							

MIL-DTL-38999 Shell Size 13	
A	CH 1Tx
B	CH 1Rx
C	CH 2Tx
D	CH 2Rx
E	CH3 Tx
F	CH3 Rx
G	CH4 Tx
H	CH4 Rx

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Ordering Guide

Ordering procedure is shown below using part number CTF-

1.	2.	3.	4.	5.	6.	7.
Connector Type	Material	XAUI Interface	Finish	Shell Style	D38999 Connector Rotation	Main Keyway Rotation
CTF						

Step 1. Connector Type

	Designates
CTF	CTF Product Family

Step 2. Select a Material

	Designates
-5	Aluminum Shell
-6	Composite Shell
-8	Stainless Steel Shell

Step 3. Select a XAUI Interface

	Designates
S	Samtec Q Series® Connector

Step 4. Select a Finish

	Designates
T	Aluminum Durmalon
Z	Aluminum Black Zinc Nickel
F	Aluminum Electroless Nickel
M	Composite Electroless Nickel
W	Aluminum OD Cad
J	Composite OD Cad
L	Stainless Steel Electrodeposited Nickel
Y	Stainless Steel Passivated

Step 5. Select a Shell Style

	Designates
0	Wall Mount

Step 6. Select a Rotation for D38999 Connector (IAW MIL-DTL-38999)

	Designates
N	N
A	A
B	B
C	C
D	D

Step 7. Select a Rotation for Main Keyway (IAW MIL-DTL-38999)

	Designates
W	0°
X	90°
Y	180°
Z	270°

Available Test Equipment

	Part Number	Description
Test Cable	CF-980062-020	LC Fiber Optic Test Cable for D38999 Connector
Test Board	CF-980062-021	SMA Test Board for Samtec Connector

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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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