



1000BASE-SX Fiber to Copper SerDes Converter

CTF-ENET-OCTAL-1G

FEATURES AND BENEFITS

- + 8 Channels of 1000BASE-SX
- + Internal Copper to Fiber Conversion
- + Compliant with IEEE 802.3an Ethernet Standards and Specifications

1000BASE-SX FIBER INTERFACE

- + D389999 Shell Size 11
- + Standard M29504 termini

SERDES COPPER INTERFACE

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

POWER SPECIFICATIONS

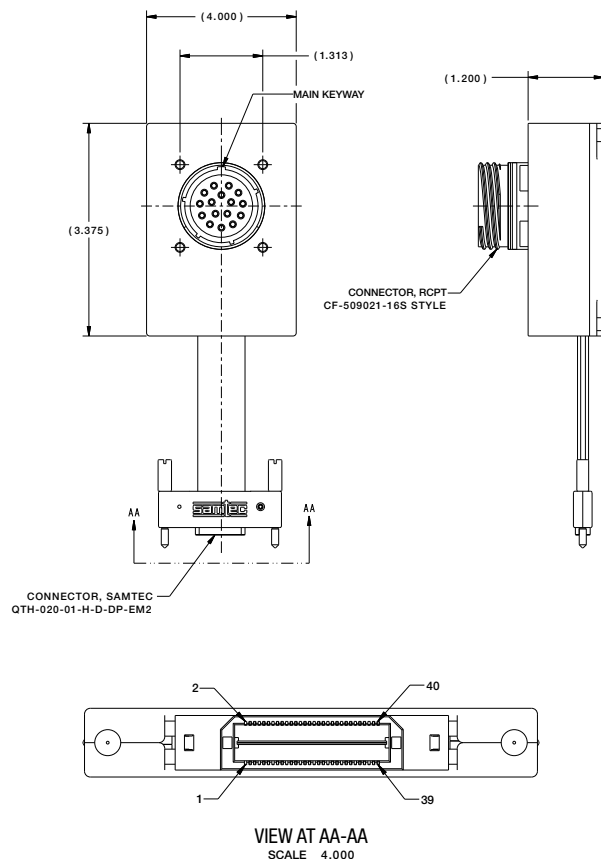
- + 5V power connection in Samtec connector
- + Low power consumption

RUGGEDIZATION

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

OVERVIEW

The 1000BASE-SX to SerDes Converter couples fiber optics and protocol conversion with a new level of ruggedization. This product line is rugged, flexible, and affordable with many options available.



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ADC-8CH-160M-14 Octal-Channel 160 MSPS 14-bit Analog Input A/D Connector

Pinout

Samtec HQDP-020 (20 pairs;40 signals)			
1	CH 1 Tx +	2	CH 6 Tx +
3	CH 1 Tx -	4	CH 6 Tx -
5	CH 1 Rx +	6	CH 6 Rx +
7	CH 1 Rx -	8	CH 6 Rx -
9	CH 2 Tx +	10	CH 7 Tx +
11	CH 2 Tx -	12	CH 7 Tx -
13	CH 2 Rx +	14	CH 7 Rx +
15	CH 2 Rx -	16	CH 7 Rx -
17	CH 3 Tx +	18	CH 8 Tx +
19	CH 3 Tx -	20	CH 8 Tx -
21	CH 3 Rx +	22	CH 8 Rx +
23	CH 3 Rx -	24	CH 8 Rx -
25	CH 4 Tx +	26	5V Power
27	CH 4 Tx -	28	5V Power
29	CH 4 Rx +	30	Ground
31	CH 4 Rx -	32	Ground
33	CH 5 Tx +	34	MDC
35	CH 5 Tx -	36	MDIO
37	CH 5 Rx +	38	Spare
39	CH 5 Rx -	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			

MIL-DTL-3899 Shell Size 21	
A	CH 1 Tx
B	CH 1 Rx
C	CH 2 Tx
D	CH 2 Rx
E	CH 3 Tx
F	CH 3 Rx
G	CH 4 Tx
H	CH 4 Rx
J	CH 5 Tx
K	CH 5 Rx
L	CH 6 Tx
M	CH 6 Rx
N	CH 7 Tx
P	CH 7 Rx
R	CH 8 Tx
S	CH 8 Rx

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Ordering Guide

1. Connector Type	2. Material	3. SerDes Interface	4. Finish	5. Shell Style	6. D38999 Connector Rotation	7. 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 Material

	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
O	Wall Mount

Step 5. Select a Shell Style

	Designates
O	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°

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

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