COL-DAC40G-XXPC
QSFP+ Direct Attach Passive Copper Cables

Features

- QSFP+ conforms to the Small Form Factor SFF-8436
- 4-Channel Full-Duplex Active Copper Cable Transceiver
- Support for multi-gigabit data rates :1Gb/s - 10Gb/s(per channel)
- Maximum aggregate data rate: 40Gb/s (4 x 10Gb/s)
- Copper link length up to 7m (passive limiting)
- High-Density QSFP 38-PIN Connector
- Power Supply :+3.3V
- Low power consumption: 0.02 W (typ.)
- I2C based two-wire serial interface for EEPROM signature which can be customized
- Temperature Range: 0~ 70 °C
- ROHS Compatible

Applications

- 10 Gigabit Ethernet
- 40 Gigabit Ethernet
- InfiniBand4x SDR, DDR, QDR
- 2, 4, 8, 10 Gigabit Fiber Channel
- Fiber Channel over Ethernet

STANDARDS COMPLIANCE

- IEEE 802.3ba
- SFF-8436
- InfiniBand
- QSFP+ MSA
- RoHS Compliant

Product Description

The QSFP+ passive cable assemblies are high performance，cost effective I/O solutions for 40G LAN, HPC and SAN applications. The QSFP+ passive copper cables are compliant with SFF-8436, QSFP+ MSA and IEEE P802.3ba 40GBASE-CR4. It is offer a low power consumption，short reach interconnect applications. The cable each lane is capable of transmitting data at rates up to 10Gb/s, providing an aggregated rate of 40Gb/s.

Recommended Operating Conditions

Parameter	Symbol	Min	Typical	Max	Unit
Storage Ambient Temperature		-40		+85	°C
Operating Case Temperature	Tc	0		+70	°C
Power Supply Voltage	V_{CC3}	3.14	3.3	3.47	V
Power Dissipation	PD			0.5	W

Descriptions

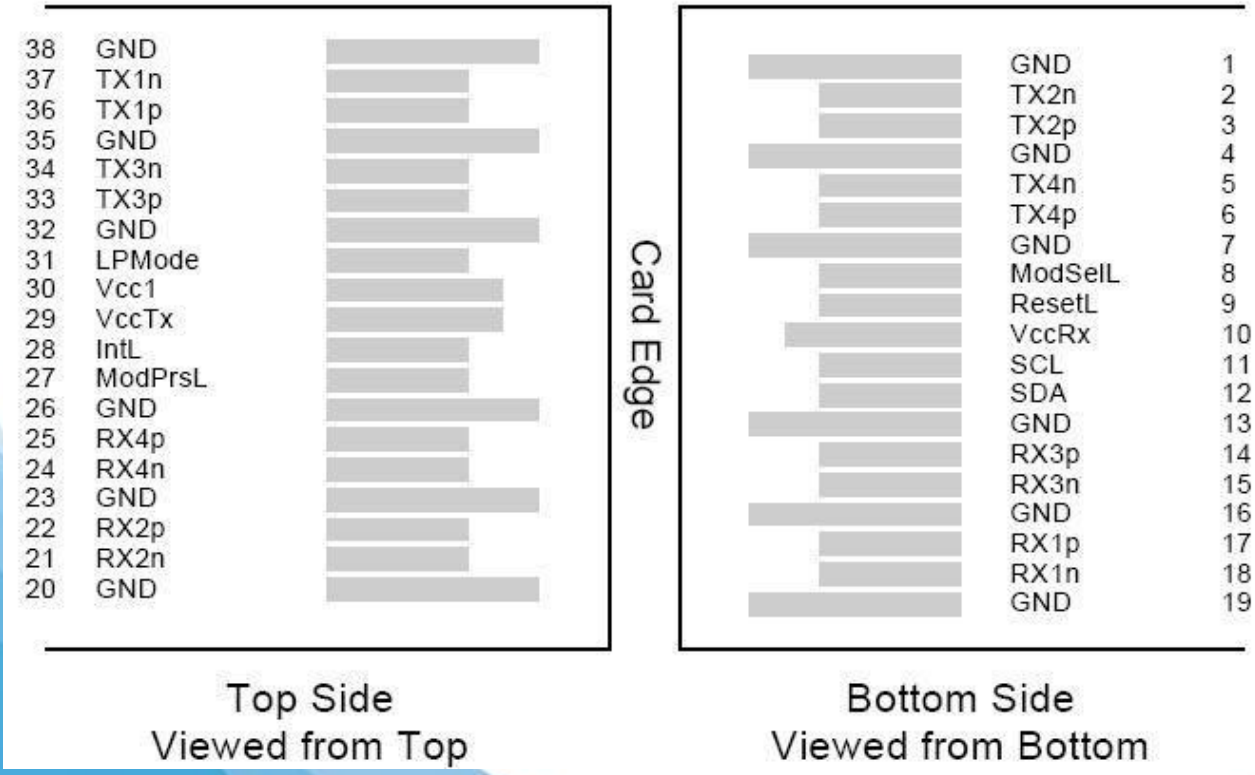

Figure 1 – QSFP MSA-compliant 38-pin connector

Pin Descriptions

Pin	Logic	Symbol	Name/Description	Ref.
1		GND	Module Ground	1
2	CML-I	Tx2n	Transmitter Inverted Data Input	
3	CML-I	Tx2p	Transmitter Non-Inverted Data output	
4		GND	Module Ground	1
5	CML-I	Tx4n	Transmitter Inverted Data Input	
6	CML-I	Tx4p	Transmitter Non-Inverted Data output	
7		GND	Module Ground	1
8	LVTLL-I	ModSelL	Module Select	
9	LVTLL-I	ResetL	Module Reset	
10		VccRx	+ 3.3V Power Supply Receiver	
11	LVCMOS-I/O	SCL	Serial 2-wire interface clock	
12	LVCMOS-I/O	SDA	Serial 2-wire interface data line	
13		GND	Module Ground	1
14	CML-O	Rx3p	Receiver Non-Inverted Data Output	
15	CML-O	Rx3n	Receiver Inverted Data Output	
16		GND	Module Ground	1
17	CML-O	Rx1p	Receiver Non-Inverted Data Output	
18	CML-O	Rx1n	Receiver Inverted Data Output	
19		GND	Module Ground	1
20		GND	Module Ground	1
21	CML-O	Rx2n	Receiver Inverted Data Output	
22	CML-O	Rx2p	Receiver Non-Inverted Data Output	
23		GND	Module Ground	1
24	CML-O	Rx4n	Receiver Inverted Data Output	
25	CML-O	Rx4p	Receiver Non-Inverted Data Output	
26		GND	Module Ground	1
27	LVTTL-O	ModPrsL	Module Present	
28	LVTTL-O	IntL	Interrupt	
29		VccTx	+3.3 V Power Supply transmitter	
30		Vcc1	+3.3 V Power Supply	
31	LVTTL-I	LPMode	Low Power Mode	
32		GND	Module Ground	1
33	CML-I	Tx3p	Transmitter Non-Inverted Data Input	
34	CML-I	Tx3n	Transmitter Inverted Data Output	
35		GND	Module Ground	1
36	CML-I	Tx1p	Transmitter Non-Inverted Data Input	
37	CML-I	Tx1n	Transmitter Inverted Data Output	
38		GND	Module Ground	1

Notes:

1. Circuit ground is internally isolated from chassis ground.

Ordering information

Part Number	Product Description
COL-DAC40G-01PC	QSFP+ to QSFP+ DAC Passive 30AWG 1m
COL-DAC40G-02PC	QSFP+ to QSFP+ DAC Passive 30AWG 2m
COL-DAC40G-03PC	QSFP+ to QSFP+ DAC Passive 30AWG 3m
COL-DAC40G-04PC	QSFP+ to QSFP+ DAC Passive 26AWG 4m
COL-DAC40G-05PC	QSFP+ to QSFP+ DAC Passive 28AWG 5m
COL-DAC40G-05PC	QSFP+ to QSFP+ DAC Passive 26AWG 5m
COL-DAC40G-07PC	QSFP+ to QSFP+ DAC Passive 24AWG 7m

Note: You can be customized diameter and distance.

References

1. “Specifications for Enhanced Small Form Factor Pluggable Module SFP+”, SFF-8431, Rev 4.1, July 6, 2009.
2. “Improved Pluggable Formfactor”,SFF-8432, Rev 4.2,Apr 18,2007
3. IEEE802.3ae – 2002
4. “Diagnostic Monitoring Interface for Optical Transceivers” SFF-8472, Rev 10.3, Dec 1,2007

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