QSFP+ 40GBASE-T Copper Transceiver
Enhanced Small Form-factor Pluggable (QSFP+), 3.3V
40Gbps Gigabit Ethernet

Features

- QSFP+ conforms to the Small Form Factor SFF-8436
- 4-Channel Full-Duplex Passive Copper Cable Transceiver
- Support for multi-gigabit data rates :1 Gb/s - 10 Gb/s (per channel)
- Maximum aggregate data rate: 40 Gb/s (4 x 10Gb/s)
- Copper link length up to 5m (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
- RoHS Compatible

Application

- 10 Gigabit Ethernet
- 40 Gigabit Ethernet
- InfiniBand4x SDR, DDR, QDR
- 2, 4, 8, 10 Gigabit Fiber Channel
- Fiber Channel over Ethernet
- SAS,Servers,Hubs,Switches,Routers

Description

APAC 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 intercon- nect applications. The cable each lane is capable of transmitting data at rates up to 10Gb/s, providing an aggregated rate of 40Gb/s.

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Ordering Information

PART NUMBER	Product Description
QSFP-PEC-40G-01	QSFP+ Direct Attach Passive Cable , 30AWG 1m
QSFP-PEC-40G-02	QSFP+ Direct Attach Passive Cable , 30AWG 2m
QSFP-PEC-40G-03	QSFP+ Direct Attach Passive Cable , 30AWG 3m
QSFP-PEC-40G-05	QSFP+ Direct Attach Passive Cable , 26AWG 5m
QSFP-AEC-40G-07	QSFP+ Direct Attach Active Cable , 26AWG 7m
QSFP-AEC-40G-10	QSFP+ Direct Attach Active Cable , 26AWG 10m

Absolute Maximum Ratings

PARAMETER	SYMBOL	MIN	MAX	UNITS	NOTE
Storage Ambient Temperature	Ts	-40	85	°C	
Relative Humidity (non-condensation)	RS	-	85	%	
Operating Case Temperature	Tc	0	70	°C	
Supply Voltage	VCC3	-0.3	3.6	V	
Voltage on LVTTL Input	Vilvttl	-0.3	VCC3 +0.2	V	

Recommended Operating Conditions

PARAMETER	SYMBOL	MIN	MAX	UNITS	NOTE
Operating Case Temperature	Tc	0	70	°C	
Relative Humidity (non-condensation)	RS	-	85	%	
Supply Voltage	VCC3	3.135	3.465	V	Typ. 3.3V

Systems

Performance	Media
4-Channel Full-Duplex Passive Copper Cable Transceiver	Hot-pluggable, industry-standard Small Form-Factor Pluggable copper cable.

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Pin Descriptions

Pin	Logic	Symbol	Name/Description	NOTE
1		GND	Ground	1
2	CML-I	Tx2n	Transmitter Inverted Data Input	
3	CML-I	Tx2p	Transmitter Non-Inverted Data Input	
4		GND	Ground	1
5	CML-I	Tx4n	Transmitter Inverted Data Input	
6	CML-I	Tx4p	Transmitter Non-Inverted Data Input	
7		GND	Ground	1
8	LVTTL-I	ModSelL	Module Select	
9	LVTTL-I	ResetL	Module Reset	
10		Vcc Rx	+3.3V Power Supply Receiver	2
11	LVCMOSI/O	SCL	2-wire serial interface clock	
12	LVCMOSI/O	SDA	2-wire serial interface data	
13		GND	Ground	1
14	CML-O	Rx3p	Receiver Non-Inverted Data Output	
15	CML-O	Rx3n	Receiver Inverted Data Output	
16		GND	Ground	1
17	CML-O	Rx1p	Receiver Non-Inverted Data Output	
18	CML-O	Rx1n	Receiver Inverted Data Output	
19		GND	Ground	1
20		GND	Ground	1
21	CML-O	Rx2n	Receiver Inverted Data Output	
22	CML-O	Rx2p	Receiver Non-Inverted Data Output	
23		GND	Ground	1
24	CML-O	Rx4n	Receiver Inverted Data Output	
25	CML-O	Rx4p	Receiver Non-Inverted Data Output	
26		GND	Ground	1
27	LVTTL-O	ModPrsL	Module Present	
28	LVTTL-O	IntL	Interrupt	
29		Vcc Tx	+3.3V Power Supply Transmitter	2

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30		Vcc1	+3.3V Power Supply	2
31	LVTTL-I	LPMode	Low Power Mode	
32		GND	Ground	1
33	CML-I	Tx3p	Transmitter Non-Inverted Data Input	
34	CML-I	Tx3n	Transmitter Inverted Data Input	
35		GND	Ground	1
36	CML-I	Tx1p	Transmitter Non-Inverted Data Input	
37	CML-I	Tx1n	Transmitter Inverted Data Input	
38		GND	Ground	1

Note:

Note 1: GND is the symbol for signal and supply (power) common for the QSFP+ module. All are common within the QSFP+ module and all module voltages are referenced to this potential unless otherwise noted. Connect these directly to the host board signal-common ground plane.

Note 2: Vcc Rx, Vcc1 and Vcc Tx are the receiver and transmitter power supplies and shall be applied concurrent- ly. Requirements defined for the host side of the Host Edge Card Connector are listed in Table 6. Recommended host board power supply filtering is shown in Figure 4. Vcc Rx Vcc1 and Vcc Tx may be internally connected with- in the QSFP+ Module module in any combination. The connector pins are each rated for a maximum current of 500 mA.

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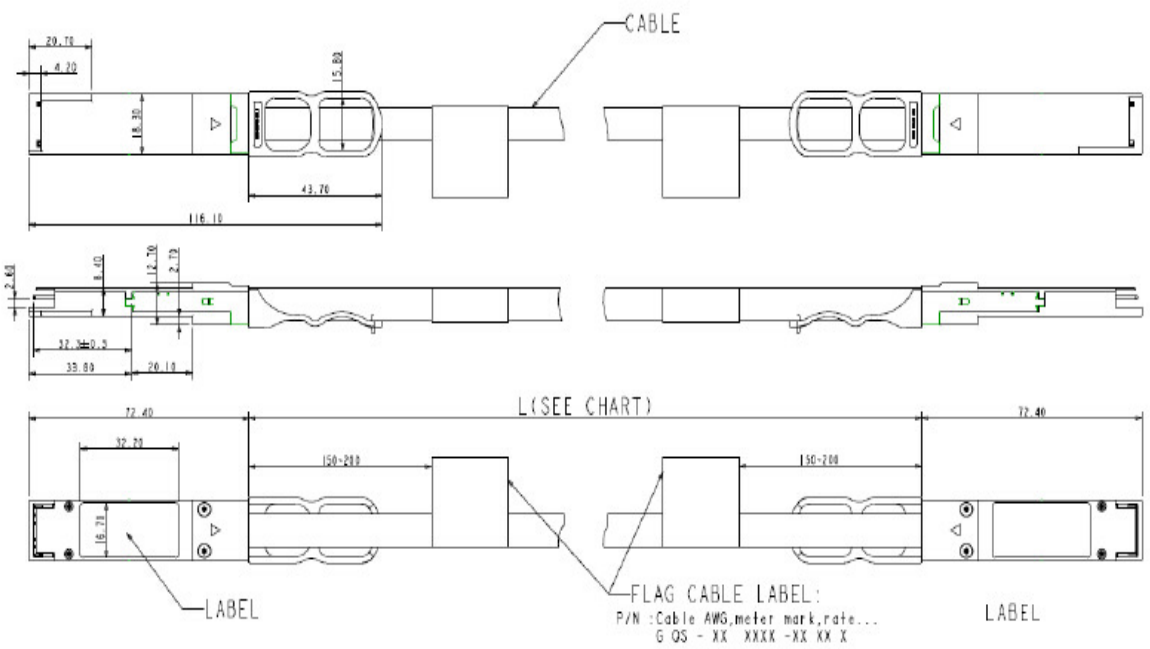
Drawing Dimensions



代码	长度范围(m)	公差(cm)
L	L≤0.5	±3
	0.5<L≤5	±5
	5<L≤20	±8
	20<L	±10

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