

**EOLQ-8556G-PCT-XX Series**

**Multi-Mode 56GBASE-SR4  
QSFP+ Transceiver  
RoHS6 Compliant**



**Features**

- ◆ Compliant to the IEEE 802.3ba
- ◆ 56Gbps aggregated bidirectional data throughput
- ◆ Compliant to the QSFP+ MSA SFF-8436 Specification
- ◆ Link length from 1m to 60m on OM3
- ◆ Up to 14.025 Gb/s per channel
- ◆ VCSEL array transmitter and PIN array receiver
- ◆ Low Power dissipation <0.35W per channel
- ◆ Operating Case Temperature: 0°C ~+70°C

**Applications**

- ◆ InfiniBand QDR (4 x 14.025G), QDR (4 x 10G), DDR (4 x 5G) and SDR (4 x 2.5G) interconnects
- ◆ High Performance and High Productivity computer interconnects
- ◆ Data Aggregation, Backplane and Proprietary Density Applications
- ◆ PCI-Express, SAS/SATA, Fiber Channel compatible interconnect
- ◆ Datacom and Telecom switch and router

**Ordering Information**

Part No.	Data Rate	AOC Length <sup>*(note2)</sup>	Temp.	DDMI
EOLQ-8556G-PCT-XX <sup>*(note1)</sup>	56Gbps	1~60m	0°C ~+70°C	Yes

Note1: Standard version.

Note2: Length measured OM3 fiber. XX denotes the AOC length with unit meter. For example, 01 denotes 1m, 02 denote 2m ... 60 denote 60m.

\*The product image only for reference purpose.

## Regulatory Compliance\*

Product Certificate	Certificate Number	Applicable Standard
TUV	R50135086	EN 60950-1:2006+A11+A1+A12+A2
		EN 60825-1:2014
		EN 60825-2:2004+A1+A2
UL	E317337	UL 60950-1
		CSA C22.2 No. 60950-1-07
EMC CE	AE 50384190 0001	EN 55032:2012
		EN 55032:2015
		EN 55024:2010
		EN 55024:2010+A1
FCC	WTF14F0514417E	47 CFR PART 15 OCT., 2013
FDA	/	CDRH 1040.10
ROHS	/	2011/65/EU

\*: The above certificate number updated to June 2018, because some certificate will be updated every year, such as FDA and ROHS. For the latest certification information, please check with Eoptolink.

## Absolute Maximum Ratings\*

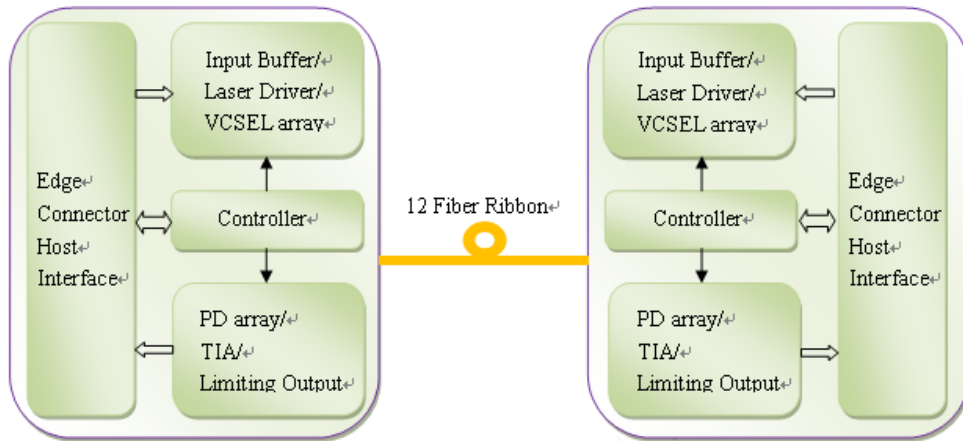
Parameter	Symbol	Min.	Max.	Unit
Storage Temperature	Ts	-40	+85	°C
Supply Voltage	Vcc	-0.5	3.6	V
Operating Relative Humidity	RH	5	85	%

\*Exceeding any one of these values may destroy the device immediately.

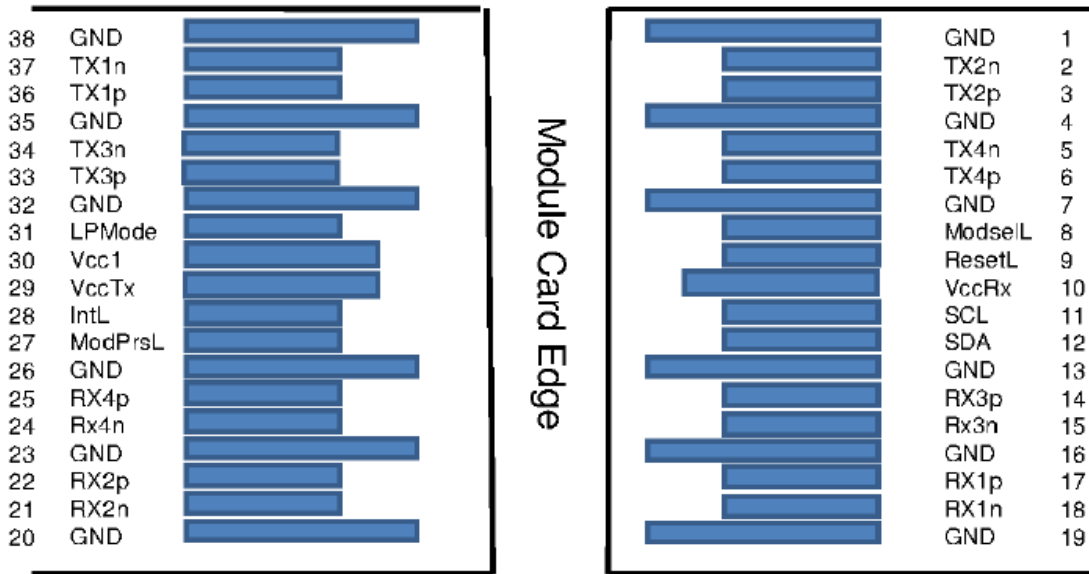
## Recommended Operating Conditions

Parameter	Symbol		Min.	Typical	Max.	Unit
Operating Case Temperature	Tc	EOLQ-8556G-PCT-XX	0		+70	°C
Power Supply Voltage	Vcc		3.15	3.3	3.45	V
Aggregate Bit Rate	BR <sub>AVE</sub>			56		Gbps
Lane Bit Rate	BR <sub>LANE</sub>			14.025		Gbps

## Functional Description of Transceiver



## QSFP+ Transceiver Electrical Pad Layout



Top Side  
Viewed From Top

Bottom Side  
Viewed From Bottom

## Pin Arrangement and Definition

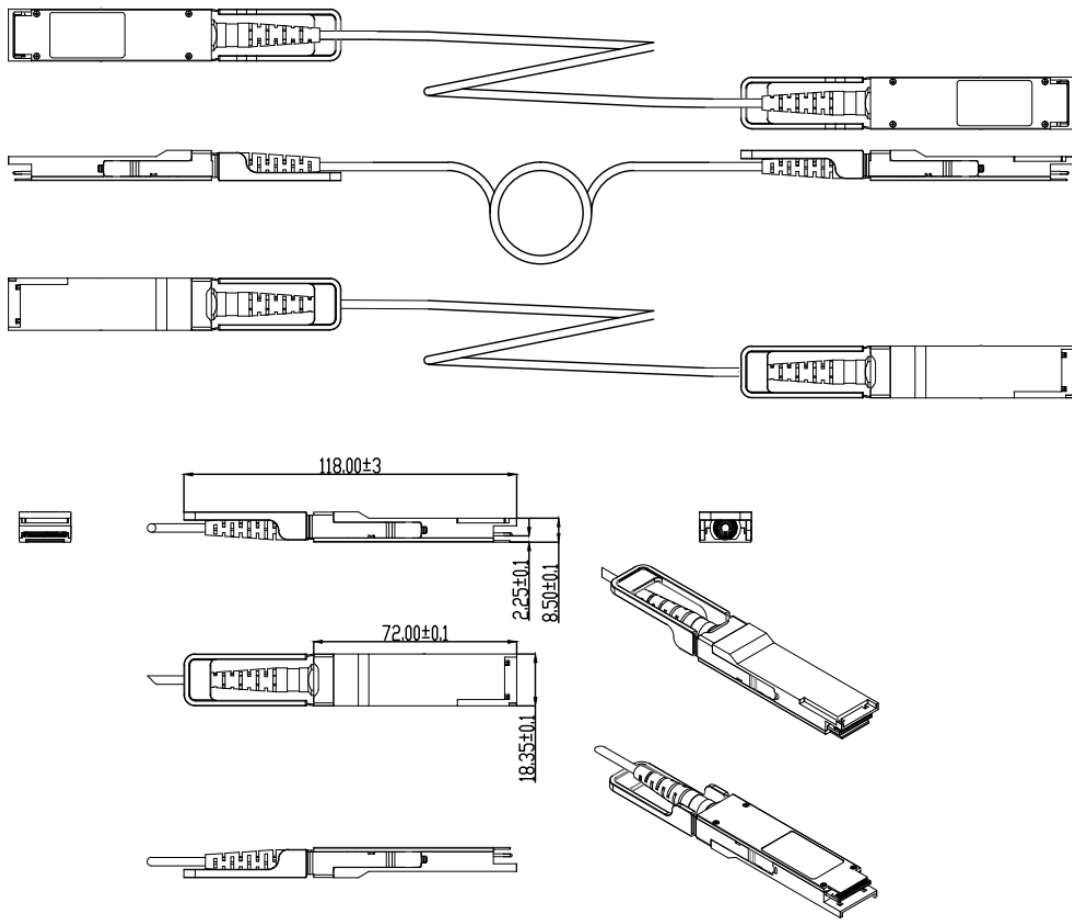
Pin	Logic	Symbol	Description	Plug Sequence	Notes
1		GND	Ground	1	1
2	CML-I	Tx2n	Transmitter Inverted Data Input	3	
3	CML-I	Tx2p	Transmitter Non-Inverted Data Input	3	
4		GND	Ground	1	1
5	CML-I	Tx4n	Transmitter Inverted Data Input	3	
6	CML-I	Tx4p	Transmitter Non-Inverted Data Input	3	
7		GND	Ground	1	1
8	LVTTTL-I	ModSelL	Module Select	3	

9	LVTTTL-I	ResetL	Module Reset	3	
10		VccRx	+3.3V Power Supply Receiver	2	2
11	LVC MOS- I/O	SCL	2-wire serial interface clock	3	
12	LVC MOS- I/O	SDA	2-wire serial interface data	3	
13		GND	Ground	1	1
14	CML-O	Rx3p	Receiver Non-Inverted Data Output	3	
15	CML-O	Rx3n	Receiver Inverted Data Output	3	
16		GND	Ground	1	1
17	CML-O	Rx1p	Receiver Non-Inverted Data Output	3	
18	CML-O	Rx1n	Receiver Inverted Data Output	3	
19		GND	Ground	1	1
20		GND	Ground	1	1
21	CML-O	Rx2n	Receiver Inverted Data Output	3	
22	CML-O	Rx2p	Receiver Non-Inverted Data Output	3	
23		GND	Ground	1	1
24	CML-O	Rx4n	Receiver Inverted Data Output	3	
25	CML-O	Rx4p	Receiver Non-Inverted Data Output	3	
26		GND	Ground	1	1
27	LVTTTL-O	ModPrsL	Module Present	3	
28	LVTTTL-O	IntL	Interrupt	3	
29		VccTx	+3.3V Power supply transmitter	2	2
30		Vcc1	+3.3V Power supply	2	2
31	LVTTTL-I	LPMode	Low Power Mode	3	
32		GND	Ground	1	1
33	CML-I	Tx3p	Transmitter Non-Inverted Data Input	3	
34	CML-I	Tx3n	Transmitter Inverted Data Input	3	
35		GND	Ground	1	1
36	CML-I	Tx1p	Transmitter Non-Inverted Data Input	3	
37	CML-I	Tx1n	Transmitter Inverted Data Input	3	
38		GND	Ground	1	1

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.

2: Vcc Rx, Vcc1 and Vcc Tx are the receiver and transmitter power supplies and shall be applied concurrently. Vcc Rx Vcc1 and Vcc Tx may be internally connected within the QSFP+ Module in any combination. The connector pins are each rated for a maximum current of 500mA.

## Mechanical Specifications



\*This 2D drawing only for reference, please check with Eoptolink before ordering.

## Obtaining Document

You can visit our website: <http://www.eoptolink.com>

Or contact Eoptolink Technology Inc., Ltd. listed at the end of the documentation to get the latest documents.

## Revision History

Revision	Initiated	Reviewed	Approved	Revision History	Release Date
V1.a	Torres	Jason		Preliminary.	Dec 8,2015
V1.b	Marvin	Kelly		Update reference picture and 2D mechanical diagram, the address and the contact information.	Oct 9.2017
V1.c	Nico	Marvin/Peter/ Chao		Update the product image, the regulatory compliance and the 2D drawing.	Sep 12, 2018

**Notice:**

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