

200G QSFP56 Active Optical Cable

CC-QRRAOCX-SD

Features

- 4 independent parallel optical channels
- Each channel data rate up to 26.56GBaud
- Hot Pluggable
- Up to 100m link over OM4 Multi-mode and 70m link over OM3 Multi -mode
- CML Compatible electrical I/O
- Case Operating Temperature Range:
Commercial: 0 to 70°C
- RoHS II Compliance
- Fiber Cable: Use OFNP Jacket (Aqua Colored Jacket)
- QSFP56 MSA Compliance
- SFF8636 Compliance

Applications

- High performance computing interconnect
- Data center

Product Description

The CC-QRRAOCX-SD is an active optical cable (AOC) for 4 x 26.56GBaud optical links. It is compliant with the QSFP56 MSA specifications. It operates at 26.56GBaud and the cable length is up to 100m .

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Absolute Maximum Ratings

Parameter	Symbol	Min	Max	Units	Notes
Storage Ambient Temperature	Tstg	-40	+85	°C	Exceeding the Absolute Maximum Ratings may cause irreversible damage to the device. The device is not intended to be operated under the condition of simultaneous Absolute Maximum Ratings, a condition which may cause irreversible damage to the device. RH is Non-condensing condition.
Relative Humidity - Storage	RHS	0	95	%	
Relative Humidity - Operating	RHO	0	85	%	
Module Supply Voltage	VCC	-0.5	3.6	V	

Recommended Operating Conditions

Parameter	Symbol	Min	Typ	Max	Units	Notes
Case Operating Temperature	Tcase	0	+25	+70	°C	Temperature Range = C
Module Supply Voltage	VCC	3.14	3.3	3.46	V	
Single Module Supply Current	IIN	-	1150	1350	mA	
Signaling Speed Per Channel	S	-	26.56	-	GBaud	

Transmitter Electrical Interfaces

Parameter	Symbol	Min	Typ	Max	Units	Notes
Tx_Data Differential Input Voltage	V _{IN}	300	-	900	mV	
Tx_Data Differential Input Impedance	Z _{IN}	-	100	-	Ω	

Receiver Electrical Interfaces

Parameter	Symbol	Min	Typ	Max	Units	Notes
Rx_Data Differential Output Voltage	V _{OUT}	-	-	900	mV	
Rx_Data Differential Output Impedance	Z _{OUT}	90	100	110	Ω	
Link BER	BER			5E-5		@26.56GBaud PRBS31Q

Cable specification

Parameter	Value
Minimum Bend radius (mm)	30
Cable diameter (mm)	3.0 ± 0.15

China Cloud Electro Optics Technology Co., Ltd.

3rd Floor, Block B, Building 16, Instrument Industrial Park, Zibo, Shandong, 255000

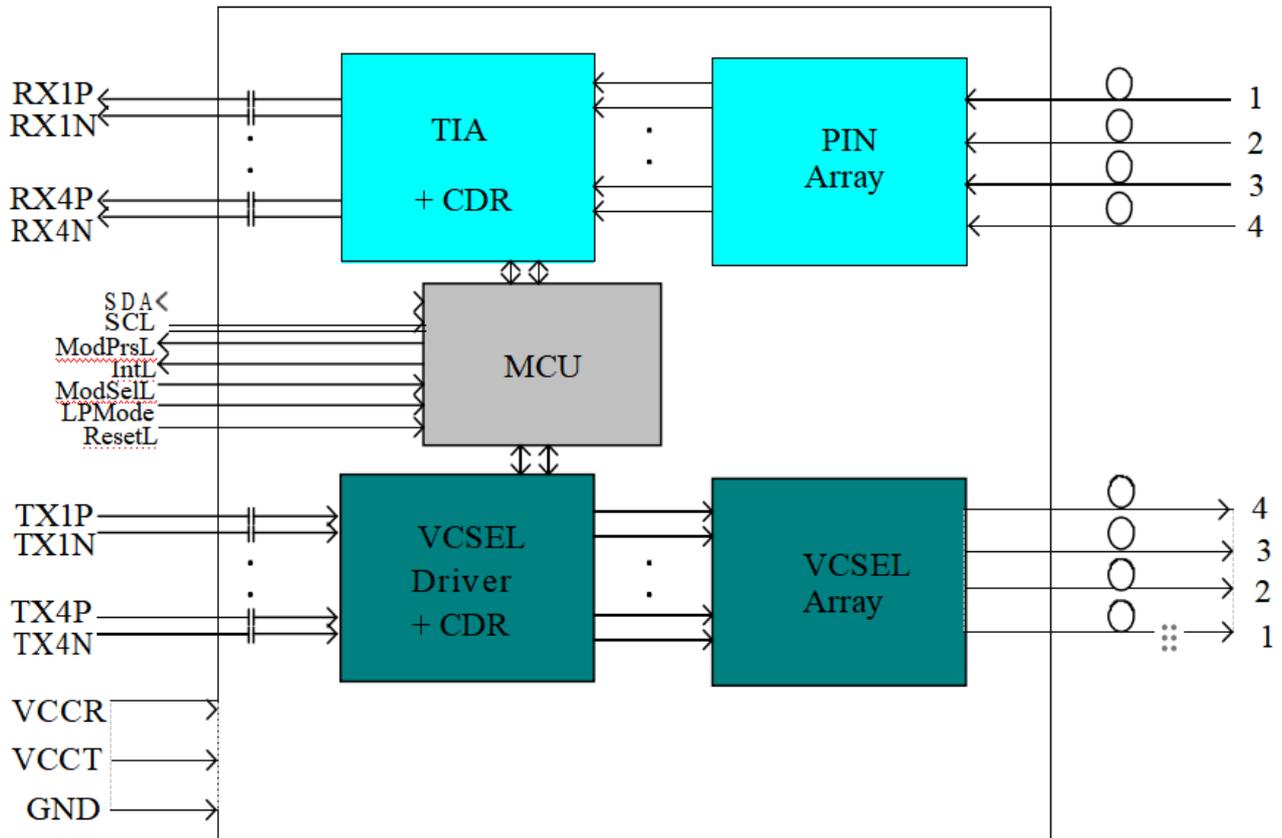
TEL: +86-533-2079888 FAX: +86-533-8171188

www.cceo.cc

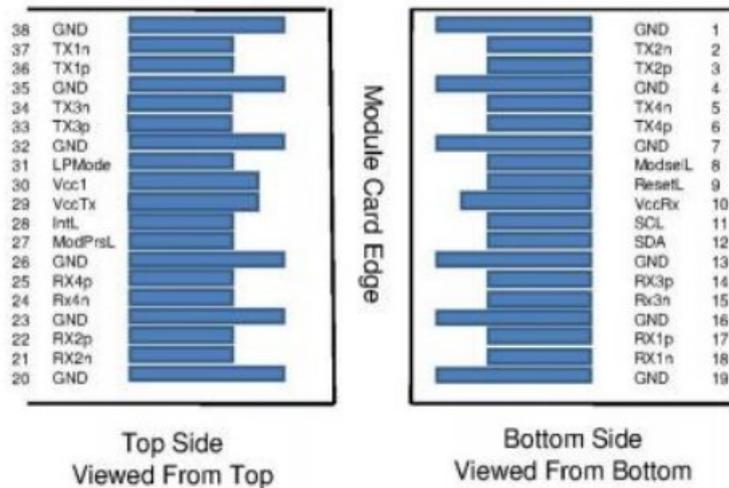
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Block Diagram



Pin Assignment



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Pin Description

Pin	Symbol	Description	Notes
1	GND	Ground	
2	Tx2n	Transmitter Inverted Data Input	
3	Tx2p	Transmitter Non Inverted Data Input	
4	GND	Ground	
5	Tx4n	Transmitter Inverted Data Input	
6	Tx4p	Transmitter Non Inverted Data Input	
7	GND	Ground	
8	ModselL	Module Select	
9	RetsetL	Module Reset	
10	VCC Rx	Receiver +3.3V DC Power Supply	
11	SCL	I2C Serial Clock	
12	SDA	I2C Serial Data	
13	GND	Ground	
14	Rx3p	Receiver Non Inverted Differential Output	
15	Rx3n	Receiver Inverted Differential Output	
16	GND	Ground	
17	Rx1p	Receiver Non Inverted Differential Output	
18	Rx1n	Receiver Inverted Differential Output	
19	GND	Ground	
20	GND	Ground	
21	Rx2n	Receiver Inverted Differential Output	
22	Rx2p	Receiver Non Inverted Differential Output	
23	GND	Ground	

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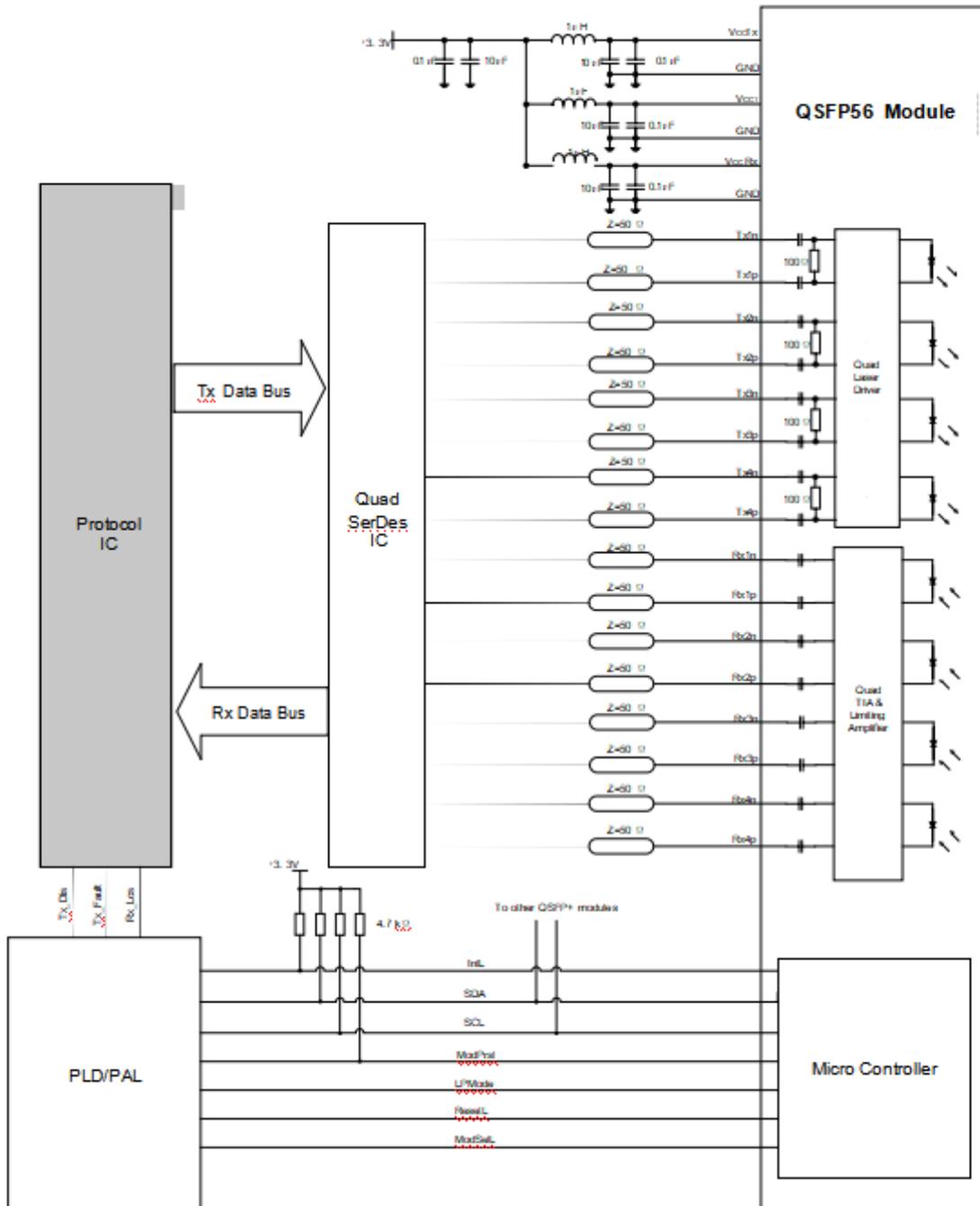
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24	Rx4n	Receiver Inverted Differential Output	
25	Rx4p	Receiver Non Inverted Differential Output	
26	GND	Ground	
27	ModPrsL	Module Present	
28	IntL	Interrupt	
29	VCC Tx	Transmitter +3.3V DC Power Supply	
30	VCC1	+3.3V DC Power Supply	
31	LPMoD	Low Power Mode	
32	GND	Ground	
33	Tx3p	Transmitter Non Inverted Data Input	
34	Tx3n	Transmitter Inverted Data Input	
35	GND	Ground	
36	Tx1p	Transmitter Non Inverted Data Input	
37	Tx1n	Transmitter Inverted Data Input	
38	GND	Ground	

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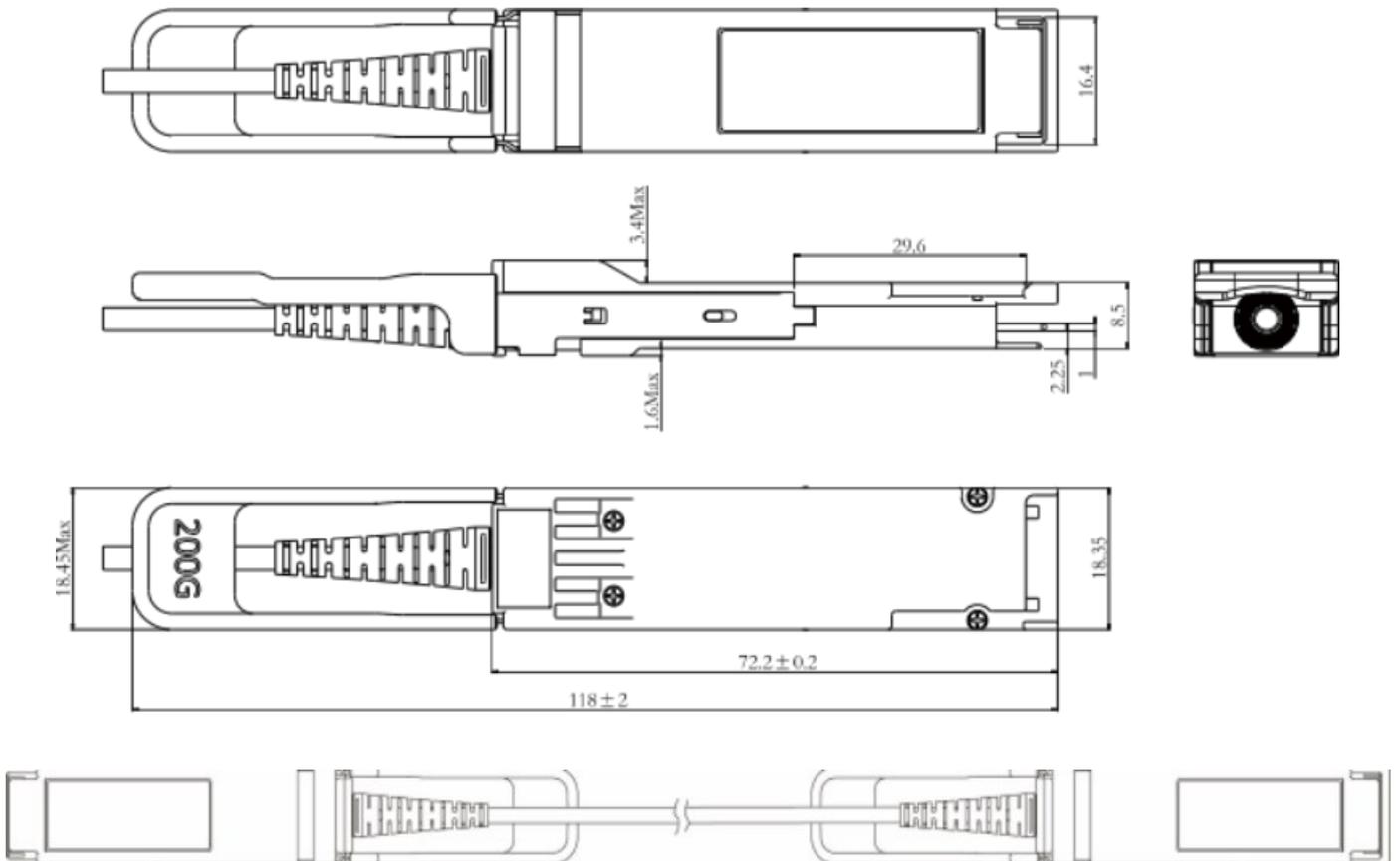
Electrical Interface



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Mechanical Dimensions



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CC-QRRAOCX-SD**Ordering Information**

Part Number	Case Operating Temperature	Standard Cable Length	Fiber Type
CC-QRRAOC3-SD	0 to 70 °C	3m	OM3
CC-QRRAOC5-SD	0 to 70 °C	5m	OM3
CC-QRRAOC7-SD	0 to 70 °C	7m	OM3
CC-QRRAOCX-SD	0 to 70 °C	10m	OM3