

Q56-200G-DAC-PxM

200G QSFP56 Passive Direct Attach Copper Cable (PCC), 0.5~3 meters

Features

- Compatible with SFF 8665 and IEEE 802.3cd
- 4-Channel Full-Duplex Passive Copper Cable
- Optimized construction to minimize insertion loss and cross talk
- Supports aggregate data rates of 200Gbps(PAM4)
- Compliant with IEEE 802.3bj 200GEBASE-CR4
- Up to 3m transmission
- Single 3.3V power supply
- Operating temperature range: 0 to 70°C
- RoHS Compliant and Lead-Free



Applications

- 200 Gigabit Ethernet links
- Fiber Channel over Ethernet
- Data storage and communication industry
- Switches, servers, routers and HBA
- Enterprise network
- SAN (Storage area networks)
- Data center cabling infrastructure
- High density connections between networking equipment

Description

The Q56-200G-DAC-PxM series is a 200G QSFP56 passive direct attach copper cable assembly (also known as 200G QSFP56 DAC). This QSFP56 DAC cable is suitable for 200 Gigabit short link connectivity between devices using QSFP56 ports. It meets 200G Ethernet and InfiniBand Data Rate(EDR) requirements and features 4x 56Gb/s PAM4 modulation to support leading-edge 200G systems. The QSFP56 DAC copper cable is designed for 200Gb/s high-speed interconnecting networking applications such as high-performance computing (HPC), data center, and network storage scenarios. This 200G DAC offers a cost-effective and lower-power replacement to 200G QSFP56 optics and QSFP56 active optical fiber (200G QSFP56 AOC).

Ordering information

Part Number	Data Rate	Cable Length	Wire Gauge		
Q56-200G-DAC-P05M	200Gbps	0.5 m	/	/	AWG30
Q56-200G-DAC-P1M	200Gbps	1 m	/	/	AWG30
Q56-200G-DAC-P2M	200Gbps	2 m	/	/	AWG30
Q56-200G-DAC-P3M	200Gbps	3 m	/	AWG26	/

Notes:

1. Customized 200G QSFP56 DAC cables are available in various lengths.

2. The Wire Gauge is available in AWG24, AWG26, AWG28, and AWG30 for customized need.

Absolute Maximum Ratings

Parameter	Symbol	Min	Max	Unit	Notes
Maximum Supply Voltage	V _{cc}	-0.5	4.0	V	
Storage Temperature	T _s	-40	85	°C	
Operating Humidity	RH	5	95	%	

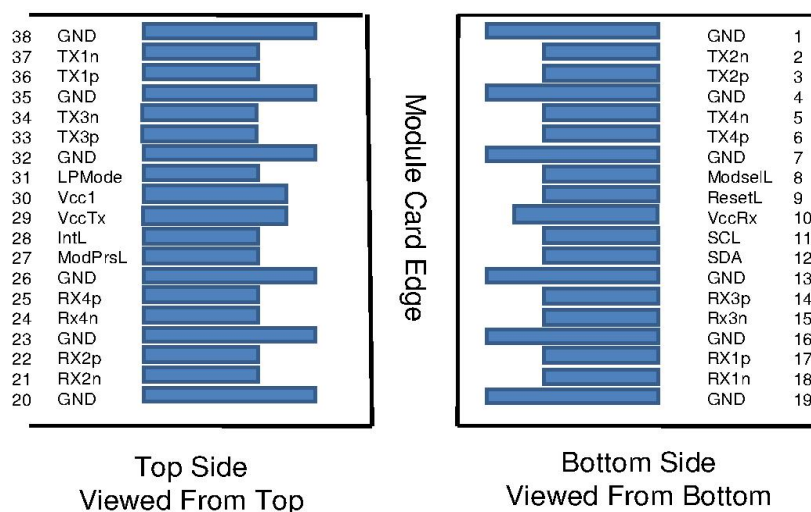
Recommended Operating Conditions

Parameter	Symbol	Min.	Typ.	Max.	Unit	Notes
Power Supply Voltage	V _{cc}	3.13	3.3	3.47	V	
Case Operating Temperature	T _c	0		70	°C	
Data Rate Per Lane				50	Gbps	
Bit Error Rate	BER			10 ⁻¹²		

Cable Specifications

Parameter	Symbol	Min.	Typ.	Max.	Unit	Notes
Cable Diameter	DIA		9.8		mm	AWG 24
			8.4		mm	AWG 26
			7.4		mm	AWG 28
			6.6		mm	AWG 30
Bend Radius		5x Cable Diameter			mm	
Cable Jacket Type		PVC				
Cable Impedance	Z	90	100	110	Ω	

Electrical Pad Layout



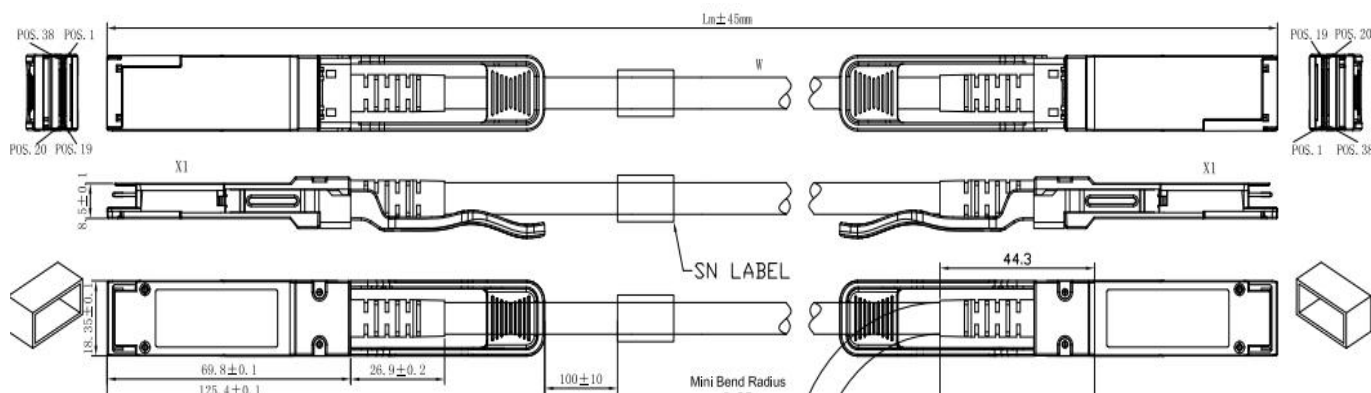
Pin Definitions

Pin	Logic	Symbol	Description
1		GND	Ground

2	CML-I	Tx2n	Transmitter Inverted Data Input
3	CML-I	Tx2p	Transmitter Non-Inverted Data Input
4		GND	Ground
5	CML-I	Tx4n	Transmitter Inverted Data Input
6	CML-I	Tx4p	Transmitter Non-Inverted Data Input
7		GND	Ground
8	LVTTL-I	ModSelL	Module Select
9	LVTTL-I	ResetL	Module Reset
10		Vcc Rx	+3.3V Power Supply Receiver
11	LVC MOS-I/O	SCL	2-wire serial interface clock
12	LVC MOS-I/O	SDA	2-wire serial interface data
13		GND	Ground
14	CML-O	Rx3p	Receiver Non-Inverted Data Output
15	CML-O	Rx3n	Receiver Inverted Data Output
16		GND	Ground
17	CML-O	Rx1p	Receiver Non-Inverted Data Output
18	CML-O	Rx1n	Receiver Inverted Data Output
19		GND	Ground
20		GND	Ground
21	CML-O	Rx2n	Receiver Inverted Data Output
22	CML-O	Rx2p	Receiver Non-Inverted Data Output
23		GND	Ground
24	CML-O	Rx4n	Receiver Inverted Data Output
25	CML-O	Rx4p	Receiver Non-Inverted Data Output
26		GND	Ground
27	LVTTL-O	ModPrsL	Module Present
28	LVTTL-O	IntL	Interrupt
29		Vcc Tx	+3.3V Power supply transmitter
30		Vcc1	+3.3V Power supply
31	LVTTL-I	LPMODE	Low Power Mode
32		GND	Ground
33	CML-I	Tx3p	Transmitter Non-Inverted Data Input
34	CML-I	Tx3n	Transmitter Inverted Data Input
35		GND	Ground
36	CML-I	Tx1p	Transmitter Non-Inverted Data Input
37	CML-I	Tx1n	Transmitter Inverted Data Input
38		GND	Ground

Mechanical Dimensions

The connector is compatible with the SFF-8665 specification.



⚠ Warnings

Process plug

The transceiver optics is supplied with a dust cover. This plug protects the transceiver optics during standard manufacturing processes by preventing contamination from air borne particles. It is recommended that the dust cover remain in the transceiver whenever an optical fiber connector is not inserted.

Handling Precautions

The transceiver optics is susceptible to damage as a result of electrostatic discharge (ESD). A static free environment is highly recommended. Follow guidelines according to proper ESD procedures.

Laser Safety

The transceiver optics is a Class 1 laser product per international standard IEC 60825-1. Radiation emitted by laser devices can be dangerous to human eyes. Avoid eye exposure to direct or indirect radiation.

For more product information, visit us on the web at www.optcore.net



DS/VER220111/EN Copyright © 2022 Optcore Technology Co.,Ltd. All rights reserved. Optcore, Optcore logo are registered trademarks of Optcore Technology Co.,Ltd. All other brands, product names, or trademarks mentioned are the property of their respective owners. Specifications and product availability are subject to change without notice. Optcore assumes no responsibility for inaccuracies contained herein.

