

56G QSFP+ Direct Attach Passive Copper Cable

Features

- Compliant with SFF- 8436
- 4-Channel Full-Duplex Passive Copper Cable
- Maximum aggregate data rate: 56 Gb/s (4 x 14.02 Gb/s)
- Available in lengths of 1m(1.6 ft) to 5m (16.4 ft)
- High-Density QSFP 38-PIN Connector
- Single 3.3V power supply
- RoHS compliant
- Commercial temperature range(COM): 0 to 70° C
- Low power consumption: less than 0.1W
- I2C based two-wire serial interface for EEPROM signature which can be customized
- 26AWG to 30AWG cable available

Applications

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

Compliance

- Compliant with SFF-8436
- Compliant with IEEE 802.3ba
- RoHS Compliance

Description

The QSFP-56G-DAC direct attach copper cable assembly (also known as DAC) is suitable for very short distances and offers a highly cost-effective way to establish a 56 Gigabit link connectivity between devices using QSFP ports.

The QSFP-56G-DAC is fully comply with QSFP+ Multi-Source Agreement (MSA) standards SFF-8436 specifications. It is developed specifically as a cost-effective and lower-power alternative to 56G QSFP+ optics and 56G QSFP+ active optical fiber cable (QSFP+ AOC).

Absolute Maximum Ratings

Table1- Absolute Maximum Ratings

Parameter	Symbol	Min.	Typical	Max.	Unit	Note
Storage Temperature	TSTG	-40	-	+85	°C	
Relative Humidity (non-condensation)	RH	5	-	95	%	
Operating Case Temperature	Tc	0	-	+70	°C	
Supply Voltage	VCC3	-0.3	3.3	3.6	v	

Recommended Operating Conditions

Table2-Recommended Operating Conditions

Parameter	Symbol	Min.	Typical	Max.	Unit	Note
Power Supply Voltage	Vcc	3.13	3.3	3.47	V	
Power Dissipation	PD			0.1	W	
Case Operating Temperature	Tc	0		70	°C	
Data Rate Per Lane				14.02	Gbps	
Bit Error Rate	BER			10-12		

Recommended Operating Conditions

Table3-Cable Specifications

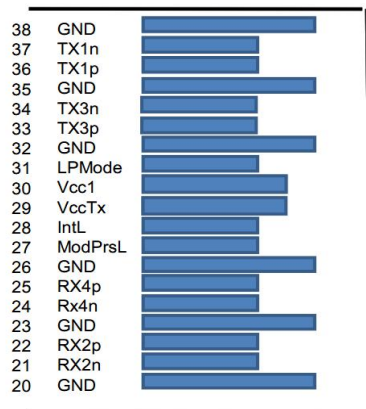
Parameter	Symbol	Min.	Typical	Max.	Unit	Note
Bend Radius	1M		35		mm	30AWG
	2M		35		mm	30AWG

	3M		35		mm	30AWG
	4M		45		mm	26AWG
	5M		45		mm	26AWG
Cable Jacket Type	PVC					
Cable Impedance	Z	90	100	110	Ω	

Pin Descriptions

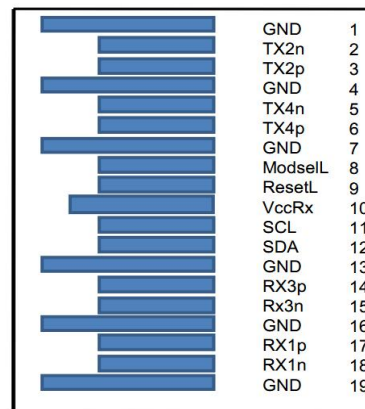
Pin	Symbol	Description	Note
1	GND	Ground	1
2	Tx2n	Transmitter Inverted Data Input	
3	Tx2p	Transmitter Non-Inverted Data Input	
4	GND	Ground	1
5	Tx4n	Transmitter Inverted Data Input	
6	Tx4p	Transmitter Non-Inverted Data Input	
7	GND	Ground	1
8	ModSelL	Module Select	
9	ResetL	Module Reset	
10	Vcc Rx	+3.3V Power Supply Receiver	
11	SCL	2-wire serial interface clock	2
12	SDA	2-wire serial interface data	2
13	GND	Ground	1
14	Rx3p	Receiver Non-Inverted Data Output	
15	Rx3n	Receiver Inverted Data Output	
16	GND	Ground	1
17	Rx1p	Receiver Non-Inverted Data Output	
18	Rx1n	Receiver Inverted Data Output	
19	GND	Ground	1
20	GND	Ground	1
21	Rx2n	Receiver Inverted Data Output	
22	Rx2p	Receiver Non-Inverted Data Output	
23	GND	Ground	
24	Rx4n	Receiver Inverted Data Output	
25	Rx4p	Receiver Non-Inverted Data Output	
26	GND	Ground	1

27	ModPrsL	Module Present	2
28	IntL	Interrupt	2
29	Vcc Tx	+3.3V Power supply transmitter	
30	Vcc1	+3.3V Power supply	
31	LPMoDe	Low Power Mode	
32	GND	Ground	1
33	Tx3p	Transmitter Non-Inverted Data Input	
34	Tx3n	Transmitter Inverted Data Input	
35	GND	Ground	1
36	Tx1p	Transmitter Non-Inverted Data Input	
37	Tx1n	Transmitter Inverted Data Input	
38	GND	Ground	1



Top Side

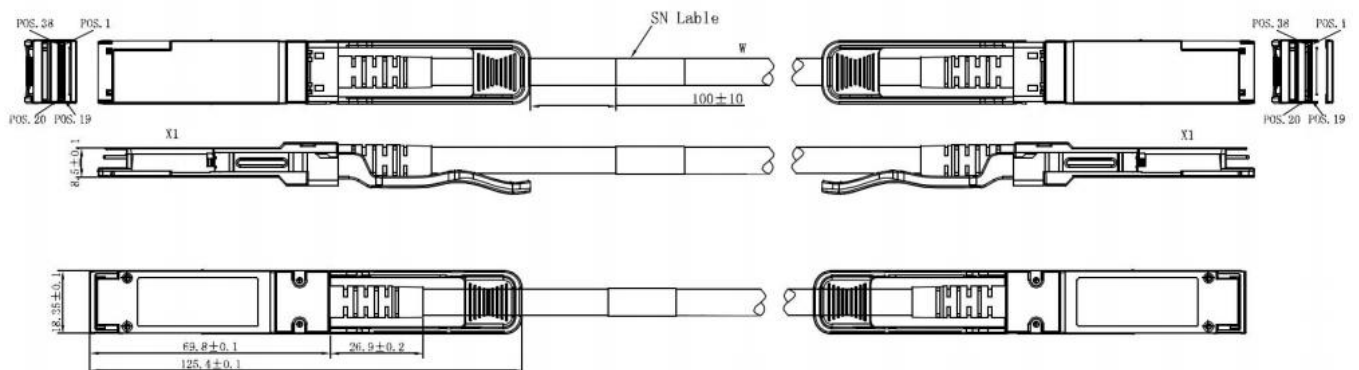
Viewed from Top



Bottom Side

Viewed from Bottom

Mechanical Specifications



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Disclaimer

1. We are committed to continuous product improvement and feature upgrades, and the contents contained in this manual are subject to change without notice.

2. Nothing herein should be construed as constituting an additional warranty.

3. NADDOD assumes no responsibility for the use or reliability of equipment or software not provided by NADDOD.

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