

QSFP28 100G Active Optical Cable

Product Features

- 4x28Gb/s, 850nm, QSFP28 Active Optical Cable
- Compliant to the QSFP28 MSA SFF-8636
- Built-in digital diagnostic functions
- VCSEL array transmitter and PIN array receiver
- Single +3.3V power supply, and maximum 2.5W operation power
- Operation case temperature 0~70°C for commercial
- Operating Data rate: up to 25.78G for each lane.
- RoHS6 compliance, and Class 1 laser safety
- Maximum link length of 70m on OM3(MMF), 100m on OM4(MMF)
- Application: 100GBASE-SR4 Ethernet

Operating Condition

Parameter	Unit	Min.	Typical	Max.
Storage Temperature	°C	-10		85
Operating Case Temp for C-temp	°C	0		70
Power Supply Voltage	V	3.135	3.3	3.465
Power Consumption	W			2.5
Bit Rate	Gbps	10.31	25.78	

Electrical Characteristics

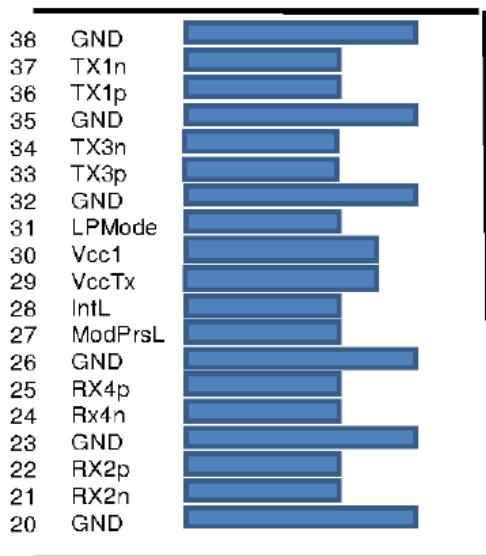
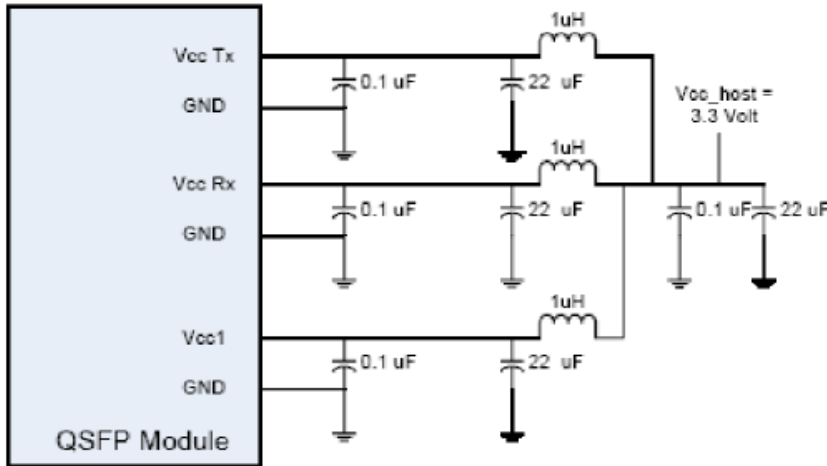
Parameter	Unit	Min.	Typical	Max.	Note
Transmitter					
Data Input Swing Differential/TX	mV	200	-	1600	
Date Differential Impedance	Ω	90	100	110	
Receiver					
Data Output Swing Differential/RX	mV	350	-	1000	
Date Differential Impedance	Ω	90	100	110	
Bit Error Ratio				1E-12	1

Note: PRBS2^31-1@25.78125Gbps

PIN Definition

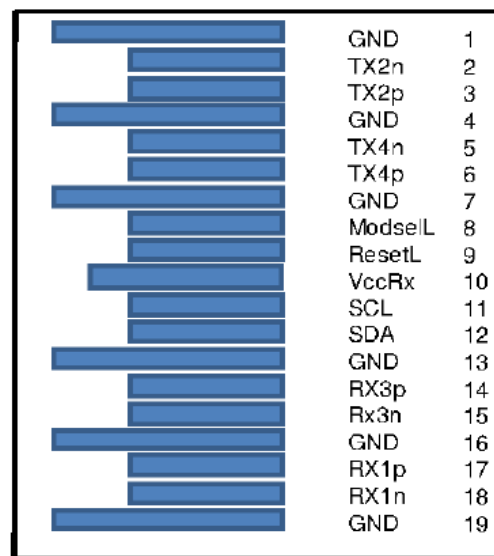
Pin No.	Symbol	Level / Logic	Description
1	GND		Module Ground
2	Tx2n	CML-I	Transmitter Inverted Data Input
3	Tx2p	CML-I	Transmitter Non-Inverted Data Input
4	GND		Module Ground
5	Tx4n	CML-I	Transmitter Inverted Data Input
6	Tx4p	CML-I	Transmitter Non-Inverted Data Input
7	GND		Module Ground
8	ModSelL	LVTTTL-I	Module Select
9	ResetL	LVTTTL-I	Module Reset
10	VccRx		+3.3V Power Supply for Receiver
11	SCL	LVTTTL-I	2-Wire Serial Interface Clock
12	SDA	LVTTTL-I/O	2-Wire Serial Interface Data Line
13	GND		Module Ground
14	Rx3p	CML-O	Receiver Non-Inverted Data Output
15	Rx3n	CML-O	Receiver Inverted Data Output
16	GND		Module Ground
17	Rx1p	CML-O	Receiver Non-Inverted Data Output
18	Rx1n	CML-O	Receiver Inverted Data Output
19	GND		Module Ground
20	GND		Module Ground
21	Rx2n	CML-O	Receiver Inverted Data Output
22	Rx2p	CML-O	Receiver Non-Inverted Data Output
23	GND		Module Ground
24	Rx4n	CML-O	Receiver Inverted Data Output
25	Rx4p	CML-O	Receiver Non-Inverted Data Output
26	GND		Module Ground
27	ModPrsL	LVTTTL-O	Module Present
28	IntL	LVTTTL-O	Interrupt
29	VccTx		+3.3V Power Supply for Transmitter
30	Vcc1		+3.3V Power Supply
31	LPMODE	LVTTTL-I	Low Power Mode
32	GND		Module Ground
33	Tx3p	CML-I	Transmitter Non-Inverted Data Input
34	Tx3n	CML-I	Transmitter Inverted Data Input
35	GND		Module Ground
36	Tx1p	CML-I	Transmitter Non-Inverted Data Input
37	Tx1n	CML-I	Transmitter Inverted Data Input
38	GND		Module Ground

- Notes: 1. GND is the symbol for signal and supply (power) common for the QSFP28 module. All are common within the QSFP28 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 QSFP28 Module in any combination.

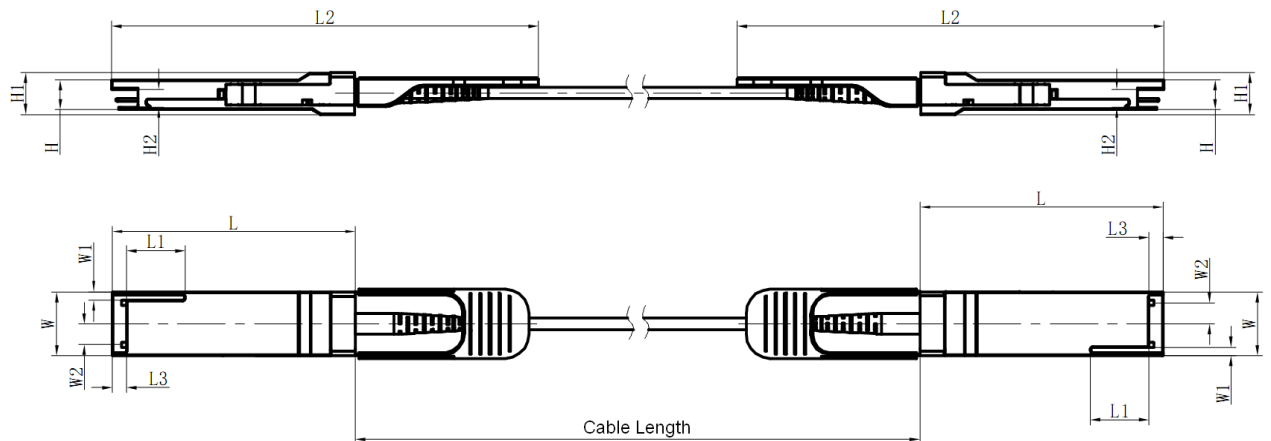


Top Side
Viewed From Top

Module Card Edge



Bottom Side
Viewed From Bottom

OUTLINES


Unit: mm

	L	L1	L2	L3	W	W1	W2	H	H1	H2
MAX	72.2	—	122	4.35	18.45	—	6.2	8.6	12.0	5.35
Typical	72.0	—	—	4.20	18.35	—	—	8.5	11.8	5.2
MIN	68.8	16.5	118	4.05	18.25	2.2	5.8	8.4	11.6	5.05

ESD

This transceiver is specified as ESD threshold 1kV for high speed data pins and 2kV for all other electrical input pins, tested per MIL-STD-883, Method 3015.4 /JESD22-A114-A (HBM). However, normal ESD precautions are still required during the handling of this module. This transceiver is shipped in ESD protective packaging. It should be removed from the packaging and handled only in an ESD protected environment.

Laser Safety

This is a Class 1 Laser Product according to IEC 60825-1:2007. This product complies with 21 CFR 1040.10 and 1040.11 except for deviations pursuant to Laser Notice No. 50, dated (June 24, 2007).

Ordering Information

Ordering P/Ns	Description
DH88hh-QCCA-XXX	4x25.78G QSFP28 AOC, 850nm, MMF, Commercial temperature.

XXX	Cable (MMF) Length
001	001=1m
050	050=50m
100	100=100m

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