

400Gb/S QSFP-DD Direct Attach Cable

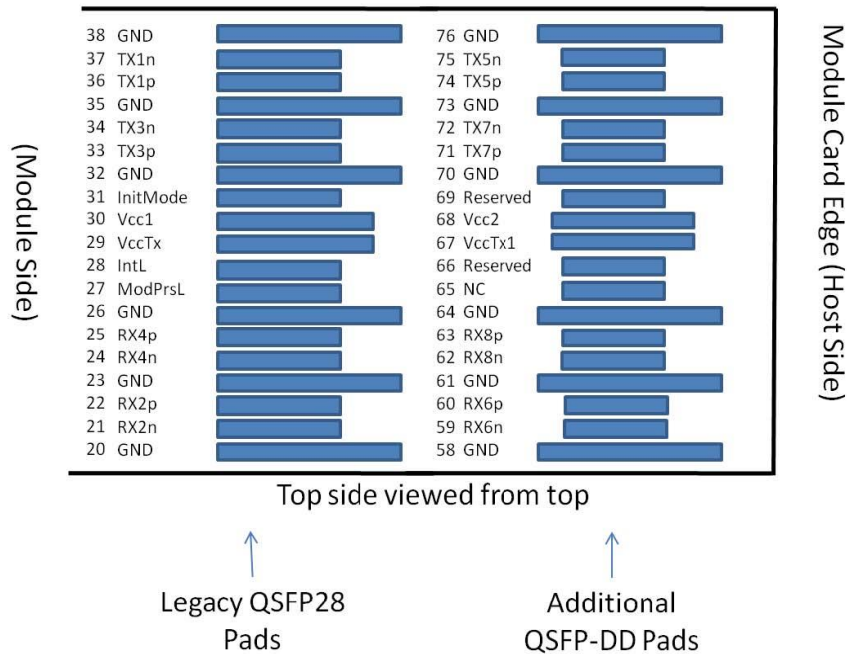
P/N: WS-QD4-DACPx-x

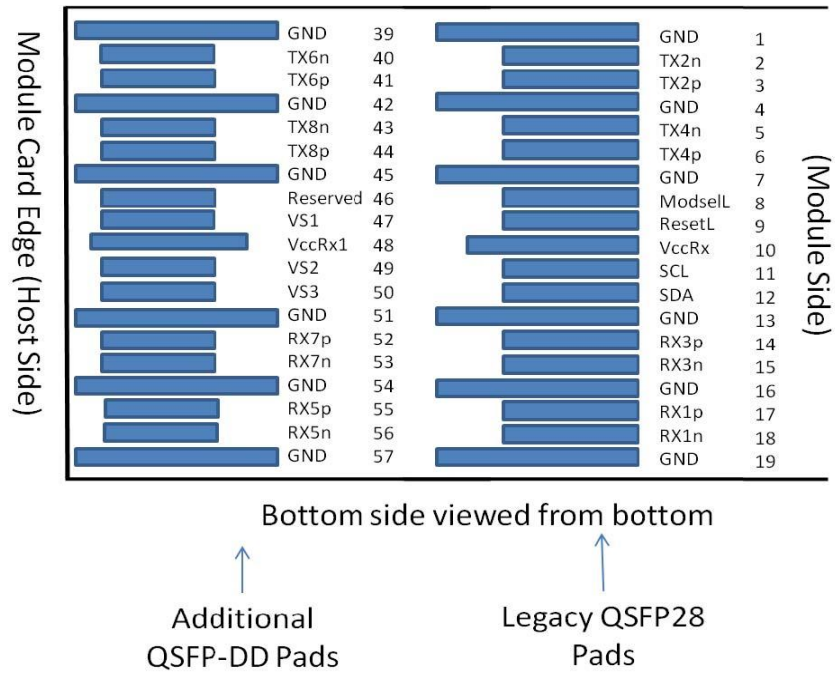


Features:

- Compliant with 400G Ethernet IEEE802.3cd
- Compliant to QSFP-DD Rev. 5.0
- Supports PAM4 400Gbps data rate links
- Using standard 4 row by 8 channel surface mount connector
- Single 3.3V power supply
- -25°C to 70°C case temperature operating range
- Hot pluggable electrical interface
- I²C management interface
- RoHS-6 Compliant

QSFP-DD Module Pad Assignments and Descriptions



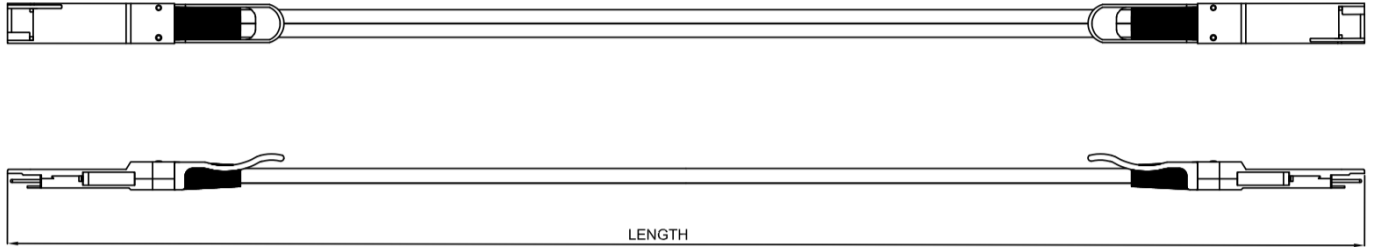


Pin	Logic	Symbol	Description	Plug Sequence	Notes
1		GND	Ground	1B	
2	CML-I	Tx2n	Transmitter Inverted Data Input	3B	
3	CML-I	Tx2p	Transmitter Non-Inverted Data Input	3B	
4		GND	Ground	1B	
5	CML-I	Tx4n	Transmitter Inverted Data Input	3B	
6	CML-I	Tx4p	Transmitter Non-Inverted Data Input	3B	
7		GND	Ground	1B	
8	LVTTL-I	ModSelL	Module Select	3B	
9	LVTTL-I	ResetL	Module Reset	3B	
10		VccRx	+3.3V Power Supply Receiver	2B	
11	LVC MOS-I/O	SCL	2-wire serial interface clock	3B	
12	LVC MOS-I/O	SDA	2-wire serial interface data	3B	
13		GND	Ground	1B	
14	CML-O	Rx3p	Receiver Non-Inverted Data Output	3B	
15	CML-O	Rx3n	Receiver Inverted Data Output	3B	
16		GND	Ground	1B	

17	CML-O	Rx1p	Receiver Non-Inverted Data Output	3B	
18	CML-O	Rx1n	Receiver Inverted Data Output	3B	
19		GND	Ground	1B	
20		GND	Ground	1B	
21	CML-O	Rx2n	Receiver Inverted Data Output	3B	
22	CML-O	Rx2p	Receiver Non-Inverted Data Output	3B	
23		GND	Ground	1B	
24	CML-O	Rx4n	Receiver Inverted Data Output	3B	
25	CML-O	Rx4p	Receiver Non-Inverted Data Output	3B	
26		GND	Ground	1B	
27	LVTTL-O	ModPrsL	Module Present	3B	
28	LVTTL-O	IntL	Interrupt	3B	
29		VccTx	+3.3V Power supply transmitter	2B	
30		Vcc1	+3.3V Power supply	2B	
31	LVTTL-I	InitMode	Initialization mode; In legacy QSFP applications, the InitMode pad is called LPMODE	3B	
32		GND	Ground	1B	
33	CML-I	Tx3p	Transmitter Non-Inverted Data Input	3B	
34	CML-I	Tx3n	Transmitter Inverted Data Input	3B	
35		GND	Ground	1B	
36	CML-I	Tx1p	Transmitter Non-Inverted Data Input	3B	
37	CML-I	Tx1n	Transmitter Inverted Data Input	3B	
38		GND	Ground	1B	
39		GND	Ground	1A	
40	CML-I	Tx6n	Transmitter Inverted Data Input	3A	
41	CML-I	Tx6p	Transmitter Non-Inverted Data Input	3A	
42		GND	Ground	1A	
43	CML-I	Tx8n	Transmitter Inverted Data Input	3A	
44	CML-I	Tx8p	Transmitter Non-Inverted Data Input	3A	
45		GND	Ground	1A	
46		Reserved	For future use	3A	
47		VS1	Module Vendor Specific 1	3A	
48		VccRx1	3.3V Power Supply	2A	

49		VS2	Module Vendor Specific 2	3A	
50		VS3	Module Vendor Specific 3	3A	
51		GND	Ground	1A	
52	CML-O	Rx7p	Receiver Non-Inverted Data Output	3A	
53	CML-O	Rx7n	Receiver Inverted Data Output	3A	
54		GND	Ground	1A	
55	CML-O	Rx5p	Receiver Non-Inverted Data Output	3A	
56	CML-O	Rx5n	Receiver Inverted Data Output	3A	
57		GND	Ground	1A	
58		GND	Ground	1A	
59	CML-O	Rx6n	Receiver Inverted Data Output	3A	
60	CML-O	Rx6p	Receiver Non-Inverted Data Output	3A	
61		GND	Ground	1A	
62	CML-O	Rx8n	Receiver Inverted Data Output	3A	
63	CML-O	Rx8p	Receiver Non-Inverted Data Output	3A	
64		GND	Ground	1A	
65		NC	No Connect	3A	
66		Reserved	For future use	3A	
67		VccTx1	3.3V Power Supply	2A	
68		Vcc2	3.3V Power Supply	2A	
69		Reserved	For Future Use	3A	
70		GND	Ground	1A	
71	CML-I	Tx7p	Transmitter Non-Inverted Data Input	3A	
72	CML-I	Tx7n	Transmitter Inverted Data Input	3A	
73		GND	Ground	1A	
74	CML-I	Tx5p	Transmitter Non-Inverted Data Input	3A	
75	CML-I	Tx5n	Transmitter Inverted Data Input	3A	
76		GND	Ground	1A	

Mechanical Drawing



Unit: mm

Ordering Information

Part No	Specification					
	Package	Data rate	Temp.	Gauge	Length*	Application
WS-QD4-DACP0-0H	QSFP-DD	PAM4 400G	-25~70°C	30AWG	0.5M	400G Ethernet
WS-QD4-DACP0-1	QSFP-DD	PAM4 400G	-25~70°C	30AWG	1M	400G Ethernet
WS-QD4-DACP8-1H	QSFP-DD	PAM4 400G	-25~70°C	28AWG	1.5M	400G Ethernet
WS-QD4-DACP8-2	QSFP-DD	PAM4 400G	-25~70°C	28AWG	2M	400G Ethernet
WS-QD4-DACP8-2H	QSFP-DD	PAM4 400G	-25~70°C	28AWG	2.5M	400G Ethernet
WS-QD4-DACP8-3	QSFP-DD	PAM4 400G	-25~70°C	28AWG	3M	400G Ethernet

Modification History

Revision	Date	Description	Originator	Review	Approved
V1.0	21-Jun-2019	New Issue	Ivy Chen	Wayne Liao	Wayne Liao



Taipei Headquarters
16F-5, No. 75, Sec. 1,
Xintai 5th Rd., Xizhi
Dist., New Taipei City
22101, Taiwan
Tel: +886-2-2698-7208
Fax: +886-2-2698-7210

U.S. Branch
2080 Rancho Higuera Ct.
Fremont, CA 94539,
USA
Tel: 510-651-7800
Fax: 510-651-7822

ShenZhen Branch
610#, 6F, No.204
Building, 2nd Industrial
zone Nanyou, Nanshan
district, Shenzhen,
Guangdong China
518054
Tel: +86-755-86265980