400G QSFP112 Passive Direct Attach Copper Cable

Features

- Compliant with QSFP112 MSA Specification Rev 2.1
- SFF-8636: Common Management Interface
- SFF-8417: Multi Conductor Cable Flex Cycle Test Procedure
- SFF-8661 Rev. 2.5 QSFP+ 4X Module
- I^2C for EEPROM communication, pull to Release latch design
- Low loss, stronger mechanical features, more flexible
- IEEE 802.3ck Physical Layer Specifications and Management Parameters for 100 Gb/s, 200 Gb/s, and 400 Gb/s
- Electrical Interfaces Based on 100 Gb/s Signaling

Standards Compliance

- IEEE 802.3ck
- SFF-8661/SFF8636/SFF 8417 Compliant

Description

Quad Small Form-factor Pluggable solution achieving 400G transmission(hereafter referred to as QSFP112) is designed for high-density applications. The hot- pluggable transceiver integrates 4 transmitting and 4 receiving channels.

QSFP112 to QSFP112 cable assemblies are high performance, high bandwidth and cost effective interconnect solutions which support 400G standards with different data rate applications.

Product Requirements

1. Operating Voltage: 3.135V~3.465V
2. Temperature: Operating (0℃ to +70℃) / Storage (-40℃to +85℃)
3. Humidity Operating: 85% MAX
4. Insertion/Removal cycles: 50 cycles(QSFP Module)
5. Cable type is a 100 ohm twinax cable which consists of 8 parallel pairs. Each pair consists of two signal conductors and two drains wire wrapped in a shield.

6. Cable Bulk shield is directly to be connected to the connector backshell to minimize EMI.

Materials

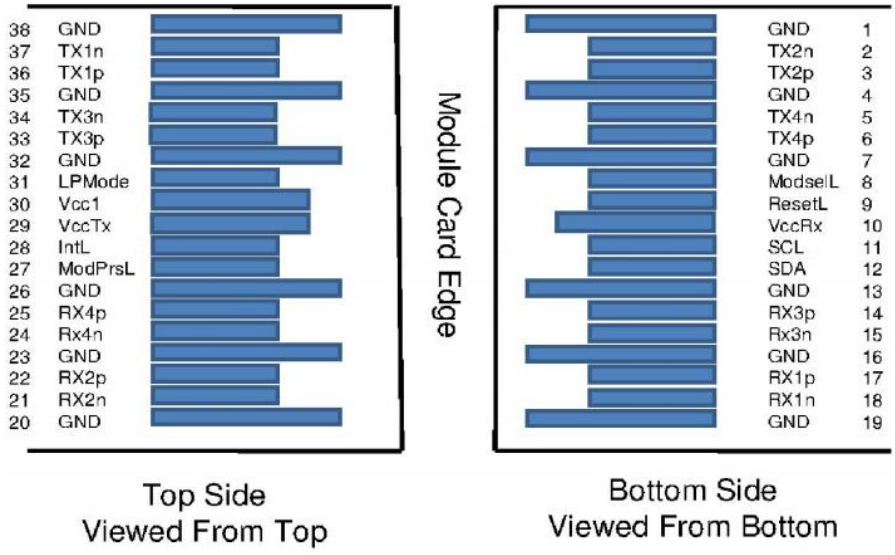
Connector

- The Backshell material is Nickel Plated Zinc
- The PCB has gold plated pads
- All materials are RoHS complaint
- The PCBs are certified by UL

Cable

- The conductors are solid copper with silver plating
- The dielectric consist of Skin - Foam - Skin PE
- The cable jacket is polyvinylchloride (PVC)
- All materials are RoHS complaint
- The cables are UL listed CM 75° C

Pin Descriptions



Pair No.	P1		P2	
	Pin	Signal	Pin	Signal
1	37	TX1n	18	RX1n
	36	TX1p	17	RX1p
2	2	TX2n	21	RX2n
	3	TX2p	22	RX2p
3	34	TX3n	15	RX3n
	33	TX3p	14	RX3p
4	5	TX4n	24	RX4n
	6	TX4p	25	RX4p
5	18	RX1n	37	TX1n
	17	RX1p	36	TX1p
6	21	RX2n	2	TX2n
	22	RX2p	3	TX2p
7	15	RX3n	34	TX3n
	14	RX3p	33	TX3p
8	24	RX4n	5	TX4n
	25	RX4p	6	TX4p

Electrical Performance Requirements

No.	Test Items	Test Condition	Requirement
6.1.1	Current		0.5A per contact
6.1.2	Voltage		30 vDC per contact
6.1.3	LLCR	EIA 364-23, 20mVdc, 100mA	less than 2 ohms
6.1.4	Continuity	Verify the continuous electrical path	No open, short, or high resistance

SI Requirements

No.	Test Items	Test Condition	Requirement
6.2.1	SDD21&SDD12	(Please reference only, when the length is more than 1.5m) ⩽19.75 dB Min. @26.56 GHz; ⩾ 11.0 dB max. @26.56GHz;	From 0.01 GHz to 26.56GHz
6.2.2	ERL	Minimum cable assembly ERL(*) : ⩾ 8.25dB	/
6.2.3	SCD12-SDD12 SCD21-SDD21	⩾ 10 0.05GHz⩽f⩽12.89GHz ⩾ 14-0.3108f 12.89GHz⩽f⩽40GHz	(up to 40GHz)

Length Information

No.	Part Number	Type	Length	AWG	Tolerance
1	Q112-400G-CU0-5	DAC	0.5 meter	30AWG	+/-0.05 meter
2	Q112-400G-CU1	DAC	1 meter	26AWG	+/-0.05 meter
3	Q112-400G-CU1-5	DAC	1.5 meter	26AWG	+/-0.05 meter
4	Q112-400G-CU2	DAC	2 meter	26AWG	+/-0.05 meter
5	Q112-400G-CU3	DAC	3 meter	26AWG	+/-0.05 meter

Further Information:

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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.