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Mellanox® MCP7H00-G01A Compatible 100GBase-CU QSFP28 to 2xQSFP28 DAC (Passive Twinax, 1.5m)

Product Description

This Mellanox® MCP7H00-G01A compatible 100GBase-CU QSFP28 to 2xQSFP28 passive direct attach cable has a maximum reach of 1.5m (4.9ft). It is 100% Mellanox® compatible and has been programmed, uniquely serialized, data-traffic and application tested to ensure that it is compliant and functional. This product complies with MSA (Multi-Source Agreement) standards. We stand behind the quality of our products and proudly offer a limited lifetime warranty.

Skylane's transceivers are RoHS compliant and lead-free.

Features:

- QSFP Module Complaint to SFF-8661
- Enable (4x25.78)100Gbps Transmission
- Transmission Data Rate up to 25.78 Gbps per Channel
- Operating Temperature: 0 to 70 Celcius
- RoHS Complaint and Lead-Free
- Built in EEPROM Functions



Applications:

- 100GBase Ethernet

For your product safety, please read the following information carefully before any manipulation of the transceiver:



ESD

This transceiver is specified as ESD threshold 1kV for SFI pins and 2kV for all others electrical input pins, tested per MIL-STD-883G, Method 3015.4 /JESD22-A114-A (HBM). However, normal ESD precautions are still required during the handling of this module.



LASER SAFETY

This is a Class1 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).

The optical ports of the module need to be terminated with an optical connector or with a dust plug in order to avoid contamination.

General Specifications

Parameter	Symbol	Min.	Typ.	Max.	Unit
Supply Voltage	Vcc	3.13	3.3	3.47	V
Storage Temperature	Tstg	-40		85	°C
Operating Temperature	Tc	0		70	°C
Relative Humidity	RH	5		85	%
Data Rate			100		Gbps

Electrical Specifications

Parameter	Symbol	Min.	Typ.	Max.	Unit
Resistance	Rcon			3	Ω
Insulation Resistance	Rins			10	M Ω
Raw Cable Impedance	Zca	95	100	105	Ω
Mated Connector Impedance	Zmated	85	100	115	Ω
Insertions Loss at 12.89 GHz	SDD21	8		22.48	dB
Return Loss at 12.89GHz	SDD11/22	$\text{Return_Loss}(f) \geq \begin{cases} 16.5-2\sqrt{f} & 0.5 \leq f < 4.1 \\ 10.66-14\log_{10}(f/5.5) & 4.1 \leq f \leq 19 \end{cases}$			dB
Differential to Common-Mode Return Loss	SCD11/22	$\text{Return_Loss}(f) \geq \begin{cases} 22-(20/25.78)f & 0.01 \leq f \leq 12.89 \\ 15-(6/25.78)f & 12.89 \leq f \leq 19 \end{cases}$			dB
Differential to Common-Mode Conversion Loss	SCD21-SDD21	$\text{Conversion_Loss}(f) \geq \begin{cases} 10 & 0.01 \leq f < 12.89 \\ 27-(29/22)f & 0.01 \leq f < 15.7 \\ 6.3 & 15.7 \leq f \leq 19 \end{cases}$			dB
Minimum COM	COM	3			dB

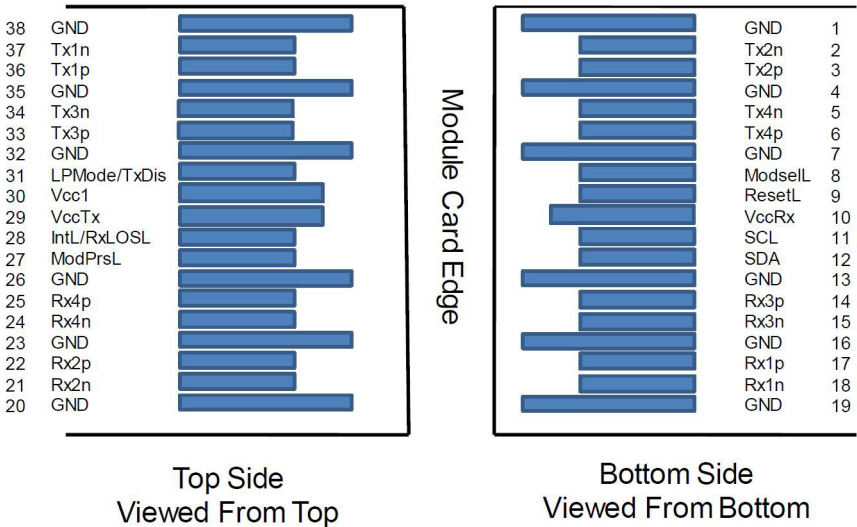
Pin Descriptions

Pin	Logic	Symbol	Name/Descriptions	Plug Sequence	Ref.
1		GND	Module Ground.	1	1
2	CML-I	Tx2-	Transmitter Inverted Data Input.	3	
3	CML-I	Tx2+	Transmitter Non-Inverted Data Input.	3	
4		GND	Module Ground.	1	1
5	CML-I	Tx4-	Transmitter Inverted Data Input.	3	
6	CML-I	Tx4+	Transmitter Non-Inverted Data Input.	3	
7		GND	Module Ground.	1	1
8	LVTTL-I	MODSEIL	Module Select.	3	2
9	LVTTL-I	ResetL	Module Reset.	3	2
10		VccRx	+3.3V Receiver Power Supply.	2	
11	LVC MOS-I/O	SCL	2-Wire Serial Interface Clock.	3	2
12	LVC MOS-I/O	SDA	2-Wire Serial Interface Data.	3	2
13		GND	Module Ground.	1	1
14	CML-O	Rx3+	Receiver Non-Inverted Data Output.	3	
15	CML-O	Rx3-	Receiver Inverted Data Output.	3	
16		GND	Module Ground.	1	1
17	CML-O	Rx1+	Receiver Non-Inverted Data Output.	3	
18	CML-O	Rx1-	Receiver Inverted Data Output.	3	
19		GND	Module Ground.	1	1
20		GND	Module Ground.	3	1
21	CML-O	Rx2-	Receiver Inverted Data Output.	3	
22	CML-O	Rx2+	Receiver Non-Inverted Data Output.	1	
23		GND	Module Ground.	1	1
24	CML-O	Rx4-	Receiver Inverted Data Output.	3	
25	CML-O	Rx4+	Receiver Non-Inverted Data Output.	3	
26		GND	Module Ground.	1	1
27	LVTTL-O	ModPrsL	Module Present. Internally pulled down to the GND.	3	
28	LVTTL-O	IntL	Interrupt output should be pulled up on the host board.	3	2
29		VccTx	+3.3V Transmitter Power Supply.	2	
30		Vcc1	+3.3V Power Supply.	2	
31	LVTTL-I	LPMode	Low-Power Mode.	3	2
32		GND	Module Ground.	1	1
33	CML-I	Tx3+	Transmitter Non-Inverted Data Input.	3	
34	CML-I	Tx3-	Transmitter Inverted Data Input.	3	
35		GND	Module Ground.	1	1
36	CML-I	Tx1+	Transmitter Non-Inverted Data Input.	3	
37	CML-I	Tx1-	Transmitter Inverted Data Input.	3	
38		GND	Module Ground.	1	1

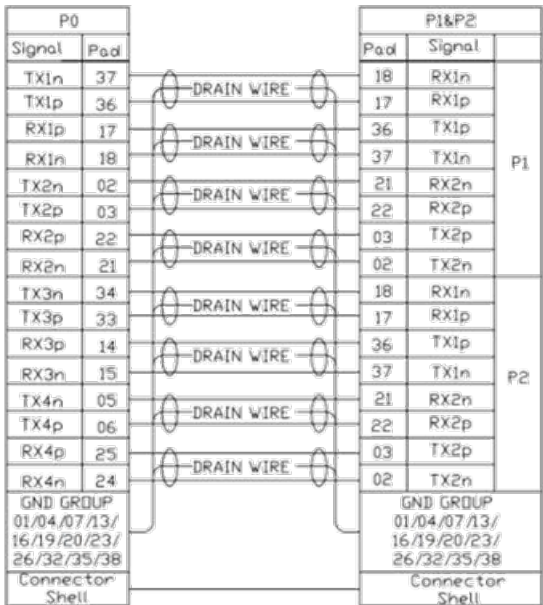
Notes:

- 1. GND is the symbol for signal and supply (power) common for the QSFP+ module. All are common within the QSFP+ module and all module voltages are references to this potential unless otherwise noted. Connect the directly to the host board signal-common ground plane.
- 2. VccRx, Vcc1, and VccTx are the receiver and transmitter power supplies and shall be applied concurrently. Requirements defined for the host board power supply filtering is shown in host board figure. VccRx, Vcc1, and VccTx may be internally connected within the QSFP+ module in any combination. The connector pins are each for a maximum current of 500mA.

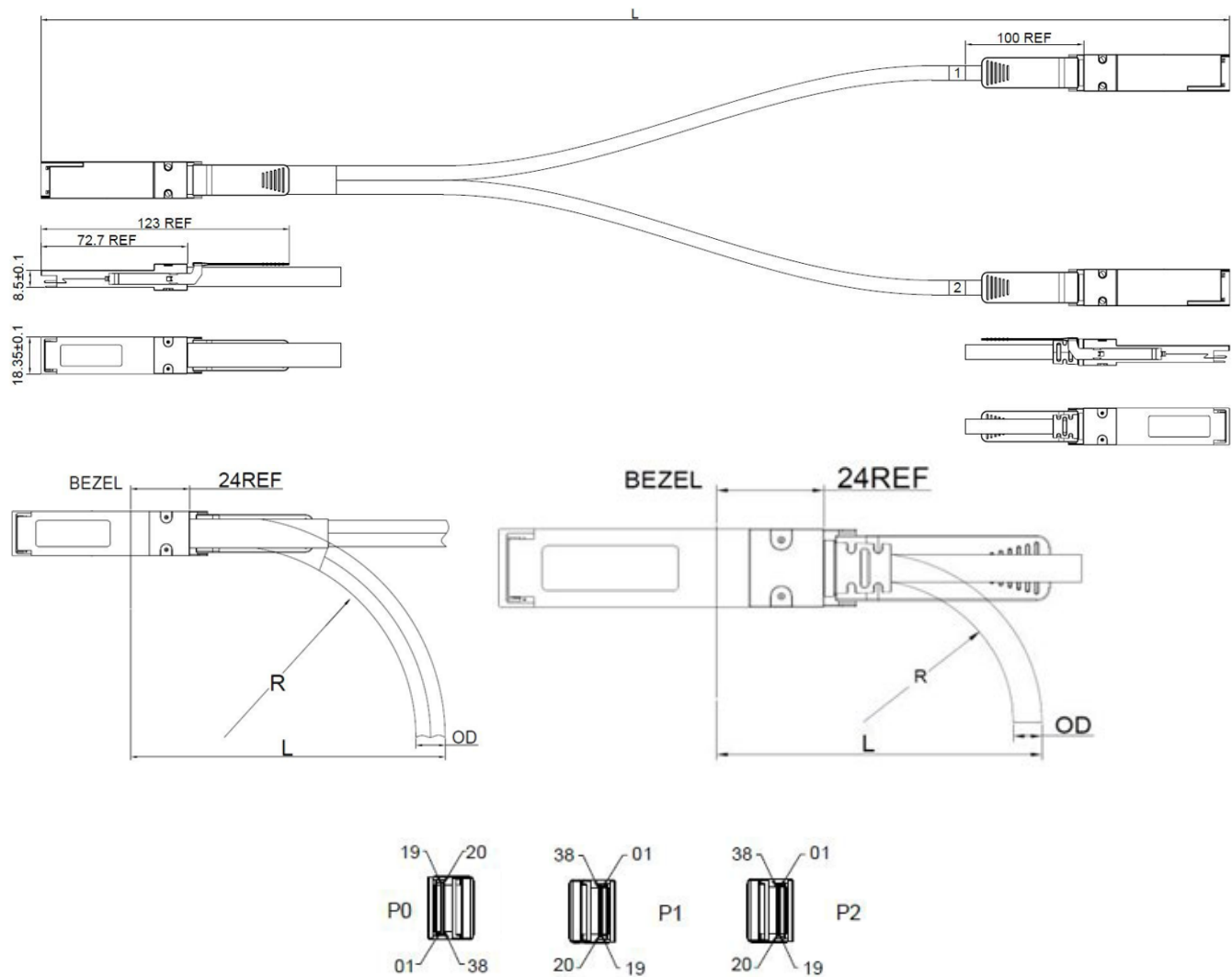
Electrical Pin-out Details



Wire Diagram



Mechanical Specifications



Cable Specifications

Parameter		Symbol	Min.	Typ.	Max.	Unit
Length		L	0.5		5.0	M
AWG				30		AWG
Jacket Material			PVC, Black (or Customization)			
OD	P0			12MM		
	P1 & P2			6MM		
Bend Radius	P0	R		60MM		
	P1 & P2			30MM		
Minimum Bend Radius	P0	L		96MM		
	P1 & P2			60MM		

About Skylane Optics

Skylane is a leading provider of transceivers for optical communication.

We offer an extensive portfolio for the enterprise, access, datacenter and metropolitan fiber optical market as well as for smart home applications and home networks.

We cover the European, South American and North American market with a strong partner network and have offices in Belgium, Brazil, Sweden and USA.

Our offerings are characterized by high quality and performance. In combination with our strong technical support, we enable our customers to build cost optimized network solutions.

We offer an extensive range of high-quality products including transceivers (Optical and copper), Active Optical Cable (AOC), Direct Attach Cable (DAC), Mux/Demux, Coding Box.

