

QSFP-100GB-AOC5MLP-MX-SKY

Mellanox® Compatible 100GBase-AOC QSFP28 to QSFP28 Low Power Active Optical Cable (850nm, MMF, 5m, Infiniband EDR, LSZH)

Product Description

This is a Mellanox® compatible 100GBase-AOC QSFP28 to QSFP28 Infiniband EDR LSZH active optical cable that operates over active fiber with a maximum reach of 5.0m (16.4ft). At a wavelength of 850nm, it has been programmed, uniquely serialized, and data-traffic and application tested to ensure it is 100% compliant and functional. This active optical cable is built to comply 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:

- Up to 25.78Gbps per channel
- Single 3.3V power supply
- 4-channel full-duplex
- Infiniband EDR
- LSZH cable jacket
- Low power consumption: 1.65W per cable end
- Operating Temperature 0 to 70 Celsius
- Hot pluggable
- RoHS compliant and lead-free



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.

Absolute Maximum Ratings

Parameter	Symbol	Min.	Typ.	Max.	Unit	Notes
Storage Temperature	Tstg	-40		85	°C	1
Operating Case Temperature	Tc	0		70	°C	
Power Supply Voltage	Vcc	3.13	3.30	3.47	V	
Supply Voltage	VIN	0		4.0	V	
Power Supply Current	Icc		500		mA	2
Relative Humidity	RH	0		85	%	
Power Consumption	PD		1.65	1.73	W	2

Notes:

1. Ambient.
2. Per end.

Cable Specifications

Parameter	Value	Unit	Notes
Cable Diameter	LSZH: $\varnothing 3.0 \pm 0.15$	mm	
Minimum Bend Radius	30	mm	1
Length Tolerance	+300/-0	mm	
Cable Jacket	LSZH, Aqua		

Notes:

1. Without tension.

Electrical Characteristics

Parameter	Symbol	Min.	Typ.	Max.	Unit	Notes
Data Rate Per Channel	BR		25.78		Gbps	
Transmitter						
Input Differential Impedance	RIN		100		Ω	
Differential Data Input Swing	VIN,pp	200		900	mV	
Receiver						
Output Differential Impedance	ROUT		100		Ω	
Differential Data Output Swing	VOUT,pp			800	mV	
Bit Error Ratio @25.78Gbps				10^{-8}		1

Notes:

1. Pre-FEC Bit Error Ratio with a PRBS $2^{31}-1$ test pattern.

Pin Descriptions

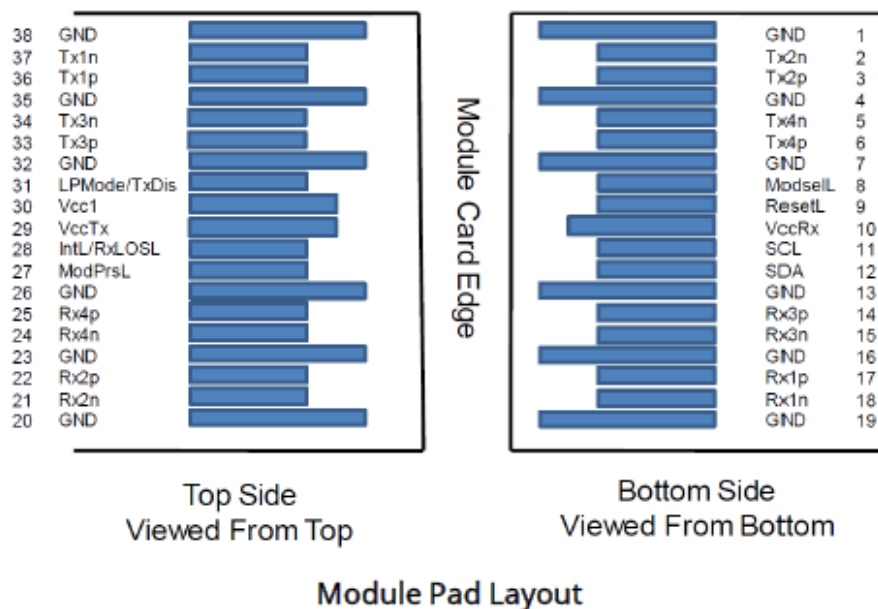
Pin	Symbol	Name/Description	Notes
1	GND	Module Ground.	1
2	Tx2-	Transmitter Inverted Data Input.	
3	Tx2+	Transmitter Non-Inverted Data Input.	
4	GND	Module Ground.	1
5	Tx4-	Transmitter Inverted Data Input.	
6	Tx4+	Transmitter Non-Inverted Data Input.	
7	GND	Module Ground.	1
8	ModSelL	Module Select.	
9	ResetL	Module Reset.	
10	VccRx	+3.3V Receiver Power Supply.	2
11	SCL	2-Wire Serial Interface Clock.	
12	SDA	2-Wire Serial Interface Data.	
13	GND	Module Ground.	1
14	Rx3+	Receiver Non-Inverted Data Output.	
15	Rx3-	Receiver Inverted Data Output.	
16	GND	Module Ground.	1
17	Rx1+	Receiver Non-Inverted Data Output.	
18	Rx1-	Receiver Inverted Data Output.	
19	GND	Module Ground.	1
20	GND	Module Ground.	1
21	Rx2-	Receiver Inverted Data Output.	
22	Rx2+	Receiver Non-Inverted Data Output.	
23	GND	Module Ground.	1
24	Rx4-	Receiver Inverted Data Output.	
25	Rx4+	Receiver Non-Inverted Data Output.	
26	GND	Module Ground.	1
27	ModPrsL	Module Present.	
28	IntL	Interrupt.	
29	VccTx	+3.3V Transmitter Power Supply.	2
30	Vcc1	+3.3V Power Supply.	2
31	LPMMode	Low-Power Mode.	3
32	GND	Module Ground.	1
33	Tx3+	Transmitter Non-Inverted Data Input.	
34	Tx3-	Transmitter Inverted Data Input.	
35	GND	Module Ground.	1

36	Tx1+	Transmitter Non-Inverted Data Input.	
37	Tx1-	Transmitter Inverted Data Input.	
38	GND	Module Ground.	1

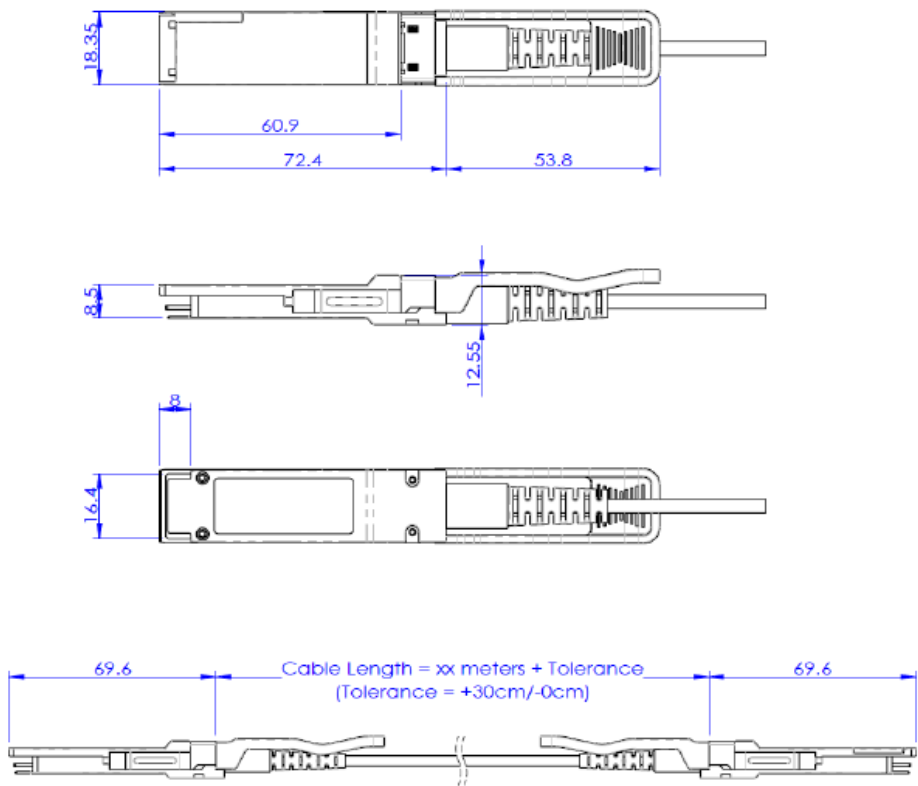
Notes:

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 voltage are referenced to this potential unless otherwise noted. Connect these 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. VccRx, Vcc1, and VccTx may be internally connected within the QSFP transceiver module in any combination. The connector pins are each rated for a maximum current of 500mA.
3. Not in use.

Electrical Pin-Out Details



Mechanical Specifications



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.

