MC2309124-007-AO

Mellanox® MC2309124-007 Compatible TAA Compliant 10GBase-CU QSFP+ to SFP+ Direct Attach Cable (Passive Twinax, 7m)

Features:

- MSA QSFP+ Compliant
- AC Coupled Inputs and Outputs
- MSA SFP+ Compliant
- Support for 2.5Gbps, 5Gbps Data Rates
- Single 3.3V Power Supply
- Independent Duplex Channels Operating at 10Gbps
- Operating Temperature: 0 to 70 Celsius
- All-Metal Housing for Superior EMI Performance
- RoHS Compliant and Lead-Free



Applications:

- 10GBase Ethernet

Product Description

This is a Mellanox® MC2309124-007 compatible 10GBase-CU QSFP+ to SFP+ direct attach cable that operates over passive copper with a maximum reach of 7.0m (23.0ft). It has been programmed, uniquely serialized, and data-traffic and application tested to ensure it is 100% compliant and functional. This direct attach cable is TAA (Trade Agreements Act) compliant, and 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.

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

TAA refers to the Trade Agreements Act (19 U.S.C. & 2501-2581), which is intended to foster fair and open international trade. TAA requires that the U.S. Government may acquire only "U.S.-made or designated country end products."

TAA COMPLIANT

General Specifications

Parameter	Symbol	Min.	Typ.	Max.	Unit	Notes
Operating Case Temperature	Tc	0		70	°C	1
Storage Ambient Temperature	Tstg	-40		85	°C	2
Input Voltage	Vcc	3.14	3.3	3.46	V	
Bit Error Rate	BER			10^{-12}		

Notes:

1. Case temperature.
2. Ambient temperature.

Cable Specifications

Parameter	Symbol	Min.	Typ.	Max.	Unit	Notes
Wire Gauge				24	AWG	
Cable Impedance	Z	90	100	110	Ω	
Product Weight	Gd		113		g/PCS	1
Cable Weight	Gc		50		g/M	2
SFP10 End Dust Cap Weight	Gs		0.80		g/PCS	
QSFP10 End Dust Cap Weight	Gq		1.40		g/PCS	

Notes:

1. The weight of cable including SFP10 end and QSFP10 end.
2. The weight of unit length cable.

Cable Dimension and Nominal Length

Standard Wire Gauge AWG	Cable Diameter OD (mm)	Minimum Bending Radius R (mm)	Module Nominal Length L1 (cm)	Tolerance Range ± (cm)
24	6.0	28	4<L1	6

Pin Descriptions (QSFP+ End)

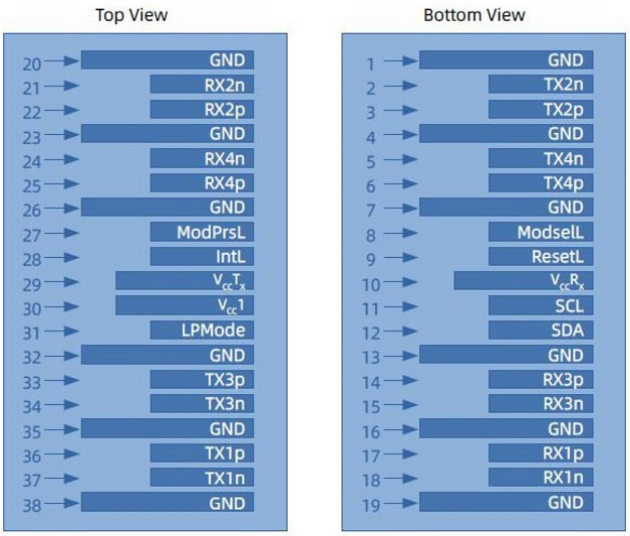
Pin	Symbol	Name/Description	Notes
1	GND	Module Ground.	5
2	Tx2-	Transmitter Inverted Data Input, LAN2.	
3	Tx2+	Transmitter Non-Inverted Data Input, LAN2.	
4	GND	Module Ground.	5
5	Tx4-	Transmitter Inverted Data Input, LAN4.	
6	Tx4+	Transmitter Non-Inverted Data Input, LAN4.	
7	GND	Module Ground.	5
8	ModSelL	Module Select Pin. The module responds to 2-wire serial communication when low level.	1
9	ResetL	Module Reset.	2
10	VccRx	+3.3V Power Supply Receiver.	
11	SCL	2-Wire Serial Interface Clock.	
12	SDA	2-Wire Serial Interface Data.	
13	GND	Module Ground.	5
14	Rx3+	Receiver Non-Inverted Data Output, LAN3.	
15	Rx3-	Receiver Inverted Data Output, LAN3.	
16	GND	Module Ground.	5
17	Rx1+	Receiver Non-Inverted Data Output, LAN1.	
18	Rx1-	Receiver Inverted Data Output, LAN1.	
19	GND	Module Ground.	5
20	GND	Module Ground.	5
21	Rx2-	Receiver Inverted Data Output, LAN2.	
22	Rx2+	Receiver Non-Inverted Data Output, LAN2.	
23	GND	Module Ground.	5
24	Rx4-	Receiver Inverted Data Output, LAN4.	
25	Rx4+	Receiver Non-Inverted Data Output, LAN4.	
26	GND	Module Ground.	5
27	ModPrsL	Module Present. The module is inserted into the indicate pin and grounded in the module.	3
28	IntL	Interrupt.	4
29	VccTx	+3.3V Power Supply Transmitter.	
30	Vcc1	+3.3V Power Supply.	
31	LPMode	Low-Power Mode.	5
32	GND	Module Ground.	5
33	Tx3+	Transmitter Non-Inverted Data Input, LAN3.	
34	Tx3-	Transmitter Inverted Data Input, LAN3.	
35	GND	Module Ground.	5
36	Tx1+	Transmitter Non-Inverted Data Input, LAN1	

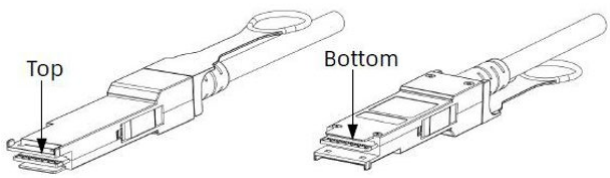
37	Tx1-	Transmitter Inverted Data Input, LAN1	
38	GND	Module Ground.	5

Notes:

1. ModSelL is the input pin. The module responds to 2-wire serial communication commands when it is held low by the host. ModSelL allows multiple QSFP modules to be used on a single 2-wire interface bus. If ModSelL is high, the module will not respond to any 2-wire interface communication from the host. ModSelL has internal pull-up resistors in the module.
2. The module restart pin, when the low level on the ResetL pin lasts longer than the minimum pulse length, resets the module and restores all user modules to their default state. When performing reset device, the host should ignore all status bits. Until the module reset interrupt is completed, please note that during hot plugging, the module will issue this information to complete the reset interrupt without resetting.
3. This pin is active high, indicating that the module is running under a low-power module. The signal has no effect on the functionality of this product.
4. IntL is the output pin, which is the open collector output and must be pulled up to Vcc with a 4.7kΩ to 10kΩ resistor on the motherboard. When it is low, it indicates that the module may malfunction. The host uses a 2-wire serial interface to identify the interrupt source.
5. The circuit ground is internally isolated from the chassis ground.

Electrical Pad Layout (QSFP+ End)





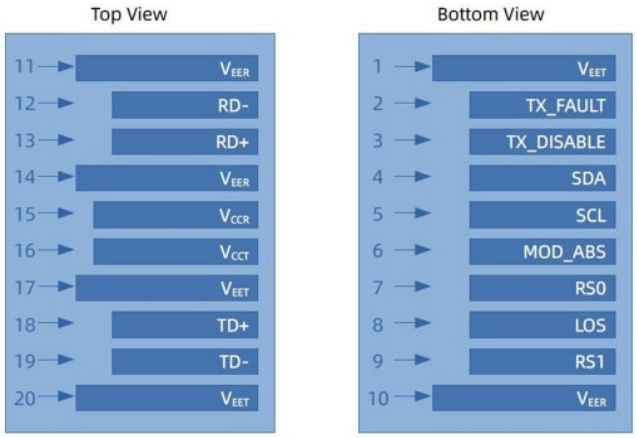
Pin Descriptions (SFP+ End)

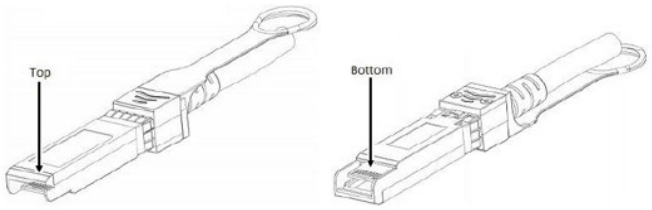
Pin	Symbol	Name/Description	Notes
1	VeeT	Transmitter Ground (Common with Receiver Ground).	1
2	Tx_Fault	Transmitter Fault.	
3	Tx_Disable	Transmitter Disable. Laser output is disabled on “high” or “open.”	
4	SDA	Data Line for Serial ID.	2
5	SCL	Clock Line for Serial ID.	2
6	MOD_ABS	Module Absent. Grounded within the module.	2
7	RS0	No Connection Required.	
8	LOS	Loss of Signal Indication. “Logic 0” indicates normal operation.	
9	RS1	No Connection Required.	
10	VeeR	Receiver Ground (Common with Transmitter Ground).	1
11	VeeR	Receiver Ground (Common with Transmitter Ground).	1
12	RD-	Receiver Inverted Data Out. AC Coupled.	
13	RD+	Receiver Non-Inverted Data Out. AC Coupled.	
14	VeeR	Receiver Ground (Common with Transmitter Ground).	1
15	VccR	Receiver Power Supply.	
16	VccT	Transmitter Power Supply.	
17	VeeT	Transmitter Ground (Common with Receiver Ground).	1
18	TD+	Transmitter Non-Inverted Data In. AC Coupled.	
19	TD-	Transmitter Inverted Data In. AC Coupled.	
20	VeeT	Transmitter Ground (Common with Receiver Ground).	1

Notes:

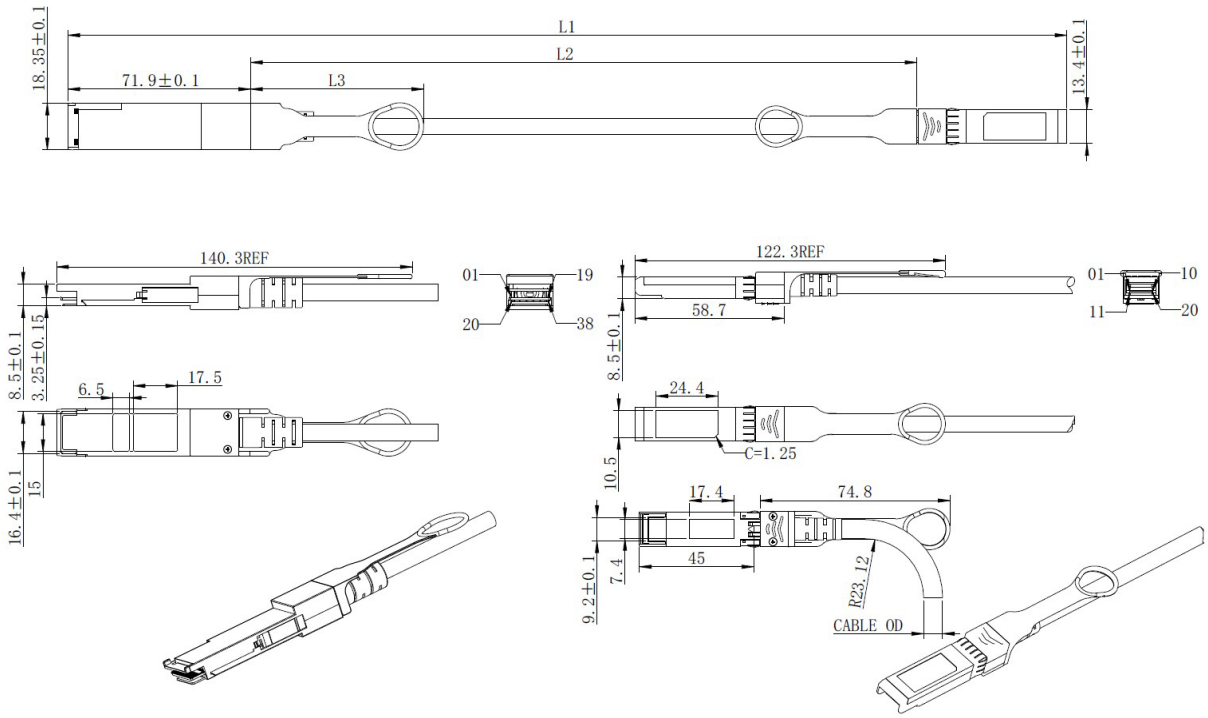
1. The circuit ground is isolated from the chassis ground.
2. Should be pulled up with 4.7kΩ to 10kΩ on the host board to a voltage between 2V and 3.6V.

Electrical Pad Layout (SFP+ End)





Mechanical Specifications



About AddOn Networks

In 1999, AddOn Networks entered the market with a single product. Our founders fulfilled a severe shortage for compatible, cost-effective optical transceivers that compete at the same performance levels as leading OEM manufacturers. Adhering to the idea of redefining service and product quality not previously had in the fiber optic networking industry, AddOn invested resources in solution design, production, fulfillment, and global support.

Combining one of the most extensive and stringent testing processes in the industry, an exceptional free tech support center, and a consistent roll-out of innovative technologies, AddOn has continually set industry standards of quality and reliability throughout its history.

Reliability is the cornerstone of any optical fiber network and is ingrained in AddOn's DNA. It has played a key role in nurturing the long-term relationships developed over the years with customers. AddOn remains committed to exceeding industry standards with certifications ranging from NEBS Level 3 to ISO 9001:2015 with every new development while maintaining the signature reliability of its products.



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