MCP2M00-A002E30N-AO

Mellanox® MCP2M00-A002E30N Compatible TAA Compliant 25GBase-CU SFP28 Direct Attach Cable (Passive Twinax, 2m)

Features

- SFF-8431/8432, INF-8074i
- SFP28 to SFP28
- 25.78125Gbps
- Operating Temperature: 0 to 70 Celsius
- RoHS Compliant and Lead-Free
- Passive copper
- RoHS Compliant and Lead-Free

Applications

- x

Product Description

This is a Mellanox® MCP2M00-A0021E30N compatible 25GBase-CU SFP28 to SFP28 direct attach cable that operates over passive copper with a maximum reach of 2.0m (6.6ft). 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.")

Absolute Maximum Ratings

Parameter	Symbol	Min.	Typ.	Max.	Unit
Supply Voltage	Vcc	3.13	3.3	3.47	V
Storage Temperature	Tstg	-40		85	°C
Operating Case Temperature	Tc	0		70	°C
Relative Humidity	RH	5		85	%
Data Rate			25.78125		Gbps

Physical Characteristics

Parameter	Symbol	Min.	Typ.	Max.	Unit	Notes
Length	L		2		M	
AWG			30		AWG	
Jacket Material		LSZH, Black				

Electrical Specifications

Parameter	Symbol	Min.	Typ.	Max.	Unit	Notes
Resistance	Rcon			3	Ω	
Insulation Resistance	Rins			10	MΩ	
Raw Cable Impedance	Zca	95	100	110	Ω	
Mated Connector Impedance	Zmated	85	100	115	Ω	
Insertion Loss @12.89GHz	SDD21	8		22.48	dB	
Return Loss	SDD11/22	$\text{Return\_loss}(f) \geq \begin{cases} 16.5-2\sqrt{f} & 0.05 \leq f < 4.1 \\ 10.66-14\log_{10}(f/5.5) & 4.1 \leq f \leq 19 \end{cases}$			dB	1
Differential-to Common-Mode Return Loss	SCD11/22	$\text{Return\_loss}(f) \geq \begin{cases} 22-(20/25.78)f & 0.01 \leq f < 12.89 \\ 15-(6/25.78)f & 12.89 \leq f \leq 19 \end{cases}$			dB	2
Differential-to Common-Mode Conversion Loss	SCD21-SDD21	$\text{Conversion\_loss}(f) - \text{IL}(f) \geq \begin{cases} 10 & 0.01 \leq f < 12.89 \\ 27-(29/22)f & 12.89 \leq f < 15.7 \\ 6.3 & 15.7 \leq f \leq 19 \end{cases}$			dB	2
Minimum COM	COM	3			dB	

Notes:

1. For $0.05 \leq f \leq 19$GHz, where f is the frequency in GHz.
2. For $0.01 \leq f \leq 19$GHz, where f is the frequency in GHz.

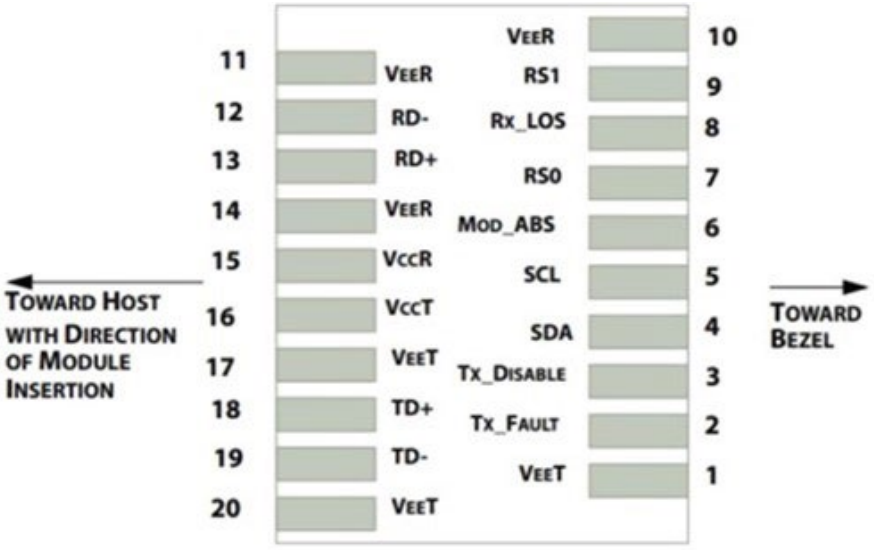
Pin Descriptions

Pin	Logic	Symbol	Name/Description	Plug Sequence	Notes
1		VeeT	Module Transmitter Ground.	1B	1
2	LVTTL-O	Tx_Fault	Module Transmitter Fault.	3B	2
3	LVTTL-I	Tx_Disable	Transmitter Disable. Turns off the transmitter laser output.	3B	3
4	LVTTL-I/O	SDA	2-Wire Serial Interface Data (Same as MOD_DEF2 in INF-8074i).	3B	
5	LVTTL-I/O	SCL	2-Wire Serial Interface Clock (Same as MOD_DEF1 in INF-8074i).	3B	
6		MOD_ABS	Module Absent. Connected to the VeeT or VeeR in the module.	3B	
7	LVTTL-I	RS0	Rate Select 0. Optionally controls the SFP+ module receiver.	3B	4
8	LVTTL-O	Rx_LOS	Receiver Loss of Signal Indication. In FC, designated as Rx_LOS. In Ethernet, designated as Signal Detect.	3B	2
9	LVTTL-I	RS1	Rate Select 1. Optionally controls the SFP+ module transmitter.	3B	4
10		VeeR	Module Receiver Ground.	1B	1
11		VeeR	Module Receiver Ground.	1B	1
12	CML-O	RD-	Receiver Inverted Data Output.	3B	
13	CML-O	RD+	Receiver Non-Inverted Data Output.	3B	
14		VeeR	Module Receiver Ground.	1B	1
15		VccR	Module Receiver 3.3V Supply.	2B	
16		VccT	Module Transmitter 3.3V Supply.	2B	
17		VeeT	Module Transmitter Ground.	1B	1
18	CML-I	TD+	Transmitter Non-Inverted Data Input.	3B	
19	CML-I	TD-	Transmitter Inverted Data Input.	3B	
20		VeeT	Module Transmitter Ground.	1B	1

Notes:

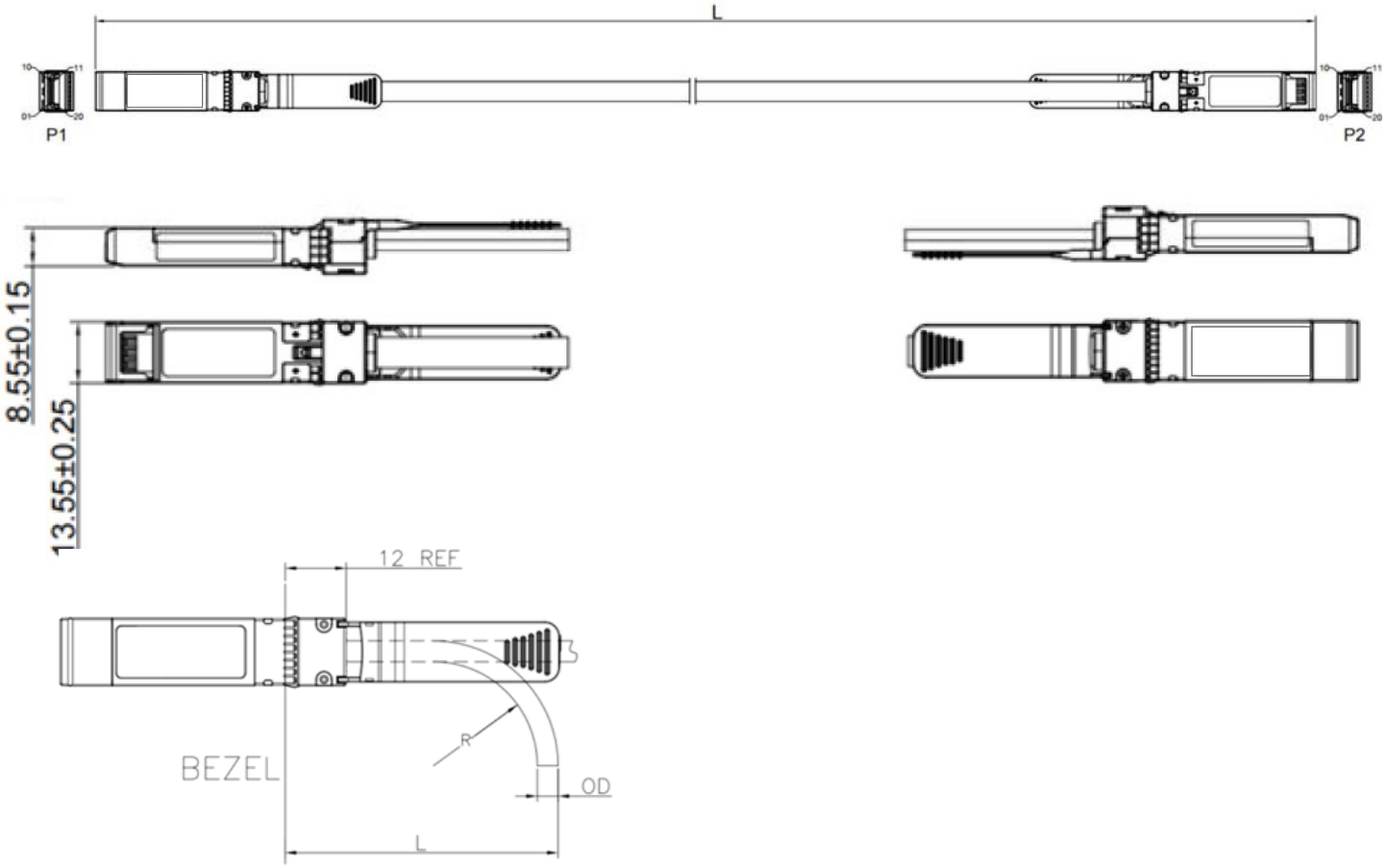
1. The module signal ground contacts, VeeR and VeeT, should be isolated from the module case.
2. This contact is an open collector/drain output contact and shall be pulled up on the host. Pull-ups can be connected to one of several power supplies; however, the host board design shall ensure that no module contact has a voltage exceeding the module VccT/R+0.5V.
3. Tx_Disable is an input contact with a 4.7kΩ to 10Ω pull-up to the VccT inside the module.
4. For SFF-8431 rate select definition see section 2.4.3 and 2.5. If implementing SFF-8079, contact 7 and 9 in SFF-8431 are used for AS0 and AS1, respectively.

Electrical Pin-Out Details



Electrical Pin-out Details for SFP

Mechanical Specifications



SFP28			
Gauge	**OD**	**Bend Radius "R"**	**Min. Bend Radius "L"**
30AWG	4.5MM	22.5MM	39MM

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.

U.S. Headquarters

Email: sales@addonnetworks.com

Telephone: +1 877.292.1701

Fax: 949.266.9273

Europe Headquarters

Email: salesemea@addonnetworks.com

Telephone: +44 1285 842070