MCP2M00-A02A-PRO

Mellanox® MCP2M00-A02A Compatible TAA 25GBase-CU SFP28 to SFP28 Direct Attach Cable (Passive Twinax, 2.5m, 30AWG)

Features

- Up to 25Gbps bi-directional data links
- Hot-pluggable
- Compliant with SFF-8402
- 100 Ohm differential impedance
- Enhanced EMI design
- AC coupled inputs and outputs
- Operating Temperature: 0 to 70 Celsius
- Single power supply 3.3V
- RoHS Compliant and Lead-Free

Applications:

- 25GBase Ethernet

Product Description

This is a Mellanox® MCP2M00-A02A Compatible 25GBase-CU SFP28 to SFP28 direct attach cable that operates over passive copper with a maximum reach of 2.5m. It has been programmed, uniquely serialized, and data-traffic and application tested to ensure it is 100% compliant and functional. We stand behind the quality of our products and proudly offer a limited lifetime warranty. This cable is TAA (Trade Agreements Act) compliant and is built to comply with MSA (Multi-Source Agreement) standards.

Proline'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.

Rev. 111423

General Specifications

Parameter	Symbol	Min.	Typ.	Max.	Unit	Notes
Data Rate	DR		25		Gbps	1
Bit Error Rate	BER			10^{-12}		
Operating Temperature	Tc	0		70	°C	2
Storage Temperature	Tstg	-40		85	°C	3
Supply Current	Icc			4	mA	4
Input Voltage	Vcc	3.14	3.3	3.46	V	4
Cable Impedance	Z	90	100	110	Ω	
Product Weight	GD		78		g/PCS	5
Cable Weight	GC		32		G/M	
Dust Cap Weight	GS		0.80		g/PCS	

Notes:

1. IEEE 802.3by.
2. Case temperature.
3. Ambient temperature.
4. For electrical power interface.

Cable Dimensions and Insertion Loss Level

Length	Standard Wire Gauge AWG	Cable Diameter OD (mm)	Minimum Bending Radius R (mm)	Insertion Loss Level (Note 1)	Tolerance Range (±cm)
2.5m	30AWG	4.6	26	CA-25G-N	2

Notes:

1. Cable insertion loss classification standard IEEE 802.3by 110-10.

Pin Descriptions

Pin	Symbol	Name/Description	Notes
1	VeeT	Transmitter Ground (Common with Receiver Ground).	1
2	Tx_Fault	Transmitter Failure Alarm. Not Used.	
3	Tx_Disable	Not Used. The signal turns off the module transmitter when it is "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.
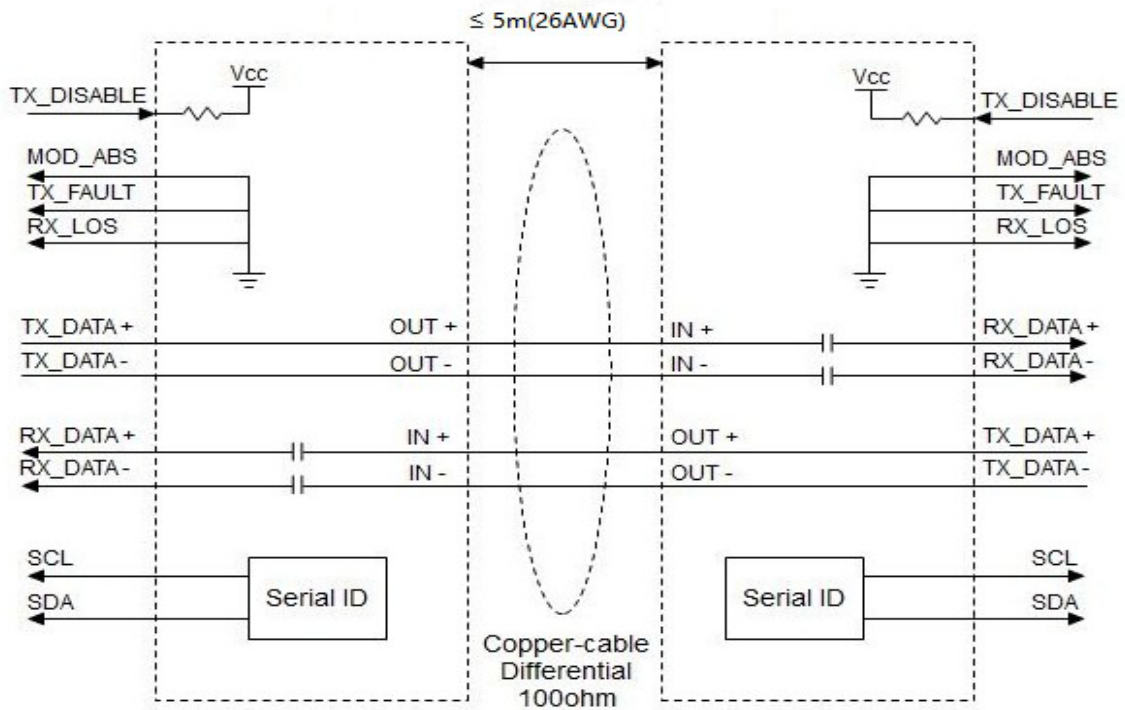
Electrical Pad Layout

	Top of Board			Bottom of Board
20 →	V_{EET}		1 →	V_{EET}
19 →	TD-		2 →	TX_FAULT
18 →	TD+		3 →	TX_DISABLE
17 →	V_{EET}		4 →	SDA
16 →	V_{CCT}		5 →	SCL
15 →	V_{CCR}		6 →	MOD_ABS
14 →	V_{EER}		7 →	RS0
13 →	RD+		8 →	LOS
12 →	RD-		9 →	RS1
11 →	V_{EER}		10 →	V_{EER}

Top of Board

Bottom of Board

Top

Bottom

Block Diagram of Transceiver

≤ 5m(26AWG)

Vcc

TX_DISABLE

MOD_ABS
TX_FAULT
RX_LOS

TX_DATA +   OUT +   IN +   RX_DATA +
TX_DATA -   OUT -   IN -   RX_DATA -

RX_DATA +   IN +   OUT +   TX_DATA +
RX_DATA -   IN -   OUT -   TX_DATA -

SCL   Serial ID   Serial ID   SCL
SDA   SDA

Copper-cable
Differential
100ohm

Mechanical Specifications

LENGTH

13.4±0.1

18,35±0,5

8.5±0.1

122,3 REF

9.2±0.1

74,8

CABLE OD

Unmarked Tolerance ±0.2
Unit: mm

About Us:

Proline Options is one of North America's leading providers of transceivers and high speed cabling. With a reputation for quality, tested products that cover the connectivity spectrum, Proline Options has a solution for you regardless of the specification.

At Proline Options, every product is tested in its intended application - never batch or spec tested only. We run bandwidth, distance and IOS network tests. We have documented an impressive 0.03% failure rate over the last 10 years. To continue this rate of success we invest millions annually in our own on-site testing lab.

Tel: 855.933.3223
Email: sales@prolineoptions.com
Email: techsupport@prolineoptions.com
Web: https://www.prolineoptions.com