

MCP1600-E02AE26-C

Mellanox® MCP1600-E02AE26 Compatible TAA Compliant 56G/100GBase-CU QSFP28 Direct Attach Cable
(Passive Twinax, 2.5m)

Features

- Up to 100 Gbps bi-directional data links
- Compliant with QSFP28 MSA specifications
- AC coupled inputs and outputs
- 100Ω differential impedance
- 30AWG Wire Gauge
- Length: 2.5m
- Single power supply 3.3V
- Operating Temperature Range: 0°C to 70°C
- RoHS Compliant



Application

- 100GBASE Ethernet
- Serial Data Transmission
- InfiniBand

Product Description

This is a Mellanox® MCP1600-E02AE26 compatible 56G/100GBase-CU QSFP28 to QSFP28 direct attach cable that operates over passive copper with a maximum reach of 2.5m (8.2ft). 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.

Prolabs' direct attach cables 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."



General Specifications

Parameter	Symbol	Min.	Typ.	Max.	Unit	Notes
Operating Temperature	Tc	0		70	°C	
Storage Temperature	Tstg	-40		85	°C	
Relative Humidity	RH			80	%	

Specifications

Parameter	Specifications
Materials	
Shells	Diecast zinc, copper underplate with a nickel overplate
PCB	High-performance laminate with gold-plated contact pads
Raw Cable	8 of all woven anti-electromagnetic interface shielding wire material for PVC
Latch	Stainless steel
Pull Tap	Thermoplastic polymer, color: black
Drive Screws	Stainless steel
Electrical Performance	
Working Voltage	3.3V
Current Rating	0.5A Maximum Per Contact
Next & Fext	-30dB Maximum for 0.1GHz – 19GHz
Insertion Loss (SDD21) (Fixture Included)	IEEE802.3bj -22.48dB Minimum for 12.89GHz
Mechanical Performance	
Durability	50 Cycles
Cable Plug Insertion Force	40N Maximum
Cable Plug Extraction Force	30N Maximum
Pulling Tap Retention Force	90N/1-Minute Minimum
Cable Plug Retention in Cage	90N/1-Minute Minimum
Cable Retention	90N/1-Minute Minimum
Cable Flex	Flex Cable 180° for 20 cycles. 10 cycles in two axes at 20 cycles per minute with a 1.0KG load applied to the cable jacket. Flex in the boot area 90° in each direction from vertical, per EIA-364-41C.

Cable Dimensions

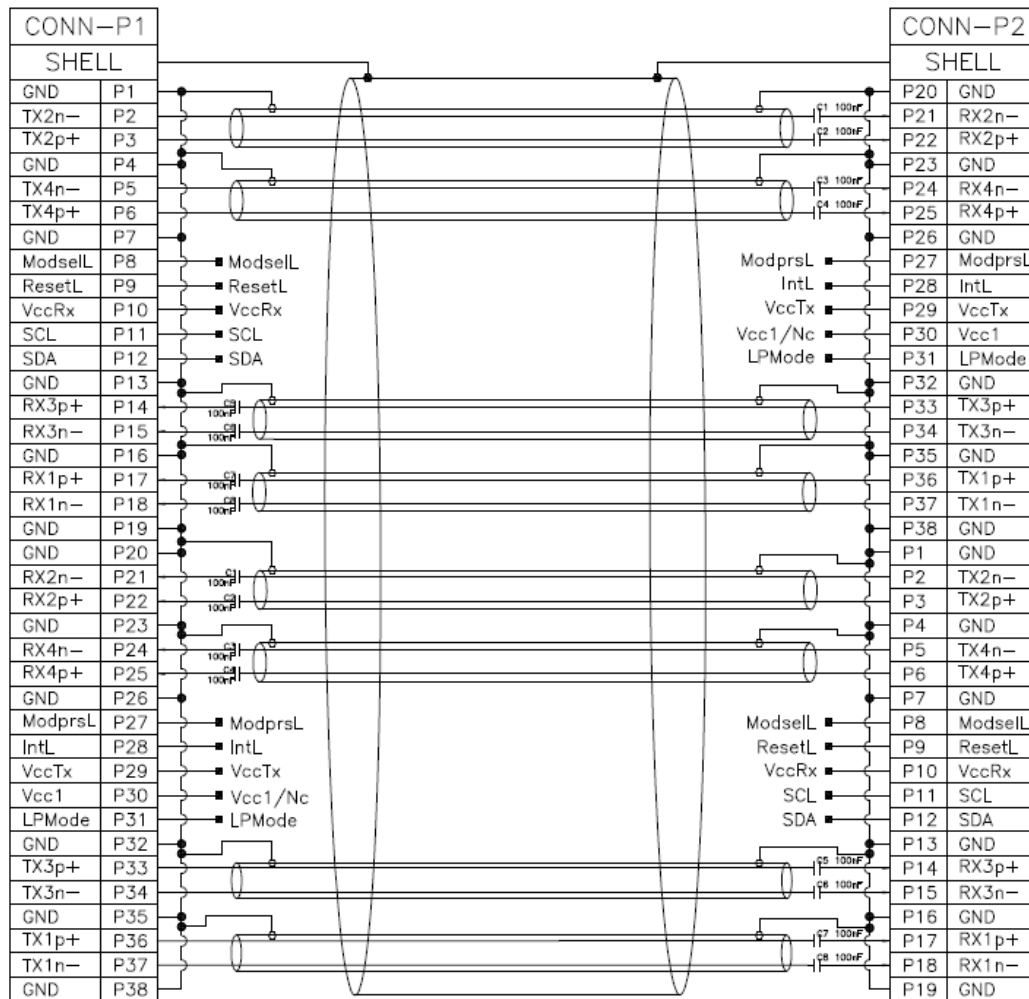
Length	Wire Gauge AWG	Cable Diameter OD	Minimum Bending Radius R	Minimum Bend Space L
2.5m	30AWG	7.8mm	39mm	80mm

Pin Descriptions

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

34	Tx3-	Transmitter Inverted Data Input. LAN3.	
35	GND	Module Ground.	
36	Tx1+	Transmitter Non-Inverted Data Input. LAN1.	
37	Tx1-	Transmitter Inverted Data Input. LAN1.	
38	GND	Module Ground.	

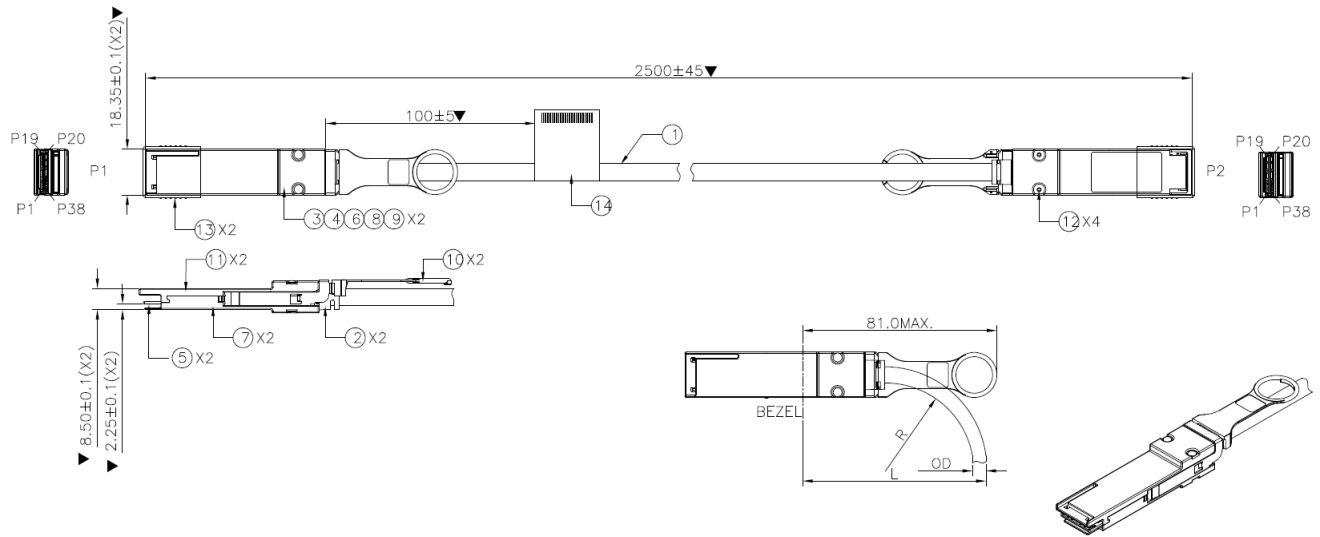
Wiring Diagram



Notes:

1. 100% conductor test, test condition, voltage 5V, insulation resistance 10mΩ, conductor resistance 2Ω maximum.
2. 100% high-frequency test according to SI-040.
3. 100% EEPROM check. 100% latch function check.
4. All materials must comply with RoHS 2.0.

Mechanical Specifications



Item	Name	Specifications	Qty	Unit
1	Raw Cable	QSFP28, 30AWG, 8 Pairs, 100Ω, PVC Jacket	A/R	mm
2	Strain Relief	PVC, 45P, Black	2	PCS
3	Copper Foil	Double-Sided Conductive, W=8.5mm	A/R	mm
4	Cable Clamp	PBT, Black	2	PCS
5	PCBA	QSFP28 PCBA, 38P	2	PCS
6	Inner Mold	Hot-Melt Glue	A/R	KG
7	Bottom Shell	Zinc Alloy, NI 120U" Over CU 280U" Minimum	2	PCS
8	Left Spring	Left-Handed Rotation, SWP-B OD=0.4	2	PCS
9	Right Spring	Right-Handed Rotation, SWP-B OD=0.4	2	PCS
10	Pull Tab	SUS301 + PA66, Black	2	PCS
11	Top Shell	Zinc Alloy, NI 120U" Over CU 280U" Minimum	2	PCS
12	Rivet	SUS302	4	PCS
13	Anti-Static Cap	PVC, 60P, Black, Anti-Static	2	PCS
14	Label	PP, LXW=57X26mm, White	1	PCS

About ProLabs

Our experience comes as standard; for over 15 years ProLabs has delivered optical connectivity solutions that give our customers freedom and choice through our ability to provide seamless interoperability. At the heart of our company is the ability to provide state-of-the-art optical transport and connectivity solutions that are compatible with over 90 optical switching and transport platforms.

Complete Portfolio of Network Solutions

ProLabs is focused on innovations in optical transport and connectivity. The combination of our knowledge of optics and networking equipment enables ProLabs to be your single source for optical transport and connectivity solutions from 100Mb to 400G while providing innovative solutions that increase network efficiency. We provide the optical connectivity expertise that is compatible with and enhances your switching and transport equipment.

Trusted Partner

Customer service is our number one value. ProLabs has invested in people, labs and manufacturing capacity to ensure that you get immediate answers to your questions and compatible product when needed. With Engineering and Manufacturing offices in the U.K. and U.S. augmented by field offices throughout the U.S., U.K. and Asia, ProLabs is able to be our customers best advocate 24 hours a day.



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