470-ABPW-PRO

Dell® 470-ABPW Compatible TAA 100GBase-CU QSFP28 to QSFP28 Direct Attach Cable (Passive Twinax, 50cm)

Features

- Up to 100 Gbps bi-directional data links
- AC coupled inputs and outputs
- Compliant with QSFP28 MSA specifications
- All-metal housing for superior EMI performance
- Single power supply 3.3V, low power consumption
- 100 Ohm differential impedance
- ROHS Compliant
- Operating Temperature: 0 to 70 Celsius

Applications:

- 100 Gigabit Ethernet
- Serial Data Transmission
- Infiniband

Product Description

This is a Dell® 470-ABPW Compatible 100GBase-CU QSFP28 to QSFP28 direct attach cable that operates over passive copper with a maximum reach of 0.5m. 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. 032924

General Specifications

Parameter	Symbol	Min.	Typ.	Max.	Unit	Notes
Bit Error Rate	BER			10^{-12}		
Operating Temperature	Tc	0		70	℃	1
Storage Temperature	Tstg	-40		85	℃	2
Input Voltage	Vcc	3.14	3.3	3.46	V	3
Cable Impedance	Z	90	100	110	Ω	
Product Weight	GD		145		g/PCS	4
Cable Weight	GC		64		g/M	
Dust Cap Weight	GQ		1.40		g/PCS	

Notes:
1. Case temperature.
2. Ambient temperature.
3. For electrical power interface.
4. For example, the weight of a 5m cable with 26AWG is: 190 + 110* (5-1) + 1.40*2=632.8g.

Cable Dimensions and Insertion Loss Level

Length	Wire Gauge AWG	Cable Diameter OD (mm)	Minimum Bending Radius R (mm)	Insertion Loss Level
0.5m	30WG	6.9	35	CA-25G-N

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

Length Tolerance

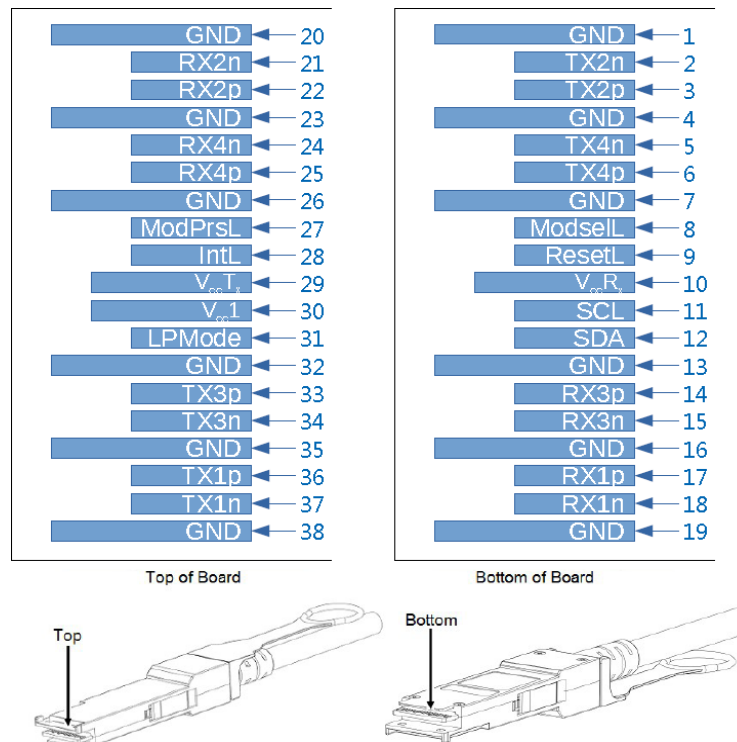| Nominal Length L1 (m)	Tolerance Range ± (cm)
L1 ≤ 3	2

Pin Descriptions

Pin	Symbol	Name/Descriptions	Ref.
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 Receiver Power Supply.	
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	The module is inserted into the indicator pin and grounded in the module.	3
28	IntL	Interrupt.	4
29	VccTx	+3.3V Transmitter Power Supply.	
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.	

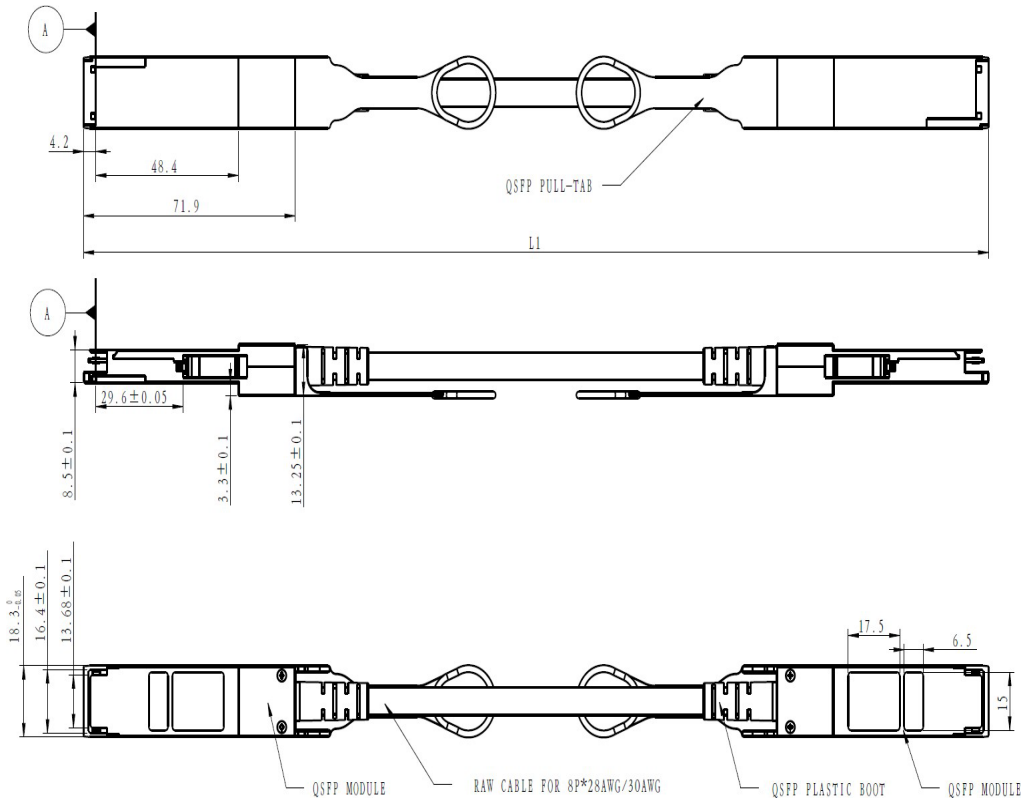| 35	GND	Module Ground.	5
36	Tx1+	Transmitter Non-Inverted Data Input. LAN1.	
37	Tx1-	Transmitter Inverted Data Input. LAN1.	
38	GND	Module Ground.	5

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.
4. IntL is the output pin, which is the open collector output and must be pulled up to Vcc 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

Top of Board		Bottom of Board	
GND	20	GND	1
RX2n	21	TX2n	2
RX2p	22	TX2p	3
GND	23	GND	4
RX4n	24	TX4n	5
RX4p	25	TX4p	6
GND	26	GND	7
ModPrsL	27	ModselL	8
IntL	28	ResetL	9
$V_{cc}T_x$	29	$V_{cc}R_x$	10
$V_{cc}1$	30	SCL	11
LPMode	31	SDA	12
GND	32	GND	13
TX3p	33	RX3p	14
TX3n	34	RX3n	15
GND	35	GND	16
TX1p	36	RX1p	17
TX1n	37	RX1n	18
GND	38	GND	19

Top

Bottom

Mechanical Specification

All dimensions are ±0.2mm unless otherwise specified.
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