ADD-Q28AR2Q28MX-P2-5M

Arista Networks® CAB-Q-Q-100G-2-5M to Mellanox® MCP1600-C02A Compatible TAA 100GBase-CU QSFP28 to 2xQSFP28 Direct Attach Cable (Passive Twinax, 2.5m)

Features

- QSFP Module Complaint to SFF-8661
- Enable (4x25.78)100Gbps Transmission
- Transmission Data Rate up to 25.78 Gbps per Channel
- Operating Temperature: 0 to 70 Celcius
- RoHS Complaint and Lead-Free
- Built in EEPROM Functions

Applications

- 100GBase Ethernet

Product Description

This Arista Networks® to Mellanox® dual oem compatible 100GBase-CU QSFP28 to 2xQSFP28 passive direct attach cable has a maximum reach of 2.5m (8.2ft). It is 100% Arista Networks® to Mellanox® compatible and has been programmed, uniquely serialized, data-traffic and application tested to ensure that it is compliant and functional. This cable will initialize and perform identically to Arista Networks® and Mellanox®'s individual cables and is built to meet or exceed OEM specifications. This product complies with MSA (Multi-Source Agreement) standards and is TAA (Trade Acts Agreement) compliant. 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
Supply Voltage	Vcc	3.13	3.3	3.47	V
Storage Temperature	Tstg	-40		85	˚C
Operating Temperature	Tc	0		70	˚C
Relative Humidity	RH	5		85	%
Data Rate			100		Gbps

Electrical Specifications

Parameter	Symbol	Min.	Typ.	Max.	Unit
Resistance	Rcon			3	Ω
Insulation Resistance	Rins			10	MΩ
Raw Cable Impedance	Zca	95	100	105	Ω
Mated Connector Impedance	Zmated	85	100	115	Ω
Insertions Loss at 12.89 GHz	SDD21	8		22.48	dB
Return Loss at 12.89GHz	SDD11/22	Return_Loss(f)≥ $\begin{cases} 16.5-2\sqrt{f} & 0.5\le f<4.1 \\ 10.66-14\log_{10}(f/5.5) & 4.1\le f\le 19 \end{cases}$			dB
Differential to Common-Mode Return Loss	SCD11/22	Return_Loss(f)≥ $\begin{cases} 22-(20/25.78)f & 0.01\le f\le 12.89 \\ 15-(6/25.78)f & 12.89\le f\le 19 \end{cases}$			dB
Differential to Common-Mode Conversion Loss	SCD21-SDD21	Conversion_Loss(f)≥ -IL(f)≥ $\begin{cases} 10 & 0.01\le f<12.89 \\ 27-(29/22)f & 0.01\le f<15.7 \\ 6.3 & 15.7\le f\le 19 \end{cases}$			dB
Minimum COM	COM	3			dB

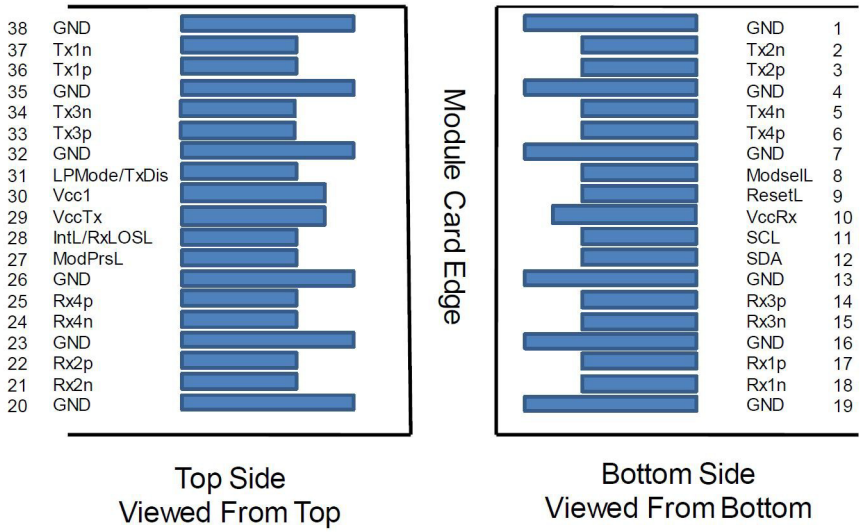
Pin Descriptions

Pin	Logic	Symbol	Name/Descriptions	Plug Sequence	Ref.
1		GND	Module Ground.	1	1
2	CML-I	Tx2-	Transmitter Inverted Data Input.	3	
3	CML-I	Tx2+	Transmitter Non-Inverted Data Input.	3	
4		GND	Module Ground.	1	1
5	CML-I	Tx4-	Transmitter Inverted Data Input.	3	
6	CML-I	Tx4+	Transmitter Non-Inverted Data Input.	3	
7		GND	Module Ground.	1	1
8	LVTTL-I	MODSEIL	Module Select.	3	2
9	LVTTL-I	ResetL	Module Reset.	3	2
10		VccRx	+3.3V Receiver Power Supply.	2	
11	LVCMOS-I/O	SCL	2-Wire Serial Interface Clock.	3	2
12	LVCMOS-I/O	SDA	2-Wire Serial Interface Data.	3	2
13		GND	Module Ground.	1	1
14	CML-O	Rx3+	Receiver Non-Inverted Data Output.	3	
15	CML-O	Rx3-	Receiver Inverted Data Output.	3	
16		GND	Module Ground.	1	1
17	CML-O	Rx1+	Receiver Non-Inverted Data Output.	3	
18	CML-O	Rx1-	Receiver Inverted Data Output.	3	
19		GND	Module Ground.	1	1
20		GND	Module Ground.	3	1
21	CML-O	Rx2-	Receiver Inverted Data Output.	3	
22	CML-O	Rx2+	Receiver Non-Inverted Data Output.	1	
23		GND	Module Ground.	1	1
24	CML-O	Rx4-	Receiver Inverted Data Output.	3	
25	CML-O	Rx4+	Receiver Non-Inverted Data Output.	3	
26		GND	Module Ground.	1	1
27	LVTTL-O	ModPrsL	Module Present. Internally pulled down to the GND.	3	
28	LVTTL-O	IntL	Interrupt output should be pulled up on the host board.	3	2
29		VccTx	+3.3V Transmitter Power Supply.	2	
30		Vcc1	+3.3V Power Supply.	2	
31	LVTTL-I	LPMode	Low-Power Mode.	3	2
32		GND	Module Ground.	1	1
33	CML-I	Tx3+	Transmitter Non-Inverted Data Input.	3	
34	CML-I	Tx3-	Transmitter Inverted Data Input.	3	
35		GND	Module Ground.	1	1
36	CML-I	Tx1+	Transmitter Non-Inverted Data Input.	3	
37	CML-I	Tx1-	Transmitter Inverted Data Input.	3	
38		GND	Module Ground.	1	1

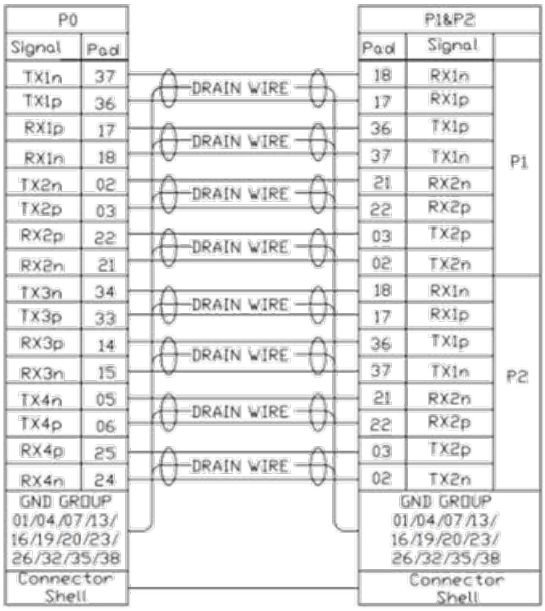
Notes:

1. GND is the symbol for signal and supply (power) common for the QSFP+ module. All are common within the QSFP+ module and all module voltages are references to this potential unless otherwise noted. Connect the directly to the host board signal-common ground plane.
2. VccRx, Vcc1, and VccTx are the receiver and transmitter power supplies and shall be applied concurrently. Requirements defined for the host board power supply filtering is shown in host board figure. VccRx, Vcc1, and VccTx may be internally connected within the QSFP+ module in any combination. The connector pins are each for a maximum current of 500mA.

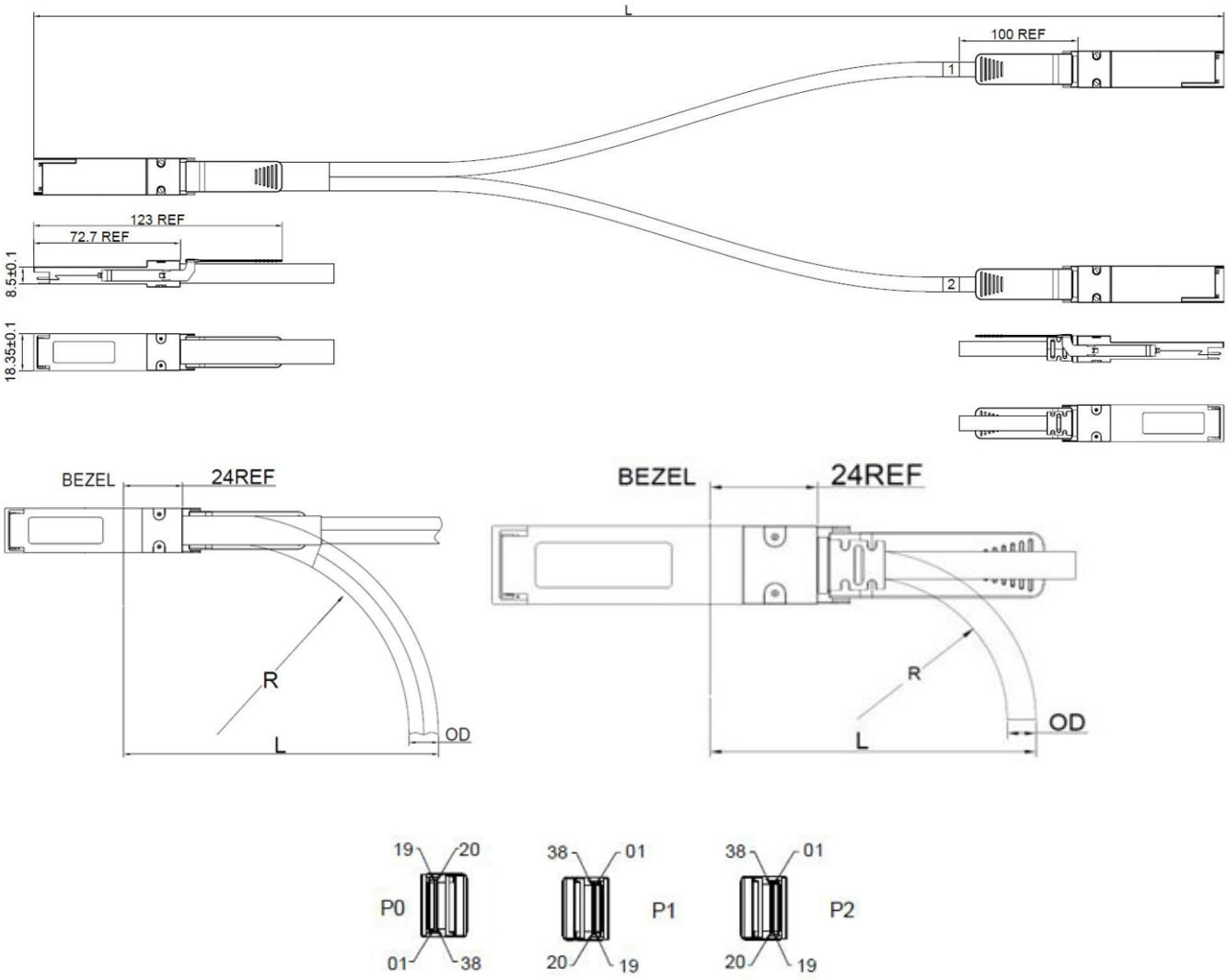
Electrical Pin-out Details



Wire Diagram



Mechanical Specifications



Cable Specifications

Parameter		Symbol	Min.	Typ.	Max.	Unit
Length		L	0.5		5.0	M
AWG				30		AWG
Jacket Material			PVC, Black (or Customization)			
OD	P0			12MM		
	P1 & P2			6MM		
Bend Radius	P0	R		60MM		
	P1 & P2			30MM		
Minimum Bend Radius	P0	L		96MM		
	P1 & P2			60MM		

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 in engrained 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 from ranging from NEBS Level 3 to ISO 9001:2005 with every new development while maintaining the signature reliability of its products.

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