QSFP28-SFP28G-CVR-PRO

MSA and TAA Compliant 25GBase-Converter QSFP28 Transceiver (, DOM, 0 to 70C, QSFP28 to SFP28)

Features

- Compliant to industry standards
- SFP+ MSA SFF-8431
- QSFP MSA SFF-8436
- Matched impedance
- Secure latching mechanism
- Low insertion loss
- RoHS-6 compliant
- Built-in EEPROM for product identification

Applications:

- 100GBase Ethernet
- Access and Enterprise

Product Description

This MSA Compliant QSFP28 to SFP28 converter provides conversion from QSFP28 to SFP28 form factors. It is built to MSA standards and is uniquely serialized and data-traffic and application tested to ensure that they will integrate into your network seamlessly. Digital optical monitoring (DOM) support is also present to allow access to real-time operating parameters. This converter is Trade Agreements Act (TAA) compliant. We stand behind the quality of our products and proudly offer a limited lifetime warranty.

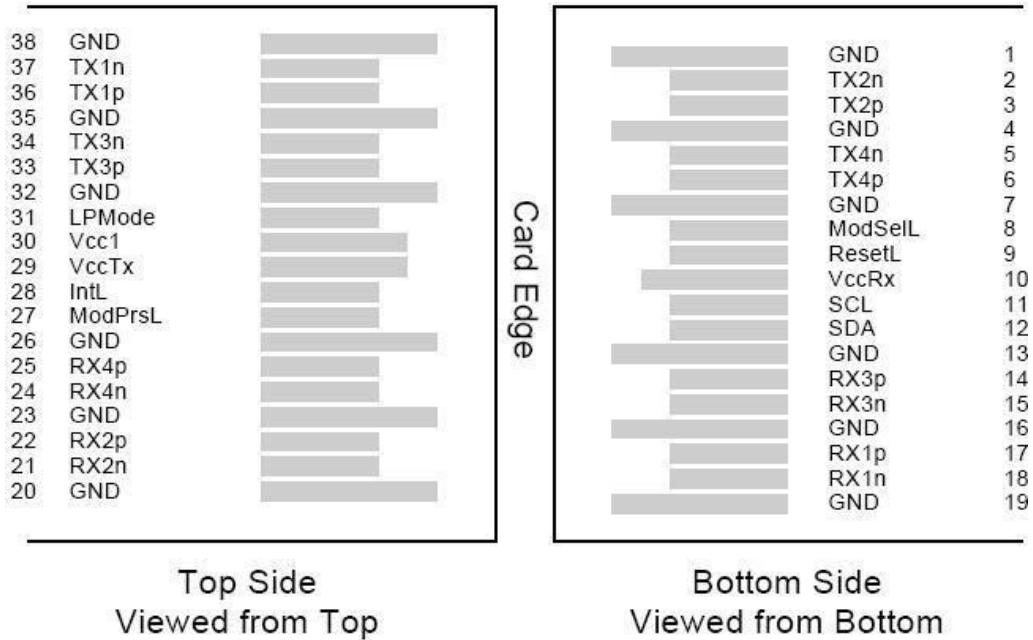Proline's transceivers are RoHS compliant and lead-free.

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. 032024

Recommended Operating Conditions

Parameter	Symbol	Min	Max	Unit
Operating Case Temperature	Tc	-20	85	ºC
Storage Temperature	Tstg	-40	85	ºC
Relative Humidity (Non-Condensing)	RH		85	%
Supply Voltage	Vcc3	3.15	3.45	V
Power Consumption	POUT		0.3	W
Characteristic Impedance	Im	90	110	Ω

QSFP Host Board Connector Pin-Out

38	GND
37	TX1n
36	TX1p
35	GND
34	TX3n
33	TX3p
32	GND
31	LPMode
30	Vcc1
29	VccTx
28	IntL
27	ModPrsL
26	GND
25	RX4p
24	RX4n
23	GND
22	RX2p
21	RX2n
20	GND

Card Edge

GND	1
TX2n	2
TX2p	3
GND	4
TX4n	5
TX4p	6
GND	7
ModSelL	8
ResetL	9
VccRx	10
SCL	11
SDA	12
GND	13
RX3p	14
RX3n	15
GND	16
RX1p	17
RX1n	18
GND	19

Top Side
Viewed from Top

Bottom Side
Viewed from Bottom

Pin Definitions

Pin	Logic	Symbol	Name/Description	Note
1		GND	Module Ground.	1
2	CML-I	Tx2-	Transmitter Inverted Data Input.	
3	CML-I	Tx2+	Transmitter Non-Inverted Data Output.	
4		GND	Module Ground.	1
5	CML-I	Tx4-	Transmitter Inverted Data Input.	
6	CML-I	Tx4+	Transmitter Non-Inverted Data Output.	
7		GND	Module Ground.	1
8	LVTLL-I	ModSelL	Module Select.	
9	LVTLL-I	ResetL	Module Reset.	
10		VccRx	+3.3V Power Supply Receiver.	2
11	LVCMOS-I/O	SCL	2-Wire Serial Interface Clock.	
12	LVCMOS-I/O	SDA	2-Wire Serial Interface Data.	
13		GND	Module Ground.	
14	CML-O	Rx3+	Receiver Non-Inverted Data Output.	
15	CML-O	Rx3-	Receiver Inverted Data Output.	
16		GND	Module Ground.	1
17	CML-O	Rx1+	Receiver Non-Inverted Data Output.	
18	CML-O	Rx1-	Receiver Inverted Data Output.	
19		GND	Module Ground.	1
20		GND	Module Ground.	1
21	CML-O	Rx2-	Receiver Inverted Data Output.	
22	CML-O	Rx2+	Receiver Non-Inverted Data Output.	
23		GND	Module Ground.	1
24	CML-O	Rx4-	Receiver Inverted Data Output.	1
25	CML-O	Rx4+	Receiver Non-Inverted Data Output.	
26		GND	Module Ground.	1
27	LVTTL-O	ModPrsL	Module Present.	
28	LVTTL-O	IntL	Interrupt.	
29		VccTx	+3.3V Power Supply Transmitter.	2
30		Vcc1	+3.3V Power Supply.	2
31	LVTTL-I	LPMode	Low-Power Mode.	
32		GND	Module Ground.	1
33	CML-I	Tx3+	Transmitter Non-Inverted Data Input.	
34	CML-I	Tx3-	Transmitter Inverted Data Output.	

35		GND	Module Ground.	1
36	CML-I	Tx1+	Transmitter Non-Inverted Data Input.	
37	CML-I	Tx1-	Transmitter Inverted Data Output.	
38		GND	Module Ground.	1

Notes:

1. GND is the symbol for signal and supply (power) common for QSFP modules. All are common within the QSFP module, and all module voltages are referenced to this potential otherwise noted. Connect these directly to the host board signal common ground plane.
2. VccRx, Vcc1, and VccTx are the receiver and transmitter power suppliers and shall be applied concurrently. Recommended host board power supply filtering is shown below. VccRx, Vcc1, and VccTx may be internally connected within the QSFP transceiver module in any combination.

**SFP+ Host Board Connector Pinout for SFP+**
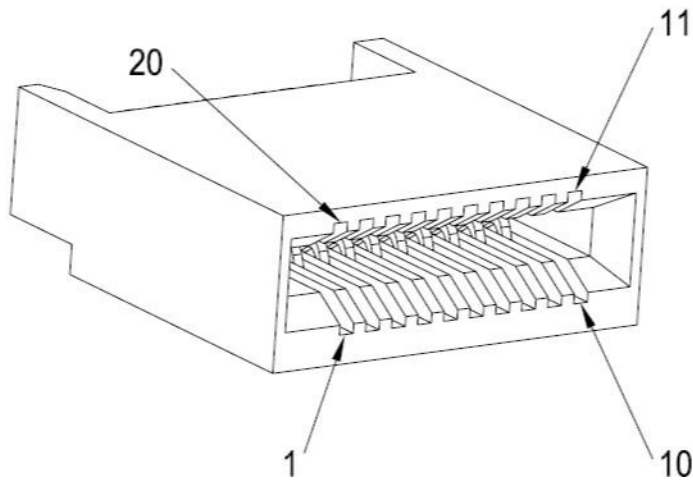
Pin Definitions

Pin	Logic	Symbol	Name/Description	Note
1		VeeT	Module Transmitter Ground.	1
2	LVTTL-O	Tx_Fault	Transmitter Fault.	2
3	LVTTL-I	Tx_Disable	Transmitter Disable.	3
4	LVTTL-I/O	SDA	MOD-DEF2 - 2-Wire Serial Interface Data.	4
5	LVTTL-I/O	SCL	MOD-DEF1 - 2-Wire Serial Interface Clock.	4
6		MOD_ABS	Module Absent.	5
7	LVTTL-I	RS0	Rate Select Zero.	
8	LVTTL- O	Rx_LOS	Module Receiver Loss of Signal.	2
9	LVTTL-I	RS1	Rate Select One.	
10		VeeR	Module Receiver Ground.	1
11		VeeR	Module Receiver Ground.	1
12	CML-O	RD-	Receiver Inverted Data Output.	
13	CML-O	RD+	Receiver Non-Inverted Data Output.	
14		VeeR	Module Receiver Ground.	1
15		VccR	Module Receiver 3.3V Supply.	
16		VccT	Module Transmitter 3.3V Supply.	
17		VeeT	Module Transmitter Ground.	1
18	CML-I	TD+	Transmitter Non-Inverted Data Input.	
19	CML-I	TD-	Transmitter Inverted Data Input.	
20		VeeT	Module Transmitter Ground.	1

Notes:
1. The module signal grounds, VeeR and VeeT, shall be isolated from the module case.
2. This is an open collector/drain output and shall be pulled up with 4.7kΩ-10kΩ to Host_Vcc on the host board. Pull-ups can be connected to multiple power supplies; however, the host board design shall ensure that no module has voltage exceeding module VccT/R+0.5V.
3. This is an open collector/drain input and shall be pulled up with 4.7kΩ-10kΩ to VccT in the module.
4. See 2-wire electrical specifications.
5. This shall be pulled up with 4.7kΩ-10kΩ to Host_Vcc on the host board.

Mechanical Dimensions
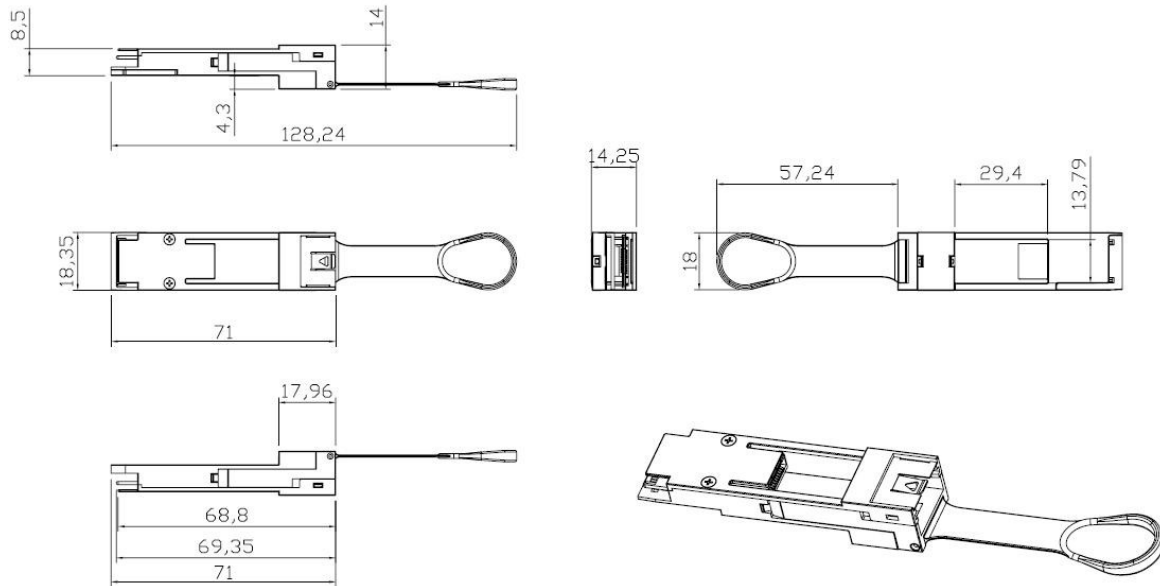
Physical Specifications

Parameter	Specification
Maximum Dimensions (H x W x D)	13.5mm x 18.4mm x 78mm
Weight	Typically less than 100g

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.

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