**QSFP-SFP10G-CVR-PRO**

MSA and TAA Compliant 10GBase-Converter QSFP+ Transceiver (, DOM, 0 to 70C, QSFP+ to SFP+)

**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:**

- 40GBase Ethernet
- Access and Enterprise

**Product Description**

This MSA Compliant QSFP+ to SFP+ converter provides conversion from QSFP+ to SFP+ 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



Top Side
Viewed from Top

Bottom Side
Viewed from Bottom
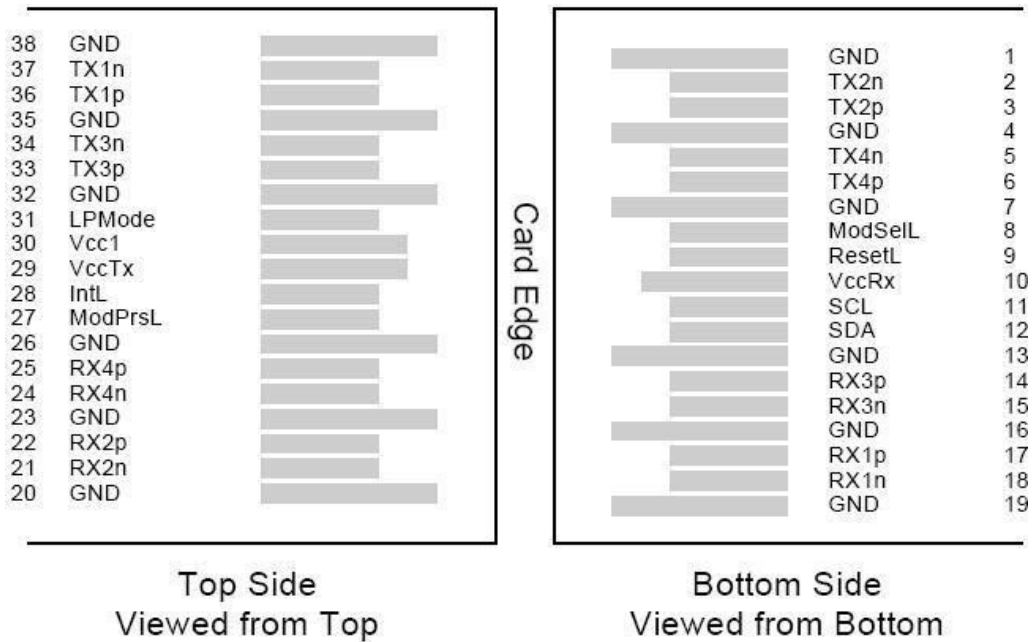
**Pin Definitions**

| 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+**
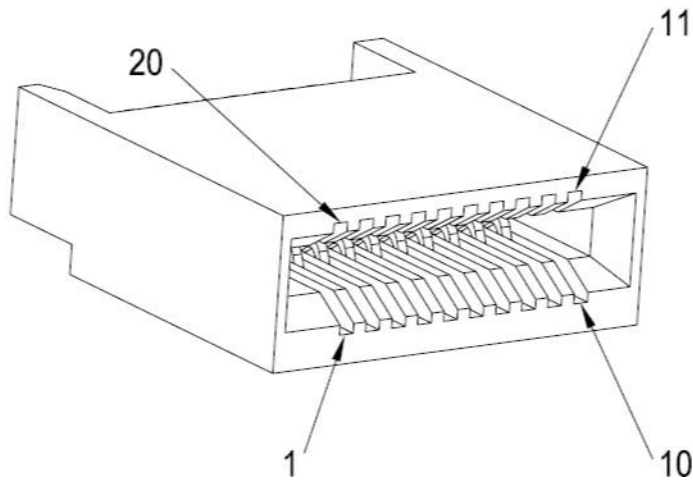
**Pin Definitions**

| 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
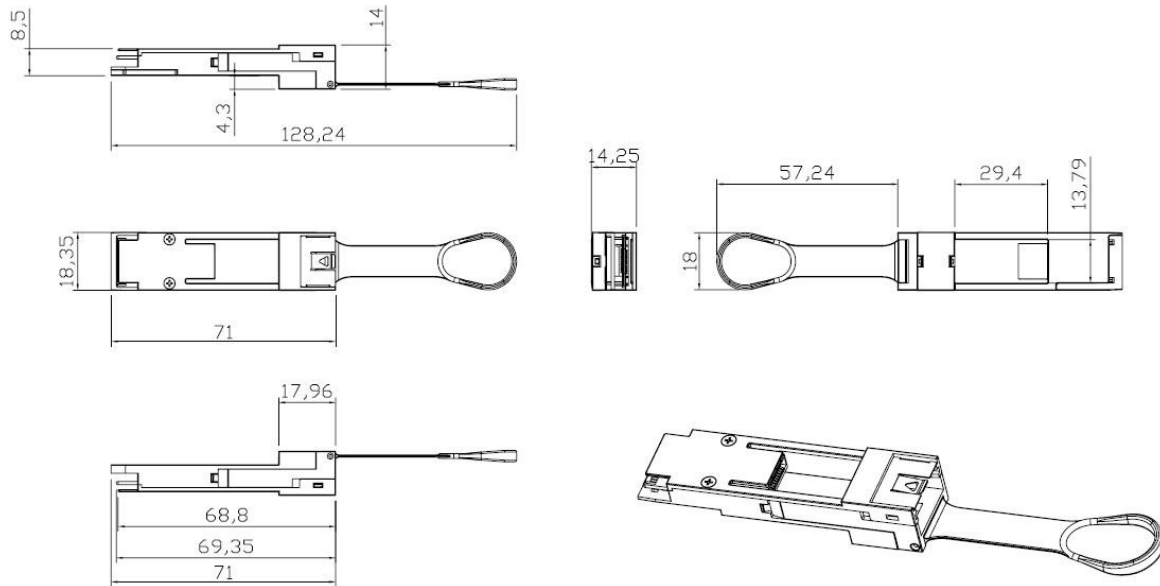
## Physical Specifications

| 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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