

QSFP-100G-LR4-RX-C

Juniper Networks® QSFP-100G-LR4-RX Compatible TAA 100GBase-LR4 QSFP28 Monitor (SMF, 1310nm, 10km, LC, DOM, RX only)

Features:

- SFF-8665 Compliance
- Duplex LC Connector
- Single-mode Fiber
- Commercial Temperature 0 to 70 Celsius
- Hot Pluggable
- Metal with Lower EMI
- Excellent ESD Protection
- RoHS Compliant and Lead Free



Applications:

- 100GBase Ethernet
- Access and Enterprise

Product Description

This Juniper Networks® QSFP-100G-LR4-RX compatible QSFP28 transceiver provides 100GBase-LR4 throughput up to 10km over single-mode fiber (SMF) using a wavelength of 1310nm via an LC connector. It is guaranteed to be 100% compatible with the equivalent Juniper Networks® transceiver. This easy to install, hot swappable transceiver has been programmed, uniquely serialized and data-traffic and application tested to ensure that it will initialize and perform identically. Digital optical monitoring (DOM) support is also present to allow access to real-time operating parameters. This transceiver is Trade Agreements Act (TAA) compliant. We stand behind the quality of our products and proudly offer a limited lifetime warranty.

ProLabs' 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."



Regulatory Compliance

- ESD to the Electrical PINs: compatible with MIL-STD-883E Method 3015.4
- ESD to the LC Receptacle: compatible with IEC 61000-4-3
- EMI/EMC compatible with FCC Part 15 Subpart B Rules, EN55022:2010
- RoHS compliant with EU RoHS 2.0 directive 2015/863/EU

Absolute Maximum Ratings

| Parameter | Symbol | Min. | Typ. | Max. | Unit |
|------------------------------------|-----------------|------|--------|------|------|
| Maximum Supply Voltage | V _{CC} | -0.5 | | 4.0 | V |
| Storage Temperature | T _S | -40 | | 85 | °C |
| Operating Case Temperature | T _C | 0 | 25 | 70 | °C |
| Relative Humidity (non-condensing) | RH | 5 | | 85 | % |
| Data Rate Per Channel | | | 25.781 | | Gb/s |

Electrical Characteristics

| Parameter | Symbol | Min. | Typ. | Max. | Unit | Notes |
|--------------------------------|-----------------------|-------|------|-------|-------------------|-------|
| Power Supply Voltage | V _{CC} | 3.135 | 3.3 | 3.465 | V | |
| Module Supply Current | I _{CC} | | | 450 | mA | |
| Power Dissipation | P _D | | | 1500 | mW | |
| Receiver | | | | | | |
| Single-ended Output Voltage | | -0.3 | | 4.0 | V | |
| Output Differential Impedance | Z _O | 90 | 100 | 110 | Ω | |
| Differential Data Output Swing | V _{OUT, P-P} | 300 | | 850 | mV _{P-P} | |
| AC Common Mode Output Voltage | | | | 7.5 | mV | |

Receiver Optical Characteristics

| Parameter | Symbol | Min. | Typ. | Max. | Unit | Notes |
|---|--------|---------|---------|---------|------|-------|
| Center Wavelength | L0 | 1294.53 | 1295.56 | 1296.59 | nm | |
| | L1 | 1299.02 | 1300.05 | 1301.09 | nm | |
| | L2 | 1303.54 | 1304.58 | 1305.63 | nm | |
| | L3 | 1308.09 | 1309.14 | 1310.19 | nm | |
| Average Receive Power, each Lane | | -10.6 | | 4.5 | dBm | 1 |
| Receiver Sensitivity (OMA), each Lane | S | | | -8.6 | dBm | 2 |
| Stressed Receiver Sensitivity (OMA), each Lane | | | | -6.8 | dBm | 3 |
| Difference in receive power between any two lanes (OMA) | | | | 5.5 | dB | |

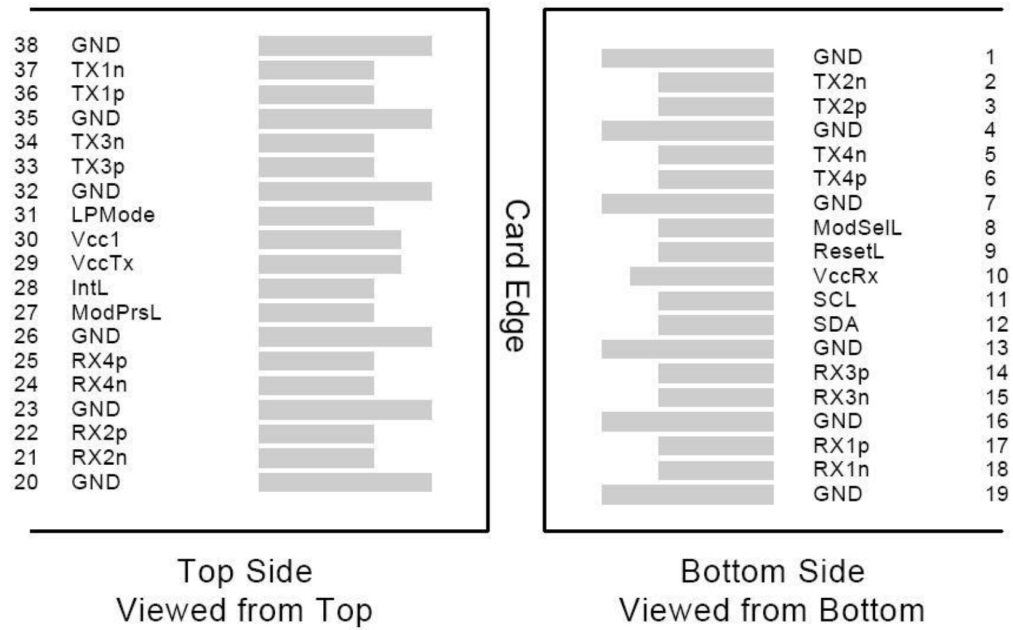
Notes:

1. Average receive power, each lane (min) is informative and not the principal indicator of signal strength. A received power below this value cannot be compliant; however, a value above this does not ensure compliance
2. Receiver sensitivity (OMA), each lane (max) is informative
3. 25.78Gbps, $BER \leq 10^{-12}$, PRBS $2^{31}-1$

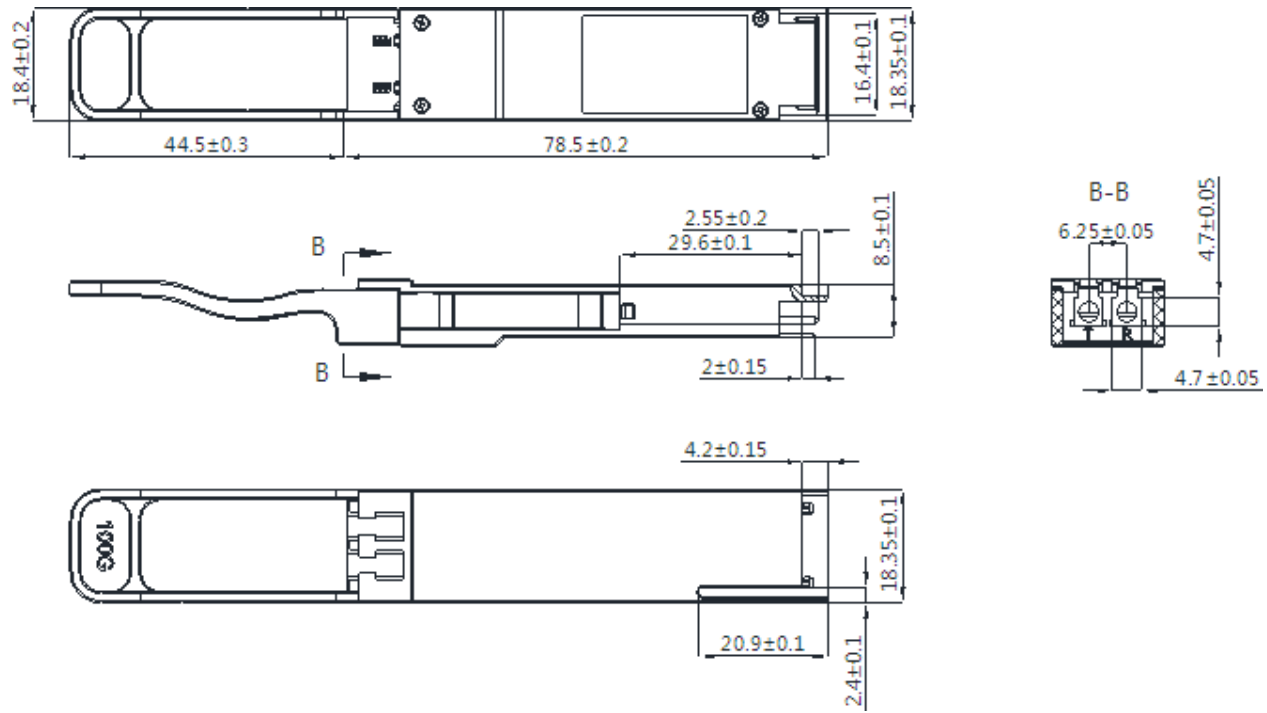
Pin Descriptions

| Pin | Symbol | Name/Descriptions | Ref. |
|-----|---------|-----------------------------------|------|
| 1 | GND | Ground | |
| 2 | TX2n | Not Connected | |
| 3 | TX2p | Not Connected | |
| 4 | GND | Ground | |
| 5 | TX4n | Not Connected | |
| 6 | TX4p | Not Connected | |
| 7 | GND | Ground | |
| 8 | ModSelL | Module Select | |
| 9 | ResetL | Module Reset | |
| 10 | VccRx | +3.3V Power Supply Receiver | |
| 11 | SCL | 2-wire serial interface clock | |
| 12 | SDA | 2-wire serial interface data | |
| 13 | GND | Ground | |
| 14 | RX3p | Receiver Non-Inverted Data Output | |
| 15 | RX3n | Receiver Inverted Data Output | |
| 16 | GND | Ground | |
| 17 | RX1p | Receiver Non-Inverted Data Output | |
| 18 | RX1n | Receiver Inverted Data Output | |
| 19 | GND | Ground | |
| 20 | GND | Ground | |
| 21 | RX2n | Receiver Inverted Data Output | |
| 22 | RX2p | Receiver Non-Inverted Data Output | |
| 23 | GND | Ground | |
| 24 | RX4n | Receiver Inverted Data Output | |
| 25 | RX4p | Receiver Non-Inverted Data Output | |
| 26 | GND | Ground | |
| 27 | ModPrsL | Module Present | |
| 28 | IntL | Interrupt | |
| 29 | VccTx | +3.3V Power supply transmitter | |
| 30 | Vcc1 | +3.3V Power supply | |
| 31 | LPMode | Low Power Mode | |
| 32 | GND | Ground | |
| 33 | TX3p | Not Connected | |
| 34 | TX3n | Not Connected | |
| 35 | GND | Ground | |
| 36 | TX1p | Not Connected | |
| 37 | TX1n | Not Connected | |
| 38 | GND | Ground | |

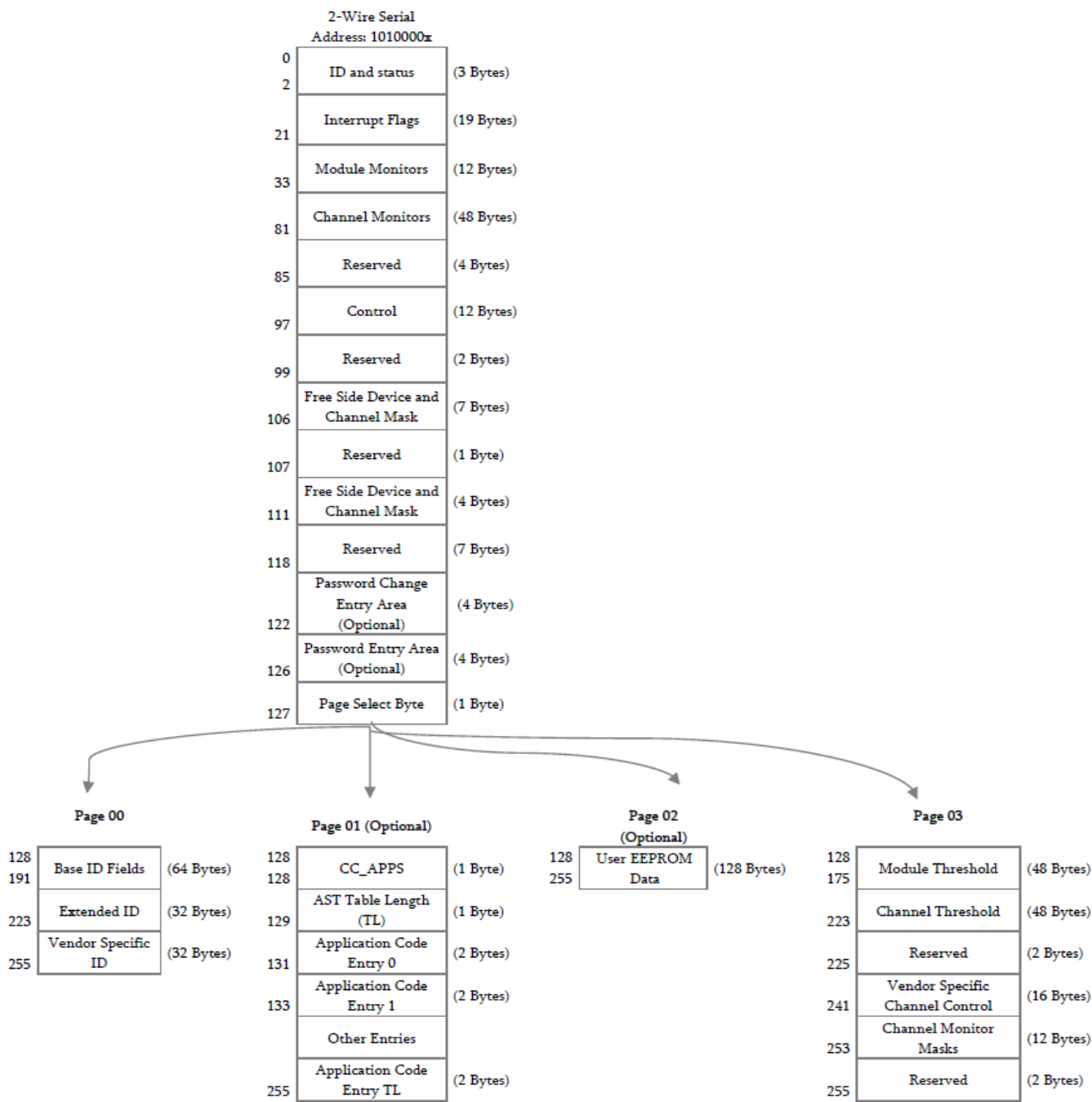
Electrical Pin-out Details



Mechanical Specifications



EEPROM
QSFP+ MSA (SFF-8436)



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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