

DATA SHEET

100G QSFP28 CWDM4 TRANSCEIVER

DESCRIPTION

The 100G QSFP28 CWDM4 transceiver is designed for use in 100 Gigabit Ethernet links over single mode fiber. The optical transmitter integrated with four lasers with center wavelengths of 1271 nm, 1291 nm, 1311 nm and 1331 nm. The optical signals are then multiplexed into a single-mode fiber through an industry standard LC connector. On the receiver side, four lanes of optical data streams are optically de-multiplexed by an integrated optical de-multiplexer and transformed to an electrical CAUI-4 compliant output driver.

A serial EEPROM in the transceiver allows the user to access transceiver monitoring and configuration data via the 2-wire QSFP Management Interface. This interface uses a single address, A0h, with a memory map divided into a lower and upper area. Basic digital diagnostic (DD) data is held in the lower area while specific data are held in a series of tables in the high memory area.



KEY FEATURES

Links up to 2km on SMF with FEC

Operating case temperature: 0~70°C

Power consumption: 3.5W

Integrated CWDM DFB TOSA
(1271,1291,1311,1331nm) and PIN ROSA

Supports 25.78125Gbps Data rate per wavelength

Build in CDR on both TX and RX

DDM function implemented

Hot pluggable QSFP28 form factor

Duplex LC receptacles

Single +3.3V power supply

APPLICATIONS

100G Ethernet

Proprietary High Speed Interconnections

Data Center Networking

COMPLIANCES

Compliant with CWDM4 MSA

Compliant with IEEE 802.3 CAUI-4

Compliant with SFF-8636/8661/ 8679

Compliant with RoHS-6

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ENVIRONMENTAL SPECIFICATIONS

| Parameter | Min. | Typ. | Max. | Unit |
|-----------------------|------|-------|------|------|
| Operation Temperature | 0 | +25 | +70 | °C |
| Storage Temperature | -40 | ----- | +85 | °C |
| Operation Humidity* | 10 | ----- | 85 | % |
| Storage Humidity | 10 | ----- | 85 | % |

(*) not condensing

OPERATING SPECIFICATIONS

| Parameter | Min. | Typ. | Max. | Unit |
|-------------------------------|-------|----------|--------|------|
| Supply Voltage | 3.135 | +3.3 | +3.465 | V |
| Power Dissipation (Each lane) | | | 3.5 | W |
| Total Data Rate | | 103.125 | | Gb/s |
| Data Rate (Each lane) | | 25.78125 | | Gb/s |
| Transmission Distance | | | 2 | Km |

OPTICAL SPECIFICATIONS

TRANSMITTER

| Parameter | Min. | Typ. | Max. | Unit |
|--|------------------------------------|------|--------|------|
| Bit Rate (each Lane) | 25.78125 +/- 100ppm | | | Gb/s |
| Line Wavelength (CH0) | 1264.5 | | 1277.5 | nm |
| Line Wavelength (CH1) | 1284.5 | | 1297.5 | nm |
| Line Wavelength (CH2) | 1304.5 | | 1317.5 | nm |
| Line Wavelength (CH3) | 1324.5 | | 1337.5 | nm |
| Side Mode Suppression Ratio (SMSR) | 30 | | | dB |
| Average Launch Power (each lane) | -6.5 | | 2.5 | dBm |
| Transmitter OMA (each lane) | -4 | | 2.5 | dBm |
| Extinction Ratio (ER) | 3.5 | | | dB |
| Average launch power (OFF transmitter, each lane) | | | -30 | dBm |
| Transmitter eye mask definition (X1, X2, X3, Y1, Y2, Y3) | (0.31, 0.4, 0.45, 0.34, 0.38, 0.4) | | | |
| Transmitter reflectance | | | -12 | dB |
| Input differential impedance (each line) | | 100 | | Ω |

RECEIVER

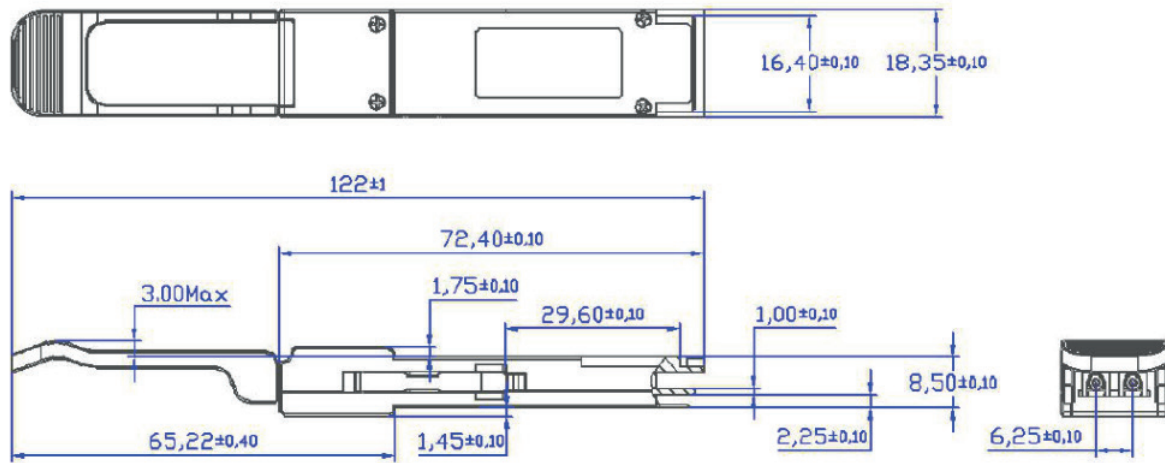
| Parameter | Min. | Typ. | Max. | Unit |
|--|---------------------|------|--------|------|
| Bit Rate (each Lane) | 25.78125 +/- 100ppm | | | Gb/s |
| Line Wavelength (CH0) | 1264.5 | | 1277.5 | nm |
| Line Wavelength (CH1) | 1284.5 | | 1297.5 | nm |
| Line Wavelength (CH2) | 1304.5 | | 1317.5 | nm |
| Line Wavelength (CH3) | 1324.5 | | 1337.5 | nm |
| Average RX Power (each lane) | -11.5 | | 2.5 | dBm |
| Receiver Sensitivity (unstressed, each lane) | | | -10 | dBm |

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DIMENSIONS

Unit: mm



ORDERING INFORMATION

| Jabil Part Number | Package | Rate | Reach | Other info |
|-------------------|---------|------|-------|------------|
| JPQ81CIRLCC000CL4 | QSFP28 | 100G | 2Km | DDM/RoHS |

For additional information, visit jabil.com/photonics