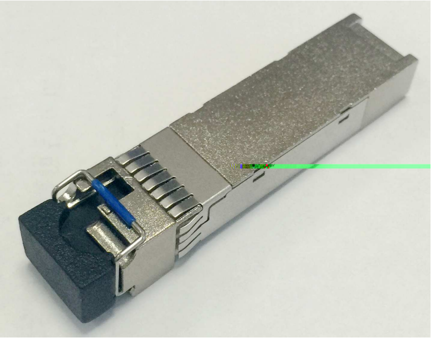

The RTXM228-461/462 1270nm/1330nm DFB 10Gigabit Transceiver is designed to transmit and receive serial optical data links up from 2.5 to 10.3 Gb/s data rate over single-mode fiber. The Transceiver is compliant with SFF-8432, and applicable portions of SFF-8431. Digital diagnostics functions are available via a 2-wire serial interface, as specified in SFF-8472.

## Features

- Compliant to SFP+ MSA
- Fully RoHS Compliant
- Operating data rate 2.5 to 10.3Gb/s
- Transmission distance up to 10km
- 1270nm/1330nm DFB Laser
- LC single connector
- Hot pluggable 20pin connector
- -40℃ to 85℃ operating wide temperature range
- Low power consumption <1W
- Single +3.3V±5% power supply
- Digital Monitoring SFF-8472 Rev 10 compliant

## Applications

- 10GBASE-LR/LW
- 10G Ethernet
- OBSAI rates 3.072 Gb/s, 6.144Gb/s
- CPRI rates 2.4576 Gb/s, 4.9152Gb/s, 6.144Gb/s,9.8304 Gb/s

## Standards

- IEEE 802.3ae 10GBASE-LR
- SFF-8431 Rev 4
- SFF-8472 Rev 10

## Specifications

(Tested under recommended operating conditions, unless otherwise noted)

| Parameter | Symbol | Unit | Min | Typ | Max | Note |
|---|---|---|---|---|---|---|
| Optical Transmitter Characteristics | | | | | | |
| Data Rate | - | Gbps | 2.5 | | 10.3 | |
| Transmission Distance | L | km | | | 10 | |
| Center Wavelength | λ | nm | 1260 | 1270 | 1280 | |
| | | | 1320 | 1330 | 1340 | |
| Spectral width(-20dB) | Δλrms | nm | | | 1 | 1 |
| Optical Output Power | $P_O$ | dBm | -8.2 | | +0.5 | 2 |
| Average Launch Power of OFF Transmitter | $P_{OFF}$ | dBm | | | -30 | |
| Extinction Ratio | ER | dB | 3.5 | | | |
| Relative Intensity Noise | $R_{IN}$ | dB/Hz | | | -128 | |
| SMSR | - | dB | 30 | | | |
| Optical Receiver Characteristics | | | | | | |
| Data Rate | - | Gbps | 2.5 | | 10.3 | |
| Center Wavelength | $\lambda_C$ | nm | 1320 | 1330 | 1340 | |
| | | | 1260 | 1270 | 1280 | |
| Receiver Sensitivity | $R_{SEN}$ | dBm | | | -14.4 | 3 |
| Receiver Overload | - | dBm | 0.5 | | | 3 |
| Receiver Reflectance | $R_{REFL}$ | dB | | | -12 | |
| LOS Optical Assert | $LOS_A$ | dBm | -30 | | | |
| Optical Dessert | $LOS_D$ | dBm | | | -15 | |
| LOS Hysteresis | - | dB | 0.5 | | 6 | |

Note 1: Spectral width has to be defined over -20dBm.

Note 2: Minimum output optical level is at end of life.

Note 3: Sensitivity for PRBS $2^{31}$-1 and BER better than or equal to 10E-12.