

1.6T-2DR4 500m OSFP-RHS Transceiver

CL1.6TOSFP2DR4-RHS

Product Features:

- Hot-pluggable OSFP1600 form factor
- Higher bandwidth EML transmitter and PIN PD receiver
- Support 1.6Tb/s aggregate bit rate
- Support 8x200G Ethernet
- Compliant with IEEE802.3dj D1p2:
 - 1.6TBASE-DR8 optical interface
- Compliant with IEEE802.3dj D1p2:
 - 1.6TAUI-8 C2M electrical interface
- Compliant with OSFP MSA Specification Rev 5.1
Type 2 housing with Dual MPO-12/APC receptacle
- Compliant with CMIS Rev 5.2
- Case operating temperature 0°C to 70°C
- Two wire serial Interface with digital diagnostic monitoring
- Complies with EU Directive 2011/65/EU (RoHS compliant)
- Class 1 Laser

Functional Characteristics (Optical)

The following tables list the performance specifications for the various functional blocks of the integrated optical transceiver module.

Table 1 – Transmitter Optical Specifications

| Parameter | Symbol | Min. | Typical | Max. | Unit | Notes |
|--|-------------|----------------------------------|---------|--------|------|-------|
| Lane wavelength (range) | λ_C | 1304.5 | - | 1317.5 | nm | |
| Side Mode Suppression Ratio | SMSR | 30 | - | - | dB | |
| Average Launch Power, each lane | AOPL | -3.3 | - | 4 | dBm | 1 |
| Outer Optical Modulation Amplitude (OMA _{outer}), each Lane for max(TECQ, TDECQ) <0.9 dB for 0.9 dB ≤ max(TECQ, TDECQ) ≤3.4 dB | TOMA | -0.3 -1.2+ Max(TECQ,TDECQ) | - | 4.2 | dBm | |
| Transmitter and Dispersion Eye Closure for PAM4 (TDECQ), each lane | TDECQ | - | - | 3.4 | dB | |
| Transmitter eye closure for PAM4 (TECQ), each lane | TECQ | - | - | 3.4 | dB | |
| TDECQ – TECQ | - | - | - | 2.5 | dB | |
| Transmitter overshoot and undershoot | - | - | - | 22 | % | |



| | | | | | | |
|--|------|-----|---|------|-------|---|
| Transmitter power excursion | - | - | - | TBD | dBm | |
| Average Launch Power of OFF Transmitter, each lane | TOFF | - | - | -15 | dBm | |
| Extinction ratio, each lane | ER | 3.5 | - | - | dB | |
| Transmitter transition time (max) | Tr | - | - | 8 | ps | |
| RIN21.4OMA (max) | RIN | - | - | -139 | dB/Hz | |
| Optical Return Loss Tolerance | ORL | - | - | 21.4 | dB | |
| Transmitter Reflectance | TR | - | - | -26 | dB | 2 |

Note 1: Average launch power, each lane (min) is informative and not the principal indicator of signal strength

Note 2: Transmitter reflectance is defined looking into the transmitter

Table 2 – Receiver Optical Specifications

| Parameter | Symbol | Min. | Typical | Max. | Unit | Notes |
|---|-------------|--------|---------|-----------------------|------|-------|
| Lane wavelength (range) | λ_C | 1304.5 | - | 1317.5 | nm | |
| Damage Threshold, each Lane | AOPD | 5 | - | - | dBm | |
| Average Receive Power, each Lane | AOPR | -6.3 | - | 4 | dBm | |
| Receive Power (OMAouter), each Lane | OMAR | - | - | 4.2 | dBm | |
| Receiver Reflectance | RR | - | - | -26 | dB | |
| Receiver sensitivity (OMAouter), each lane for $TECQ < 0.9$ dB for $0.9 \text{ dB} \leq TECQ \leq SECQ$ | SOMA | - | - | -3.4 $-4.3 + TECQ$ | dBm | 1 |
| Stressed Receiver Sensitivity (OMAouter), each Lane | SRS | - | - | -0.9 | dBm | 1 |
| Conditions of stressed receiver sensitivity test | | | | | | |
| Stressed eye closure for PAM4 (SECQ), lane under test | - | - | 3.4 | - | dB | |
| OMAouter of each aggressor lane | - | - | 2.9 | - | dBm | |

Note 1: Measured with conformance test signal at TP3 for the BER= 6.4×10^{-5} .

Ordering Information

Table 3 - Ordering Information

| Part No. | Application | Data Rate | Laser Source | Fiber Type |
|--------------------|-------------|-----------|--------------|------------|
| CL1.6TOSFP2DR4-RHS | Ethernet | 1.6Tb/s | EML | MPO-12 APC |

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