1.6T-2DR4 500m OSFP-IHS Transceiver

CL1.6TOSFP2DR4-IHS

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)	λC	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 (OMAouter), 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)	λC	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 dB≤TECQ ≤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 TP3for the BER= $6.4x10^{-5}$.

Ordering Information

Table 3 - Ordering Information

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

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