

PRE-QSFP56DD-SR8

QSFP-DD, SR8, 850nm, 400G, 100m, MMF, MPO, DDM



Product Features:

- 53.125Gbps PAM4 Data Rate per Channel
- Maximum Link Length of 100m on OM3 MMF with FEC
- 850nm VCSEL Technology
- Digital Diagnostic SFF-8636 Compliant
- Compliant with the QSFP-DD MSA
- 8 parallel lanes with 16-pin MPO Connector



Applications:

- 400G Ethernet
- Datacenter and Enterprise Networks

Compliance:

- QSFP-DD MSA
- IEEE 802.3bs
- MIL-STD-883
- RoHS

Operating Conditions

Parameter	Symbol	Min	Typ	Max	Unit	Notes
Operating Case Temperature	T_{OP}	0	-	70	°C	
Power Consumption	P_W	-	-	10.5	W	
Power Supply Current	I_{CC}	-	-	3.18	A	
Power Supply Voltage	V_{CC}	3.14	3.3	3.46	V	
Electrical Data Rate, per lane	-	26.5625			GBd	PAM4
Pre-FEC Bit Error Ratio	$BER_{Pre-FEC}$	-	-	2.4×10^{-4}	-	
Post-FEC Bit Error Ratio	$BER_{Post-FEC}$	-	-	1×10^{-12}	-	1
Transmission Distance (OM3)	TD	0.5	-	100	m	2

Notes:

1. FEC provided by host system.
2. FEC required on host system to support maximum transmission distance.

Optical Characteristics

Parameter	Symbol	Min	Typ	Max	Unit	Notes
Transmitter						
Wavelength	λ	840	850	860	nm	
Data Rate, each Lane	-	26.5625 \pm 100 ppm			GBd	PAM4
Average Launch Power, per lane	P_{TX_AVG}	-6.5	-	4	dBm	
RMS Spectral Width	$\Delta\lambda_{rms}$	-	-	0.6	nm	
Outer Optical Modulation Amplitude (OMA _{outer}), per lane	P_{TX_OMA}	-4.5	-	3	dBm	
Launch Power in OMA _{outer} minus TDECQ, each Lane	-	-5.9	-	-	dBm	
Transmitter and Dispersion Eye Closure for PAM4, per lane	TDECQ	-	-	4.5	dB	
Extinction Ratio	ER	3	-	-	dB	
Optical Return Loss Tolerance	TOL	-	-	12	dB	
Average Launch Power of OFF Transmitter, per lane	P_{OFF}	-	-	-30	dBm	
Receiver						
Wavelength	λ	840	850	860	nm	
Data Rate, per lane	-	26.5625 \pm 100 ppm			GBd	PAM4
Damage Threshold, per lane	TH_d	5	-	-	dBm	
Average Receive power, per lane	P_{RX_AVG}	-7.9	-	4	dBm	
Receive Power (OMA _{outer}), per lane	P_{RX_OMA}	-	-	3	dBm	
Receiver Sensitivity (OMA _{outer}), per lane	SEN	-	-	-6.5	dBm	@ 2.4x10 ⁻⁴
Stressed Receiver Sensitivity (OMA _{outer}), per lane	SRS	-	-	-3	dBm	@ 2.4x10 ⁻⁴
Receiver Reflectance	R_R	-	-	-12	dB	
Stressed eye closure for PAM4 (SECQ), lane under test	-	-	4	-	dB	
OMA _{outer} of each Aggressor Lane	-	-	3	-	dBm	
LOS Assert	LOS _A	-30	-	-	dBm	
LOS De-Assert	LOS _D	-	-	-12	dBm	
LOS Hysteresis	LOS _H	0.5	-	-	dB	

Product Ordering Information

Part Number	Description
PRE-QSFP56DD-SR8	QSFP-DD, SR8, 850nm, 400G, 100m OM3, MMF, MPO-16, DDM