

PRE-QSFP28-LR4
100Gb/s QSFP28 Optical Transceiver, 10km



Product Features:

- Hot pluggable QSFP28 form factor
- MSA, RoHS-6, IEEE compliant
- Up to 10km reach on single mode fiber
- Single +3.3V power supply
- Transmitter cooled 4x25Gb/s LAN WDM EML TOSA
- Receiver 4x25Gb.s PIN ROSA
- Max power consumption 4.0W
- 4x28G electrical serial interface
- Duplex LC receptacle

Applications:

- 100G telecom connections
- 100GBASE-LR4 ethernet links
- Infiniband QDR/DDR interconnects



Product Description:

The PRE-QSFP28-LR4 transceiver supports 100 Gigabit Ethernet applications up to 10km. The module is IEEE, MSA, and ROHS compliant and is designed to meet external operating conditions such as temperature, humidity, and EMI interface.

Absolute Maximum Rating

Parameter	Symbol	Min	Typ	Max	Unit
Storage Temperature	T _S	-40	-	+85	°C
Operating Case Temperature	T _{OP}	0	-	+70	°C
Power Supply Voltage	V _{CC}	-0.5	-	3.6	V
Relative Humidity	RH	0	-	85	%
Damage Threshold, Each Lane	TH _d	5.5	-	-	dBm

Operating Conditions

Parameter	Symbol	Min	Typ	Max	Unit
Operating Case Temperature	T _{OP}	0	-	+70	°C
Power Supply Voltage	V _{CC}	3.135	3.3	3.465	V
Data Rate, Each Lane	-	-	25.78125	-	Gb/s
Control Input Voltage High	-	2	-	V _{CC}	V
Control Input Voltage Low	-	0	-	0.8	V
Link Distance with G.652	D	0.002	-	10	km

Optical Characteristics

Parameter	Symbol	Min	Typ	Max	Unit
Lane Wavelength	L0	1294.53	1295.56	1296.59	nm
	L1	1299.02	1300.05	1301.09	nm
	L2	1303.54	1304.58	1305.63	nm
	L3	1308.09	1309.14	1310.19	nm

Transmitter Characteristics

Parameter	Symbol	Min	Typ	Max	Unit
Side Mode Suppression Ratio	SMSR	30	-	-	dB
Total Average Launch Power	P_T	-	-	10.5	dBm
Average Launch Power, Each Lane	P_{AVG}	-4.3	-	4.5	dBm
OMA, Each Lane	P_{OMA}	-1.3	-	4.5	dBm
TDP, Each Lane	TDP	-	-	2.2	dB
Extinction Ration	ER	4	-	-	dB
Optical Return Loss Tolerance	TOL	-	-	20	dB
Transmitter Reflectance	R_T	-	-	-12	dB

Receiver Characteristics

Parameter	Symbol	Min	Typ	Max	Unit
Damage Threshold, each lane	TH_d	5.5	-	-	dBm
Total Average Receive Power	-	-	-	10.5	dBm
Average Receive Power, each lane	-	-10.6	-	4.5	dBm
Receive Power (OMA), each lane	-	-	-	4.5	dBm
Receiver Sensitivity (OMA), each lane	SEN	-	-	-8.6	dBm
Stressed receiver sensitivity (OMA), each lane	-	-	-	-6.8	dBm
LOS Assert	LOSA	-	-18	-	dBm
LOS Deassert	LOSD	-	-15	-	dBm
LOS Hysteresis	LOSH	0.5	-	-	dB

Product Ordering Information

Part Number	Description
PRE-QSFP28-LR4	QSFP28, 1310nm, LR4 SMF, 10km, 100GBase, DDM, LC