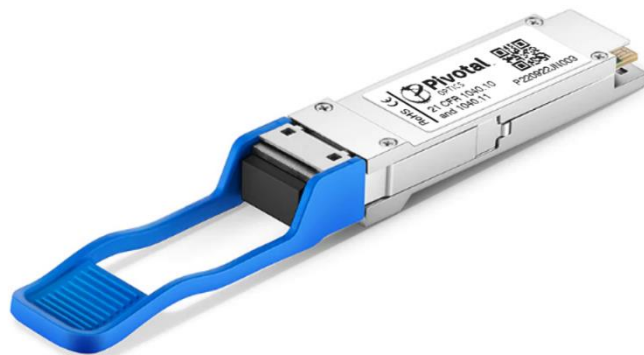


QSFP-40G-PLR4

40GBase QSFP+ PLR4 1310nm 10km Transceiver

Product Features

- 4 Parallel lanes design
- Compliant with QSFP+MSA, SFF-8436
- 4 channels PIN photo detector
- Maximum link length of 10km over SMF
- Single +3.3V power supply
- Class 1 laser safety certified.
- RoHS compliant
- MTP/MPO Connector
- Maximum power consumptions: 3.5 W
- Case operating temperature:
 - Commercial: 0 ~ 70°C



Product Applications

- 40GBASE-LR4 Ethernet
- 4x10G Ethernet Links
- InfiniBand: QDR, DDR, SDR

I. Maximum Ratings

Exceeding the limits below may damage the transceiver module permanently.

Parameter	Symbol	Min.	Typ.	Max	Units	Notes
Storage Temperature	Ts	-40		85	°C	
Relative Humidity	RH	5		95	%	
Power Supply Voltage	VCC	-0.5		4	V	

II. Operating Specifications

Parameter	Symbol	Min.	Typ.	Max.	Units	Notes
Operating Case Temperature	Top	0		70	°C	Commercial
Power Supply Voltage	VCC	3.13	3.3	3.47	V	
Power Supply Current	ICC			1100	mA	
Data Rate	BR		10.3125	11.2	Gbps	each channel
Transmission Distance	TD			10	km	

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40GBASE, QSFP+ PLR4, TRANSCEIVER
1310nm, 10km REACH, MTP/MPO CONNECTOR

III. Optical Characteristics

Parameter	Symbol	Min	Typical	Max	Unit	Notes
Transmitter						
Center Wavelength	λ_C	1260	1310	1355	nm	
Launch Optical Power per lane	P	-6		+1.5	dBm	1
Side Mode Suppression Ratio	SMSR	30			dB	
Extinction Ratio	ER	3.5			dB	2
Optical Return Loss Tolerance	ORLT			12	dB	
Pout @TX-Disable Asserted	Poff			-30	dBm	1
Eye Diagram		IEEE Std 802.3ba compatible				
Receiver						
Center Wavelength	λ_C	1260		1355		
Receiver Sensitivity (OMA)	sen			12.6		
Damage Threshold	THd	2.3				
LOS Assert	LOS A			-15		
LOS De-Assert	LOS D	-30				
LOS Hysteresis	LOS H	0.5				

Notes:

1. The optical power is launched into SMF.
2. Measured with a PRBS $2^{31}-1$ test pattern, @10.325Gb/s, BER< 10^{-12}

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IV. Electrical Characteristics

Parameter	Symbol	Min.	Typ.	Max.	Unit	Notes
Supply Voltage	Vcc	3.135	3.3	3.465	V	
Supply Current	Icc			1000	mA	
Transmitter						
Input differential impedance	Zin		100		Ω	
Differential data input swing	Vin,pp	180		900	mV	
(TX_FAULT) Transmitter Fault	VOH	2.0		VccHOST	V	
(TX_FAULT) Normal Operation	VOL	0		0.8	V	
(TX_DIS) Transmitter Fault	VIH	2.0		VccHOST	V	
(TX_DIS) Normal Operation	VIL	0		0.8	V	
Receiver						
Output Differential Impedance			100		Ω	
Differential Data Output Swing	Vout,pp	300		850	mVp-p	1
Data Output Rise Time, Fall Time	Tr,Tf	28			ps	2
(RX_LOS) Loss of signal (LOS)	VOH	2.0		VccHOST	V	3

Notes:

1. Internally AC coupled, but requires an external 100 Ω differential load termination..
2. 20 – 80 %.
3. LOS is an open collector output. Should be pulled up with 4.7k Ω on the host board.

Warranty

All transceivers feature a limited lifetime warranty.

Disclaimer

External physical characteristics are subject to variation. This may include, but is not limited to, external case designs, pull tab colors and/or shapes, removal latch styles or colors, and label sizes and placement. These variations do not affect the function or characteristics of the transceivers.