*100GBASE-ER4 | **40KM** QSFP28 Transceiver*

EN-QSFP28-ER4-xx

Features

- Duplex LC receptacle optical interface
- Single +3.3V power supply
- Hot-pluggable QSFP28 MSA form factor
- 4x25G Electrical Serial Interface
- Compliant with 4x28G(CEI-28G-VSR)
- Built in digital diagnostic function
- Transmitter: cooled 4x25Gb/s LAN WDM EML TOSA (1295.56, 1300.05, 1304.58, 1309.14nm)
- Receiver: 4x25Gb/s SOA+PIN ROSA
- Operating case temperature range: 0℃ to 70℃
- Up to 40km reach for G.652 SMF without FEC
- Power dissipation < 6.5 W

Applications

- 100GBASE-ER4 Ethernet Links
- Infiniband QDR and DDR interconnects
- Client-side 100G Telecom connections

Ordering information

Part Number	Description	Data Rate	Wavelength	Distance
EN-QSFP28-ER4-xx	QSFP28 Transceiver 100GBASE-ER4 40KM (without FEC) **Commercial Temperature (0-+70 °C)**	100G	1295.56 1300.05 1304.58 1309.14	40KM

Product Selection

xx: Refers to vendor compatibility

** Please note pricing is same for most of the NEMs including Cisco, Juniper, F5, Fortinet, except HP, Evertz. There is an additional charge

Compatibility; Tested and Proven

- ♦ Proven Compatibility and Interoperability with; in process
- ♦ Test and Visibility equipment such as; IXIA, GIGAMON, VSS, SPIRENT, JDSU, XENA, EXFO, etc.

Compliance

All our products come with Built-in digital diagnostic functions DDM Compliant with SFF-8472 Rev12 and Compliant with the QSFP28 MSA SFF SPECIFIACTIONS.

Recommended Operating Conditions and Supply Requirements

Parameter	Symbol	Min.	Typ	Max.	Unit	Note
Data Rate	DR		25.78125		Gb/s	
Supply Voltage	V_{CC}	3.135	3.3	3.465	V	
Supply Current	I_{CC}	-	-	1.876	A	
Power Consumption	P	-	-	6.5	W	
Operating Case Temp.	T_C	0	-	70	°C	
Link Distance with G.652 (without FEC)	D1	-	-	40	km	

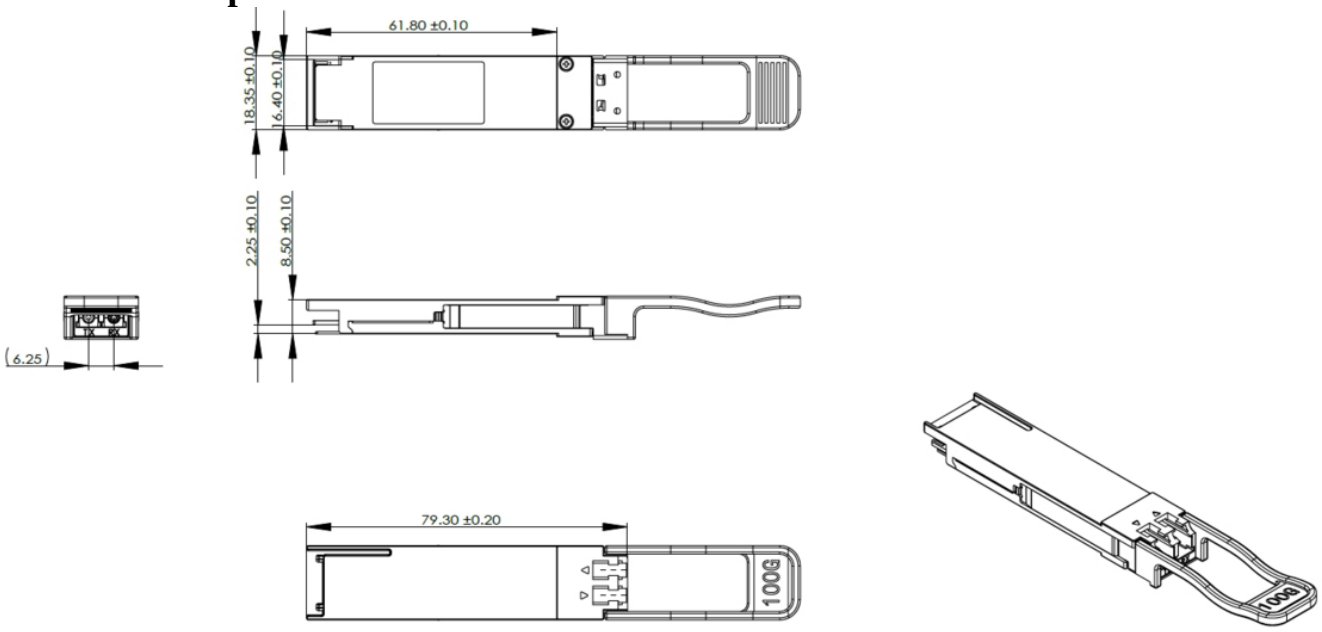
Optical Characteristics

Parameter	Symbol	Unit	Min	Typ	Max	Notes
Transmitter						
Signaling rate, each lane	DRPL	Gb/s	25.78125 ±100 ppm			
Four Lane Wavelength Range	λ1	nm	1294.53	1295.56	1296.59	
	λ2		1299.02	1300.05	1301.09	
	λ3		1303.54	1304.58	1305.63	
	λ4		1308.09	1309.14	1310.19	
Total launch power	Pout	dBm	-	-	8.9	
Average launch power, each lane	Pavg	dBm	-2.9	-	2.9	
Extinction ratio	ER	dB	8	-	-	
Side-mode suppression ratio	SMSR	dB	30	-	-	
Average launch power of OFF transmitter, per lane	POFF	dBm	-	-	-30	
RIN	RIN	dB/Hz			-128	
Optical return loss tolerance (max)		dB			20	
Transmitter reflectancec (max)		dB			-12	
Transmitter eye mask {X1, X2, X3, Y1, Y2, Y3}	M_t		{0.25, 0.4, 0.45, 0.25, 0.28, 0.4}			1
Receiver						
Receive Rate for Each Lane	Pavg	Gb/s	25.78125 ±100 ppm			
Four Lane Wavelength Range	λ1	nm	1294.53	1295.56	1296.59	
	λ2		1299.02	1300.05	1301.09	
	λ3		1303.54	1304.58	1305.63	
	λ4		1308.09	1309.14	1310.19	
Damage Threshold, each Lane	THd	dBm	5.5	-		
Average receive power, each lane (max)	PSAT	dBm	-		4.5	
Average receive power, each lanec (min)	Pin	dBm	-20.9	-		
Receiver sensitivity (OMA), each laned (max)					− 21.4	BER =1*10 - 12,2
Receiver reflectance	RL	dB	-	-	-26	
Los De-Assert	P_d	dBm	-	-	-24	

Los Assert	P_a	dBm	-33	-	-	
Loss Hysteresis	P_d-P_a	dBm	0.5			

Notes:

Mechanical Specifications



Notice:

ECI Networks reserves the right to make changes to or discontinue any optical link product or service identified in this publication, without notice, in order to improve design and/or performance. Applications that are described herein for any of the optical link products are for illustrative purposes only.

For further information

Office: 1-800-967-1672
Fax : 1-855-201-7283
mailto:sales@ecin.ca

www.ecin.ca