

## DATA SHEET

# 100G QSFP28 CWDM4 TRANSCEIVER

## DESCRIPTION

The 100G QSFP28 CWDM4 transceiver is designed for use in 100 Gigabit Ethernet links over single mode fiber. The optical transmitter integrated with four lasers with center wavelengths of 1271 nm, 1291 nm, 1311 nm and 1331 nm. The optical signals are then multiplexed into a single-mode fiber through an industry standard LC connector. On the receiver side, four lanes of optical data streams are optically de-multiplexed by an integrated optical de-multiplexer and transformed to an electrical CAUI-4 compliant output driver.

A serial EEPROM in the transceiver allows the user to access transceiver monitoring and configuration data via the 2-wire QSFP Management Interface. This interface uses a single address, A0h, with a memory map divided into a lower and upper area. Basic digital diagnostic (DD) data is held in the lower area while specific data are held in a series of tables in the high memory area.



## KEY FEATURES

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Links up to 2km on SMF with FEC

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Operating case temperature: 0~70°C

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Power consumption: 3.5W

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Integrated CWDM DFB TOSA  
(1271,1291,1311,1331nm) and PIN ROSA

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Supports 25.78125Gbps Data rate per wavelength

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Build in CDR on both TX and RX

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DDM function implemented

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Hot pluggable QSFP28 form factor

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Duplex LC receptacles

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Single +3.3V power supply

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## APPLICATIONS

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100G Ethernet

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Proprietary High Speed Interconnections

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Data Center Networking

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## COMPLIANCES

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Compliant with CWDM4 MSA

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Compliant with IEEE 802.3 CAUI-4

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Compliant with SFF-8636/8661/ 8679

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Compliant with RoHS-6

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## ENVIRONMENTAL SPECIFICATIONS

Parameter	Min.	Typ.	Max.	Unit
Operation Temperature	0	+25	+70	°C
Storage Temperature	-40	-----	+85	°C
Operation Humidity*	10	-----	85	%
Storage Humidity	10	-----	85	%

(\*) not condensing

## OPERATING SPECIFICATIONS

Parameter	Min.	Typ.	Max.	Unit
Supply Voltage	3.135	+3.3	+3.465	V
Power Dissipation (Each lane)			3.5	W
Total Data Rate		103.125		Gb/s
Data Rate (Each lane)		25.78125		Gb/s
Transmission Distance			2	Km

## OPTICAL SPECIFICATIONS

### TRANSMITTER

Parameter	Min.	Typ.	Max.	Unit
Bit Rate (each Lane)	25.78125 +/- 100ppm			Gb/s
Line Wavelength (CH0)	1264.5		1277.5	nm
Line Wavelength (CH1)	1284.5		1297.5	nm
Line Wavelength (CH2)	1304.5		1317.5	nm
Line Wavelength (CH3)	1324.5		1337.5	nm
Side Mode Suppression Ratio (SMSR)	30			dB
Average Launch Power (each lane)	-6.5		2.5	dBm
Transmitter OMA (each lane)	-4		2.5	dBm
Extinction Ratio (ER)	3.5			dB
Average launch power (OFF transmitter, each lane)			-30	dBm
Transmitter eye mask definition (X1, X2, X3, Y1, Y2, Y3)	(0.31, 0.4, 0.45, 0.34, 0.38, 0.4)			
Transmitter reflectance			-12	dB
Input differential impedance (each line)		100		Ω

### RECEIVER

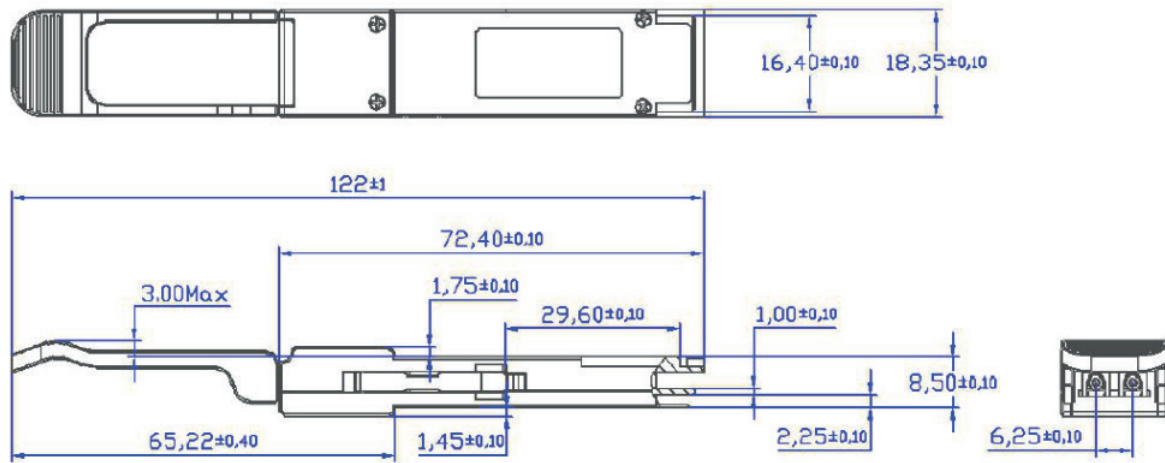
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Line Wavelength (CH1)	1284.5		1297.5	nm
Line Wavelength (CH2)	1304.5		1317.5	nm
Line Wavelength (CH3)	1324.5		1337.5	nm
Average RX Power (each lane)	-11.5		2.5	dBm
Receiver Sensitivity (unstressed, each lane)			-10	dBm

**DATA SHEET**

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DIMENSIONS

Unit: mm



ORDERING INFORMATION

Jabil Part Number	Package	Rate	Reach	Other info
JPQ81CIRLCC000CL4	QSFP28	100G	2Km	DDM/RoHS

For additional information, visit [jabil.com/photonics](http://jabil.com/photonics)