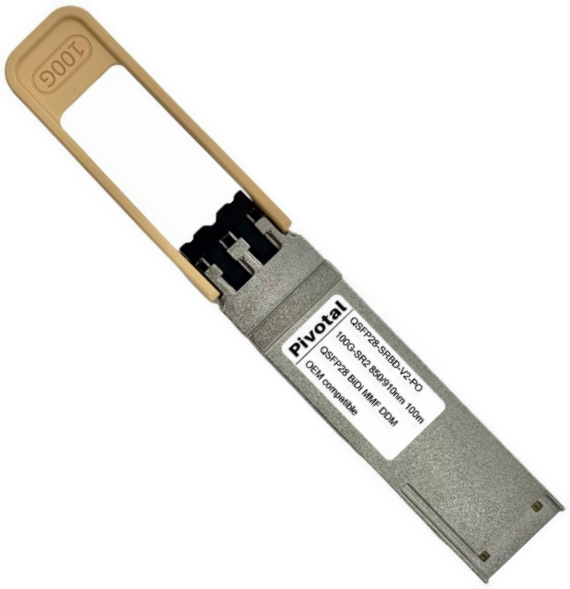
QSFP28-SRBD-V2

100GBASE, QSFP28, SR2 BiDi, MMF TRANSCEIVER

850/910nm, 100m REACH, LC CONNECTOR

Product Features

- Compliant with 100GBASE-SR2 BiDi
- Compliant with SFF-8665 QSFP28 MSA
- Compliant with IEEE 802.3bm CAUI-4 Interface
- Dual wavelength 850/910nm VCSEL Bi-Directional optical interface
- Optical Data Rate PAM4 2x26.5625GBd
- Electrical Data Rate NRZ 4x25.78125Gbps
- Built in quad TX CDR and RX CDR
- Support KP4 FEC at 100Gbps
- Hot Pluggable QSFP28 footprint
- Dual Bidi LC connector
- 2-wire interface for management and diagnostic monitor compliant with SFF-8636
- Single 3.3V power supply
- Link distance up to 150m (OM5)
- Maximum power consumption: 4W
- RoHS compliant
- Operating Temperature:
  - +10~+60°C



Product Applications

- 100GBASE-SR2 Ethernet @103.1G
- Data Centers Switch Interconnect
- Server and Storage Area Network Interconnect

I. Operating Specifications

Parameter	Symbol	Min	Typical	Max	Unit	Notes
Case Operating Temperature	T_{OP}	+10		+60	°C	
Storage Temperature	T_{ST}	-40		85	°C	
Power Supply Voltage	Vcc3	-0.5		3.6	V	
Storage Relative Humidity	RH	0		85	%	

Operating Link Distance	OM3	D			70	m	
	OM4				100		
	OM5				150		

II. Electrical Characteristics

Parameter	Symbol	Min	Typical	Max	Unit	Notes
Electrical Data Rate, per lane	DR		25.78125		Gb/s	
Supply Voltage	V_{CC}	+3.13	+3.3	+3.47	V	
Data Rate Accuracy	ΔDR	-100		+100	Ppm	
Bit Error Rate (NO FEC)	BER			$2.4x10^{-4}$		
Bit Error Rate (with FEC)	BER			$1x10^{-12}$		
Supply Current	I_{CC}			1200	mA	
Power Consumption	P			4	W	
Transceiver Power-on Initialization Time				2000	Ms	
Control Input Voltage High	V_{IH}	2.0		Vcc	V	
Control Input Voltage Low	V_{IL}	GND		0.8	V	
Control Output Voltage High	V_{OH}	2.0		Vcc	V	
Control Output Voltage Low	V_{OL}	GND		0.8	V	

III. Optical Characteristics (VCC= 3.13V to 3.47V, TOP = 0 °C to 70 °C)

Parameter	Symbol	Min.	Typ.	Max.	Units	Notes
Transmitter						
Electrical Data Rate, per CAUI-4 Lane	DR_{EL}		25.78125		Gb/s	
Optical Data Rate, per Optical Channel	DR_{OP}		26.5265		GBd	
Average Launch Power, per Channel	P_{AVG}	-6.2	-1	+4	dBm	
Optical Wavelength, CH1	λ_{CH1}	844	850	863	nm	1
Optical Wavelength, CH2	λ_{CH2}	900	910	918	nm	1
Spectral Width (RMS)	Δλ		0.5	0.65	nm	1
Optical Extinction Ratio	ER	3			dB	
Average Launch Power OFF, per Channel	P_{OFF}			-30	dBm	
Optical Return Loss Tolerance	ORLT			12	dB	
Input Differential Impedance	Z_{IN}	80	100	120	Ω	
Differential Data Input Voltage	V_{IN-PP}	120		900	mVpp	

Parameter	Symbol	Min.	Typ.	Max.	Units	Notes
Receiver						
Optical Data Rate, per Optical Channel	DR_{OP}		26.5265		GBd	
Electrical Data Rate, per CAUI-4 Lane	DR_{EL}		25.78125		Gb/s	
Damage Threshold, per Lane	D_{TH}	+5				2
Average Receive Power, per Channel	P_{RX-AVG}	-8.2		+4	dBm	2
Receiver Sensitivity (OMA), per Channel	SEN_{OMA}			-6.6	dBm	3
Optical Wavelength, CH1	λ_{CH1}	900	910	920	nm	
Optical Wavelength, CH2	λ_{CH2}	832	850	868	nm	
Receiver Reflectance	R_{RX}			-12	dB	
LOS De-Assert	LOS_D			-11.2	dBm	
LOS Assert	LOS_A	-30		-14.2	dBm	
LOS Hysteresis	LOS_H	0.5			dB	
Output Differential Impedance	Z_{OUT}	80	100	120	Ω	

Notes:

1. Transmitter wavelength, RMS spectral width and launch power need to meet the OMA minus TDP specs to guarantee link performance.
2. The receiver shall be able to tolerate, without damage, continuous exposure to a modulated optical input signal having this power level on one lane. The receiver does not have to operate correctly at this input power.
3. Measured with conformance test signal at receiver input for BER= $5x10^{-5}$.

IV. Ordering Information

Pivotal Part Number	Description
QSFP28-SRBD-V2	QSFP28, Duplex BiDi v1.2 850nm, SR MMF, 100m OM4, 100G DDM

Notes:

1. Please contact sales for specific OEM Platform part numbers to fit your network.

Warranty
https://pivotaloptics.com/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.