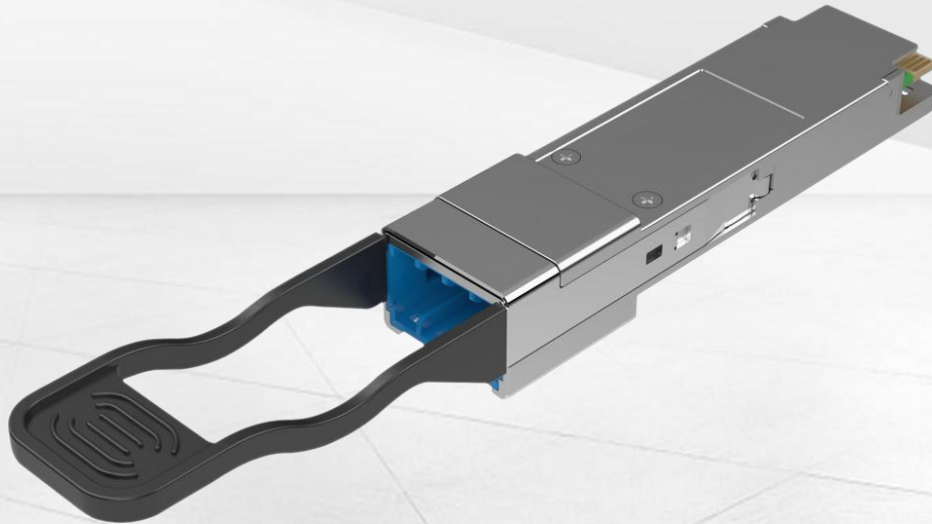




100G SR4 QSFP28 Optical Transceiver

Product Specifications

100G SR4 QSFP28 Optical Transceiver (MDC Interface)



Product Description

MDC interface 100G SR4 optical module adopts QSFP package and supports MDC connector cables. 4 groups of MDC optical interfaces are used for connection, and a total of 8 optical fibers are used for parallel transmission. The MDC connector is a duplex connector designed to provide efficient, high-density fiber optic connections.

100G QSFP28 transceiver modules are designed for use in 100 Gigabit Ethernet links over multimode fiber. They are compliant with the QSFP28 MSA and IEEE 802.3bm 100GBASE-SR4 and CAUI-4. Digital diagnostics functions are available via the I2C interface, as specified by the QSFP28 MSA. The transceiver is RoHS-6 compliant per Directive 2011/65/EU.

Product Features

- Hot Pluggable QSFP28 form factor
- Supports 103.1Gb/s aggregate bit rate
- Maximum link length of 100m on OM4 Multimode Fiber (MMF)
- MDC interface
- Single 3.3V power supply
- Typical Power dissipation <1.8W
- 4x25Gb/s 850nm VCSEL-based transmitter
- 4x25G electrical interface
- I2C management interface
- Commercial operating case temperature range: 0°C to 70°C

Electrical Characteristics (EOL, TOP = 0 to 70C, VCC = 3.135 to 3.465 Volts)

Parameter	Symbol	Min.	Typical	Max.	Unit	Note
Supply Voltage	V _{cc}	3.135		3.465	V	
Supply Current	I _{cc}			800	mA	
Module total power	P			2.5	W	
Transmitter Section:						
Signaling rate per lane			25.78125 ± 100ppm		Gb/s	
Differential pk-pk input voltage tolerance	V _{in,pp,diff}			900	mV	
Single-ended voltage tolerance	V _{in,pp}	-0.35		+3.3	V	
Module stress input test			Per Section 83E.3.4.1, IEEE 802.3bm		V	
Receiver Section:						
Signaling rate per lane			25.78125 ± 100ppm		V	
Differential data output swing	V _{out,pp}	100		400	mV _{pp}	
		300		600		
		400	600	800		
		600		1200		
Eye width		0.57			UI	
Eye height, differential		228			mV	
Vertical eye closure	VEC	5.5			dB	
Transition time (20% to 80%)	t _r , t _f	12			ps	

Optical Characteristics (EOL, TOP = 0 to 70C, VCC = 3.135 to 3.465 Volts)

Parameter	Symbol	Min.	Typical	Max.	Unit	Note
Transmitter Section:						
Center Wavelength	λ _t	840	850	860	nm	
RMS spectral width	Δλ			0.6	nm	

100G SR4 QSFP28 Optical Transceiver (MDC Interface)

Average Optical Power per Lane	TXP _x	-8.4	2.4	dBm
Optical Power OMA per Lane	T _x OMA	-6.4	3	dBm
Launch Power [OMA] minus TDEC per Lane	P-TDEC	-7.3		dBm
TDEC per Lane	TDEC		4.3	dBm
Optical Extinction Ratio	ER	2		dB
Optical Return Loss Tolerance	ORL		12	dB
Encircled Flux	FLX	>86% at 19 um <30% at 4.5 um		dB
Average Launch Power of OFF Transmitter, per Lane			-30	dBm
Transmitter Eye mask definition {X1, X2, X3, Y1, Y2, Y3}		{0.3,0.38,0.45,0.35,0.41,0.5}		2
Receiver Section:				
Signaling Speed per Lane		25.78125 ± 100ppm	Gb/s	3
Center Wavelength	λ _r	840	860	nm
Damage Threshold	DT	3.4		dBm
Average Receive Power per Lane	RXP _x	-10.3	2.4	dBm
Receive Power (OMA) per Lane	R _x OMA		3	dBm
Receiver Reflectance	R _{fl}		-12	dB
Stressed Sensitivity (OMA)	SRS		-5.2	dBm 4
Stressed Conditions:				
Stressed Eye Closure	SEC		4.3	dB
Stressed Eye J2 Jitter	J2		0.39	UI
Stressed Eye J4 Jitter	J4		0.53	UI
OMA of each aggressor lane			3	dBm
Stressed Receiver Eye Mask Definition {X1, X2, X3, Y1, Y2, Y3}		{0.28,0.5,0.5,0.33,0.33,0.4}		5
Los De-Assert	LOS _D		-13	dBm
Los Assert	LOS _A	-30		dBm
Los Hysteresis	LOS _H	0.5	2	dB

Note:

1. Transmitter consists of 4 lasers operating at a maximum speed of 25.78125Gb/s ± 100ppm each.
2. Hit Ratio 1.5 x 10⁻³ hits/sample.
3. Receiver consists of 4 photo detectors operating at a maximum speed of 25.78125Gb/s ± 100ppm each.
4. Minimum value is informative only and not the principal indicator of signal strength.
5. Hit Ratio 5 x 10⁻⁵ hits/sample

General Specifications

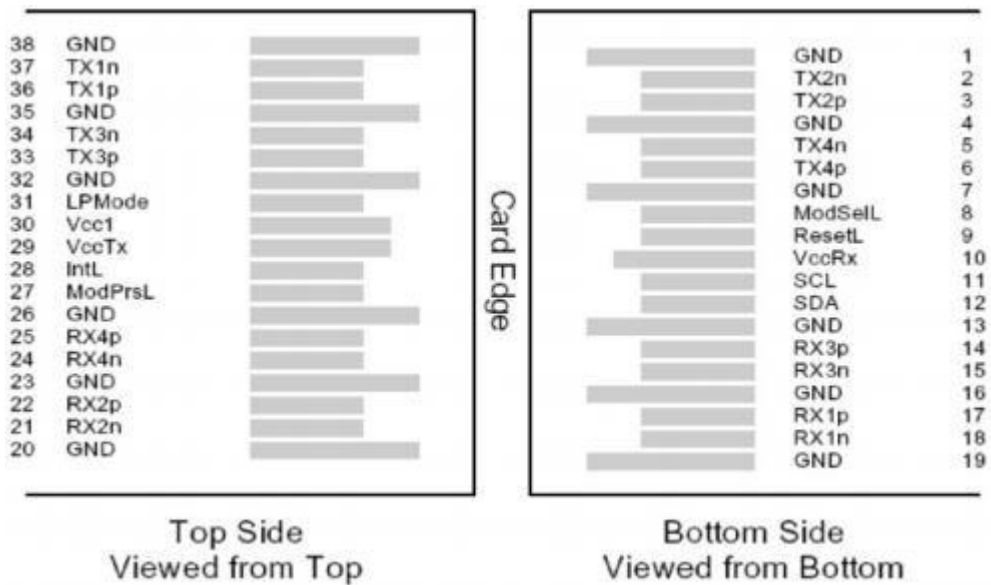
Parameter	Symbol	Min.	Typical	Max.	Unit
Bit Rate (all wavelengths combined)	BR			103.1	Gb/s
Bit Error Ratio (pre-FEC)	BER			5x10 ⁻⁵	

Maximum Supported Distances

Fiber Type

OM3 MMF	Lmax1			70	m
OM4 MMF	Lmax2			100	m

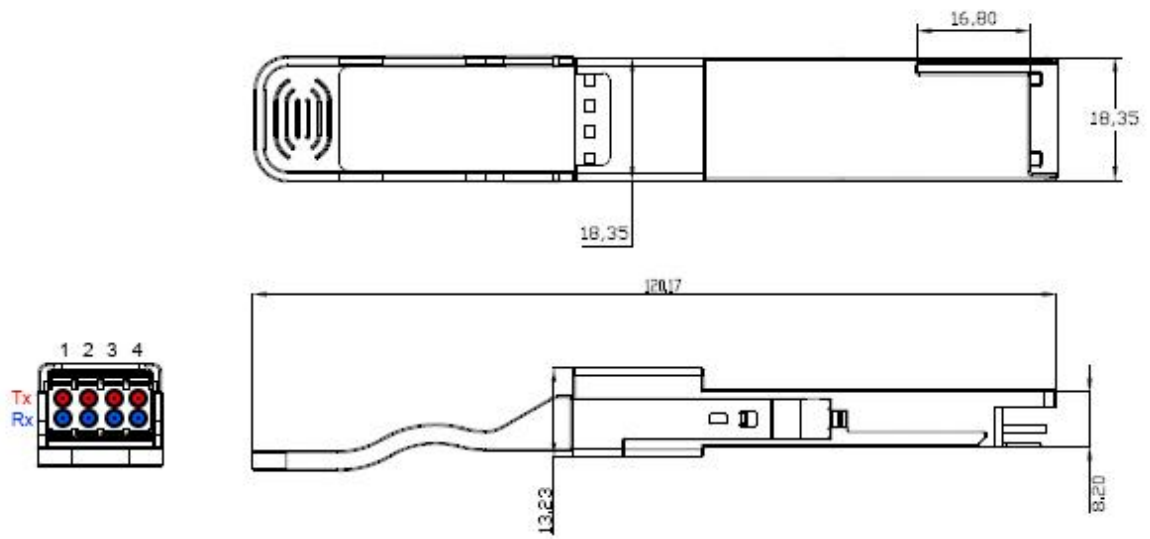
Pin Assignment:



Order Guide

No.	Product Code	Product Description
1	9950107	100G SR4 transceiver w/MDC optical conn interface

Product Specifications

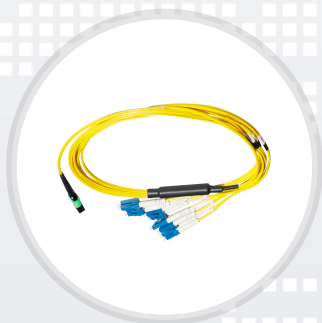


About ADTEK

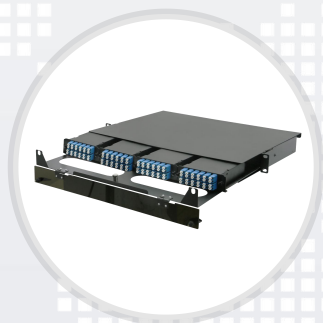
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The company focuses on providing optical fiber and copper cable connection products for global customers, and provides one-stop fiber optic cabling system and network cabling solutions for domestic and foreign operators, telecom main equipment suppliers and system integrators.

Our main products cover high-density data centers, 5G fronthaul, OBO onboard connections, FTTX etc. Based on the purpose of "Quality is everything", our products have passed CE, RoHS, UL, FCC and other certifications to ensure the reliability and stability of each product and provide excellent products for our customers.



Fiber Optic Patch Cord



Fiber Optic Patch Panel



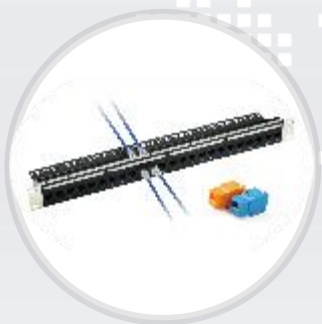
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