

SV-QSFP-100G-SWDM4

Starview QSFP28 100G module SWDM(850/ 880/ 910/ 940nm) wavelengths MM (LC) DDM, distance up to 150m



Features

- Compliant with QSFP28 MSA
- Compliant with SWDM MSA
- Compliant with IEEE802.3bm CAUI-4
- Hot-pluggable QSFP28 form factor
- 4x25Gb/s 850nm VCSEL-based transmitter
- Supports 103.1Gbps aggregate bit rate
- Power dissipation<3.5W
- Maximum link length of 150m on OM5 multimode Fiber
- Case temperature range of 0°C to 70°C
- Duplex LC receptacles
- CAUI-4 electrical interface
- RoHS compliant

Applications

- 100G Ethernet over Duplex MMF

Ordering Information

Part number	Description
SV-QSFP-100G-SWDM4	Starview QSFP28 100Gbps module 100GBase aggregating 4 x 25Gbps duplex SWDM (850/ 880/ 910/ 940nm) wavelengths MM (LC) with Digital Diagnostic Monitoring (DDM), distance up to 100m on 50/125um MM OM4 MM fiber, 150m on 50/125um MM OM5 MM fiber

Absolute Maximum Ratings

Parameter	Symbol	Min	Max	Units
Storage Temp Range	Ts	-40	+85	°C
Supply Voltage	Vcc	-0.5	3.6	V
Relative Humidity	RH	15%	85%	
Case Temp-Operating	Tcase	0	70	°C
Supply Voltage	Vcc	3.14	3.46	V
Power Consumption	P		3.5	W
Link Distance on OM3 Fiber			75	M
Link Distance on OM4 Fiber			100	M
Link Distance on OM5 Fiber			150	M

Optical Characteristics

Transmitter Parameter	Lane	Min	Typical	Max	Unit	Note
Signaling rate,each lane		25.78125±100ppm			Gb/s	
Lane Wavelength Range	Lane0	844		858	nm	
	Lane1	874		888		
	Lane2	904		918		
	Lane3	934		948		
Modulation Format	NRZ					
Difference in launch power between any two lanes				4.5	dBm	
RMS Spectral width				0.59	nm	1
Optical Modulation Amplitude(OMA),each lane	-5.5			3	dBm	2
Average Launch Power per Lane@TX Off State				-30	dBm	
Launch Power in OMA minus TDEC	Lane0	-7			dBm	
	Lane1	-7				
	Lane2	-7.4				
	Lane3	-7.7				
Transmitter and Dispersion Eye Closure	Lane0			4	dB	3
	Lane1			4		
	Lane2			4.4		
	Lane3			4.8		
Extinction Ratio	2				dB	
Optical Return Loss Tolerance				12	dB	
Encircled Flux				≥86%at 19 um ≤30%at 4.5 um		4
Transmitter eye mask definition{X1,X2,X3,Y1,Y2,Y3}		{0.3,0.38,0.45,0.35,0.41,0.5}				
Hit ratio 1.5x10-3 hits per sample						

Notes:

1.RMS spectral width is the standard deviation of the spectrum.

2.The normative lowest value of OMA for a compliant transmitter is 'Launch power in OMA minus TDEC,each lane(min)'+the actual value of 'TDEC',but with a value of at least 'OMA,each lane(min)'.

3.TDEC is calculated from the measured TDECm using the methods in 3.6.TDECm is measured following the method in IEEE 802.3 clause 95.8.5 using a 12.6 GHz bandwidth reference receiver for all lanes.

4.If measured into type A1a.2 or type A1a.3 50 um fiber in accordance with IEC 61280-1-4.

Receiver Parameter	Lane	Min	Typical	Max	Unit	Note
Signaling rate, each lane		25.78125±100ppm			Gb/s	
Lane Wavelength Range	Lane0	844		858	nm	
	Lane1	874		888		
	Lane2	904		918		
	Lane3	934		948		
Modulation Format		NRZ				
Damage Threshold		4.4			dBm	
Average Receive Power, each lane	Lane0	-9.5		3.4	dBm	
	Lane1	-9.4				
	Lane2	-9.4				
	Lane3	-9.4				
Receiver Power, each lane (OMA)				3	dBm	
Receiver Reflectance				-12	dB	
unStressed Receiver Sensitivity(OMA)	Lane0			-8.2	dBm	1
	Lane1			-8.4		
	Lane2			-8.6		
	Lane3			-8.8		
RX_ Los_Assert		-30			dBm	
RX_ Los_ De-ASSERT				-12	dBm	
RX_ Los_ Hysteresis		0.5			dBm	

1.unstressed sensitivity at BER of 5E-5(pre FEC)

Electrical Characteristics

Transmitter electrical input signal characteristics(TP1)	Min	Typical	Max	Unit
Signaling rate per lane(range)	25.78125±	100 ppm		GBd
Differential input return loss	Equation(83E-5)			dB
Differential to common mode input return loss	Equation(83E-6)			dB
Differential termination mismatch			10	%
Module stressed input test	See 83E3.4.1			
Differential pk-pk input voltage tolerance	900			mV
DC common mode voltage	-350		2850	mV
Single ended voltage tolerance range	-0.4		3.3	V
Receiver electrical output signal characteristics(TP4)	Min	Typical	Max	Unit
Signaling rate per lane(range)	25.78125±	100 ppm		GBd
AC common-mode output voltage(RMS)			17.5	mV
Differential output voltage			900	mV
Eye width	0.57			UI
Eye height,differential	228			mV
Vertical eye closure			5.5	dB
Differential output return loss	Equation(83E-2)			dB
Common to differential mode conversion return loss	Equation(83E-3)			dB

Differential termination mismatch		10	%
Transition time(20%to 80%)	12		ps
DC common mode voltage	-350	2850	mV

