SV-QSFP-100G-ZR4

Starview QSFP28 100G module LWDM wavelengths SM (LC) DDM, distance up to 80km

Features

- QSFP28 MSA compliant
- Hot pluggable 38 pin electrical interface
- 4 LAN-WDM lanes MUX/DEMUX design
- 4x25G electrical interface
- Maximum power consumption 5W
- LC duplex connector
- Supports 103.125Gb/s aggregate bit rate
- Up to 80km transmission on single mode fiber
- Operating case temperature: 0℃ to 70℃
- Single 3.3V power supply
- RoHS 2.0 compliant

Applications

- 100GBASE-ZR4 100G Ethernet
- Telecom networking

Ordering Information

Part number	Description
SV-QSFP-100G-ZR4	Starview QSFP28 100Gbps module 100GBase aggregating 4 x 25Gbps duplex LWDM (1295.6 nm, 1300.1 nm, 1304.6 nm, and 1309.1nm) wavelengths SM (LC) with Digital Diagnostic Monitoring (DDM), distance up to 80km, supporting 100GE

Absolute Maximum Ratings

Parameter	Symbol	Min	Typ	Max	Unit	Notes
Maximum Supply Voltage	Vcc	0		3.6	V	
Storage Temperature	Ts	-40		85	℃	
Relative Humidity	RH	15		85	%	1
Damage Threshold, each lane	THd	6.5			dBm	

Recommended Operating Conditions

Parameter	Symbol	Min	Typical	Max	Unit
Operating case temperature	T_c	0		70	°C
Power supply voltage	Vcc	3.135	3.3	3.465	V
Link Distance with G.652				80	km

Electrical Characteristics

Parameter	Symbol	Min	Typ	Max	Unit	Note
Power dissipation				5	W	
Supply Current	Icc			1.5873	A	Steady state
Transmitter						
Data Rate, each lane			25.78125		Gbps	
Differential Voltage pk-pk	Vpp			900	mV	At 1 MHz
Common Mode Voltage	Vcm	-350		2850	mV	
Transition time	Trise/Tfall	10			ps	20%~80%
Differential Termination Re-sistance Mismatch				10	%	
Eye width	EW15	0.46			UI	
Eye height	EH15	95			mV	
Receiver						
Data Rate, each lane			25.78125		Gbps	
Differential Termination Re-sistance Mismatch				10	%	At 1 MHz
Differential output voltage swing	Vout, pp			900	mV	
Common Mode Noise, RMS	Vrms			17.5	mV	

Transition time	Trise/Tfall	12		ps	20%~80%
Eye width	EW15	0.57		UI	
Eye height	EH15	228		mV	

Optical Characteristics

100GBASE-ZR4 Operation（EOL, TOP = 0 to +70 ℃, VCC = 3.135 to 3.465 Volts）

Parameters	Unit	min	type	max	Note
Transmitter					
Signaling Speed per Lane	Gb/s		25.78125 ±100 ppm		
Transmit wavelengths	nm	1294.53		1296.59	
		1299.02		1301.09	
		1303.54		1305.63	
		1308.09		1310.19	
Side-Mode Suppression Ratio (SMSR)	dB	30			
Total Average Launch Power	dBm	8.0		12.5	
Average launch power, each lane	dBm	2.0		6.5	
Difference in launch power between any two lanes(Average and OMA)	dBm			3	
Average launch power of OFF transmitter, each lane	dBm			-30	
Extinction Ratio (ER)	dB	6			
RIN OMA	dB/Hz			-130	
Optical return loss tolerance	dB			20	
Transmitter reflectance	dB			-12	
Transmitter eye mask definition {X1,X2, X3, Y1, Y2, Y3}			{0.25, 0.4, 0.45, 0.25, 0.28, 0.4}		1
Mask margin	%	5			
Receiver					
Signaling Speed per Lane	Gb/s		25.78125 ±100 ppm		
		1294.53		1296.59	
		1299.02		1301.09	

Receive wavelengths	nm	1303.54	1305.63	
		1308.09	1310.19	
Average receiver power, each lane	dBm	-28	-7	
Receiver power, each lane(OMA)	dBm		-7	
Receiver reflectance	dB		-26	
Receiver sensitivity Average, eachlane	dBm		-28	1
			-20.9	2
Receiver 3 dB electrical upper cutoff frequency, each lane	GHz		31	
Damage threshold, each lane	dBm	6.5		
LOS Assert	dBm	-40		
LOS Deassert	dBm		-29	
LOS Hysteresis	dB	0.5		

Note

Sensitivity is specified at BER@5E-5 with FEC

Sensitivity is specified at BER@1E-12 without FEC.