SV-QSFP-100G-ZR4

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

Features

- Supports 103Gbps
- Single 3.3V power supply
- Power dissipation : 5.5W
- Up to 80km over SMF
- Commercial case temperature range of 0°C to 70°C
- Four 25Gbps EML LAN-WDM lasers on transmitter side
- SOA&PD on the receiver side
- 4x25Gbps / electrical interface
- Duplex LC receptacles
- I2C interface with integrated Digital Diagnostic Monitoring
- Safety certification: TUV/UL/FDA
- RoHS compliant

Applications

- 100G 80km applications with FEC on host side
- 100G Datacom & Telecom connections

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.	Max.	Unit
Storage Temperature	Ts	-40	+85	°C
Supply Voltage	Vcc	-0.5	3.6	V
Operating Relative Humidity	RH	5	85	%

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
Power dissipation	P_D			5.5	W

Performance Specifications – Electrical

Parameter	Symbol	Min	Typical	Max	Unit
Transmitter					
Differential data input swing per lane				900	mvp-p
Input Impedance (Differential)	Zin			10	%
Stressed input parameters					
Eye width		0.46			UI
Applied pk-pk sinusoidal jitter		IEEE 802.3bm Table 88-13			
Eye height		95			mV
DC common mode voltage		-350		2850	mV
Receiver					
Differential output amplitude		200		900	mvp-p
Output Impedance (Differential)	Zout			10	%
Eye width		0.57			UI
Eye height differential		228			mV
Vertical eye closure				5.5	dB

Optical Characteristics

Parameter	Symbol	Min	Typical	Max	Unit
Transmitter					
Signaling Speed per Lane	BRAVE		25.78		Gbps
Data rate variation		-100		+100	ppm
Lane_0 center wavelength	λ_{C0}	1294.53	1295.56	1296.59	nm
Lane_1 center wavelength	λ_{C1}	1299.02	1300.05	1301.09	nm
Lane_2 center wavelength	λ_{C2}	1303.54	1304.58	1305.63	nm

Lane_3 center wavelength	λC3	1308.09	1309.14	1310.19	nm
Spectral width (-20dB)	Δλ			1	nm
Total average output power	Po			13	dBm
Average launch power per lane*(Note4)	Peach	3		7	dBm
Optical modulation amplitude per lane	POMA	3.7		7.8	dBm
Average launch power of OFF transmitter per lane	Poff			-30	dBm
Side-mode suppression ratio	SMSR	30			dB
Transmitter dispersion penalty , each lane*(Note6)	TDP			1	dB
Difference in launch power between any two lanes				3.6	dB
Optical Return loss tolerance				20	dB
Transmitter reflectance				-26	
Extinction ratio	ER	6	8		dB
Transmitter eye mask definition {X1, X2, X3, Y1, Y2, Y3}*(Note8)		{0.25, 0.4, 0.45, 0.25, 0.28, 0.4}			
Receiver					
Signaling speed per lane	BR_{AVE}		25.78		Gbps
Data rate variation		-100		+100	ppm
Lane_0 center wavelength	λ_{C0}	1294.53	1295.56	1296.59	nm
Lane_1 center wavelength	λ_{C1}	1299.02	1300.05	1301.09	nm
Lane_2 center wavelength	λ_{C2}	1303.54	1304.58	1305.63	nm
Lane_3 center wavelength	λ_{C3}	1308.09	1309.14	1310.19	nm
Average receive power per lane	Rx_pow	-31		4.5	dBm
Damage threshold per lane(min) *(Note5)	Pdamage			5.5	dBm
Receiver overload per Lane	Psat	4.5			dBm
Receive sensitivity average per lane*(Note6)	Rx_sens			-29	dBm
Stressed Sensitivity per lane*(Note6)	SRS			-25.1	dBm
Receiver reflectance	ORL			-26	dB
LOS Assert	LOSA	-42			dBm
LOS De-Assert	LOSD			-31.5	dBm
LOS hysteresis		0.5			dB

Note4. Average launch power, each lane (min) is informative and not the principal indicator of signal strength. A transmitter with launch power below this value cannot be compliant; however, a value above this does not ensure compliance.

Note5. The receiver shall be able to tolerate, without damage, continuous exposure to an optical input signal having this average power level.

Note6. Measured with conformance test signal for BER = 5E-5@25.78Gbps PRBS31-1.