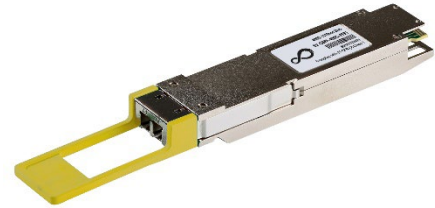


SV-OSFP-400G-PFR1

Starview OSFP 400G-DR4+ aggregating 4 x 100Gbps 1310nm SM (MPO12 APC) with DDM, distance up to 2km



Features

- Supports 425Gbps
- Single 3.3V Power Supply
- Power dissipation < 10W
- Up to 2km over SMF
- OSFP MSA Compliant
- 8x53.125GBd(PAM4) electrical interface
- MPO-12 connector
- Commercial case temperature range of 0°C to 70°C
- PIN and TIA array on the receiver side
- I2C interface with integrated Digital Diagnostic Monitoring
- Safety Certification: TUV/UL/FDA
- RoHS Compliant

Applications

- 4 x 100G-DR4+ applications
- Data center

Part number	Description
SV-OSFP-400G-PFR1	Starview OSFP 400Gbps module 400G-DR4+ aggregating 4 x 100Gbps 1310nm SM (MPO12 APC) with Digital Diagnostic Monitoring (DDM), distance up to 2km

Absolute Maximum Ratings

Parameter	Symbol	Min.	Max.	Unit
Storage Temperature	Ts	-40	+85	°C
Supply Voltage	Vcc	-0.5	3.6	V
Damage threshold	Rxdmg	5		dBm

Recommended Operating Conditions

Parameter	Symbol	Min.	Typical	Max.	Unit
Operating Case Temperature	Tc	0		70	°C
Power Supply Voltage	Vcc	3.135	3.3	3.465	V
Operating Relative Humidity	RH	5		85	%
Power Dissipation	P _D			10	W

* Power Supply specifications, Instantaneous, sustained and steady state current compliant with OSFP MSA Power Classification.

Electrical Characteristics

Parameter	Symbol	Min.	Typ.	Max	Unit	Notes
Transmitter						
Differential data input swing per lane		900			mV _{p-p}	
Differential input impedance	Z _{in}	90	100	110	ohm	
Stressed input parameters						
Eye width		0.265			UI	@TP4, all 3 PAM4 eyes, 1E-5
DC common mode voltage		-350		2850	mV	
Receiver						
Differential output amplitude				900	mV _{p-p}	
Differential output impedance	Z _{out}	90	100	110	ohm	
Output Rise/Fall Time	t _r /t _f	9.5			ps	20%~80%
Eye width		0.265			UI	
Eye height differential		70			mV	@TP4, all 3 PAM4 eyes, 1E-5

Optical Characteristics

Parameter	Symbol	Min.	Typical	Max.	Unit
Transmitter					
Signaling speed per lane			106.25		Gbps
Modulation format			PA		

M4					
Center wavelength	λ_C	1304.5	1310	1317.5	nm
Side-mode Suppression Ratio	SMSR	30			dB
Extinction Ratio	ER	3.5			dB
Transmit OMA each lane	TxOMA	-0.3		4.2	dBm
Transmit average each lane*(note4)	TxAVG	-2.9		4	dBm
Launch Power in OMA _{outer} minus TDECQ, each Lane *(note5)		-1.7			dBm
Launch Power in OMA _{outer} minus TDECQ, each Lane*(note6)		-1.6			dBm
Transmitter and dispersion eye closure, each lane	TDECQ			3.4	dB
Optical return loss tolerance				17.1	dB
Receiver					
Signaling speed per lane			106.25		Gbps
Modulation format			PAM4		
Center wavelength	λ_C	1304.5	1310	1317.5	nm
Receive Power (OMA) each lane	RxOMA			4.2	dBm
Average receive power each lane	RxAVG	-7.3		4	dBm
Receiver sensitivity(OMA _{outer}), each lane	SenOMA	max(-4.6, SECQ-6.0)			dBm
Receiver reflectance				-26	dB
LOS Assert	LOSA	-30			dBm
LOS De-Assert	LOSD			-12	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: For ER ≥ 4.5dB

Note6: For ER < 4.5dB