

SV-XFP-10GER4C##

9.95Gbps to 11.1Gbps, 1470nm to 1610nm SM (LC), distance up to 40km



Features

- Hot-pluggable XFP footprint
- Supports 9.95Gb/s to 11.3Gb/s bit rates
- Supports Lineside and XFI loopback
- RoHS-6 Compliant (lead-free)
- Power dissipation <3.5W
- Case temperature range:0°C to 70°C
- Maximum link length of 40km
- Cooled CWDM EML and PIN receiver
- Full Duplex LC connector
- No Reference Clock required
- Built-in digital diagnostic functions
- Standard bail release mechanism

Applications

- 10GBASE-ER/EW 10G Ethernet
- 10G Fiber Channel
- SONET OC-192 &SDH STM 64

Ordering Information

Part number	Description	TX Power (dBm)	RX Sens. (dBm)	Fiber Budget (dB)	Distance (km)	DDM
SV-XFP-10GER4C##	Starview XFP module with Digital Diagnostic Monitoring (DDM), Data rate from 9.95Gbps to 11.1Gbps supporting OC-192/ STM-64/ 10G LAN/ 10G FC and OC192 with FEC SM (LC), distance up to 40km. where ## denotes 47=1470nm 49=1490nm, 51=1510nm, 53=1530nm, 55=1550nm, 57=1570nm, 59=1590nm, 61=1610nm	-1 to 4	-16.5 to 0.5	15	40	YES

Absolute Maximum Ratings

Parameter	Symbol	Min.	Typ.	Max.	Unit
Maximum Supply Voltage 1	Vcc3	-0.5		4.0	V
Maximum Supply Voltage 2	Vcc5	-0.5		6.0	V
Storage Temperature	TS	-40		85	°C
Case Operating Temperature	Tcase	0		70	°C

Optical Characteristics

Parameter	Symbol	Min.	Typ.	Max.	Unit	Note
Transmitter						
Average Optical Power	Pf	-1		4	dBm	
Optical Wavelength	λ	$\lambda-6.5$	$\lambda+1$	$\lambda+6.5$	nm	1
Side mode Suppression ratio	SMSR	30			dB	
Optical Extinction Ratio	ER	8.2			dB	
Tx Jitter Generation(peak-to-peak)	Jp-p			0.3	UI	
Transmitter and Dispersion Penalty	TDP			2	dB	
Average Launch power of OFF transmitter	POFF			-30	dBm	
Relative Intensity Noise	RIN			-130	dB/Hz	
Receiver						
Receiver Sensitivity	Psen			-16.5	dBm	2
Input Saturation Power (Overload)	Psat	+0.5			dBm	
Wavelength Range	λ_c	1270		1610	nm	
Receiver Reflectance	Rrx			-27	dB	
LOS De-Assert	LOSD			-22	dBm	
LOS Assert	LOSA	-28			dBm	
LOS Hysteresis		0.5			dB	

Note (1): " λ " is:1470, 1490, 1510, 1530, 1550, 1570, 1590, 1610,

Note (2): Measured with BER10^{-12}@10.3Gbps, $2^{31} - 1$ PRBS.

General Specifications

Parameter	Symbol	Min.	Typ.	Max.	Unit	Notes
Bit Rate	BR	9.95		11.3	Gb/s	1
Bit Error Ratio	BER			10^{-12}		2
Max. Supported Link Length	LMAX		40		km	1

Note (1): 10GBASE-ER/EW.

Note (2): Tested with 10.3Gbps, $2^{31} - 1$ PRBS

Electrical Characteristics

Parameter	Symbol	Min.	Typ.	Max.	Unit	Note
Main Supply Voltage	Vcc5	4.75		5.25	V	
Supply Voltage #2	Vcc3	3.13		3.45	V	
Supply Current – Vcc5 supply	Icc5			320	mA	
Supply Current – Vcc3 supply	Icc3			450	mA	
Module total power	P			3.5	W	1
Transmitter						
Input differential impedance	Rin		100		Ω	2
Differential data input swing	Vin,pp	120		820	mV	
Transmit Disable Voltage	VD	2.0		Vcc	V	3
Transmit Enable Voltage	VEN	GND		GND+ 0.8	V	
Transmit Disable Assert Time				10	us	
Receiver						
Differential data output swing	Vout,pp	340	650	850	mV	4
Data output rise time	tr			38	ps	5
Data output fall time	tf			38	ps	5
LOS Fault	VLOS fault	Vcc-0.5		VccHOST	V	6
LOS Normal	VLOS norm	GND		GND+0.5	V	6
Power Supply Rejection	PSR		See Note 6 below			7

Note (1): Maximum total power value is specified across the full temperature and voltage range.

Note (2): After internal AC coupling.

Note (3): Or open circuit.

Note (4): Into 100 ohms differential termination.

Note (5): These are unfiltered 20-80% values

Note (6): Loss Of Signal is open collector to be pulled up with a 4.7k – 10kohm resistor to 3.15 – 3.6V.

Logic 0 Indicates normal operation; logic 1 indicates no signal detected.

Note (7): Per Section 2.7.1. in the XFP MSA Specification1