

SV-XFP-SR

9.95Gbps to 11.3Gbps, 850nm MM (LC), distance up to 300m



Features

- Hot-pluggable XFP footprint
- Supports 9.95Gb/s to 11.3Gb/s bit rates
- XFI Loopback Mode
- Power dissipation <1.5W
- RoHS-6 compliant (lead-free)
- Case Temperature range 0°C to 70°C
- Maximum link length of 300m
- Uncooled 850nm VCSEL laser
- Duplex LC connector
- No Reference Clock required
- Built-in digital diagnostic functions
- Standard bail release mechanism

Applications

- 10GBASE-SR/SW 10G Ethernet
- 1200-Mx-SN-I 10G Fiber Channel

Ordering Information

Part number	Description	TX Power (dBm)	RX Sens. (dBm)	Fiber Budget (dB)	Distance (km)	DDM
SV-XFP-SR	Starview XFP module with Digital Diagnostic Monitoring (DDM), Data rate from 9.95Gbps to 11.3Gbps supporting OC192/ STM64/ 10G LAN/ 10G FC, 850nm MM (LC), distance up to 300m	-6 to -1.0	-10 to 0.5	1	0.3	YES

Absolute Maximum Ratings

Parameter	Symbol	Min.	Typ.	Max.	Unit
Maximum Supply Voltage	V _{cc3}	-0.5		4.0	V
Storage Temperature	T _s	-40		85	°C
Case Operating Temperature	T _{case}	0		70	°C

Optical Characteristics

Parameter	Symbol	Min.	Typ.	Max.	Unit	Note
Transmitter						
Average Optical Power	P _{AVE}	-6		-1.0		1
Optical Wavelength	λ	840	850	860	nm	
Optical Extinction Ratio	ER	3.0	5		dB	
Transmitter and Dispersion Penalty	TDP			3.9	dB	
Average Launch power of transmitter	P _{OFF}			-30	dBm	
Encircled Flux	<4.5μm			30	%	2
Relative Intensity Noise	RIN _{OMA12}			-128	dB/Hz	
Receiver						
Receiver Sensitivity@ 10.5Gb/s	P _{sen}			-10	dBm	
Input Saturation Power (Overload)	P _{sat}	+0.5			dBm	
Wavelength Range	λ _C	840		860	nm	
Receiver Reflectance	R _{rx}			-12	dB	
LOS De-Assert	LOS _D			-12	dBm	
LOS Assert	LOS _A	-30			dBm	
LOS Hysteresis		0.5			dB	

Note(1): Average power figures are informative only, per IEEE 802.3ae..

Note(2): Measured into Type A1a (50/125 μm multimode) fiber per ANSI/TIA/EIA-455-203-2

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
Maximum Supported Distances						
Fiber Type	850nm OFL Bandwidth					
62.5μm	160MHz-km	Lmax		26	m	
	OM1 500MHz-km			33		
50μm	400MHz-km	Lmax		66	m	
	OM2 500MHz-km			82		
	OM3 2000MHz-km			300		

Note(1): 10GBASE-SR/SW, 1200-Mx-SN-I

Note(2): Tested with 10.3Gbps, 2³¹ – 1 PRBS

Electrical Characteristics

Parameter	Symbol	Min.	Typ.	Max.	Unit	Note
Supply Voltage	Vcc3	3.13		3.45	V	
Supply Current	Icc3			450	mA	
Module total power	P			1.5	W	1
Transmitter						
Input differential impedance	R_{in}		100		Ω	2
Differential data input swing	Vin,pp	120		1000	mV	
Transmit Disable Voltage	V_D	2.0		Vcc	V	3
Transmit Enable Voltage	V_{EN}	GND		GND+ 0.8	V	
Transmit Disable Assert Time				10	us	
Receiver						
Differential data output swing	Vout,pp	600	650	800	mV	4
Data output rise time	t_r			40	ps	5
Data output fall time	t_f			40	ps	5
LOS Fault	$V_{LOS\ fault}$	$V_{CC} - 0.5$		V_{CC_HOST}	V	6
LOS Normal	$V_{LOS\ norm}$	GND		GND+0.5	V	6
Power Supply Rejection	PSR					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 Ω – 10k Ω 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.