

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

Absolute Maximum Ratings

Parameter	Symbol	Min	Typ	Max	Unit	NOTE
Maximum Supply Voltage	Vcc3	-0.5		4.0	V	
Storage Temperature	T _s	-40		85	°C	
Case Operating Temperature	T _{case}	0		70	°C	

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	V _{in,pp}	120		1000	mV	
Transmit Disable Voltage	V _D	2.0		V _{cc}	V	3
Transmit Enable Voltage	V _{EN}	GND		GND+ 0.8	V	
Transmit Disable Assert Time				10	us	
Receiver						
Differential data output swing	V _{out,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
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Notes:

1. Maximum total power value is specified across the full temperature and voltage range.
2. After internal AC coupling.
3. Or open circuit.
4. Into 100 ohms differential termination.
5. These are unfiltered 20-80% values
6. Loss Of Signal is open collector to be pulled up with a 4.7kΩ – 10kΩ resistor to 3.15 – 3.6V. Logic 0 indicates normal operation; logic 1 indicates no signal detected.
7. Per Section 2.7.1. in the XFP MSA Specification ¹.

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	<4.5 μ m			30	%	2
Relative Intensity Noise	RIN_{OMA}			-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	

Notes:

1. Average power figures are informative only, per IEEE 802.3ae.
2. Measured into Type A1a (50/125 μ m multimode) fiber per ANSI/TIA/EIA-455-203-2.

General Specifications

Parameter	Symbol	Min	Typ	Max	Units	NOTE
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					
62.5 μ m	160MHz-km	Lmax		26	m	
	OM1 500MHz-km			33		
50 μ m	400MHz-km	Lmax		66	m	
	OM2 500MHz-km			82		
	OM3 2000MHz-km			300		

Notes:

1. 10GBASE-SR/SW, 1200-Mx-SN-I
2. Tested with 10.3Gbps, $2^{31} - 1$ PRBS

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