Features

- Hot-pluggable XFP footprint
- Supports 9.95Gb/s to 11.3Gb/s bit rates
- XFI Loopback Mode
- RoHS-6 Compliant (lead-free)
- Power dissipation <2.0W
- Case temperature range:0°C to 70°C
- Maximum link length of 2km
- FP laser and PIN receiver
- Full Duplex LC connector
- No Reference Clock required
- Built-in digital diagnostic functions
- Standard bail release mechanism

Applications

- 10GBASE-LR/LW 10G Ethernet
- 10G Fiber Channel
- SONET OC-192 SR-1 SDH STM I-64.1

Absolute Maximum Ratings

Parameter	Symbol	Min	Typ	Max	Unit
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 #2	Vcc3	3.13		3.45	V	
Supply Current – Vcc3 supply	Icc3			450	mA	
Module total power	P			2.0	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					7

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 4.7k – 10kohm 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.

Optical Characteristics

Parameter	Symbol	Min	Typ	Max	Unit	NOTE
Transmitter						
Average Optical Power	P_f	-6		-1	dBm	
Optical Wavelength	λ	1290	1310	1330	nm	
Side mode Suppression ratio	SMSR	30			dB	
Optical Extinction Ratio	ER	3.5	5		dB	
Transmitter and Dispersion Penalty	TDP			3.2	dB	
Average Launch power of transmitter	P_{OFF}			-30	dBm	
Tx Jitter	Tx_j				Per 802.3ae requirements	
Relative Intensity Noise	RIN			-130	dB/Hz	
Receiver						
Receiver Sensitivity	R_{SENS}			-15	dBm	1
Input Saturation Power (Overload)	Psat	0.5			dBm	
Wavelength Range	λ_C	1270		1610	nm	
Receiver Reflectance	R_{rx}			-27	dB	
LOS De-Assert	LOS_D			-18	dBm	
LOS Assert	LOS_A	-32			dBm	
LOS Hysteresis		0.5			dB	

Notes:

1. Measured with BER<10^{-12}@10.3Gbps, 2^{31} – 1 PRBS.

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
Max. Supported Link Length	LMAX			2	km	1

Notes:

1. 10GBASE-LR/LW.
2. Tested with a 2^{31} – 1 PRBS, 10.3Gbps.

Ordering Information

Part number	Description	TX Power (dBm)	RX Sens. (dBm)	Fiber Budget (dB)	Distance (km)	DDM
SV-XFP-ESR	Starview XFP module with Digital Diagnostic Monitoring (DDM), Data rate from 9.95Gbps to 11.3Gbps supporting OC192/ STM64/ 10G LAN/ 10G FC, 1300nm MM (LC), distance up to 2km	-6 to -1	-15 to 0.5	6	2	YES