SV-SFP-ESXDx

1.25Gb/s, 1310nm TX/ 1550nm RX(1550nm TX/ 1310nm RX), SM,2km.

Features

- Up to 1.25Gb/s data links
- FP laser transmitter and PIN photo-detector
- Up to 3km on 9/125μm SMF
- Hot-pluggable SFP footprint
- BIDI LC/UPC type pluggable optical interface
- Low power dissipation
- Metal enclosure, for lower EMI
- RoHS compliant and lead-free
- Single +3.3V power supply
- Support Digital Diagnostic Monitoring interface
- Compliant with SFF-8472
- Case operating temperature
  Commercial: 0°C to +70°C
  Industrial: -40°C to +85°C

Applications

- Switch to Switch Interface
- Gigabit Ethernet
- Switched Backplane Applications
- Router/Server Interface
- Other Optical Links

Ordering Information

Part number	Description	TX Power (dBm)	RX Sens. (dBm)	Fiber Budget (dB)	Distance (km)	DDM
SV-SFP-ESXD1	Starview Single Fiber Bi-Directional SFP module with Digital Diagnostic Monitoring (DDM), 1000Base-LX 1310nm TX/ 1550nm RX Single fiber MM (LC), distance up to 2km	-11 to -3	-19 to -3	8	2	YES
SV-SFP-ESXD2	Starview Single Fiber Bi-Directional SFP module with Digital Diagnostic Monitoring (DDM), 1000Base-LX 1550nm TX/ 1310nm RX single fiber MM (LC), distance up to 2km	-11 to -3	-19 to -3	8	2	YES

SV-SFP-ESXD1H	Starview Single Fiber Bi-Directional SFP module with Digital Diagnostic Monitoring (DDM), 1000Base-LX 1310nm TX/ 1550nm RX Single fiber SM (LC), Industrial temperature range,distance up to 2km	-11 to -3	-19 to -3	8	2	YES
SV-SFP-ESXD2H	Starview Single Fiber Bi-Directional SFP module with Digital Diagnostic Monitoring (DDM), 1000Base-LX 1550nm TX/ 1310nm RX single fiber SM (LC), Industrial temperature range,distance up to 2km	-11 to -3	-19 to -3	8	2	YES

Absolute Maximum Ratings

Parameter	Symbol	Min.	Typ.	Max.	Unit
Storage Temperature	Ts	-40		85	ºC
Storage Ambient Humidity	HA	5		95	%
Power Supply Voltage	VCC	-0.5		4	V
Signal Input Voltage		-0.3		Vcc+0.3	V
Receiver Damage Threshold		5			dBm

Recommended Operating Conditions

Parameter	Symbol	Min.	Typ.	Max.	Unit	Note
Case Operating Temperature	Tcase	0		70	ºC	SV-SFP-ESXDx
		-10		80		
		-40		85		SV-SFP-ESXDxH
Ambient Humidity	HA	5		70	%	Non-condensing
Power Supply Voltage	VCC	3.13	3.3	3.47	V	
Power Supply Current	ICC			280	mA	
Power Supply Noise Rejection				100	mVp-p	100Hz to 1MHz
Data Rate			1.25/1.25		Gbps	TX Rate/RX Rate
Transmission Distance				3	KM	
Coupled Fiber			Single mode fiber			9/125um SMF

Specification of Transmitter

Parameter	Symbol	Min.	Typ.	Max.	Unit	Note
Average Output Power	POUT	-11		-3	dBm	Note (1)
Extinction Ratio	ER	9			dB	
Center Wavelength	λC	1290	1310	1330	nm	SV-SFP-ESXD1
		1530	1550	1570		SV-SFP-ESXD2
Spectrum Width (RMS)	σ			3.5	nm	FP Laser
Transmitter OFF Output Power	POff			-45	dBm	
Differential Line Input Impedance	RIN	90	100	110	Ohm	
Output Eye Mask	Compliant with IEEE802.3 z (class 1 laser safety)					

Note 1: Measure at 2^23-1 NRZ PRBS pattern

Specification of Receiver

Parameter	Symbol	Min.	Typ.	Max.	Unit	Note
Input Optical Wavelength	λIN	1530	1550	1570	nm	SV-SFP-ESXD1
		1290	1310	1330		SV-SFP-ESXD2
Receiver Sensitivity	PIN			-19	dBm	Note (1)
Input Saturation Power (Overload)	PSAT	-3			dBm	
Los Of Signal Assert	PA	-35			dBm	
Los Of Signal De-assert	PD			-20	dBm	Note (2)
LOS Hysteresis	PA-PD	0.5	2	6	dB	

Note (1): Measured with Light source 1550nm(1310nm), ER=9dB; BER =<10^-12 @PRBS=2^7-1 NRZ.

Note (2): When LOS de-asserted, the RX data+/- output is signal output.

Electrical Interface Characteristics

Parameter	Symbol	Min.	Typ.	Max.	Unit	Note
Transmitter						
Total Supply Current	ICC			A	mA	Note 1
Transmitter Disable Input-High	VDISH	2		Vcc+0.3	V	
Transmitter Disable Input-Low	VDISL	0		0.8	V	
Transmitter Fault Input-High	VTxFH	2		Vcc+0.3	V	
Transmitter Fault Input-Low	VTxFL	0		0.8	V	
Receiver						
Total Supply Current	ICC			B	mA	Note 1
LOSS Output Voltage-High	VLOSH	2		Vcc+0.3	V	LVTTL
LOSS Output Voltage-Low	VLOSL	0		0.8	V	

Note 1: A (TX) + B (RX) = 280mA (Not include termination circuit)