

# SV-SFP-2GZXD4

2.125Gbps to 2.7 Gbps Fiber Optic  
 1550nm SM (LC) with DDM, distance  
 up to 40km.



## Features

- Up to 2.7Gb/s data links
- DFB laser transmitter and APD receiver
- Up to 40km on 9/125μm SMF
- Hot-pluggable SFP footprint
- Duplex LC/UPC type pluggable optical interface
- Low power dissipation
- Metal enclosure, for lower EMI
- RoHS compliant and lead-free
- Support Digital Diagnostic Monitoring interface
- Single +3.3V power supply
- 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
<b>SV-SFP-2GZXD4</b>	Starview SFP module Multi-rate 2.125Gbps to 2.7 Gbps Fiber Optic 1550nm SM (LC) with Digital Diagnostic Monitoring (DDM), distance up to 40km.	-2 to 3	-19 to 0	17	40	YES
<b>SV-SFP-2GZXD4H</b>	Starview SFP module Multi-rate 2.125Gbps to 2.7 Gbps Fiber Optic 1550nm SM (LC) with Digital Diagnostic Monitoring (DDM), Industrial temperature range, distance up to 40km	-2 to 3	-19 to 0	17	40	YES

## Absolute Maximum Ratings

Parameter	Symbol	Min.	Typ.	Max.	Unit
Storage Temperature	Ts	-40		85	°C
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
		0		70		SV-SFP-2GZXD4
Case Operating Temperature	Tcase	-40		85	°C	SV-SFP-2GZXD4H
Power Supply Voltage	VCC	3.13	3.3	3.47	V	
Power Supply Current	ICC			300	mA	
Data Rate			2500/2500	2700	Mbps	TX Rate/RX Rate
Transmission Distance				40	km	
Coupled Fiber		Single mode fiber				9/125um SMF

## Specification of Transmitter

Parameter	Symbol	Min.	Typ.	Max.	Unit	Note
Average Output Power	POUT	-2		3	dBm	
Extinction Ratio	ER	8.2			dB	
Center Wavelength	$\lambda_C$	1530	1550	1570	nm	DFB Laser
Side Mode Suppression Ratio	SMSR	30			dB	
Spectrum Bandwidth(-20dB)	$\sigma$			1	nm	
Transmitter OFF Output Power	POff			-45	dBm	
Differential Line Input Impedance	RIN	90	100	110	Ohm	
Output Eye Mask		Compliant with G.959(class 1 laser safety)				

## Specification of Receiver

Parameter	Symbol	Min.	Typ.	Max.	Unit	Note
Input Optical Wavelength	$\lambda_{IN}$	1270		1610	nm	
Receiver Sensitivity	PIN			-19	dBm	Note (1)
Input Saturation Power (Overload)	PSAT	0			dBm	
LOS De-assert	LOSD			-20	dBm	
LOS Assert	LOSA	-35			dBm	Note (2)
LOS Hysteresis		0.5	2	6	dB	

Note (1): Measured with Light source 1550nm, ER=8.2dB; BER =  $<10^{-12}$  @PRBS=2<sup>23</sup>-1 NRZ

Note (2): When LOS de-asserted, the RX data +/- output is High-level (fixed)

## 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		V <sub>CC</sub> +0.3	V	
Transmitter Disable Input-Low	VDISL	0		0.8	V	
Transmitter Fault Input-High	VTxFH	2		V <sub>CC</sub> +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		V <sub>CC</sub> +0.3	V	
LOSS Output Voltage-Low	VLOSL	0		0.8	V	LVTTL

Note (1). A (TX)+ B (RX) = 300mA (Not include termination circuit)