# SV-SFP-2GZXD8

2.125Gbps to 2.7 Gbps Fiber Optic 1550nm SM (LC) with DDM, distance up to 80km.

## Features

- Up to 2.7Gb/s data links
- DFB laser transmitter and APD receiver
- Up to 80km 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
- 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
- SDH/SONET and 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-2GZXD8** | Starview SFP module Multi-rate 2.125Gbps to 2.7 Gbps Fiber Optic 1550nm SM (LC) with Digital Diagnostic Monitoring (DDM), distance up to 80km. | 0 to 5 | -28 to -6 | 28 | 80 | YES |
| **SV-SFP-2GZXD8H** | 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 80km | 0 to 5 | -28 to -6 | 28 | 80 | 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 |
|---|---|---|---|---|---|---|
| Case Operating Temperature | Tcase | 0 | | 70 | °C | SV-SFP-2GZXD8 |
| | | -40 | | 85 | | SV-SFP-2GZXD8H |
| 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 | | | | 80 | km | |
| Coupled Fiber | Single mode fiber | | | | | 9/125um SMF |

## Specification of Transmitter

| Parameter | Symbol | Min. | Typ. | Max. | Unit | Note |
|---|---|---|---|---|---|---|
| Average Output Power | POUT | 0 | | 5 | dBm | Note (1) |
| Extinction Ratio | ER | 8.2 | | | dB | |
| Center Wavelength | λC | 1530 | 1550 | 1570 | nm | DFB Laser |
| Side Mode Suppression Ratio | SMSR | 30 | | | dB | |
| Spectrum Bandwidth(-20dB) | σ | | | 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 | λIN | 1270 | | 1610 | nm | |
| Receiver Sensitivity | PIN | | | -28 | dBm | Note (1) |
| Input Saturation Power (Overload) | PSAT | -6 | | | dBm | |
| LOS De-assert | LOSD | | | -29 | dBm | |
| LOS Assert | LOSA | -40 | | | dBm | Note (2) |
| LOS Hysteresis | | 0.5 | 2 | 6 | dB | |

Note (1): Measured with Light source 1550nm, ER=8.2dB; BER =<10^-12 @PRBS=2^23-1 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 | | 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) = 300mA (Not include termination circuit)