

SV-SFP-SGLXD4x

SGMII Bi-Di, 100Base-LX
 1310nm TX/1550nm RX
 (1550nm TX/1310nm RX)
 SM ,with DDM,up to 40km



Features

- 1310nm FP TX / 1550nm PIN-TIA RX
- 1550nm DFB TX / 1310nm PIN-TIA RX
- 40km with 9/125 μm SMF at least
- Single 3.3V Power Supply and TTL Logic Interface
- Single LC Connector Interface
- Hot Pluggable
- Build-in PHY Supporting SGMII Interface
- Support More Link Status Monitor, Such as CRC, Package Counter and Far End Fault Indication(FEFL)
- Operating Case Temperature Standard: 0°C ~ +70°C
- Compliant with SFP MSA Specification

Applications

- 100BASE-FX
- Switched Backplane Applications
- Switch to Switch Interface

Ordering Information

Part number	Description
SV-SFP-SGLXD41	Starview SFP Single Fiber Serial Gigabit Media Independent Interface (SGMII) Bi-Directional module 100Base-LX 1310nm TX/ 1550nm RX single fiber SM (LC) with Digital Diagnostic Monitoring (DDM), distance up to 40km
SV-SFP-SGLXD42	Starview SFP Single Fiber Serial Gigabit Media Independent Interface (SGMII) Bi-Directional module 100Base-LX 1550nm TX/ 1310nm RX single fiber SM (LC) with Digital Diagnostic Monitoring (DDM), distance up to 40km

Absolute Maximum Ratings

Parameter	Symbol	Min.	Max.	Unit
Storage Temperature	TS	-40	+85	°C
Supply Voltage	Vcc	-0.5	3.6	V
Operating Relative Humidity		5	95	%

Recommended Operating Conditions

Parameter	Symbol	Min.	Typ.	Max.	Unit
Operating Case Temperature	TC	0		70	°C
Power Supply Voltage	VCC	3.15	3.3	3.45	V
Power Supply Current	Icc			360	mA
Baud Rate			125		MBaud

Performance Specifications – Electrical

Parameter	Symbol	Min.	Typ.	Max	Unit	Notes
Transmitter						
LVPECL Inputs(Differential)	Vin	500		2400	mVpp	AC coupled inputs
Input Impedance (Differential)	Zin	85	100	115	ohm	Rin > 100 kohm @ DC
TX_Dis	Disable	2		Vcc	V	
	Enable	0		0.8		
TX_FAULT	Fault	2		Vcc+0.3	V	
	Normal	0		0.5		
Receiver						
LVPECL Outputs (Differential)	Vout	370		2000	mVpp	AC coupled outputs
Output Impedance (Differential)	Zout	85	100	115	ohm	
RX_LOS	LOS	2		Vcc+0.3	V	
	Normal	0		0.8	V	
MOD_DEF (0:2)	VoH	2.5			V	With Serial ID
	VoL	0		0.5	V	

Performance Specifications – Optical 1310nm FP and PIN/TIA

Parameter	Symbol	Min.	Typical	Max.	Unit
9/125 μ m Core Diameter SMF	L		40		km
Data Rate			125		Mbps
Transmitter					
Center Wavelength	λ_C	1260	1310	1360	nm
Spectral Width (RMS)	$\Delta\lambda$			3	nm
Average Output Power ^{*(note3)}	P _{out}	-8		-3	dBm
Extinction Ratio	ER	9			dB
Rise/Fall Time(20%~80%)	tr/tf			3	ns
Total Jitter	TJ			1.0	ns
Output Optical Eye ^{*(note4)}		Compatible with IEEE 802.3-2002			
TX_Disable Assert Time	t _{off}			10	us
TX Disable Asserted ^{*(note3)}	P _{out}			-45	dBm
Receiver					
Center Wavelength	λ_C	1480		1600	nm
Receiver Sensitivity ^{*(note5)}	P _{min}			-32	dBm
Return Loss		12			dB
LOS De-Assert	LOSD			-33	dBm
LOS Assert	LOSA	-45			dBm
Overload ^{*(note5)}	P _{max}	-8			dBm

Performance Specifications – Optical 1550nm DFB and PIN/TIA

Parameter	Symbol	Min.	Typical	Max.	Unit
9/125 μ m Core Diameter SMF	L		20		km
Data Rate			125		Mbps
Transmitter					
Center Wavelength	λ_C	1500	1550	1600	nm
Spectral Width (-20dB)	$\Delta\lambda$			1	nm
Average Output Power ^{*(note3)}	P _{out}	-8		-3	dBm
Extinction Ratio	ER	9			dB
Rise/Fall Time(20%~80%)	tr/tf			3	ns
Total Jitter	TJ			1.0	ns
Output Optical Eye ^{*(note4)}		Compatible with IEEE 802.3-2002			
TX_Disable Assert Time	t _{off}			10	us
TX Disable Asserted ^{*(note3)}	P _{out}			-45	dBm
Receiver					

Center Wavelength	λ_C	1260	1360	nm
Receiver Sensitivity*(note5)	Pmin		-32	dBm
Return Loss		12		dB
Sky De-Assert	SKYD		-33	dBm
Sky Assert	SKYA	-45		dBm
Overload*(note5)	Pmax	-8		dBm

Note3: Output is coupled into a 9/125um single-mode fiber.

Note4: Measured with 4B/5B code for 125Mbps.

Note5: Measured with 4B/5B code for 125Mbps, worst-case extinction ratio, and BER 1E-12.