SV-SFP-SGLXD2x

SGMII Bi-Di, 100Base-LX
1310nm TX/1550nm RX
(1550nm TX/1310nm RX)
SM ,with DDM,up to 20km

Features

- 1550nm/1310nm Laser and PIN-TIA
- 20km 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(FEFI)
- Operating Case Temperature Standard: 0℃~+70℃

Applications

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

Ordering Information

Part number	Description
SV-SFP-SGLXD21	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 20km
SV-SFP-SGLXD22	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 20km

Absolute Maximum Ratings

Parameter	Symbol	Min.	Max.	Unit
Storage Temperature	TS	-40	+85	℃
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	℃
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
9/125μm Core Diameter SMF	L		20		km
Data Rate			125		Mbps
Transmitter					
Center Wavelength	λC	1260	1310	1360	nm
Spectral Width (RMS)	Δλ			3	nm
Average Output Power*(note4)	Pout	-15		-8	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)	Pout			-45	dBm
Receiver					
Center Wavelength	λC	1480		1600	nm
Receiver Sensitivity*(note5)	Pmin			-32	dBm
Return Loss		12			dB
LOS De-Assert	LOSD			-33	dBm
LOS Assert	LOSA	-45			dBm
Overload*(note5)	Pmax	-8			dBm

Performance Specifications – Optical 1550nm FP and PIN/TIA

Parameter	Symbol	Min.	Typical	Max.	Unit
9/125μm Core Diameter SMF	L		20		km
Data Rate			125		Mbps
Transmitter					
Center Wavelength	λ_C	1500	1550	1600	nm
Spectral Width (RMS)	Δλ			3	nm
Average Output Power*(note4)	Pout	-15		-8	dBm
Extinction Ratio	ER	9			dB
Rise/Fall Time(20%～80%)	tr/tf			3	ns
Total Jitter	TJ			1.0	ns
Output Optical Eye*(note5)	Compatible with IEEE 802.3-2002				
TX_Disable Assert Time	t_off			10	us
TX Disable Asserted*(note4)	Pout			-45	dBm
Receiver					

Center Wavelength	λC	1260	1360	nm
Receiver Sensitivity*(note6)	Pmin		-32	dBm
Return Loss		12		dB
Sky De-Assert	SKYD		-33	dBm
Sky Assert	SKYA	-45		dBm
Overload*(note6)	Pmax	-8		dBm

Note4: Output is coupled into a 9/125um single-mode fiber.

Note5: Measured with 4B/5B code for 125Mbps.

Note6: Measured with 4B/5B code for 125Mbps, worst-case extinction ratio, and BER 1E-12.