Features

- Up to 1.25Gb/s data links
- DFB laser transmitter
- PIN photo-detector
- Up to 80KM 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

  Extended: -10°C to +80°C

  Industrial: -40°C to +85°C

Applications

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

Absolute Maximum Ratings

Parameter	Symbol	Min.	Typ.	Max.	Unit	Note
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	
		-10		80		
		-40		85		
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				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	
Extinction Ratio	ER	9			dB	
Center Wavelength	λC	1470	1490	1510	nm	SV-SFP-LXD85
		1530	1550	1570		SV-SFP-LXD86
Side Mode Suppression Ratio	SMSR	30			dB	DFB Laser
Spectrum Bandwidth(-20dB)	σ			1	nm	
Transmitter OFF Output Power	POff			-45	dBm	
Differential Line Input Impedance	RIN	90	100	110	Ohm	
Jitter P-P	tJ			0.1	UI	Note (1)
Output Eye Mask	Compliant with IEEE802.3 z (class 1 laser safety)					

Note (1): Measure at 2^7-1 NRZ PRBS pattern

Specification of Receiver

Parameter	Symbol	Min.	Typ.	Max.	Unit	Note
Input Optical Wavelength	λIN	1530	1550	1570	nm	SV-SFP-LXD85
		1470	1490	1510		SV-SFP-LXD86
Receiver Sensitivity	PIN			-26	dBm	Note (1)
Input Saturation Power (Overload)	PSAT	-3			dBm	
Los Of Signal Assert	PA	-40			dBm	
Los Of Signal De-assert	PD			-27	dBm	Note (2)
LOS Hysteresis	PA-PD	0.5	2	6	dB	

Note (1): Measured with Light source 1550nm(1490nm), 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	VDISL	2		Vcc+0.3	V	
Transmitter Fault Input-Low	VTxFH	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)

Ordering Information

Part number	Description	TX Power (dBm)	RX Sens. (dBm)	Fiber Budget (dB)	Distance (km)	DDM
SV-SFP-LXD85	Starview Single Fiber Bi-Directional SFP module with Digital Diagnostic Monitoring (DDM), 1000Base-LX 1550nm TX/ 1490nm RX single fiber SM (LC), distance up to 80km	0 to 5	-26 to -3	26	80	YES
SV-SFP-LXD86	Starview Single Fiber Bi-Directional SFP module with Digital Diagnostic Monitoring (DDM), 1000Base-LX 1490nm TX/ 1550nm RX single fiber SM (LC), distance up to 80km	0 to 5	-26 to -3	26	80	YES
SV-SFP-LXD85H	Starview Single Fiber Bi-Directional SFP module with Digital Diagnostic Monitoring (DDM), 1000Base-LX 1550nm TX/ 1490nm RX single fiber SM (LC), Industrial temperature range, distance up to 80km	0 to 5	-26 to -3	26	80	YES
SV-SFP-LXD86H	Starview Single Fiber Bi-Directional SFP module with Digital Diagnostic Monitoring (DDM), 1000Base-LX 1490nm TX/ 1550nm RX single fiber SM (LC), Industrial temperature range, distance up to 80km	0 to 5	-26 to -3	26	80	YES