

S12SDI-D31-SP-LR-D

12 Gbps video SFP+ transceiver

Description:

The **12G video SDI SFP+** optical cable module adds an LC fiber optic connection. The 12G data rates of the module allow you to use SD, HD and 4K resolutions. In addition, fiber optic communication allows 10 km distance transmission without loss of quality in the signal.

The **12G video SFP+ transceiver** is designed to transmit/receive data rates from 50Mbps to 11.88Gbps, compliant with SMPTE ST 2082-1 (12G UHD-SDI), ST 2081-1 (6G UHD-SDI), ST424 (3G SDI), ST 292-1(HD-SDI), and ST 259 (SD-SDI). Video transceiver supports SDI pathological patterns signals. The **12G video SDI transceiver** includes these sections: DFB laser, PIN photodiode integrated with the trans-impedance preamplifier (TIA), Reclocker and a MCU controller. The transceiver is compatible with SFP Multi-Source Agreement (MSA).



Features:

- Operating data rate up to 11.88 Gbps
- Metal enclosure for Lower EMI
- Hot-pluggable SFP+ footprint
- 1310nm DFB laser transmitter
- Support pathological patterns for SD-SDI, HD-SDI
- 3G-SDI, 6G-SDI and 12G SDI
- The module's receiver contains reclocker
- Duplex LC connector interface
- Case operating temperature range: 0°C to 70°C
- Single 3.3 V power supply

Standards:

- Compliant with SFF-8472 with duplex LC connector
- Compliant with SFP+ MSA
- RoHS Compliant (lead free)

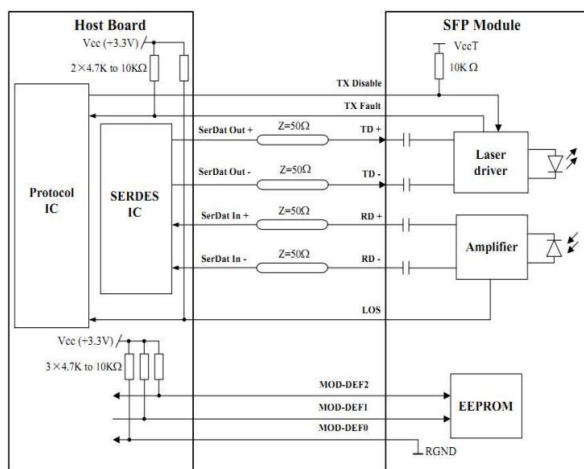
Applications:

- Serial Digital Fiber Transmission System for SMPTE ST 259, SMPTE ST 292-1, SMPTE ST 424, SMPTE ST 2081-1 and SMPTE ST 2082-1 Signals
- UHDTV/HDTV/SDTV Service Interfaces
- 4K Video (12G/6G Ultra-SDI) Optical Signal Transmission

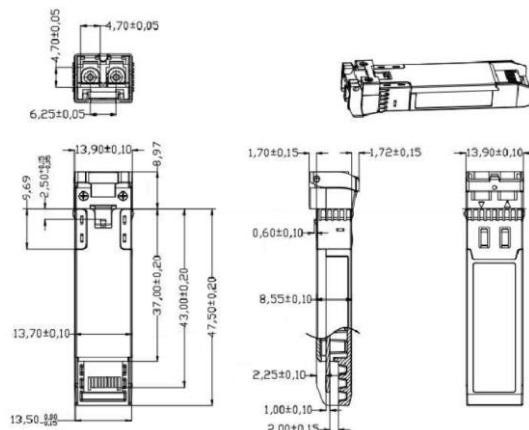
Recommended operating conditions:

Parameter	Symbol	Unit	Min.	Max.
Operating Case Temperature	T _c	°C	0	70
Power Supply Voltage	V _{cc}	V	3.13	3.47
Power Supply Current	I _{cc}	mA		450
Data Rate	P	Mbps	50	1200

Module block diagram:



Mechanical Dimension



Optical specifications:

Transmitter						
Parameter	Symbol	Min.	Typical	Max.	Unit	Notes
Center Wavelength Range	λ_c	1300	1310	1320	nm	
Average Output Power	P _{out}	-3		1	dBm	1
Single Mode Suppression Ratio	SMSR	30			dB	
Spectral Width (-20dB)	λ_{20}			1	nm	
Receiver						
Center Wavelength Range	λ_c	1260		1610	nm	
Receiver Sensitivity@ 11.88Gbps	P _{out}			-10	dBm	2
Overload			0		dBm	
LOS De-Assert	LOS _D			-16		
LOS Assert	LOS _A	-27				

Note 1- The optical power is launched into SMF

Note 2- Internally AC-coupled, minimum input overload power for SMPTE ST 2081-1, SMPTE ST 2082-1

Ordering code:

Part number	Description
S12SDI-D31-SP-LR-D	12 Gbps, SDI video SFP+, 1310 nm, distance 10 km over SM , duplex LC connector, 0°C to +70°C

