

12G-SDI Optical Fiber Extender G-SDI-E-2*12G-TR

Features

- ✓ SD,HD,3G,6G,12G input datarate detected
Automatically, 125M/270M/1.48G/3G/6G/12G
datarate selected both automatically and manually
- ✓ Rreachable distance: 80km(@3G SDI SFP transceiver),
20km(@12G SDI SFP transceiver),700m(@6G SDI SFP transceiver)
- ✓ Supported format :
SMPTE ST 2082-1 (11.88Gbps/s),
SMPTE ST 2081-1 (5.94Gbps/s),
SMPTE ST 424 (2.97Gbps/s),
SMPTE ST 292 (1.485Gbps/s),
SMPTE ST 259(360Mb/s),DVB-ASI(270Mb/s),MADI (125Mb/s)
- ✓ Co-axis cable equalizer embedded in the transmitter:
70m at 11.88Gb/s: <0.2UI output jitter
90m at 5.94Gb/s: <0.15UI output jitter
180m at 2.97Gb/s: <0.1UI output jitter
240m at 1.485Gb/s: <0.1UI output jitter
300m at 270Mb/s: <0.1UI output jitter
- ✓ CDR embedded in the receiver
- ✓ SDI signal connecting status indicated by LED
- ✓ 5~12V DC power supply
- ✓ Friendly simple GUI
- ✓ Operating case temperature range: 0 to +70° C



Applications

- ✓ Live Broadcast
- ✓ 4K Screen
- ✓ 4K Camera
- ✓ Video Meeting
- ✓ Security Monitoring

Description

12G-SDI fiber optical extender makes possible transmission of two lanes of 12G SDI signals in long-distance, which are independent. The maximum transmission distances can reach 80km at 3G-SDI data rate and 20km at 12G-SDI data rate. Operating data rate is from 125Mbps to 11.88Gbps. Besides, MADI, DVB-ASI, SD-SDI, HD-SDI, 3G-SDI, 6G UHD-SDI formats are backward compatible.

Two lanes of SDI signals are transmitted and received independently.

With gigalight 12/6/3G SDI SFP transceivers, it extends one or two lanes of SDI signals.

Hardware Configuration

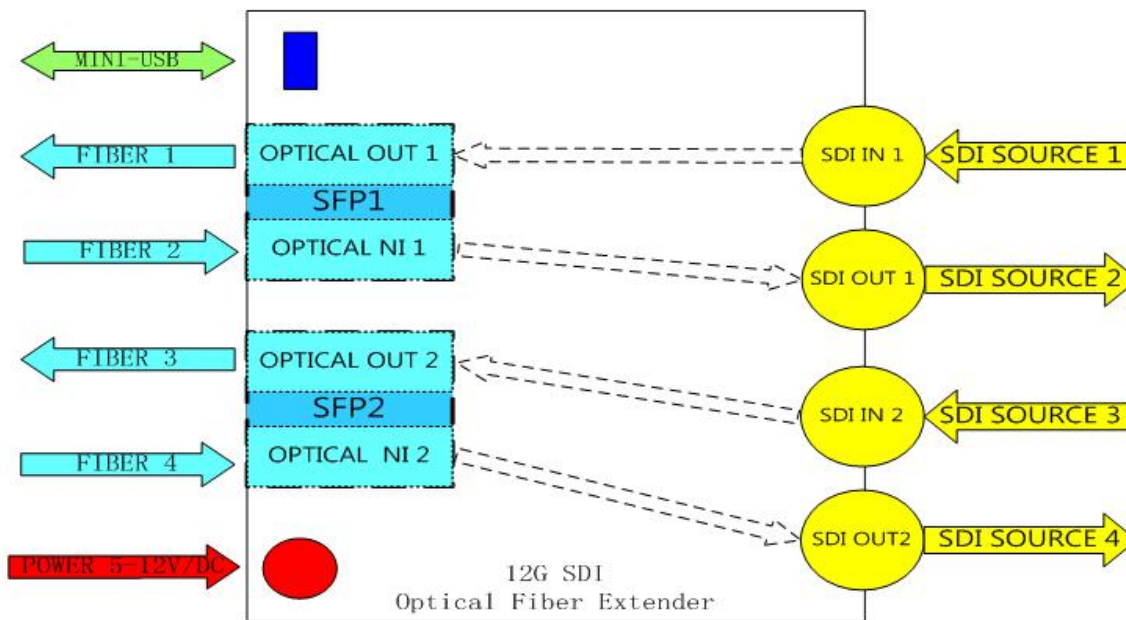


Figure 1. Block diagram

LED	Display	Description
POWER	Off	Power off
	Green	Power on
LOCK1	Off	SDI IN1 signal connecting to NG
	Green	SDI IN1 signal connecting OK
LOCK2	Off	SDI OUT1 signal connecting NG
	Green	SDI OUT1 signal connecting OK
LOCK3	Off	SDI IN2 signal connecting to NG
	Green	SDI IN2 signal connecting OK
LOCK4	Off	SDI OUT2 signal connecting NG
	Green	SDI OUT2 signal connecting OK

Absolute Maximum Ratings

Parameter	Symbol	Min	Max	Unit
Storage Temperature	T_s	-50	+125	°C
Power Supply Voltage	Vcc	3	17	V

Technical Specifications

Parameter	Symbol	Min	Typical	Max	Unit
Operating Case Temperature	T_c	-10		60	°C
Operating Humidity	-	5		85 non-cond	%
Power Supply Voltage	Vcc	4.5	5	12	V
Power Supply current(without transceivers)	Icc(5V)		410	500	mA
Physical Dimensions		129.59(W)x11.6 (D) x23.9(H)			mm
Weight		248.32			g

Optical and Electrical Characteristics

Main Frame	
BNC	Standard BNC, 75 Ohm
Transmission rate	125 Mbps to 11.88 Gbps
Standard	SMPTE ST 2082-1, SMPTE ST 2081-1, SMPTE ST 424, SMPTE ST 292-1, SMPTE ST 259, DVB-ASI(270M), MADI(125M)
RL	>15dB @1.5GHz
	>10dB @3GHz
	>7 dB @6GHz
	>4 dB @12GHz
Wavelength	1310nm/1550nm
Jitter	< 2.0UI @10Hz
	< 0.3UI @100KHz
Output Swing	800mV (+/-10%)
Overshoot	<10%
Rise/fall time	<135ps @3G-SDI
	<80ps @6G UHD-SDI
	<45ps @12G UHD-SDI

Mechanical Dimensions

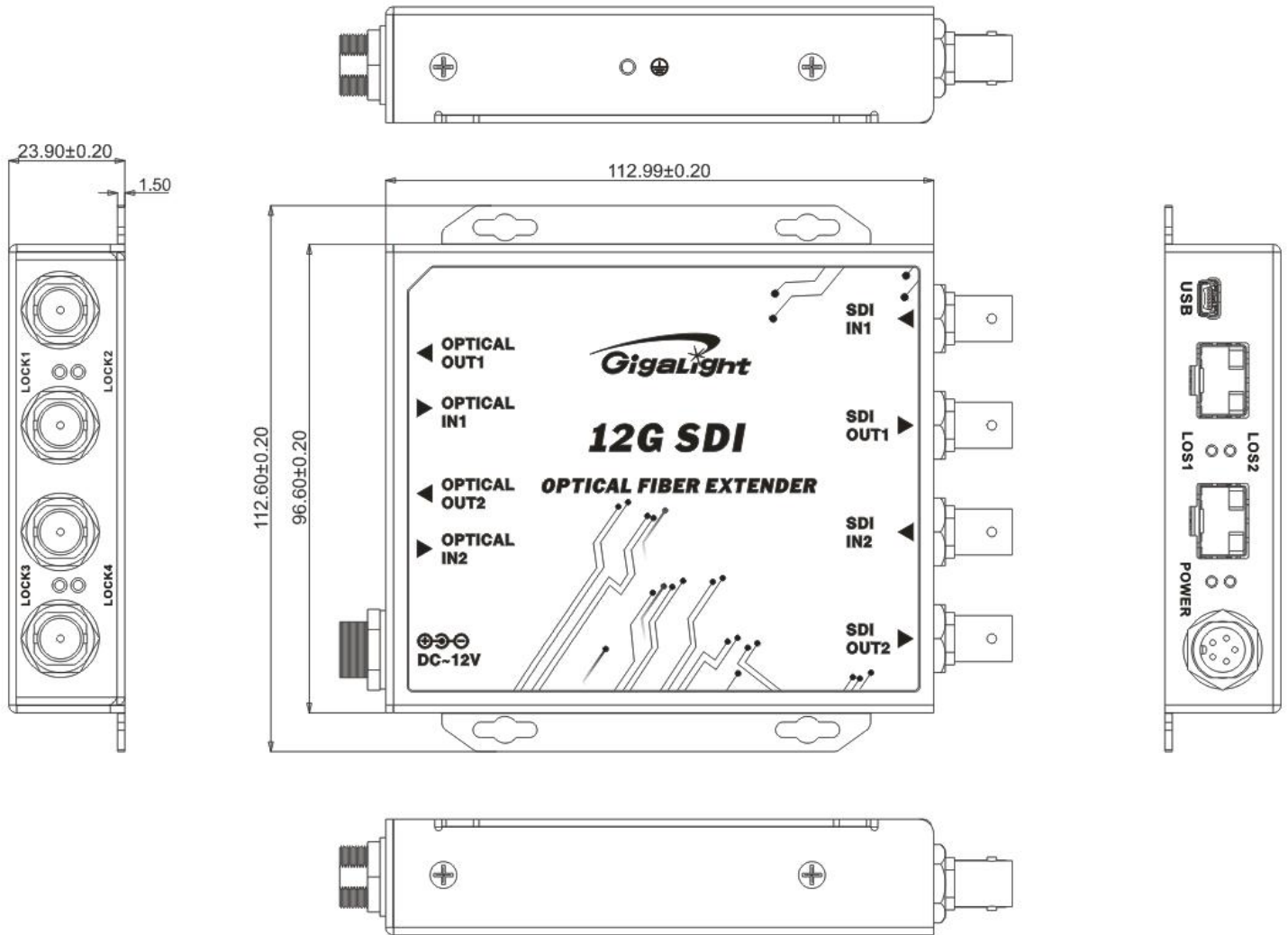


Figure 2. Mechanical Specifications

Ordering Information

Part Number	Product Description
G-SDI-E-2*12G-TR	12G-SDI Optical Extender

Important Notice

Performance figures, data and any illustrative material provided in this data sheet are typical and must be specifically confirmed in writing by Gigalight before they become applicable to any particular order or contract. In accordance with the Gigalight policy of continuous improvement specifications may change without notice.

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Revision History

Revision	Date	Description
V0	Jan-14- 2020	Advance Release.