

12G-SDI Optical Fiber Extender

FE2SP-2V12F

Features

- SD,HD,3G,6G,12G input data rate detected
- Automatically, 125M/270M/1.48G/3G/6G/12G data rate selected both automatically and manually
- Reachable 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 +55°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 FIBERSTAMP 12/6/3G SDI SFP transceivers, it extends one or two lanes of SDI signals.



Hardware Configuration

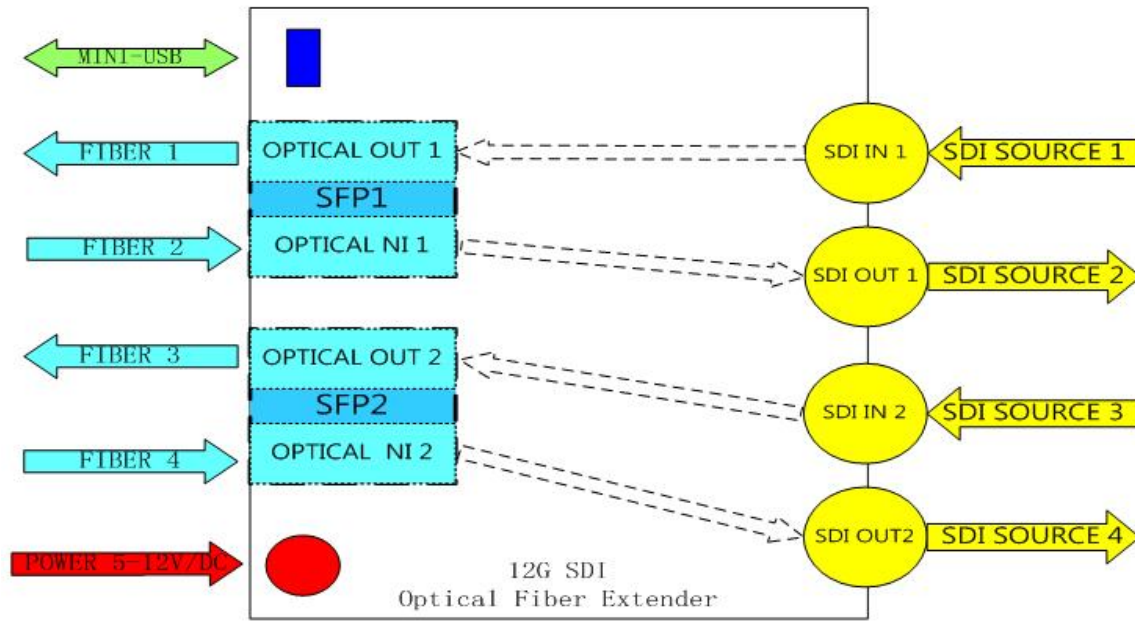


Figure 1. Block diagram

| 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 | V _{cc} | 3 | 17 | V |

Technical Specifications

| Parameter | Symbol | Min | Typical | Max | Unit |
|---|----------------------|-----|---------|-----|---------------------|
| Operating Case Temperature | T _c | -10 | | 60 | °C |
| Operating Humidity | - | 5 | | 85 | % non-condensing |
| Power Supply Voltage | V _{cc} | 4.5 | 5 | 12 | V |
| Power Supply current(without transceivers) | I _{cc} (5V) | | 410 | 500 | mA |

| Parameter | Symbol | Min | Typical | Max | Unit |
|---------------------|--------|-----------------------------|---------|-----|------|
| 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

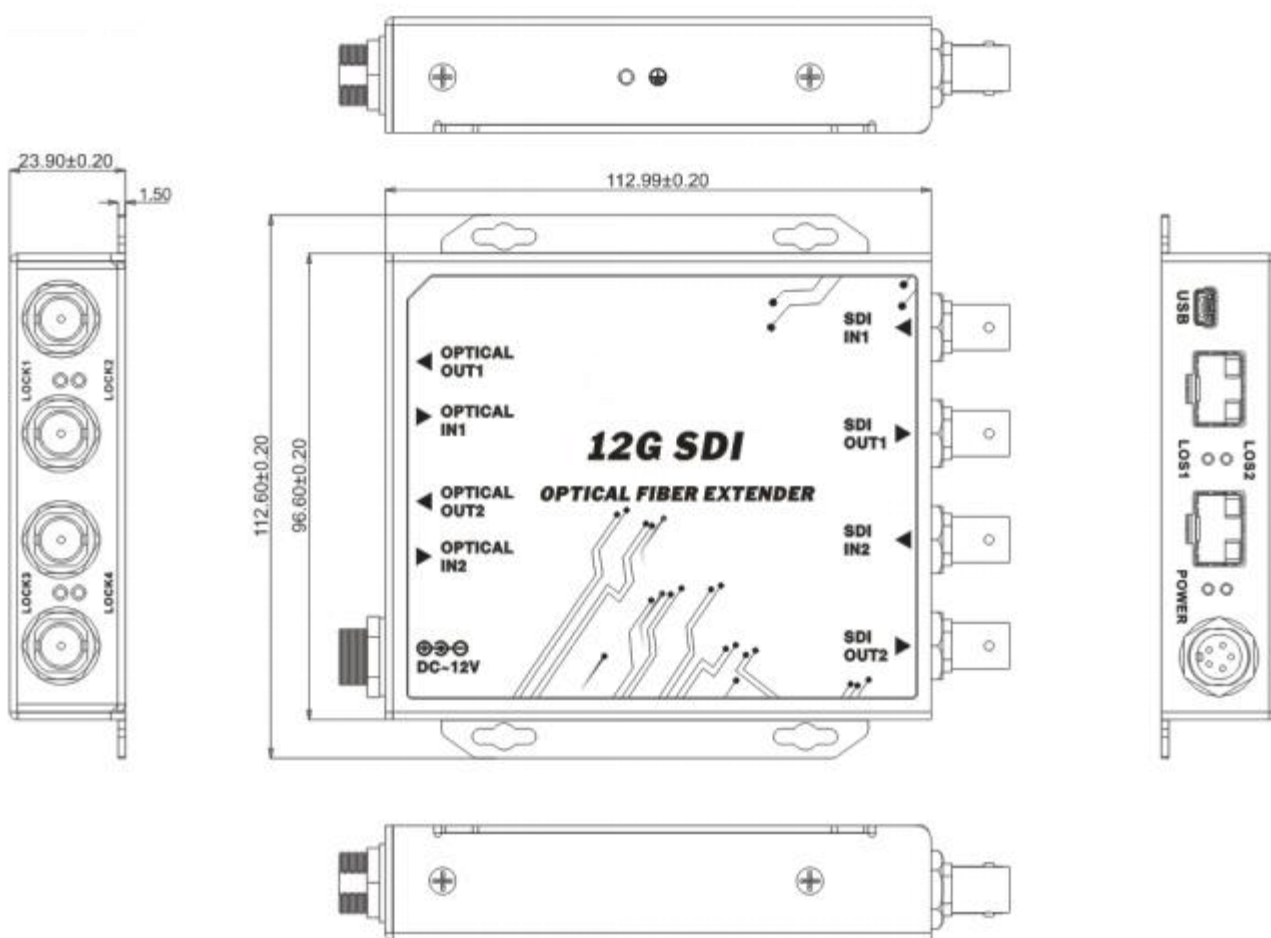


Figure 2. Mechanical Specifications

Ordering Information

| Part Number | Product Description |
|------------------|------------------------------------|
| G-SDI-E-1*12G-TR | 12G-SDI Optical Extender, 2x TX/RX |

Important Notice

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