



CLUX-SDI2OF & CLUX-OF2SDI

SDI over Optical Fiber Extender



Operation Manual

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Version 1.1 August 2011

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SAFETY PRECAUTIONS

Please read all instructions before attempting to unpack, install or operate this equipment and before connecting the power supply.

Please keep the following in mind as you unpack and install this equipment:

- Always follow basic safety precautions to reduce the risk of fire, electrical shock and injury to persons.
- To prevent fire or shock hazard, do not expose the unit to rain, moisture or install this product near water.
- Never spill liquid of any kind on or into this product.
- Never push an object of any kind into this product through any openings or empty slots in the unit, as you may damage parts inside the unit.
- Do not attach the power supply cabling to building surfaces.
- Use only the supplied power supply unit (PSU). Do not use the PSU if it is damaged.
- Do not allow anything to rest on the power cabling or allow any weight to be placed upon it or any person walk on it.
- To protect the unit from overheating, do not block any vents or openings in the unit housing that provide ventilation and allow for sufficient space for air to circulate around the unit.

REVISION HISTORY

| VERSION NO. | DATE DD/MM/YY | SUMMARY OF CHANGE |
|-------------|---------------|---------------------------------------|
| VR0 | 29/09/11 | Preliminary release |
| VS1 | 17/07/12 | Updated format/diagrams/SDI standards |
| VS2 | 20/07/12 | First release |



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1. INTRODUCTION

The SDI to Optical Fiber Extender set is designed to extend your SDI signals over Optical Fiber for long distance transmission up to 10km. Signals from 50Mb/s to 3Gb/s bandwidth can be sent without loss or compression with thinner, lighter cables for easy installations.

2. APPLICATIONS

- Broadcast signal extension
- Surveillance - Monitor a remote camera
- Television Studio - Transmit a signal from one building to another

3. PACKAGE CONTENTS

- SDI over Optical Fiber Transmitter
- SDI over Optical Fiber Receiver
- 2×5V/2.6A DC Power Adaptor
- Operation Manual

4. SYSTEM REQUIREMENTS

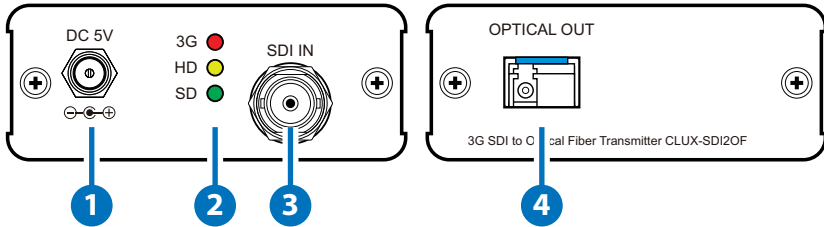
Input SDI source equipment such as a broadcast video recorder or camera and output to SDI monitor/display with SDI connection cables and optical fiber link in between the Transmitter and Receiver.

5. FEATURES

- SMPTE 287-2006 compliant
- Robust error-free transmission of signals from 50Mb/s to 3Gb/s up to 10km over single-mode fiber (distance is dependent on the fiber module used).
- Supports video pathological patterns for SD-SDI, HD-SDI and 3G-SDI
- Supports SDI input modes:
 1. SD-SDI: SMPTE 259M-C, at bitrates of 270 Mbit/s
 2. HD-SDI: SMPTE 292M, at bitrates of 1.485 Gbit/s and 1.485/1.001 Gbit/s
 3. 3G-SDI: SMPTE 424M/425M-AB, at bitrates of 2.970 Gbit/s and 2.970/1.001 Gbit/s
- Supports integrated SDI audio up to maximum 16 channels of 48kHz audio
- Automatic video mode detection (3G/HD/SD)
- Faster data transmission
- Lower power consumption

6. OPERATION CONTROLS AND FUNCTIONS

6.1 Transmitter Front and Rear Panels



1 DC 5V

Plug the 5V DC power supply into the Transmitter unit and connect the adaptor to an AC outlet.

2 SDI Signal Status LEDs

These LEDs will light according to the SDI input signal format (3G, HD or SD). The device will automatically detect the signal:

Red: 3G-SDI

Yellow: HD-SDI

Green: SD-SDI

3 SDI IN

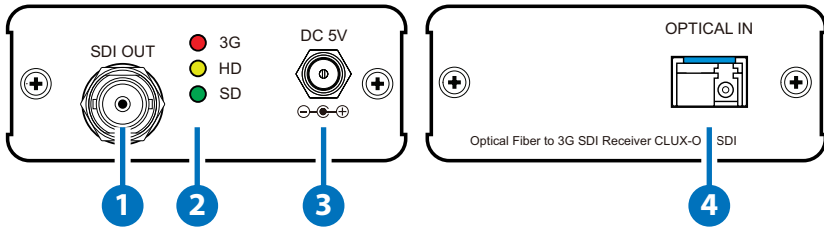
Connect the SDI source input equipment such as a SNG video recorder or a SDI video camera.

4 OPTICAL OUT

Connect the Transmitter and Receiver units with fiber optical cable (up to 10 km) for transmission of the SDI signal.

Note: Single-Mode Fiber Optical with LC connector.

6.2 Receiver Front and Rear Panels



1 SDI OUT

Connect to a SDI monitor or display for SDI video and audio output.

2 SDI Signal Status LEDs

These LEDs will light according to the SDI output signal format (3G, HD or SD). The device will automatically detect the signal:

Red: 3G-SDI

Yellow: HD-SDI

Green: SD-SDI

3 DC 5V

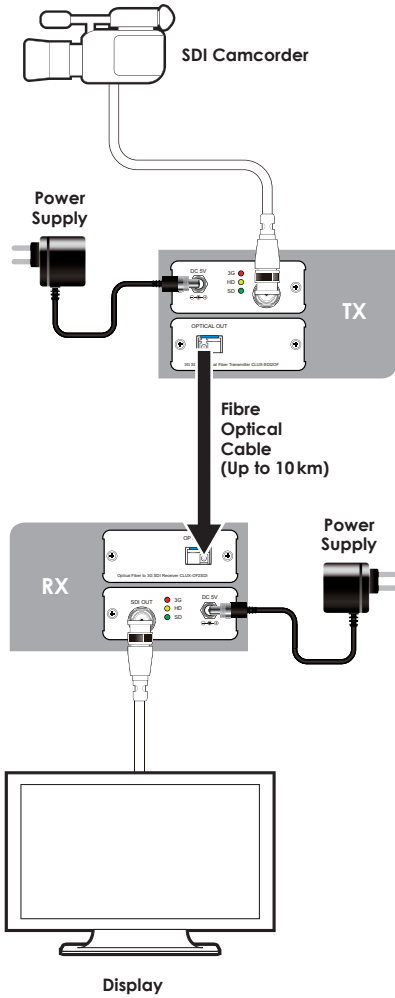
Plug the 5V DC power supply into the Receiver unit and connect the adaptor to an AC outlet.

4 OPTICAL IN

Connect the Transmitter and Receiver units with fiber optical cable (up to 10 km) for transmission of the SDI signal.

Note: Single-Mode Fiber Optical with LC connector.

7. CONNECTION DIAGRAM



8. SPECIFICATIONS

Transmitter

| | |
|---------------------|--|
| Input Ports | 1×BNC (SD/HD/3G-SDI) |
| Output Ports | 1×Single-Mode Fiber Optical (LC connector) |

Receiver

| | |
|---------------------------|--|
| Input Ports | 1×Single-Mode Fiber Optical (LC connector) |
| Output Ports | 1×BNC (SD/HD/3G-SDI) |
| SDI Timing Support | SD-SDI: SMPTE 259M-C, at bitrates of 270 Mbit/s HD-SDI: SMPTE 292M, at bitrates of 1.485 Gbit/s and 1.485/1.001 Gbit/s 3G-SDI: SMPTE 424M/425M-AB, at bitrates of 2.970 Gbit/s and 2.970/1.001 Gbit/s |

| | |
|---------------------------|--|
| SDI Cable Distance | 3G up to 100m (BELDEN 1694A cable) HD up to 200m (BELDEN 1694A cable) SD up to 300m (BELDEN 1694A cable) |
|---------------------------|--|

| | |
|-------------------------------------|------------|
| Optical Fiber Cable Distance | Up to 10km |
|-------------------------------------|------------|

| | |
|---------------------|---|
| Power Supply | 5V/2.6A DC (US/EU standards, CE/FCC/UL certified) |
|---------------------|---|

| | |
|-------------------|-------------------------------|
| Dimensions | 78.5mm (W)×143mm (D)×30mm (H) |
|-------------------|-------------------------------|

| | |
|--------------|------|
| Weigh | 200g |
|--------------|------|

| | |
|-------------------------|----------|
| Chassis Material | Aluminum |
|-------------------------|----------|

| | |
|-------------------------|--------|
| Silkscreen Color | Silver |
|-------------------------|--------|

| | |
|------------------------------|-------------------------|
| Operating Temperature | 0 °C~40 °C/32 °F~104 °F |
|------------------------------|-------------------------|

| | |
|----------------------------|---------------------------|
| Storage Temperature | -20 °C~60 °C/-4 °F~140 °F |
|----------------------------|---------------------------|

| | |
|--------------------------|----------------------------|
| Relative Humidity | 20~90% RH (non-condensing) |
|--------------------------|----------------------------|

| | |
|--------------------------|-----------|
| Power Consumption | 3W (each) |
|--------------------------|-----------|

9. ACRONYMS

| ACRONYM | COMPLETE TERM |
|---------|---------------------------------|
| 3G | Bandwidth 2.97Gbps \approx 3G |
| LED | Light-Emitting Diode |
| SDI | Serial Digital Interface |
| SNG | Satellite News Gathering |



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