

# **Globalmediapro SOF-101 & SOF-102**

**SDI over Optical Fiber Extender**

**Operation Manual**

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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**

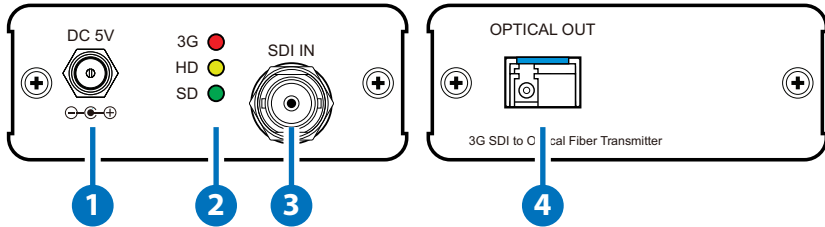
Input SDI source equipment such as a broadcast video recorder or camera and output to SDI monitor/display with SDI connection cables and optical fiber link in between the Transmitter and Receiver.

## 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

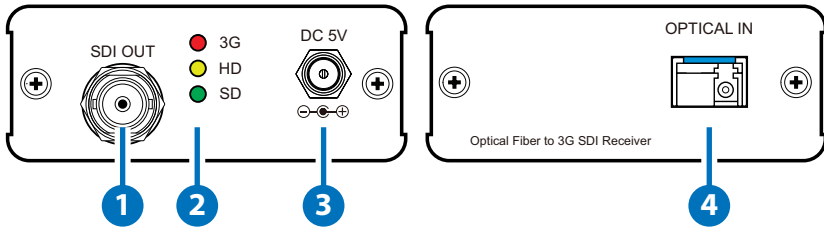
Connect the SDI source input equipment such as a SNG video recorder or a SDI video camera.

#### 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

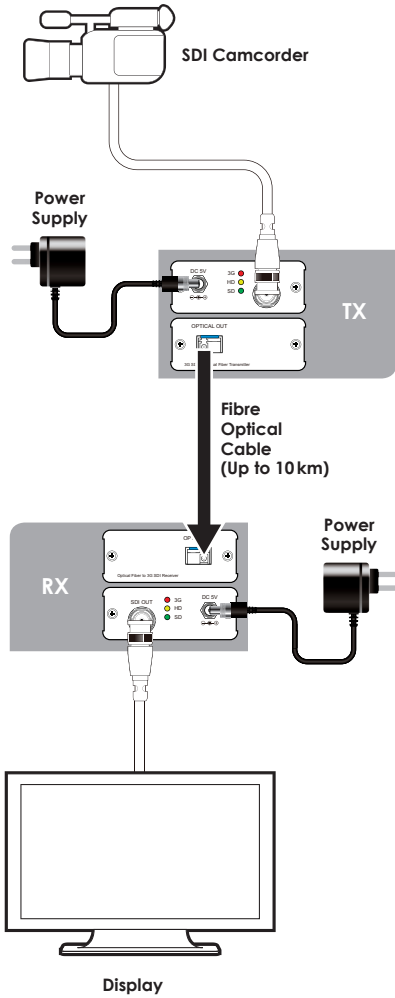
Plug the 5V DC power supply into the Receiver unit and connect the adaptor to an AC outlet.

### 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