

GefenPRO

1080P
PROGRESSIVE



3GSDI Fiber Optic Extender

GEF-3GSDI-FO-141

User Manual

www.gefenPRO.com

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Notice

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INTRODUCTION

Congratulations on your purchase of the 3GSDI Fiber Optic Extender. Your complete satisfaction is very important to us.

GefenPRO

GefenPRO is a unique product line catering to the growing needs for innovative home theater solutions. We specialize in total integration for your home theater, while also focusing on going above and beyond customer expectations to ensure you get the most from your hardware. We invite you to explore our distinct product line and hope you find your solutions. Don't see what you are looking for here? Please call us so we can better assist you with your particular needs.

The Gefen 3G-SDI Fiber Optic Extender

The Gefen 3G-SDI Fiber Optic Extender is a miniature digital video data transport system over fiber optic cable supporting 1080p for 3G-SDI and HD-SDI. It converts a one-channel SMPTE-424M 3G-SDI, SMPTE-292M HD, or SMPTE-259M serial digital video signal over extended distances up to 12 miles (20 km) over either single-mode or multi-mode fiber optic cable.

How It Works

The Sender receives the SDI input signal and converts the SMPTE-424M / 292M / 259M SDI signals to optical data. The Receiver unit collects the optical data from the fiber cable and converts it to an SDI signal.

OPERATION NOTES

READ THESE NOTES BEFORE INSTALLING OR OPERATING THE 3G-SDI FIBER OPTIC EXTENDER

- The Gefen 3G-SDI Fiber Optic Extender will connect two 3G-SDI devices using an ST-terminated fiber cable to a distance of up to 12 miles (20 km.) The input has automatic equalization and the output is automatically re-clocked.
- The use of an intermediate cable or adapter is not recommended. Additional coupling devices may deteriorate the signal transmission.

FEATURES

Features

- Extends 3G-SDI up to 12 miles (20km)
- Transports Multi-rate HD-SDI Digital Video over 1 Fiber
- Supports SMPTE-424M (3G-SDI), SMPTE-292M (HD-SDI), or SMPTE-259M (SDI) specifications.
- Automatic Input Equalization
- Output Clock Recovery
- Latch-Locking Power Connector
- 3G-SDI BNC input connector and ST terminated fiber optical connector
- Robust metal die-casting enclosure for harsh environments

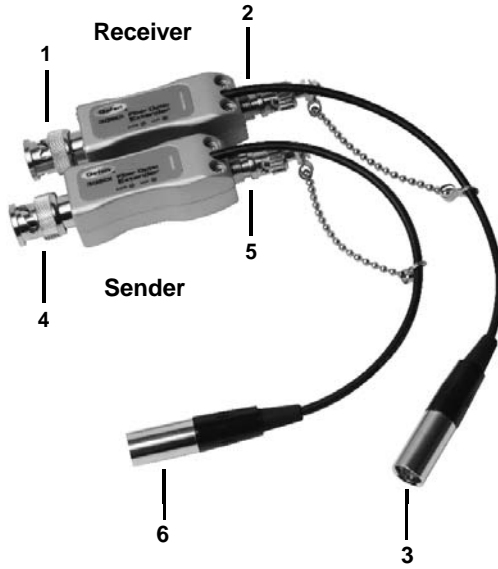
Package Includes

- (1) GEF-3GSDI-FO-141S
- (1) GEF-3GSDI-FO-141R
- (1) Users manual
- (2) 5V Power Supplies

SMPTE Standards Table (Showing Bit Rates for SDI):

Standard	Name	Bit Rates	Example Video Formats
SMPTE 424M	3G-SDI	2.970 Gbit/s	1080p
SMPTE 292M	HD-SDI	1.485 Gbit/s	720p, 1080i
SMPTE 259M	SD-SDI	270 Mbit/s, 360 Mbit/s 143 Mbit/s and 177 Mbit/s	480i, 576i

CONNECTOR LAYOUT



(shown with protective cover)

CONNECTOR DESCRIPTIONS

- 1 3G-SDI BNC Output**
Connect the Receiver to the input of the SDI display.
- 2 ST Fiber Connector Input**
Connect the ST-fiber cable to this connector.
- 3 5V DC Power Supply Connector (Receiver)**
Connect this cable to the included 5V DC power supply.
- 4 3G-SDI BNC Input**
Connect the Sender to the output of the SDI source.
- 5 ST Fiber Connector Output**
Connect the ST-fiber cable to this connector.
- 6 5V DC Power Supply Connector (Sender)**
Connect this cable to the included 5V DC power supply.

CONNECTING THE 3GSDI FIBER OPTIC EXTENDER

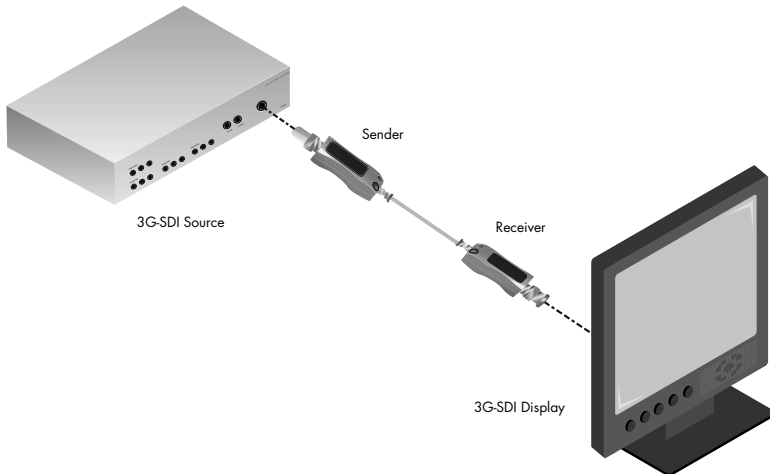
How to Connect the 3G-SDI Fiber Optic Extender

1. Connect the Sender of the Gefen 3G-SDI Fiber Optic Extender to the 3G-SDI source equipment via the BNC connector.
2. Remove the locking protective cover from the fiber connector of the Sender and connect one end of the fiber cable to the ST connector of the Sender.
3. Remove the locking protective cover from the fiber connector of the Receiver and connect the other end of the fiber cable to the ST connector of the Receiver.
4. Connect the BNC output connector to the SDI display device.
5. Connect the included 5V DC power supplies to both the Sender and Receiver.

GEF-3GSDI-FO-141 Connection Diagram

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ST FIBER OPTIC CABLE 



GEF-3GSDI-FO-141

TROUBLESHOOTING

No picture / display shows a blank screen

- Ensure that all jacks that are used by the 5V DC power supplies are firmly connected.
- Ensure that the SDI connector is firmly plugged in to the SDI source and SDI display. Ensure that the Sender and Receiver module parts are connected to the SDI source and SDI display, respectively.
- Check if the SDI source and SDI display are powered on and properly booted.
- Reset the system by unplugging and reconnecting the Sender SDI module or Receiver SDI module. Re-boot the system while connecting the 3G-SDI Fiber Optic Extender.
- Verify that the fiber cables are not damaged.

Picture is distorted or contains noise

- Verify the quality of the SDI source and check the length of the fiber cable. The 3G-SDI Fiber Optic Extender will work up to a distance of 12 miles (20km) using single-mode fiber.

SPECIFICATIONS

Signal Formats.....	SMPTE-424M 3G HD-SDI, SMPTE-292M HD-SDI, SMPTE-259M SDI
Input Impedance.....	75 Ohm
Data Rate.....	up to 3 Gbps
Signal Level.....	800mVp-p +/- 50mV
Optical Fiber Types.....	ST (Multi mode and Single mode)
Number of Fibers.....	1
Input Connector.....	BNC Female
Output Connector.....	BNC Female
Distance.....	Up to 12 miles (20km)
Dimension.....	Dimensions: 0.77"W x 0.77"H x 1.97"D
Power Supply.....	5V DC (2.5W)
Power Budget.....	16dB
Operating Temperature.....	-20 to + 80C