Gefen

4x1 3G-SDI Switcher

EXT-3GSDI-441

User Manual

www.gefen.com

ASKING FOR ASSISTANCE

Technical Support:

Telephone	(818) 772-9100
	(800) 545-6900
Fax	(818) 772-9120

Technical Support Hours:
8:00 AM to 5:00 PM Monday thru Friday.

Write To:

Gefen Inc.
c/o Customer Service
20600 Nordhoff St
Chatsworth, CA 91311

www.gefen.com
support@gefen.com

Notice

Gefen Inc. reserves the right to make changes in the hardware, packaging and any accompanying documentation without prior written notice.

4x1 3G-SDI Switcher is a trademark of Gefen Inc.

CONTENTS

INTRODUCTION

Congratulations on your purchase of the 4x1 3G-SDI Switcher. Your complete satisfaction is very important to us.

Gefen

Gefen delivers innovative, progressive computer and electronics add-on solutions that harness integration, extension, distribution and conversion technologies. Gefen's reliable, plug-and-play products supplement cross-platform computer systems, professional audio/video environments and HDTV systems of all sizes with hard-working solutions that are easy to implement and simple to operate.

The Gefen 4x1 3G-SDI Switcher

The Gefen 4x1 3G-SDI Switcher allows any one of four high-bandwidth 3G-SDI, HD-SDI or SDI sources to be switched to a single output without a switching delay or loss of signal quality. Ideal for cutting equipment costs in the studio by enabling shared signal routing, this 3G-SDI Switcher supports source resolutions up to 1080p and has convenient switching methods.

How It Works

Up to four 3G-SDI sources connect to BNC input jacks on one side of the Gefen 4x1 3G-SDI Switcher. A single 3G-SDI output connects on the output side. Power is applied to the 4x1 3G-SDI Switcher and a vibrant video picture is transmitted to the output device. Any 3G-SDI input source is selectable via the included IR remote control or a selector button on the front panel of the 4x1 3G-SDI Switcher. Selection of sources may also be performed by using the RS-232 communications port.

READ THESE NOTES BEFORE INSTALLING OR OPERATING THE 4X1 3G-SDI SWITCHER

- The 4x1 3G-SDI Switcher will accept the following formats:

  SDI - SMPTE 259M-C (270Mbps)

  HD-SDI -SMPTE 292M (1.485, 1.485/1.001 Gbps)

  HD-SDI-SMPTE 424M/425M (2.97/3.0 Gbps)

FEATURES

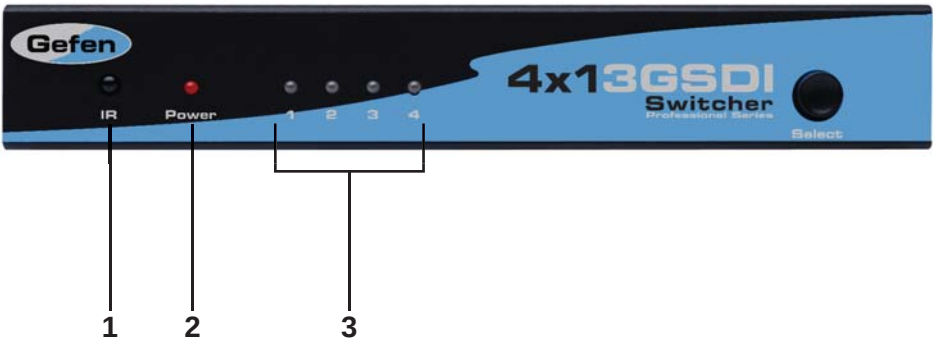
Features

- Switches four 3G-SDI sources instantly without signal degradation
- Streamlines equipment by eliminating unnecessary hardware
- Switching is accomplished 3 ways -- by using the optional IR remote, the front panel selector button, or the RS-232 interface.
- Video resolutions up to 1080p are supported

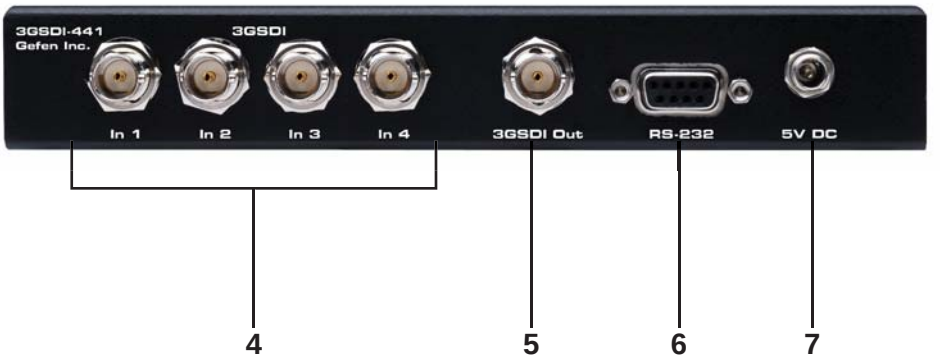
Package Includes

(1) 4x1 3G-SDI Switcher
(1) 5V DC Locking Power Supply
(1) RMT-4IR IR Remote Control
(1) User's Manual

Front Panel



Back Panel



PANEL DESCRIPTIONS

1 IR (Infrared) Receiver

This receiver will accept command for switching between input devices using the included RMT-4IR remote control. Line of sight must be preserved between the remote and unit for proper operation.

2 Power LED Indicator

This LED will become active once the included 5V DC power supply is properly connected between the unit and an open wall power socket.

3 Selected Input LED Indicator

There is a 4 LED array to indicate which source is currently selected on the 4x1 3G-SDI Switcher. The currently selected input will be indicated by an active LED.

4 3G-SDI Inputs 1-4

These inputs ports can accept (up to four) 3G-SDI, HD-SDI or SDI capable devices. The selected input source is sent to the single output and is selectable using the included RMT-4IR remote control or via the RS-232 serial communication port.

5 3G-SDI Output

This output will accept a single 3G-SDI, HD-SDI or SDI output device.

6 RS-232 Serial Communications Port

This port is used to control input source swithcing on the 4x1 3G-SDI Switcher. Please see page 9 for complete details on the serial communication features that are used on this product.

7 5V DC Power Receptacle

This receptacle will require power from the included 5V DC power supply for proper operation. Connect the included power supply between this port and an open wall power socket.

CONNECTING AND OPERATING THE 4X1 3G-SDI SWITCHER

How to Connect the 4x1 3G-SDI Switcher

1. Connect up to four 3G-SDI, HD-SDI or SDI source devices to the 4x1 3G-SDI Switcher's inputs using user supplied cables.

2. Connect a single 3G-SDI, HD-SDI or SDI capable device to the 4x1 3G-SDI Switcher's outputs using a user supplied cable.

3. Connect the included 5V DC power supply between the 4x1 3G-SDI Switcher's power receptacle and an open wall power socket.

4. Initialize (power on) the output device first and the source devices second.

How to Operate the 4x1 3G-SDI Switcher

The source input is selectable by using either the included RMT-4IR remote control or the integrated RS-232 serial communication port.

Please see page 7 for RMT-4IR remote control operation.

Please see page 9 for RS-232 serial communication control operations.

RMT-4IR REMOTE DESCRIPTION

The included RMT-4IR remote control is used to switch between inputs on the 4x1 3G-SDI Switcher. Only one input can be selected at a time and this input is then output to the connected SDI output device.

Switching

Press the button 1 to switch to input 1

Press the button 2 to switch to input 2

Press the button 3 to switch to input 3

Press the button 4 to switch to input 4

IR CODE CONFIGURATION

Why would I need to change the remote channel?

In some instances, the 4x1 3G-SDI Switcher may use IR codes that conflict with other IR remote control devices. The unit may switch inputs when another brand IR remote control is used or the RMT-4IR may cause other brand IR controlled devices to behave unexpectedly.

I am experiencing the issues listed above. What do I do?

In these cases it is recommended to change the IR channel that the RMT-4IR remote control and the 4x1 3G-SDI Switcher use. The IR channel is configured independently on the RMT-4IR remote control and the 4x1 3G-SDI Switcher but the channel selection must match on both units for proper operation.

How Do I change the Remote Channel?

There are service DIP switches on both the RMT-4IR remote control and the 4x1 3G-SDI Switcher for channel configuration. Please use the diagram below to locate and change the IR channel to one that is not the default. Remember that the IR channel must match on both the unit and remote control for successful operation.

RMT-4IR Remote Control

Remove the battery cover on the rear side of the RMT-4IR remote control to expose the DIP switches.

2 DIP switch bank for IR channel configuration.

Remote Channel 1: Default

Remote Channel 2:

Remote Channel 3:

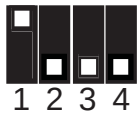
Remote Channel 4:

4x1 3G-SDI Switcher

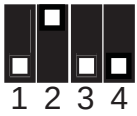
The IR channel DIP switches for the 4x1 3G-SDI Switcher are located on an 4 bank DIP switch on the underside of the unit. Locate DIP switches 1 and 2 (DIP switches 3 and 4 are not used) and make the desired channel adjustments.

Remote Channel 1: Default

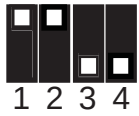
Remote Channel 2:



Remote Channel 3:



Remote Channel 4:



What features are available via the RS-232 serial communications port?

The 4x1 3G-SDI Switcher can accept commands through the RS-232 serial communications port located on the rear panel. The current RS-232 control features are:

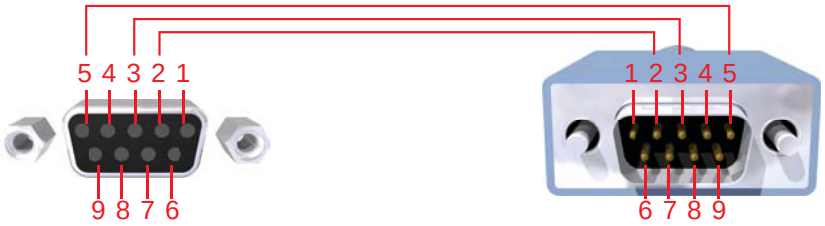
- Switching/routing of inputs to the outputs without the RMT-4IR remote control.

How do I use these features?

These features were initially intended for utilization by custom installers in automated setups. However, these features can be tested by using any Windows PC with the Hyperterminal program.

What pins are used for communication with the 4x1 3G-SDI Switcher?

Only pins 2 (Receive), 3 (Transmit), and 5 (Ground) are used for communication. A null-modem adapter should not be used with this product.



Only Pins 2 (RX), 3 (TX), and 5 (Ground) are used on the RS-232 serial interface

What are the communication port settings?

Bits per second 19200

Data bits 8

Parity ..... None

Stop bits 1

Flow Control ..... None

Switching/Routing Binary Table

ASCII	RMT-4IR Button	Binary
1	1	0011 0001
2	2	0011 0010
3	3	0011 0011
4	4	0011 0100

SPECIFICATIONS

Format Support ..... NTSC, PAL & and all HD formats

Input/Output ..... HD-SDI-SMPTE 292M (1.485, 1.485/1.001 Gbps)

Input/Output ..... HD-SDI-SMPTE 424M/425M (2.97/3.0 Gbps)

Input/Output ..... SDI-SMPTE 259M-C (270Mbps)

Dimensions ..... 7.5”W x 1.1”H x 3.5”D

Power Consumption ..... 10 Watts (max)

Power Supply ..... 5V DC

Shipping Weight ..... 4 lbs.