HDMI to 3GSDI Converter

EXT-HD-3G-C

User Manual

Release A1

Important Safety Instructions

1. Read these instructions.
2. Keep these instructions.
3. Heed all warnings.
4. Follow all instructions.
5. Do not use this unit near water.
6. Clean only with a dry cloth.
7. Do not block any ventilation openings. Install in accordance with the manufacturer's instructions.
8. Do not install or place this unit near any heat sources such as radiators, heat registers, stoves, or other apparatus (including amplifiers) that produce heat.
9. Do not defeat the safety purpose of the polarized or grounding-type plug. A polarized plug has two blades with one wider than the other. A grounding type plug has two blades and a third grounding prong. The wide blade or the third prong are provided for your safety. If the provided plug does not fit into your outlet, consult an electrician for replacement of the obsolete outlet.
10. Protect the power cord from being walked on or pinched particularly at plugs, convenience receptacles, and the point where they exit from the unit.
11. Only use attachments/accessories specified by the manufacturer.
12. To reduce the risk of electric shock and/or damage to this unit, never handle or touch this unit or power cord if your hands are wet or damp. Do not expose this unit to rain or moisture.
13. Unplug this unit during lightning storms or when unused for long periods of time.
14. Refer all servicing to qualified service personnel. Servicing is required when the unit has been damaged in any way, such as power-supply cord or plug is damaged, liquid has been spilled or objects have fallen into the unit, the unit has been exposed to rain or moisture, does not operate normally, or has been dropped.
15. Batteries that may be included with this unit and/or accessories should never be exposed to open flame or excessive heat. Always dispose of used batteries according to the instructions.

Gefen warrants the equipment it manufactures to be free from defects in material and workmanship.

If equipment fails because of such defects and Gefen is notified within two (2) years from the date of shipment, Gefen will, at its option, repair or replace the equipment, provided that the equipment has not been subjected to mechanical, electrical, or other abuse or modifications. Equipment that fails under conditions other than those covered will be repaired at the current price of parts and labor in effect at the time of repair. Such repairs are warranted for ninety (90) days from the day of reshipment to the Buyer.

This warranty is in lieu of all other warranties expressed or implied, including without limitation, any implied warranty or merchantability or fitness for any particular purpose, all of which are expressly disclaimed.

1. Proof of sale may be required in order to claim warranty.
2. Customers outside the US are responsible for shipping charges to and from Gefen.
3. Copper cables are limited to a 30 day warranty and cables must be in their original condition.

The information in this manual has been carefully checked and is believed to be accurate. However, Gefen assumes no responsibility for any inaccuracies that may be contained in this manual. In no event will Gefen be liable for direct, indirect, special, incidental, or consequential damages resulting from any defect or omission in this manual, even if advised of the possibility of such damages. The technical information contained herein regarding the features and specifications is subject to change without notice.

For the latest warranty coverage information, refer to the Warranty and Return Policy under the Support section of the Gefen Web site at www.gefen.com.

Technical Support

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Product Registration

Register your product here: http://www.gefen.com/kvm/Registry/Registration.jsp

- Always make sure that the 3GSDI to HDMI Converter is running the latest firmware. The Gefen Syner-G Software Suite is a free downloadable application from Gefen that provides automatic download and installation of firmware upgrades for this product.

  Download the application here: http://www.gefen.com/support/download.jsp

- The 3GSDI to HDMI Converter is not compatible with HDCP-encoded content. If the input signal is HDCP-encoded, there will be no SDI output.

HDMI to 3GSDI Converter is a trademark of Gefen, LLC.

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

This product uses UL or CE listed power supplies.

Features

- Converts HDMI to SDI
- Input resolutions up to 1920 x 1200 (WUXGA) and 1080p Full HD
- Output resolutions up to 1080p60
- Supports HDMI 12 bit color and SDI 10-bit color
- Supports Color Spaces: 4:4:4 (RGB and YCbCr) and 4:2:2 (YCbCr)
- Supports 3G-SDI Levels A and B
- Up to LPCM 7.1 audio support
- Field configurable via DIP switch settings or Gefen Syner-G™ software
- Gefen Syner-G™ simplifies in-field firmware updates and advanced EDID management
- Mini USB port for use with Gefen Syner-G™
- Wide power supply operating range (6V to 24V DC)
- Locking power supply connector
- 1/4-20 industry-standard camera gear attachment thread on bottom
- Surface-mountable using the included detachable bracket

HIGH-DEFINITION MULTIMEDIA INTERFACE

Packing List

The HDMI to 3GSDI Converter ships with the items listed below. If any of these items are not present in the box when you first open it, immediately contact your dealer or Gefen.

- 1 x HDMI to 3GSDI Converter
- 1 x 6 ft. Locking HDMI Cable
- 1 x Surface Mounting Bracket
- 1 x 12V Power Supply
- 1 x Quick-Start Guide

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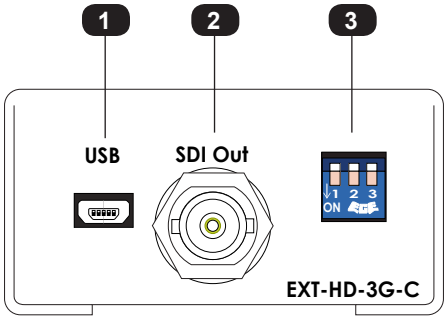
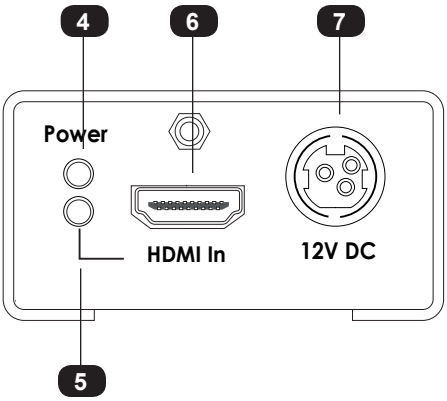

1
2
3
USB
SDI Out
ON
EXT-HD-3G-C

GEFEN
HDMI to 3GSDI
Converter


4
6
7
Power
HDMI In
12V DC
5

ID	Name	Description
1	USB	This mini-USB port is used for upgrading the firmware.
2	3GSDI Out	Connect a BNC cable from this port to the SDI display.
3	DIP switches	Use these DIP switches to set the operating mode of the converter. See DIP Switches (page 8) for more information.
4	Power	When the HDMI to 3GSDI Converter is powered, this LED indicator will glow solid blue. When power is disconnected, this LED indicator will turn off.
5	HDMI In (Indicator)	This LED indicator will glow solid green when an HDMI cable is connected to the **HDMI In** port. If the HDMI cable is disconnected, then this LED indicator will turn off.
6	HDMI In	Connect the included HDMI cable from the source to this port.
7	12V DC	Connect the included 12V DC power supply to this power receptacle.

Connection Instructions

► **Video**

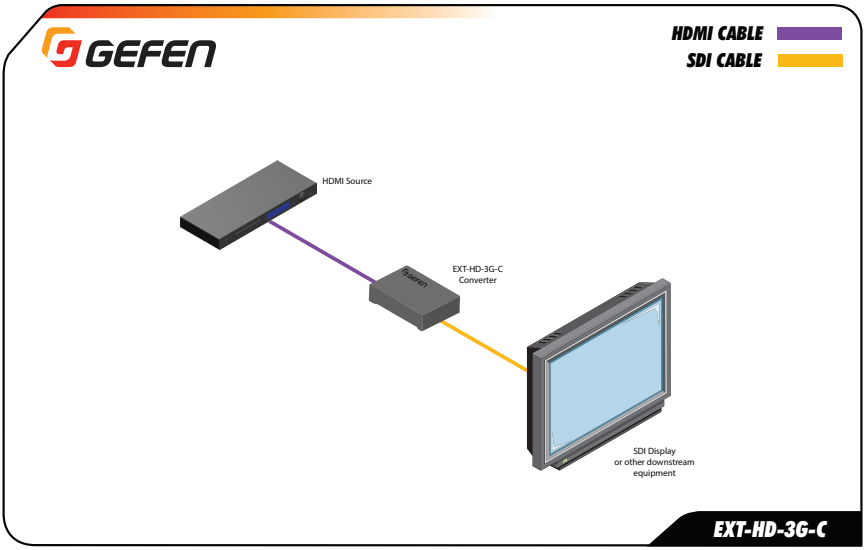
1. Connect the included HDMI cable from the HD source to the **HDMI In** port on the HDMI to 3GSDI Converter.

2. Connect a BNC cable from the SDI display to the **SDI In** port on the HDMI to 3GSDI Converter.

► **Power**

3. Connect the included power supply to the 12V DC power receptacle and connect the power cord to an available electrical outlet.

Sample Wiring Diagram



HDMI to 3GSDI Converter

2 Basic Operation

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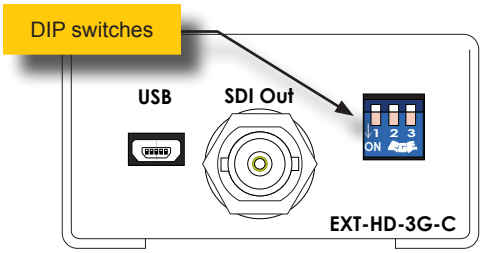
Pre-programmed EDID Modes

The HDMI to 3GSDI Converter comes with three pre-programmed EDID configurations. Use DIP switch 1 and 2 to set the desired EDID mode. DIP 3 controls the 3G mode.



DIP 1	DIP 2	DIP 3	Description
OFF	OFF		3G/HD/SD-SDI with multichannel audio †
OFF	ON		3G/HD/SD-SDI with two-channel LPCM audio
ON	OFF		HD/SD-SDI with two-channel LPCM audio
ON	ON		Custom EDID Mode *

† DTS-HD Master Audio™ and Dolby® TrueHD are not supported.

* As of this writing, Custom EDID Mode is not available but will be implemented in a future release.

3G Mode

DIP 1	DIP 2	DIP 3	Description
		ON	Enable 3G level-B mode
		OFF	Enable 3G level-A mode

Indicates factory-default settings.

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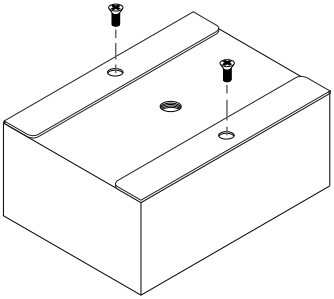
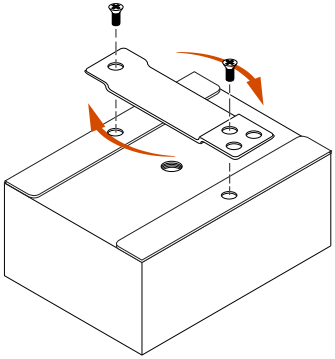
The HDMI to 3GSDI Converter can be mounted on any flat surface using the included mount or on a camera tripod. Mounting screws are not included.

Flat Surface

1. Remove the two screws on the bottom of the unit.

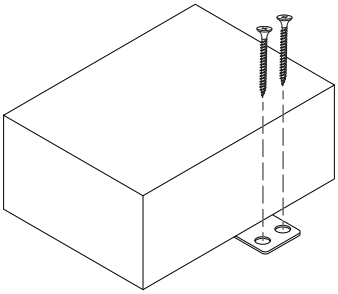
2. Place the included mount, as shown, so that it rests between the two flanges. Note that the mount can be placed in either direction, as shown by the arrows.





3. Replace the two enclosure screws and tighten to secure the mount to the unit.

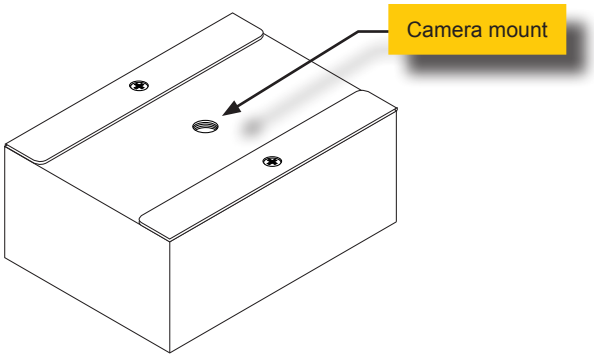
4. Mount the unit, as shown (screws not included).



For installation on a drywall surface, use a #6 drywall screw. When installing, it is recommended to thread the drywall screws into a stud.

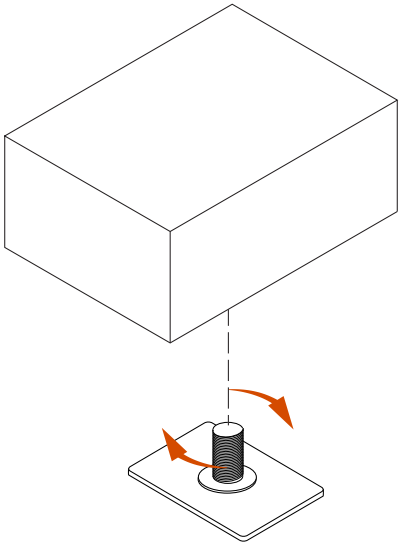
Camera Mount

1. The center hole is used to mount the HDMI to 3GSDI Converter to a camera tripod.



2. Mount the HDMI to 3GSDI Converter on a camera mount using a 1/4” 20-thread screw.

3. Hand-tighten the mounting screw, from the bottom, until the HDMI to 3GSDI Converter is secure. Do not overtighten the screw.



Connectors, Controls, and Indicators	
Video Input	• 1 x HDMI Type A 19-pin, female, locking
Video Output	• 1 x SDI BNC-type, female
USB	• 1 x Mini-B
Configuration Switches	• 3 x DIP-type
HDMI Indicator	• 1 x LED, green
Power Indicator	• 1 x LED, blue
Power Receptacle	• 1 x 3-pin, locking

Operational	
Maximum Pixel Clock	• 150 MHz
Maximum TMDS Clock	• 225 MHz
Power Supply	• 12V DC, nominal • 6V to 24V DC, operating range
Power Consumption	• 3W, maximum
Operating Temperature	• +32 to +122 °F (0 to +50 °C)
Operating Humidity	• 5% to 90% RH, non-condensing
Storage Temperature	• -4 to +185 °F (-20 to +85 °C)
Storage Humidity	• 0% to 95% RH, non-condensing
MTBF	• 50000 hours

Physical	
Dimensions (W x H x D)	• 2.9” x 1.2” x 2.3” (74mm x 30mm x 59mm)
Unit Weight	• 0.3 lbs (0.15 kg)

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