®

1:2 Splitter for HDMI® 1.3 with Digital Audio

EXT-HDMI1.3-142D
User Manual

Gefen
Power
Int
Ext
Link
1:2 Splitter
for HDMI 1.3

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 PST

Write To:

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

www.gefen.com
support@gefen.com

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

1:2 Splitter For HDMI 1.3 with Digital Audio is a trademark of Gefen, LLC

HDMI, the HDMI logo, and **High-Definition Multimedia Interface** are trademarks or registered trademarks of HDMI Licensing in the United States and other countries.

© 2010 Gefen, LLC, All Rights Reserved
All trademarks are the property of their respective owners

Rev B2
2.1M

CONTENTS

1 Introduction

2 Operation Notes

3 Features

4 Panel Descriptions

5 Panel Descriptions

6 Connecting and Operating The 1:2 Splitter For HDMI 1.3 with Digital Audio

7 EDID Management

9 Specifications

10 Warranty

Congratulations on your purchase of the 1:2 Splitter For HDMI 1.3. 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 1:2 Splitter For HDMI 1.3

The 1:2 Splitter for HDMI 1.3 with Digital Audio allows set-top boxes, DVD players, DVRs and other HDMI sources with an HDMI output to be connected to two HDMI-compliant displays while also supplying digital audio to an external amplifier or receiver. A TOSLINK output on the 1:2 Splitter allows connection of an external amplifier or receiver for greater installation flexibility. 3D content can be displayed when connecting a 3DTV and 3D source. A greater number of displays can be split by daisy-chaining multiple 1:2 Splitters together to create a larger distribution.

How It Works

An HDMI source connects to the HDMI input connector on the Gefen 1:2 Splitter for HDMI 1.3 with Digital Audio. Two HDMI outputs from the 1:2 Splitter connect to two HDMI-compliant Displays. Vibrant, sharp HDMI video with embedded multichannel digital audio will now be observed on the HDMI Displays. TOSLINK digital audio output on the rear of the unit allows connection of an external amplifier or receiver.

OPERATION NOTES

READ THESE NOTES BEFORE INSTALLING OR OPERATING THE 1:2 SPLITTER FOR HDMI 1.3 WITH DIGITAL AUDIO

- By default, display information from the display connected to HDMI output port 1 is sent back to the source. Therefore, the other display connected to the 1:2 Splitter for HDMI 1.3 with Digital Audio must be capable of accepting the timings, resolutions and audio formats of the display that is connected to HDMI output port 1. It is recommended that the display with the lowest native resolution be connected to HDMI output port 1. This is to ensure that a compatible video signal will be able to be displayed on all connected monitors. There is a generic EDID programmed into the 1:2 Splitter for HDMI 1.3 with Digital Audio that can be used instead. Please see page 7 for more details.

- The digital TOSLINK output only supports the transmission of the following audio formats:

  - LPCM 2-channel (32 ~ 192 Khz sampling rate)

  - Dolby AC3 2-channel and 5.1-channel

  - Dolby Digital Plus 5.1-channel

  - DTS 2-channel and 5.1-channel

- LPCM of more than 2 channels, Dolby Digital Plus of 7.1 channels, DTS-HD and Dolby TrueHD are supported through the HDMI output only (not on the TOSLink output).

*When used with a HDMI to DVI adapter

HDMI 1.3 Features

- 225 MHz (up to 12 bit YUV 444 supported @ 1080p)
- Deep Color
- Dolby TrueHD and DTS-HD Master Audio
- Lip-Sync
- CEC Pass-Through

Features

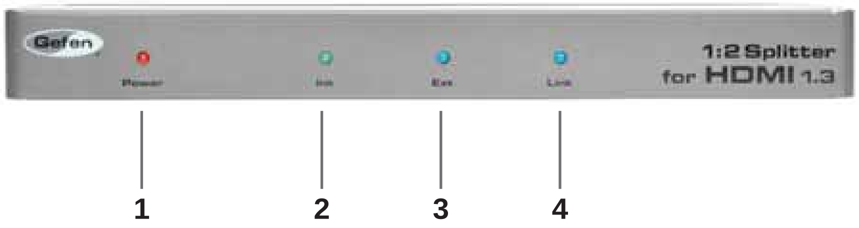
- Simultaneously displays a single Hi-Def source on up to two (2) HDTV displays without signal loss
- Maintains sharp HDTV resolutions up to 1080p Full HD and 2K
- 3DTV Pass-Through
- Color Space Conversion
- EDID Management for rapid integration of sources and display devices.
- Mono-LOK™ Locking HDMI Connectors
- Built-in TOSLINK audio output connector
- Supports the use of DVI sources and DVI displays with an HDMI-to-DVI converter cable or adapter
- HDMI and HDCP compliant

Package Includes

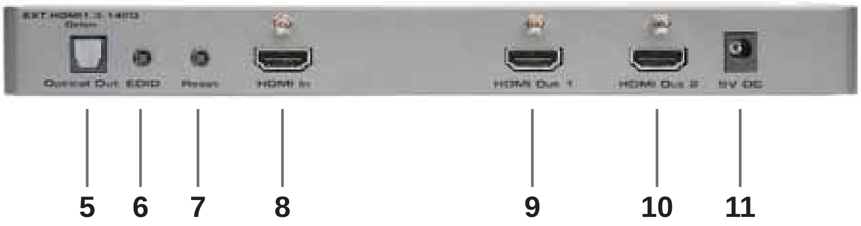
(1) Gefen 1:2 Splitter for HDMI 1.3 with Digital Audio
(1) 6 ft HDMI cable (M-M)
(1) 5V DC Power Supply
(1) User Manual

PANEL LAYOUT

Front Panel


Gefen
Power
Init
Ext
Link
1:2 Splitter
for HDMI 1.3
1
2
3
4

Back Panel


Optical Out
EDID
Reset
HDMI In
HDMI Out 1
HDMI Out 2
5V DC
5
6
7
8
9
10
11

1 **Power LED**
This LED will activate once a valid power source is applied.

2 **Internal EDID LED**
This LED will activate only when the pre-programmed internal EDID is being used. Please see page 7 for more details on the internal EDID.

3 **External EDID LED (default EDID routing)**
This LED will activate only when the external EDID is being used. Please see page 7 for more details on the external EDID.

4 **Link LED**
This LED activates when a valid link between source and splitter is detected.

5 **Optical Digital Audio Output**
This optical output will supply supported audio formats for output to an external audio decoder or device such as an amplifier or receiver. See the Operation Notes on page 2 for more information about supported audio formats on this output.

6 **EDID Button**
This button will activate the onboard EDID. Press this button (the Int. EDID should turn on and the Ext. LED should turn off) and reset the unit using the Reset button (below) to initialize this EDID mode. To use an external EDID, press the EDID button again (the Int. LED should turn off and the Ext. LED should turn on) and press the Reset button to initialize this EDID mode. Please see page 7 for more information.

7 **Reset Button**
This button will reset the unit and initialize whichever EDID mode is currently selected.

8 **HDMI Input**
This is the input for the HDMI source device. When a valid source is detected by the splitter, the Link LED will activate.

9 **HDMI Out 1**
This is the first HDMI output port. Connect a valid HDMI display to this port. When the External EDID mode is active, the EDID form the display connected to this port will be used to send to the source.

10 **HDMI Out 2**
This is the second HDMI output port. Connect a valid HDMI display to this port.

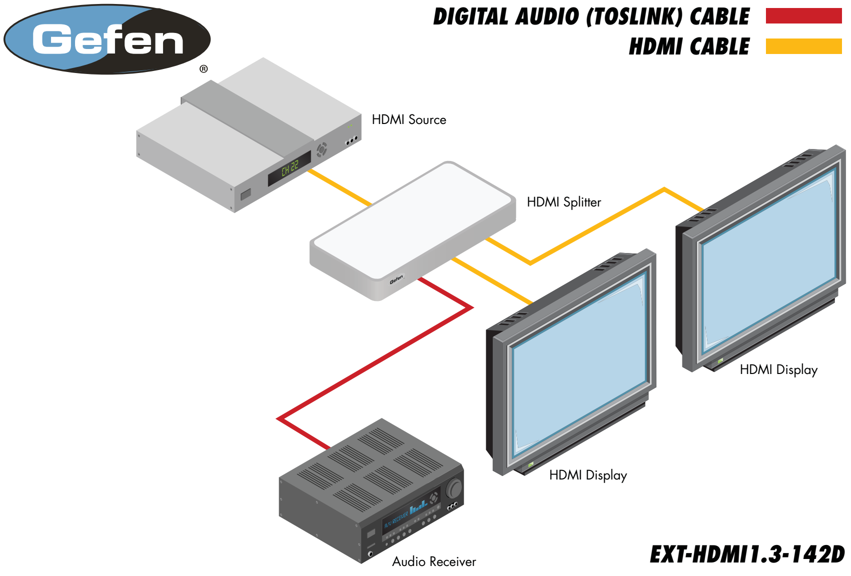
11 **5V DC Power Input**
This port is for the included 5V DC power supply. When a valid 5V power supply is attached, the Power LED will activate.

How to Connect the 1:2 Splitter for HDMI 1.3 with Digital Audio

1. Connect the supplied cable from the HDMI source into the Splitter’s input.
2. Connect the cables from your displays (monitor or projector) into the HDMI outs of the 1:2 Splitter for HDMI 1.3 with Digital Audio. Up to 2 displays are supported.
3. If using the TOSLINK optical audio output, connect a TOSLINK optical audio cable between the 1:2 Splitter for HDMI 1.3 with Digital Audio and an A/V Receiver.
4. Plug the 5V DC power supply into the 1:2 Splitter for HDMI 1.3 with Digital Audio.

Apply power to the sources and displays. The source signal will now be seen on two (2) displays at the same time.

Wiring Diagram for the Gefen 1:2 Splitter for HDMI 1.3 with Digital Audio


Gefen®
DIGITAL AUDIO (TOSLINK) CABLE 🟥
HDMI CABLE 🟨
HDMI Source
HDMI Splitter
HDMI Display
HDMI Display
Audio Receiver
EXT-HDMI1.3-142D

EDID Mode Selection

1. **EXTERNAL MODE**:

   See page 8 for details on using the External EDID.

2. **INTERNAL MODE**:

   To use this mode, press the EDID button on the rear panel until the front-panel LED marked “Int” turns bright green. This mode will use a preset EDID, from the factory, that is stored in the Gefen 1:2 Splitter for HDMI 1.3 with Digital Audio. This pre-programmed standard EDID data structure is compatible with most A/V display devices. All resolutions and audio formats specified in this EDID will be passed to the source device. See the tables below for a complete listing of the resolutions and audio formats listed in this EDID.

   NOTE: All other HDMI devices/displays connected to the output ports **MUST** be compatible with at least one resolution/audio format specified in this EDID. It is recommended to set, on the source device, a common resolution and audio format shared by all attached devices/displays. This is to ensure a compatible signal is output to all connected devices/displays.

Internal EDID Video Timings

Timing	Refresh Rate	Timing	Refresh Rate
1280 x 720p	50 Hz	720 x 576p	50 Hz
1280 x 720p	59.94 / 60 Hz	1920 x 1080p	50 Hz
1920 x 1080i	50 Hz	1920 x 1080p	59.94 / 60 Hz
1920 x 1080i*	59.94 / 60 Hz	1440 x 480p	59.94 / 60 Hz
720 x 480p	59.94 / 60 Hz	1440 x 576p	50 Hz

* Native Resolution

Internal EDID Audio Formats

Audio Format	Supported Channels
LPCM	2CH
AC-3	2CH / 5.1CH
DTS	2CH / 5.1CH

External EDID Management

The 1:2 Splitter for HDMI 1.3 with Digital Audio features EDID Management. Before the source can send video or audio signals, the source device reads the EDID (Extended Display Identification Data) from the output devices connected to the Splitter. The EDID contains information about what type of A/V data that the source can send to each output device.

The 1:2 Splitter for HDMI 1.3 with Digital Audio distributes a single source to multiple output devices. This involves reading EDID data from more than one device. Management of the EDID data is important to maintain compatibility between all devices.

The following EDID features are copied from Output 1:

- Supported Resolutions
- 3D Support
- Audio Features

EDID color features are built based on all attached displays, using the following rules:

- Deep Color will be *enabled* if one or more displays are connected to the Splitter supporting Deep Color.
- xvYCC (x.v.Color) is supported if all connected displays support it.

Display Connections:

- If a display is not connected to Output 1, then no EDID changes are made, meaning that the previous EDID information will be used. This state will be in effect until a display is connected to Output 1 and the Splitter is power-cycled.
- EDID is built from Output 1 to the Input. The audio block will be copied from Output 1. EDID-copying is performed only when the Splitter is reset or power-cycled.

SPECIFICATIONS

Video Amplifier Bandwidth	225 MHz
Input Video Signal	1.2 Volts p-p
Input DDC Signal	5 Volts p-p (TTL)
Single Link Range	1080p/1920 x 1200
HDMI Connector	Type A, 19 Pin Female
Power Supply	5V DC
Power Consumption	13 Watts (max)
Dimensions	10.25”W x 1”H x 4.25”D
Shipping Weight	3.5 lbs.

WARRANTY

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, please visit Gefen’s Warranty web page at http://www.gefen.com/kvm/aboutus/warranty.jsp

PRODUCT REGISTRATION

Please register your product online by visiting Gefen’s web site at http://www.gefen.com/kvm/Registry/Registration.jsp

MA-HDMI1.3-142D

Rev B2
2.1M

20600 Nordhoff St., Chatsworth CA 91311
1-800-545-6900   818-772-9100   fax: 818-772-9120
www.gefen.com   support@gefen.com

CE   RoHS   c UL US