

# 1:10 | Distribution Amplifier for HDMI 1.3

EXT-HDMI1.3-1410-BLK

EXT-HDMI1.3-1410-SIL

User Manual

Release A4



## Important Safety Instructions

1. Read these instructions.
2. Keep these instructions.
3. Heed all warnings.
4. Follow all instructions.
5. Do not use this product 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 product 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 apparatus.
11. Only use attachments/accessories specified by the manufacturer.
12. To reduce the risk of electric shock and/or damage to this product, never handle or touch this unit or power cord if your hands are wet or damp. Do not expose this product to rain or moisture.
13. Unplug this apparatus during lightning storms or when unused for long periods of time.
14. Refer all servicing to qualified service personnel. Servicing is required when the apparatus 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 apparatus, the apparatus has been exposed to rain or moisture, does not operate normally, or has been dropped.
15. Batteries that may be included with this product and/or accessories should never be exposed to open flame or excessive heat. Always dispose of used batteries according to the instructions.

## Warranty Information

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](http://www.gefen.com).

### PRODUCT REGISTRATION

**Please register your product online by visiting the Register Product page under the Support section of the Gefen Web site.**

# Contacting Gefen Technical Support

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

Telephone: (818) 772-9100  
(800) 545-6900

Fax: (818) 772-9120

Email: [support@gefen.com](mailto:support@gefen.com)

Visit us on the Web: [www.gefen.com](http://www.gefen.com)

Technical Support Hours: 8:00 AM to 5:00 PM Monday - Friday, Pacific Time

**1:10 Distribution Amplifier for HDMI 1.3** is a trademark of Gefen, LLC.

## Important Notice

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

## Operating Notes

- Make sure to connect all the cables and the power supply prior to connecting power to the HDMI sources and the 1:10 Distribution Amplifier for HDMI 1.3.
- 3D content will be displayed when using with a 3D compatible source and TV.
- The 1:10 Distribution Amplifier for HDMI 1.3 features an EDID selection that will allow the user to choose from a external EDID from an attached display or a built-in internal EDID. See [EDID Management \(page 8\)](#) for more details.

# Features and Packing List

## Features

- Simultaneously displays a single Hi-Def source on up to 10 HDTV displays without signal loss
- Maintains sharp HDTV resolutions up to 1080p Full HD and 2K
- HDMI Features:
  - ▶ 225 MHz (up to 12 bit YUV 444 supported @ 1080p)
  - ▶ Deep Color
  - ▶ Dolby® TrueHD and DTS-HD Master Audio™
  - ▶ Lip-Sync
- 3DTV Pass-Through
- Color Space Conversion
- EDID Management for rapid integration of sources and display devices
- Mono-LOK™ Locking HDMI Connectors
- Supports the use of DVI sources and DVI displays with an HDMI-to-DVI converter cable or adapter
- Rack-mountable (rack ears included)
- HDMI and HDCP compliant



## Packing List

The 1:10 Distribution Amplifier for HDMI 1.3 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 1:10 Distribution Amplifier for HDMI 1.3
- 1 x 6 ft. HDMI cable (M-M)
- 1 x 24V DC Power Supply
- 1 x Set of Rack Ears
- 1 x Quick-Start Guide



# Table of Contents

## 01 Getting Started

Panel Layout .....	2
Front.....	2
Back .....	3
Installation .....	4
Connecting the 1:10 Distribution Amplifier for HDMI 1.3.....	4
Sample Wiring Diagram .....	4

## 02 Operating the 1:10 Distribution Amplifier for HDMI 1.3

EDID Management.....	8
Selecting the EDID Mode.....	8
Internal EDID .....	9
External EDID .....	10

## 03 Appendix

Specifications .....	14
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# 1:10 | Distribution Amplifier for HDMI 1.3

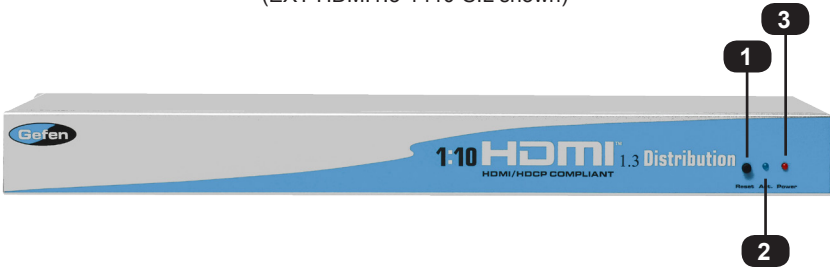
## 01 Getting Started

Panel Layout .....	2
Front.....	2
Back .....	3
Installation .....	4
Connecting the 1:10 Distribution Amplifier for HDMI 1.3.....	4
Sample Wiring Diagram .....	4

# Panel Layout

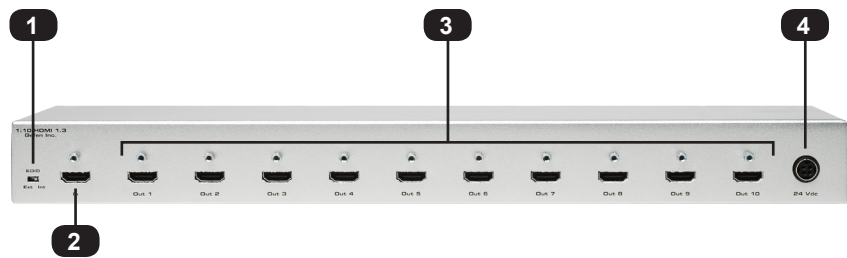
## Front

(EXT-HDMI1.3-1410-SIL shown)



ID	Name	Description
1	Reset	Press this button to reset the 1:10 Distribution Amplifier for HDMI 1.3.
2	Act.	This LED indicator will glow bright blue once an active source device is connected to the HDMI In connector.
3	Power	This LED indicator glows bright red when the unit is powered.

Back



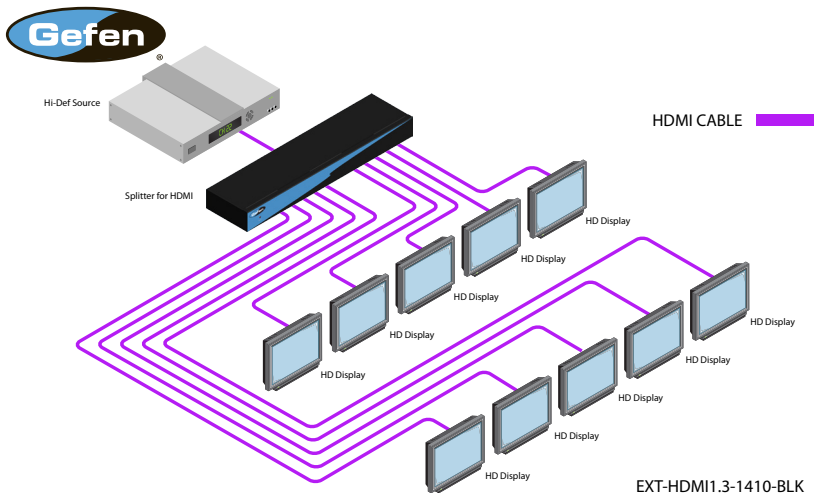
ID	Name	Description
1	EDID (Ext / Int)	Use this switch to have the 1:10 Distribution Amplifier for HDMI 1.3 use the internal EDID or external EDID. See <a href="#">EDID Management (page 8)</a> for more information.
2	In	Use the included HDMI cable to connect the Hi-Def source to this port.
3	Out (1 - 10)	Connect up to 10 HDTV displays to these HDMI outputs.
4	24V DC	Connect the included 24V DC power supply from this power receptacle to an available AC electrical outlet.

# Installation

## Connecting the 1:10 Distribution Amplifier for HDMI 1.3

1. Connect the included HDMI cable between the Hi-Def source and the **In** port on the distribution amplifier.
2. Connect up to 10 Hi-Def displays to the distribution amplifier using each of the **Out** ports.
3. Connect the included 24V DC power supply from the power receptacle of the distribution amplifier to an available electrical outlet.

### Sample Wiring Diagram









# 1:10 | Distribution Amplifier for HDMI 1.3

## 02 Operating the 1:10 Distribution Amplifier for HDMI 1.3

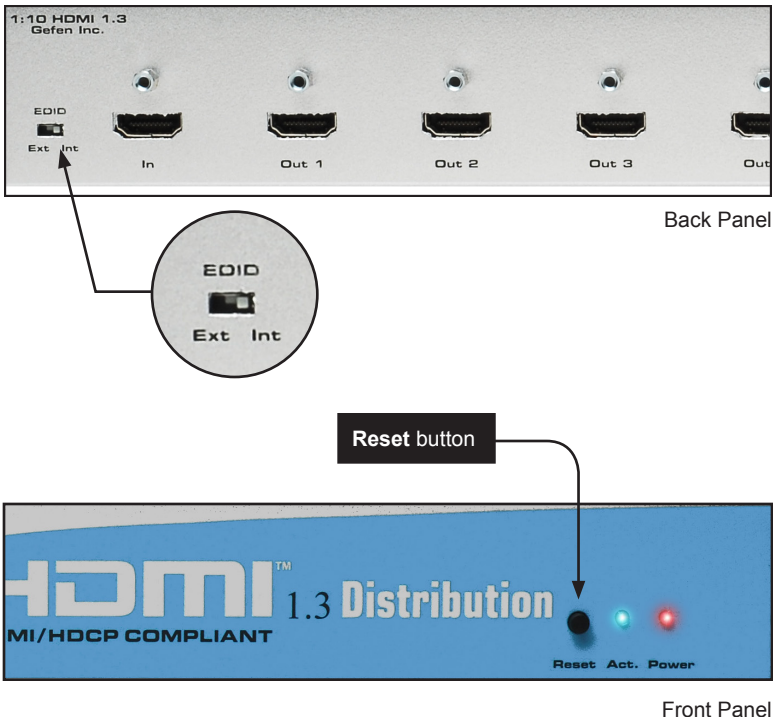
EDID Management.....	8
Selecting the EDID Mode.....	8
Internal EDID.....	9
External EDID .....	10

## EDID Management

The 1:10 Distribution Amplifier for HDMI 1.3 features EDID Management. Before the source can send video and/or audio to the display (sink), the source reads the EDID (Extended Display Identification Data) from the sink (display) devices that are connected to the distribution amplifier. The EDID contains information about what type of audio/video data that the source can send to each output device. The distribution amplifier can use either the downstream EDID (from the display / sink) or the built-in internal EDID.

### Selecting the EDID Mode

1. Use a sharp pointed object, such as a jeweler's screwdriver, to slide the EDID switch to the desired position.
  - ▶ Set the switch to the **Int** position (shown below) to use the built-in internal EDID.
  - ▶ Set the switch to the **Ext** position to use the external (downstream) EDID.
2. After the desired EDID mode is selected, press the **Reset** button on the front panel. The distribution amplifier must be reset or power-cycled when switching between EDID modes.



## Internal EDID

Use this EDID mode if problems are encountered when using the external EDID. The built-in internal EDID provides the source device with a “generic” EDID which can be used by all display (sink) devices.

1. Select the internal EDID mode. Refer to [Selecting the EDID Mode \(page 8\)](#).
2. Press and release the **Reset** button on the front panel of the distribution amplifier to reset the unit. The distribution amplifier must be reset (or power-cycled) each time the EDID mode is switched.

The table, below, displays the video timings and audio formats supported by the internal EDID.



**NOTE:** All sink devices connected to the distribution amplifier *must* be compatible with at least one resolution / audio format specified in the internal EDID. If one of the connected displays does not support xvYCC, then this feature is removed from the EDID.

Video Timings	Audio Formats
640 x 480p 59/60 4:3	LPCM (2CH)
720 x 480p 59/60 4:3*	
720 x 480p 59/60 16:9	
1280 x 720p 59/60 16:9	
1920 x 1080i 59/60 16:9	
1440 x 480i 59/60 4:3	
1920 x 1080p 59/60 16:9	
720 x 576p 50 4:3	
720 x 576p 50 16:9	
1280 x 720p 50 16:9	
1920 x 1080i 50 16:9	
1440 x 576i 50 4:3	
1920 x 1080p 50 16:9	
1920 x 1080p 23/24 16:9	

\* *Native resolution*

## External EDID

When set to **Ext** mode, EDID data will be fetched from the sink that is connected to **Out 1**. It is recommended that the display with the lowest native resolution be connected to **Out 1**. This ensures that a compatible video signal will be output to all connected displays.

1. Select the external EDID mode. Refer to [Selecting the EDID Mode \(page 8\)](#).
2. Press and release the **Reset** button on the front panel of the distribution amplifier to reset the unit. The distribution amplifier must be reset (or power-cycled) each time the EDID mode is switched.

When the external EDID is used, the following rules apply:

- ▶ The 1:10 Distribution Amplifier for HDMI 1.3 will always attempt to read the EDID from the sink device connected to the **Out 1** port and copy it to the **In** port. **Out 1** is the (default) primary output port.
- ▶ If a sink device is *not* detected on the primary output port, then the distribution amplifier will sequentially scan all subordinate output ports (2, 3, etc.) until a sink device is found. Once detected, this subordinate output port will become the new primary output port and the EDID will be copied to the **In** port.

This state will be in effect until a sink device is connected to the **Out 1** port and the distribution amplifier is power-cycled or the **Reset** button is pressed.

- ▶ EDID capabilities (timings, audio, color depth, etc.) will be supported by all subordinate sink devices *only* if they are supported by the primary sink device.
- ▶ Operational / compatibility issues may result if a subordinate sink device is unable to support the EDID capabilities of the primary sink device.





# 1:10 | Distribution Amplifier for HDMI 1.3

## 03 Appendix

Specifications .....	14
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# Specifications

## Supported Formats

Resolutions (max.)	<ul style="list-style-type: none"> <li>• 1080p Full HD</li> <li>• 1920 x 1200 (WUXGA)</li> <li>• 2K</li> </ul>
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## Electrical

Maximum Pixel Clock	<ul style="list-style-type: none"> <li>• 225 MHz</li> </ul>
Input Video Signal	<ul style="list-style-type: none"> <li>• 1.2V p-p</li> </ul>
Input DDC Signal	<ul style="list-style-type: none"> <li>• 5V p-p (TTL)</li> </ul>
Power Indicator	<ul style="list-style-type: none"> <li>• 1 x LED, red</li> </ul>
Activity Indicator	<ul style="list-style-type: none"> <li>• 1 x LED, blue</li> </ul>
EDID Switch	<ul style="list-style-type: none"> <li>• 1 x Slide-type</li> </ul>

## Connectors

Video Input	<ul style="list-style-type: none"> <li>• 1 x HDMI Type-A, 19-pin, female</li> </ul>
Video Output	<ul style="list-style-type: none"> <li>• 10 x HDMI Type-A, 19-pin, female</li> </ul>
Power	<ul style="list-style-type: none"> <li>• 1 x 24V DC</li> </ul>

## Operational

Power Consumption	<ul style="list-style-type: none"> <li>• 60W (max.)</li> </ul>
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## Physical

Dimensions (W x H x D)	<ul style="list-style-type: none"> <li>• 17" x 1.75" x 5.5" (432mm x 45mm x 140mm)</li> </ul>
Unit Weight	<ul style="list-style-type: none"> <li>• 1.8 lb (0.8 kg)</li> </ul>







Stretch it. Switch it. Split it. Gefen's got it. ®

20600 Nordhoff St., Chatsworth CA 91311  
1-800-545-6900 818-772-9100 fax: 818-772-9120  
[www.gefen.com](http://www.gefen.com) [support@gefen.com](mailto:support@gefen.com)



This product uses UL listed or CE compliant power supplies.