

Gefen

HDMI to DVI AUDIO Adapter

EXT-HDMI-2-DVIAUD

User Manual



www.gefen.com

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Notice

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INTRODUCTION

Congratulations on your purchase of the HDMI to DVI Audio Adapter. 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 HDMI to DVI Audio Adapter

The HDMI to DVI Audio Adapter is a unique device that converts the HDMI signal to a digital video DVI (DVI-D) output and a digital audio TOSLINK output. This adapter lets you connect your HDMI source to a DVI HDCP display and enjoy high quality digital audio at the same time. With the HDMI to DVI Audio Adapter, home theater devices and computer systems can easily be connected to any DVI display for the full digital video and audio experience.

How It Works

Simply connect your DVI compliant monitor to the DVI Female connector on the output side of the HDMI to DVI Audio Adapter. Then connect the supplied HDMI cable from your source to the input side of the HDMI to DVI Audio Adapter. Then connect the TOSLINK digital audio cable between the audio output on the HDMI to DVI Audio Adapter and the Audio input on your device. Then connect the power supply.

Note: When the HDMI input is HDCP encrypted the DVI output is encrypted as well.

OPERATION NOTES

READ THESE NOTES BEFORE INSTALLING OR OPERATING THE HDMI TO DVI AUDIO ADAPTER

The HDMI source device needs an EDID (display information) to operate correctly. By default, the HDMI to DVI Audio Adapter will use the EDID from the device connected to the DVI output. If the output device is a DVI type device, audio information will not be included in its EDID and audio may not be output by the attached HDMI device. To resolve this issue, the HDMI to DVI Audio Adapter carries preset EDID's that include audio flags for use by the source device. For a listing of the EDID modes and how to utilize them, please see page 8.

FEATURES

Features

- Allows you to connect HDMI outputs to TOSLINK and a DVI display
- Decodes digital audio and video signal from HDMI™ video and audio
- Supports resolutions up to 1080p, 2K, and 1920 x 1200
- Built in EDID selection for audio support
- HDCP pass-through

Package Includes

- (1) HDMI to DVI Audio Adapter
- (1) 5V Power Supply
- (1) 6 ft. Locking HDMI Cable
- (1) User Manual

PANEL LAYOUT

Front Panel



1

2

Back Panel



3

4

5

PANEL DESCRIPTIONS

1 *DVI Output Connector*

This output will accept a single DVI output device via a DVI-D type connector. The video portion of the HDMI signal will be separated from the audio portion and output through this connector.

2 *TOSLINK Digital Audio Output Connector*

This output will accept a single TOSLINK (optical) digital audio device via a TOSLINK female connector. The audio portion of the HDMI signal will be separated from the video portion and output through this connector.

3 *5V DC Power Receptacle*

Connect the included locking 5V DC power supply between this port and an open wall power socket.

4 *Power LED Indicator*

This LED will become active once a valid connection is made between the included 5V DC power supply and an open wall power socket.

5 *HDMI Input Connector*

This input will accept a single HDMI input source device via a HDMI Type A female connector.

CONNECTING AND OPERATING THE HDMI TO DVI AUDIO ADAPTER

How to Connect the HDMI to DVI Audio Adapter

1. Connect the HDMI source device to the HDMI input on the HDMI to DVI Audio Adapter using the supplied HDMI cable.
2. Connect the DVI capable output device to the DVI output on the HDMI to DVI Audio Adapter using a user supplied DVI cable.
3. Connect a TOSLINK capable audio output device to the TOSLINK output on the HDMI to DVI Audio Adapter using a user supplied TOSLINK cable.

NOTE: By default, the HDMI to DVI Audio Adapter will use the EDID from the DVI device connected to the output. In most cases a DVI EDID will not carry any audio information, and in most cases the HDMI source device will require audio information in the EDID it reads to set the right audio output format and type. To compensate for this eventuality, the HDMI to DVI Audio Adapter carries preset EDID's that contain specific audio flags. To enable a preset EDID, please see page 7. The preset EDID must be set before proceeding to the next step.

4. Connect the included 5V DC power supply to the HDMI to DVI Audio Adapter and an open wall power socket.

How to Operate the HDMI to DVI Audio Adapter

No further configuration is required to operate the HDMI to DVI Audio Adapter. If, however, the audio format needs to be changed, please refer to the next section on instructions on how to change preset EDID modes.

EDID. What is it and what is it used for?

Under normal circumstances, a source device (digital and analog) will require information about a connected device/display to assess what resolutions and features are available. The source can then cater its output to send only resolutions and features that are compatible with the attached device/display. This information is called EDID (Extended Display Information Data) and a source device can only accept and read one EDID from a connected device/display. Likewise, the source can only output one resolution for use by a connected device/display. EDID will also specify specific audio capabilities as well, such as supported audio formats and speaker allocation.

Why is EDID so important with the HDMI to DVI Audio Adapter?

The HDMI to DVI Audio Adapter will separate the video and audio stream in an HDMI signal to allow separate routing of each signal type. The connected HDMI source device will require one EDID to read. By default, the EDID used is from the connected DVI output device. In most cases, a DVI EDID will not carry the required audio information that the HDMI source needs to ascertain what type of audio will be output.

What options do I have to manage the EDID in the HDMI to DVI Audio Adapter?

The HDMI to DVI Audio Adapter has the ability to use preset EDID's that contain audio information. These EDID's can then be used by the HDMI source device to adjust its audio output to match. These EDID modes can be set using the 4 DIP switch bank located on the underside of the HDMI to DVI Audio Adapter.

How do I change EDID modes in the HDMI to DVI Audio Adapter?

There is a bank of 4 DIP switches located on the underside of the HDMI to DVI Audio Adapter. This bank is covered by a piece of metallic tape. Removing this piece of tape will expose the DIP switch bank.

Use a small pointed tool to adjust the DIP switches according to the chart on the next page. Changes should be made without the application of power. Once a change is made, power can be reapplied. The source device may also need to have its power cycled to register the new EDID.

USING PRE-PROGRAMMED EDID

Some situations require forcing EDID (display and audio capability data) for troubleshooting purposes. The goal is to provide settings that the source device will understand, resolving cases where the data is indeterminate or wrong due to an interfacing issue and the source does not know what signal to output to the display.

Underneath the unit, a bank of 4 switches (called DIP switches) allows you to set EDID parameters. Look on the underside of the unit and carefully peel off a grey silver sticker revealing the bank of 4 DIP switches. You are now ready to make adjustments. Please refer to the chart below.

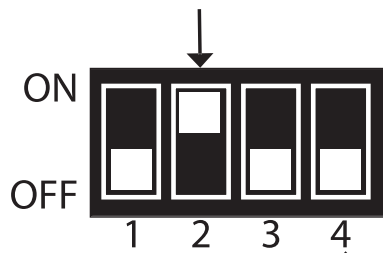
FORCING RGB COLORSPACE

Sometimes output video may have a pink or green tint. This is usually due to lack of colorspace support by an output device. All digital displays handle the standard RGB colorspace. DIP switch 2 can be set to force the output colorspace to RGB. If the input colorspace is YCbCr, the colorspace will be converted to RGB prior to output. The following table shows the DIP switch settings that are possible:

Switches [4:1] / Video	Audio
All Dip Sw. off (factory default)	EDID audio, video, and speaker configurations are identical to display's EDID.
Switch 1 on, 1080i native EDID	Audio format: LPCM, max number of channels: 8 Sampling rates 32, 44.1, and 48 KHz. 24, 20, and 16 bits/sample.
Switch 2 on, 1080i native EDID	Audio format: LPCM, 2 channels maximum. Sampling rates 32, 44.1, and 48 KHz. 24, 20, and 16 bits/sample.
Switch 3 on, 1080p native EDID	Audio format: none.
Switch 4 on, force RGB	EDID A/V follows display's EDID. Color space is forced to RGB on the output.

Resolution	Timing
640x480	60Hz
720x480i/p	59.94/60Hz
720x576i/p	50Hz
1280x720p	50Hz
1280x720p	59.94/60Hz
1920x1080i/p	50Hz
1920x1080i/p	59.94/60Hz

Setting DIP switch 2 to ON forces 1080i native EDID with 2-channel LPCM audio:



Setting DIP switch 4 to ON forces RGB Color Space regardless of the Display's EDID settings.

SPECIFICATIONS

Maximum Pixel Clock.....	165 MHz (HDMI and DVI)
HDMI Input Connector.....	(1) Type A 19 pin female
DVI Output Connector.....	(1) DVI-I 29 pin female
Audio Output Connector.....	(1) Optical (TOSLINK)
Power Supply.....	5V DC
Power Consumption.....	5W (max)
Dimensions.....	3.2"D x 3.4" W x 1"H
Shipping Weight.....	2 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, refer to the Warranty and Return Policy under the Support section of the Gefen Web site at 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.

* MA - HDMI - 2 - DVI AUD*

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This product uses UL listed power supplies.