HDMI™ to DVI AUDIO

EXT-HDMI-2-DVIAUD

User Manual

www.gefen.com

1080P PROGRESSIVE

HDMI HIGH DEFINITION MULTIMEDIA INTERFACE

HDTV

Blu-ray Disc™

ASKING FOR ASSISTANCE

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CONTENTS

1 Introduction

2 Operation Notes

3 Features / Package Includes

4 Panel Layout

5 Panel Descriptions

6 Connecting and Operating the HDMI to DVI Audio

7 EDID Guide

8 DIP Switch Guide

9 Specifications

10 Warranty

INTRODUCTION

Congratulations on your purchase of the HDMI to DVI Audio. 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

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.

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

The HDMI source device needs an EDID (display information) to operate correctly By default, the HDMI to DVI Audio 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 carries preset EDID' s that include audio f ags for use by the source device. For a listing of the EDID modes and how to utilize them, please see page 7.

FEATURES

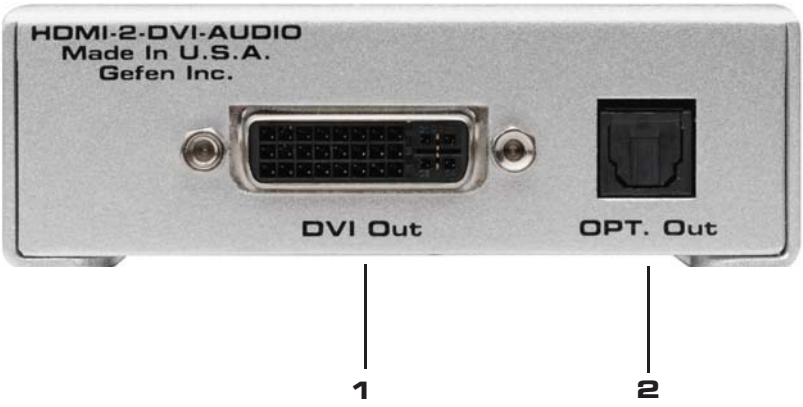
Features

- 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
- HDMI 1.2 compliant
- HDCP pass-through

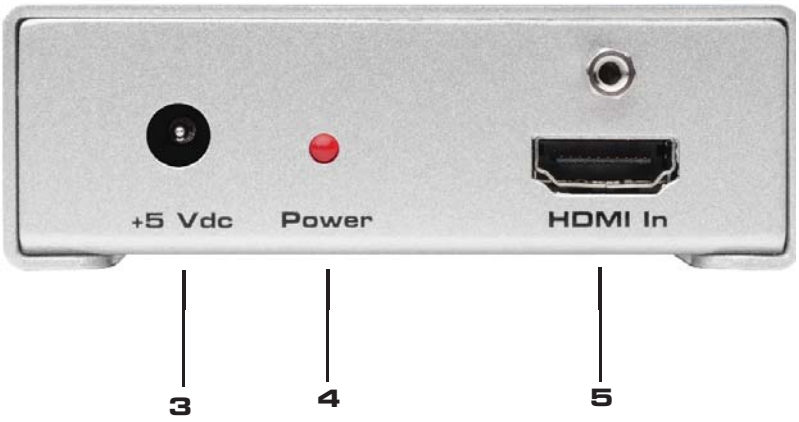
Package Includes

(1) HDMI to DVI Audio Adapter
(1) 5V Power Supply
(1) 6 ft HDMI Cable
(1) Users Manual

Front Panel



Back Panel



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

How to Connect the HDMI to DVI Audio

1. Connect the HDMI source device to the HDMI input on the HDMI to DVI Audio using the supplied HDMI cable.

2. Connect the DVI capable output device to the DVI output on the HDMI to DVI Audio using a user supplied DVI cable.

3. Connect a TOSLINK capable audio output device to the TOSLINK output on the HDMI to DVI Audio using a user supplied TOSLINK cable.

NOTE: By default, the HDMI to DVI Audio 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 carries preset EDID's that contain specif c audio f ags. To enable a preset EDID please see page ##. 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 and an open wall power socket.

How to Operate the HDMI to DVI Audio

No further conf guration is required to operate the HDMI to DVI Audio. 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 an only output one resolution for use by a connected device/display. EDID will also specify specif c audio capabilities as well, such as supported audio formats and speaker allocation.

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

The HDMI to DVIAudio 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?

The HDMI to DVI Audio 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.

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

There is an bank of 4 DIP switches located on the underside of the HDMI to DVI Audio. 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 it's 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 of f a grey silver sticker revealing the bank of 4 DIP switches. You are now ready to make adjustments. Please refer to the chart below.

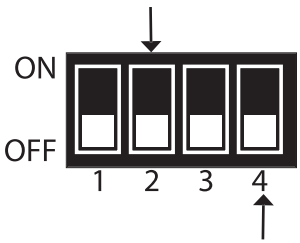
FORCING RGB COLORSPACE

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 RBG 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 conf gs 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, max no. channels: 2 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 8-channel LPCM audio (Max):



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.....5 Watts (max)

Dimensions.....3.2”D x 3.4” W x 1”H

Shipping Weight.....2 lbs.