

Gefen

1080P HDMI™ Scaler USER MANUAL



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ASKING FOR ASSISTANCE

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INTRODUCTION

Congratulations on your purchase of the 1080p HDMI Scaler. 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 1080p HDMI Scaler

The Gefen HDMI 1080p Scaler allows you to upscale your standard definition or high definition HDMI sources to resolutions up to 1080p. Anything from set-top boxes, DVD players to the next generation of gaming consoles including the Xbox 360 Elite and Playstation 3 can be plugged into the HDMI 1080p Scaler.

The HDMI 1080p Scaler supports HDMI or DVI sources with digital audio as well as HDMI or DVI Displays. You can input a DVI source with a separate digital audio signal and the HDMI 1080p Scaler will embed the digital audio into the HDMI output. Conversely, you can use an HDMI source with a DVI display and the HDMI 1080p Scaler will extract the audio for the digital audio out to be used on an external sound system and/or amplifier.

Easy to use on-screen menus accessible through the buttons on the unit or the IR remote control (sold separately) allow for effortless setup and image adjustment to accommodate different viewing modes and screen sizes.

How It Works

Connect your HDMI source to the HDMI 1080p Scaler with optional digital optical audio or analog stereo audio. Then, connect your display to the output port on the HDMI 1080p Scaler. Since the audio is cross converted from digital to analog or analog to digital, you can choose your desired audio output format and connector. Use the on-screen menu system, along with the front panel buttons, to adjust the video signal.

OPERATION NOTES

READ THESE NOTES BEFORE INSTALLING OR OPERATING THE 1080P HDMI SCALER

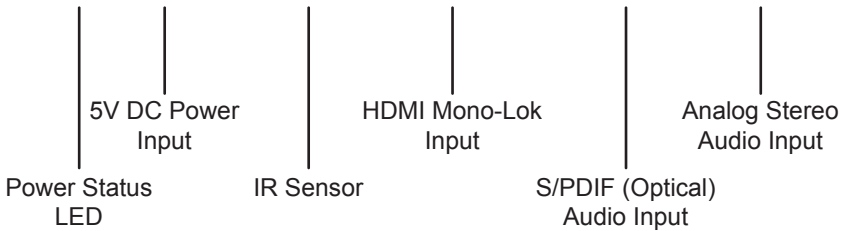
- The 1080p HDMI Scaler will cross convert between digital and analog audio formats (please see note 1 on page 5 for additional information).
- Compatible with all HDMI and DVI* displays.
- HDMI/HDCP compliant

*When used with a DVI to HDMI adapter

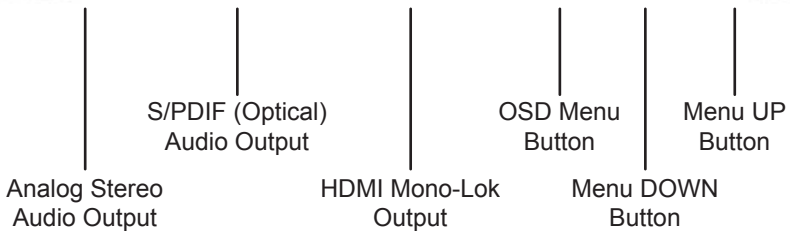


PANEL DESCRIPTIONS

Front Panel



Back Panel



FEATURES

Features

- Digital Input is format-converted and pixel re-scaled on the outputs
- Dual high-quality scaling engines
- Dual 3D motion video adaptive deinterlacers
- DVI/HDMI/HDCP compliant input; Operates up to 165 MHz (UXGA @ 60Hz)
- Automatic 3:2 pull-down & 2:2 pull-down detection and recovery
- High-performance framerate conversion engine
- Proprietary Advanced Color Engine technology gives: Brilliant and fresh color, intensified contrast and details, vivid skin tones, sharp edges, and accurate & independent color control.
- Option to select between HDMI or TOSLink/SPDIF for audio source
- Operates via on-screen menu display (OSD) w/IR remote control
- Supports digital HD output resolutions up to 1080p
- Digital audio delay to match audio/video timing
- Less than one frame delay allowing for gaming
- Aspect ratio control

Package Includes

- (1) 1080p HDMI Scaler
- (1) 5V DC Power Supply
- (1) 6 foot HDMI (M-M) cable
- (1) User Manual

CONNECTING AND OPERATING THE 1080P HDMI SCALER

How to Connect the 1080p HDMI Scaler

1. Connect the HDMI source to the 1080p HDMI Scaler using the supplied HDMI cable.
2. Connect an optional external audio source to either the TOSLINK digital audio input or the stereo mini-jack input using user supplied cables.

NOTE¹: The 1080p HDMI Scaler will cross convert between some digital and audio formats. All audio outputs (HDMI, digital TOSLINK, and analog stereo mini-jack) will be active. The 1080p HDMI Scaler will not, however, down-mix multi-channel audio formats to 2 channel analog stereo. Please see the chart below to see if audio will be heard out of a particular output based on the audio input format.

INPUT ►	HDMI MULTICHANNEL LPCM	HDMI 2 CHANNEL LPCM	HDMI DOLBY DIGITAL & DTS	TOSLINK 2 CHANNEL LPCM	TOSLINK DOLBY DIGITAL & DTS	ANALOG STEREO 2 CHANNEL
OUTPUT ▼						
HDMI	YES *2 CHANNEL	YES	YES	YES	YES	YES
TOSLINK	YES *2 CHANNEL	YES	YES	YES	YES	YES
ANALOG STEREO MINI-JACK	NO	YES	NO	YES	NO	YES

*2 channels are the front right and front left speakers. It will not down-mix multi-channel to 2 channel audio

3. Connect the HDMI output on the 1080p HDMI Scaler to the display using the supplied HDMI cable.
4. Connect either the TOSLINK digital audio output or the stereo mini-jack analog output to the display or external audio processor using user supplied cables.
5. Plug the 5V DC power supply into the 1080p HDMI Scaler.
6. Power on the display first, then the source.

OPERATING THE 1080P HDMI SCALER

The 1080p HDMI Scaler has a built in GUI for navigating the various functions. The GUI is navigated by the front panel buttons or the optional RMT-SR-IR remote control (sold separately).

1080P HDMI SCALER CONFIGURATION

Entering the Menu System

Pressing the Menu button on the front panel will display the GUI (graphical user interface) for adjustment options.

The GUI is overlaid onto the outgoing video to the display. Therefore, the source must be outputting a compatible resolution for viewing on the display. If video is not visible on the display, the GUI will also fail to be displayed. To correct this, please reset the unit by following the steps below follow the steps below.

Reset

1. Verify that the source is on and outputting a video signal.
2. Verify that the display is connected and powered on.
3. Press and hold the menu button, located on the front panel.
4. While holding the menu button, remove the power supply connector from the unit and wait 5 seconds.
5. While continuing to hold the menu button, re-insert the power supply into the unit and then release the menu button.

This will reset the unit and allow it to detect the display's native resolution based on its EDID. If an image is still not being displayed, it is possible that either the display's EDID is corrupt or the 1080p HDMI Scaler cannot output the display's native resolution. Please call Gefen's technical support line.

Navigation

Navigation of the GUI is accomplished using the front panel buttons. Please see the chart below for the functions of each panel button.

Button	Function
MENU	Shows the On Screen Menu and acts as the confirmation button in all menus. Cycles through menu options that have multiple choices.
+	Moves menu cursor DOWN the menu / Increases adjustment values
-	Moves menu cursor UP the menu / Decreases adjustment values

MAIN MENU

The following are the main menu options. Use the - and + buttons to choose your desired subcategory and press Menu to enter it.

VIDEO
COLOR
OUTPUT
OSD
AUDIO
INFORMATION

1080P HDMI SCALER CONFIGURATION

VIDEO

Picture Mode

Preset and user configurable settings for different viewing scenarios. Preset settings will not allow user adjustment. Only the USER option will allow customized video settings. The USER settings are saved.

Options:

- Standard - useful for general content
- Movie - useful for dimly lit environments
- Vivid - useful for accentuating colors for a more vibrant image
- User - user configurable settings

Contrast

Adjusts the contrast in increments of 1 on a scale of 1 to 100 (default 50).

Brightness

Adjusts the brightness in increments of 1 on a scale of 1 to 100 (default 50).

Hue

Adjusts the hue in increments of 1 on a scale of 1 to 100 (default 50).

Saturation

Adjusts the saturation in increments of 1 on a scale of 1 to 100 (default 50).

Sharpness

Adjusts the sharpness in increments of 1 on a scale of 1 to 100 (default 50).

Scale

Adjusts the aspect ratio of the video.

Options:

4:3 Source

16:9 Source



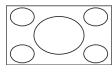
Full - Stretches the image to fill the screen



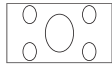
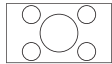
Overscan - Stretches the image to fullscreen and just beyond the border of the display



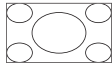
Underscan - Stretches the image to fullscreen and just within the border of the screen



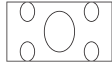
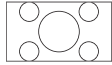
Letterbox Underscan - Stretches the image to 16:9 aspect ratio with underscan



Pan Scan Underscan - Stretches the image to 4:3 aspect ratio with underscan



Letterbox Full - Stretches the image to 16:9 aspect ratio without underscan



Pan Scan Full - Stretches the image to 4:3 aspect ratio without underscan

1080P HDMI SCALER CONFIGURATION

NR (Noise Reduction)

NR is not used for digital HDMI video.

COLOR

Color Tone

Sets the color for the appearance of white. Only the USER option will allow customized settings. The USER settings are saved.

Options:

- Normal - Normal white color appearance (default)
- Warm - Slight red shift to white appearance
- Cool - Slight blue shift to white appearance
- User - User adjustments to Red, Green, and Blue

Red

Adjusts the red color in regards to the appearance of white for the USER setting.

Option:

Adjusts in increments of 1 from 1 to 100 (default is 50)

Green

Adjusts the green color in regards to the appearance of white for the USER setting.

Option:

Adjusts in increments of 1 from 1 to 100 (default is 50)

Blue

Adjusts the blue color in regards to the appearance of white for the USER setting.

Option:

Adjusts in increments of 1 from 1 to 100 (default is 50)

OUTPUT

This menu sets the output resolution for all video sources. The OUTPUT button on the RMT-SR-IR remote control cycles through these resolutions when pressed.

VGA	480i	576i	WXGA
SVGA	480p	576p	WSXGA
XGA	720p 60	720p 50	WUXGA
SXGA	1080i 60	1080i 50	Native
UXGA	1080p 60	1080p 50	

Native

This option will select the native resolution of the connected display based on the EDID from the display.

NOTE: If a resolution that is not supported by the display is selected, the menu GUI will not longer be visible. To correct this, please reset the unit using the instructions on page 6

1080P HDMI SCALER CONFIGURATION

OSD (ON SCREEN DISPLAY)

H-Pos (Horizontal Position)

Adjusts the OSD's horizontal position on the screen.

Options:

- Adjusts in increments of 1 on a scale of 1 to 100 (default is 50)

V-Pos (Vertical Position)

Adjusts the OSD's vertical position on the screen.

Options:

- Adjusts in increments of 1 on a scale of 1 to 100 (default is 50)

Time Out

Adjusts the amount of idle time before the OSD is automatically exited.

Options:

- Adjusts in increments of 1 on a scale of 1 to 100 (default is 10)

Background

Sets the transparency level of the OSD background.

Options:

- Adjusts in increments of ~12.5 on a scale of 1 to 100 (default is 50)

Remote Channel

Sets the remote channel for use with the optional RMT-SR-IR remote control. If the selected channel in this menu and does not match the channel set in the RMT-SR-IR remote, the unit will cease to respond to IR commands from the remote.

Options:

- Selectable remote channel from 1 to 4 (default is 1)

AUDIO

Source

Sets the audio source.

Options for HDMI:

- HDMI - HDMI internal audio (default)
- Optical - Optical input
- Earphone - Analog audio input

Delay

Sets the audio delay for lip syncing correction.

Options:

- Off - No delay (default)
- 40ms - 40 millisecond audio offset
- 110ms - 110 millisecond audio offset
- 150ms - 150 millisecond audio offset

1080P HDMI SCALER CONFIGURATION

Sound

Select general audio output function

Options:

- On - Use selected audio source (default)
- Mute - No sound output

INFORMATION

This menu will allow the user to view general information. There are no configurable options in this menu.

- Source - Displays current source
- Input - Displays current input source resolution
- Output - Displays current output resolution
- Version - Displays current firmware revision

SPECIFICATIONS

Digital Video Amplifier Bandwidth	165 MHz
Input DDC Signal	5 Volts p-p (TTL)
Input Video Signal	1.2 Volts p-p
Single Link Range	1080p/1920x1200
Input/Output HDMI Connectors	Type A, 19-pin Female
Digital Audio Connector	Optical TOSLink + Coaxial S/PDIF
Power Supply	5V DC
Power Consumption	20 Watts (max)
Dimensions	4"W x 1.1"H x 5.75"D
Shipping Weight	4 lbs.