

# ***HDMI to HDMI Scaler Box***

***Operation Manual***



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## **1. Introduction**

This is a compact yet versatile HDMI to HDMI Scaler Box. It accepts HDMI input with a separate Toslink or analog audio and scale it to HDMI output (at a number of selectable resolutions) with additional Toslink and analog audio output.

This Scaler Box has a comprehensive OSD menu that allows user to select a variety of output resolutions and adjust for best picture quality.

It is ideal for using between incompatible HDMI source and display by changing picture resolution and frame rate of HDMI source to match the native resolution of the HDMI display.

## **2. Features**

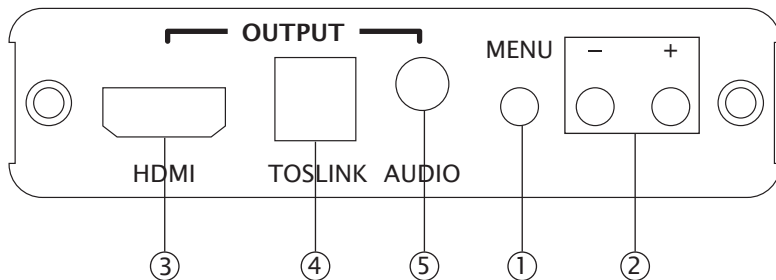
1. HDMI 1.2, HDCP 1.1 and DVI 1.0 compliant.
2. Scales any PC (VGA ~ WUXGA) /HD (480i ~ 1080p) resolutions to/from another PC/HD resolutions.
3. Automatically detect the factory setting of the connected display and output the corresponding resolution and refresh rate, when the NATIVE output is selected.
4. Supports 50/60Hz frame rate conversion.
5. Supports 3-D motion video adaptive, 3-D de-interlacing, and 3:2 / 2:2 pull-down detection and recovery.
6. Provides output picture adjustment on contrast, brightness, hue, saturation, sharpness, RGB level, and scan size.
7. Supports high resolution input/output:  
PC: VGA, SVGA, XGA, SXGA, UXGA, WXGA, WSXGA, WUXGA  
HDTV: 480i, 576i, 480p, 576p, 720p, 1080i, and 1080p
8. Supports digital and analog audio input and output.

## **3. Package Contents**

1. HDMI to HDMI Scaler Box
2. 5VDC Power Supply Adaptor
3. Operation Manual

## 4. Operation Controls and Functions

### 4.1. Front Panel



#### 1. MENU Button:

- Press the MENU button to bring up OSD operation menu (see section "4.3 OSD Operation" for reference.)
- When in the OSD menu mode, use MENU button as an OK key to confirm the selection.

#### 2. +/- Buttons:

- On the first tier of OSD menu, use + and - buttons to scroll up/down the highlight bar for selection.
- Once the desired option is selected, use + and - buttons to toggle between setting values.

#### 3. HDMI OUTPUT:

Connect the HDMI output port to the HDMI input port of your display.

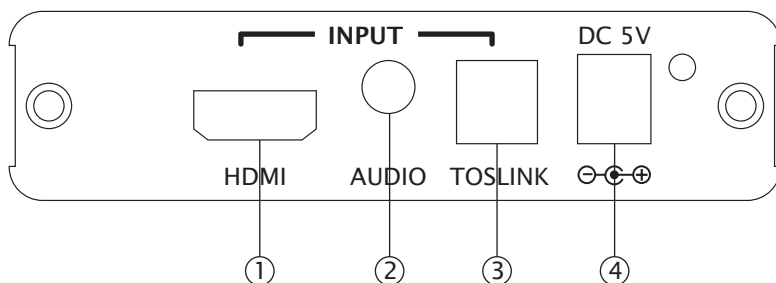
#### 4. TOSLINK OUTPUT:

Connect the digital audio output port to the input port of your digital audio equipment such as amplifier, or receiver, using Optical Fiber cable.

#### 5. AUDIO OUTPUT:

Connect the analog audio output port to the input port of your analog audio equipment such as speakers.

## 4.2. Rear Panel



### 1. HDMI INPUT:

Connect the HDMI input port to the HDMI output port of your source equipment such as DVD player or Set-Top-Box.

### 2. AUDIO INPUT:

Connect the analog audio input port to the output port of your source equipment such as DVD player or Set-Top-Box.

### 3. TOSLINK INPUT:

Connect the digital audio input port to the Toslink output port of your source equipment such as DVD player or Set-Top-Box.

### 4. Power Supply:

Plug the 5VDC power supply into the unit and connect the adaptor to AC wall outlet.

### 4.3 OSD Operation

| 1 <sup>st</sup> Tier Option | 2 <sup>nd</sup> Tier Option | Adjustment                                                                                                                                                                               |
|-----------------------------|-----------------------------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| CONTRAST                    | -                           | 0 ~ 100 of Contrast Level                                                                                                                                                                |
| BRIGHTNESS                  | -                           | 0 ~ 100 of Brightness Level                                                                                                                                                              |
| FINETUNE                    | - HUE                       | 0 ~ 100 of Hue Level                                                                                                                                                                     |
|                             | - SATURATION                | 0 ~ 100 of Saturation Level                                                                                                                                                              |
|                             | - SHARPNESS                 | 0 ~ 100 of Sharpness Level                                                                                                                                                               |
|                             | - EXIT                      | Back to 1 <sup>st</sup> Tier                                                                                                                                                             |
| COLOR                       | - RED                       | 0 ~ 100 of Red Color Level                                                                                                                                                               |
|                             | - GREEN                     | 0 ~ 100 of Green Color Level                                                                                                                                                             |
|                             | - BLUE                      | 0 ~ 100 of Blue Color Level                                                                                                                                                              |
|                             | - EXIT                      | Back to 1 <sup>st</sup> Tier                                                                                                                                                             |
| SIZE                        | -                           | FULL / OVERSCAN / UNDERSCAN                                                                                                                                                              |
| OUTPUT                      | -                           | NATIVE / VGA / SVGA / XGA /<br>SXGA / UXGA / 480i / 480p /<br>720p@60Hz / 1080i@60Hz /<br>1080p@60Hz / 576i / 576p /<br>720p@50Hz / 1080i@50Hz /<br>1080p@50Hz / WXGA / WSXGA /<br>WUXGA |
| AUDIO                       | -                           | HDMI / EAR PHONE / OPTICAL                                                                                                                                                               |
| OSD                         | - HPOSITION                 | 0 ~ 100 of OSD Horizontal Position                                                                                                                                                       |
|                             | - VPOSITION                 | 0 ~ 100 of OSD Vertical Position                                                                                                                                                         |
|                             | - TIMER                     | 0 ~ 100 of OSD Existing Time (sec.)                                                                                                                                                      |
|                             | - TRANSP                    | 0 ~ 100 of OSD Transparent Level                                                                                                                                                         |
|                             | - EXIT                      | Back to 1 <sup>st</sup> Tier                                                                                                                                                             |
| INFORMATION                 | -                           | SOURCE (Input Interface)<br>INPUT (Input Resolution)<br>OUTPUT (Output Resolution)<br>VERSION (Firmware Version)                                                                         |
| EXIT                        | -                           | Close OSD Menu                                                                                                                                                                           |

## 5. Reset Functionality

To reset the unit, press and hold the MENU button then re-plug the DC power into the unit to set the unit back to factory default, with output resolution as NATIVE. This feature is also useful when the output is scaled to a resolution not supported by the connected TV/monitor so no picture is shown, because the NATIVE resolution can guarantee the proper (might not be the best) output.

6. Specifications

6.1. General Specification

- \* Frequency bandwidth: 1.65Gbps (single link)
- \* Input Ports:  
HDMI x 1 / Toslink x 1 / 3.5mm Phone Jack x 1
- \* Output Ports:  
HDMI x 1 / Toslink x 1 / 3.5mm Phone Jack x 1
- \* 5V/2.6A DC power supply
- \* Dimensions: 102(W) x 145(D) x 25(H)mm
- \* Weight: 1Kgs

6.2. Support Resolution

| INPUT  |                                                                                                                                                |
|--------|------------------------------------------------------------------------------------------------------------------------------------------------|
| PC     | VGA@(60/72/75/85Hz),<br>SVGA@(56/60/72/75/85Hz),<br>XGA@(60/70/75/85Hz),<br>SXGA@(60/75/85Hz), UXGA@60Hz,<br>WXGA@60Hz, WSXGA@60Hz, WUXGA@60Hz |
| TV     | 480i, 480p, 576i, 576p, 720p@(50/60Hz),<br>1080i@(25/30Hz), 1080p@(50/60Hz)                                                                    |
| OUTPUT |                                                                                                                                                |
| PC     | VGA@(60/72/75/85Hz),<br>SVGA@(56/60/72/75/85Hz),<br>XGA@(60/70/75/85Hz),<br>SXGA@(60/75/85Hz), UXGA@60Hz,<br>WXGA@60Hz, WSXGA@60Hz, WUXGA@60Hz |
| TV     | 480i, 480p, 576i, 576p, 720p@(50/60Hz),<br>1080i@(25/30Hz), 1080p@(50/60Hz)                                                                    |

7. Connection and Installation



## Cypress Scaler Box Series:

| Product   | INPUT                                     | OUTPUT               | Highest Resolution |
|-----------|-------------------------------------------|----------------------|--------------------|
| CP-259H   | HDMI                                      | HDMI                 | 1080p              |
| CP-255I   | Video/S-Video/<br>PC/YPbPr/YCbCr/<br>HDMI | HDMI                 | 1080p              |
| CP-255H   | YPbPr/YCbCr/PC/<br>DVI-D/HDMI             | DVI-D<br>HDMI        | 1080p              |
| CP-255D   | YPbPr/YCbCr/PC/<br>DVI-D                  | PC<br>DVI-D          | 1080p              |
| CM-394    | Video/S-Video/<br>SCART                   | YPbPr/HDTV<br>RGB/PC | 1080i              |
| CM-393S   | Video/S-Video/<br>SCART/HDMI              | HDMI                 | 1080i              |
| CM-392    | Video/S-Video                             | HDMI                 | 1080i              |
| CM-391    | Video/S-Video                             | DVI                  | 1080i              |
| CM-390    | Video/S-Video                             | YPbPr/HDTV<br>RGB/PC | 1080i              |
| CSC-220   | YPbPr/YCbCr/PC/<br>DVI-D                  | PC<br>DVI-D          | 1080i              |
| CS-720PHD | SCART                                     | HDMI                 | 720p (fixed)       |
| CV-720PHD | Video/S-Video                             | HDMI                 | 720p (fixed)       |
| CP-254    | DVI                                       | DVI                  | 1080i              |
| CP-253    | DVI                                       | YPbPr/HDTV<br>RGB/PC | 1080i              |
| CP-252    | YPbPr/HDTV<br>RGB/PC                      | DVI                  | 1080i              |
| CP-251F   | YPbPr/HDTV<br>RGB/PC                      | YPbPr/HDTV<br>RGB/PC | 1080i              |



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