CSC-6011

4K UHD PC/HD & HDMI to HDMI Scaler

HDMI®
HIGH-DEFINITION MULTIMEDIA INTERFACE

4kx2k⁺

HDCP 2.2

Operation Manual

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SAFETY PRECAUTIONS

Please read all instructions before attempting to unpack, install or operate this equipment and before connecting the power supply.

Please keep the following in mind as you unpack and install this equipment:

- Always follow basic safety precautions to reduce the risk of fire, electrical shock and injury to persons.
- To prevent fire or shock hazard, do not expose the unit to rain, moisture or install this product near water.
- Never spill liquid of any kind on or into this product.
- Never push an object of any kind into this product through any openings or empty slots in the unit, as you may damage parts inside the unit.
- Do not attach the power supply cabling to building surfaces.
- Use only the supplied power supply unit (PSU). Do not use the PSU if it is damaged.
- Do not allow anything to rest on the power cabling or allow any weight to be placed upon it or any person walk on it.
- To protect the unit from overheating, do not block any vents or openings in the unit housing that provide ventilation and allow for sufficient space for air to circulate around the unit.

REVISION HISTORY

VERSION NO.	DATE (DD/MM/YY)	SUMMARY OF CHANGE
RDV1	04/07/16	Preliminary Release

CONTENTS

1. INTRODUCTION

This is a compact yet versatile PC/HD and HDMI to HDMI Scaler Box. It accept a wide-range of PC/HD resolution up to 1080p/WUXGA and 4K2K UHD 6G HDMI signal and scale it to selectable resolution up to 4K2K with both digital and analog audio outputs simultaneously. This device has a comprehensive OSD menu that allows user with easy setting and hot key design for fast timing switching. An ideal device between incompatible PC/HD and HDMI source to display.

2. APPLICATIONS

• PC/HD contents on to HDMI display

• Household PC/HDMI signal enlargement onto HDMI TV/display with audio

• Lecture room/Showroom/Meeting room or Classroom signal display

3. PACKAGE CONTENTS

• 1 x PC/HD and HDMI to HDMI Scaler Box

• 1 x 5V/2.6A DC Power Adaptor

• 1 x Operation Manual

4. SYSTEM REQUIREMENTS

Input HDMI source signal such as PC/Laptop, DVD player, Blu-ray player and …etc. with output HDMI display and connection cables.

5. FEATURES

- HDMI with 4Kx2K 6G supported, HDCP2.2 and DVI compliant
- Supports full range of PC resolution from VGA~WUXGA and HDMI resolution from 480i~4K2K_YUV444
- Supports 50/60 frame rate conversion
- Supports 3-D motion video adaptive, 3-D de-interlacing and 3:2/2:2 pull-down detection and recovery
- Automatically detect the factory setting of the connected display and output the corresponding resolution and refresh rate, when the NATIVE output is selected
- Provides scaling output picture adjustment on contrast, brightness, hue, saturation, sharpness, RGB (color tone) level and aspect ratio size
- Supports stereo LPCM analog/digital audio input and stereo LPCM analog/digital output by selecting among the audio input sources in the OSD menu and simultaneously output to HDMI, Optical and phone jack
- Supports USB firmware update

Note: *When displaying HDMI 4Kx2K signal, equivalent source signal, output display and HDMI cables are required in order to secure the best image display.*

6. OPERATION CONTROLS AND FUNCTIONS

6.1 Front Panel
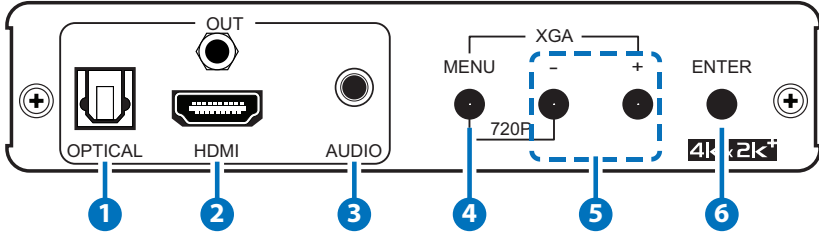
① OPTICAL OUT: Connect to amplifier or active speaker with optical cable for audio output. LPCM format support 2CH only.

② HDMI OUT: Connect to HDMI TV/monitor for output image display or with AV receiver for audio output.

③ AUDIO OUT: Connect to an amplifier or active speaker with 3.5mm phone jack for audio output. Supports LPMC 2CH only, bitstream format will be muted.

④ MENU: Press this button to enter into the OSD menu and press it again to enter into the selection.

⑤ -/+ Buttons: Press these buttons to

   i. Press "-" to adjust output L/R audio volume

   ii. Press "+" to Auto Adjust PC input signal

   iii. Press "-" together with "MENU" to switch output resolution to 720P@60 instantly

   iv. Press "+" together with "MENU" to switch output resolution to XGA@60 instantly

   v. Press both "+" together with "-" and "ENTER" to set the device back to factory reset setting

      Under OSD selection:

   vi. Move up/down the OSD selection

   vii.To adjust the value

⑥ ENTER: Press this button to switch input between PC/HDMI or when under OSD selection press to confirm the selection.

6.2 Rear Panel
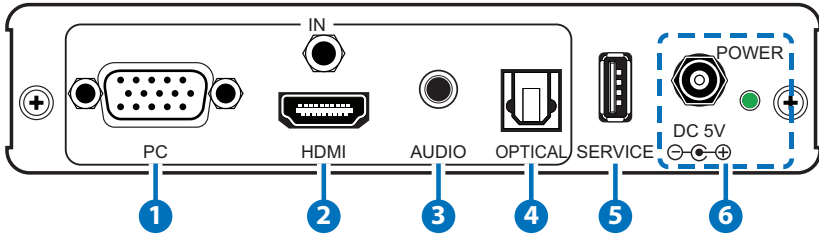
1 **PC IN:** Connect from source equipment such as PC/Laptop with D-Sub 15-pin cable or DVD player with D-Sub to RCA adaptor.

2 **HDMI IN:** Connect from the audio source equipment such as DVD/Blu-ray player or DVI source equipment with DVI to HDMI adaptor.

3 **AUDIO IN:** Connect from the audio source equipment such as PC/Laptop with 3.5mm phone jack for analog audio signal input.

4 **OPTICAL IN:** Connect from audio source equipment such as DVD/Blu-ray player with optical cable for digital audio signal input.

5 **SERVICE:** This is reserved for firmware update use only.

6 **DC 5V/ POWER LED:** Connect the adapter included in the package and connect to AC wall outlet for power supply. The LED will illuminate when the device is connected to an active power supply.

6.3 OSD Menu

PICTURE	CONTRAST	0~100 (50)
	BRIGHTNESS	0~100 (50)
	EXIT	
FINETUNE HDMI/YPbPr	HUE	0~100 (50)
	SATURATION	0~100 (50)
	SHARPNESS	0~100 (50)
	NR	**OFF**/LOW/MIDDLE/HIGH
	EXIT	
FINETUNE PC	PHASE	0~100
	CLOCK	0~100
	H – POSITION	0~100
	V – POSITION	0~100
	EXIT	
COLOR	RED	0~100 (50)
	GREEN	0~100 (50)
	BLUE	0~100 (50)
	EXIT	
OUTPUT	SOURCE	PC/YPbPr, **HDMI**
	RESOLUTION	**NATIVE**, 640x480/60, 800x600/60, 1024x768/60, 1280x768/60, 1360x768/60, 1280x800/60, 1280x1024/60, 1440x900/60, 1400x1050/60, 1680x1050/60, 1600x1200/60, 1920x1200/60RB, 480P60, 576P50, 720P50, 720P60, 1080P50, 1080P60, 4K2K/24, 4K2K/25, 4K2K/30 4K2K/50, 4K2K/60, 4K2K/50 420, 4K2K/60 420
	4K2K MODE	**4K2K 3840**/4K2K 4096

OUTPUT	SIZE	FULL/OVER SCAN/UNDER SCAN/LETTER BOX/PAN SCAN/**BEST FIT**
	EXIT	
AUDIO	HDMI INPUT	**AUTOMATIC**/EMBEDDED/ANALOG/OPTICAL
	PC INPUT	**ANALOG**/OPTICAL
	VOLUME (L/R OUT)	0~**100**(VOL 100->2Vrms Analog Out L/R)
	EXIT	
OSD	TIMER	OFF, 5~100 (10)
	DISPLAY	**INFO**/ON/OFF
	EXIT	
EDID MANAGE (HDMI Only)	EDID COPY	**DEF. 1080P**/ DEF. 4K2K(6G)/ DEF. 4K2K(420)/ DEF. 4K2K(3G)/ OUTPUT
	EXIT	
ADVANCED	AUTO SYNC OFF	**OFF**/FAST(≈10 sec.)/ SLOW(≈120 sec.)
	AUTO INPUT	OFF/ **AUTO SWITCH**
	HDCP ON INPUT	OFF/**ON** (HDMI Only)
	AUTO ADJUST	**OFF**/ON (PC Only)
	EXIT	
FACTORY	RESET	**NO**/YES
	EXIT	

Default settings are in **Bold** or () print. ***Scaling 4K2K resolution with the same frame rate the OSD selection in italic font will be muted.***

7. CONNECTION DIAGRAM

PC

DVD

HDMI Cable   Optical Cable

L/R Audio Cable

D-Sub

PC/HD & HDMI to
HDMI Scaler Box

Optical Cable   L/R Audio Cable

HDMI Cable

Active Speakers   HDMI TV   Amplifier
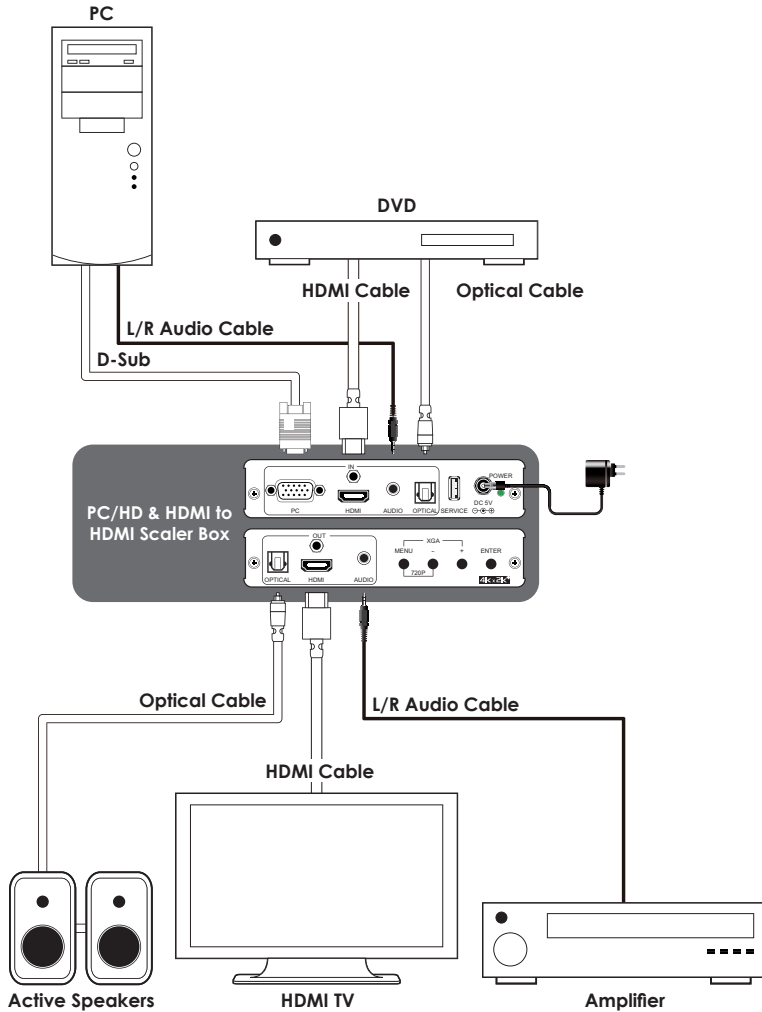
8. SPECIFICATIONS

8.1 Technical Specification

Video Bandwidth	600MHz/18Gbps
Input Ports	1 x HDMI 1 x D-Sub 15-pin, 1 x Optical, 1 x 3.5mm Phone Jack, 1 x USB(Service)
Output Ports	1 x HDMI, 1 x Optical, 1 x 3.5mm Phone Jack
Supported Resolutions	VGA~WUXGA@60, 480i~1080p@24/50/60 4K2K@24/25/30/50/60(YUV444)
HDMI Cable Distance	5m@4K2K/60_YUV444 10m@1080p/12-bit 10m@1080p/8-bit
Power Supply	5VDC/2.6A (US/EU standards, CE/FCC/ UL certified)
ESD Protection	Human Body model: ± 8kV (air-gap discharge) ± 4kV (contact discharge)
Chassis Material	Aluminum
Silkscreen color	Black
Dimensions	145mm (W) x 192mm (D) x 30mm (H) (Jacks excluded) 145mm (W) x 201.2mm (D) x 30mm (H) (Jacks included)
Weight	578g
Operating Temperature	0˚C~40˚C/32˚F~104˚F
Storage temperature	-20˚C~60˚C/-4˚F~140˚F
Relative Humidity	20~90% RH (no condensation)
Power Consumption	8.47W

Note: *HDMI cable distance might affected by material or design of cable. It is suggested to use Premium High Speed HDMI cable for 6G HDMI signal.*

8.2 Audio Specification Chart

Input Level/Freq.	Output Terminal	Output Level	THD+N	Frequency Response	SNR	Crosstalk
Digital 0dB/1kHz	Digital	0dB ~ -1db	<0.01%	±1dB	>80dB	<-80dB
Analog 1Vrms/1kHz	Digital	0dB ~ -1.5db	<0.1%	±3dB	>70dB	<-60dB
Digital 0dB/1kHz	Analog	0.5Vrms ±10%	<0.1%	±3dB	>80dB	<-60dB
Analog 1Vrms/1kHz	Analog	0.5Vrms ±10%	<0.1%	±3dB	>70dB	<-60dB

8.3 Supported Resolutions

	INPUT		OUTPUT	
	PC	HD	PC	HD
640x480@60/72/75/85	✓		✓@60	
800x600@56/60/72/75/85	✓		✓@60	
1024x768@60/70/75/85	✓		✓@60	
1280x1024@60/75/85	✓		✓@60	
1360x768@60	✓		✓	
1280x800@60	✓		✓	
1280x1024@60	✓		✓	
1440x900@60	✓		✓	
1400x1050@60	✓		✓	
1600x1200@60	✓		✓	
1680x1050@50/60	✓		✓@60	
1920x1200@60	✓		✓	

	INPUT		OUTPUT	
	PC	HD	PC	HD
480i/576i		✓		
480p/576p		✓		✓
720p@50/60		✓		✓
1080i@50/60		✓		✓ @50/60 Only
1080p@24/50/60		✓		✓
3840x2160@24/25/30/50/60		✓		✓
4096x2160@24/25/30/50/60		✓		✓

Input	Output	ByPass Mode	Scaler Mode
Any Timing	640x480/60	X	✓
Any Timing	800x600/60	X	✓
Any Timing	1024x768/60	X	✓
Any Timing	1280x768/60	X	✓
Any Timing	1360x768/60	X	✓
Any Timing	1280x800/60	X	✓
Any Timing	1280x1024/60	X	✓
Any Timing	1440x900/60	X	✓
Any Timing	1400x1050/60	X	✓
Any Timing	1680x1050/60	X	✓
Any Timing	1600x1200/60	X	✓
Any Timing	1920x1200/60RB	X	✓
Any Timing	480P60	X	✓
Any Timing	576P50	X	✓
Any Timing	720P50	X	✓

Any Timing	720P60	X	✓
Any Timing	1080P50	X	✓
Any Timing	1080P60	X	✓
Not 4K2K/24	4K2K/24	X	✓
Not 4K2K/25	4K2K/25	X	✓
Not 4K2K/30	4K2K/30	X	✓
Not 4K2K/50	4K2K/50	X	✓
Not 4K2K/60	4K2K/60	X	✓
Not 4K2K/50	4K2K/50 420	X	✓
Not 4K2K/60	4K2K/60 420	X	✓
4K2K/24	4K2K/24	✓	X
4K2K/25	4K2K/25	✓	X
4K2K/30	4K2K/30	✓	X
4K2K/50	4K2K/50	✓	X
4K2K/60	4K2K/60	✓	X
4K2K/50	4K2K/50 420	✓	X
4K2K/60	4K2K/60 420	✓	X

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