



CDPS-US100R

Ultra HD Scaler



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	29/10/13	Preliminary Release
RDV2	03/09/14	Add Connection Diagram



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1. INTRODUCTION

The UHD Scaler is designed to extend and upscale HDMI signal on to two HDMI output displays and one analog audio simultaneously. It supports 4Kx2K, 3D, 36-bit Deep Color, Hi-Def. lossless audio and other features defined by the latest HDMI specifications. Allowing uncompressed video and audio, as well as bi-directional IR control, RS-232 pass through, and LAN serving from a single CAT5e/6/7 cable over 100m of distance. The management of source/sink scenarios can be operated easily through on-panel buttons, OSD, IR remote control, RS-232 and WebGUI control.

2. APPLICATIONS

- Extending incoming signal through CAT5e/6/7 to HDMI outputs
- Scale up HDMI input low resolution video on High-Definition display
- Scale down HD signal down monitor
- Lecture room/showroom/Meeting room/Classroom display and control
- Public Commercial Display extension

3. PACKAGE CONTENTS

- 1 x Ultra HD Scaler
- 2 x Terminal Block Jacks
- 1 x Remote Control with Battery
- 1 x IR Receiver Cable
- 1 x IR Blaster Cable
- 1 x 24V/2.6A DC Power Adaptor
- Operation Manual

4. SYSTEM REQUIREMENTS

HDBaseT compatible Transmitter input and PS3/Blu-ray player and output HDMI TV/Display with connection cables.



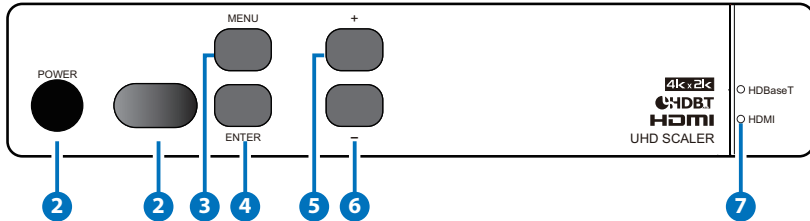
5. FEATURES

- HDMI with 3D supported, and HDCP compliant
- Supports HDTV resolutions up to 4Kx2K (3840x2160@24/25/30, & 4096x2160@24)
- Supports scale down HD resolution on to monitor/display
- Supports data rate from 300Mbps to 3Gbps and Deep Color up to 1080p 36-bit
- Supports simultaneous HDMI outputs with different resolution setting
- Supports LPCM 2/5.1/7.1CH, Dolby Digital 2~5.1CH, DTS 2~5.1CH, Dolby TrueHD and DTS-HD Master Audio (Pass through)
- Extend HDMI, IR, RS-232 signal up to 100m through CAT5e/6/7 cable
- Supports Balanced audio and bi-directional IR control
- Supports Ethernet transmission rate up to 100Mbps
- Supports OSD, on-panel, Remote, RS-232 and WebGUI control

Note: This system was tested with CAT6/23AWG cable, result may vary with cable of a different specification.

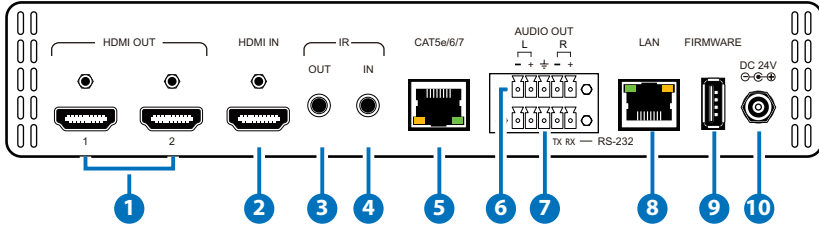
6. OPERATION CONTROLS AND FUNCTIONS

6.1 Front Panel



- 1 POWER & LED:** Press this button to turn ON the device or set the device to standby mode. The LED will illuminate in green when switch to ON. This device contains power last memory and therefore, when the power is connected the device will switch to ON/Standby according to the last status.
- 2 IR Window:** This IR Receiver receives the remote control signal from the packaged included remote control only with IR frequency at 38kHz.
- 3 MENU:** Press this button to enter into OSD menu.
- 4 ENTER:** Press this button to select an OSD selection and press it again to confirm.
- 5 +/-:** Press these buttons to move up/down in the OSD selection.

6.2 Rear Panel



- 1 **HDMI OUT:** Connect to HDMI TV/display or HD Amplifier for output image and or audio display.
- 2 **HDMI IN:** Connect from source equipment such as Blu-ray/DVD/ PS3 players, Set-Top-Box or any HDMI equipped source device for input signal sending.
- 3 **IR OUT:** Connect to the supplied IR Blaster cable for IR signal transmission. Place the IR Blaster in direct line-of-sight of the equipment to be controlled.
- 4 **IR IN:** Connect the supplied IR Receiver cable for IR signal reception. Ensure that remote being used is within the direct line-of-sight of the IR Extender.
Note: Both IR IN and IR OUT signal are sending through CAT5e/6/7 cable and therefore, it does not accept the remote signal included in this package.
- 5 **CAT5e/6/7:** Connect to the Transmitter unit with a single CAT5e/6/7 cable for receiving all data signals.
- 6 **AUDIO OUT:** Connect to active speaker or audio receiver for audio signal output.
- 7 **RS-232:** This slot is to connect with D-Sub 9-pin cable from device equipment for receiving RS-232 commands.
- 8 **IP CONTROL:** Connect from PC/Laptop with active internet service for Telnet or WebGUI control with RJ-45 terminated cable.
- 9 **FIRMWARE:** This slot is reserved for firmware update use only.
- 10 **RS232:** Connect from PC/Laptop for RS-232 command sending to control the device.
- 11 **DC 24V:** Connect the adaptor with power cord included in the package and connect to AC wall outlet for power supply.

6.3 Remote Control

6.4 RS-232 Pin Assignment

Baud Rate: 115200bps

Data Bit: 8 bits

Parity: None

Flow Control: None

Stop Bit: 1



7. SPECIFICATIONS

Frequency bandwidth	340Mbps to 10.2Gbps
Input ports	1 x HDMI 1 x CAT5e/6/7 1 x IR In 1 x USB (Service only) 1 x Control
Output ports	2 x HDMI 1 x IR Out
Resolution	480i~1080p@50/60, 1080p@24, 4K x 2K
HDMI I/O Cable Distance	15M@8/12bit, 5M@4Kx2K
IR Frequency	30~50kHz
ESD Protection	Human body model: ±8kV (air-gap discharge) ±4kV (contact discharge)
Power Supply	24V/ 3.75A DC (US/EU standards, CE/ FCC/UL certified)
Dimensions	219mm (W) x 156mm (D) x 43mm (H)/ Jacks Excluded 219mm (W) x 164.3mm (D) x 48mm (H)/ Jacks Included
Weight	g
Chassis Material	Metal
Silkscreen Color	Black
Operating Temperature	Operating from 0°C ~ 40°C
Storage Temperature	-20°C ~ 60°C / -4 °F ~ 140 °F
Relative Humidity	20 ~ 90% RH (non-condensing)
Power Consumption	W

DVI and HDMI Supported Resolutions	Input	Output
640x480@60	✓	✓
640x480@72	✓	✓
640x480@75	✓	✓
720x480@60	✓	✓
720x576p@50	✓	✓
800x600@60	✓	✓
800x600@72	✓	✓
800x600@75	✓	✓
1024x768@60	✓	✓
1024x768@70	✓	✓
1024x768@75	✓	✓
1280x720@50	✓	✓
1280x720@60	✓	✓
1280x768@60	✓	✓
1280x800@60	✓	✓
1280x1024@60	✓	✓
1360x768@60	✓	✓
1600x1200@60	✓	✓
1920x1080i@50	✓	✓
1920x1080i@60	✓	✓
1920x1080p@24	✓	✓
1920x1080p@25	✓	✓
1920x1080p@30	✓	✓
1920x1080p@50	✓	✓
1920x1080p@60	✓	✓



1920x1200@60(RB)	✓	✓
3840x2160@24/25/30	✓	✓
4096x2160@24	✓	✓

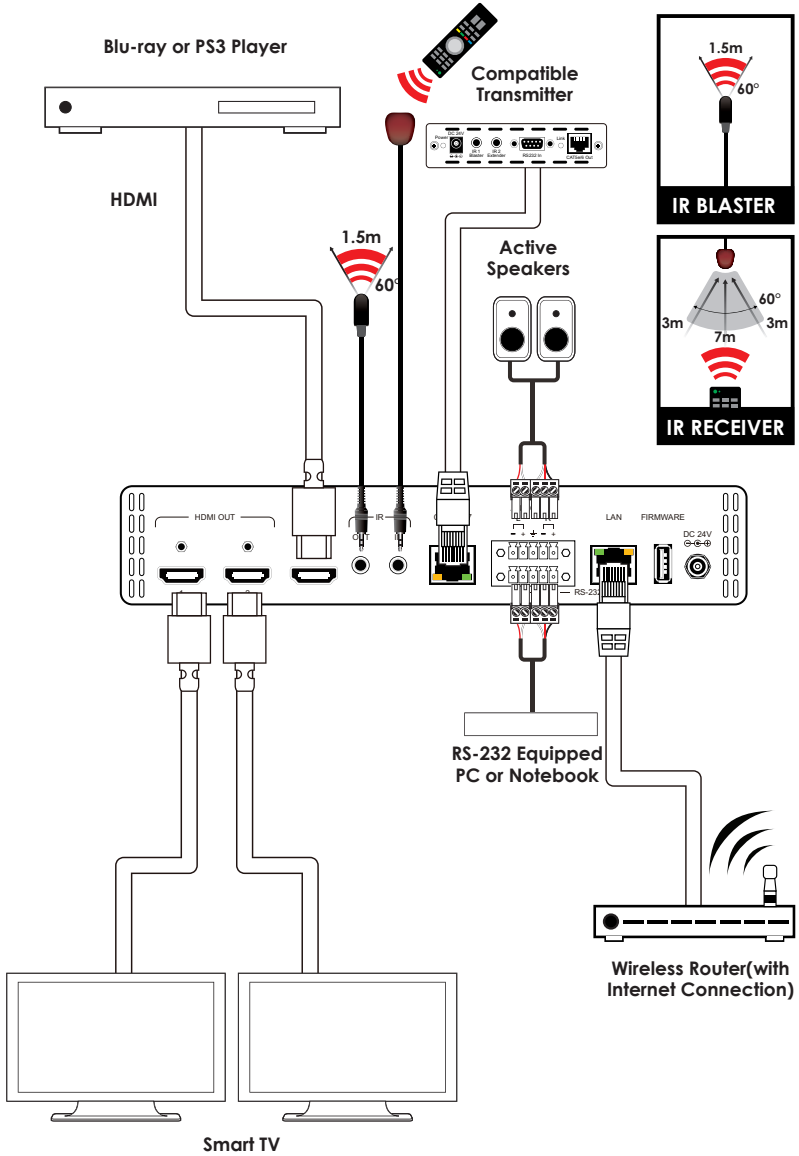
Audio Sampling Rate Up to 192 kHz

HDMI input (Up to 192kHz)	HDMI output	Analog output
LPCM 2CH	✓	N/A
LPCM 5.1CH	✓	X
LPCM 7.1CH	✓	X
Dolby Digital 2~5.1CH/ DTS 2~5.1CH	✓	N/A
Dolby TrueHD/ DTS-HD Master Audio	✓	X

Audio Format LPCM 2/5.1/7.1CH, Dolby Digital 2~5.1CH, DTS 2~5.1CH (Pass through), Dolby TrueHD and DTS-HD Master Audio

HDMI input	HDMI output	Analog output
LPCM 2CH	✓	✓
LPCM 5.1CH	✓	X
LPCM 7.1CH	✓	X
Dolby Digital (Plus) DTS-HD & DTS Surround 5.1CH	✓	✓
Dolby TrueHD/ DTS-HD Master Audio	✓	X

8. CONNECTION DIAGRAM



9. ACRONYMS

ACRONYM	COMPLETE TERM
CAT5e	Category 5 Cable
CAT6	Category 6 Cable
CAT7	Category 7 Cable
CEC	Consumer Electronic Control
DVI	Digital Visual Interface
HDCP	High-bandwidth Digital Content Protection
HDMI	High-Definition Multimedia Interface
PoC	Power over Cable
4Kx2K	3840x2160/ 4096x2160



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