CYP

CS-801H
HD High Resolution Scaler with 3D

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	06/01/12	Preliminary Release
RDV2	07/02/12	
RDV3	31/07/12	Add RS-232 Commands
RDV4	22/12/12	Support timing change
VS01	09/12/14	Updated Text/Diagrams

CONTENTS

1. INTRODUCTION

This HD High Resolution Scaler can switch and convert HDMI, DisplayPort and VGA, Component Video inputs to an HDMI output, along with their associated audio signals. With the ability to scale a wide range of resolutions and allows 3D movies to be watched on a 2D displays, the operation of all features can be easily handled through on-panel controls, IR remote control, or by RS-232 protocol.

2. APPLICATIONS

- Scale HDMI, DisplayPort and VGA/Component Video input resolutions to HDMI output resolutions
- Convert 3D signal to 2D signal for 2D display
- Bypass 3D source to 3D display without scaling
- Commercial presentation switching scaler

3. PACKAGE CONTENTS

- 1×HD High Resolution Scaler with 3D
- 1×Remote Control (CR-111)
- 1×5V/2.6A DC Power Adaptor
- 1×Operation Manual

4. SYSTEM REQUIREMENTS

HDMI/DisplayPort/PC/YUV sources and output to a 2D or 3D HDMI display.

5. FEATURES

- Supports HDMI and Component Video input resolutions up to 1080p@50/60 Hz, DisplayPort up to 2560×1600@60 Hz (RB) and PC up to 1920×1200@60/75 Hz
- Supports HDMI 3D processing on Frame Packing and Top-and-Bottom signals at resolutions of 720p@50/60 Hz and 1080p@24 Hz and Side-by-Side Half signals at resolutions of 720p@50/60 Hz, 1080i@50/60 Hz (input signal only) and 1080p@24/50/60 Hz
- Supports digital and analog audio bi-directional conversion, embedding and de-embedding for the audio signals from individual inputs or from the HDMI source
- Supports Component Video input via D-sub 15-pin to 3 RCA phono adaptor

6. OPERATION CONTROLS AND FUNCTIONS

6.1 Front Panel
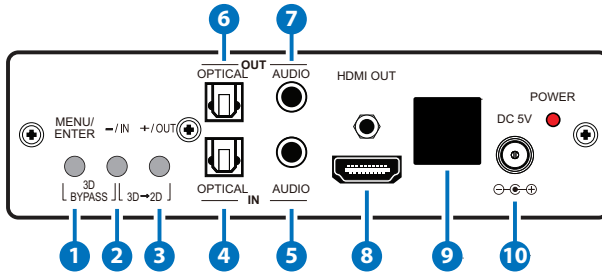
1 MENU/ENTER: Press this button to ENTER the On-screen Display (OSD) menu. Press again to confirm the selection.

2 MINUS (-)/IN: When in the OSD menu, press this button repeatedly to move down through the menu. When not in the OSD menu, press this button to quickly select the required input.

3 PLUS (+)/OUT: When in the OSD menu, press this button repeatedly to move up through the menu. When not in the OSD menu, press this button to quickly select the required output resolution.

Note:Pressing '−' (MINUS) and 'ENTER' simultaneously will immediately switch the output resolution of the unit to 3D Bypass. Pressing '−' (MINUS) and '+' (PLUS) simultaneously will immediately switch the output resolution of the unit from 3D to 2D.

4 OPTICAL IN: Digital audio TOSLINK input. Use this input to connect to a source with an OPTICAL cable.

5 AUDIO IN: Analog audio input. Use this input to connect to analog source with a 3.5mm mini-jack cable.

6 OPTICAL OUT: Digital audio TOSLINK output. Use this output to connect to an Amplifier or Active Speakers to an optical digital input with an OPTICAL cable.

7 AUDIO OUT: Analog audio output. Use this output to connect to Active Speakers or an Amplifier with a 3.5mm mini-jack cable.

8 HDMI OUT: Connect to a HDMI equipped TV/monitor for display of the source signal.

9 IR Window: Receives the IR signal from the supplied IR Remote only.

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10 DC 5V and POWER LED: Connect the supplied 5V DC power supply to the unit and plug the power supply to AC wall outlet. Once the system turns on the LED will turn RED.

6.2 Rear Panel
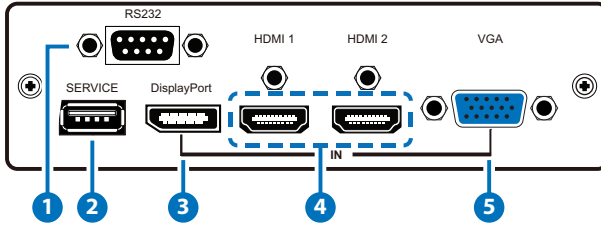
1 RS232: Connect to a PC or RS-232 control system with a D-sub 9-pin cable for RS-232 control.

2 SERVICE: Manufacturer use only.

3 DisplayPort IN: Connect to a DisplayPort source device such as a PC/Laptop with a DisplayPort cable.

4 HDMI 1/2 IN: Connect to the HDMI source devices such as a DVD player or a Set-top Box with HDMI cables.

5 VGA IN: Connect to a VGA source such as a PC/Laptop source equipment with a D-sub 15-pin cable or to a Component Video source with a D-sub 15-pin to 3 RCA phono adaptor for component video signal input.

6.3 Remote Control

1 POWER: Press to turn the system ON/ OFF.

2 VIDEO IN: Press the required key to directly select the video source (HDMI 1/HDMI 2/DP/PC/COMP).

3 AUDIO IN: Press the required key to directly select the audio source (AUDIO/OPTICAL/HDMI/MDP) or to MUTE the system.

4 MENU: Press this button to ENTER the OSD menu.

5 EXIT: Press this button to EXIT the OSD menu.

6 ENTER and ▲/▼/◄/►: Press ENTER button to confirm the selection and press the arrow keys to navigate the OSD menu.

7 INFO: Press to show the input and output resolution information.

8 OUTPUT: Press to show the output resolution table.

9 3D→2D: Press to switch from 3D to 2D.

10 3D BYPASS: Press to switch to 3D bypass.

11 NATIVE: Press to switch to native resolution.
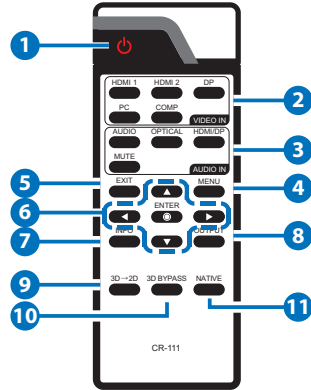
6.4 RS-232 Protocols

SCALER	
Pin	Definition
1	NC
2	TxD
3	RxD
4	NC
5	GND
6	NC
7	NC
8	NC
9	NC

▶
◀

REMOTE CONTROL	
Pin	Definition
1	NC
2	RxD
3	TxD
4	NC
5	GND
6	NC
7	NC
8	NC
9	NC

Baud Rate: 19200 bps

Data Bit: 8 bits

Parity: None

Stop Bit: 1 bit

Flow Control: None

6.5 RS-232 Commands

COMMAND	DESCRIPTION
POWER ?	Power Status
POWER ON	Power On
POWER OFF	Power Off
3D ?	3D Status
3D TO 2D	3D In, 2D Out
3D BYPASS	3D In, 3D Bypass Out
VIDEO ?	Video Input Source
HDMI 1	Video Input in HDMI1

COMMAND	DESCRIPTION
HDMI 2	Video Input in HDMI2
DP	Video Input in DisplayPort
PC	Video Input in PC
COMP	Video Input in Component
AUDIO ?	Audio Input Source
AUDIO	Audio Input in AUDIO
OPTICAL	Audio Input in OPTICAL
HDMI/DP	Audio Input in HDMI/DP
MUTE ON	Mute On
MUTE OFF	Mute Off
INFO ?	Info.OSD Status
INFO ON	Info.OSD On
INFO OFF	Info.OSD Off
OUTPUT ?	Output Status
480P	Output in 480P
720P	Output in 720P
1080P	Output in 1080P
VGA	Output in VGA(640×480)
SVGA	Output in SVGA(800×600)
XVGA	Output in XGA(1024×768)
SXVGA	Output in SXGA(1280×1024)
UXGA	Output in UXGA(1600×1200)
WUXGA	Output in WUXGA(1920×1200)
NATIVE	Output by Native
EDID ?	EDID Status
EDID INT	EDID By Internal
EDID EXT	EDID By External
FEEDBACK ?	Feedback Status
FEEDBACK ON	RS232 Feedback Enable

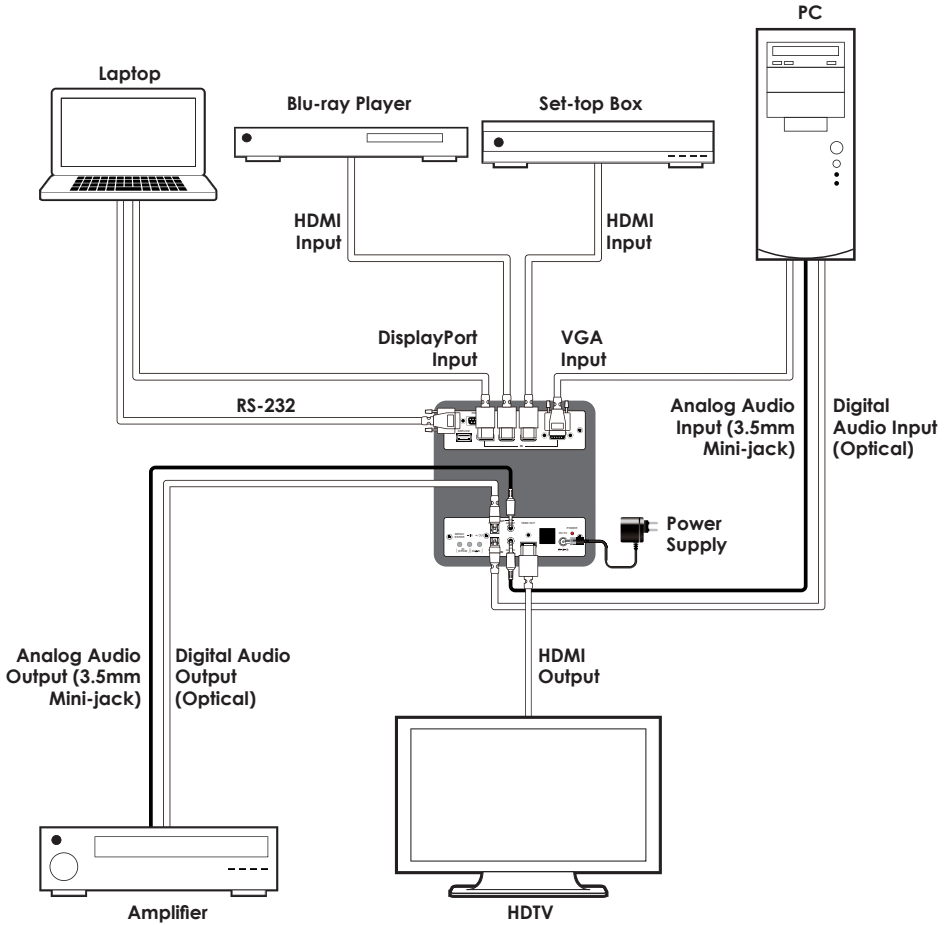| COMMAND	DESCRIPTION
FEEDBACK OFF	RS232 Feedback Disable
STATE ?	Video Input Signal Status
VERSION ?	Firmware Version
DEFAULT	Reset to Factory Default

Note: Any commands will not be executed unless followed by a carriage return. Commands are not case-sensitive.

6.6 OSD Menu

FIRST LEVEL	SECOND LEVEL	THIRD LEVEL
Input Video	PC	
	COMP	
	HDMI 1	
	HDMI 2	
	DP	
	Exit	
Input Audio	Audio	
	Optical	
	HDMI/DP	
	Mute	
	Exit	

FIRST LEVEL	SECOND LEVEL	THIRD LEVEL
Output Resolution	720×480P	
	1280×720P	
	1920×1080P	
	640×480	
	800×600	
	1024×768	
	1280×1024	
	1600×1200	
	1920×1200	
	By Native	
	3D Bypass	
	Exit	
Output Format	3D→2D	
	3D Bypass	
	Exit	
Miscellany	EDID Mode	Internal
		External
		Exit
	Info. OSD Mode	Off
		On
		Exit
	About CS-801H	FW Ver.
	Factory Reset	System Reset
	Exit	
Exit		

7. CONNECTION DIAGRAM

PC

Laptop

Blu-ray Player

Set-top Box

HDMI Input

HDMI Input

DisplayPort Input

VGA Input

RS-232

Analog Audio Input (3.5mm Mini-jack)

Digital Audio Input (Optical)

Power Supply

Analog Audio Output (3.5mm Mini-jack)

Digital Audio Output (Optical)

HDMI Output

Amplifier

HDTV

8. SPECIFICATIONS

8.1 Technical Specifications

HDMI Video Bandwidth	255 MHz/6.75 Gbps
DisplayPort Video Bandwidth	2.7 Gbps & 1.62 Gbps/Lane
Input Ports	2×HDMI, 1×DisplayPort, 1×VGA (D-sub 15-pin), 1×Optical, 1×3.5mm Mini-jack
Output Ports	1×HDMI, 1×Optical, 1×3.5mm Mini-jack
Power Supply	5 V/2.6 A DC (US/EU standards, CE/FCC/UL certified)
ESD Protection	Human body model: ±8kV (air-gap discharge) ±4kV (contact discharge)
Dimensions	142 mm (W)×180 mm (D)×43 mm (H)
Weight	700 g
Chassis Material	Metal
Color	Black
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 (non-condensing)
Power Consumption	9 W

8.2 Supported Input Resolutions

INPUT RESOLUTION (2D SIGNAL)	PC	HDMI	DP	COMP
640×350@85	✓		✓	
640×400@85	✓		✓	
720×400@85	✓		✓	
640×480 (VGA)@60, 72, 75, 85	✓	✓	✓	
800×600 (SVGA)@56, 60, 72, 75, 85, 120	✓	✓	✓	
848×480@60Hz	✓		✓	
1024×768 (XGA)@60, 75, 85, 120	✓		✓	
1152×864 (XGA+)@75	✓		✓	
1280×720@60	✓	✓	✓	
1280×768@60RB, 60, 75, 85, 120RB	✓	✓	✓	
1280×800@60RB, 60, 75, 85, 120RB	✓		✓	
1280×960@60, 85, 120RB	60, 85		✓	
1280×1024@60, 75, 85	✓	✓	120RB	
1360×768@60, 120RB	✓	✓	✓	
1366×768@60	✓		✓	
1400×1050 (SXGA+)@60RB, 60, 75	✓			
1440×900 (WXGA+)@60RB, 60, 75, 85	✓		✓	
1440×1050@85, 120RB	✓		✓	
1600×900@60RB	✓		✓	
1600×1200 (UXGA)@60, 65, 70, 75, 85, 120RB	60 only	✓	✓	
1680×1050 (WSXGA)@60RB, 75, 85	60CTV, 60	✓		

INPUT RESOLUTION (2D SIGNAL)	PC	HDMI	DP	COMP
1792×1366@60, 75			✓	
1856×1392@60			✓	
1920×1080@60	✓		✓	
1920×1200@60RB, 60, 75	60	✓	✓	
1920×1440@60			✓	
720×480i/p		✓	✓	✓
720×576i/p		✓		✓
720i/p@50, 60		✓		✓
1080i/p@50, 60		✓	✓	
1080p@24		✓		
2048×1152@60RB			✓	
2560×1600@60RB			✓	

INPUT RESOLUTION (3D SIGNAL)	PC	HDMI	DP	COMP
1080p@24 Frame Packing		✓		
1080p@24 Top-and-Bottom		✓		
1080p@24 Side-by-Side		✓		
1080i@50/60 Side-by-Side		✓		
720p@50/60 Side-by-Side		✓		
720p@50/60 Frame packing		✓		
720p@50/60 Top-and-Bottom		✓		

8.3 Supported Output Resolutions

OUTPUT RESOLUTION (2D SIGNAL)
640×480, 800×600, 1024×768, 1280×1024, 1600×1200, 1920×1200RB, 480p, 720p, 1080p

OUTPUT RESOLUTION (3D SIGNAL)	
Frame Packing	720p@50/60, 1080i@60, 1080p@24/30
Top-and-Bottom	720p@50/60, 1080i@60, 1080p@24/30
Side-by-Side	720p@50/60, 1080i@60, 1080p@24

Note: Some displays may not support 3D@50 Hz and therefore, some 3D 50Hz signal may not be displayed.

9. ACRONYMS

ACRONYM	COMPLETE TERM
COMP	Component Video
DP	DisplayPort
HDMI	High-Definition Multimedia Interface