CYP

CP-291N
PC/HD to PC/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.
- Please completely disconnect the power when the unit is not in use to avoid wasting electricity.

VERSION HISTORY

REVISION	DATE	SUMMARY OF CHANGE
VR0	03/06/15	Preliminary release
VS1	21/04/17	Updated text/diagrams
VS2	16/08/18	Updated Section 8.2

CONTENTS

1. INTRODUCTION

This scaler is designed to cross-convert between a wide range of analog PC (15-pin VGA) and HD (Component YUV) resolutions from VGA/480i up to WUXGA (RB)/1080p. The original signal can be output, unprocessed and unscaled, by using the included bypass output port. This unit has a comprehensive OSD menu which allows the user to select from a variety of output resolutions as well as to adjust the video settings to provide the best picture quality. An ideal example of usage is to place the unit between a standard PC source and an HDTV while changing the output resolution and format to match the native requirements of the display.

2. APPLICATIONS

• Display an analog PC/HD video signal on an HDTV

• Scale an analog PC/HD video signal to HD resolutions

• Integrate an analog PC/HD video source device to an Component Video (3-RCA) equipped display

3. PACKAGE CONTENTS

• 1×PC/HD to PC/HD Scaler

• 1×15-pin to 15-pin D-sub Cable

• 1×15-pin to 3-RCA Cable

• 1×5V/2.6A DC Power Adaptor

• 1×Operation Manual

4. SYSTEM REQUIREMENTS

Standard PC source device such as a PC/laptop and Component Video (3 RCA) or VGA (15-pin D-sub) equipped display such as an HDTV or monitor.

5. FEATURES

- Supports a wide range of PC (15-pin VGA) resolutions from VGA ~ WUXGA (RB) and HD (Component YUV) resolutions from 480i~1080p over both input and output

- Component YUV input and output is supported with the use of a 15-pin to 3-RCA adapter

- Included bypass output port allows viewing the original, unscaled, source

- Output picture adjustments include: contrast, brightness, hue, saturation, sharpness, RGB (color tone) level and aspect ratio

- Controllable via front-panel buttons with OSD

# 6. OPERATION CONTROLS AND FUNCTIONS

6.1 Front Panel
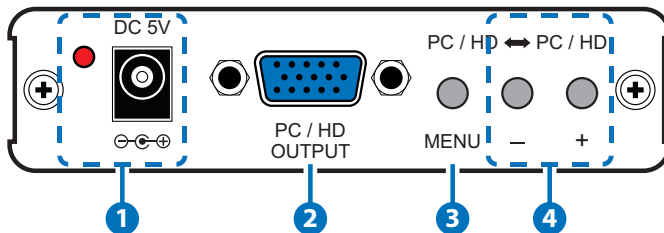
1 **DC 5V & LED:** Connect the 5V DC power supply to the unit and plug the adaptor into an AC outlet. This LED will illuminate once the unit is connected to an active power supply.

2 **PC/HD OUTPUT:** Connect to a VGA monitor for analog video output. YUV displays, such as HDTV, are also supported with the use of a 15-pin to 3-RCA adapter.

3 **MENU:** Press this button to enter the OSD (On-screen Display) menu and press it again to make a selection.

4 **+/−:** When in the OSD menu, press these buttons to navigate up/down the OSD menu or adjust the value of a menu selection.

Under normal operation (outside of OSD menu), press the "-" button to perform automatic calibration of the output signal when

the input signal is from PC (VGA) only.

Note: Press the "+" button together with the "MENU" button to switch the output resolution to XGA@60Hz (1024×768); press the "-" button together with 'MENU' button to switch the output resolution to 720p@60Hz. Press both the "+" and "-" buttons at the same time to reset the unit to the default settings.

6.2 Rear Panel
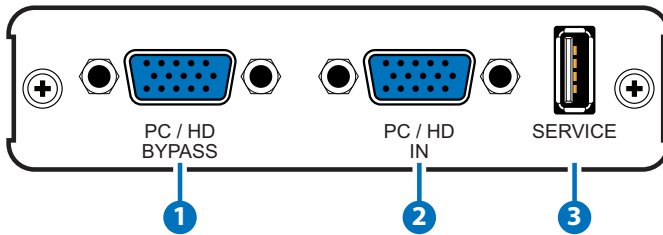
1 **PC/HD BYPASS:** Connect to an analog VGA monitor or YUV display to locally view the connected VGA source.

2 **PC/HD INPUT:** Connect to VGA source equipment such as a PC or laptop. YUV sources, such as DVD players, are also supported with the use of a 15-pin to 3-RCA adapter.

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

6.3 OSD Menu

LEVEL 1	LEVEL 2	LEVEL 3
PICTURE SETTING	CONTRAST	0~100 **(50)**
	BRIGHTNESS	0~100 **(50)**
	EXIT	
FINETUEN	HUE*	0~100 **(50)**
	SATURATION*	0~100 **(50)**
	SHARPNESS*	0~100 **(50)**
	NR*	**OFF**
		LOW

LEVEL 1	LEVEL 2	LEVEL 3
FINETUEN	NR*	MIDDLE
		HIGH
	PHASE**	0~100 **(100)**
	CLOCK**	0~100 **(50)**
	H-POSITION**	0~100 **(50)**
	V-POSITION**	0~100 **(50)**
	EXIT	
COLOR SETTING	RED	0~100 **(50)**
	GREEN	0~100 **(50)**
	BLUE	0~100 **(50)**
	EXIT	
OUTPUT SETTING	SIZE	**FULL**
		OVERSCAN
		UNDERSCAN
		LETTER BOX
		PANSCAN
		ASPECT
		EXIT
	RESOLUTION	800×600@60
		1024×768@60
		1280×1024@60
		1400×1050@60
		1600×1200@60
		1280×800@60
		1440×900@60
		1680×1050@60
		1920×1200@60RB
		1600×900

LEVEL 1	LEVEL 2	LEVEL 3
OUTPUT SETTING	RESOLUTION	480P
		576P
		720P@50
		720P@60
		1080I@50
		1080I@60
		1080P@50
		1080P@60
	EXIT	
OSD SETTING	H-POSITION	0~100 **(10)**
	V-POSITION	0~100 **(90)**
	TIMER	0~100 **(50)**
	BACKGROUND	0~100 **(50)**
	DISPLAY	**INFO**
		ON
		OFF
	EXIT	
FACTORY RESET		
INFORMATION		
EXIT		

Note:

- *Items in **Bold** are factory default settings.*

- *Items with one Asterisk (*) are only abailable for HD input. Items with two Asterisk (**) are only abailable for PC input.*

7. CONNECTION DIAGRAM

Monitor

PC/Laptop

VGA/Component Video Output (Bypassed)

VGA/Component Video Input

Power Supply

VGA/Component Video Output (Scaled)

HDTV
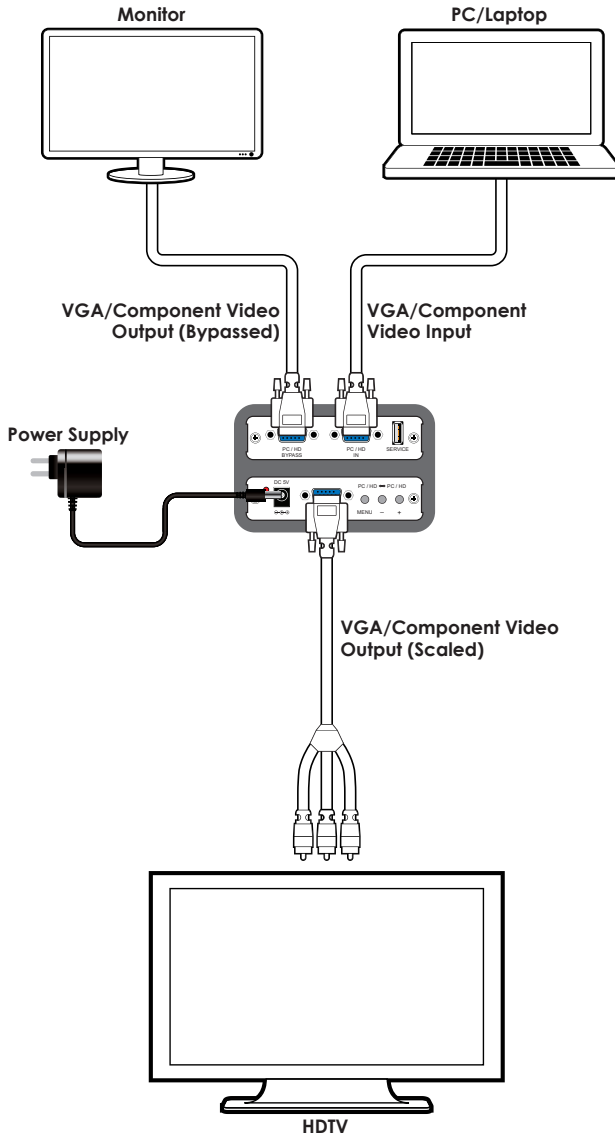
8. SPECIFICATIONS

8.1 Technical Specifications

Input Port	1×VGA (HD-15)
Output Ports	2×VGA (HD-15)
Power Supply	5V/2.6A DC (US/EU standards, CE/FCC/UL certified)
ESD Protection	Human Body Model: ±12kV (Air Discharge) ±8kV (Contact Discharge)
Dimensions	102mm×147mm×25mm (W×H×D) [Case Only] 102mm×158.5mm×25mm (W×H×D) [All Inclusive]
Weight	342g
Chassis Material	Metal (Aluminum)
Silkscreen 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	5.3W

8.2 Video Specifications

Supported Resolutions (Hz)	Input RGBHV	Input YUV	Output RGBHV	Output YUV
640×480@60/72/75/85	✓		60	
800×600@56/60/72/75/85	✓		60	
1024×768@60/70/75/85	✓		60	
1280×1024@60/75/85	✓		60	
1440×1050@60	✓		✓	
1600×1200@60	✓		60	
1280×800@60	✓		60	
1440×900@60	✓		✓	
1600×900@60	✓		✓	
1680×1050@50/60	✓		60	
1920×1200@60 (RB)	✓*		✓	
480i/576i		✓		
480p/576p		✓		✓
720p@50/60		✓		✓
1080i@50/60		✓		✓
1080p@50/60		✓		✓

Note: This unit only supports WUXGA (1920×1200@60Hz) sources using the reduced blanking timing (154MHz). WUXGA sources using standard blanking (193MHz) are not supported.

9. ACRONYMS

ACRONYM	COMPLETE TERM
HD	High-Definition
HDTV	High-Definition Television
OSD	On-Screen Display
PC	Personal Computer
USB	Universal Serial Bus
VGA	Video Graphics Array
WUXGA (RB)	Widescreen Ultra Extended Graphics Array (Reduced Blanking)