



CPRO-12ES

1 by 2 HDMI Scaler



Operation Manual

DISCLAIMERS

The information in this manual has been carefully checked and is believed to be accurate. Cypress Technology assumes no responsibility for any infringements of patents or other rights of third parties which may result from its use.

Cypress Technology assumes no responsibility for any inaccuracies that may be contained in this document. Cypress also makes no commitment to update or to keep current the information contained in this document.

Cypress Technology reserves the right to make improvements to this document and/or product at any time and without notice.

COPYRIGHT NOTICE

No part of this document may be reproduced, transmitted, transcribed, stored in a retrieval system, or any of its part translated into any language or computer file, in any form or by any means—electronic, mechanical, magnetic, optical, chemical, manual, or otherwise—without express written permission and consent from Cypress Technology.

© Copyright 2012 by Cypress Technology.

All Rights Reserved.

Version 1.0 December 2010

TRADEMARK ACKNOWLEDGMENTS

All products or service names mentioned in this document may be trademarks of the companies with which they are associated.



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

CONTENTS

1. Introduction	1
2. Applications	1
3. Package Contents	1
4. System Requirements	1
5. Features	1
6. Hardware Description	2
6.1 Front Panel	2
6.2 Rear Panel.....	3
6.3 OSD MENU.....	4
7. Connection Diagram	6
8. Specifications	7

DRAFT



1. INTRODUCTION

The 1 by 2 HDMI Scaler is designed to scale both 4K2K and non-4K2K HDMI signal into 1080p and also, bypass 4K2K signal out on to 4K2K display. Allowing all types of HDMI source signal to be display on HDTV/ Monitor. With friendly and simple design which allows user with direct viewing on input resolution and output signal up to 2 simultaneous HDMI. The 1 by 2 HDMI Scaler is your best media between HD and Ultra HD signal.

2. APPLICATIONS

- Ultra HDMI source displaying on standard LED TV/monitor
- Ultra HDMI source displaying on 4K2K TV/Panel
- Examining if display supports 4K2K
- Examining if source supports 4K2K

3. PACKAGE CONTENTS

- 1 x 1 by 2 HDMI Scaler
- 1 x 5V/2.6A DC Power Supply
- 1 x User Manual

4. SYSTEM REQUIREMENTS

Input source equipment such as DVD/Blu-ray(4K2K) player and output HDMI (4K2K) TV/display.

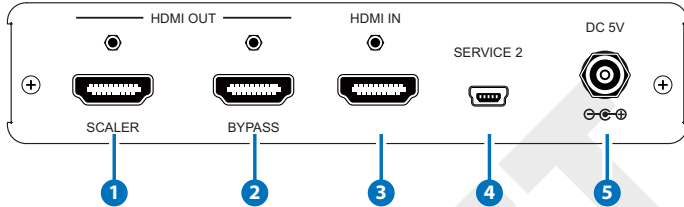
5. FEATURES

- Supports HDMI 4K2K signal bypass
- Supports HDMI signal bypass
- Simultaneous HDMI outputs
- Friendly and simple to use

6. HARDWARE DESCRIPTION

The following sections describe the hardware components of the unit.

6.1 Front Panel



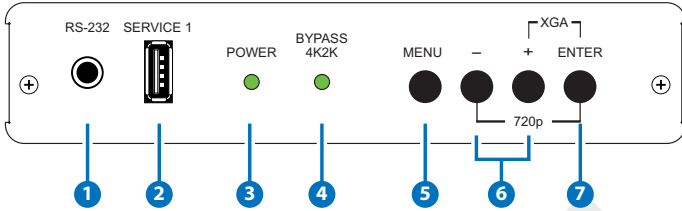
- 1 HDMI OUT/SCALER:** This slot is to connect with HDMI TV/display for output AV displaying with resolution up to 1080p.
- 2 BYPASS:** This slot is to connect with HDMI TV/display with or without 4K2K specification for output AV displaying according to input source signal setting.

Input Source	SCALER OUTPUT	BYPASS OUTPUT
1080p	1080P	1080P
4K2K	1080P	4K2K

Note: Displaying HDMI 4Kx2K contents, equivalent source signal and HDMI cable are required on BYPASS output connection.

- 3 HDMI IN:** Connect from HDMI source equipment such as Blu-ray/DVD player with or without 4K2K signal.
- 4 SERVICE 2:** This slot is reserved for factory use only.
- 5 4K2K / 1080P LED:** These LED will illuminate according to input source signal's resolution when both LED are illuminating it state the input source's signal does not belong to 4K2K/1080P@24.
- 6 DC 5V IN:** Connect 5V DC power supply into the unit and connect the adaptor to an AC outlet.

6.2 Rear Panel



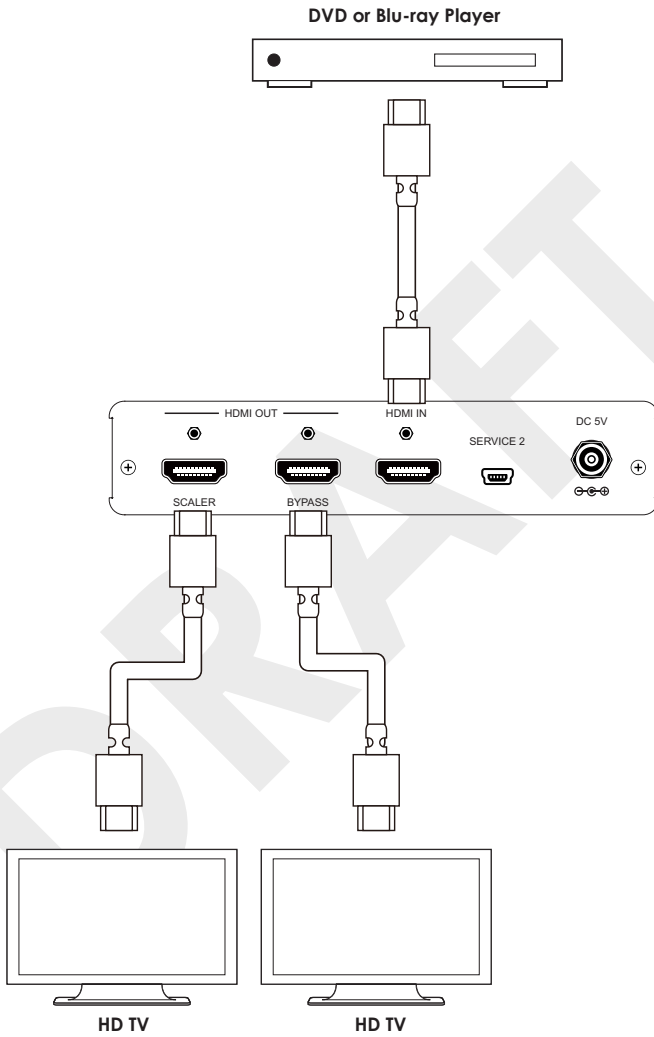
- 1 RS-232:** This slot is reserve for factory use only.
- 2 SERVICE 1:** This slot is reserve for factory use only.
- 3 POWER LED:** This LED will illuminate when the device is connected with power supply.
- 4 BYPASS 4K2K:** This LED will illuminate when the input signal contains with 4K2K resolution.
- 5 MENU:** Press this button to enter into OSD menu.
- 6 -/+:** Press this button to scroll down/up the menu selection. Press “-” with “ENTER” button to switch SCALER output resolution to 720p instantly or press “+” with “ENTER” button to switch SCALER output resolution to XGA instantly.
- 7 ENTER:** Press this button to enter or confirm the selection.

6.3 OSD MENU

1 st Layer	2 nd Layer	3 rd Layer	4 th Layer	
Picture Setting	Contrast	0~100		
	Brightness	0~100		
	FineTune	Hue		0~100
		Saturation		0~100
		Sharpness		0~100
		NR		Off/ High/ Middle/ Low
		Exit		
	Color	Red		0~100
		Green		0~100
		Blue		0~100
		Exit		
Output Setting	Size	Full/Over Scan/Under Scan/Letter Box/Pan Scan/Best Fit		
	Resolution	640x480/60,800x600/60,1024x768/60,1280x1024/60,1600x1200/60,1366x768/60,1680x1050/60,1920x1200/60,1280x800/60,1440x900/60,1400x1050/60,1600x900/60,480i/480p/720p60/1080i60/1080p60/576i/576p/720p50/1080i50/1080p50/ Native		
	Exit			
OSD Setting	H-Position	0~100		
	V-Position	0~100		

	TimerOut	5~100	
	Background	0~100	
	Display	Info/On/Off	
	Exit		
Factory Setting	Reset	No/Yes	
	Exit		
Information	Input	...x...	
	Output	...x...	
	Version	x.xx	
Exit			

7. CONNECTION DIAGRAM





8. SPECIFICATIONS

Video Frequency	300MHz/9Gbps
Input Ports	1 x HDMI, 2 x USB (Service only), 1 x RS-232 (Service only)
Output Ports	2 x HDMI
HDMI Cable Distance	In 15M, Out 15M@1080p/8bit, In 10M, Out 10M@1080p/12bit, In 5M, Out 10M@4K2K
Power Supply	5V / 2.6A DC (US/EU standards, CE/FCC/UL certified)
ESD Protection	Human body model: ±8kV (air-gap discharge) ±4kV (contact discharge)
Dimensions (mm)	145(W) x 160.5(D) x 30 (H)/ Jacks Excluded 145(W) x 167(D) x 30 (H)/Including Jacks
Weight(g)	488
Chassis Material	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	7.7W

HDMI Supported Resolutions	Input	Output
640x480@60	✓	✓
640x480@72	✓	
640x480@75	✓	
720x480@60	✓	
720x480i@60	✓	
720x576i@50	✓	✓
720x576p@50	✓	✓
800x600@56	✓	
800x600@60	✓	✓
800x600@72	✓	
800x600@75	✓	
1024x768@60	✓	✓
1024x768@70	✓	
1024x768@75	✓	
1280x720@60	✓	
1280x720p@60	✓	
1280x800@60	✓	✓
1280x1024@60	✓	✓
1440x1050@60		✓
1600x1200@60	✓	✓
1920x1080@60	✓	
1920x1080i@50	✓	✓
1920x1080i@60	✓	✓
1920x1080p@23.97	✓	✓
1920x1080p@24	✓	✓
1920x1080p@25	✓	✓
1920x1080p@29.97	✓	✓
1920x1080p@30	✓	✓
1920x1080p@50	✓	✓

1920x1080p@60	V	V
1920x1200@60(RB)	V	V

DRAFT

DRAFT



CYPRESS TECHNOLOGY CO., LTD
Home page: <http://www.cypress.com.tw>

MPM-CPRO12ES