

CPRO-3D41GAME

HDMI 4 by 1 v1.4 Switcher

Operation Manual



CPRO-3D41GAME

• **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 2009 by Cypress Technology.

All Rights Reserved.

Version 1.0 October 2009

• **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 or 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 module openings or empty slots, as you may damage parts.
- Do not attach the power supply cabling to building surfaces.
- Do not allow anything to rest on the power cabling or allow it to be abused by persons walking on it.
- To protect the equipment from overheating, do not block the slots and openings in the module housing that provide ventilation.

• **Revision History**

Version No	Date	Summary of Change
V1	20100407	Preliminary Release

Table of Contents

1. Introduction	1
2. Applications	1
3. Package Contents	1
4. System Requirements	1
5. Features	2
6. Specifications	3
7. Operation Controls and Functions	4
7.1 Front Panel	4
7.2 Rear Panel	4
7.3 Right Panel	4
7.4 Left Panel	5
7.5 Top Panel	5
8. Remote Control	6
9. OSD Menu	6
9.1 System Info	7
9.2 Sink Edid	7
9.3 Source Infoframe	7
9.4 Input Select	7
9.5 Audio Return	7
9.6 Exit	8
10. Connection and Installation	8
11. Acronyms	9

1. Introduction

This is a high performance four-input & one-output High-Definition Multimedia Interface (HDMI) v1.4 switcher with digital audio inputs and outputs. It supports HDCP repeater functions and fast switching between any of the four of HDMI input ports. The system supports all 3D TV formats in addition to all HDTV formats up to 1080p 12-bit Deep Color. Furthermore, the remote control gives users complete control over the selection of sources and makes the device incredibly user friendly.

2. Applications

- Display 3D content
- Multi-source selection and display
- Display HDMI v1.4 content
- Electronic retail display

3. Package Contents

- HDMI v1.4 3D 4 in 1 out switcher
- Remote Control
- 5V 1A power adaptor
- Operation manual

4. System Requirements

Input source equipment with or without 3D content and HDMI connection cables. HDTV output displays that support or don't support 3D and HDMI connection cables.

5. Features

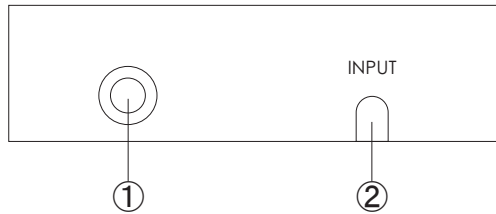
- Support multiplexed HDMI 4-input and 1-output
- HDMI 1.4, HDCP 1.4 and CEC1.4 compliant
- HDMI 1.4 support:
 - ✓ Audio Return Channel (ARC)
 - ✓ 3D TV support
 - ✓ CEC1.4
- Fast switching on all HDMI input ports
- Character and icon based On-Screen Display (OSD)
 - ✓ System information for Software version
 - ✓ Sink EDID
 - ✓ Source info frame
 - ✓ HDMI input Audio & Audio Return selection
- HDCP repeater support
- Deep Color support 36/30/24-bit, 1080p@60Hz
- HDMI cable distance tested with 1080p 8/12 bits resolution, the input & output distance can be up to 10 & 15 meters.
- Audio support:
 - ✓ HDMI 1.4 compatible audio interface
 - ✓ Dedicated, flexible audio input/output port
 - ✓ Dolby TrueHD
 - ✓ DTS-HD Master Audio 7.1CH
 - ✓ Full audio input and output support

6. Specifications

Frequency Bandwidth	2.25Gbps
Input Ports	4 x HDMI Female ports
Output port	1 x HDMI Female port
HDMI Audio Output	PCM2, 5.1, 7.1CH, Dolby 5.1, DTS5.1, DD+, D-TrueHD, DTS-HD
HDMI Cable In	1080p 8-bit (10M), 12-bit (10M)
HDMI Cable Out	1080p 8-bit (15M), 12-bit (15M)
Coaxial Audio Output	PCM2CH
Power Supply	5V/1A DC (US/EU standards, CE/FCC/UL certified)
ESD Protection	Human Body Model: $\pm 8\text{kV}$ (air-gap discharge) $\pm 4\text{kV}$ (contact discharge)
Dimensions (mm)	100 (W) x 70 (D) x 20 (H)
Weight (g)	90
Chassis Material	Plastic
Silkscreen Color	White
Power Consumption	4W
Operating Temperature	0°C ~ 40°C / 32°F ~ 104°F
Storage Temperature	-20°C ~ 60°C / -4°F ~ 140°F
Relative Humidity	20~60% RH (non-condensing)

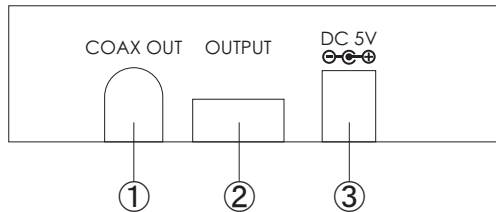
7. Operation Controls and Functions

7.1 Front Panel



- ① IR sensor: This is a IR receiver window that receives IR signals from the remote control included in the package.
- ② INPUT: Press this button to select the desired input source, the LED will switch on according to the selection.

7.2 Rear Panel

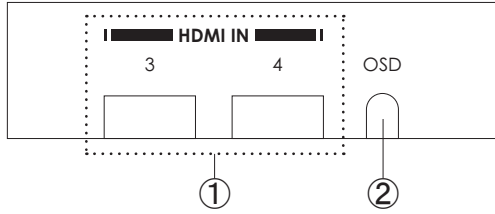


- ① COAX OUT: This slot is where you connect an amplifier for transmitting an audio signal with coaxial cables. When the audio return function is on the audio signal will be received from the output and when the audio return function is off the audio signal will be received from the input source. This device only supports PCM 2CH.

Note:

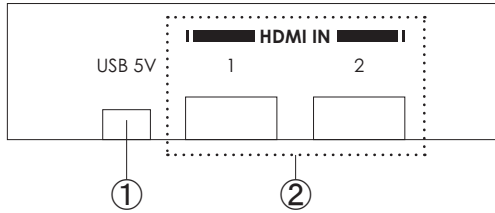
1. The display TV or monitor must support an audio return function and the function be must turned ON in order to perform the audio return.
 2. The display TV or monitor's HDMI input jack must be connected to the device with an audio return function.
- ② OUTPUT: This slot is where you connect with an HDTV or HD display that does support or does not support 3D signals for sending an input signal to the display with an HDMI cable.
 - ③ DC 5V: Plug the 5V DC power supply into the unit and connect the adaptor to an AC outlet. The LED will switch on when the power cable is plugged in.

7.3 Right Panel



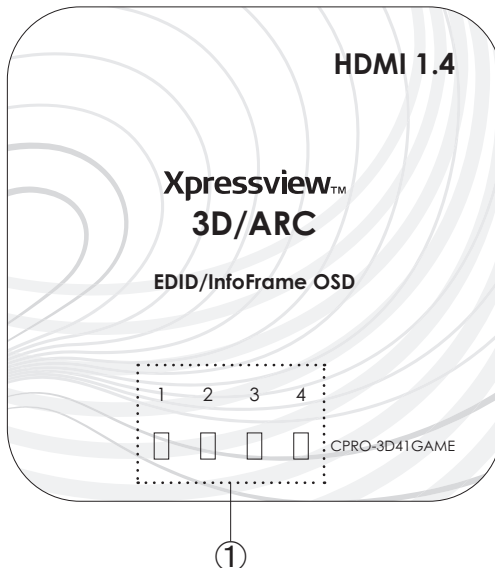
- ① HDMI IN 3 & 4: These slots are where you connect the input source devices for sending a signal to the input source with HDMI cables.
- ② OSD: Press this button to bring up the OSD on the display and press it again to turn it off.

7.4 Left Panel



- ① USB 5V: This slot is where you can connect the mini USB cable from your PC to the device in order to supply power.
- ② HDMI IN 1 & 2: These slots are where you connect the input source devices for sending an input signal with HDMI cables.

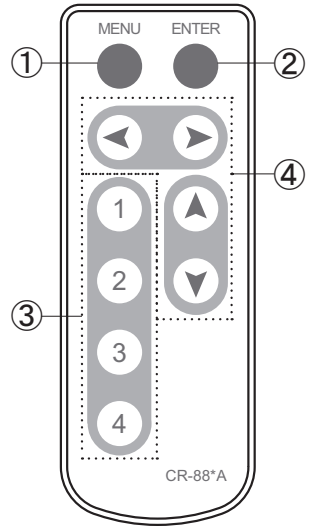
7.5 Top Panel



- ① Input LED 1~4: These LED will switch on according to user's input selection.

8. Remote Control

- ① MENU: Press to enter into menu selection, an OSD will appear from the display.
- ② Enter: Press to confirm the selection.
- ③ 1, 2, 3, 4: Press to select input port.
- ④ ▲▼◀▶: Use these buttons to select/adjust OSD menu's object.



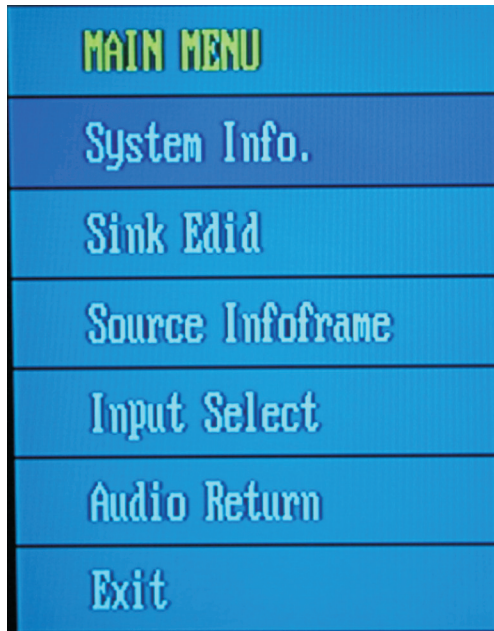
9. OSD Menu

Press the OSD button from the device or MENU button from the remote control to bring up the OSD on the display.

Press [▲/▼] to highlight an option

Press [◀/▶] to select the option

Press [Enter] to confirm/exit the selection



9.1 System Info

Press [▲/▼] to highlight an option

Press [Enter] to check the input/output device information and software version.

Press [MENU] to exit menu

Press [Enter] to confirm/exit the selection

9.2 Sink Edid

Press [▲/▼] to highlight an option

Press [◀/▶] to select the option

Press [Enter] to confirm/exit the selection

Press [MENU] to exit menu

Option	Description
Block Data	To check the sink Block0 and Block1's table of EDID
Description	To check the sink description of EDID

9.3 Source Infoframe

Press [▲/▼] to highlight an option

Press [◀/▶] to select the option

Press [Enter] to confirm/exit the selection

Press [MENU] to exit menu

Option	Description
AVI (AVI infoframe data)	To check the source video infoFrame Packet
AUD (Audio infoframe data)	To check the source audio infoFrame Packet

9.4 Input Select

Press [▲/▼] to highlight an option

Press [◀/▶] to select the option

Press [Enter] to confirm the selection

Press [MENU] to exit menu

9.5 Audio Return

Press [▲/▼] to highlight an option

Press [◀/▶] to select the option

Press [Enter] to confirm the selection

Press [MENU] to exit menu

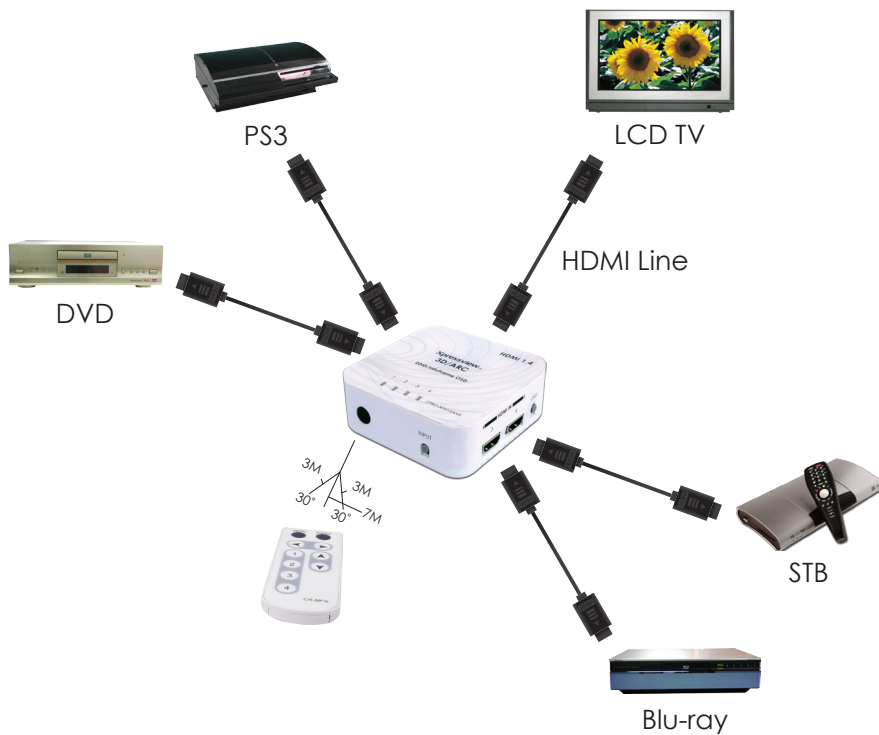
Option	Description
Audio Return	On/Off

9.6 Exit

Press [\uparrow/\downarrow] to highlight an option

Press [Enter] to confirm/exit the selection

10. Connection and Installation





Acronyms

Acronym

Complete Term

HDCP

High-bandwidth Digital content protection

HDMI

High-Definition Multimedia Interface

CEC

Consumer Electronics Control



CYPRESS TECHNOLOGY CO., LTD.

Home page: <http://www.cypress.com.tw>

20100416 MPM-CPRO3D41 GAME