CPRO-41W

HDMI 4 by 1 v1.4 with ARC Switcher

Operation Manual

CPRO-41W

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Version 1.0 October 2009

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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

Revision History

Version No	Date	Summary of Change
V1	20100407	Preliminary Release
VR02	20110323	ID Size
VR03	20110413	Power Supply Condition

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1. Introduction

This is a high performance four-input & one-output HDMI v1.4 switcher with digital audio inputs and outputs. It supports an HDCP repeater function and fast switching between any of the four 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 allows every user to easily control selection of sources and its wall mounted design, the installation is an easy and pain free process.

2. Applications

- Display 3D content
- Display HDMI v1.4 content
- Electronic retail display

3. Package Contents

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

4. System Requirements

Input source equipment with or without 3D content and HDMI connection cables.
Output HDTV's with or without 3D support and HDMI connection cables.

5. Features

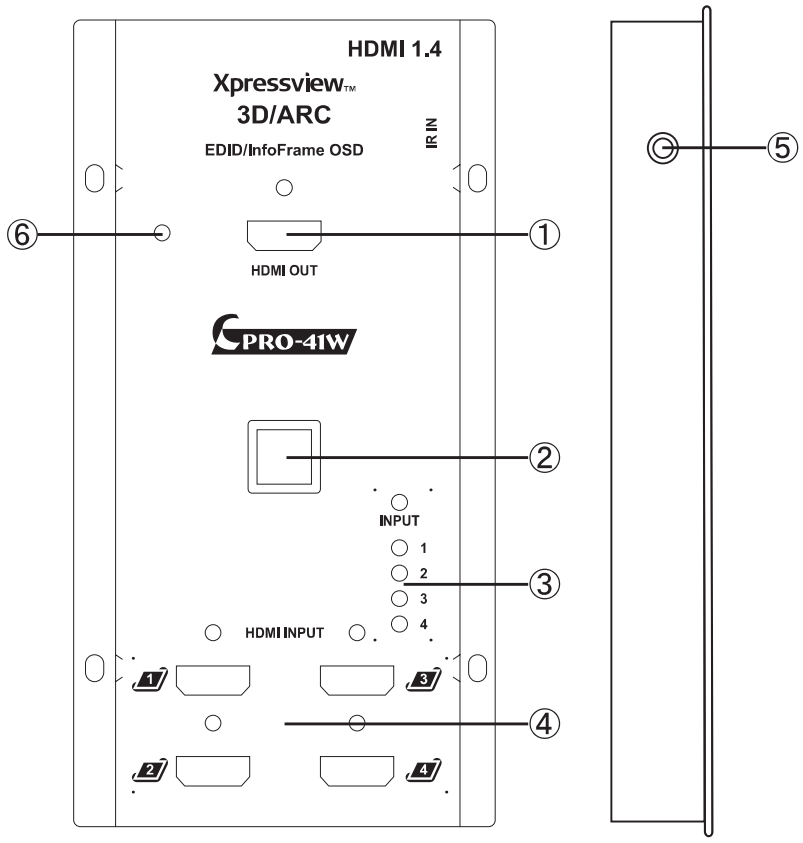
- Support multiplexed HDMI 4-input and 1-output
- HDMI 1.4, HDCP 1.4 and CEC compliant
- HDMI 1.4 support:
  - ✓ Audio Return Channel (ARC)
  - ✓ 3D TV support
  - ✓ CEC
- Fast switching on all HDMI input ports
- Character and icon based On-Screen Display (OSD)
  - ✓ System information for Software version
  - ✓ Sink EDID
  - ✓ Source infoframe
  - ✓ 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 run 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 Output Resolution	480i ~1080p 50/60, 1080p24, VGA~WUXGA
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)
IR Frequency	38KHz
Coaxial Audio Output	PCM2CH, AC3
Power Supply	5V/1A DC (US/EU standards, CE/FCC/UL certified) Or Mini USB power
ESD Protection	Human Body Model: ± 8kV (air-gap discharge) ± 4kV (contact discharge)
Dimensions (mm)	93(W) x148 (D) x 31 (H)
Weight (g)	260
Chassis Material	Aluminum
Silkscreen Color	Silver
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 **7.2 Site Panel**



① HDMI OUTPUT: This slot is where you connect an HDTV or HD display that supports or doesn't support 3D signals for displaying an input signal with a HDMI cable.

② IR sensor: This is an IR receiver window that receives IR signals from the remote control included in the package.

③ INPUT & LED: Press this button to select the desired input source, the LED will switch on according to the selection.

④ HDMI INPUT 1~3 & 4: These slots are where you connect the input source devices for sending an input signal with HDMI cables.

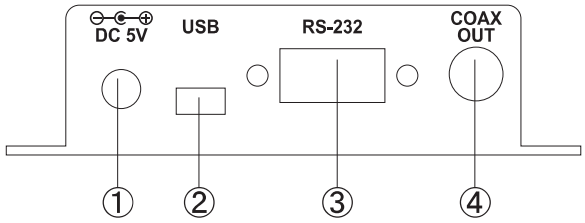
⑤ IR IN: This slot connects with the IR extender for receiving an IR signal from the remote control of this unit.

⑥ POWER LED: The LED will turn on when the power device is plugged in with power.

Note

A. This system was tested with 24AWG cables if using cables of another type, the performance of this system may vary.
B. Cable distance tested with a PS3 & 40" Samsung LED LCD TV.
C. Figures provided in this manual are for reference only, actual figures may depend on the source and display used along with the cables specifications.

7.3 Top Panel



① 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.

② USB 5V: This slot is where you can connect the mini USB cable from your PC to supply power.

Note: Power supply only support either DC5V or mini USB power.

③ RS-232: This slot is to connect with a PC or control system with D-Sub 9pin cable for RS-232 control. For detailed RS-232 commands please refer to section 9.

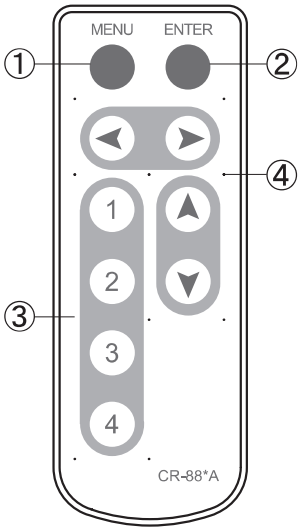
④ COAX OUT: This slot is where you connect an amplifier for sending an audio signal with coaxial cables. When audio return function is on the audio signal will be received from the output end and when the audio return function is OFF the audio signal will be received from the input source. This device supports PCM 2CH and AC3.

Note:

A. The display TV or monitor must support an audio return function and the function be must turned on in order to perform properly.
B. The display TV or monitor's HDMI input jack must connected to the one with an audio return function.

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. RS-232 Protocols

9.1 Pin Assignment

The connection between Switcher and remote controller with RS-232 modem cable.

Switcher			Remote Controller	
PIN	Definition		PIN	Definition
1	NC		1	NC
2	TxD		2	RxD
3	RxD	→	3	TxD
4	NC		4	NC
5	GND		5	GND
6	NC	←	6	NC
7	NC		7	NC
8	NC		8	NC
9	NC		9	NC

Baud Rate: 115200 bps
Data bit: 8 Bits
Parity: None
Stop Bit: 1 bit
Flow Control: None

Acronyms

A

Acronym	Complete Term
HDCP	High-bandwidth Digital content protection
HDMI	High-Definition Multimedia Interface
CEC	Consumer Electronics Control

10. OSD Menu

Press the 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

10.1 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

10.2 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

10.3 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

10.4 Input Select

Press [▲/▼] to highlight an option

Press [◀/ ▶] to select the option

Press [Enter] to confirm the selection
Press [MENU] to exit menu

10.5 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

10.6 Exit

Press [▲/▼] to highlight an option

Press [Enter] to confirm/exit the selection
Note: When the input source is with 3D signal the output image will not display the OSD screen. This is due to the IC limitation.

11. Connection and Installation

Acronyms

A

Acronym	Complete Term
HDCP	High-bandwidth Digital content protection
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CEC	Consumer Electronics Control

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20100628 MPM-CPRO41W