OR-HD88S

8 x 8 HDMI Matrix

Operation Manual

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	SUMMARY OF CHANGE
RDV1	11/11/2011	PreliMINary Release
RDV2	13/12/2011	Power Supply Change

CONTENTS

1. INTRODUCTION

The 8 x 8 HDMI Matrix is a fabulous device for organizing and distributing your HDMI signals. With 8 HDMI input ports and 8 HDMI output ports this device allows a great amount of sources and display to be used motivationally. Moreover, with plenty of control systems such as IR, RS-232 and remote control allow user for all kinds of control habit and occasion to be used. Further, the EDID control settings unlocked the information display freely present.

2. APPLICATIONS

- Video/TV wall display
- Commercial advertising and displaying
- Lecture room display and control
- Hyper market demonstration and control

3. PACKAGE CONTENTS

- 8 x8 HDMI Matrix
- 24V/6.25A DC adaptor x 1
- Remote control x 1
- Operation manual

4. SYSTEM REQUIREMENTS

Input source equipments with HDMI connection cables and output display or audio amplifier equipments with HDMI connection cables.

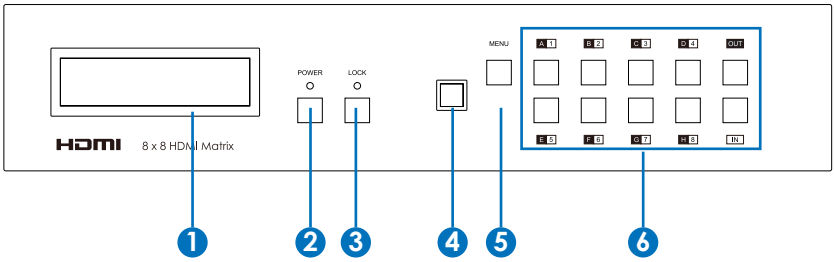
5. FEATURES

- HDMI, HDCP1.1 and DVI compliant
- Supports HDMI v1.4 features:

  √ 3D
- Supports audio sampling rate up to 192kHz
- Supports resolutions to VGA ~ WUXGA and 480i~1080p follow by output display's EDID
- Supports 3D signal display follow by display TV's EDID
- Supports HDMI input up to 15 meters with 8bits resolution or 10 meters with 12bits resolution
- Supports IR extension
- Supports RS-232, remote control and on panel control
- 2U size design

6. OPERATION CONTROLS AND FUNCTIONS

6.1 Front Panel



1 LCM

This monitor displays your setting information with each input and output selection.

2 Power button LED

Press this button to turn on the device and the green LED will illuminate when the power is on. When the LED illuminate in red it is in standby mode

3 LOCK

Press this button to lock all the buttons on the panel. To unlock, just press it again.

4 IR

This IR window accepts the remote control signal of this device only.

5 Menu

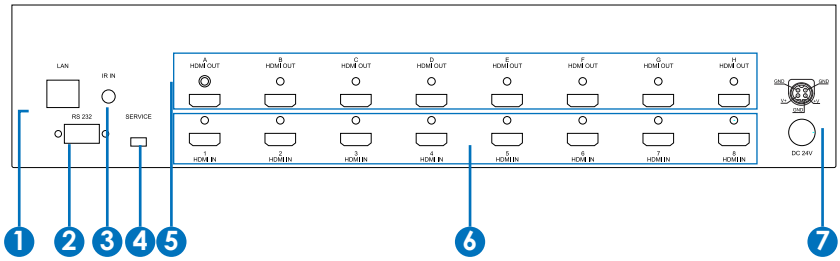
Press this button once to select EDID setting from STD (internal) 1 or TV (external) 2 then press it again to confirm the selection. Press this button every to confirm the selection.

6 1 ~8 /A ~ H & Out/In button

Press Out/In button first to select the output/input then press the number button to make the selection accordingly. For example, output A ~ D wish to select input 1 and E ~ H wish to select input 2. Press Out →A→B→C→D→In→1→Menu,

and then press Out →E→F→G→H→In→2→Menu. If the menu button is not press the selection will not be changed.

6.2 Rear Panel



1 LAN:

This slot is to connect with CAT5/6 cable from an IP router for on-line firmware updating with a website designed by the device's designer. Or may be a control terminal on-link from a designate IP address.

2 RS-232:

This slot is to connect with D-Sub 9pin cable from the PC/NB device for RS-232 control.

3 IR-In: This slot is to connect with the IR extender included in the package for IR signal receiving from the remote control of this device.

4 Service: This slot is to connect with USB cable for manufacturers' firmware update only.

5 HDMI OUT A~H: These slots are to connect with display or monitor with HDMI cables for output image display.

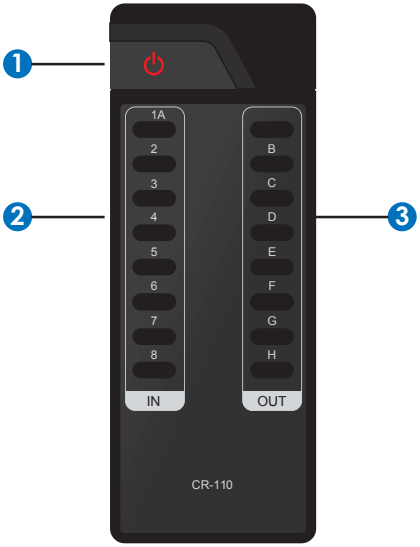
6 HDMI IN 1~8: These slots are to connect with input source equipment such as Blu-ray player or Set-Up-Box with HDMI cable or DVI to HDMI converter cable for input signal sending.

7 DC24V: This slot is to plug the power cord with adaptor included in the package and then connect them with AC wall outlet for power supply.

6.3 Side Panel

1 Ventilator: These are fan ventilator area, DO NOT block these area or cover it with any object.

7. REMOTE CONTROL



1. **Power:**

   Press this button to switch on the device or set it to standby mode.

2. **IN:**

   Input ports selection 1~8.

3. **OUT:**

   Output ports selection A~H.

7.1 RS-232 Protocols

Pin Assignment

OR-HD88S			Remote Control Console	
PIN	Assignment		PIN	Assignment
1	NC		1	NC
2	TX		2	RX
3	RX	→	3	TX
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: 19200bps

Data bit: 8 bits

Parity: None

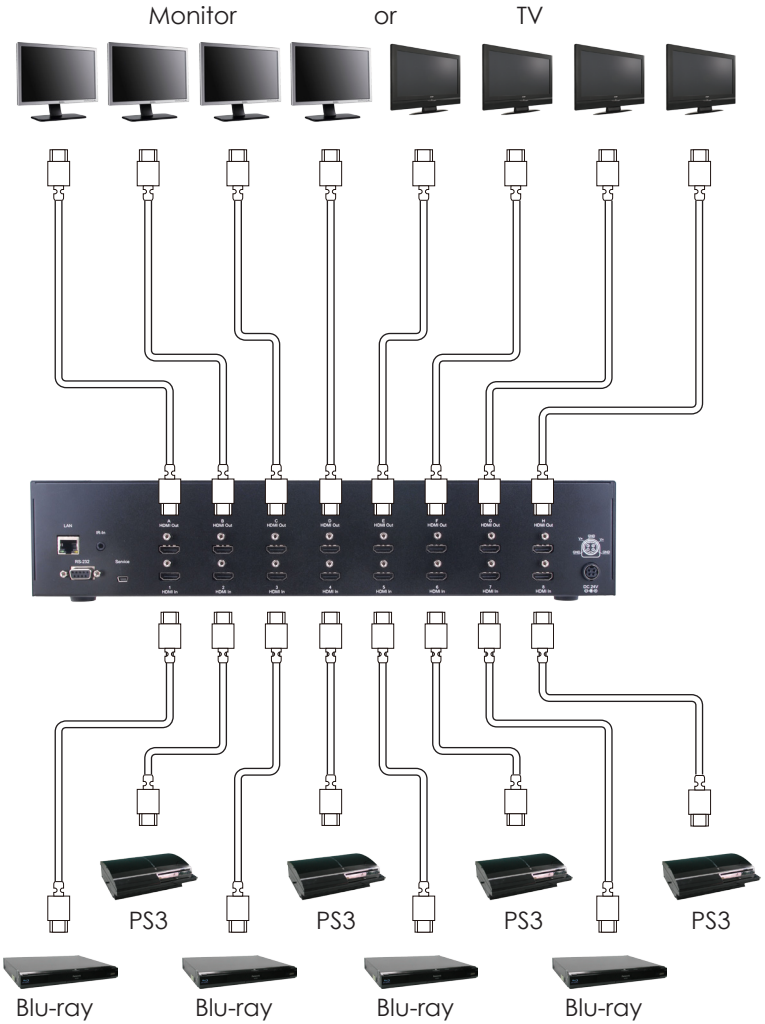
Flow Control: None

Stop Bit: 1

7.2 RS-232 Commands

Command (Case Sensitive)	Description
A1~A8	Switch output A to 1~8
B1~B8	Switch output B to 1~8
C1~C8	Switch output C to 1~8
D1~D8	SWITCH OUTPUT D TO 1~8
E1~E8	SWITCH OUTPUT E TO 1~8
F1~F8	SWITCH OUTPUT F TO 1~8
G1~G8	SWITCH OUTPUT G TO 1~8
H1~H8	SWITCH OUTPUT H TO 1~8
ABCD...1~ABCD...8	SWITCH OUTPUT ABCD... TO 1~8
P0	POWER OFF
P1	POWER ON
I1~I8	SWITCH ALL THE OUTPUT TO 1~8

8. CONNECTION AND INSTALLATION



9. SPECIFICATIONS

TMDS Clock Frequency	2.25 Gbps
Input Ports	8 x HDMI, 1 x IR, 1 x RS-232, 1 x USB B type(for firmware update only), 1 x RJ-45 (LAN)
Output Ports	8 x HDMI
ESD Protection	Human body model: ± 8kV (Air-gap discharge) ± 4kV (Contact discharge)
Power Supply	24V/6.25A DC (US/EU standards, CE/FCC/UL certified)
Dimensions (mm)	438(W) x 255(D) x 93(H)
Weight(g)	4278
Chassis Material	Metal
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(W)	

10. ACRONYMS

ACRONYM	COMPLETE TERM
DTS	Digital Theater System
DVI	Digital Visual Interface
EDID	Extended Display Identification Data
HDCP	High-bandwidth Digital Content Protection
HDMI	High-Definition Multimedia Interface
HDTV	High-Definition Television
LCM	Liquid Crystal Monitor
USB	Universal Serial Bus
VGA	Video Graphics Array
WUXGA	Wide Ultra Extended Graphics Array