OMX-07HMHM0005 MANUAL

4K60HZ HDR 4X4 HDMI MATRIX SWITCHER

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Safety Precautions:

Please read all instructions before installing or operating this equipment and connecting the power supply.

Please keep the following in mind as you unpack and install the unit:

1. To prevent fire or shock hazards, do not expose this equipment to high humidity and/or dust. Do not use in an unprotected outdoor installation nor any area classified as overly damp or wet.

2. The temperature for installation should be kept between -4°F and 140°F (-20°C and 60°C). Avoid direct sunlight exposure or extreme temperature changes over a short period of time.

3. Do not disassemble or place the unit on an unstable base.

4. Do not drop the unit and avoid heavy impacts.

5. This unit should not be permanently installed unless proper ventilation is provided. Any enclosure openings must not be blocked or covered as they protect the unit from overheating.

6. Before cleaning, turn off the power and unplug the unit from all connections. Use a damp cloth. Do not use liquid cleaners or aerosol cleaners.

7. Do not overload outlets and extension cords, as this may result in a risk of fire or electric shock.

8. Never push objects of any kind, including liquids, into this unit through openings as they may touch dangerous voltage points or short-out parts that could result in a fire or electric shock.

9. Do not attempt to open or service this unit yourself; opening or removing covers may expose you to dangerous voltage and other hazards.

10. The unit does not contain user-serviceable parts. Contact your authorized dealer or an authorized repair service company if it requires service.

Introduction:

Ocean Matrix's OMX-07HMHM0005 4x4 HDMI matrix switcher supports resolutions up to 4K60Hz and is backward compatible. This unit features multiple switching options, including IR remote control, front panel selection buttons, and RS-232 control. The OMX-07HMHM0005 supports automatic downscaling for any two of the four HDMI outputs and has 16 built-in EDID settings to ensure a reliable signal connection with various equipment. This unit is ideal for security monitoring, education, training, exhibition, and broadcast.

In the Box:

- 1 x OMX-07HMHM0005 4x4 HDMI Matrix Switcher
- 1 x Power Adapter 5V/1A
- 1 x Remote Control
- 2 x Mounting Ears
- 6 x Mounting Screws
- 2 x Grounding Screws
- 1 x Terminal Block

Features:

- 4 HDMI inputs and 4 HDMI outputs
- Supports up to 4096x2160@60Hz resolution and is backward compatible
- HDR10 supported
- Multiple switching options: IR remote control, buttons, RS-232
- Built-in EDID Management
- Any two of the four HDMI outputs support Auto Down-scaling
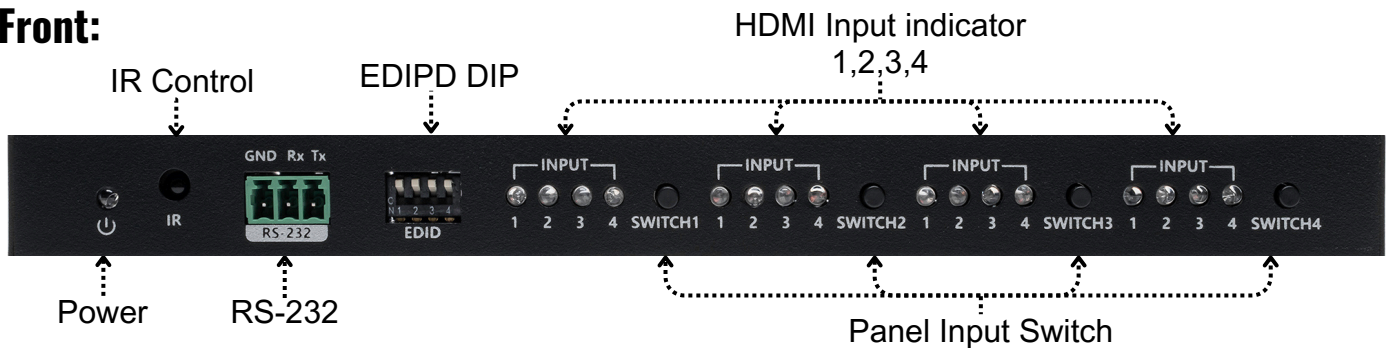- Lightning, surge, and ESD protection

Specifications:

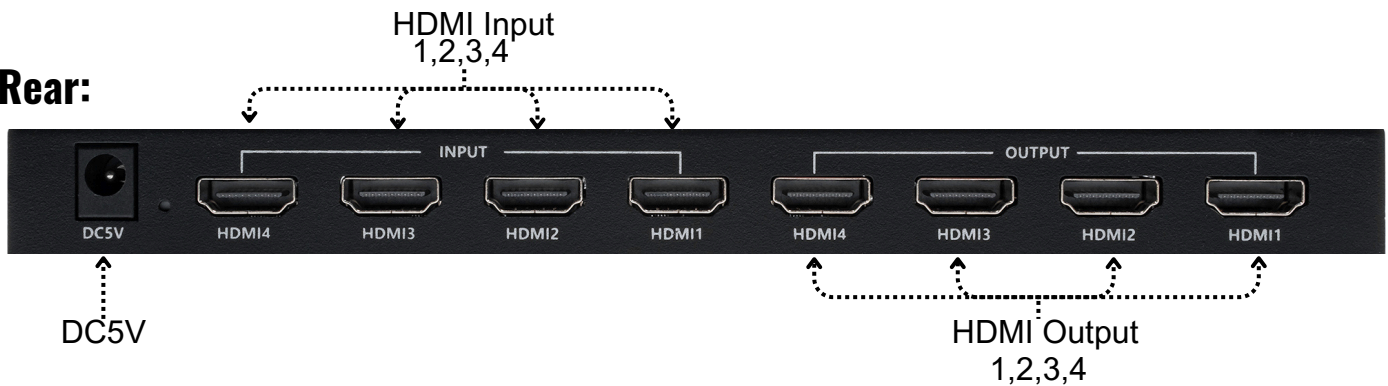| Items	Description
HDMI Version	HDMI 2.0 (HDR, YUV 4:4:4)
	Compatible with HDCP 2.2, HDCP 1.4
HDMI Interface	4 HDMI Input, 4 HDMI Output
Transmission Rate	18Gbps
Bandwidth	600MHz
Resolution	480i@60Hz / 480p@60Hz / 576i@50Hz / 576p@50Hz/ 720p@50/60Hz/1080i@50/60Hz / 1080p@50/60Hz / 3840x2160@24/25/30/60Hz /4096x2160@24/25/30/60Hz
Audio Format	LPCM7.1 / DTS-HD / DTS-AUDIO / DOLBY DIGITAL PLUS / DOLBY TRUEHD 7.1 / DOLBY DIGITAL 7.1CH / DOLBY ATMOS
RS-232	3 Pin (GND/Rx/Tx), BAUD Rate 9600
Voltage	DC5V/1A
Power Consumption	<4W
Working Temperature	-4°F – 140°F (-20°C – 60°C)
Storage Temperature	-22°F – 158°F (-30°C – 70°C)
Humidity	0-90%RH (No Condensation)
Housing	Steel
Color	Black
Weight	0.8063 lbs (367g)
Dimensions (LxWxH)	8.375 x 3.162 x 0.845"
Protection	ESD Protection 1a Contact discharge level 2 (±4KV) 1b Air discharge level 3 (±8KV) Implementation of the standard: IEC61000-4-2
	Lighting protection, surge protection

Installation Requirements:

1. Source device: Signal source with HDMI output interface, such as PS4, TV box, PC, etc.
2. Display device: 4K or 1080P display device with HDMI input interface, such as TV or projector.

Panel Description:

Front:

HDMI Input indicator
1,2,3,4

IR Control   EDIPD DIP

Power   RS-232

Panel Input Switch

HDMI Input
1,2,3,4

Rear:

DC5V

HDMI Output
1,2,3,4

Remote Control:

CR2025 Battery included

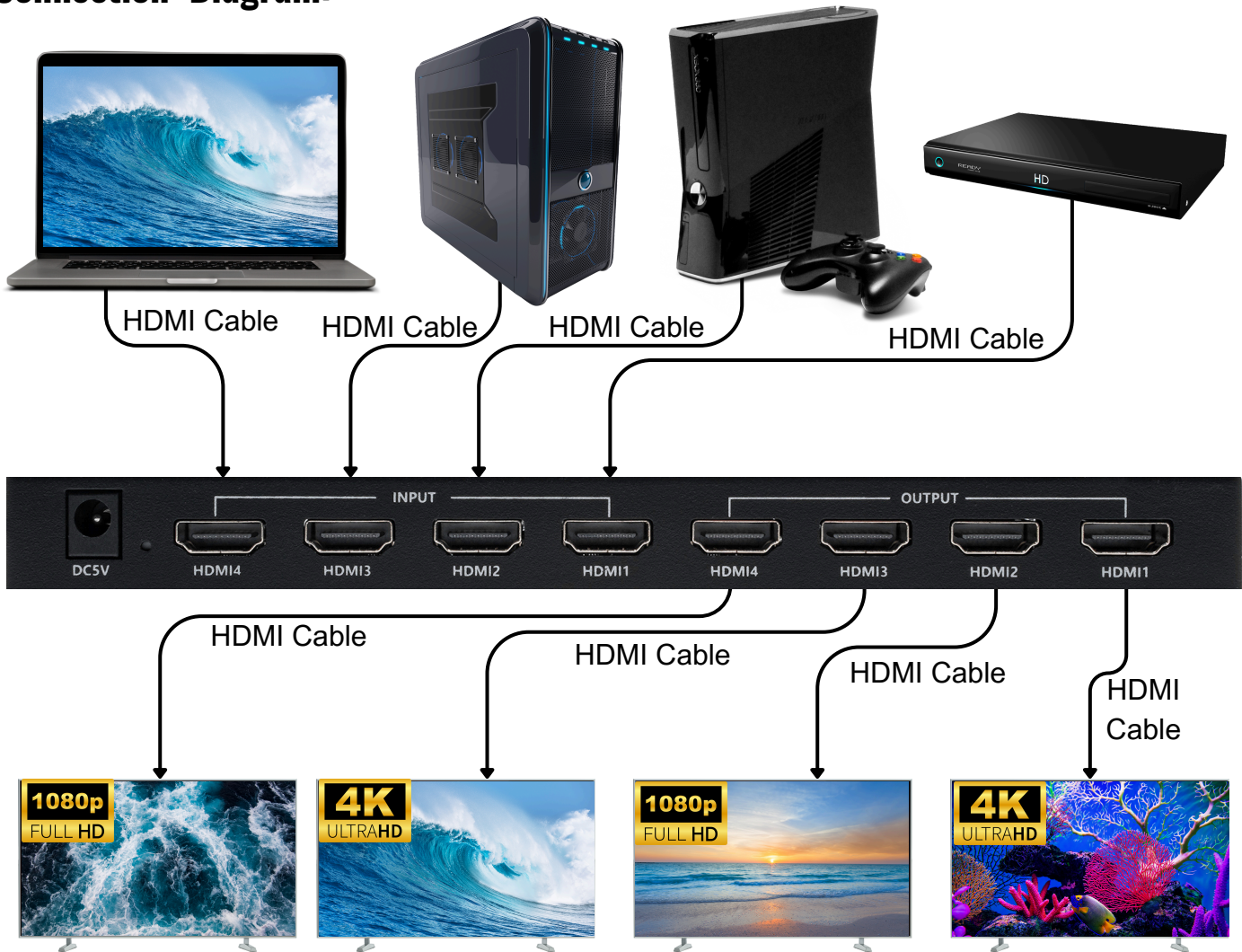Use the "<" and ">" buttons to select between input and output.

Use the numerical buttons "1-4" to select the corresponding HDMI port.

Installation and Connection:
Connection Instructions:
1. Connect the source devices to the HDMI input ports with HDMI cables
2. Connect the display devices to the HDMI output ports with HDMI cables
3. Power on the Devices to get started

Connection Diagram:

Auto Down-scaling:
The OMX-07HMHM0005 only supports downscaling on any two of the four HDMI outputs. The OMX-07HMHM0005 auto-senses the ports and will detect the first two connected displays that can support or would need downscaling.

NOTE: Only the first (2) connected displays will downscale, regardless of how many displays are connected.

Installation and Connection:
RS-232 Control:

Note: RS-232 works with Termite control software. Functionality not guaranteed with other software.
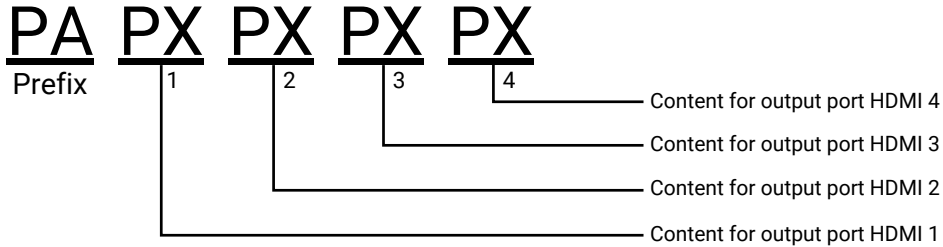
RS-232 Control:
Baud rate:9600
Data bits: 8
Stop Character: 1
Parity: none

	/	HDMI1 input	HDMI2 input	HDMI3 input	HDMI4 input
Operation mode one	**HDMI1 output**	PS11R	PS12R	PS13R	PS14R
	HDMI2 output	PS21R	PS22R	PS223R	PS24R
	HDMI3 output	PS31R	PS32R	PS33R	PS34R
	HDMI4 output	PS41R	PS42R	PS43R	PS44R
	HDMI1/2/3/4 output	PA1R	PA2R	PA3R	PA4R
Operation mode two	PA PX PX PX PX Prefix 1 2 3 4 Content for output port HDMI 4 Content for output port HDMI 3 Content for output port HDMI 2 Content for output port HDMI 1 PAPXPXPXPX PA is the command prefix, and the "X" of PX can be any number from 1 to 4. P1 represents HDMI 1 source content for output, P2 represents HDMI 2 source content for output, and so on to P4. *E.g. PAP3P1P4P2 represents:* *Output port HDMI 1 outputs content from input port HDMI 3* *Output port HDMI 1 outputs content from input port HDMI 1* *Output port HDMI 1 outputs content from input port HDMI 4* *Output port HDMI 1 outputs content from input port HDMI 2*				
Return Value	PAXXXR is the command to read the status of all interfaces; after sending the command, OKPXPXPXPX is displayed, where X is 1 to 4; if the command sent is incorrect, ERR appears.				
Reset	Device restart				
Recover	Restore device factory setting				
BaudXX	Set baud rate value: 9600 (default), 19200				

Installation and Connection:
EDID Management:

The product has 16 built-in EDID states, which can be set to switch the output resolution through the DIP switch. The DIP Switch up means "1" and down means "0".

Resolution Information	DIP Switch Status			
	1	2	3	4
4K@60Hz 2CH	0	0	0	0
4K@60Hz 5.1CH	1	0	0	0
4K@60Hz 7.1CH	0	1	0	0
4K@60Hz HDR 7.1CH	0	0	1	0
4K@30Hz 2CH	0	0	0	1
4K@30Hz 5.1CH	1	1	0	0
4K@30Hz 7.1CH	1	0	1	0
4K@30Hz HDR 7.1CH	1	0	0	1
1080p@60Hz 2CH	0	1	1	0
1080p@60Hz 5.1CH	0	1	0	1
1080p@60Hz 7.1CH	0	0	1	1
1080i@60Hz 2CH	1	1	1	0
1080i@60Hz 5.1CH	1	1	0	1
1080i@60Hz 7.1CH	1	0	1	1
1080i@60Hz HDR 7.1CH	0	1	1	1
1) Read only the EDID that was first connected to the output 2)Connect 4 Outputs at the same time, only read the EDID of HDMI 1 output	1	1	1	1

FAQ:

Q: No Video or audio signal output on the displays?

A:1) Please ensure the matrix switch is connected correctly and powered on.

   2) Please ensure all HDMI cables are connected correctly.

   3) Please ensure the input channel of displays is correct.

Q: Is the picture unstable?

A: 1) Please ensure all HDMI Cables are connected properly.

   2)To check the picture quality, connect the source device directly to the display device or change to another source device.

   3) Please use a high-quality HDMI standard cable for an HDMI 4K signal input.

Support & Warranty:

Ocean Matrix products are warrantied for one (1) year from the date of purchase, with parts and labor included. Our objective is to maintain engineering excellence and an R&D laboratory dedicated to the latest technology compliance testing. We strive for exceptional quality every day to ensure your confidence in our products and our commitment to your success.

This warranty is limited to defects or failures in hardware workmanship, materials, or functionality and does not cover customer damage, abuse, or unauthorized modification. If this product fails or does not perform as warranted, your recourse shall be repair or replacement. Under no condition shall Ocean Matrix be liable for any damage incurred through the use of this product. This damage includes but is not limited to lost profits, lost savings, or incidental or consequential damage arising from the use of or inability to use this product.

Ocean Matrix specifically disclaims all other warranties, expressed or implied, and the installation or use of this product shall be deemed as an acceptance of these terms by the user. All warranty claims must be submitted with proof of purchase from an authorized distributor or reseller.

Ocean Matrix reserves the right to repair or replace items identified as within warranty. To determine warranty product failures, all warranty repairs must be returned freight prepaid, insured, and inspected before any in-warranty or out-of-warranty repairs occur.