

OCTAVA™

4x2 HD Matrix + 7.1 Audio

Model: HDMXA71

Installation Guide

Rev.i

Safety Information:



Electrical safety

- Use only the power supplies and the AC power cord that were included with your product.

Use of other power supplies could damage the product or cause shock, or other hazards

- For Indoor Use only
- Avoid excessive humidity, or temperature extremes
- Do not place the product in any area where it may become wet.
- Unplug the power supplies and the AC power cord before cleaning, or removing any panels for servicing.
- When adding or removing devices to or from the product, disconnect all power cables from the existing product before you add a device.

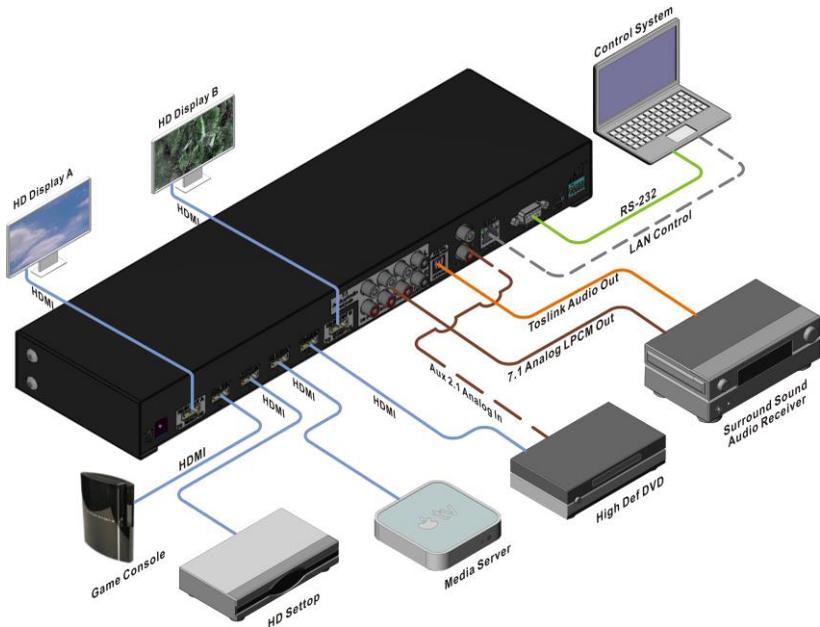
Operation safety

- Install the product in a well ventilated location. Keep ventilation opening free of obstructions.
- Don't block any ventilation openings on the unit.
- Avoid dust, humidity, and temperature extremes.
- Do not place the product in any area where it may become wet.

If you are unsure, please contact your authorized service center.

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*Note 1: Analog output supports only LPCM audio format. Unit does NOT decode Dolby or DTS.

Note 2: You must set your PS3, or source to LPCM mode in order to use the Analog Audio Output from HDMI.

Note 3: Aux Input port allows connecting a 2nd analog audio source and "loop thru " to the Analog Audio Output. Does not convert Analog Audio to HDMI .

Application Diagram

Installation:

- 1) Connect the Display(s) to the HDMI OUT ports
- 2) Connect the HDMI source to the HDMI INPUT
- 3) Connect audio cables (optional)
- 4) Connect the DC power adapter

Description:

The HDMXA71 video matrix switch enables video switching of 4 video sources to 2 displays up to 16 viewing combinations. The HDMXA71 also includes both analog and optical audio output for integration with an existing audio system.

The Optical audio output supports both PCM and Bitstream audio formats. LPCM audio is supported thru the RCA analog audio outputs(x8). Perfect for systems with LPCM support such as PS3. An Auxiliary (2ch) audio Loop thru port is included to connect to a second Analog (2ch) source.

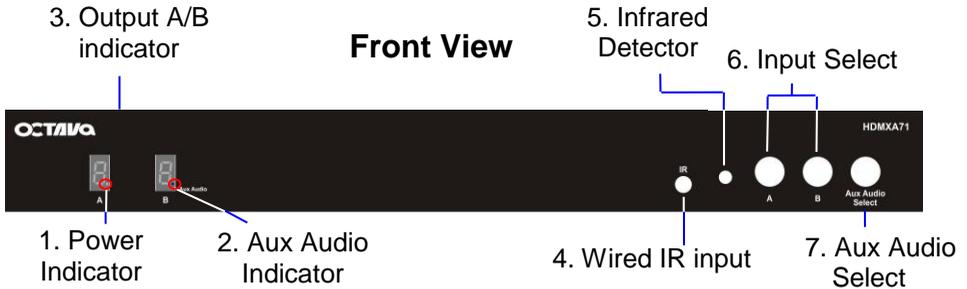
Features:

- **1080P, 4k2k @30 Hz**
- 4 HDMI inputs, 2 HDMI outputs
- Analog audio output (8ch.) -*Note 1,2*
- Aux Analog Input port (8ch.)- *Note 3.*
- Optical Toslink Digital Audio Output-2CH , Bitstream
- Supports high resolution video 480 P, 720 I/P, 1080 I/P
- Seamless integration with your existing Audio Receiver.
- Remote Control (IR) included. Discrete Code allows direct channel control.
- 1RU rack mountable.
- **Wired IR** port for In-cabinet installations.
- **RS232** port for PC or Control System operation.
- **USB service port for EDID or code customization**
- **LAN Telnet port**

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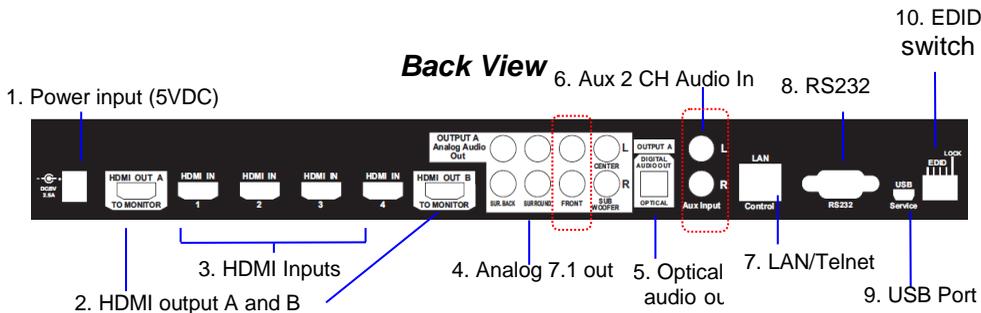


	Function	
1	Power Indicator	
2	Aux Audio Input Indicator	LED is illuminated if the Aux Input is selected (loop thru mode)
3	Output A/B Indicator	Displays the Input selected
4	Wired IR input	connect Octava supplied IR Receiver Extension cable (optional) for hidden cabinet installs requiring line of sight for IR control.
5	IR detector	Senses IR from remote control
6	Input select button	Press to switch inputs for output A and B
7	Aux Audio Select	Press to change the Analog Output Mode between : Aux Input or HDMI mode

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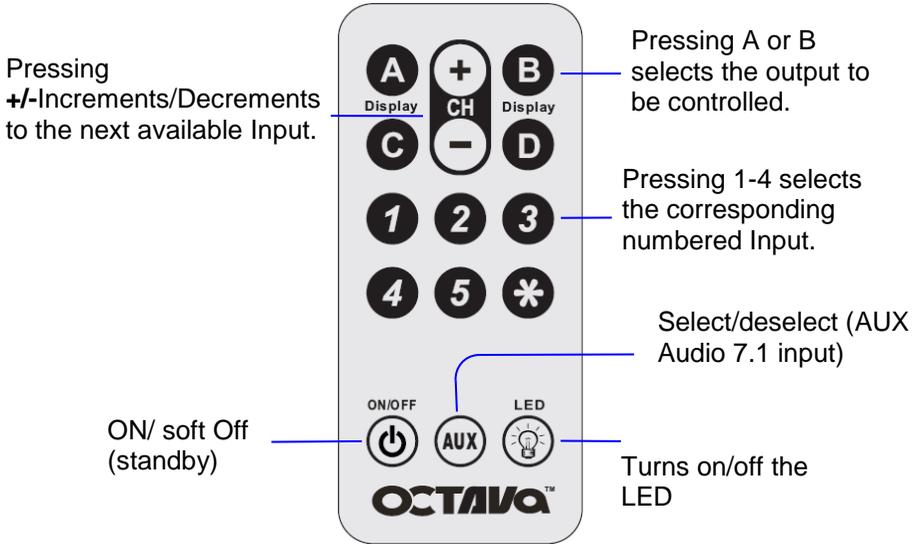
	Back Side Connectors	Function	
1	Power In	5V DC	
2	HDMI Outputs A/B	Connect High Speed HDMI cables to AVR or Display device.	
3	HDMI Inputs	Connect High Speed HDMI cables to Source device.	
4	7.1 Analog Audio Output	Connect to Audio Amp/receiver.	Note 1,2
	HDMI Mode	Analog Audio Output is from the selected HDMI source.	Note 1,2
	Aux Input Mode (Loop Thru)	Analog Audio Output is from the (see 6) connected analog audio connection.	Note 3.
		AUX audio indicator led will illuminate when Aux input Mode (Loop thru) is selected	
5	Optical Digital Output	Audio will play the Out A source selection.	
6	Aux 2ch audio input	- Routes the 2 CH Analog Audio Input to Front L/R Analog Audio Output. Routes from 6 to 4.	Note 3.
7	LAN/Telnet	For LAN Control port for controlling the matrix via Telnet Commands	
8	RS-232	For external control of Matrix via PC or 3rd party Control system.	
9	USB Port	for custom EDID/ code updates	
10	EDID Mode Switch	Allows selection of various EDIDs	

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Remote Control Guide:



Button	Function	Notes
+, -	Increments/Decrements to the next available Input	
1,2,3,4	Selects the corresponding numbered Input	
	Turns ON/OFF the LED.	
	Turns ON/ soft Off(standby) the unit	
Other	Not used	

Octava's Remote control uses discrete code so can be easily integrated with most Universal Remote Controls such as Logitech's Harmony.

Basic Quick Start:

Use the remote control to select Output A or B Display that you wish to control followed by the Input that you wish to watch.

For example:

-Pressing **Display B, “2”** will switch Input 2 to Out B.

-To connect **DISPLAY A to IN1 and DISPLAY B to IN3** you simply follow this sequence

Step 1) Display A, 1 (this will set Display A to Input 1)

Step 2) Display B, 3 (this will set Display B to Input 3)

Here are some more examples:

Output Selection (Step 1)	Input Selection (Step2)	Result
DISPLAY A	“2”	Display A switches to Input 2
DISPLAY B	“1”	Display B switches to Input 1
DISPLAY A	“+”	Display A increments to next available Input
DISPLAY B	“-”	Display B decrements to next available Input

Control Port:

The Octava HD HDMXA71 can be easily integrated with 3rd Party control systems via: 1. RS-232 or 2. LAN/Telnet control port.

The default mode is control with RS-232. To change control port, see the following table.

Control Port Selection	
	Press A and Aux Audio Select button simultaneously to toggle the control port between RS-232 or LAN/TELNET
 RS-232 Mode	 LAN/TELNET Mode

RS232 Control Commands:

RS-232 protocol	
Baud Rate	9600
Data Bits	8
Parity Check	none
Stop Bits	1
Flow control	none

Controlling the HDMXA71 via RS232 can be done by sending a series of commands per the **RS232 Command Table**.

Basic controls					
Note: The commands are in HEX. No spaces between HEX codes. "0x" denotes HEX. No need to enter "0x"					
	HEX CODE				
Port Status	0x02	0x30	0x30	0x31	0x03
Turn ON LED	0x02	0x30	0x30	0x33	0x03
Turn OFF LED	0x02	0x30	0x30	0x34	0x03
Turn ON Power	0x02	0x30	0x30	0x35	0x03
Turn OFF Power	0x02	0x30	0x30	0x36	0x03

Example:

Send Command:

02 30 30 34 03 in Hex
To turn off LED

Switching Commands					
Note: The commands are in HEX. No spaces between HEX codes. "0x" denotes HEX. No need to enter "0x"					
Output A Switching Commands	HEX CODE				
Select OUT A to Input port 1	0x02	0x32	0x31	0x31	0x03
Select OUT A to Input port 2	0x02	0x32	0x31	0x32	0x03
Select OUT A to Input port 3	0x02	0x32	0x31	0x33	0x03
Select OUT A to Input port 4	0x02	0x32	0x31	0x34	0x03
Output B Switching Commands	HEX CODE				
Select OUT B to Input port 1	0x02	0x32	0x32	0x31	0x03
Select OUT B to Input port 2	0x02	0x32	0x32	0x32	0x03
Select OUT B to Input port 3	0x02	0x32	0x32	0x33	0x03
Select OUT B to Input port 4	0x02	0x32	0x32	0x34	0x03

Switching Commands					
Note: The commands are in HEX. No spaces between HEX codes. "0x" denotes HEX. No need to enter "0x"					
	HEX CODE				
Aux Analog ON/ HDMI 7.1 Audio OFF	0x02	0x39	0x30	0x31	0x03
Aux Analog OFF / HDMI 7.1 Audio ON	0x02	0x39	0x30	0x32	0x03

LAN/ Telnet IP control port:

The Octava HD HDMXA71 can be easily integrated with 3rd Party control systems via LAN/Telnet control port. The following shows the control protocol:

Telnet Settings	
IP Address	192.168.1.254
Login	octava
Password	octava
Basic controls	
	Command
Turn ON LED	led=on
Turn OFF LED	led=off
Power ON	power=on
Power OFF	power=off
Sleep ON	
Sleep OFF	
Switching Commands	
Output A Switching Commands	Command
Select OUT A to Input port 1	out:a=1
Select OUT A to Input port 2	out:a=2
Select OUT A to Input port 3	out:a=3
Select OUT A to Input port 4	out:a=4
Output B Switching Commands	
Select OUT B to Input port 1	out:b=1
Select OUT B to Input port 2	out:b=2
Select OUT B to Input port 3	out:b=3
Select OUT B to Input port 4	out:b=4
Select ALL Output Switching Commands	
Select ALL Outputs(A-B) to Input port 1	out:all=1
Select ALL Outputs(A-B) to Input port 2	out:all=2
Select ALL Outputs(A-B) to Input port 3	out:all=3
Select ALL Outputs(A-B) to Input port 4	out:all=4
Audio	
L/R Audio Output from HDMI (default)	auxaudio=off
L/R Audio Output from Aux Input	auxaudio=on

<p>IP Address (dhcp)</p>	<p>If the LAN / Telnet port is connected through a router, check the "device list" of the router. Search for the MAC address of the matrix . The assigned IP address will be indicated in the "device list" next to the MAC address. The MAC address of the matrix is labeled on back of unit</p>
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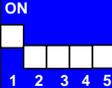
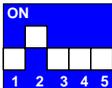
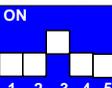
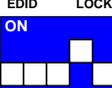
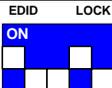
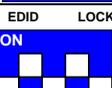
EDID Configuration:

The HDMXA71 pre-programmed EDID table is listed below

In addition, alternative or customized EDID can be downloaded via the USB port for optimum integration into your system.

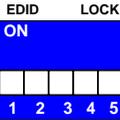
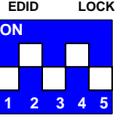
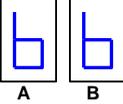
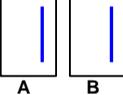
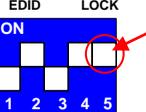
EDID switch position 1-4 selects the mode

EDID switch position 5 is for *program* mode or *LOCKED* mode.(program mode is shown)

Mode	Video	Audio	Settings
1(default)	1080P	2CH PCM	<div style="text-align: center;">EDID LOCK</div> <div style="text-align: center;">ON</div>  <div style="text-align: center;">1 2 3 4 5</div>
2	1080P	2.0/5.1 /7.1 LPCM +DD/DTS5.1	<div style="text-align: center;">EDID LOCK</div> <div style="text-align: center;">ON</div>  <div style="text-align: center;">1 2 3 4 5</div>
3	1080i	2CH PCM	<div style="text-align: center;">EDID LOCK</div> <div style="text-align: center;">ON</div>  <div style="text-align: center;">1 2 3 4 5</div>
4	4k	2CH PCM	<div style="text-align: center;">EDID LOCK</div> <div style="text-align: center;">ON</div>  <div style="text-align: center;">1 2 3 4 5</div>
5	4K	2CH PCM +DD/DTS5.1	<div style="text-align: center;">EDID LOCK</div> <div style="text-align: center;">ON</div>  <div style="text-align: center;">1 2 3 4 5</div>
6	Clone EDID of device connected to Output A		<div style="text-align: center;">EDID LOCK</div> <div style="text-align: center;">ON</div>  <div style="text-align: center;">1 2 3 4 5</div>

Changing EDID mode:

It is recommended to keep the EDID in the factory default MODE1. If necessary, you may set to different EDID mode by following these instructions.

Step	Video	Reference	Note
1	Unplug all cables and the power from the HDMXA71		
2	Set the DIP switch 1-5 to the down position as shown		
3	Refer to the EDID Table (page 14). Set the DIP switches to the EDID you wish to program to. (Mode 6 shown as example)		Mode 6 shown as example
4	Plug in the 5V Power		
5	Verify LED is indicating the EDID mode selected to program. (Mode 6 shown as example)		Mode 6 shown as example
4	Press the A button to start programming.		
5	The LED will count from 1-99		
6	Wait until LED completes counting to 99. When LED shows "1 1" programming is completed.		
7	Set Switch #5 to the LOCK position as shown.		
8	Connect all video sources and displays to Matrix.		
9	Re-power the Matrix. DONE!		

USB Service Port:

The HDMXA71 USB port allows the unit to update EDID or functionality.

Please visit our support page

<https://octavainc.com/support%20and%20updates.html#HDMXA71ip>

**If you are unsure or need assistance, please contact us
at: info.octavainc.com**

1 RU Rack mount:

The Octava HDMXA71 can be installed in a 1 RU rack by simply installing the rack mounts included.



Disabling /Enabling Front Panel IR Remote Receiver:

To disable the front panel IR remote receiver-insert the plastic plug into the IR jack as shown.



Front panel IR receiver -disabled

Warranty

Octava warrants the equipment purchased to be free from defects in material and workmanship under normal use and service for a period of 1 year. In the event applicable law imposes any implied warranties, the implied warranty period is limited to 1 year from the date of receipt. If Octava's equipment fails because of defects (1) year from the date of receipt, Octava will at its option, A) repair or replace the equipment, or B) request return of equipment for refund of the price paid for the product provided that the equipment has not been subjected to mechanical, electrical or other abuse or modifications. Proof of sale required to claim warranty.

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Description	Specifications
Model	HDMXA71
HDMI Inputs	4
HDMI Outputs	2
Video Resolution	480P, 720i/P, 1080i/P, 4k2k@30 Hz
Optical Toslink Digital Audio Output	1 2CH PCM, Bit Stream
Analog Audio Output	1 (8ch.) Supports only LPCM audio format. Unit does NOT decode Dolby or DTS.
Aux Analog Audio Input (for loop thru /bypass mode)	1 (2ch.) Aux Input port allows connecting a 2nd analog audio source and "loop thru " to the Analog Audio Output. Does not convert Analog Audio to HDMI
RS-232	1
LAN / TELNET Control	1 (RJ-45)
USB Service Port	1
Dimension	15.07 x 4.12 x 1.67 inch (382.9 x 104.7 x 42.3 mm)
DC adapter (included)	5VDC, 2.5A
Rack mount capable	1RU, Rack mounts included
Remote control (IR)	Infrared, discrete code.

For Questions and support:

Email: info@octavainc.com

URL: www.octavainc.com

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