

iMatrix

8x8 HDMI 2.0 Matrix with Audio Matrix/ Downscaling/

AOC Supported

Datasheet Model: H88AM





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Version: H88AM_2021V1.0 www.infobitav.com info@infobitav.com

1. Introduction

The H88AM is a professional 8x8 HDMI 2.0 Matrix Switcher with Audio Matrix. It includes 8 HDMI inputs, 8 HDMI outputs and the last four outputs with down-scaling function, which is designed for switching four HDMI2.0 and HDCP2.3 compliant signals. It also features 8 SPDIF and 8 analog audio outputs for audio matrix.

The matrix switcher features comprehensive EDID management and advanced HDCP handing to ensure maximum functionality with a wide range of video sources.

The matrix switcher not only supports bi-directional IR, RS232 extension but also has IR, RS232, and TCP/IP control options.

1.1 Features

- 8x8 HDMI 2.0 Matrix Switcher.
- Supports 4K/60 4:4:4, HDR, HDCP2.3 compliant.
- Audio Matrix, audio out can be de-embedded from arbitrary input or output.
- Individual volume adjustment on each L+R output.
- Supports 4K to 1080p down-scaling up to 4 outputs.
- HDMI out provides 2.5W to power Active Optical Cable (AOC).
- HDMI Output support up to 5V500mA for AOC cable
- Controllable by front panel, IR, RS232 and TCP/IP.

1.2 Package List

- 1x H88AM
- 6x Screws
- 1x RS232 cable (3-pin to DB9)
- 1x IR remote
- 1x User manual
- 2x Mounting ears
- 4x Plastic cushions
- 1x IR receiver
- 1x Power adaptor (DC 24V 2.71A)

Note: Please contact your distributor immediately if any damage or defect in the components is found.

2. Specification

Video Input (8) HDMI Input Connector (8) Type-A female HDMI HDMI Input Resolution Up to 4K@60Hz 4:4:4, HDR Video Output (8) HDMI Output Connector (8) Type-A female HDMI HDMI Output Resolution Up to 4K@60Hz 4:4:4, HDR10 and Dolby Vision HDMI Output Supports up to 5V500mA for AoC cable HDMI Version Up to 2.0 HDMI Audio Signal LPCM 7.1 audio, Dolby Atmos®, Dolby® TrueHD, Dolby Digital® Plus, DTS:X™, and DTS-HD® Master Audio™ pass-through. Digital Audio Output Output (8) Digital SPDIF audio Output Connector (8) Toslink connector Digital SPDIF Audio Format Supports PCM, Dolby Digital, DTS, DTS-HD Frequency Response 20Hz – 20KHz, ±1dB Max Output Level ± 0.05dBFS THD+N < 0.05%, 20 Hz – 20 KHz bandwidth, 1 kHz sine at 0dBFS level (or max level) SNR > 90dB, 20Hz-20KHz bandwidth Crosstalk Isolation < -70 dB, 10 kHz sine at 0 dBFS level (or max level before clipping) Noise -90dB Analog Audio Output (8) Analog L/R Audio Output Connector (8) L&R (RCA) Digital SPDIF Audio Format	Video		
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Output load capability 1k ohm and higher (supports 10x paralleled 10k ohm loads)	Crosstalk Isolation	< -80 dB, 10 kHz sine at 0dBFS level (or max level before clipping)	
	L-R level deviation	< 0.05 dB, 1 kHz sine at 0dBFS level (or max level before clipping)	
Noise -80dB	Output load capability	1k ohm and higher (supports 10x paralleled 10k ohm loads)	
	Noise	-80dB	

Control	
Control port	(1) FIRWARE, (1) IR EYE, (1) RS232, (1) TCP/IP,
Control Connector	(1) USB-A, (1) 3.5mm jack, (1) 3-pin terminal block, (1) RJ45
General	
Transmission Distance	4K/60Hz/444 5m,4K/60Hz/420 10m,1080P 15m
Bandwidth	18Gbps
Operation Temperature	-5°C ~ +55°C
Storage Temperature	-25°C ~ +70°C
Relative Humidity	10% ~ 90%
External Power Supply	Input: AC 100V~240V, 50/60Hz; Output : 24V DC 2.71A
Power Consumption	24W
Dimension (W*H*D)	436.4mm*44mm*236mm
Net Weight	3kg

Video Resolution Down-scaling:

The product supports video resolution down-scaling, the 4K input can be automatically degraded to 1080p output for compatibility with 1080p display, shown in the below chart.

	Input			Output	
#	Resolution	Refresh	Color Space	Downscale	1080p Specs
1	3840x2160	60	4:4:4	Support	1080p@60Hz 4:4:4
2	3840x2160	30	4:4:4	Support	1080p@30Hz 4:4:4
3	3840x2160	24	4:4:4	Support	1080p@24Hz 4:4:4
4	3840x2160	60	4:2:0	Support	1080p@60Hz 4:4:4
5	3840x2160	30	4:2:0	Support	1080p@30Hz 4:4:4
6	3840x2160	24	4:2:0	Support	1080p@24Hz 4:4:4
7	3840x2160	60	4:2:2	Not Support	N/A
8	3840x2160	30	4:2:2	Not Support	N/A
9	3840x2160	24	4:2:2	Not Support	N/A

Note: Only last four outputs (output 5, output 6, output 7 and output 8) have down-scaling function.

3. Panel Description

3.1 Front Panel



No.	Name	Description		
1)	Power Indicator	Illuminates green when device powered on;Turns red in standby mode.		
2	IR sensor	Built-in IR sensor, receives IR signal sent from IR remote.		
3	INPUT selector button OUTPUT selector button	 Total 8 input selector buttons, press one of buttons to switch input source. Total 8 output selector buttons, press the buttons to select output channel. 		
4	ENTER button	Confirm operation.		
	LOCK button	Press this button for 3 seconds to lock/unlock all front buttons.		
	ALL button	Select all outputs to convert an input to all outputs: → Press INPUTS 1 + ALL + ENTER		
	CLEAR button	Withdraw button.		
(5)	PRESET RECALL HOLD TO STORE	 Press and hold the button 1~4 to save the current switching status to the corresponding preset 1~4. Press the button 1~4 to recall the saved preset 1~4. 		

3.2 Rear Panel



No.	Name	Description
1	INPUTS	HDMI input ports, 8 in total, connects with HDMI sources.
2	OUTPUTS	8 in total, connects with HDMI displays. The latter four HDMI ports have down-scaling function.
3	AUDIO MATRIX OUTPUTS	SPDIF: Audio output ports for de-embedded HDMI audio, 8 in total. L&R (RCA): Audio output ports for de-embedded HDMI audio, 8 pairs in total.
4	IR EYE	Connects with external IR receiver for using the IR remote to control the Matrix Switcher.
5	RS232	3-pin terminal block to connect the RS232 control device (e.g. PC) or a device to be controlled by RS232 commands.
6	FIREWARE	USB-A port for updating firmware.
7	TCP/IP	RJ45 port to connect the control device (e.g. PC) to control the matrix by GUI.
8	DC 24V	Connect with 24VDC 2.71A power adaptor.