

ZIGEN

HXL-88Plus

8x8x12 HDMI 2.0 Audio/Video Matrix Switch Quick Start Guide



Read this quick start guide carefully before using the product. Pictures shown in this document are for reference only. Different models and specifications are subject to actual product. Refer to HXL-88Plus User Manual for more details on installing, configuring, and operating the HXL-88Plus 8x8x12 HDMI 2.0 Switch.

Important Downloads

Download the latest documents from the product page of the zigencorp.com website. The product page contains the latest documents to ensure a successful deployment of HXL-88Plus. Important documents include:

- HXL-88PLUS Quick Start Guide
- HXL-88PLUS User Manual

Packing List

- 1x HXL-88Plus 8x8x12 HDMI 2.0 Matrix Switch
- 1x Universal 100-240 VAC, 24V/5.0A Power Supply
- 1x IR Remote Control
- 1x RS-232 Cable (male DB9 to female DB9)
- 2x Rack Mounting Ears
- 4x Plastic Cushions
- 1x Quick Start Guide

Overview

The HXL-88Plus 8x8x12 is an HDMI 2.0 Matrix Switch with eight HDMI Inputs, eight HDMI Outputs (Scalable), and twelve Unbalanced RCA Audio Outputs. The unit can be configured to connect any of the eight inputs to any outputs. The device supports video formats up to 4K UHD (up to 2160p60

@ 4:4:4) with support for HDCP 2.2 or 1.4 content protection.

The HXL-88Plus Unbalanced RCA Left/Right audio outputs are extracted from the selected HDMI inputs. The RCA Analog Audio Outputs support 2 channel Stereo only. To hear the analog audio, the EDID of the selected HDMI input must be configured for 2 channel Stereo. Audio from the HDMI Outputs support all multi-channel surround sound formats including DTS, DTS-HD, Dolby Digital, and Dolby Atmos.

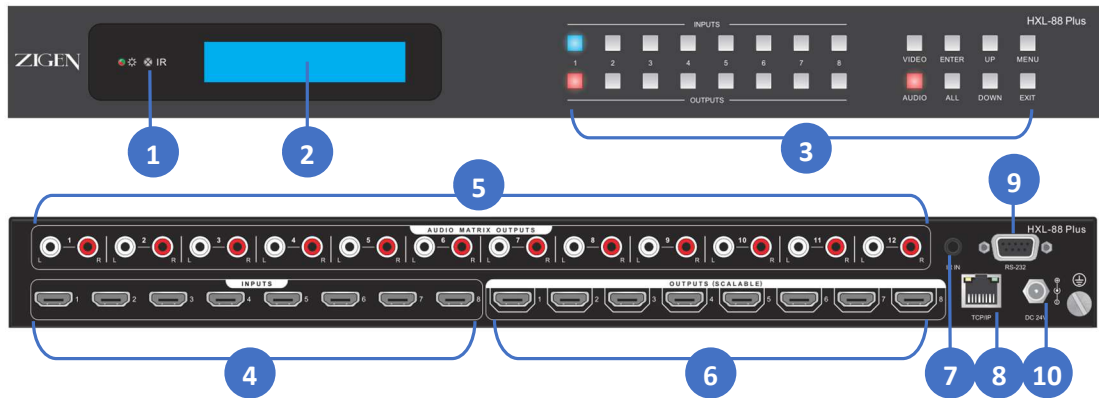
The HXL-88Plus can be configured with the included IR Remote Control to select any inputs to any Audio/Video outputs. The unit can also be controlled with a third-party control system (with proper drivers) using bi-directional RS-232, IR, or Ethernet. With Ethernet, the ZigNet full web interface allows extensive device control including advanced EDID management and system diagnostics.

Refer to the HXL-88Plus User Manual for more information.

Connections

The HXL-88Plus video, audio, and control ports should be connected first before applying power to the unit. The use of professional grade cables is highly desired for successful deployment. When viewing UHD 60p 4:4:4 or UHD 60p HDR 4:2:2, Zigen highly recommends the use of 4K Premium certified HDMI cables. Zigen offers these premium certified cables in varying lengths from 3 meters to 9 meters.

HXL-88Plus



1 IR Sensor

This sensor is used for the IR Remote Control (included). Aim the IR Remote Control in this window when pressing the Remote Control buttons.

2 LCD Display

The LCD Display shows the menus and current configuration of the unit.

3 Front Panel Buttons

The Front Panel buttons are used to locally control the unit.

INPUTS: The eight Input Buttons are associated with the HDMI inputs 1-8. When an Input button is pressed, any connected outputs will also be illuminated.

OUTPUTS: The eight Output Buttons are associated with HDMI outputs 1-8 or Analog Audio 1-12 (blue LEDs for Audio 1-8, red LEDs for Audio 9-12).

VIDEO: The Video button configures the Input and Output buttons for mapping HDMI Video.

AUDIO (Blue): The blue Audio button configures the Input and Output buttons for mapping RCA Audio 1-8.

AUDIO (Red): The red Audio button configures the Input and Output buttons for mapping RCA Audio 9-12.

ENTER: The Enter button is used to accept a selection in the Menu shown on the LCD Display.

ALL: The All button is used to map all Video or Audio Outputs to a selected Input.

UP/DOWN: The Up and Down buttons are used to navigate the Menus shown on the LCD Display.

MENU: Pressing the Menu button will display the configuration menus on the LCD Display.

EXIT: Pressing the Exit button will close the configuration menus shown on the LCD Display.

4 HDMI Inputs

Connect the video sources to any of the eight HDMI Inputs, which corresponds to Input buttons 1-8 located in the front.

5 RCA Unbalanced Analog Audio Outputs

Connect an AVR or Audio Amplifier to any of the 12 RCA outputs. The audio sources are extracted from any HDMI Inputs 1-8 (2-Channel Stereo format). See **Operation** for mapping instructions.

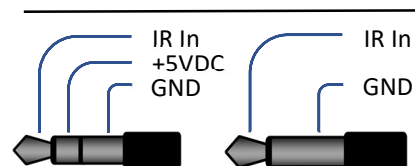
6 HDMI Output

Connect displays or Audio/Video Receivers (AVR) to any of the eight HDMI Outputs, which corresponds to Output buttons 1-8 located in the front. Any HDMI output can automatically downscale a UHD (4K) video source down to 1080p as required by the connected display. See **Operation** for mapping instructions.

7 IR Input Connection

The IR Input Plug can be connected to an IR Receiver (3-pin Jack, 5V) or any 3rd party Control System (2-pin Jack). The pin out for the IR connectors are as follows:

IR INPUT (2 or 3 pin support)



HXL-88Plus

8 Ethernet LAN Port

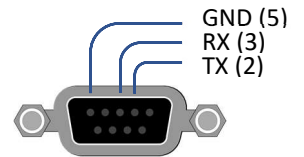
The Ethernet LAN port is a 100 Base-T connection to any router, switch, or directly to a computer. The HXL-88Plus features a web interface, called ZigNet. Hardware configuration, EDID management, and advanced diagnostics can all be accessed through ZigNet. Use the Menu to display the IP Address of the LAN port then use any web browser to access ZigNet.

Note: Refer to the HXL-88Plus User Manual for a complete explanation of ZigNet.

9 RS-232 Connection

An RS-232 connection is typically connected to a 3rd party control system to configure the HXL-88Plus. The default settings are:

Baud Rate: 115,200
Data Bits: 8 | Stop Bits: 1
Parity: None
Flow Control: None



Note: Refer to the HXL-88Plus User Manual for a description of the RS-232 control protocol.

10 Power

The HXL-88Plus requires 24VDC @ 5.0Amp to power the unit. Use the included power adaptor and ensure the locking ring is threaded snugly to prevent inadvertent disconnection of the power jack. Make sure all video, audio, and control ports are properly connected before applying power to the HXL-88Plus.

Operation

To connect a Video Output to an Input, first press the Video Button. Next press the desired Input Button (1-8) and then press the desired Output (1-8) to be connected. The pressed Input and Output buttons will momentarily flash to confirm the new connection mapping. If the ALL button is pressed following an Input button, all outputs will be mapped to the selected Input.

To connect Audio Outputs 1-8 to an extracted HDMI Input, first press the Audio Button until it illuminates blue. Next press the desired Input Button (1-8) and then press the desired Output (1-8) to be connected. The pressed Input and Output buttons will momentarily flash to confirm the new connection mapping. If the ALL button is pressed following an Input button, all audio outputs will be mapped to the selected Input.

To connect Audio Outputs 9-12 to an extracted HDMI Input, first press the Audio Button until it illuminates red. Next press the desired Input Button (1-8) and then press the desired Output (1-4), corresponding to Audio Outputs (9-12). The pressed Input and Output buttons will momentarily flash to confirm the new connection mapping. If the ALL button is pressed following an Input button, all audio outputs will be mapped to the selected Input.

Specifications

Video Connection	HDMI 2.0b
Content Protection	HDCP 2.2 1.4
Maximum Video Resolution	4K60P UHD 4:4:4, 4K60P UHD 4:2:2 HDR
Maximum HDMI Bandwidth	17.82 Gbps
Color Space Support	RGB, YUV
YUV Subsampling	4:4:4, 4:2:2, 4:2:0
Full Color Depth	8 bits, 10 bits, 12 bits
High Dynamic Range (HDR)	Dolby Vision HDR10+ HDR10 HLG
Audio Format (HDMI Output)	7.1 Channel PCM, DTS, DTS-HD, Dolby Digital, Dolby TrueHD, Dolby Atmos
Audio Format (RCA Output)	2-Channel Stereo Only
	<i>Note, noise may be heard on the RCA outputs if audio EDID is configured for multichannel surround sound format (5.1, 7.1, Dolby Digital, DTS, etc.)</i>

HXL-88Plus

Audio DSP (RCA Output)	Volume Attenuation, Tone Control Bass/Treble, 5-Band Equalizer, Equalizer Presets, Surround Sound Effects, and Bass Enhancement
IR Remote Control	✓
RS-232 Port	✓
IR Input Port (compatible with 2-pin Control System or 3-pin IR Receiver Cable)	✓
Ethernet Port	✓
ZigNet Administration	✓
EDID Management	✓
Advanced Diagnostics	✓
CEC	✓
Low Power Standby Mode	✓
Power	24VDC @ 5.0A, Center pin hot
Dimensions	436.4mm x 44.0mm x 238.1mm 17.18 inches x 1.73 inches x 9.38 inches
Weight	2.0 Kg 4.4 pounds
Temperature	0° to 40° C (10% - 90% Non-Condensing Humidity) 32° to 104° F
Regulatory Safety and Emissions	CE FCC RoHS

Warranty Information

Powered Product Warranty

Zigen warrants its powered products against any defects in materials and workmanship for a period of three years from the date of invoice. Touchscreen displays carry a one-year parts and labor warranty. If a malfunction occurs during the warranty period, Zigen will repair or replace a product to its original operating condition. A return authorization number must be obtained from Zigen before products are returned for service.

Non-Powered and Cable Products - Lifetime Limited Performance Warranty

Zigen warrants that its non-powered products and cable products will be free from defects in material and workmanship for as long as you or your customer owns the product. All Zigen non-powered products and cables are designed and engineered to meet and exceed performance specifications. If, at any time, the product fails due to manufacturer defect, Zigen will repair or replace the product to ensure that it meets original performance specifications. Reduced performance due to normal wear and tear, or damages caused by misuse or negligence will not be covered. Zigen will test and evaluate all non-powered and cable products claimed defective. Products must be shipped to Zigen, prepaid along with proof of purchase only after obtaining a Return Merchandise Authorization (RMA) number from Zigen. This statement of policy is in lieu of any other policy expressed or implied and no representative or person is authorized to assume any other liability or adopt any other policy for Zigen without our written consent.

Return Policy

If you would like to return a Zigen product, it can be done within 30 days of purchase for a full refund, less shipping and handling. Zigen will not be responsible for shipping and handling of product returns. Returns will only be accepted of products with proof of purchase, products in the original packaging with zero to minimal use and a Return Merchandise Authorization RMA number provided by Zigen.