EZW-UH4

ULTRA 2X2 HD VIDEO WALL PROCESSOR

USER MANUAL

🇺🇸 **Designed and Manufactured in the USA**

Smart-**AVI**

1-800-284-2131
www.smartavi.com

THANK YOU FOR PURCHASING THIS PRODUCT

For optimum performance and safety, please read these instructions carefully before connecting, operating or adjusting this product. Please keep this manual for future reference.

SURGE PROTECTION DEVICE RECOMMENDED

This product contains sensitive electrical components that may be damaged by electrical spikes, surges, electric shock, lighting strikes, etc. Use of surge protection systems is highly recommended in order to protect and extend the life of your equipment.

OVERVIEW

INTRODUCTION

This product is a HDMI 2.0 Video Wall controller with 2 HDMI input, 2 HDMI loop out and 4 HDMI scaling out for video wall processing. With WEB UI and Remote Control to control the product for different wall display.

FEATURES

- HDMI 2.0 and HDCP 2.2 compliant
- Support multi-resolution up to 3840 x 2160 @ 60 Hz video output for video wall
- Support 2 channels HDMI loop out
- Support RS-232 and TCP/IP control

WHAT'S IN THE BOX?

PART NO.	Q-TY	DESCRIPTION
EZW-UH4-S	1	Ultra HD Video Wall Processor
PS12VDC3A	1	Power Adapter
	1	User Manual

TECHNICAL SPECIFICATIONS

| VIDEO & AUDIO	
HDMI Compliance	HDMI 2.0
HDCP Compliance	HDCP 2.2/1.4
Input Resolutions	3840 × 2160 @ 60Hz
Output Resolutions	3840 × 2160 @ 60Hz
Input Interface	(2) HDMI INPUT (19-pin female)
Output Interface	(4) HDMI OUTPUT (19-pin female), (2) HDMI LOOP (19-pin female)
Audio Format	2.0 channel, 5.1 channel, LPCM, Dolby, AC3, DTS
CONTROL	
RS-232	Baud rate: 115200, data bit: 8, Stop bit: 1, no parity
OTHER	
ESD Protection	Human-body Model: ±8kV (Air-gap discharge) , ±4kV (Contact discharge)
Power	PS12VDC3A
Dimensions	12.57" W x 1.76" D x 6.69" H
Weight	4.4 lbs
Operating Temperature	0°C ~ 40°C / 32°F ~ 104°F
Storage Temperature	-20°C ~ 70°C / -4°F ~ 158°F
Relative Humidity	10%~50% RH (non-condensing)

OPERATION CONTROLS AND FUNCTIONS
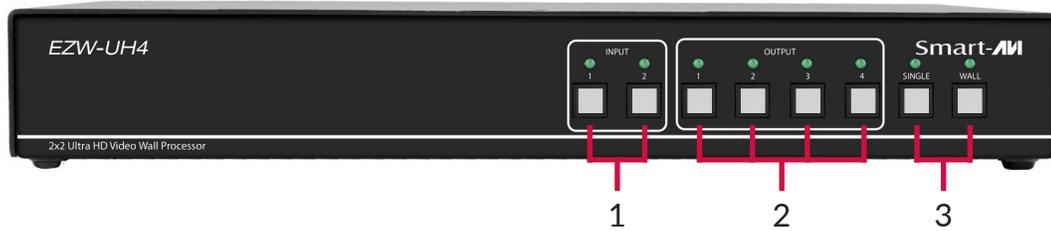
FRONT PANEL

#	NAME	DESCRIPTION
1	Input Buttons	Port input selection
2	Output Buttons	Port output selection
3	Mode Buttons	Mode selection

SELECTING INDIVIDUAL MONITOR	DESCRIPTION
Input 1 -> Output 1 - 4 -> SINGLE	Display Input 1 on selected Output
Input 2 -> Output 1 - 4 -> SINGLE	Display Input 2 on selected Output
SELECTING 1X2 WALL	
Input # -> Output 1 -> WALL	Display Input # as a 1X2 wall using Output 1 + 2
Input # -> Output 2 -> WALL	Display Input # as a 1X2 wall using Output 3 + 4
SELECTING 2X1 WALL	
Input # -> Output 3 -> WALL	Display Input # as a 2X1 wall using Output 1 + 3
Input # -> Output 4 -> WALL	Display Input # as a 2X1 wall using Output 2 + 4
SELECTING 2X2 WALL	
Input # -> WALL	Display Input # as a 2X2 wall using all Outputs
SET RESOLUTION	
SINGLE + WALL	While in Wall Mode for Input 1 or Input 2: Pressing SINGLE + WALL together for the first time will set the resolution to 1920 x 1080 @ 60Hz Let go and press SINGLE + WALL together again will bring the resolution back to 3840 x 2160 @ 60 Hz
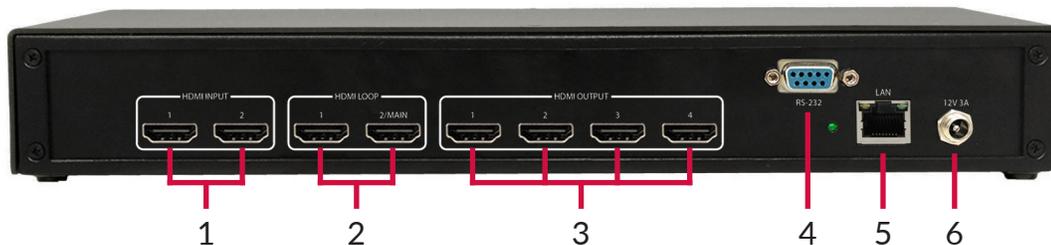
REAR PANEL

| #	NAME	DESCRIPTION
1	Input	HDMI signal input ports, connect to HDMI source device such as DVD or PS4 with HDMI cable
2	Loop Out	HDMI signal loop out ports. Loop out HDMI A/B signal to downstream
3	Outputs	HDMI signal scaling output for video wall
4	RS232	RS232 control command
5	LAN	CAT5/5e/6
6	12V/3A	DC 12V/3A power supply port

REMOTE CONTROL

The EZW-UH4 supports IR control to manage inputs and video wall settings. Using the included remote, the instructions are as follows:

SELECTING INDIVIDUAL MONITOR	DESCRIPTION
1 -> Input 1 - 4 -> OK	Display Input 1 on Output 1-4
2 -> Input 1 - 4 -> OK	Display Input 2 on Output 1-4
SELECTING 1X2 WALL	
1 -> SW/SP -> 1	Display Input 1 as a 1X2 wall using Output 1 + 2
1 -> SW/SP -> 2	Display Input 1 as a 1X2 wall using Output 3 + 4
2 -> SW/SP -> 1	Display Input 2 as a 1X2 wall using Output 1 + 2
2 -> SW/SP -> 2	Display Input 2 as a 1X2 wall using Output 3 + 4
SELECTING 2X1 WALL	
1 -> SW/SP -> 3	Display Input 1 as a 2X1 wall using Output 1 + 3
1 -> SW/SP -> 4	Display Input 1 as a 2X1 wall using Output 2 + 4
2 -> SW/SP -> 3	Display Input 2 as a 2X1 wall using Output 1 + 3
2 -> SW/SP -> 4	Display Input 2 as a 2X1 wall using Output 2 + 4
SELECTING 2X2 WALL	
1 -> SW/SP -> OK	Display Input 1 as 2X2 wall using all Outputs
2 -> SW/SP -> OK	Display Input 2 as 2X2 wall using all Outputs
CLEAR ALL STITCHING	
Exit	Removes all stitching and returns each Output to Single Mode

RS232 CONTROL

The EZW-UH4 can be controlled via RS232 to manage input and video wall settings. Once connected to a PC, launch your preferred RS232 console. The baud rate connection will need to be set as 115200 bps. If the RS232 connection is established before booting up the device, the UI should display the following:
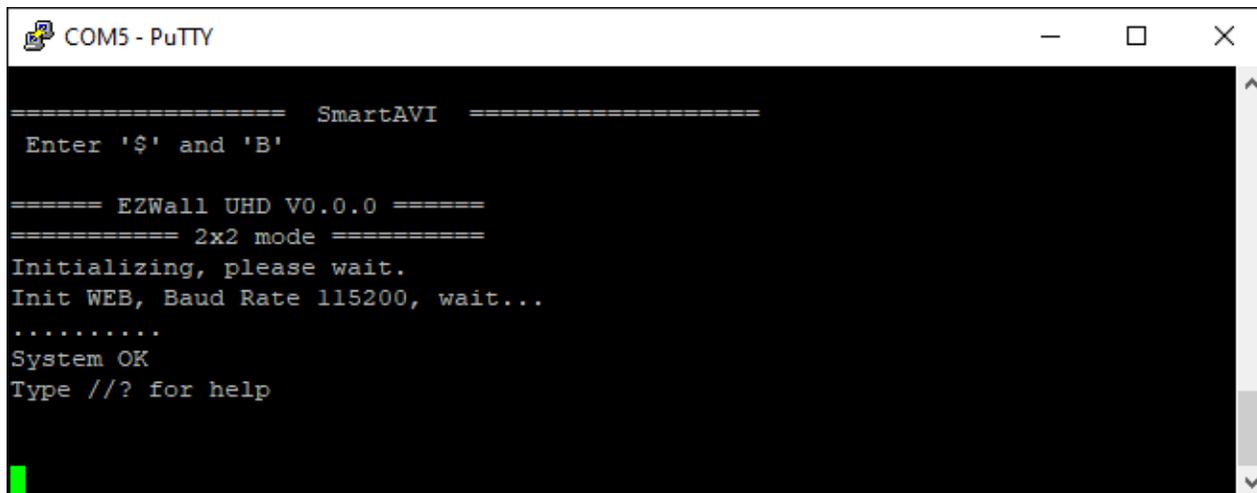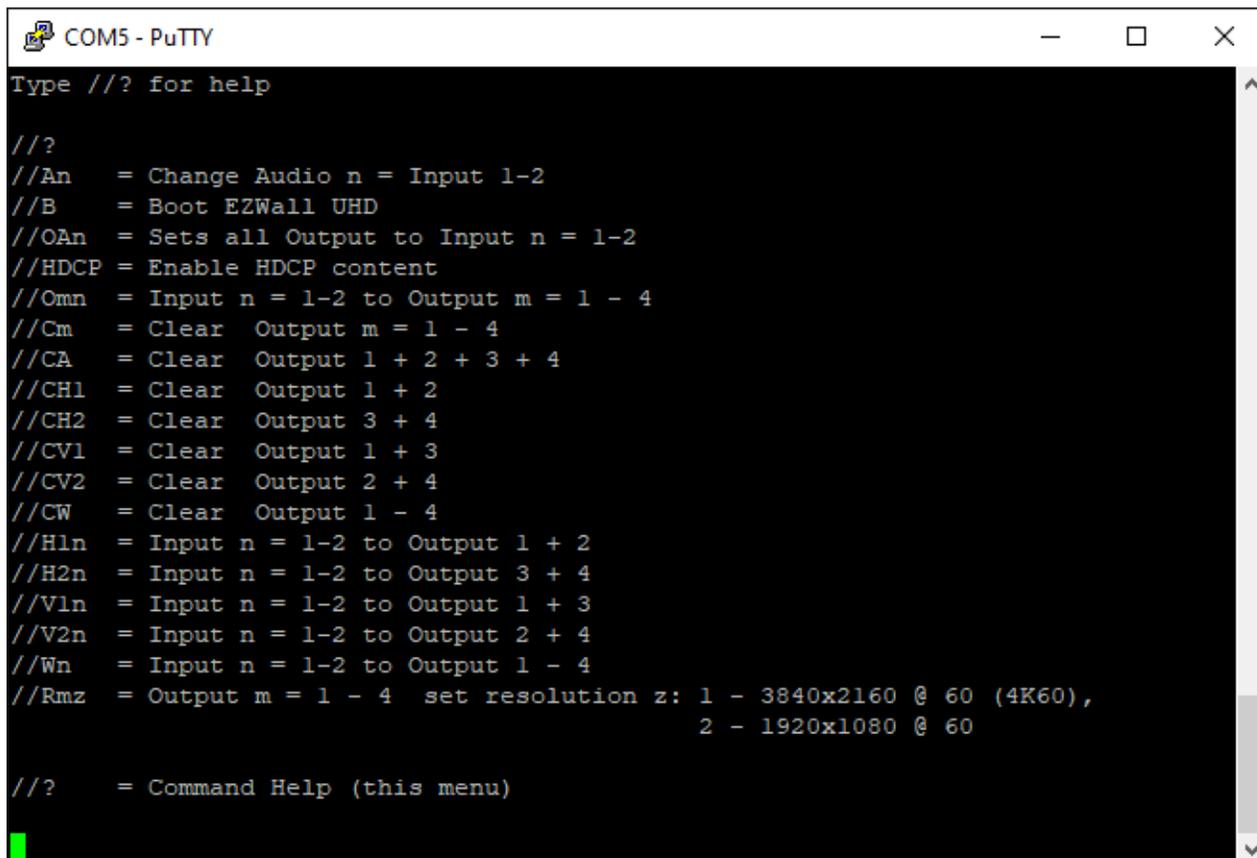
```
COM5 - PuTTY                                              —    □    ×

================  SmartAVI  ==================
 Enter '$' and 'B'


====== EZWall UHD V0.0.0 ======
=========== 2x2 mode ==========
Initializing, please wait.
Init WEB, Baud Rate 115200, wait...
..........
System OK
Type //? for help
```

USING THE MENU

The help menu can be displayed by sending the "//?" command which will prompt the following:

```
COM5 - PuTTY                                              —    □    ×

Type //? for help

//?
//An   = Change Audio n = Input 1-2
//B    = Boot EZWall UHD
//OAn  = Sets all Output to Input n = 1-2
//HDCP = Enable HDCP content
//Omn  = Input n = 1-2 to Output m = 1 - 4
//Cm   = Clear  Output m = 1 - 4
//CA   = Clear  Output 1 + 2 + 3 + 4
//CH1  = Clear  Output 1 + 2
//CH2  = Clear  Output 3 + 4
//CV1  = Clear  Output 1 + 3
//CV2  = Clear  Output 2 + 4
//CW   = Clear  Output 1 - 4
//H1n  = Input n = 1-2 to Output 1 + 2
//H2n  = Input n = 1-2 to Output 3 + 4
//V1n  = Input n = 1-2 to Output 1 + 3
//V2n  = Input n = 1-2 to Output 2 + 4
//Wn   = Input n = 1-2 to Output 1 - 4
//Rmz  = Output m = 1 - 4  set resolution z: 1 - 3840x2160 @ 60 (4K60),
                                             2 - 1920x1080 @ 60


//?    = Command Help (this menu)
```

RS232 CONTROL (CONTINUED)

All menu commands must be sent with "//" followed by the appropriate command.

HOTKEY	DESCRIPTION
//?	Display Help menu
//A1 or //A2	Change audio to Input 1 or Input 2
//B	Reboot the device
//OA1 or //OA2	Sets all Outputs to Input 1 or Input 2
//HDCP	Enables HDCP content
//O(m)(n)	Set Input n to Output m
//C(m)	Clear select Output number of stitching
//CA	Clear all Output stitching
//CH1	Clear Output 1 + 2
//CH2	Clear Output 3 + 4
//CV1	Clear Output 1 + 3
//CV2	Clear Output 2 + 4
//H1(n)	Set Input n as 1X2 wall using Output 1 + 2
//H2(n)	Set Input n as 1X2 wall using Output 3 + 4
//V1(n)	Set Input n as 2X1 wall using Output 1 + 3
//V2(n)	Set Input n as 2X1 wall using Output 2 + 4
//W(n)	Set Input n as 2x2 wall using Output 1-4
//R(m)(z)	Set resolution of Output m to resolution z where: Z: 1 – 3840x2160 @ 60 Hz Z: 2 – 1920x1080 @ 60 Hz

CHART KEY

(m) - Output number (1-4)
(n) - Input number (1-2)
(z) - Resolution option (1-2)

NETWORK CONTROL

The EZW-UH4 can also be controlled via IP to manage input and video wall settings. To find the IP, visit our website at https://smartavi.com/helpful-links/. Download and open the IP-Finder 2 software. Once launched, click on "Search Device". This will display the device under Device IP. Use the IP displayed on your IP-Finder 2 on your preferred web browser. We highly recommend Google Chrome for the best compatibility.

NETWORK CONTROL (CONTINUED)

The EZW-UH4 will have several pages of navigation: Matrix Switch, TV Wall, and Settings. The default landing page will display the Matrix Switch page. TV Wall can be navigated by click on "TV Wall" on the top right side. Settings can be opened on the top left side with the triple lines in the purple box.
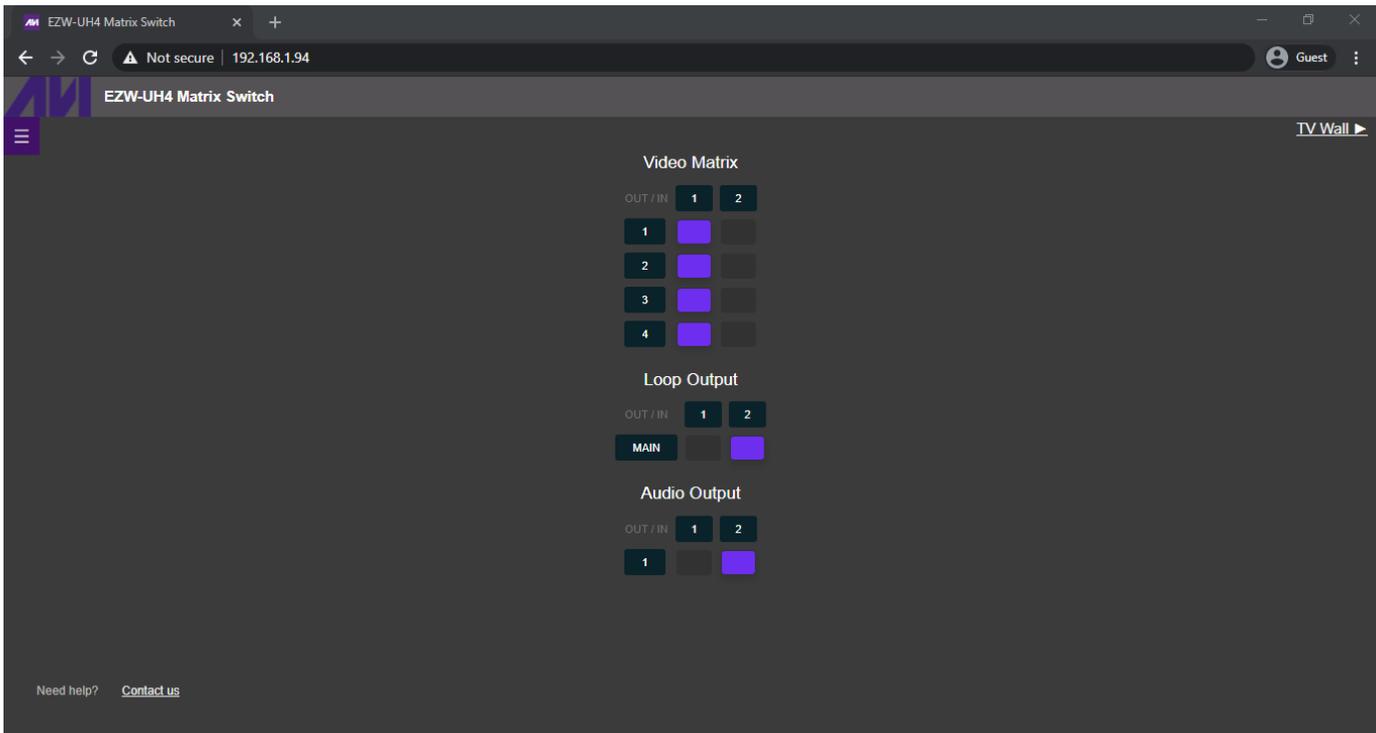

The Matrix Switch page can be used to quickly change individual inputs and outputs for video, loop, and audio. Note: Loop Output 1 and Loop Output 2 only affect the Loop 2/MAIN output. Loop 1 will always display Input 1.
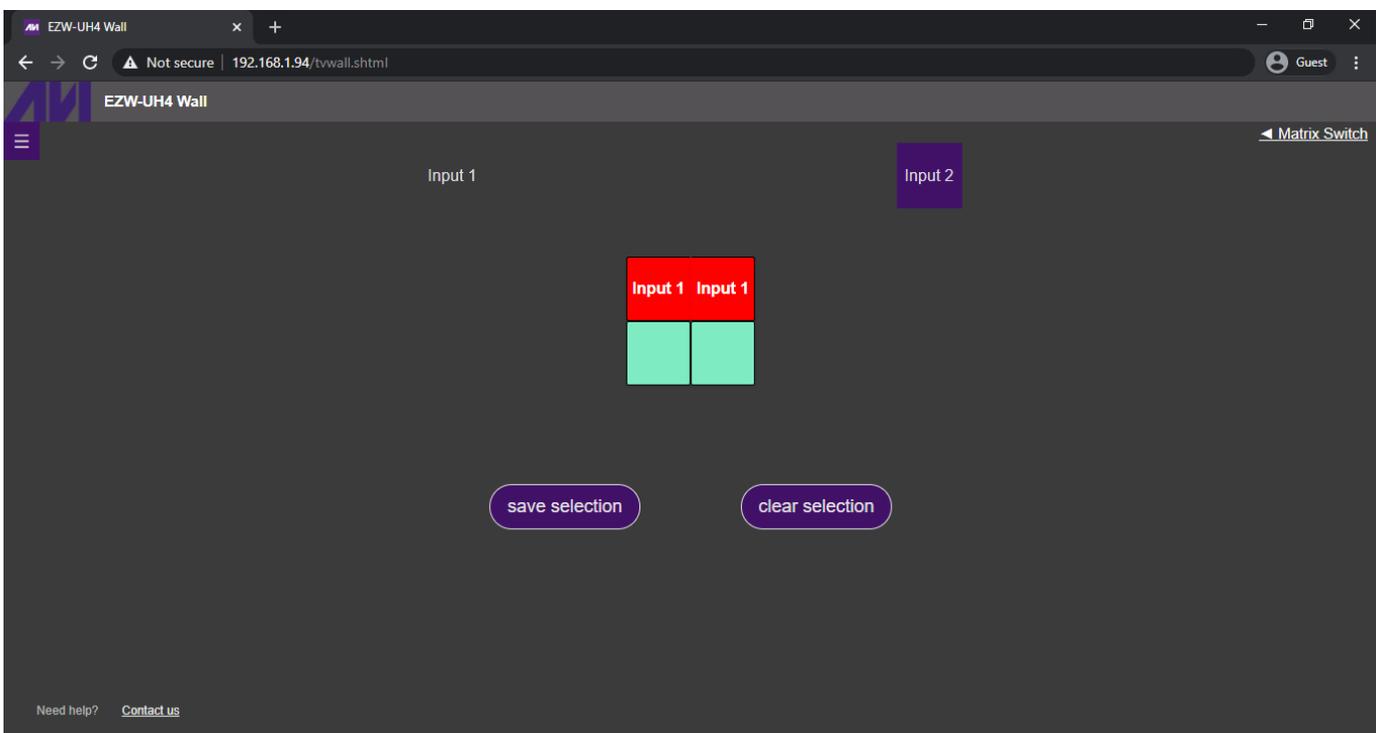
NETWORK CONTROL (CONTINUED)

The TV Wall page can be used to stitch the video outputs to create video walls within a 2X2 dimension. This includes 1X2, 2X1, or 2X2. Simply click on the desired input, draw over the grid area and click save selection. The cyan highlighted boxes will indicate the area that will be used for the new stitching. Clear selection will remove all stitching already set; this will allow new stitching to be created.
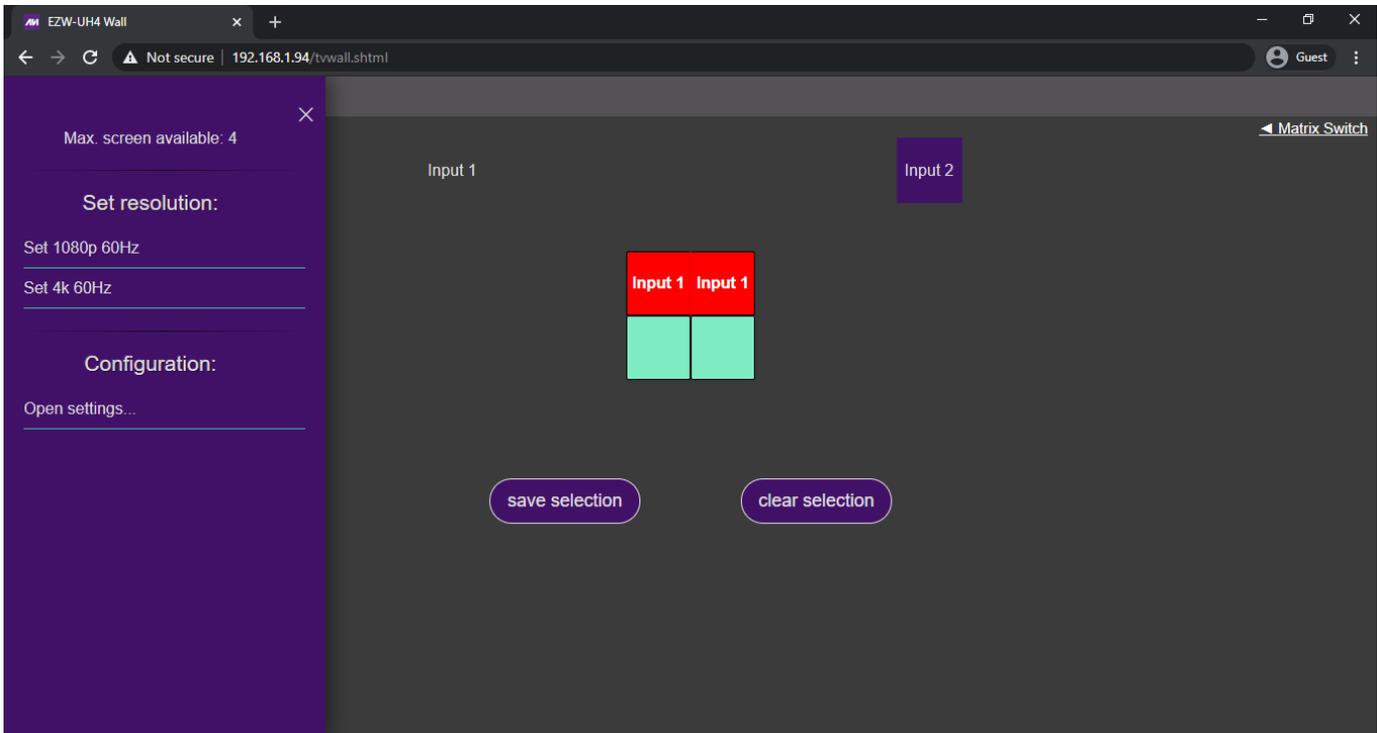
Opening settings allows for the resolution to be changed or open configuration settings.
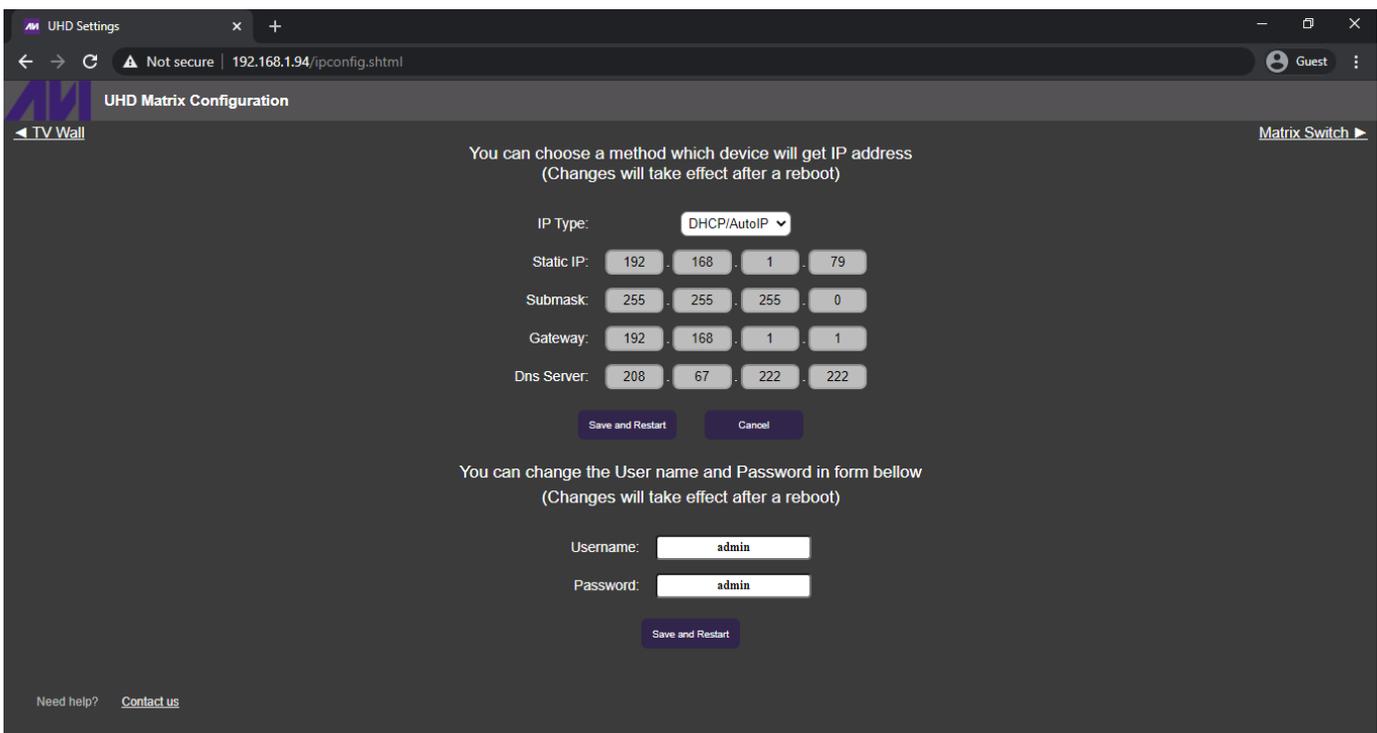
NETWORK CONTROL (CONTINUED)

The Configuration page allows for the EZW-UH4 to update its method for receiving its IP. The IP can be set as DHCP (default) or as Static. The login credentials can also be modified on this page as well. Note: Please select Save and Restart after making any changes. If updating IP, select the Save and Restart under the IP settings. If updating login credentials, select the Save and Restart under the username and password field.

SAFETY INSTRUCTION

To ensure reliable operation of this product as well as protecting the safety of any person using or handling this device while powered, please observe the following instructions.

1. Do not operate either of this product outside the specified temperature and humidity range given in the above specifications.
2. Ensure there is adequate ventilation to allow this product to operate efficiently.
3. Repair of the equipment should only be carried out by qualified professionals as these products contain sensitive devices that may be damaged by any mistreatment.
4. Only use this product in a dry environment. Do not allow any liquids or harmful chemicals to come into contact with these products
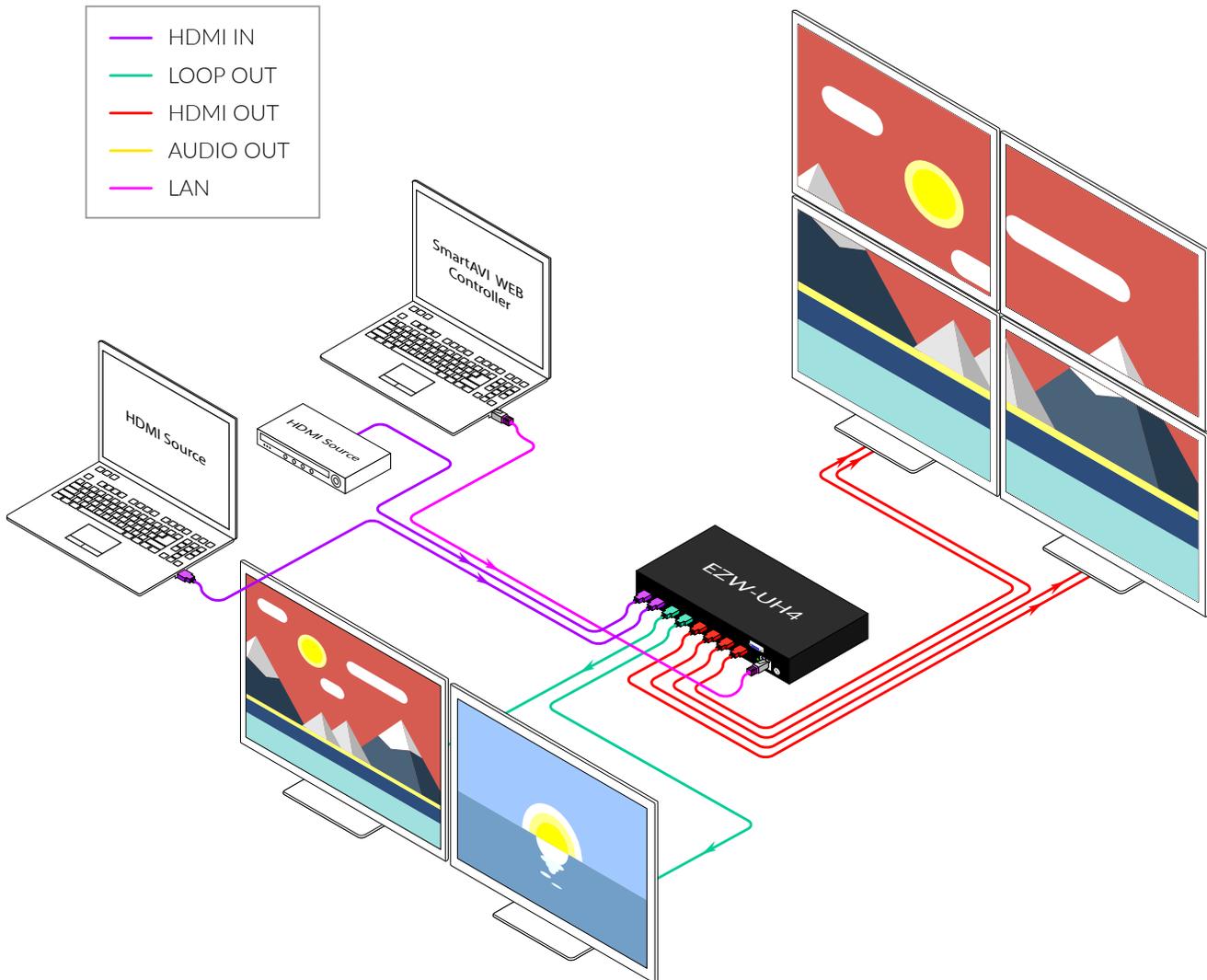
TROUBLESHOOTING

No Power
- Make sure that the power adapter is securely connected to the power connector of the unit.
- Check the output voltage of the power supply and make sure that the voltage value is around 12VDC.
- Replace the power supply.

No Video
- Check if all the video cables are connected properly.
- Connect the computer directly to the monitor to verify that your monitor and computer are functioning properly.
- Restart the computers.

Keyboard is not working
- Check if the keyboard is properly connected to the unit.
- Check if the USB cables connecting the unit and the computers are properly connected.
- Try connecting the USB on the computer to a different port.
- Make sure that the keyboard works when directly connected to the computer.
- Replace the keyboard.

Mouse is not working
- Check if the mouse is properly connected to the unit.
- Try connecting the USB on the computer to a different port.
- Make sure that the mouse works when directly connected to the computer.
- Replace the mouse.

No Audio
- Check if all the audio cables are connected properly.
- Connect the speakers directly to the computer to verify that the speakers and the computer audio are functioning properly.
- Check the audio settings of the computer and verify that the audio output is through the speakers.

TECHNICAL SUPPORT

For product inquiries, warranty questions, or technical questions, please contact info@smartavi.com.

LIMITED WARRANTY STATEMENT

A. Extent of limited warranty
SmartAVI, Inc. warrants to the end-user customers that the SmartAVI product specified above will be free from defects in materials and workmanship for the duration of 1 year, which duration begins on the date of purchase by the customer. Customer is responsible for maintaining proof of date of purchase.

SmartAVI limited warranty covers only those defects which arise as a result of normal use of the product, and do not apply to any:
> a. Improper or inadequate maintenance or modifications
> b. Operations outside product specifications
> c. Mechanical abuse and exposure to severe conditions

If SmartAVI receives, during applicable warranty period, a notice of defect, SmartAVI will at its discretion replace or repair defective product. If SmartAVI is unable to replace or repair defective product covered by the SmartAVI warranty within reasonable period of time, SmartAVI shall refund the cost of the product.

SmartAVI shall have no obligation to repair, replace or refund unit until customer returns defective product to SmartAVI.

Any replacement product could be new or like new, provided that it has functionality at least equal to that of the product being replaced.

SmartAVI limited warranty is valid in any country where the covered product is distributed by SmartAVI.

B. Limitations of warranty
To the extant allowed by local law, neither SmartAVI nor its third party suppliers make any other warranty or condition of any kind whether expressed or implied with respect to the SmartAVI product, and specifically disclaim implied warranties or conditions of merchantability, satisfactory quality, and fitness for a particular purpose.

C. Limitations of liability
To the extent allowed by local law the remedies provided in this warranty statement are the customers sole and exclusive remedies.

To the extant allowed by local law, except for the obligations specifically set forth in this warranty statement, in no event will SmartAVI or its third party suppliers be liable for direct, indirect, special, incidental, or consequential damages whether based on contract, tort or any other legal theory and whether advised of the possibility of such damages.

D. Local law
To the extent that this warranty statement is inconsistent with local law, this warranty statement shall be considered modified to be consistent with such law.

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NOTICE

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