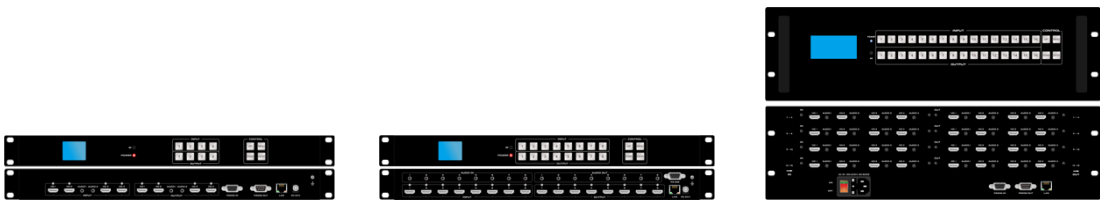


WOXCON

USER MANUAL

FHD 4x4 HDMI Matrix Switcher with VW, seamless switch

WX-SEM44-AED



Version: V24.07

Safety Reminder

To protect the device and operating personnel from electrostatic discharge, you need to check and ensure that the device is grounding well before the device is powered on. Please observe the following when you install, use, maintain this equipment.



Make sure the device ground connection.

Important Safety Instructions



1. Do not expose this apparatus to rain, moisture, dripping or splashing and that no objects filled with liquids, such as vases, shall be placed on the apparatus.



6. Clean this apparatus only with dry cloth.



2. Do not install or place this unit in a bookcase, built-in cabinet or in another confined space. Ensure the unit is well ventilated.



7. Unplug this apparatus during lightning storms or when unused for long periods of time.



3. To prevent risk of electric shock or fire hazard due to overheating, do not obstruct the unit's ventilation openings with newspapers, tablecloths, curtains, and similar items.



8. Protect the power cord from being walked on or pinched particularly at plugs.



4. Do not install near any heat sources such as radiators, heat registers, stoves, or other apparatus (including amplifiers) that produce heat.



9. Only use attachments / accessories specified by the manufacturer.



5. Do not place sources of naked flames, such as lighted candles, on the unit.



10. Refer all servicing to qualified service personnel.

Warnings of FCC

This equipment has been tested and found to comply with the limits for a Class B digital device, pursuant to Part 15 of the FCC Rules. These limits are designed to provide reasonable protection against harmful interference in a residential installation. This equipment generates uses and can radiate radio frequency energy and, if not installed and used in accordance with the instructions, may cause harmful interference to radio communications. However, there is no guarantee that interference will not occur in a particular installation. If this equipment does cause harmful interference to radio or television reception, which can be determined by turning the equipment off and on, the user is encouraged to try to correct the interference by one or more of the following measures:

- Reorient or relocate the receiving antenna.
- Increase the separation between the equipment and decoder.
- Connect the equipment into an outlet on a circuit different from that to which the decoder is connected.
- Consult the dealer or an experienced radio/TV technician for help.

Changes or modifications not expressly approved by the party responsible for compliance could void the user's authority to operate the equipment.

Contents

1. Product Introduction.....	3
2. Features	3
3. Specification.....	3
4. Connection Diagram	4
5. Packing	4
6. Panel description	4
Front panel	4
7. Matrix Switcher control	5
7.1 Remote Control	5
Channel switching:	6
Scene Save:	6
Scene Recall :	6
7.2 WEB GUI browser Control	6
7.2.1 Switch.....	6
7.2.2 Video Wall:	8
7.2.3 EDID Management:	9
7.2.4 System Setting:.....	10
7.3 Upgrade Settings:	12
7.4 Application control	13
8. TCP/IP/RS232 control:.....	13

1. Product Introduction

This is a the SVM-MANAGER series 1080P HDMI Matrix switchers with the seamless switch, Video Wall function, WEB GUI and EDID management, audio embedded and de-embedded and the resolution can up to 1080p60Hz with scaling function and all ports are HDCP compliant. With the friendly user control methods: IR remote control, push buttons with background blue light, APP/WEB GUI/TCP/IP/RS232/IR remote control, supports the WEB smart EDID management, this matrix switcher can work with the Blu-Ray Players, Set-Top boxes, Home Theater, and game consoles etc HDMI input sources to route to the HDMI displays, it has been widely used in different audio visual applications.

2. Features

- The resolution can up to 1080P60Hz inputs and outputs with scaling
- Supports seamless switching, no black/blue screen during the sources switch
- Supports the video wall function and bezel corrections
- Supports the 3.5mm audio embedded and de-embedded
- Supports smart EDID management
- Supports RS232 and TCP/IP Control(WEB GUI, APP), IR remote control
- Supports the push buttons control with blue lights
- Supports to rename the inputs and outputs
- Supports up to 16 scenes

3. Specification

Video	Resolution	Inputs FHD 1080P60Hz and under Outputs 1080P60Hz\720P\1366*768@60
	HDMI protocol	HDMI1.4
	HDCP protocol	HDCP1.4
	Color depth	8/10/12 bit
	Color space	YCbCr, RGB
	EDID	Built-in and output ports learning/copy
	HDMI output	4 inputs or 8 inputs
	HDMI output	4 outputs or 8 outputs
Audio	Audio format	PCM 2.1Ch, Dolby Digital, Dolby True-HD, DTS-HD(Only supports 2.1)
	Audio sampling	32kHz, 44.1kHz, 48kHz, 88.2kHz, 96kHz, 176.4kHz, 192kHz
	Audio baud rate	Up to 16~24-bit
Control	RS232	DB9 female connector
	IR	IR receiver

	LAN	RJ45 for the TCP/IP control
Other	Power	Power adapter 24V/3A
	Consumption	20W
	Size	440*279*44 (mm) for the 4x4 and 8x8
	Weight	3kg
	Working temp	0°C~50°C
	Storage temp	-20°C~ 60°C
	Working Humidity	20%-90%

4. Connection Diagram(*here takes the 8x8 as example)

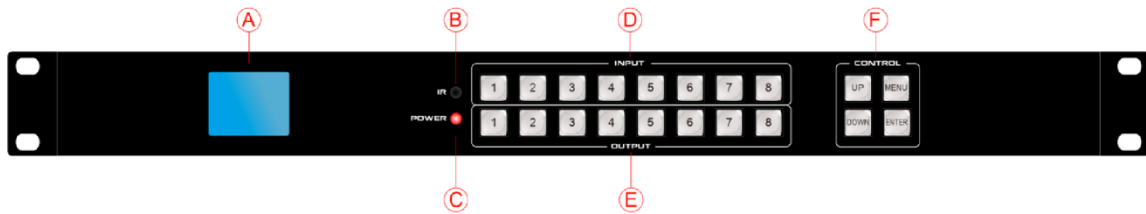


5. Packing(*here takes the 8x8 as example)

No.	Name	Qty	Unit
1	Matrix switcher	1	Pcs.
2	DC 24V3A power adapter	1	Pcs
3	Remote Control	1	Pcs
4	Ear	1	Pair

6. Panel description (*here takes the 8x8 as example)

Front panel(*here takes the 8x8 as example)



A: LCD screen for the switching, EDID, IP etc information display.

B: IR light for the IR remote control

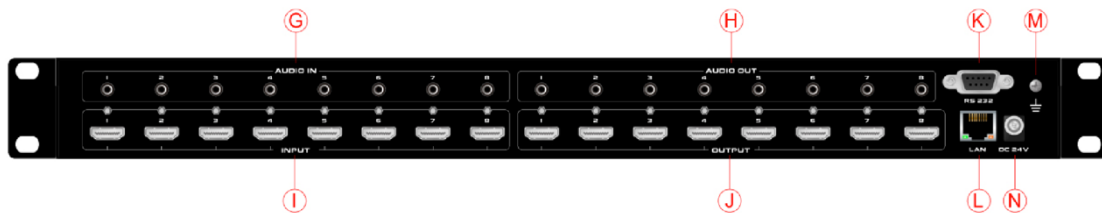
C: Power indicator

D: Inputs buttons

E: Output buttons

E: Control buttons

Back panel(*here takes the 8x8 as example)



G: 3.5mm audio embedded ports

I: HDMI input ports

H: 3.5mm audio embedded ports

J: HDMI output ports

K: RS232 ports for the 3rd party control

L: RJ45 port for the WEB GUI/TCP/IP control

M: Power supply port

N: Grounding

7. Matrix Switcher control

This Matrix switcher can support IR remote, WEB GUI browser, TCP/IP/RS232 control, or the front push-buttons control.

7.1 Remote Control

Users also can control this matrix switcher with the remote control.

Channel switching:

Press the input from number “1~8”, first press the input number 1-8), and then press the output number 1-8 to switch

Eg. Switch input 1 to output 1, 2, 3:

1 → SWITCH → 1, 2, 3

Scene Save:

Press “SAVE”, then press the scene number from “1~8”, and finally press “ENTER”

Eg, Save switching input 1 to output 1,2,3 to scene 2:

SAVE → 2 → ENTER

Scene Recall :

Press “RECALL”, then press the scene number from “1~8”, and finally press “ENTER”

Eg, Recall scene 2:

RECALL → 2 → ENTER

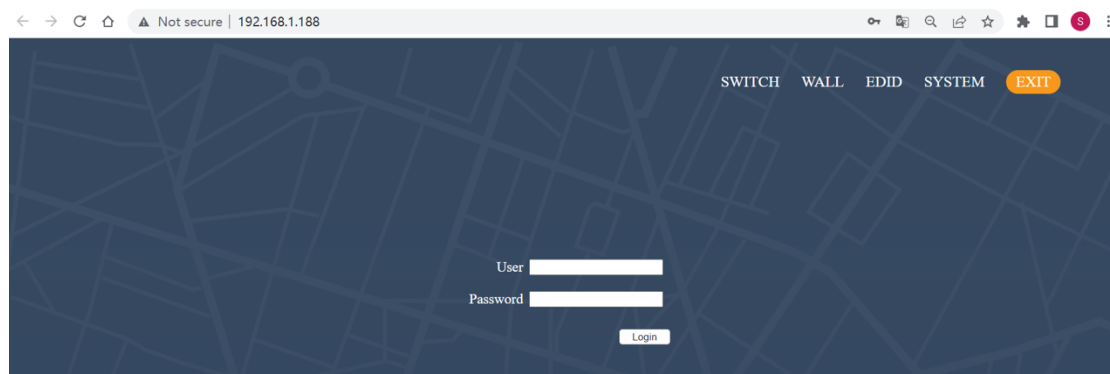


7.2 WEB GUI browser Control

Users also can use the WEB browser to control the matrix switcher, users can have the matrix switcher connected with the PC with the LAN cable directly or have the matrix switcher connected the same network switch. The default IP address of the matrix switcher is 192.168.1.188

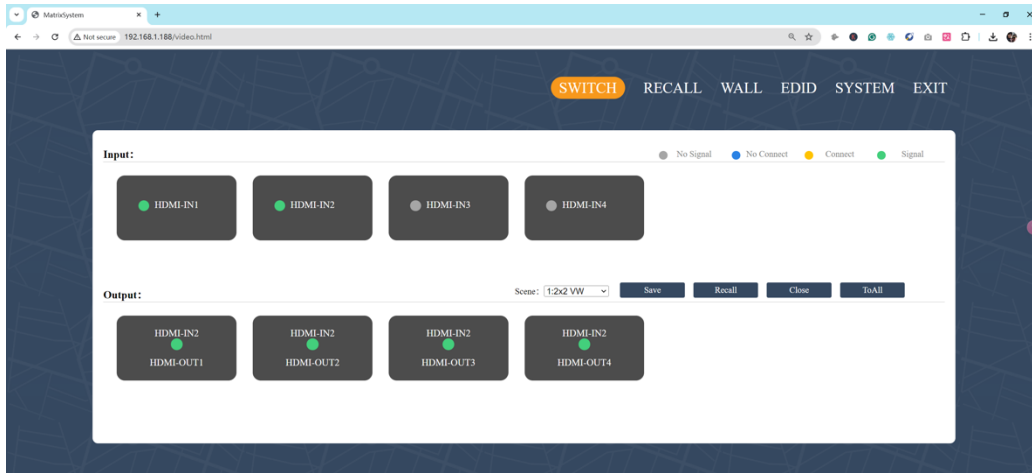
After opening the browser, users can type the matrix switcher IP address and press enter:

The default user name is admin and the password is admin.

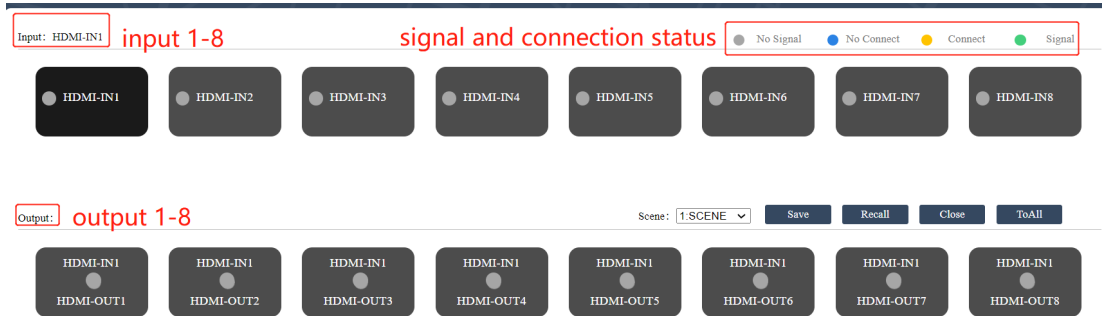


After login, it will turn to “Switch” interface, users can do the sources switching, scenes

7.2.1 Switch



On the input and output buttons, users also can view the active ports by the button color, 2 steps for the switching



Function button: Save, Recall, Closed, ToAll

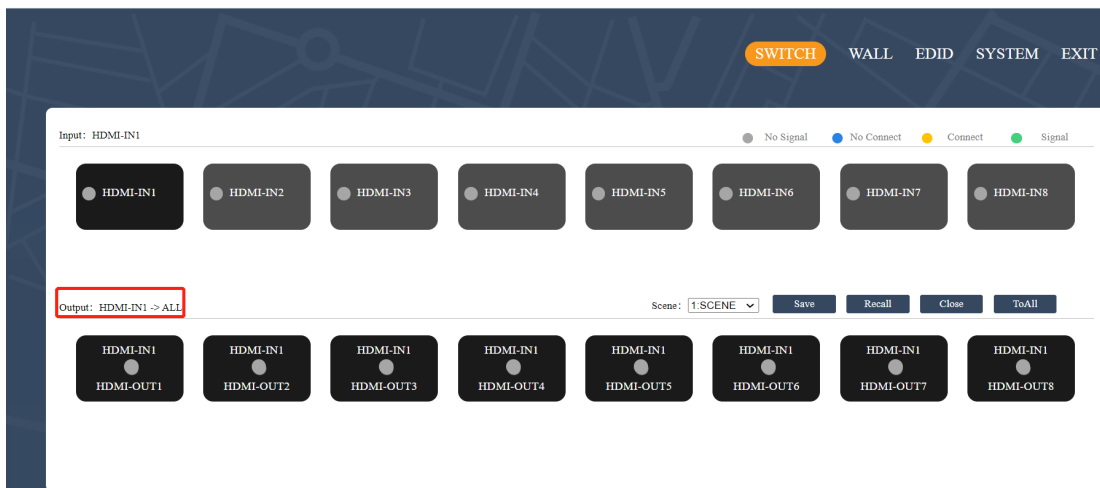


Save and Recall: It will take 2 steps to Save or Recall the scenes, select the scene number first, and then click “Save” or “Recall” button, you will hear the “beep” sound from the matrix , it was successfully.

Close: Click the “close” button firstly and select the output you want to close(no image on screen), you will hear the “beep” sound from the matrix , it was successfully:



ToAll: Select the input firstly, and then click the “ToAll” button:



7.2.2 Video Wall:

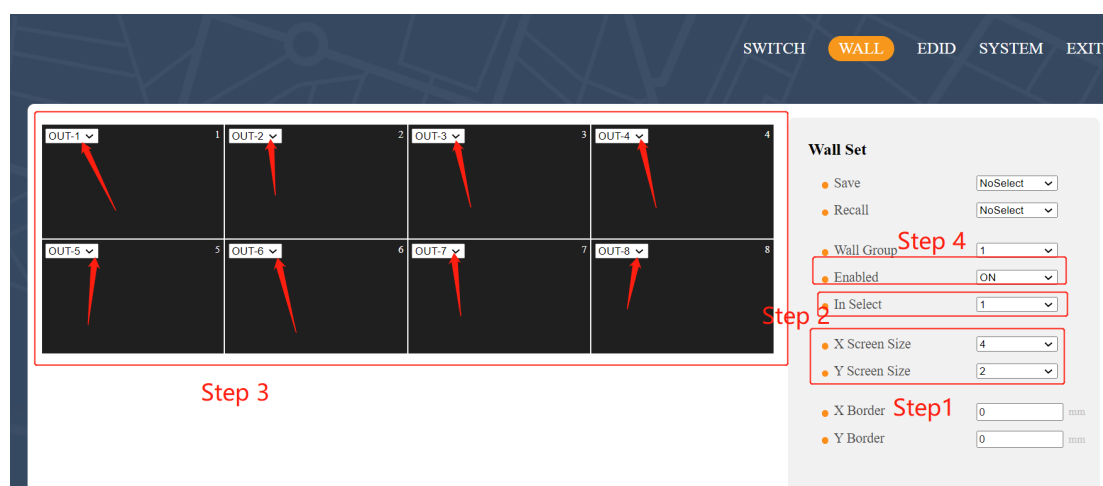
users can setup the VW wall, adjust the bezel, or save/recall the VW scenes,

Step1: Configure the VW size by select the “X screen size” and “Y screen size”

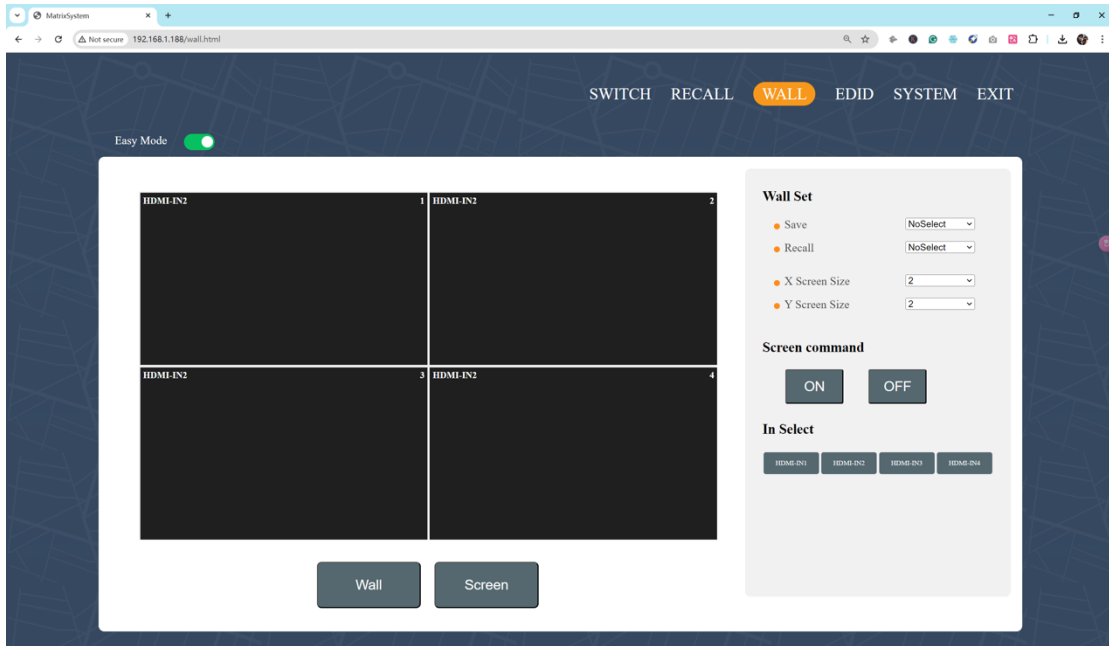
Step2: Select the input you want

Step3: Select the output for the video wall.

Step4: Select the “on” to open the video wall



Also can support the Easy-mode:



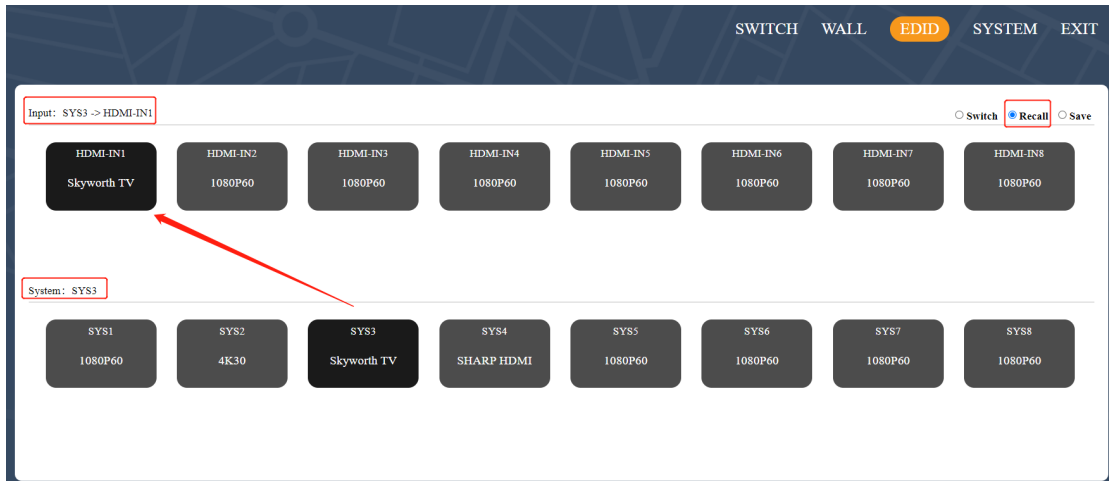
7.2.3 EDID Management:



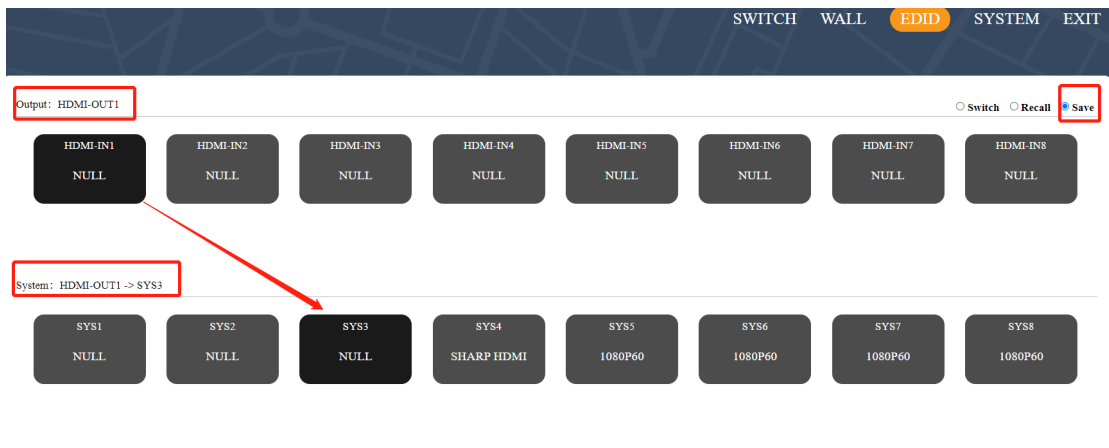
Switch: Select the output, and then click the input, then will copy the EDID of input to output.



Recall: Select the EDID in the system, and then select the input, it's mean copy the EDID in the system to input.

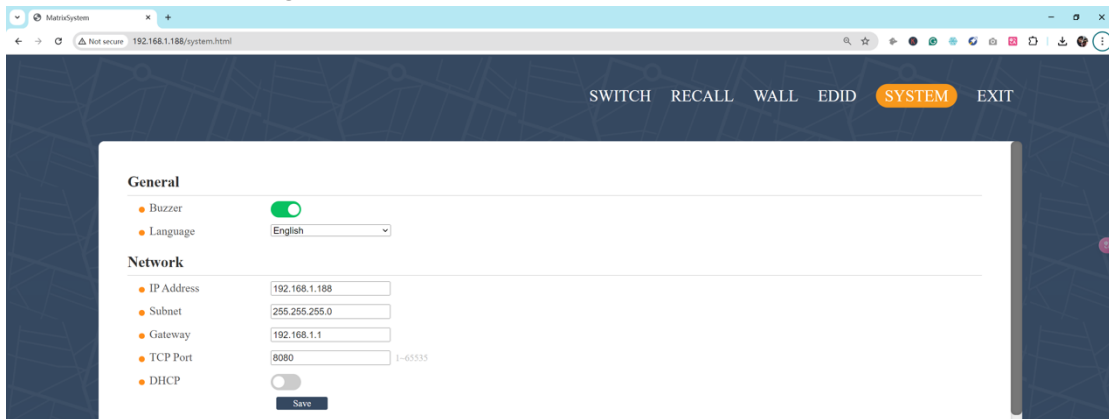


Save: Select the output, and then select the system, then will save the output EDID to system.



7.2.4 System Setting:

General/Network setting



Serial Settings: User can change the band rate, data bit

Serial

- Baud rate: 115200
- Data bits: 8bit
- Stop bits: 1bit
- Parity: NONE

Input Audio Settings: User can select the Internal HDMI or External 3.5mm audio for the 8 input

Input Audio

- HDMI-IN1: Internal
- HDMI-IN2: Internal
- HDMI-IN3: Internal
- HDMI-IN4: Internal
- HDMI-IN5: Internal
- HDMI-IN6: Internal
- HDMI-IN7: Internal
- HDMI-IN8: Internal

Output Settings: User can ON or OFF the auto switch, select the out format, select the resolution and brightness, saturation and contrast.

Output (OUT1)

- Auto Switch: OFF
- Out format: HDMI
- Resolution: 1920x1080p60Hz
- Brightness: 50 (0-99)
- Saturation: 50 (0-99)
- Contrast: 50 (0-99)

Auto switch: User can select Auto mode and Last mode or off

Output (OUT1)

- Auto Switch: OFF
- Out format: HDMI

Auto mode: that means when the input source are disconnected, the matrix will auto switch the input 1 to the screen, if input 1 also have not source connected, the matrix will auto switch input 2 to the screen, matrix will follow the principle from input 1 to input 8 based connect some input sources.

Last Mode: that means the screen will be showed the last signal of connection, and will off the auto switch function, when the input source are disconnected, the display will be black.

Out format: User can select the output format to DVI or HDMI

Output (OUT1)

- Auto Switch: OFF
- Out format: HDMI
- Resolution: HDMI

Resolution Setting: *Although it has the 4K30 resolution in the list, but recommend to select up to 1080P60 would be the most stable way to use.

Output

Port	Type	Auto Switch	Out format	Resolution	Brightness	Saturation	Contrast	HPD	Signal	EDM	Ver
OUT 1	HDMI 1.4	Auto	HDMI	1280x720P60Hz	50	50	50	ON	ON	HDMI	v100
OUT 2	HDMI 1.4	OFF	HDMI	1024x768P60Hz	50	50	50	ON	ON	HDMI	v100
OUT 3	HDMI 1.4	OFF	HDMI	1280x720P30Hz	50	50	50	ON	ON	HDMI	v100
OUT 4	HDMI 1.4	OFF	HDMI	1280x768P60Hz	50	50	50	ON	ON	HDMI	v100

Rename

- Input Name: IN1 Save
- Output Name: OUT1 Save
- Scene Name: S1 Save

Rename: User can enter the name and save it for the input, output and sence.

Rename

- Input Name: IN1 Save
- Output Name: OUT1 Save
- Scene Name: S1 Save

7.3 Upgrade Settings:

Connect to the matrix through the network assistant or serial port assistant to send commands: #BOOT

USR-TCP232-Test RS232 to Ethernet Convert tester

File(E) Options(O) Help(H)

COMSettings: PortNum: COM8, BaudR: 115200, DPality: NONE, DataB: 8 bit, StopB: 1 bit, Open

Recv Options: Receive to file..., Add line return, Receive As HEX, Receive Pause, Save..., Clear

Send Options: Data from file..., Auto Checksum, Auto Clear Input, Send As Hex, Send Recycle, Interval: 0 ms, Load..., Clear

NetSettings: (1) Protocol: TCP Client, (2) Server IP: 192.168.1.188, (2) Server Port: 8080, Connect

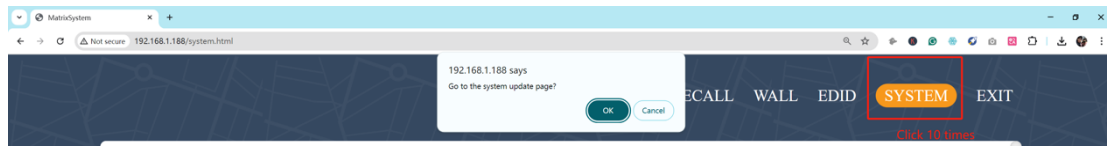
Recv Options: Receive to file..., Add line return, Receive As HEX, Receive Pause, Save..., Clear

Send Options: Data from file..., Auto Checksum, Auto Clear Input, Send As Hex, Send Recycle, Interval: 1000 ms, Load..., Clear

Send: #BOOT, Send, Send: 0, Recv: 0, Reset, Succeed sending #BOOT., Send: 6, Recv: 0, Reset

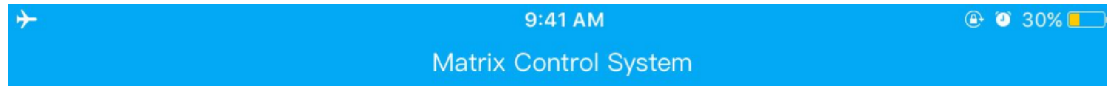
WEB GUI upgrading: click the SYSTEM for 10 times, then it will pop-up the upgrading window and

click OK to enter.



7.4 Application control

The matrix can support APP control. iOS users can directly search for MCS in the Apple store to download the APP, and Android users can download and install it through the website.



eg:192.168.1.111

1. TCP/IP/RS232 control:

Support RS232, TCP (8080): connect to the control device through the RS232 serial cable

Baud rate: 115200 (factory default), N, 8, 1

Use RS232 direct connection

Control commend	Function
#SW:[X]to[Y].	Switch input [X] to output [Y]
#ASW:[X],[Y].	output [X], select the switch mode [Y]: 0:off 1: Automode, 2:Lastmode
#SAVE:[X].	Save sence, [X] is 1--32
#RECALL:[X].	Recall sence, [X]is1--32
#BUZZER:[X].	On or Off the Buzzer, [X] 0:OFF 1:ON
#RESET.	Restore to factory setting
#VSW:?.	Review the video switchover status

SCOMM Assistant

Serial / Network

(1) Protocol: TCP Client

(2) Remote Host Addr: 192.168.1.188

(3) Remote Host Port: 8080

Disconnect

Recv Options

ASCII HEX

Log Display Mode

Auto Linefeed

Hide Received Data

Save Recv to File...

AutoScroll Clear

AutoReply BatchSend Checksum DataChart Themes

Send Options

ASCII HEX

File Data Transfer...

Use Escape Chars ⓘ

Auto Append Bytes

Cycle Time: 1000 ms

Shortcut History

Data Log

SCOMM V5.0.13

[2024-07-16 18:57:32.028]# SEND ASCII/9 to SERVER >>>
#SW:2to2.

[2024-07-16 18:57:32.052]# RECV HEX/9 from SERVER <<<
21 53 57 3A 32 74 6F 32 2E

[2024-07-16 18:57:35.063]# SEND ASCII/9 to SERVER >>>
#SW:2to2.

[2024-07-16 18:57:35.072]# RECV ASCII/9 from SERVER <<<
!SW:2to2.

[2024-07-16 18:57:35.763]# SEND ASCII/9 to SERVER >>>
#SW:1to2.

[2024-07-16 18:57:35.785]# RECV ASCII/9 from SERVER <<<
!SW:1to2.

[2024-07-16 18:57:37.143]# SEND ASCII/9 to SERVER >>>
#SW:2to2.

[2024-07-16 18:57:37.167]# RECV ASCII/9 from SERVER <<<
!SW:2to2.

[2024-07-16 18:57:37.578]# SEND ASCII/9 to SERVER >>>
#SW:1to2.

[2024-07-16 18:57:37.602]# RECV ASCII/9 from SERVER <<<
!SW:1to2.

Net Send

#SW:1to2

Clear Clear

Send

JT808 Data Chart Checksum ASCII Table More Tools

Shortcut BatchSend History AutoReply ModbusDebug

Data Record

	Send Time
ab) #SW:2to2.	18:57:19 07-16
ab) #SW:1to2.	18:56:31 07-16
ab) 2x1.	18:55:35 07-16
ab) 1x1.	18:55:29 07-16
ab) FD F4 03 87 5E 42 60 DF	18:29:55 07-08
ab) FD F4 03 87 5E 48 34 DF	18:29:43 07-08

14/16 RX:126 TX:134 Reset