

# Video Wall Controller

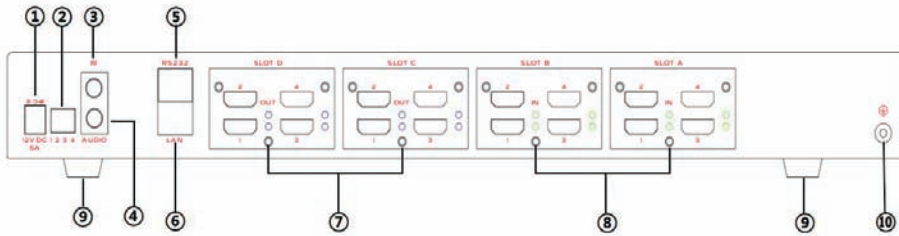
**MT-DM-0404 / MT-DM-0808**

## User Manual

## CONTENTS

1. Interface.....	1
2. Wiring Instruction.....	2
3. Software Installation.....	4
4. Network Setting.....	4
5. Software Connection.....	5
6. Device Activation.....	5
7. Language Setting.....	6
8. Output Screen Settings.....	6
9. Signal Source Display.....	7
10. Scene Store and Recall.....	11
11. Audio Signal Switching.....	12
12. Subtitle Management.....	13
13. Background Photo Setting.....	13
14. Matrix Management.....	14
15. IP Address Modification.....	15
16. User Management and Password Modification.....	15
17. License Import.....	16
18. Screen Power Control.....	17
19. Modification of Signal Source Name.....	17
20. Web Control.....	18
21. Application Control.....	19
22. Center Control Agreement.....	21
23. Warning.....	24

## 1. Interface

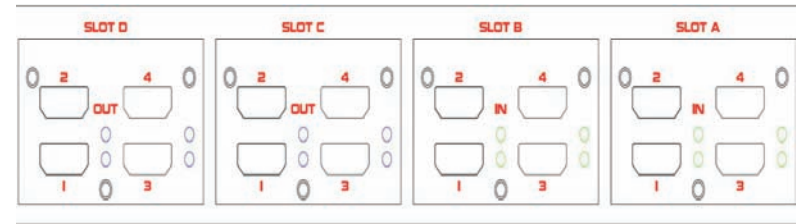


	Description
1	12V power
2	DIP switch
3	IR infrared
4	AUDIO (3.5MM) audio port
5	RS232 serial port (Less use)
6	10/100M adaptive network port (Common)
7	HDMI output port (blue light)
8	HDMI output port (green light)
9	Chassis mat
10	Grounding port
11	Case handle
12	Power switch

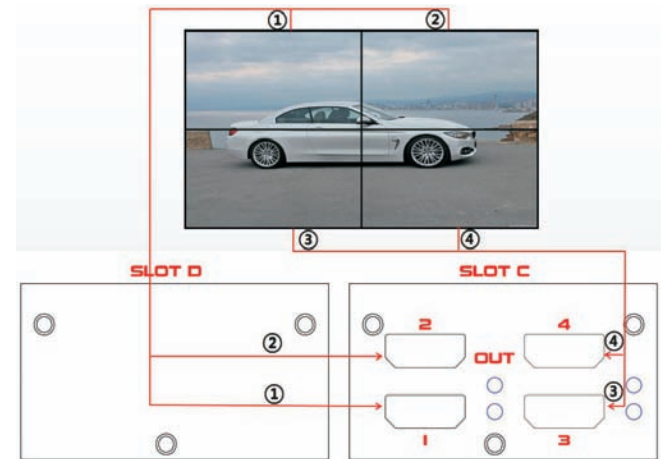
## 2. Wiring Instruction

2.1 Audio and video output can be realized by connecting the HDMI cables, network cable, audio cable, grounding cable and signal source through the controller.

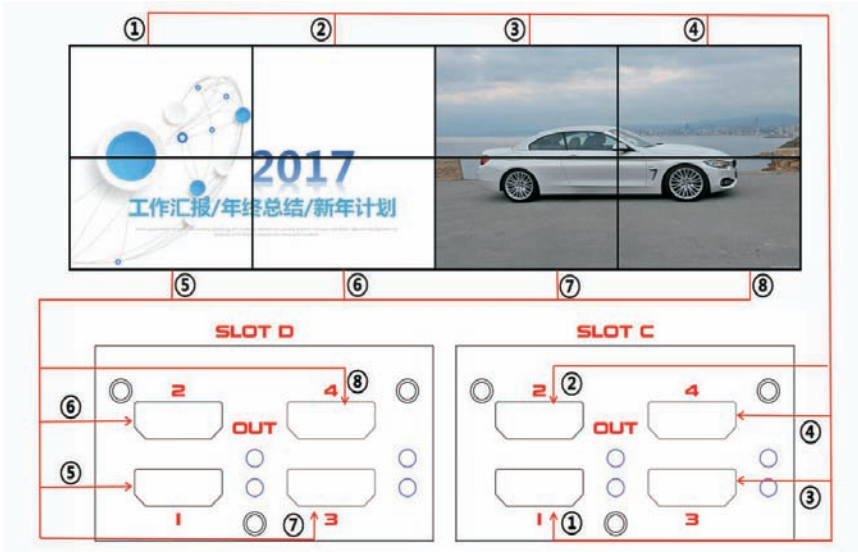
2.2 Each slot is printed with "IN" and "OUT" to distinguish the input (IN) and output (OUT). It can also be distinguished according to the color of the lamp post under each card slot, the green light is input (IN) and the blue light is output (OUT). As shown below:



2.3 The HDMI output cables must be correspond to the output sequence of the controller one by one. As shown below:

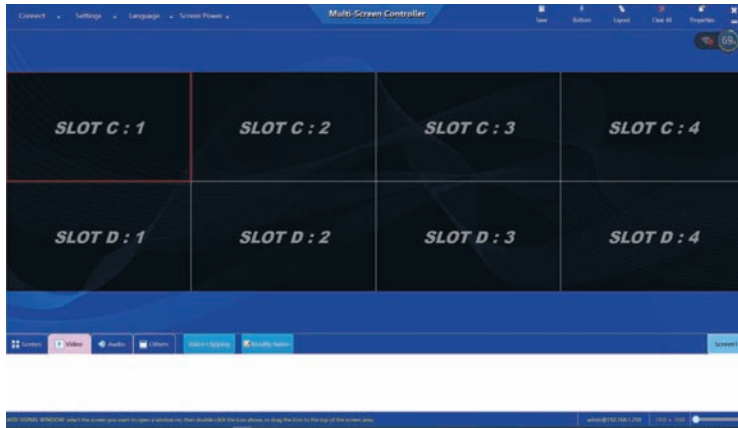


Pic 1 Wiring Diagram of 2 x 2 Output

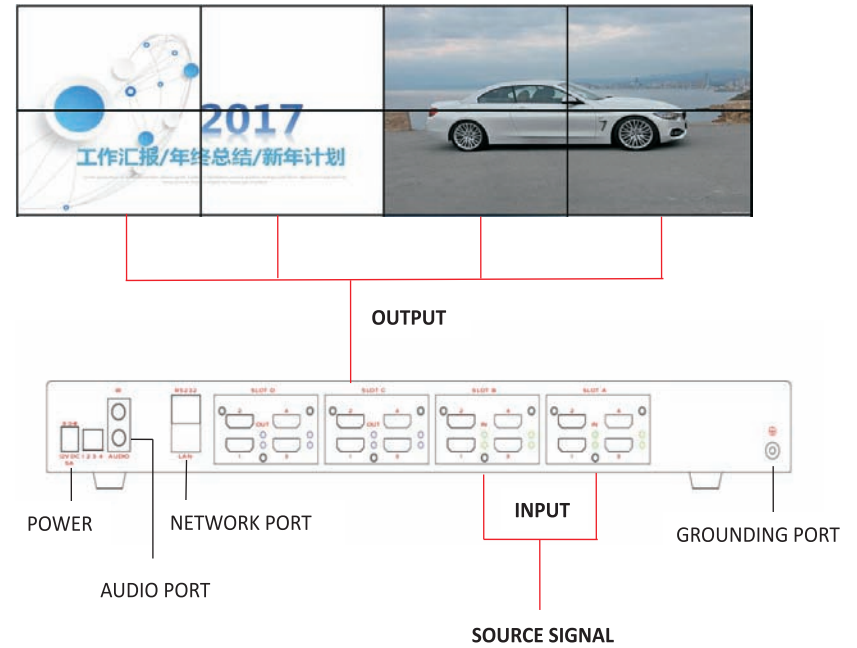


Pic 2 Wiring Diagram of 2 x 4 Output

2.4 After connecting the software (see 5.Software Connection) and setting the screen output (see 7.Screen Output Settings), the software virtual screen will show the wiring sequence of output ports, as shown below. Connect the HDMI output cables to the corresponding output ports of the controller in sequence.



### Topology Diagram



### 3. Software Installation

Copy the software installation package named WtyController\_VX.X.X\_setup from the USB drive to the computer, then double-click it and click NEXT to complete the installation.

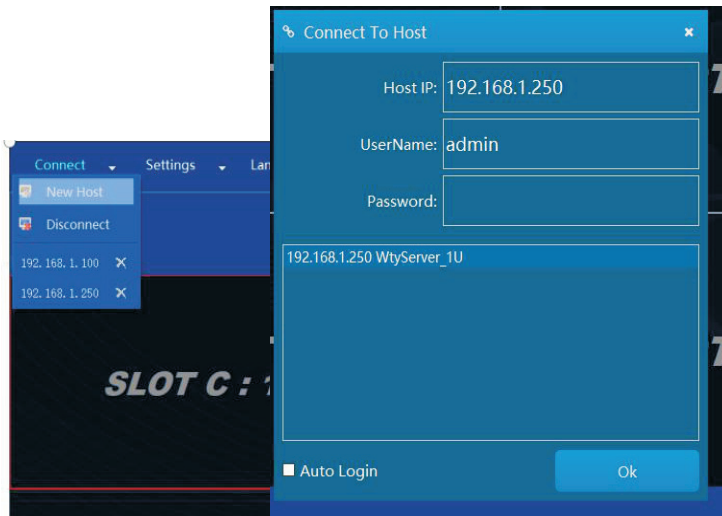
### 4. Network Setting

4.1 Connect the controller directly to the computer through a network cable, or connect both the controller and computer to the same switch or router.

4.2 The default IP address of the controller is 192.168.1.xx. the computer IP address need to be set to 192.168.1.xx to ensure that the computer and controller are in the same network segment.

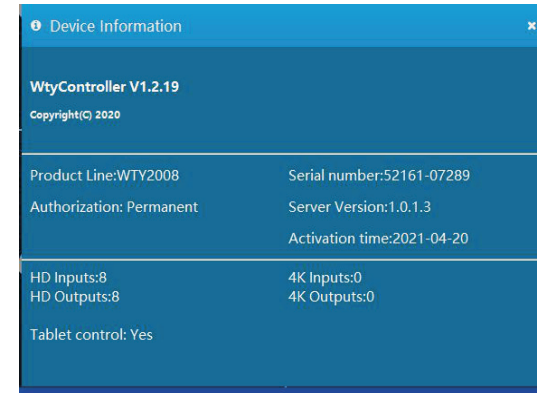
## 5. Software Connection

Click Connect - New Host, a login dialog box pops up, enter the host IP, user name (admin) and leave the password blank. You can also select the controller IP address that automatically searched(as follows) to log in the control software.



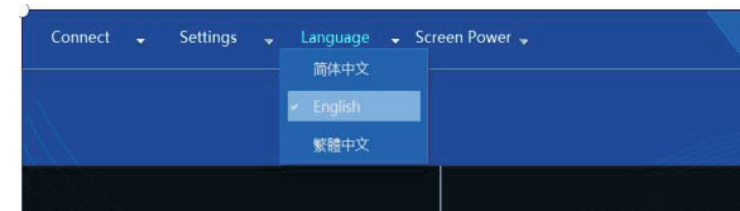
## 6. Device Activation

The device needs to be activated for the first time and the code is 888888. You can check the activation time in Device Information. See below:



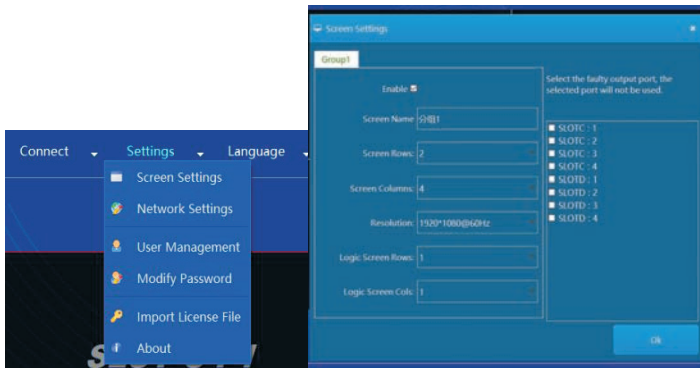
## 7. Language Setting

Click Language to switch between Simplified Chinese, traditional Chinese and English. As shown below:



## 8. Output Screen Settings

8.1 Click Screen Settings. If the output display screen is a standard resolution screen such as LCD, DLP, plasma, etc., you need to set the output resolution of the device according to the screen resolution. As shown below:



8.2 If the output display screen is a non-standard resolution LED display, you need to select "Custom Resolution"("3" in the diagram below) in the screen resolution item, and then enter the width and height of each LED sending card output resolution in the dialog box (in Pixels are in units). See the figure below:



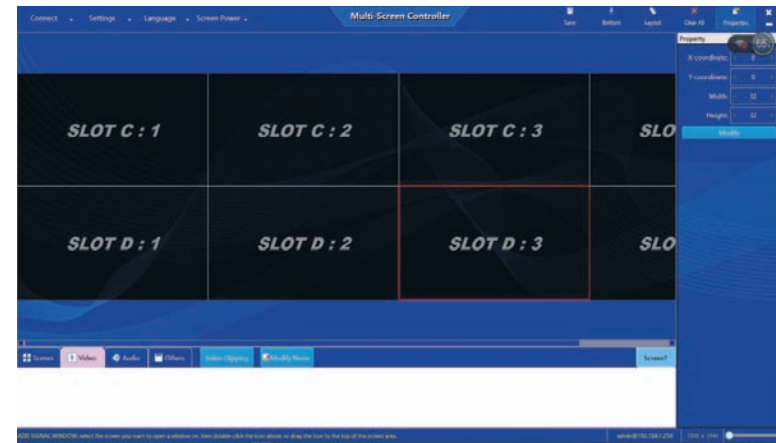
## 9. Signal Source Display

9.1 The signal source can be automatically identified after you connect the signal source to the input port of the controller through the cable.

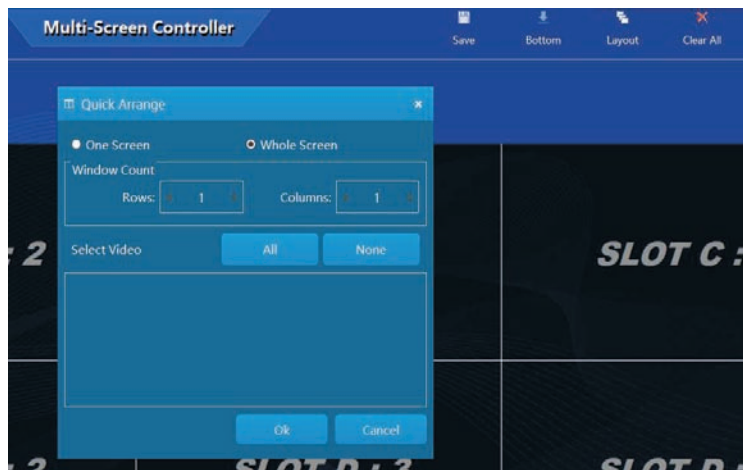
9.2 There are three ways to display:

9.2.1 Double-click the signal source with mouse or drag the signal source to the

specified window position, as shown below:




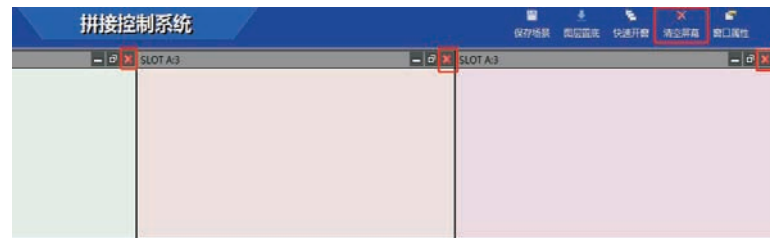
9.2.2 Click Layout and then choose One Screen or Whole Screen, as shown below:



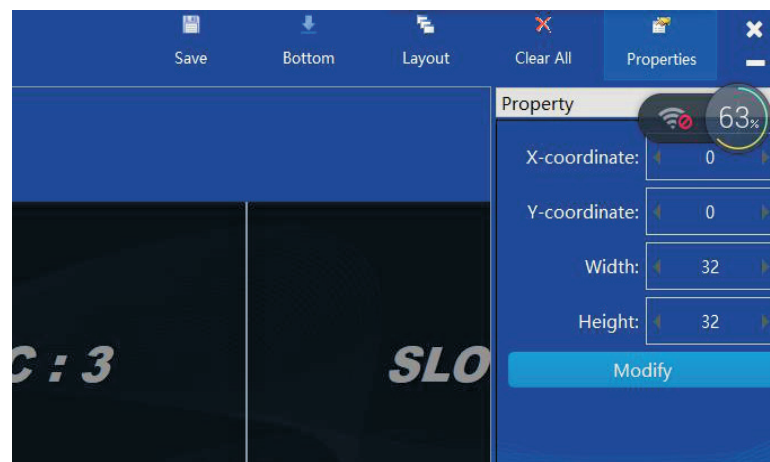
9.2.3 Select the signal source, press and hold the left button of the mouse on the software virtual screen. Slide the mouse on any area of the virtual screen, and release the mouse and then the signal source will be displayed in this area.



9.3.1 Click  in the upper right corner of the window to close the current window. Click “Clear All” to clear all pictures on the large screen quickly. As shown below:

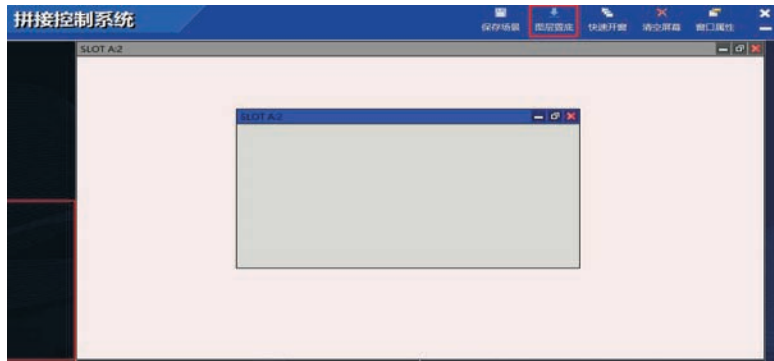


9.3.2 You can use the mouse to control the source position, zoom in and out. It can also be controlled by changing the parameter value of the source property. As shown below:



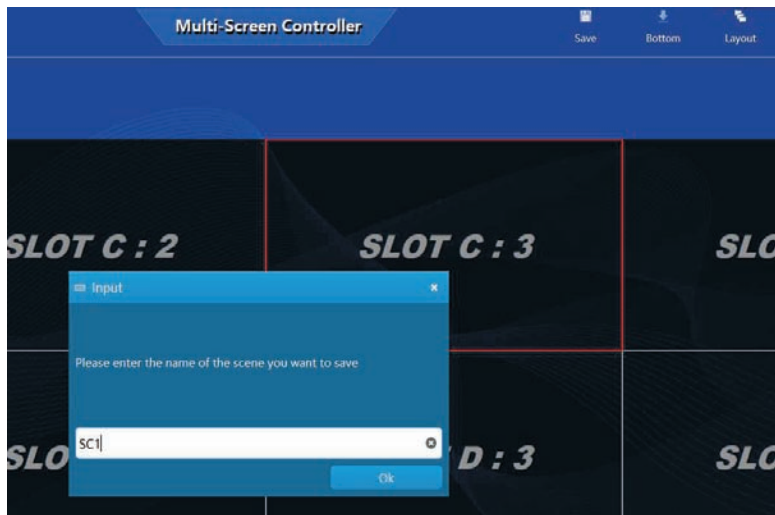
9.3.3 If you select the current layer with the mouse, the current layer will be placed on top, when you click “Bottom”, the layer can be placed on the bottom. As shown below:



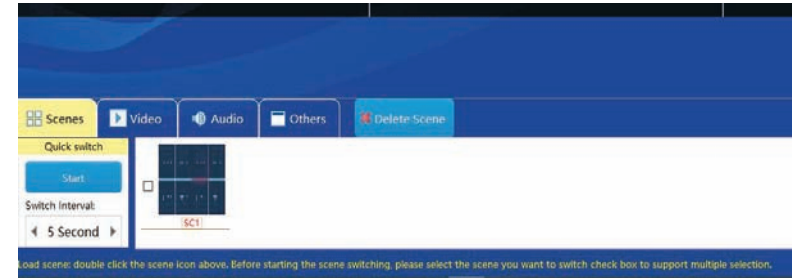


## 10. Scene Store and Recall

10.1 After the source display, click Save Scene, enter the scene name, and click OK to save the scene. As shown below:



10.2 Scenes that are saved successfully can be viewed in the scenes list, as shown below:



10.3 Switching the scene: Double-click the scene name or the corresponding thumbnail.

10.4 Deleting the Scene: Select the scene and click Delete Scene.

10.5 Scenes rotation: Set the rotation time interval and click “Start” to realize the rotation of all scenes.

## 11. Audio Signal Switching

11.1 Click the audio signal to turn on the sound of the signal, as shown below:

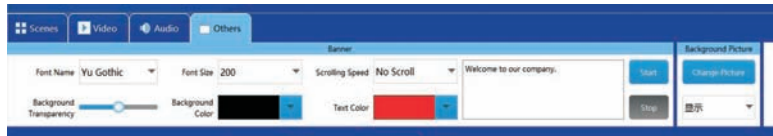


11.2 When you don't need audio output, click Sound Off to close all audio output, as shown below:



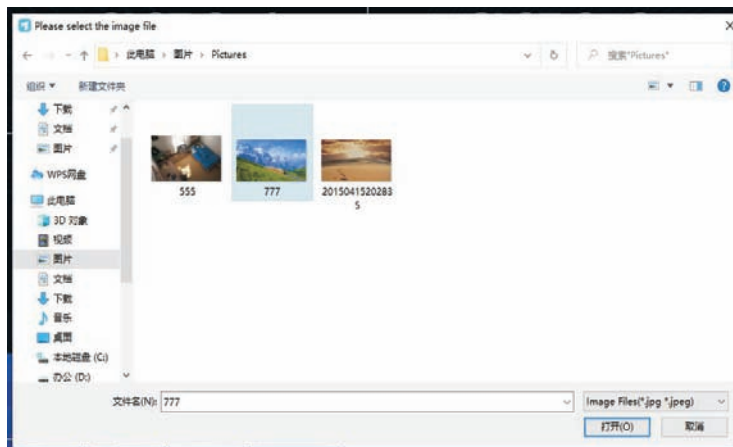
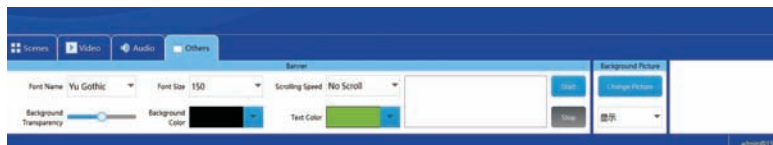
## 12. Subtitle Management

Click “Other” to enter the subtitle management, edit the content in the subtitle edit box, and then set the font, font size, font color, background transparency, and background color of the content. Click “Start”, see below.



## 13. Background Photo Setting

Click “Others”- “Change Picture”, and select the photo you want in the computer.



## 14. Matrix Management

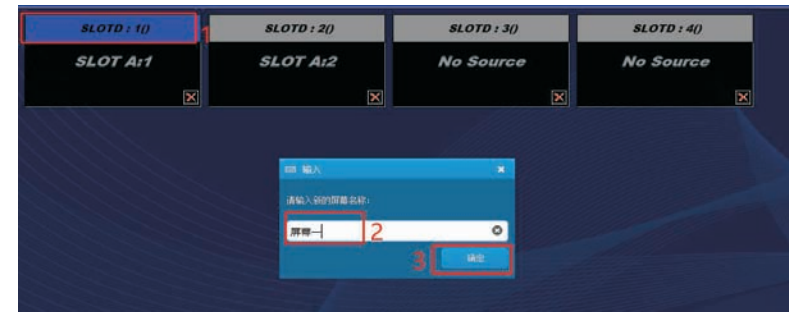
14.1 When setting the screen output(see 8.Output Screen Settings), if the amount of rows and columns on large screen is less than the amount of output ports of the controller, we can see a matrix group button at the bottom right corner of the software. If you set the amount of rows and columns of the large screen equal to the amount of output ports of the controller, the matrix group button will be hidden.

14.2 Click the matrix group button to enter the matrix group management.

14.2.1 Double-click the signal source or drag the signal source to the specified window position, as shown below:



14.2.2 Double-click the screen name, and you can see the modify screen box.

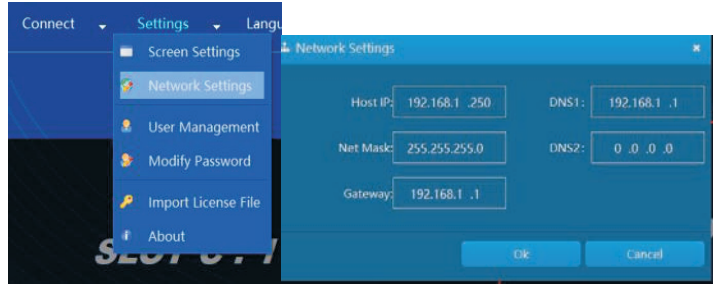


14.2.3 Click the delete button at the bottom right corner of the screen to clear the screen.



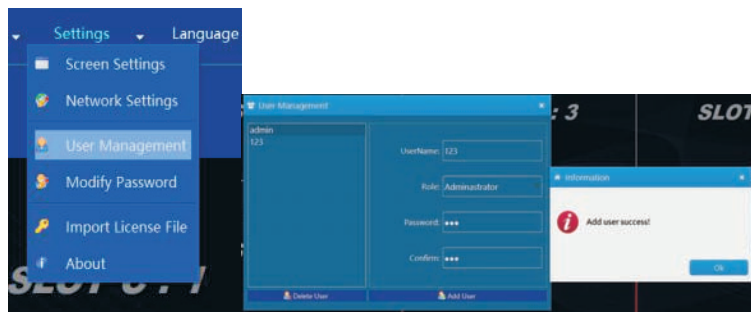
## 15. IP Address Modification

Click Setting-Network Settings, and modify the Host IP, Net Mask, and Gateway as required.

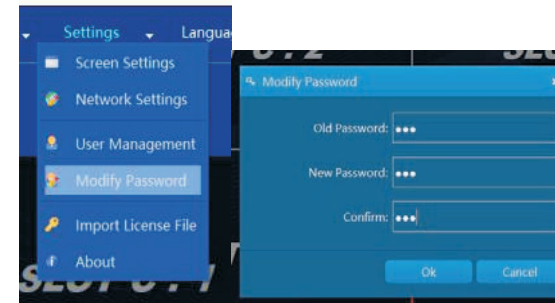


## 16. User Management and Password Modification

16.1 Click Setting - User Management, enter your user name and password, then click Add User. Select the user you want to delete and click Delete User.

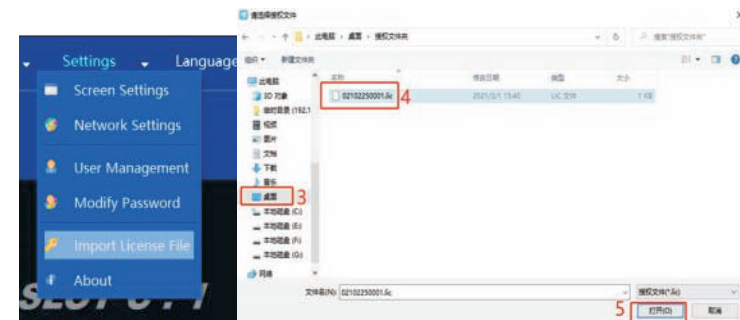


16.2 Click Setting -- Modify Password to change the current account password, as shown below:

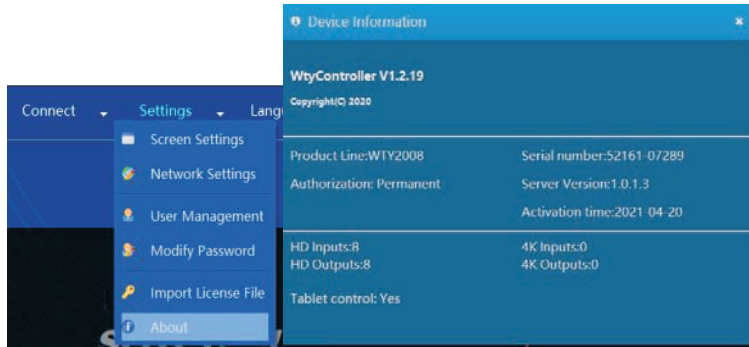


## 17. License Import

17.1 Click Settings -- Import License File and select the file, as shown below:

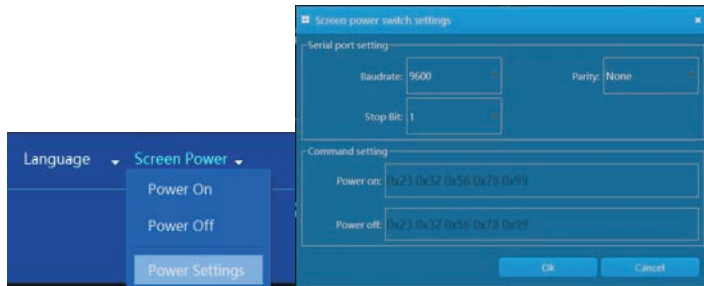


17.2 Click Settings - About to check whether the device information is correct, as well as software version, product model, serial number, etc. As shown below:



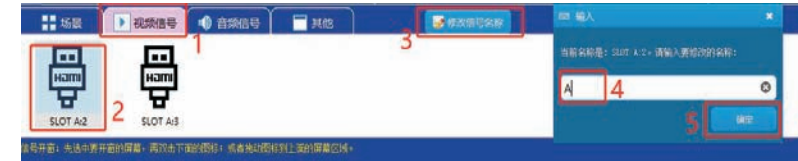
## 18. Screen Power Control

After connecting the screen to the controller with HDMI cable, then go to the Screen Power--Power Settings to make the serial port setting and command setting. After that, the screen can be turned on or off.



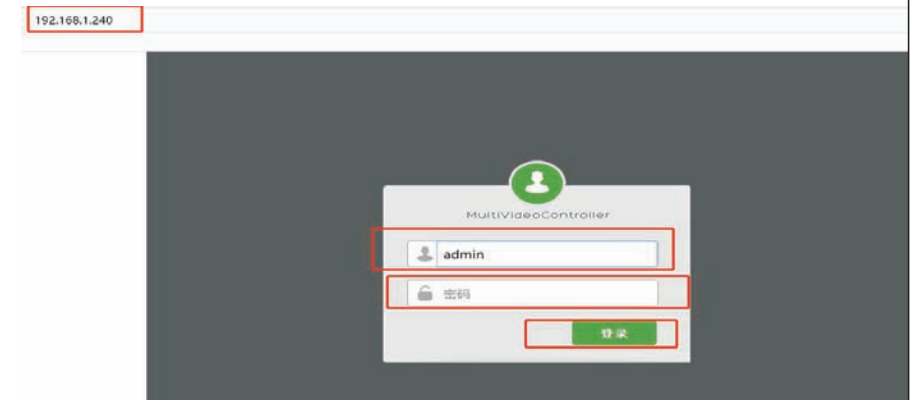
## 19. Modification of Signal Source Name

Click Modify Signal Name, and type the new name then enter to modify of the signal source name. As shown below:

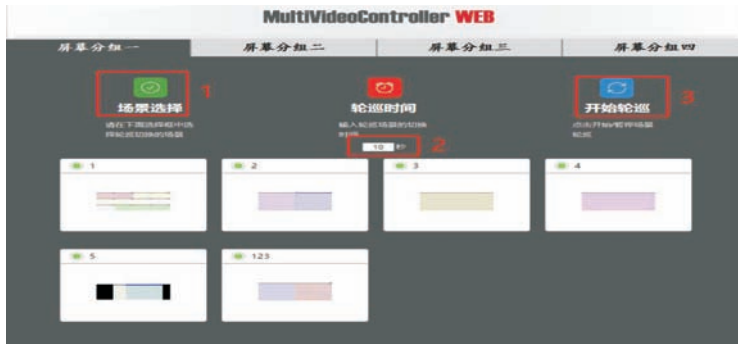


## 20. Web Control

20.1 Open a browser on the mobile terminal under LAN and enter the IP address of the controller. The web login page will pop up, and enter the account password to log in. The initial account is admin and leave the password blank. As shown below:



20.2 After login, click the required scene to retrieve the scene, or set the scene automatic rotation. As shown below:



## 21. Application Control

21.1 Install the app on the tablet PC or mobile phone and connect WIFI, the WIFI must be in the same network segment as the controller. Open the software, enter IP address of controller, user name (admin) and leave the password blank to log in. You can also log in with the new user name and password created by the client. As shown below:



21.2 After log-in, the control interface of APP will appear. On the left is the list of signal sources, drag the signal sources to the virtual screen to display. Click the audio switch at the top right corner of the signal source can turn on or off the sound of the signal source. The virtual screen is in the middle, the signal source can be zoomed in and out, superimposed roaming, etc. On the right is the scene list, double-click can

invoke the scene. As shown below:



## 22. Center Control Agreement

### 22.1 Connection Method

This system supports two ways of switching scenes: HTTP and serial port.

### 22.2 Description of HTTP Interfaces

- Port: 80.
- Keep-alive mode is not supported.
- Unless otherwise specified, the URL of POST or GET in the following

interfaces is `http://host IP address /index2.html`

#### 22.2.1 Login

<b>Request type</b>	<b>POST</b>
<b>Content</b>	<b>Json:</b> <pre>{   "Command" : "Login",   "UserName" : "Enter User Name"   "Password" : " Enter The MD5 string of the password" }</pre>
<b>Response</b>	<b>Json:</b> <pre>{   "Status" : "Ok"/"Error",   "SessionId" : "Enter The session id of this login, - valid when the status is ok"   "ScreenGroup" : [Screen grouping authority, 1 means it can be operated, 0 means it can not be operated]   "Message" : "Error Message" }</pre>

Note: The session id must be saved for later use

#### 22.2.2 Get the host scene list

This command gets the list of scenes corresponding to the screen group specified by ScreenGroup.

<b>Request type</b>	<b>GET</b>
<b>Header contains</b>	<b>session_id=Enter session id</b>
<b>Content</b>	<b>Command=GetAllModal&amp;ScreenGroup=Enter Screen group number (1-4)</b>
<b>Response</b>	<b>Json:</b>

	<pre>{   "Status": "Ok"/"Error",   "ModalList": ["scene 1", "scene 2", ...] }</pre>
--	---

#### 22.2.3 Get the thumbnail of the host scene

<b>Request type</b>	<b>GET</b>
<b>URL</b>	<b>http://xxx.xxx.xxx.xxx/scene name.jpg</b>
<b>Header contains</b>	<b>session_id=Enter session id</b>
<b>Response</b>	<b>Image data</b>

#### 22.2.4 Switching Scene

<b>Request type</b>	<b>POST</b>
<b>Header contains</b>	<b>session_id=session id</b>
<b>Content</b>	<b>Json:</b> <pre>{   "Command" : " LoadModal",   "ScreenGroup" : Enter screen group number (1-4)   "ModalName" : Enter "scene name" }</pre>
<b>Response</b>	<b>Json:</b> <pre>{   "Status" : "Ok"/"Error",   "Message" : "Error Message" }</pre>

### 22.3 Description of serial port interface

#### 22.3.1 Port configuration

- Port and baud rate: set in the communication settings
- Parity check: none
- Flow control: none
- Data bits: 8
- Stop bit: 1

#### 22.3.2 Packet format

The commands sent by the center control to the device and the responses sent by the device to the center control are all encapsulated into data packets. Each data packet starts with a \$ character and ends with a ^ character, as shown below:

Op represents an operation command, one character.

Scr represents the screen group number to be operated, one character.

\$	Op	Scr	DATA	^
----	----	-----	------	---

### 22.3.3 Serial command

1) Get the host scene list

Center control command:

<b>Op</b>	1
<b>Scr</b>	One byte, the value is 1 to 4, which specifies the serial number of the screen group
<b>DATA</b>	None
<b>Example:</b>	To get the screen of screen group 1: \$11^ To get the screen of screen group 2: \$12^ To get the screen of screen group 3: \$13^ To get the screen of screen group 4: \$14^

Device response:

<b>Op</b>	1
<b>DATA</b>	Multiple scene names separated by spaces (UTF8 format). E.g: Scene 1 scene 2

2) Switch scene

Center control command:

<b>Op</b>	3
<b>Scr</b>	A byte, ranging from 1 to 4, specifying the sequence number of the screen group
<b>DATA</b>	Screen name (UTF8 format)
<b>应用示例:</b>	Switch “scenario5” of screen group 1: \$31scenario5^ Switch “ab” of screen group 2: \$32ab^ Switch “123ab” of screen group 3: \$33123ab ^ Switch “scenario one 6a” of screen group 4: \$34 scenario one 6a ^ Code of Scenario Name “1”: 24 33 31 31 5E Code of Scenario Name “2”: 24 33 31 32 5E Code of Scenario Name “3”: 24 33 31 33 5E

Device response:

<b>Op</b>	3
<b>DATA</b>	OK or Error

3) Obtain the controller IP

Center control command:

<b>Op</b>	6
<b>Scr</b>	none
<b>DATA</b>	none
<b>应用示例:</b>	\$6^

Device response:

<b>Op</b>	6
-----------	---

<b>DATA</b>	Professor IP. Example: IP:[192.168.1.250]
-------------	--

4) Set the controller IP address

Center control command:

<b>Op</b>	7
<b>Scr</b>	None
<b>DATA</b>	IP address
<b>Example</b>	Setting the professor IP to: 192.168.1.200: \$7192.168.1.200^

Device response:

<b>Op</b>	7
<b>DATA</b>	OK or Error

## 23. Warning

In order to ensure the reliable use of the equipment and the safety of the users, please observe the following items during installation, use and maintenance:

- 1) The distributor is connected to the controller. Since the distributor reads the EDID from the first output port, if the input of the controller is connected to other ports of the distributor, the color of the controller will be cast.
- 2) When installing the equipment, make sure that the ground wire in the power cord is well grounded.
- 3) Do not place the device in a place that is too hot or cold.
- 4) Keep the working environment well ventilated, so that the heat emitted by the equipment is discharged in time, so as to avoid damage to the equipment due to excessive temperature.
- 5) In a humid and dew environment or long-term non-use, the main power supply of the equipment should be turned off.
- 6) Before the following operations, be sure to unplug the AC power cord of the equipment from the power socket:  
Remove or reset any part of the equipment;  
Do not disassemble the equipment without permission to avoid electric shock. Also do not repair privately to avoid further damage of the equipment.