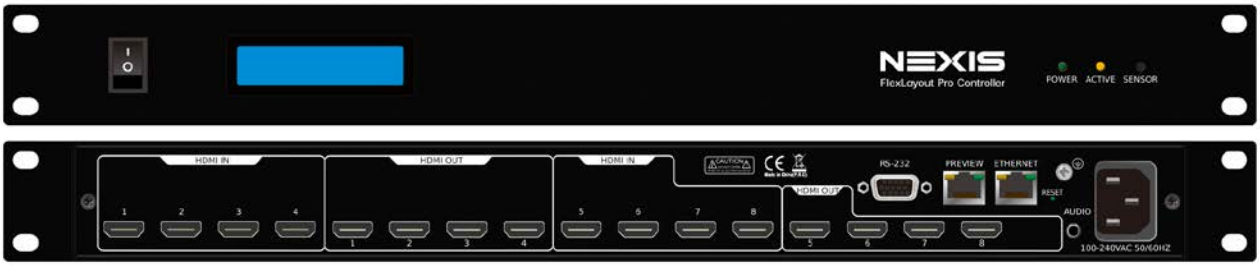
# NEXIS

# VW4808A Seamless 4K Ultra HD Matrix and Video Wall Processor User Manual

**V1.0**



# The meaning of symbols

■ Safety instructions

Instructions and equipment use symbols to indicate potential harm to users or others and risks of property damage, so that you can use the equipment safely and correctly. Instructions and their meanings are as follows. Please make sure to understand these instructions correctly before reading the instructions.

| | |
|---|---|
|  | Users are reminded to follow the operation and maintenance instructions provided with the device. If these instructions are ignored, death or personal injury may result from incorrect operation. |
|  | Remind the user that the uninsulated dangerous voltage in the device may cause an electric shock. |
| CE | CE certification means that the product has met the safety requirements specified by the European Union, and users can use it safely. |
| ISO9001-2000 | This product has passed ISO9001 international quality certification. |
|  | Warning: To avoid electric shock, do not open the cover or put any unused parts inside the case. Contact a qualified service technician. |

■ **General information instructions**

| | |
|---|---|
|  | Lists the content that may cause an operation or configuration to fail and some information to note. |

# Important note

 Warn

To ensure reliable operation of equipment and personnel safety, please comply with the following during installation, use and maintenance:

**Precautions during installation**

◆ The power plug should be easy to disconnect, and the disconnect coupler on the front panel should also be easy to disconnect.

◆ The equipment shall not be exposed to water droplets or splashes, and no items such as vases filled with water shall be placed on the equipment.

◆ Do not use this product in the following places: places with dust, oil fumes, conductive dust, corrosive gas, flammable gas; places exposed to high temperature, condensation, wind and rain; places with vibration and impact. Electric shock, fire, misoperation will also lead to product damage and deterioration;

◆ During screw hole processing and wiring, do not let metal chips and wire ends fall into the ventilation hole of the controller, which may cause fire, failure and misoperation;

◆ After the installation of the product is finished, it is necessary to ensure that there are no foreign objects on the ventilation surface, including dust-proof paper and other packaging items, otherwise it may lead to poor heat dissipation during operation, causing fire, failure and misoperation;

◆ Avoid wiring and plugging and unplugging cable plugs in a charged state, otherwise it is easy to cause electric shock or circuit damage;

◆ Installation and wiring must be firm and reliable, poor contact may lead to misoperation;

◆ For applications with serious interference, high-frequency signal input or output cables should be selected to improve the anti-interference performance of the system.

**Precautions during wiring**

◆ The equipment should be connected to the power outlet of the grid with a protective grounding connection.

◆ The installation, wiring and other operations can not be carried out until all external power sources are cut off, otherwise it may cause electric shock or equipment damage;

◆ This product is grounded through the grounding wire of the power line to avoid electricity to strike, the grounding conductor must be connected to the earth for transmission of this product. Before connecting the input or output end, please make sure that the product is properly grounded;

◆ Remove foreign objects immediately after installation and wiring. Cover the terminal cover plate of the product before power on to avoid electric shock;

**Precautions during operation and maintenance**

◆ Do not touch the terminal when powered on, otherwise it may cause electric shock or misoperation;

◆ Clean and tighten the terminals after turning off the

power supply;
These operations may cause electric shock when powered on;

◆ Please connect or remove the communication signal cable, expand the module or control unit cable connection or remove the operation after turning off the power supply, otherwise it may cause equipment damage, misoperation;

◆ Do not disassemble the equipment to avoid damage to internal electrical components;

◆ Be sure to read this manual thoroughly, and fully confirm the safety before proceeding with the program change, trial run, start and stop operation;

◆ The button battery must be replaced in the state of power failure. If it is necessary to replace the battery with electricity due to equipment operation, it should be done by professional electrical technicians wearing insulated gloves.

**Precautions when the product is scrapped**

◆ Explosion of electrolytic capacitors: explosion may occur when electrolytic capacitors on the circuit board are burned;

◆ Please collect and dispose of them in categories, and do not put them into household garbage.

◆ Please dispose of it as industrial waste or in accordance with local environmental protection regulations.

# Preface

This manual is mainly about the use, performance parameters and troubleshooting of NEXIS VW4808A HDMI seamless 4K ultra HD matrix and video wall processor.

If the technical parameters and system usage in this manual are changed, the manufacturer will update the version number of the user manual. Please use the latest product manual.

| Version | Update | Date |
|---|---|---|
| 1.0 | Released | 2025.8.11 |
| | | |

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# 1.Overview



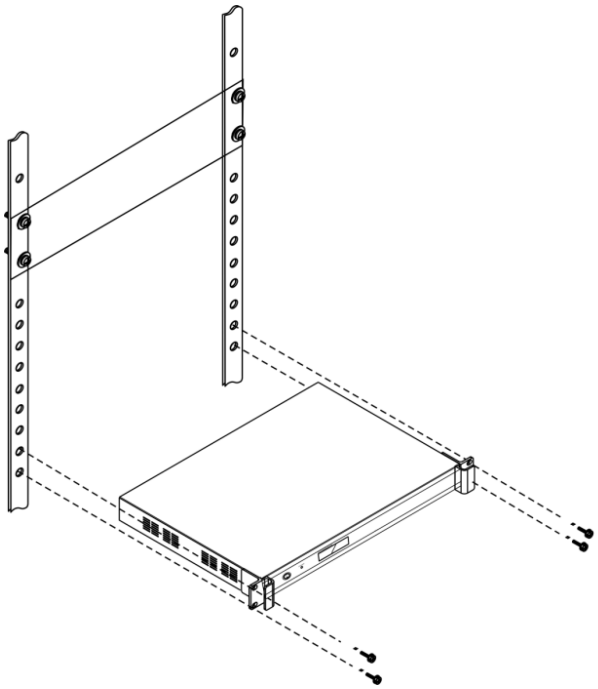

The VW4808A Seamless Matrix Switcher features 8 HDMI inputs and 8 seamless HDMI outputs with analog audio support. It supports 4K@30 input/output resolution, enabling real-time seamless video splicing. The device offers IP visual preview, flexible layout configuration, multi-layer display capabilities, image editing, large-screen splicing, multiple control modes, and intelligent management, catering to diverse application scenarios.

## 1.1 Functions

1) 8 HDMI inputs, 8 HDMI seamless outputs and an analog audio output.
2) Input/output supports 4K@30 backward compatibility,compatible with HDMI 1.4 and HDCP 1.4 standards.
3) Visual management: Built-in IP preview function, can monitor the input signal picture in real time, and feedback the current status of the splicing wall.
4) Flexible layout: support any window opening, roaming, zoom, signal switching and picture overlay operations.
5) Preview window expansion: A single interface supports up to 8 layers, and the entire splicing wall supports up to 16 layers (interfaces 1 to 8 share 16 layers).
6) EDID management: It supports the selection of a variety of built-in EDID files, reads and outputs the EDID of the display device and applies it to the input end, and also supports EDID file update.
7) Image clipping: Support for local cropping of input images as display signals.
8) Logo adding: Support to add logo on the input image, support any language, font and size can be adjusted.
9) Built-in signal generator: input and output channels provide 11 kinds of professional test images for engineering debugging.
10) LED or LCD large screen synchronous splicing processing: support seamless splicing and synchronous display.

11) Scrolling subtitle function: supports scrolling subtitles on the large screen, including any language, font and size adjustment.
12) Graphical control interface: Support intuitive graphical control through web page or PC software.
13) Volume control: The volume of each input channel can be adjusted through the software, and one-click mute function is supported.
14) Multiple control modes: including front panel button control with LCD screen, RS232 control, TCP/IP network control, web page control, etc., to provide flexible and convenient operation experience.
15) Output port mapping: Supports flexible configuration of output port mapping to improve usability.
16) Smart device management: Real-time update of input source status, support to view device temperature and version information.
17) Multi-user permission management: supports multiple connections and multi-user operations, and can assign different management permissions and port management scope according to different users.
18) Preset Plan: Support one-click save and activate plans to simplify the operation process.
19) Bezel compensation setting: Support to adjust the screen gap when splicing the picture, optimize the visual effect.

## 1.2 Installation



# 2.Hardware Parameters

Product Parameters ：

| | |
|---|---|
| Model | VW4808A |
| Input Type | 8 HDMI |
| Output type | 8 HDMI, 1 analog audio |
| Video protocol | HDMI 1.4、HDCP 1.4 |
| Maximum resolution | Input/output 4K@30 |
| HDMI port | Type A, 19 pins, female connector |
| Serial interface | RS-232 |
| Input cable length | 10 ms |
| Output cable length | 10 ms |
| Impedance | 100±15 ohms |
| RJ45 control protocol | TCP/IP protocol |
| Ethernet rate adaptation | Adaptive 10M/100M/1000M |
| Storage environment | Temperature: -20°C ~ +70°C, humidity: 10%~90% |
| Work environment | Temperature: 0°C ~ +50°C, humidity: 10%~90% |
| Power supply | AC100~240V 50/60Hz |
| Maximum power consumption | 65W |
| Chassis specifications | 1U |
| Size (length x depth x height) | 482x350x46.3 mm |
| Weight | 3.5 Kg |
| MTBF | 30,000 hours |
| Guarantee | One year warranty and lifetime maintenance |

# 3.Introductions of Panels

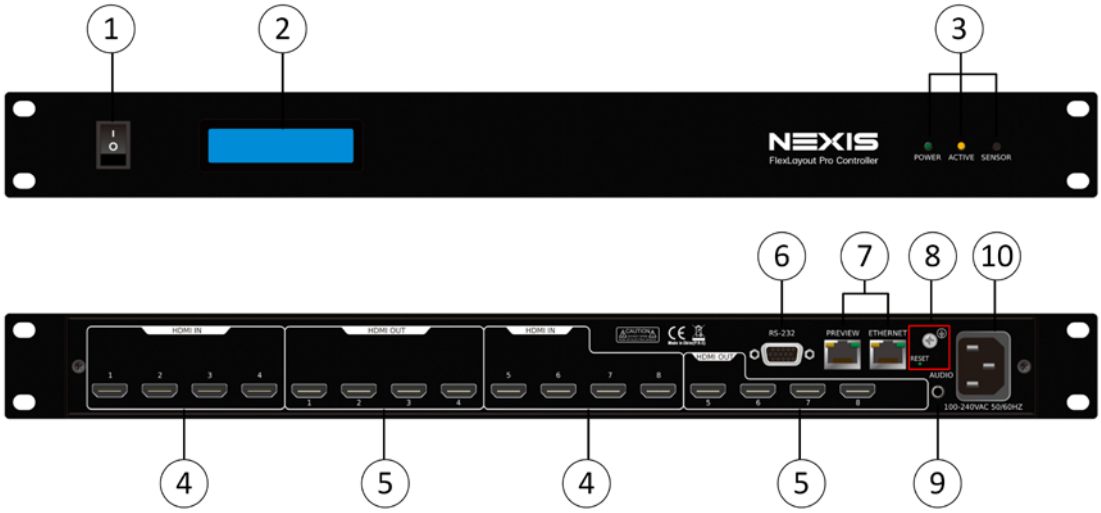
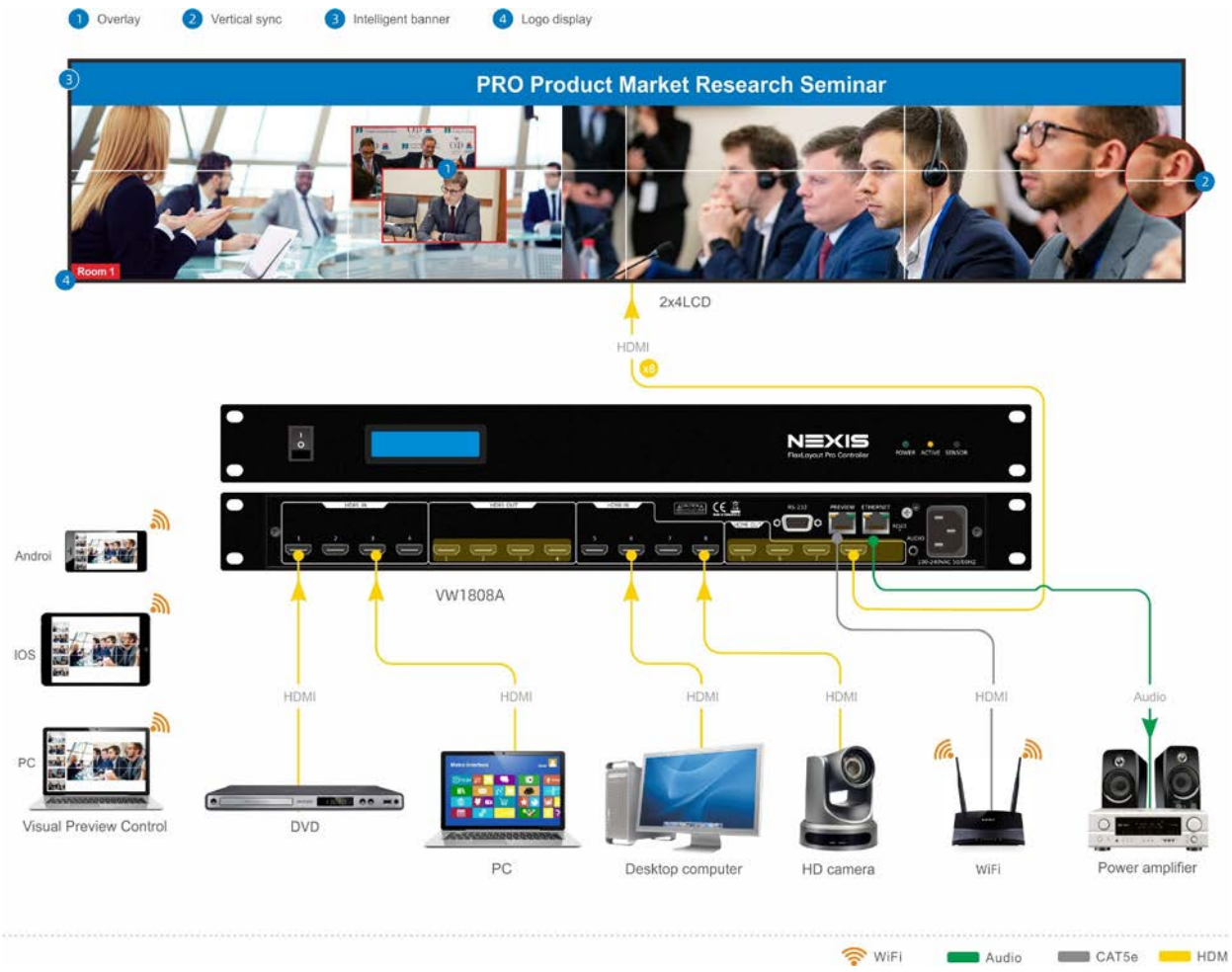



Figure 1-Front panel and back panel of VW4808A

The front and rear panels of the VW4808A seamless UHD matrix switcher include:

1. Power switch-Turn on or off the power supply of the matrix switch.
2. Display screen-Current matrix IP address and port number.
3. Signal indicator light-POWER: Power indicator light; ACTIVE: Active status indicator for receiving commands; SENSOR: Infrared receiver status indicator.
4. HDMI IN-Signal input source, providing 8 HDMI input ports for connecting the corresponding input source devices.
5. HDMI OUT-Signal output source, providing 8 HDMI output ports for connecting corresponding output devices.
6. RS-232 serial port-Provides 1 independent RS-232 port (DB9 female connector), which can be used to connect RS232 control equipment for central control.
7. Ethernet/PREVIEW RJ45 network interface-Provides two Ethernet network connection ports, which can be used to connect LAN and Internet, etc. Green light indicates normal connection, orange light flashing indicates receiving or sending data.
8. Grounding column and RESET key.
9. Analog audio output-Provides a balanced analog audio output interface (3.5mm)
10. Power input port-system working power supply, supporting AC100~240V 50/60Hz input.

# 4.Diagram


1 Overlay
2 Vertical sync
3 Intelligent banner
4 Logo display
PRO Product Market Research Seminar
Room 1
2x4LCD
HDMI
x8
NEXIS
VW1808A
Androi
IOS
PC
Visual Preview Control
HDMI
DVD
HDMI
PC
HDMI
Desktop computer
HDMI
HD camera
HDMI
WiFi
Audio
Power amplifier
WiFi
Audio
CAT5e
HDM

# 5.Control Command

Ethernet protocol: TCP, IP: 192.168.1.191, port: 6666

Serial Port Protocol: Baud Rate: 9600

Data Bits: 8 Stop Bits: 1 Parity: None

Protocol Table:

| | Command | Functions | Parameter | Return information |
|---|---|---|---|---|
| System Settings: | | | | |
| | /^Version; | Device model/version/ temperature | None | <Version:1.1.1/1.0/2.2><br><Temp:0.0><br><Device:0808><br><Model:VW4808A><br><Resolution:1920x1080 @60Hz><br><X2_MODE> |
| | /:HeartBeat; | With the device's heartbeat packet (device over 12s<br>No data will be received and the connection will be disconnected) | | <HeartBeat> |
| | /:ScanPortRes olution; | Scan resolution | | <Resolution/1/In/1920x 1080x60Hz> |
| | <#TestColor[x ],[y],[z],[r],[g] ,[b]> | Port [y] graphical test mode | [x]: 1 input 2: output [y]: channel [z]: 0x00: direct<br>0x1: Red, green and blue color | <TestColor[x],[y],[z],[r], [g],[b]> |

| | | | | |
|---|---|---|---|---|
| | | | bars<br>0x2: 16 levels of gray<br>0x3: 32-bit grayscale<br>0x4: 64-bit grayscale<br>0x5: Red grid<br>0x06: Green grid<br>0x7: Blue grid<br>0x8: White grid<br>0x9: Horizontal scroll bar<br>0xA: Vertical scroll bar<br>0xB: Pure color (depending on RGB values) | |
| | <#SignalMode[x],[y],[z],[r],[g],[b]> | Output graphics without graphical input port<br>(Only solid color input and splicing cards) | [x]: 1 input, 2 output, y: channel<br>[z]: 0x00: Normal video<br>0x1: Red, green and blue color bars<br>0x2: 16 levels of gray<br>0x3: 32-bit grayscale<br>0x4: 64-bit grayscale<br>0x5: Red grid<br>0x06: Green grid<br>0x7: Blue grid | <SignalMode[x],[y],[z],[r],[g],[b]> |

| | | | | |
|---|---|---|---|---|
| | | | 0x8: White grid<br>0x9: Horizontal scroll bar<br>0xA: Vertical scroll bar<br>0xB: Pure color (depending on RGB values) | |
| | <#Cmd_Baud[x]> | [x]: Baud rate<br>0:9600<br>1:38400<br>2:115200<br>3:230400 | | |
| | <#Cmd_Port[x]> | x: 0 COM0 | | <Cmd_Port[x]> |
| | <^Cmd_Port> | Return the command port and baud rate | | <Cmd_Port[x]><br><Cmd_Baud[x]> |
| | <#Cmd_Send[x]> | Send the central control command x: Command ID | Failure indicates that no command was set | <Send_failed> |
| Network port 1 parameter setting: | | | | |
| | <^NET> | Query network parameters | | |
| | <#SPORT[5000]> | Set the network port number of the matrix | | <SPORT:[X1]> |
| | <#SIPR[192].[168].[0].[2]> | Set the matrix network IP | | <SIPR:[X1].[X2].[X3].[X4]> |
| | <#GAR[192].[168].[0].[1]> | Set the network gateway | | <SUBR:[X1].[X2].[X3].[X4]> |

| | | | | |
|---|---|---|---|---|
| | | number | | |
| | <#SUBR[255].[255].[255].[0]> | Set the network subnet mask | | <GAR:[X1].[X2].[X3].[X4]> |
| | <#SHAR[08]:[52]:[31]:[00]:[00]:[01]> | Set the network hardware address (hexadecimal) | | <SHAR:[X1]:[X2]:[X3]:[X4]:[X5]:[X6]> |
| | <#NETDEFAULT> | Restore factory Settings to network | | |
| Network port 2 parameter setting: | | | | |
| | <#SIPR:[192].[168].[0].[2]> | Set the matrix network IP | | <SIPR:[X1].[X2].[X3].[X4]> |
| | <#GAR:[192].[168].[0].[1]> | Set the network gateway number | | <SUBR:[X1].[X2].[X3].[X4]> |
| | <#SUBR:[255].[255].[255].[0]> | Set the network subnet mask | | <GAR:[X1].[X2].[X3].[X4]> |
| | <#SHAR:[08]:[52]:[31]:[00]:[00]:[01]> | Set the network hardware address (hexadecimal) | | <SHAR:[X1]:[X2]:[X3]:[X4]:[X5]:[X6]> |
| Input and output Settings: | | | | |
| | <#AudioSel[x]> | Select to input the [x]th audio channel | | <Set Succeed!> |
| | <^AudioSel> | Query the current channel | | <AudioSel[x]> |

| | | | | |
|---|---|---|---|---|
| | | of audio | | |
| | <#VolumeIn[x],[y]> | Set the input volume of channel [x] | | <Set Succeed!> |
| | <^VolumeIn[x]> | Query the input volume of channel [x] | | <VolumeIn[x],[y]> |
| Layout Settings: | | | | |
| | <#SetDelay[x],[y]> | Set the delay of the splicing port [x], and the delay size [y] is 0-3 | | <SetDelay[x],[y]> |
| | <#MAP[x],[x1],[x2]> | The partition wall [x], window [x1] is mapped to [x2] | | <MAP[x],[x1],[x2]> |
| | <#SIZE[x],[x1],[x2]> | The resolution of the partition wall [x1][x2] is higher for LCD | Set it uniformly when LCD is used | <SIZE[x],[x1],[x2]> |
| | <#SIZE_X[x],[x1],[x2],[x3],[x4]> | Horizontal resolution of each window in the partition wall [x] | [x1]--[x4] corresponds to columns 1 through 4 | <SIZE_X[x],[x1],[x2],[x3],[x4]> |
| | <#SIZE_Y[x],[x1],[x2],[x3]> | Vertical resolution of each window in the partition wall [x] | [x1]--[x3] corresponds to the first to third columns | <SIZE_Y[x],[x1],[x2],[x3]> |
| | <#FREQ[x],[y]> | Refresh rate of the splicing wall [x] [y] | "1080P mode supports 30,50,60, | <FREQ[x],[y]> |

| | | | | |
|---|---|---|---|---|
| | <#LOGICVIR[x],[x1],[x2]> | Puzzle wall [x] rows [x1]: horizontal window rows [x2]: vertical window rows | 4K mode supports 30 and 60Hz | <LOGICVIR[x],[x1],[x2]> |
| | <#VIR[x],[x1],[x2]> | Puzzle wall [x] rows [x1]: horizontal window rows [x2]: vertical window rows | Other modes are limited to 60Hz" | <VIR[x],[x1],[x2]> |
| | <#OPEN[x],[x1],[x2],[x3],[x4],[x5],[x6],[x7]> | Open a new window parameter setting: [x]: splicing wall identifier [x1]: window identifier [x2]: input source [x3]: layer number [x4]: horizontal position of window [x5]: vertical position of window [x6]: total horizontal length of window [x7]: total vertical length of window | Re-virtualize the rows of the splicing wall | <OPEN[x],[x1],[x2],[x3],[x4],[x5],[x6],[x7]> |
| | <#MOVE[x],[x1],[x2],[x3]> | Mobile window parameter setting: [x]: splicing wall identifier [x1]: window identifier [x2]: | | <MOVE[x],[x1],[x2],[x3]> |

| | | | | |
|---|---|---|---|---|
| | | window horizontal position [x3]: window vertical position | | |
| | <#RESIZE[x],[x1],[x2],[x3],[x4],[x5]> | Window stretching parameter Settings: [x]: Splicing wall identifier [x1]: Window identifier [x2]: Window horizontal position [x3]: Window vertical position [x4]: Window horizontal size [x5]: Window vertical size | | <RESIZE[x],[x1],[x2],[x3],[x4],[x5]> |
| | <#LAYER[x],[x1],[x2]> | Window layer parameter setting: [x]: wall identification mark [x1]: window identification mark [x2]: layer number | | <LAYER[x],[x1],[x2]> |
| | <#CLOSE[x],[x1]> | Window closed setting: [x]: splicing wall sign [x1]: window sign | | <CLOSE[x],[x1]> |
| | <#CLOSEALL[x]> | Close all windows on the splicing wall | | <CLOSEALL[x]> |

| | | | | |
|---|---|---|---|---|
| | | [x] | | |
| | <^JOINT> | Query the splicing status of all splicing walls | | |
| | <^JOINT[x]> | Query [x] to get all the splicing states of the wall | | |
| | <^SIZE> | Query the PC window size and frequency | The return code is the same as the window return code | <SIZE[x],[x1],[x2]> |
| | <^VIR> | Query the PC terminal window array | The return code is the same as the window return code | <VIR[x],[x1],[x2]> |
| | <^LOGICVIR> | Query the logical screen rows and columns | The return code LCD prefix is SIZE LED as "<SIZE_X <SIZE_Y" | <LOGICVIR[x],[x1],[x2]> |
| | <^MAP> | Query the mapping relationship | | <MAP[x],[x1],[x2]> |
| | SavePJ[x],[Y]. | Save the current mode of the splicing wall [x] to the [y] group | | |
| | RecallPJ[x],[Y]. | Call the plan saved in group [y] of the jigsaw wall [x] | The return code is the same as the window return code | |

| | | | | |
|---|---|---|---|---|
| | ClearPJ[x],[Y]. | Remove the [y]th group of saved plans for the [x]th splicing wall [x] | | |
| | [x]M[x1],[x2]. | [x]: Input source [x1]: Splicing wall [x2]: Splicing window | | [x]M[x1],[x2]. |
| Background setup | | | | |
| | <#SavePic1> | The base map is preserved | | <SavePic1> |
| | <#ErasePic1> | Background erased | | <ErasePic1> |
| | <#PIC_OPEN1> | Open the base map | | <PIC_OPEN1> |
| | <#PIC_CLOSE1> | Close the base map | | <PIC_CLOSE1> |

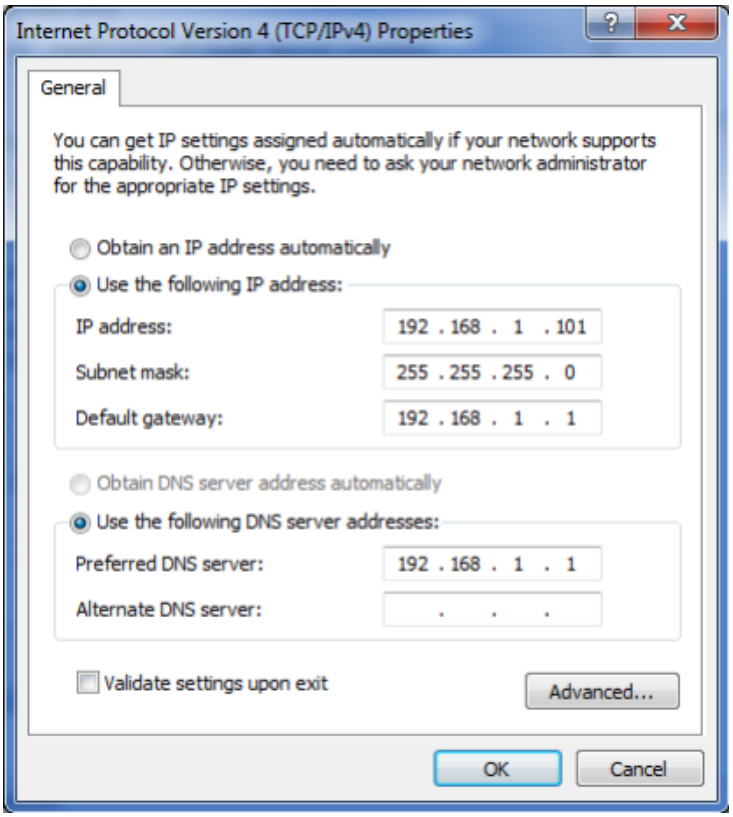
# 6.PC Software Introduction

## 6.1 Connect

1. Connect the router with CAT5 cable for TCP/IP communication.

The default IP address of the matrix is: 192.168.1.191. The router should be assigned to the same network segment.

2. To control using a PC, open the "Network and Internet" Settings and change the adapter options to the following IP.

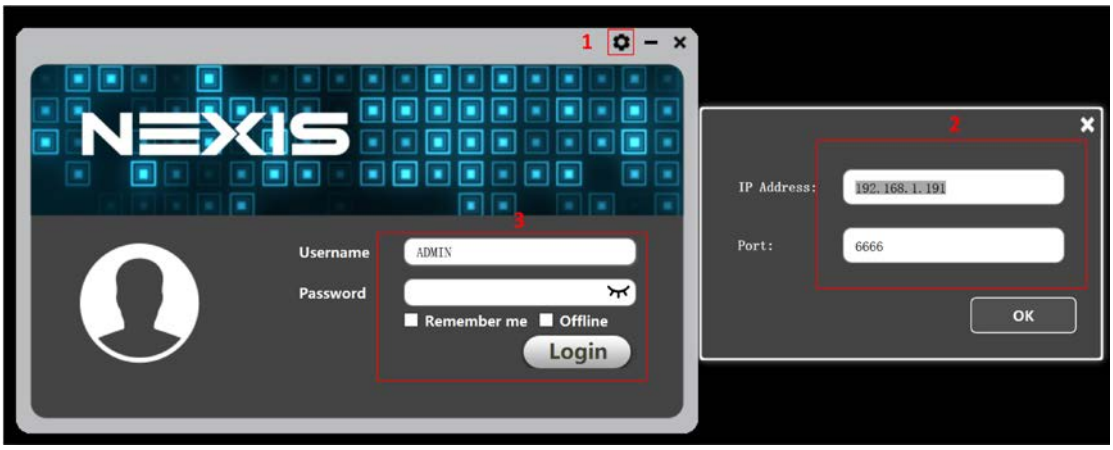



## 6.2 Software login

1. Double-click to open the software "PWSystem".



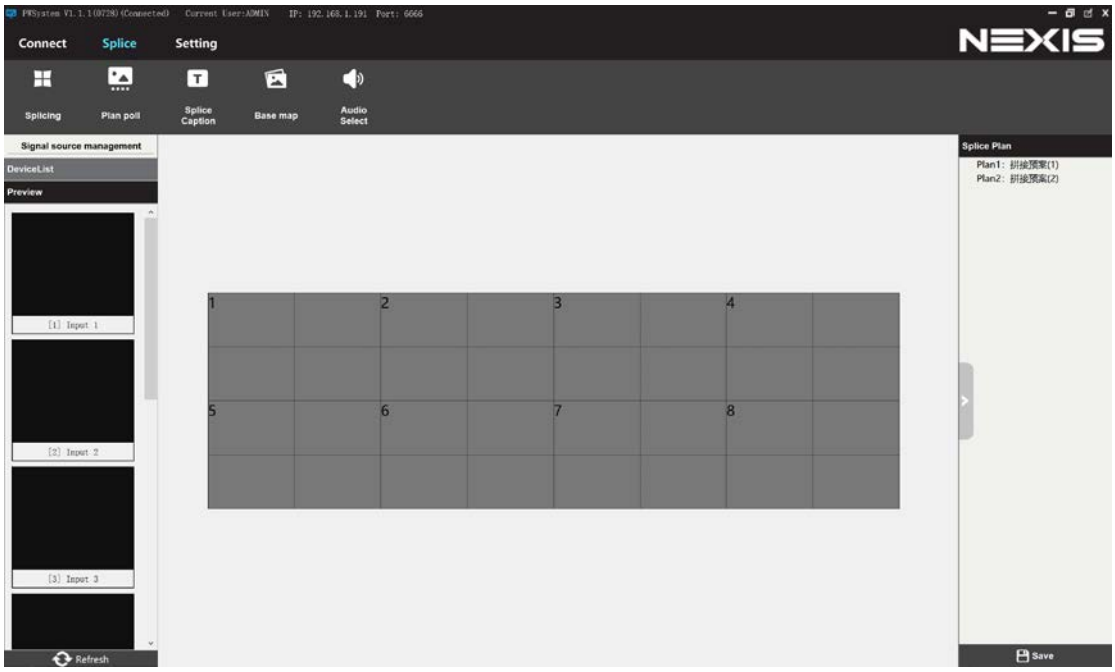

2. Check whether the device IP address and port number are correct before entering the default account and password.




The default IP address is 192.168.1.191 and the port number is 6666

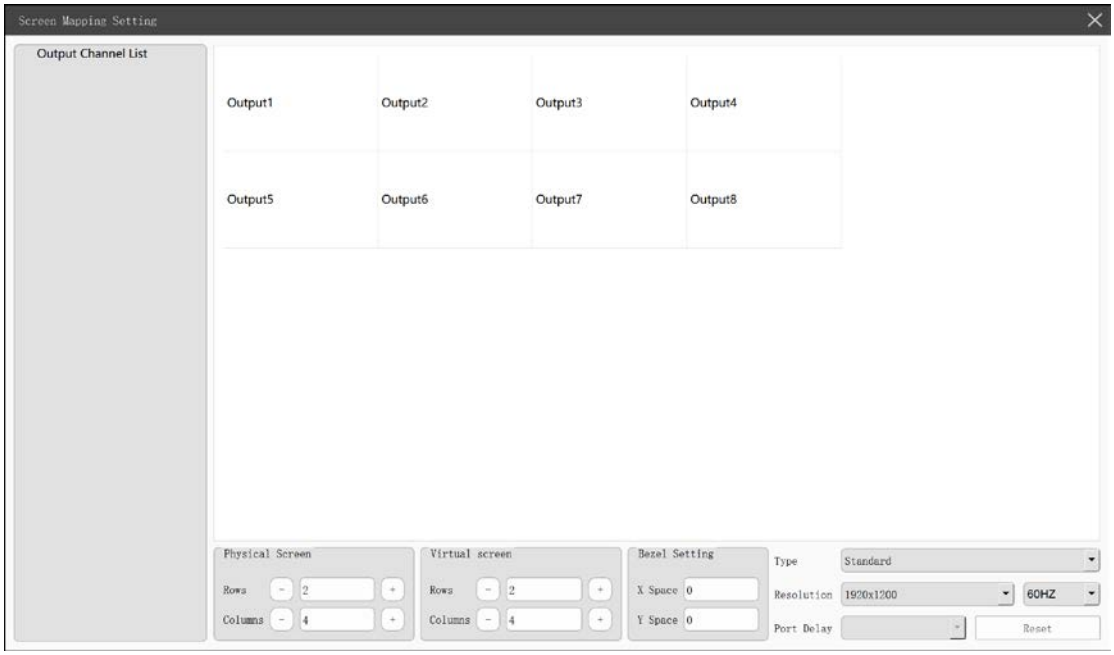
Default login account password: ADMIN, admin123

## 6.3 Video splicing page




### 6.3.1 Splicing

The splicing function is as follows:




a) The output list is the signal port of the output splicing card, and the splicing output signal can be dragged and dropped into the grid on the right side of the splicing wall for mapping.

b) There is one splicing wall, and the number of grids in the splicing wall corresponds to the maximum number of rows and columns of the physical screen, which can support 18 rows and 16 columns.

c) Virtual screens simulate screen sizes. For example, with 2x2 physical screens requiring each to display four frames, setting them to a 4x4 grid in the virtual screen configuration will automatically divide the original 2x2 setup into 4x4 windows. This allows the software to treat the 2x2 screen as a unified 4x4 display.

d) Screen spacing: Set the distance between screens! For example, in reality, there will inevitably be gaps between screens when the screen is placed. Screen spacing is used to fill the gap and make the displayed picture more coherent!

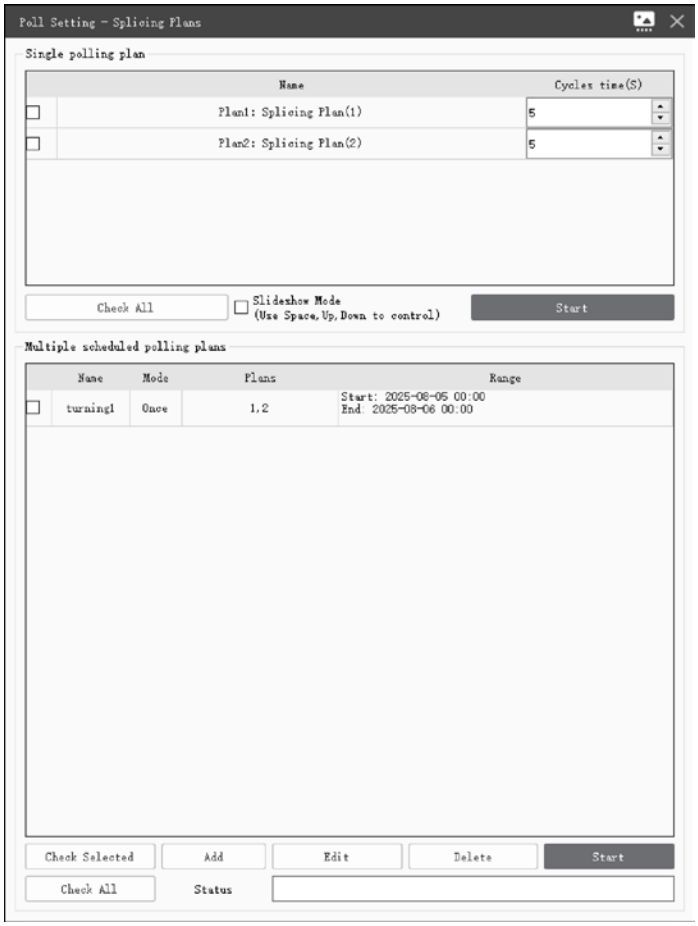
e) Screen Type: LCD--In LCD mode, the screen resolution cannot be set using coordinates; only the output resolution can be configured. Once the output resolution is selected in LCD mode, it takes effect immediately. After modifying physical screen rows and columns, you must reset the output resolution for changes to take effect. LED--In LED mode, the output resolution cannot be adjusted through coordinates; only screen coordinates can be used to configure resolution settings!

f) Screen Coordinate Configuration Options: ① Automatic Calculation: When activated, the software automatically determines the starting position and default resolution (1920×1080) for subsequent screens after setting the primary screen size. To adjust any screen, simply tap the target screen and modify its width/height. ② Manual Calculation: All other screens except the first one retain fixed starting positions and resolutions. If settings are incorrect,

the system will automatically reset all screens to 1920×1080. ③ Default Settings: In LED mode, all screens default to 1920×1080. To use this resolution, simply tap the app. For specific screen adjustments, tap the corresponding grid in the video wall interface and modify dimensions through coordinate settings. Note: Any physical screen row/column adjustments require updated coordinate settings for resolution synchronization – changes won't take effect until configured.

g) Port delay: Click the splicing grid corresponding to the screen that needs to be delayed, and then the port delay will be activated. At this time, select an appropriate delay to synchronize the frame of the screen.

### 6.3.2 Splicing plan polling

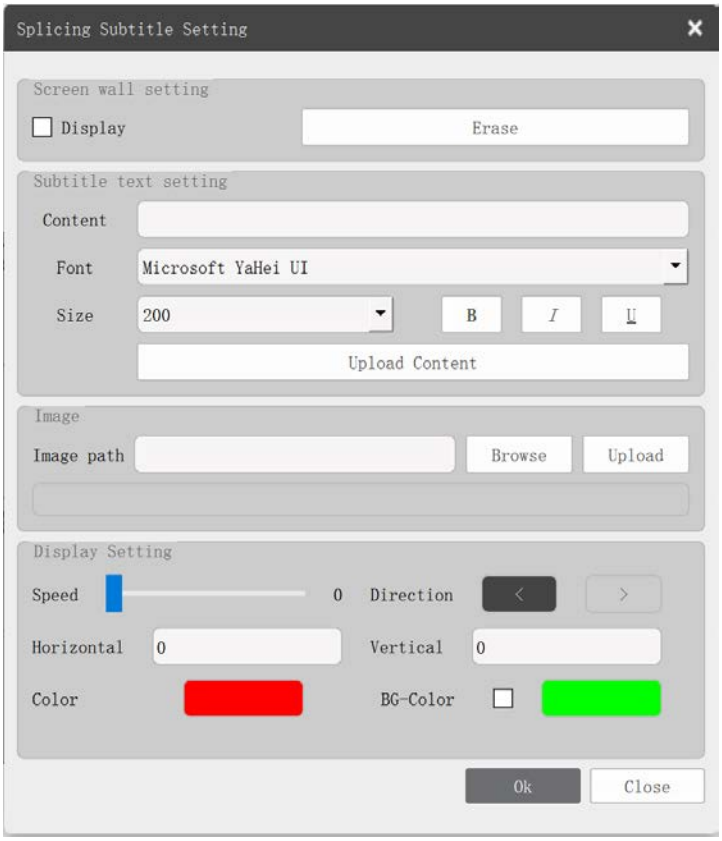



a) Use the next scheduled plan at designated intervals, following the sequence displayed in the diagram. Each plan's duration is determined by the last column in the list. For example, if Plan 1's last column shows 10 seconds, it will display for 10 seconds before transitioning to Plan 2 after that, and so on until the final plan is completed. After the last plan ends and

a 10-second interval has elapsed, the system will restart the rotation based on the preset cycle time. If the diagram shows a 0-minute cycle interval, the system will immediately resume rotation after completing one full cycle.

b) When in slide mode, the rotation interval and display time for each plan will be disabled. In this case, only pressing the space bar will switch to the next plan.

### 6.3.3 Splicing subtitles




**Set up the subtitle on the splicing wall**

**List of splicing walls:** You can switch to the splicing wall you need to operate on.

**Display switch:** Set the switch of subtitles for the current splicing wall.

**Erase:** Delete the subtitles of the current splicing wall.

**Font setting for subtitles**

**Content:** Fill in the subtitle content that needs to be displayed.

**Font:** Set the font style of the subtitle.

**Font size:** Set the font size of the subtitle.

**B (bold):** The subtitle font is bold.

**I (tilted):** The subtitle font is tilted.

**U (underline):** Underline for subtitle font.

**Upload Characters:** Upload the pre-configured characters to the current splicing wall! Note that you must configure the characters before uploading. For example, if bolding is not set up beforehand, clicking "Bold" after uploading will have no effect. Therefore, ensure all settings are properly configured during the upload process. Otherwise, you will need to re-upload the subtitles.

**Image path:** Upload the image to the splicing wall as a subtitle display. Note that the size should not be too large, otherwise it will display abnormally. It supports a variety of image formats, such as.bmp, .png, .jpg, .jpeg, .tga, .tiff and other image formats.

Display Settings

**Speed:** Controls the speed of subtitle movement. 0 means no movement and 10 is the maximum speed.

**Direction:** The direction of the moving subtitles. Click the arrow to change the direction of the moving subtitles as needed.

**Horizontal:** Setting the horizontal position of the spliced caption on the spliced wall should be noted that if the speed of the spliced caption is not 0, the horizontal position will be invalid.

**Vertical:** Set the splicing caption at the vertical position of the splicing wall.

**Font color:** After selecting the color, you can change the font color of the subtitle on the current splicing wall.

**BG-Color:** After selecting the color, you can change the background color of the subtitles on the current splicing wall. Next to the selected color, there is a switch to control the display and hide of the background color.

**Real time**

**Port:** Select the port to be set. After selection, the corresponding information of the port clock will be automatically obtained.

**Font size:** Set the font size of the clock for the currently selected port.

**Time:** Set whether the time of the current selected port is displayed or hidden.

**Display position x:** Set the vertical position of the current display time and date.

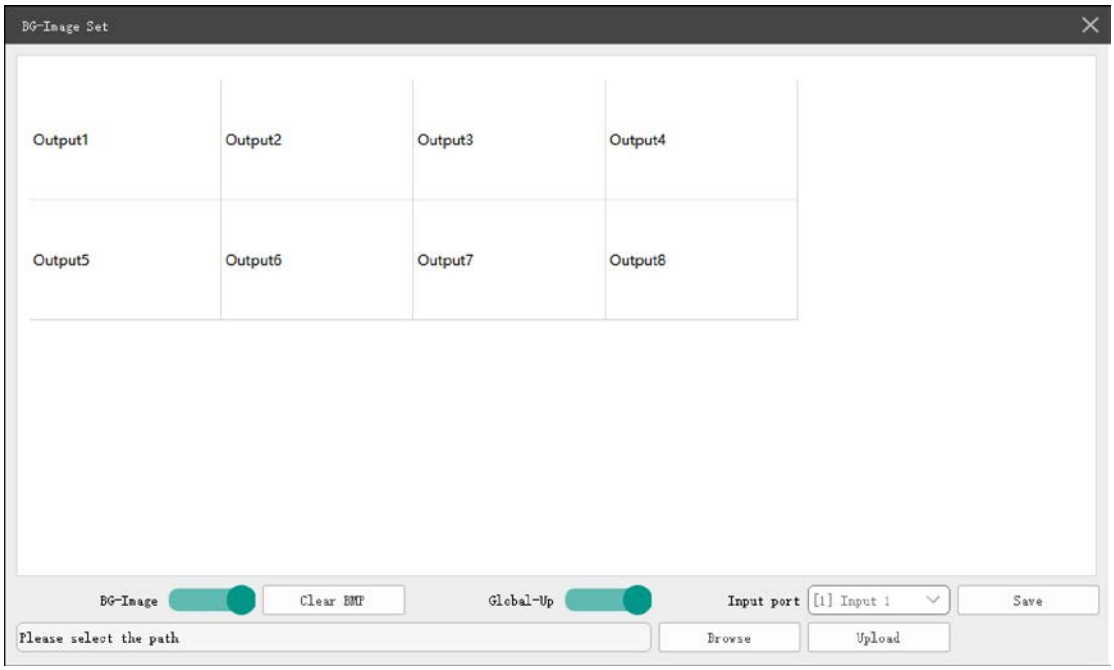
**Display position Y:** Set the horizontal position of the current display time and date.

**Date:** Set whether the date of the currently selected port is displayed or hidden.

**Refresh time:** This refresh time refreshes the time display on the left side of this button.

**Sync to device:** Sync to device is to synchronize the time displayed next to it to the device! For example, if you find that the time in the device does not match the local time, click Refresh time to refresh the time on the left, and then click Sync to device to synchronize the time.

### 6.3.4 Background image



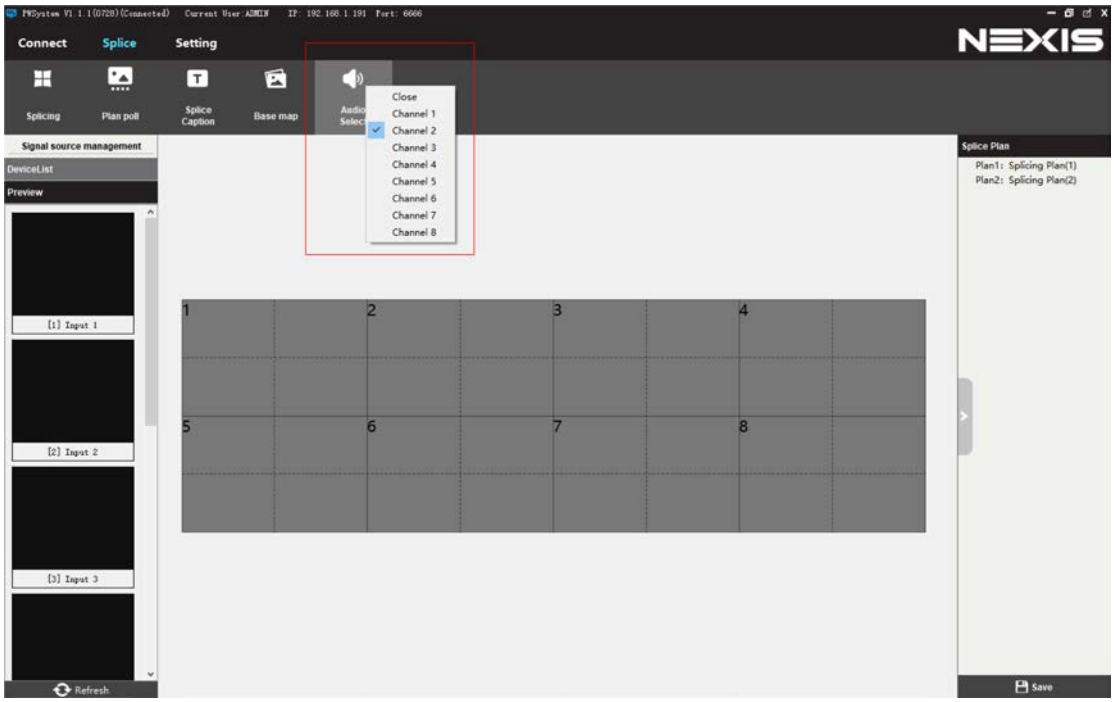

a) The BG-Image switch controls the display of the base map for all mapping ports on the current splicing wall.

b) The image format supported by the background image upload includes.bmp,.png,.jpg,.jpeg,.tga,.tiff and other image formats.

c) Upload Method: When the base map switch and global upload settings are activated, the browsing and upload buttons become visible. Browse the base maps you wish to upload, select them, and click to upload. Upon completion, a preview of the uploaded base map will appear on the mosaic wall. Double-click any port to zoom in, and the selected base map will be displayed on all screens. Zoom through all ports sequentially until the entire mosaic is visible. Click "Save" to finalize changes and restart the matrix for immediate effect.

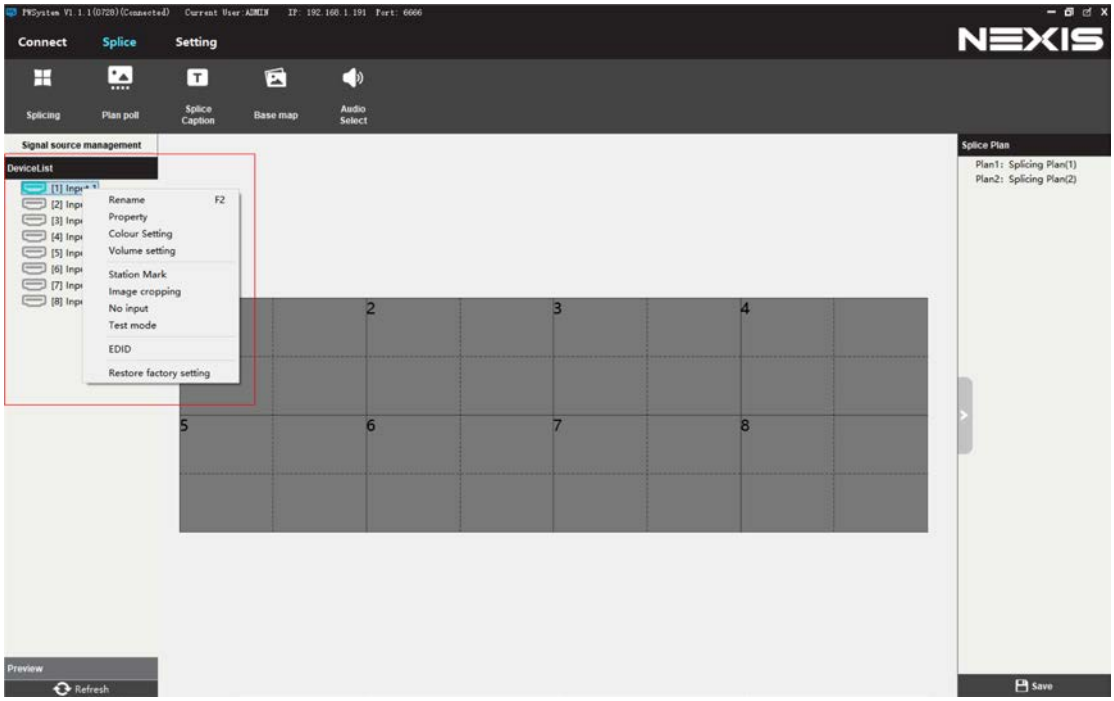
d) Method to clear the background map: Select a port and click to clear the background map, then double-click the port to zoom in the background map. Click all ports to zoom in and clear the background map in sequence. After clearing the background map, restart the matrix to make it effective.

### 6.3.5 Audio selection



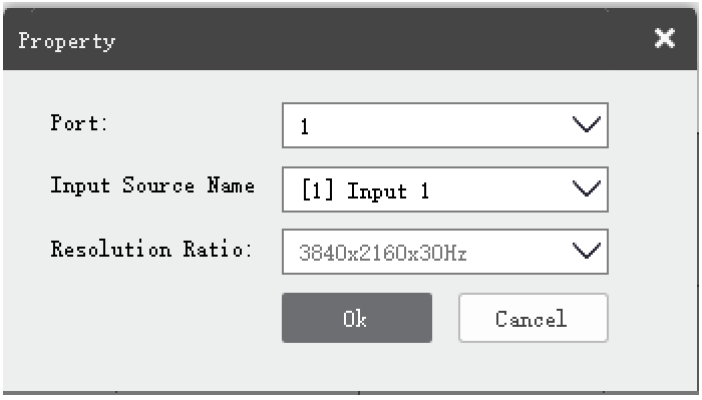

You can select the audio output from the analog 3.5mm audio output interface; select to turn off or HDMI input channel 1-8 audio.

### 6.3.6 List of signal sources

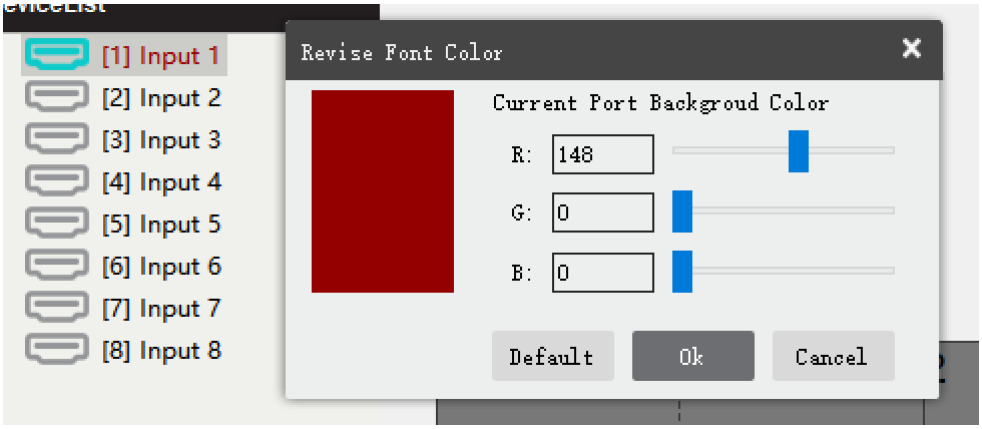


① Rename: rename the input signal name.

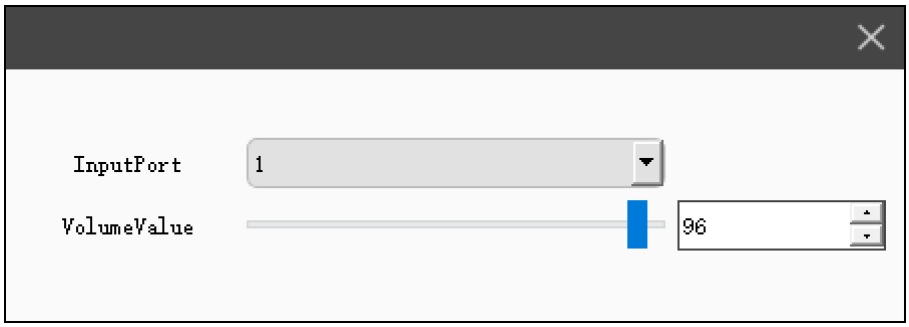
② Property: Displays information about the current input port, as shown in the figure below.



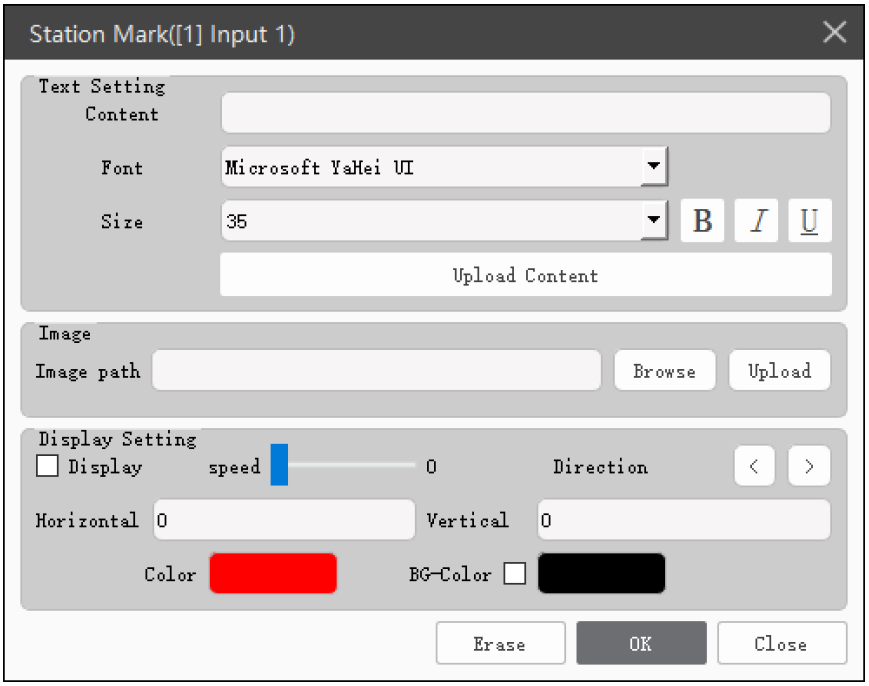

③ Color setting: Font color of the current input port, as shown in the figure below.




④ Volume setting: Adjust the volume of the current input port HDMI audio, as shown in the figure below.




⑤ Station mark: Upload the title to the currently selected port. The title and subtitle functions work similarly, with the main difference being that the subtitle serves as the entire wall's text while the title only applies to the currently selected port. Content uploaded as a title will only be displayed on the selected port.




Logo setting

**Text setting content:** The editor needs to upload the character of the display logo.

**Font:** Set the character font style to be uploaded.

**Size:** Set the font size of the character to be uploaded.

**B (bold):** Set whether the uploaded characters are bold.

**I (Tilt): S**et whether the uploaded character font is tilted.

**U (Underline):** Set whether to add an underline to the uploaded character.

**Upload Content:** Upload the set character to the selected port. Note that you should set the character style and size before uploading. Otherwise, you cannot change the character style and size after uploading. In this case, you can only reconfigure the size and font style of the character by reuploading the new character.

**Image:** Select an image and upload it to the device as the logo image of the selected port. Do not choose too large a size, otherwise it will display abnormally. Logo image: Select an image and upload it to the device as the logo image of the selected port. Do not choose too large a size, otherwise it will display abnormally.

The logo upload supports a variety of formats, such as.bmp,.png,.jpg,.jpeg,.tga,.tiff and other image formats. The logo upload supports a variety of formats, such as.bmp,.png,.jpg,.jpeg,.tga,.tiff and other image formats. The logo upload supports a variety of formats, such as.bmp,.png,.jpg,.jpeg,.tga,.tiff and other image formats.

Display Settings

**Display:** Controls the icon display switch for the current port.

**Speed:** Controls the movement speed of the logo on the current port. The speed is 0 for static

and the maximum speed is 10.

**Direction:** Controls the movement direction of the logo on the current port.

**Horizontal:** Controls the horizontal position of the logo displayed on the current port. Note: The vertical effect can only be seen when the speed is 0. Horizontal: Controls the horizontal position of the logo displayed on the current port. Note: The vertical effect can only be seen when the speed is 0.

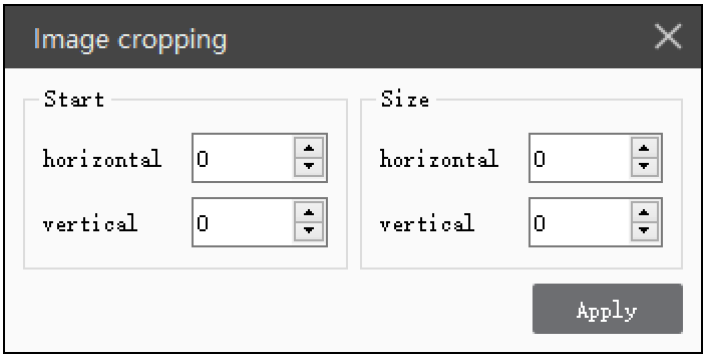
**Vertical:** Controls the vertical position of the logo displayed on the current port.

**Character color:** Sets the font color of the logo character for the current port.

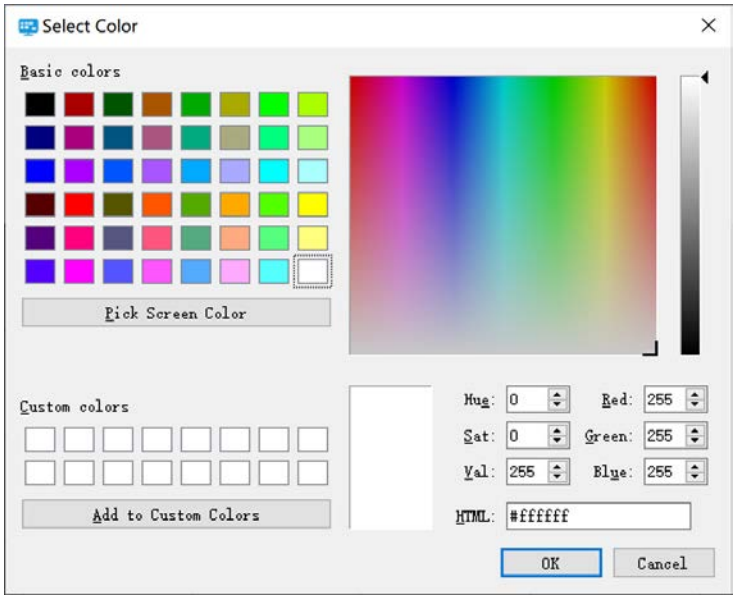
**BG-Color:** Set the background color of the logo character of the current port; control the display switch of the background color.

**Erase:** Erases the logo character of the current port.

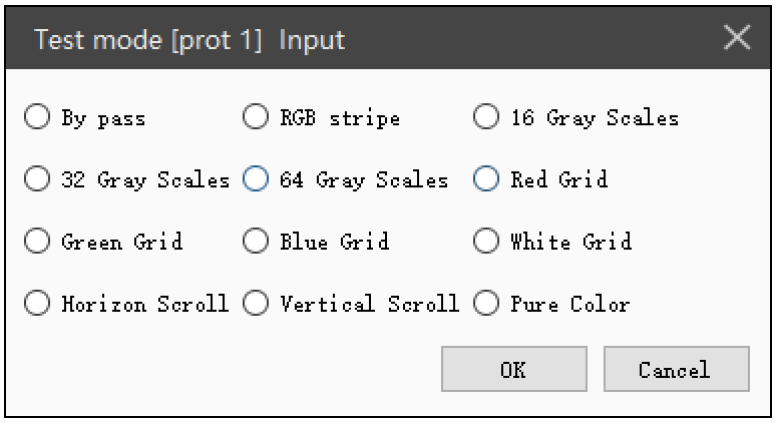
⑥ Image cropping: Crop the signal image from the current input port. The cropping position and size can be customized by users. When the size is 0,0, it means cropping from the starting position to the maximum value of the screen. If the start position is set to 0,0 and the size is also set to 0,0, no cropping will be performed.




⑦ No signal input: Specify a color for the selected input signal. When no signal is selected, the selected input signal port will be used as the screen input with the color set by the user.




⑧ Graphics test mode: Assign a color to the selected input signal. When there is no signal at the selected input signal port, the screen input will be the color set by the user.

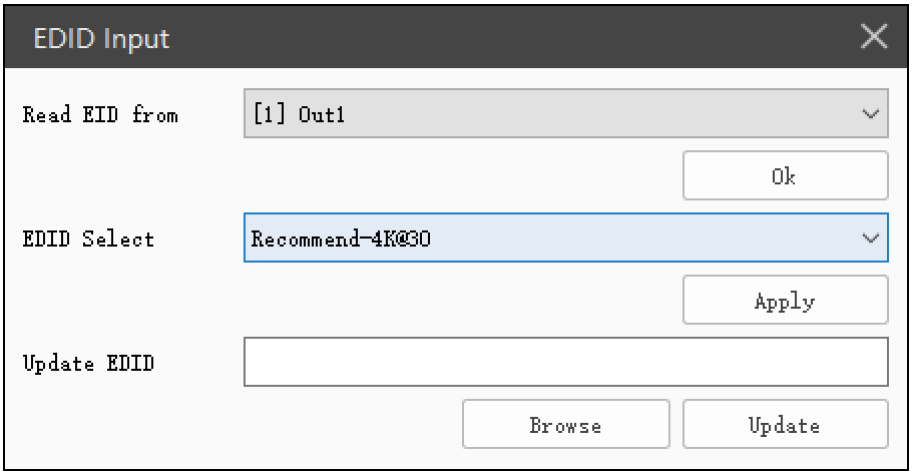



Direct: Direct input source.

Non-direct, non-pure color: The signal picture of the input source is changed to the set picture.

Pure color: The input source picture is changed to the user's custom picture.

⑨ EDID




Read output to input list: You can read the output to the currently selected input port or switch to other output ports.

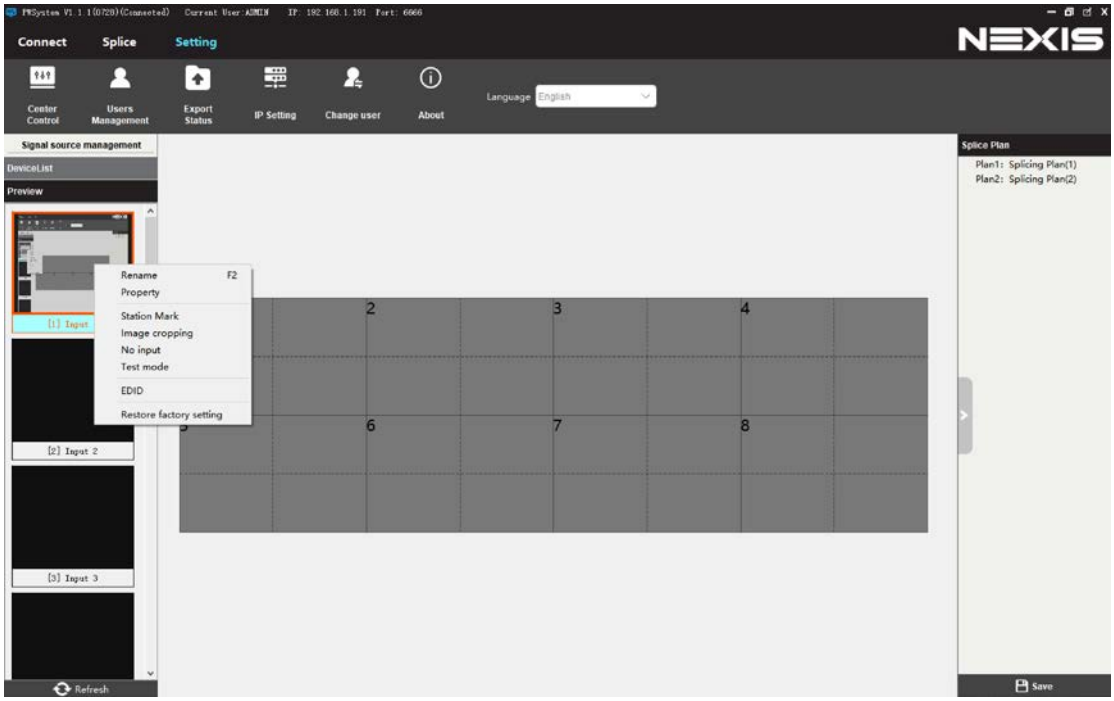
EDID select: You can choose the internal EDID resolution, which supports 4K@30,1080P@60/HDMI, and 1080P@60/DVI.

Update EDID: Click browse to select the EDID file to be updated, and click upload to complete EDI update.

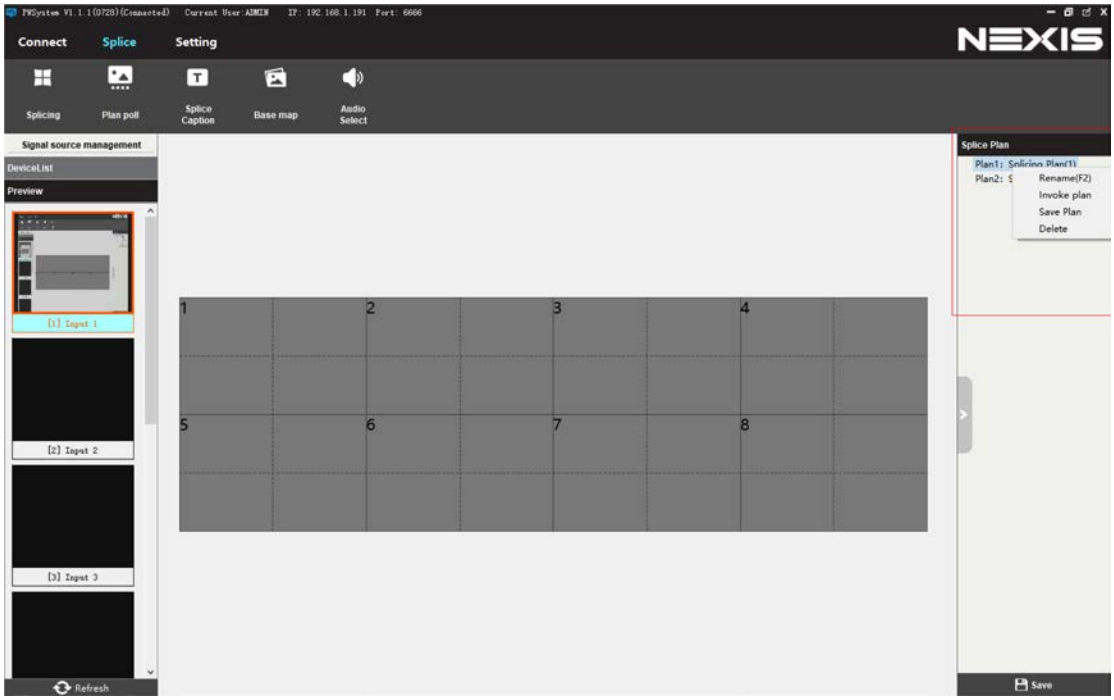
⑩ Restore the port to factory Settings.

### 6.3.7 Preview list

The right-click function list of preview list is the same as that of device list. Please go to device list to query relevant information.




## 6.3.8 List of splice plans




1. As shown in the figure above, the list in the red box is the splicing plan list.
2. The save button below the red box in the figure is the function button to create a new splicing plan and save the current window opening status. When the number of window openings on the current splicing wall is less than 1, it is impossible to create a new plan.

3. Double-click the plan to call the window opening state of the splicing wall saved in the plan.
4. Right-click the backup plan

Rename (F2): rename the name of the splicing plan.

Save plan: Change the status of the selected plan to the current window open state of the splicing wall.

Invoke plan: Call the status of the selected plan to the current splicing wall status.

Delete: Delete the selected plan.

### 6.3.9 Operation of splicing wall

1. Windowing




The opening mode is as follows:

Mode 1

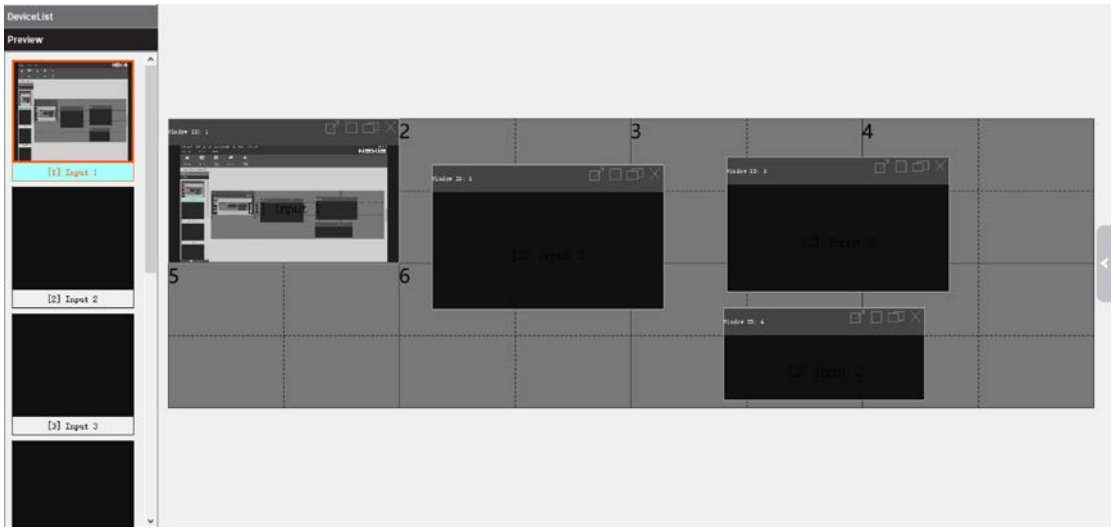
Click the signal list to select the signal source that needs to be opened. Press the left mouse button in the virtual screen, and then start to pull the mouse to the lower right corner. Release the mouse when you reach the expected position to complete the opening of the selected signal port.

Mode 2

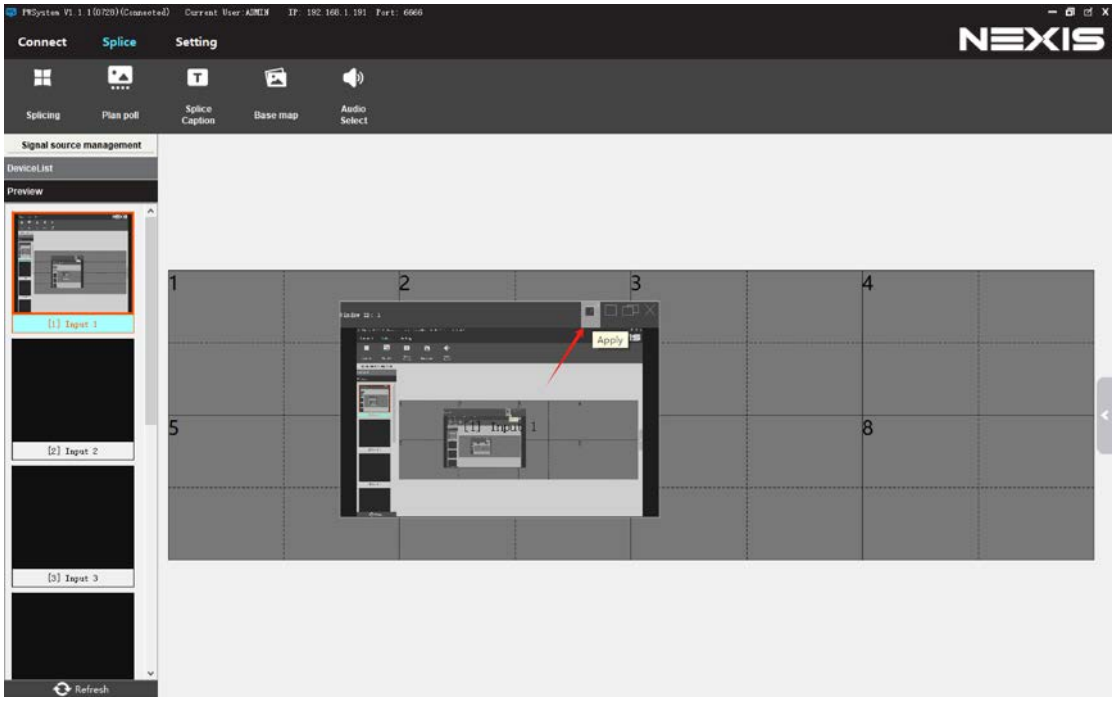
Click the signal list signal and drag it to the virtual screen of the splicing wall. Release the mouse to complete the window opening.

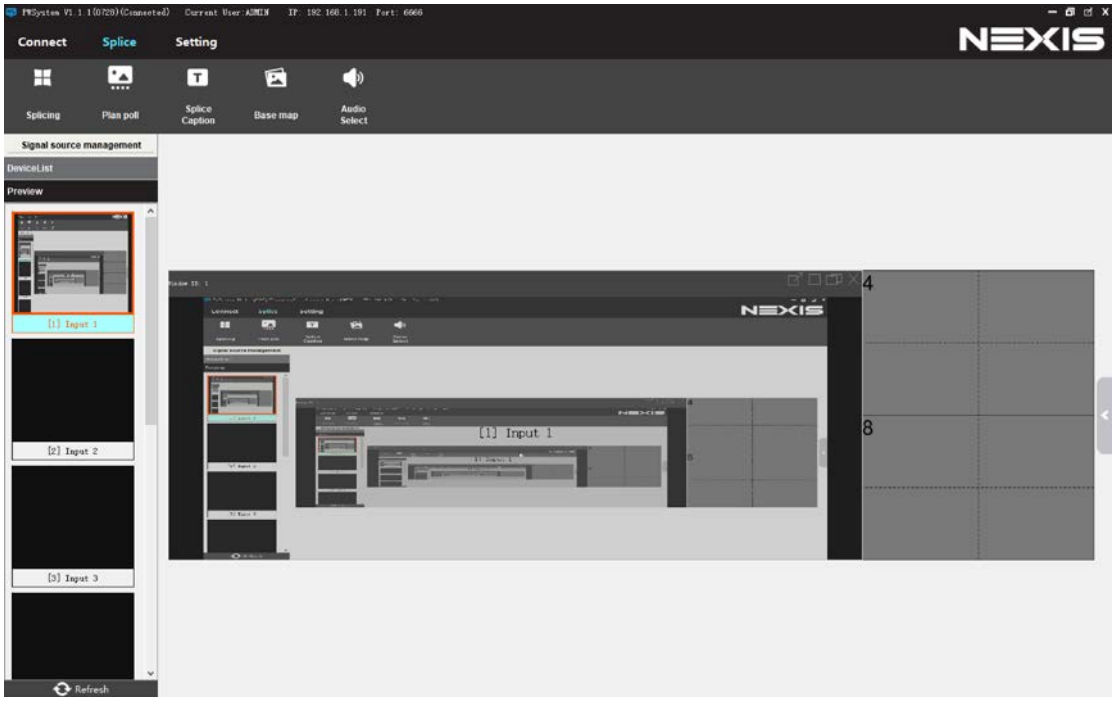
Mode 3

As shown in the figure, the preview mode is the same as the window opening mode and the device list. You can directly drag and drop the preview window to the virtual screen to open the window.

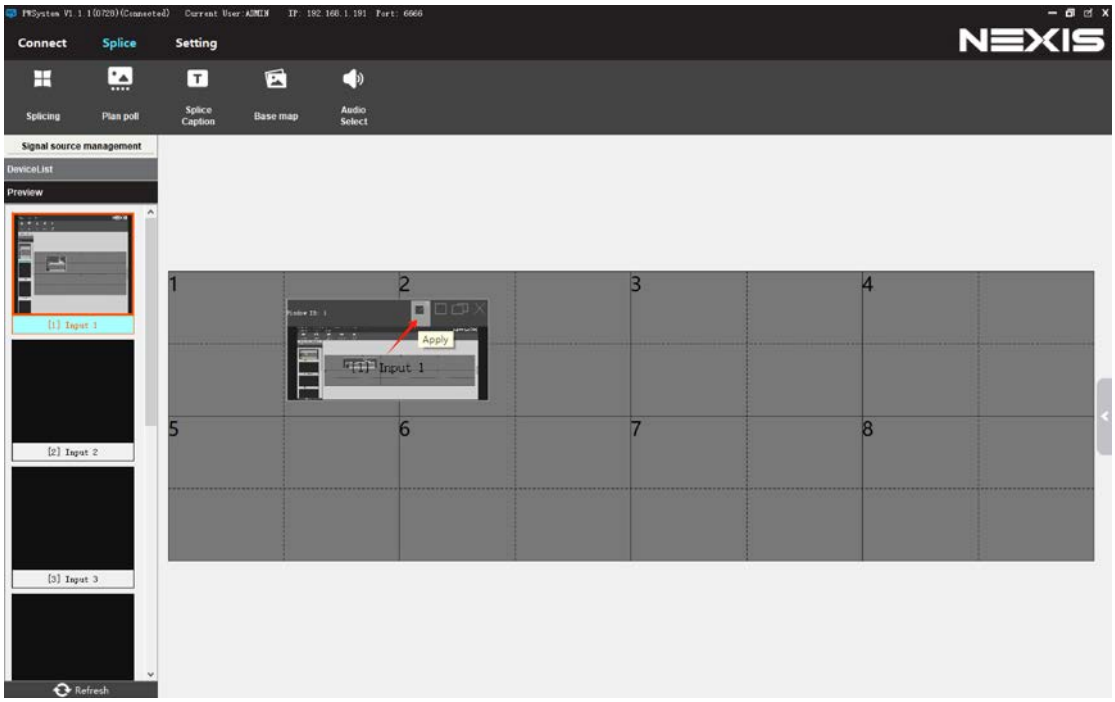



2. Window to open-application





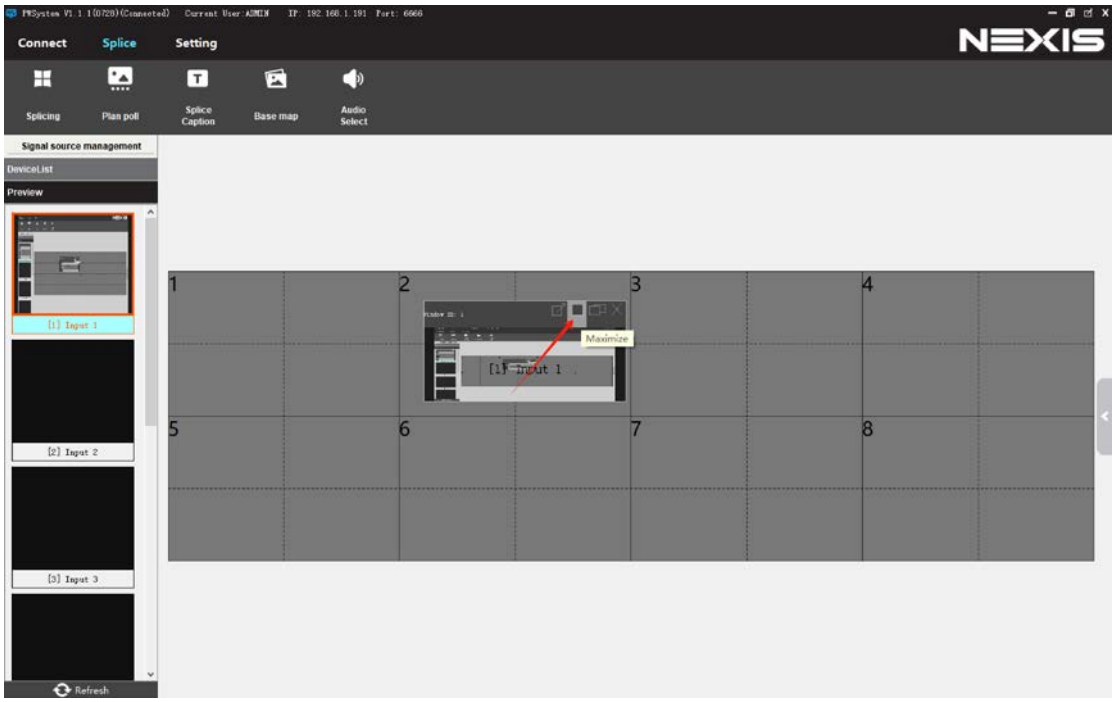

As shown in the figure above, when you click "Apply" at the window position indicated, the application window will expand to cover all four virtual screen areas (1, 2, 3, 5, 6, 7). This means the current window will be enlarged to fill the screen space occupied by its four corners. For example, in the figure below, since the window is only expanded in areas 1 and 2 without touching areas 3 and 4, clicking "Apply" will fully cover areas 1 and 2 without affecting areas 3 and 4.




3. Open the window-maximize

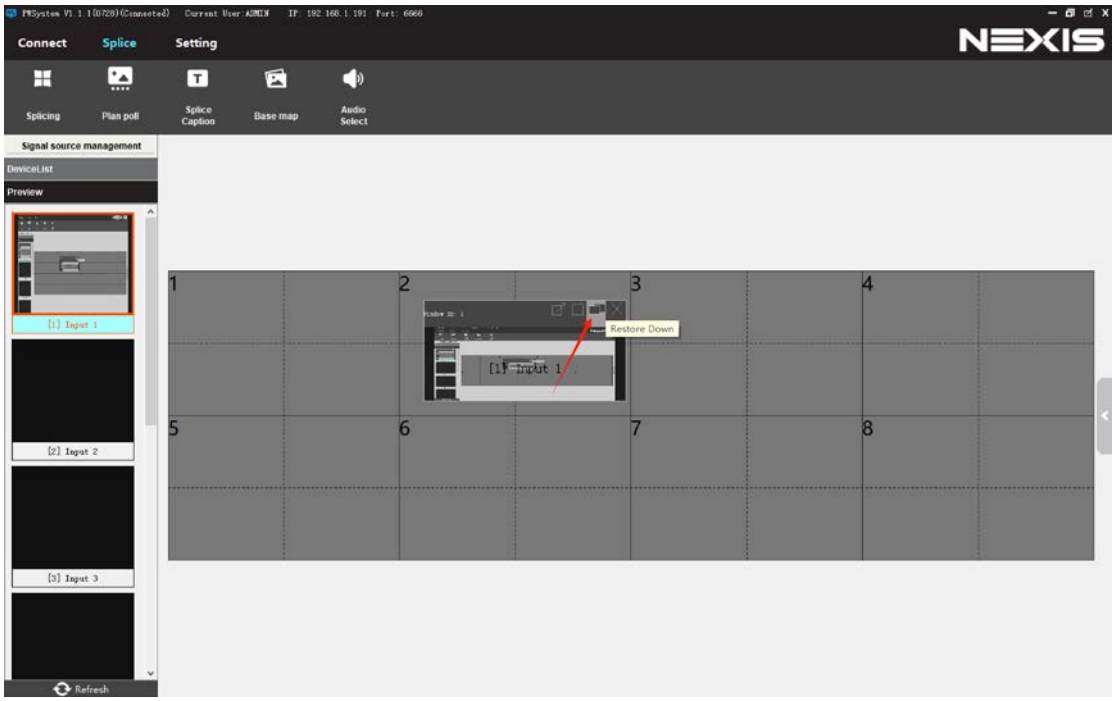
Wherever the window is opened, when clicked to maximize, it will fill the entire virtual

screen below the current splicing wall.




4. Open the window-restore

When you maximize it, you can click Restore to quickly restore the window to its previous position and size.




5. Open the window-zoom

Non-touch mode:

Move the mouse to the border of the window. When the shape of the mouse changes, hold

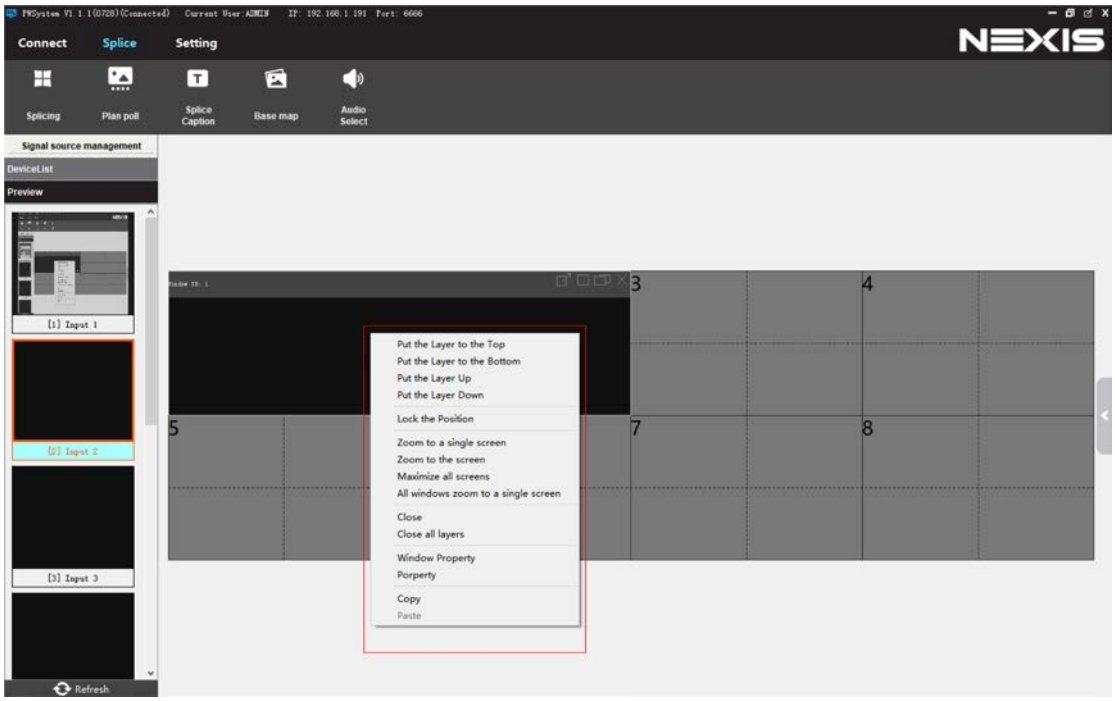
down the mouse and drag to stretch the window.

Touch mode:

The first touch point should be inside the window opened, and the second touch point should be within the virtual screen range of the current splicing wall. The second touch point should be higher than the first touch point and on the right. In this case, the two touch points can be contracted to complete the zoom, and the window can be expanded by opening outward.

6. Open window-Close: Close the current splicing window.

7. Right-click the window to list the window




a) Put the Layer to the Top: Example: Stack top can be used when multiple windows overlap and a window needs to be at the top.

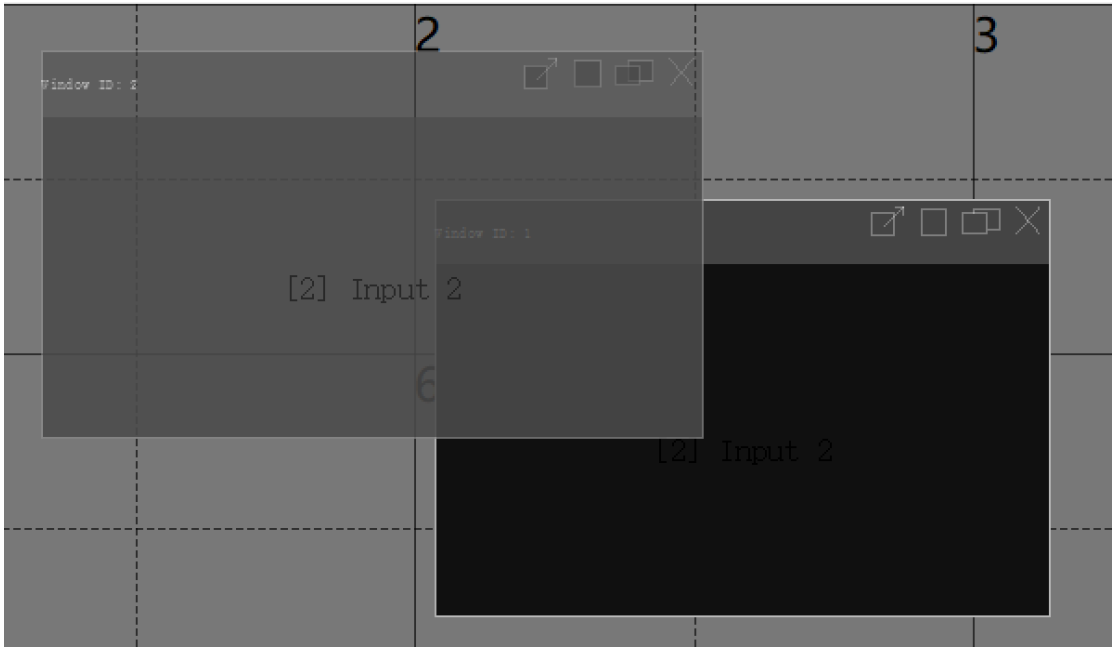
b) Put the Layer to the Bottom: Example: When multiple Windows overlap, you can use layer bottom when you need to put one window at the end.

c) Put the Layer Up: Example: Three Windows are half overlapping, and the window ID is 1, 2, and 3. 1 is at the top, 2 is in the middle, and 3 is at the bottom. In this case, you need to move 3 between 2 and 1. In this case, you can use layer move up on layer 3 to achieve the purpose.

d) Put the Layer Down: Example: Three Windows are half overlapping, and the window ID is 1, 2, and 3. 1 is at the top, 2 is in the middle, and 3 is at the bottom. In this case, you need to move 1 between 2 and 3. In this case, you can use layer down on layer 1 to achieve the purpose.

e) Lock the Position: As shown in the figure, the translucent window is the lock window. At

this time, the window cannot be moved, enlarged or reduced, and can be closed! Lock means to fix the position of the window and do not allow to change the position.




f) Zoom to a single screen: As shown in the figure, zoom the window to the size of a virtual screen! About which virtual screen the zoom will fall under: The virtual screen window to be zoomed into is determined by the upper left corner of the current window under that virtual screen.

g) Zoom to the screen: This feature fills the entire virtual screen occupied by the current window, functioning similarly to window operations. The fill position is determined by the virtual screens at the four corners. For example, in Figure 1, the four corners are located at virtual screens 2, 3, 6, and 7. When using Resize to Screen, the area enclosed by these four virtual screens will be filled, as shown in Figure 2.




Figure 1 right




Figure 2 right

h) Maximize all screens: Maximize the window and fill all current virtual screens.
i) All windows zoom to a single screen: This feature works similarly to single-screen scaling but applies to all windows. As shown in the diagram, it scales all windows to the size of a virtual screen. Regarding which virtual screen the scaled window lands under: The target virtual screen is determined by the upper-left corner of the current window within that virtual screen.
j) Close: Close the current window.
k) Close all layers: Close all splicing windows under the current splicing wall.
l) Window Property: As shown in the figure, view information about the window.
m) Property: As shown in the figure, view the input signal source information.
n) Copy: Copy the input signal from the current window.
o) Paste: Copies the input signal to be pasted, that is, changes the input signal of the current paste window.

8. Zoom in and out of the virtual screen on the partition wall

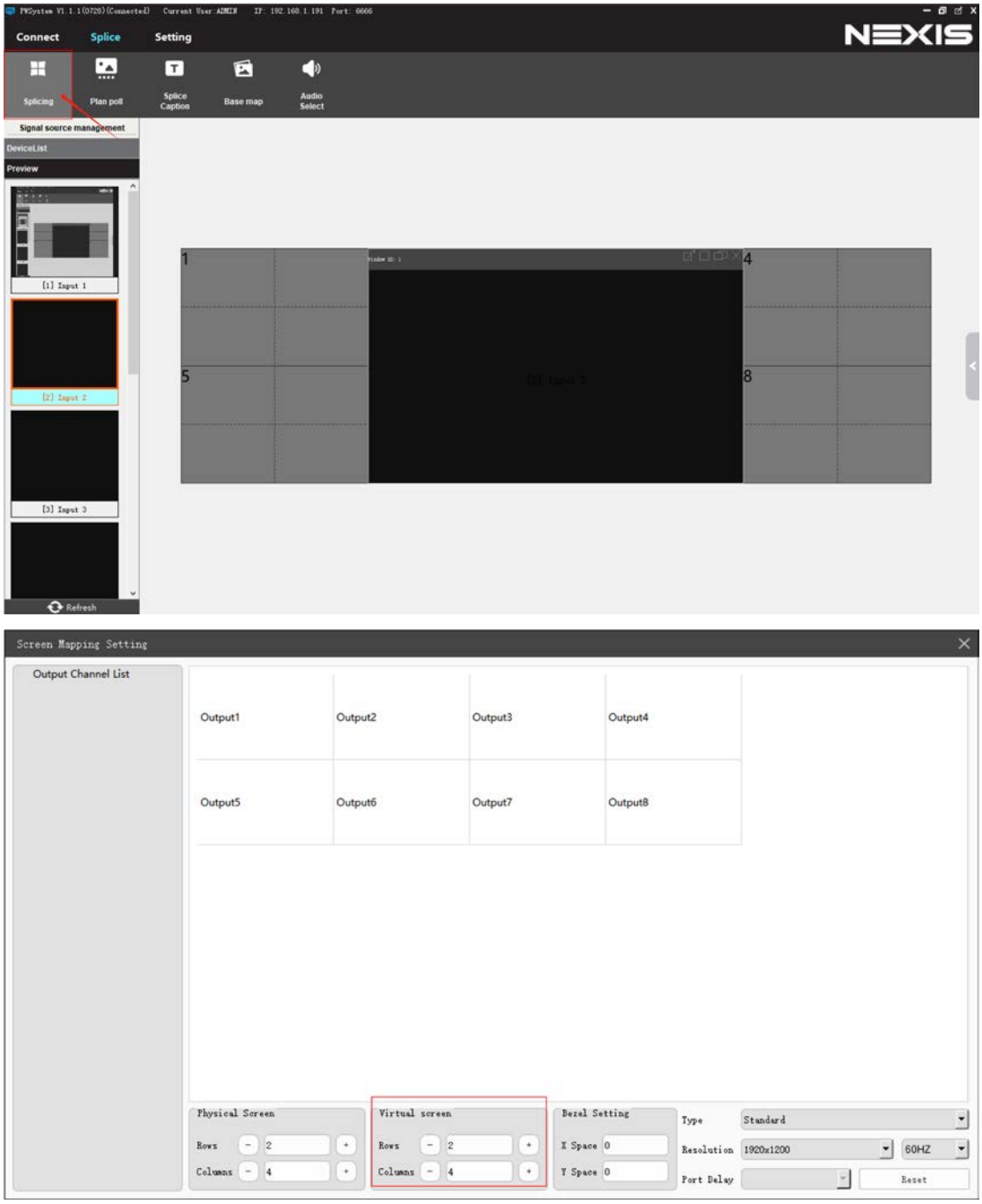
Non-touch mode:

When the mouse is within the virtual screen range of the current splicing wall, press the keyboard CTRL and then scroll the mouse to zoom in or out of the virtual screen of the splicing wall.

Touch mode:

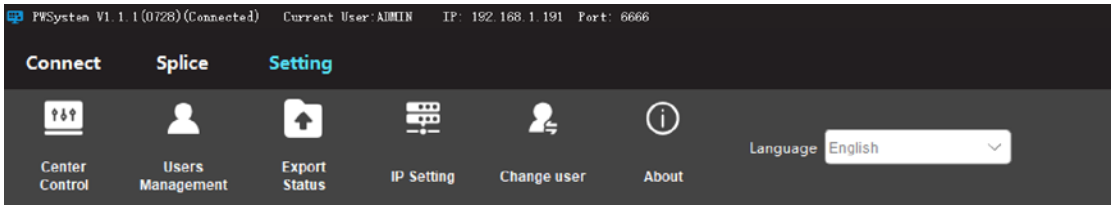
The first touch point should be under the virtual screen (not in the window that opens, otherwise it is zooming in on the window that opens), and the second touch point should be within the virtual screen and to the upper right of the first touch point. At this time, zooming in will zoom and zoom out will zoom.

9. Change the virtual row and column of the splicing wall

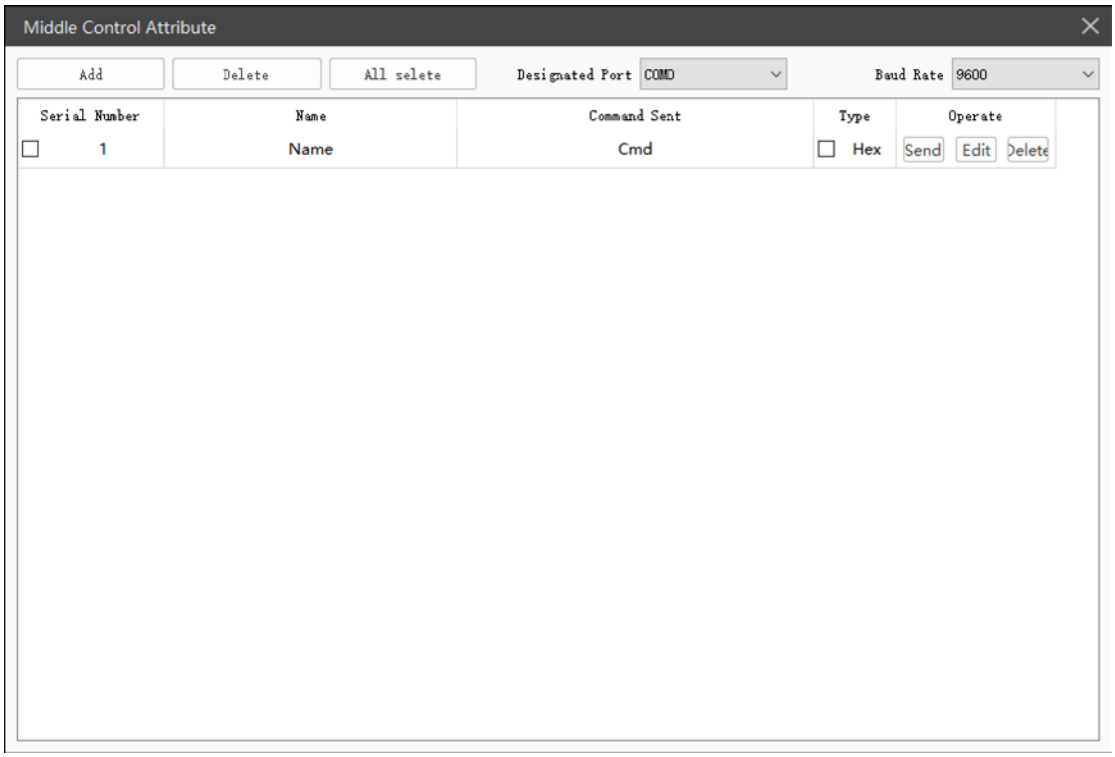



As shown in the figure, the virtual screen rows and columns of the splicing wall can be set in the splicing function of the video splicing.

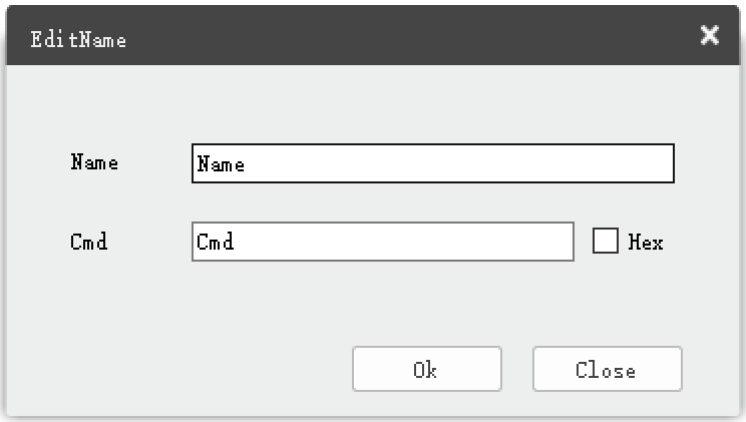
## 6.4 System Settings



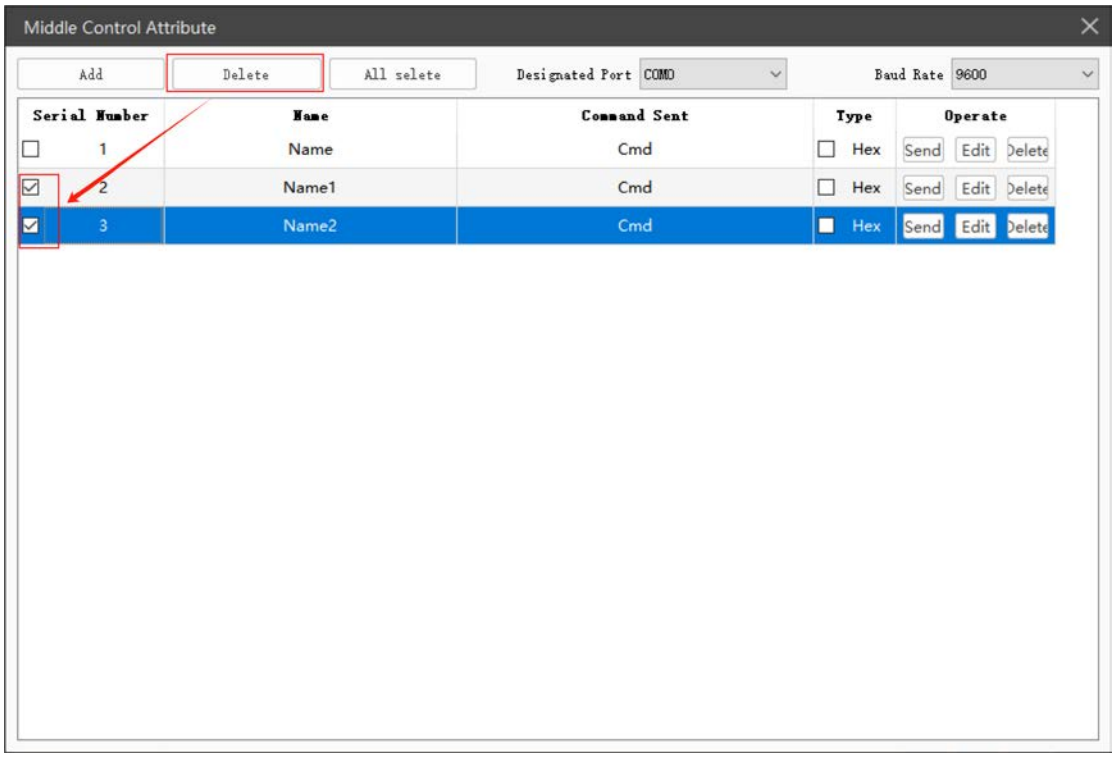

### 6.4.1 Central control



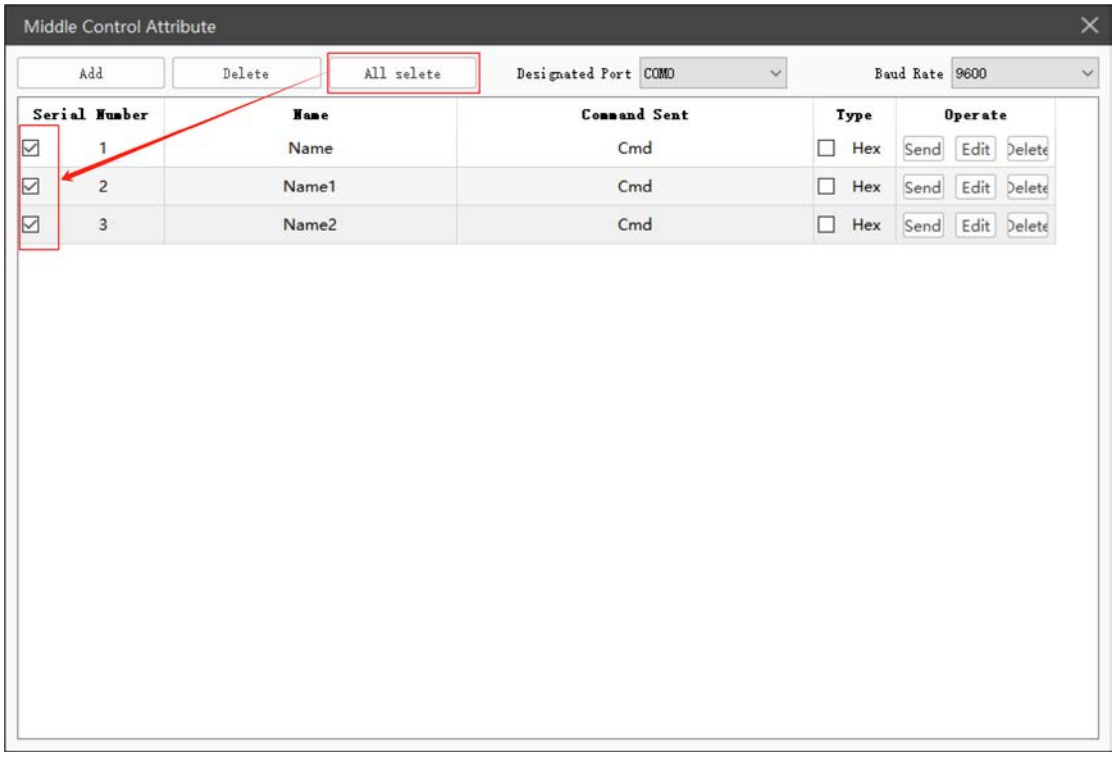

a) Add: Enter the name and instruction, check whether it is a hexadecimal instruction, click OK to complete the addition.



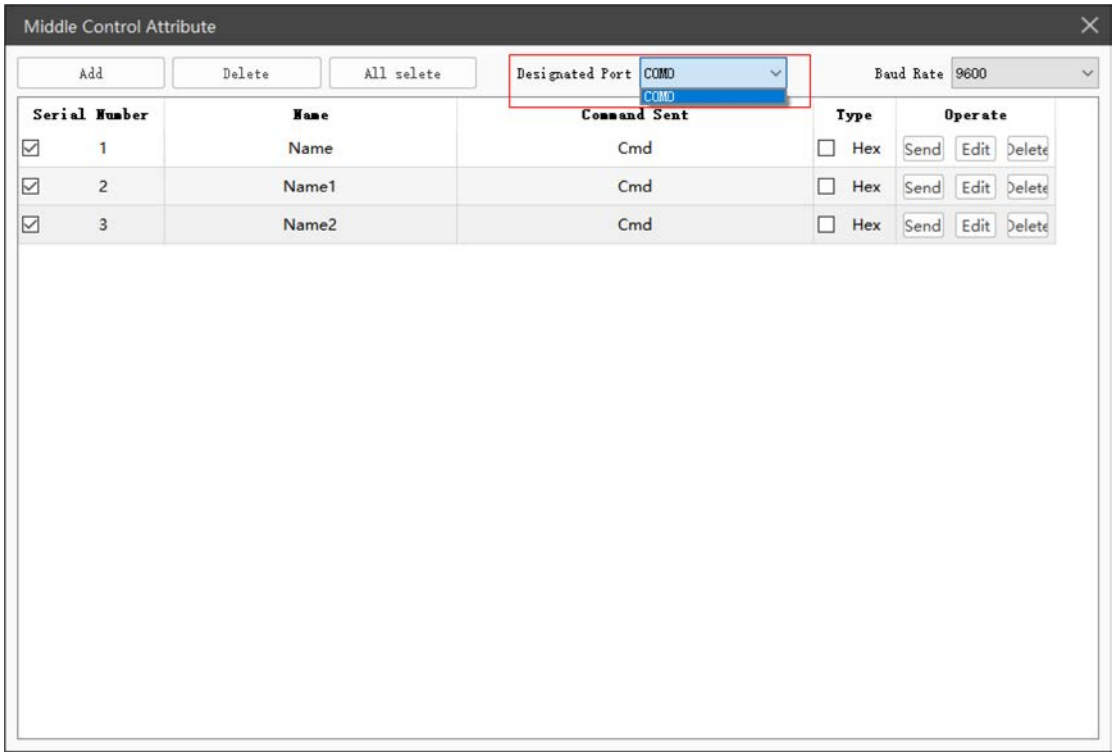
b) Delete (non-list operation): This delete will only remove the selected items in the list, and will not be effective for unselected items.



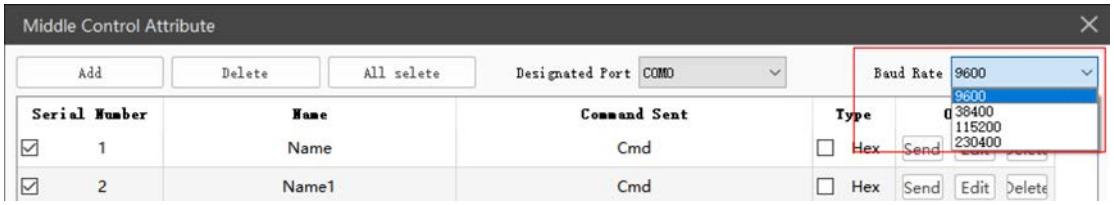

c) All select: Mark all items in the list.




d) Designated port: Designated port for central control command operation.

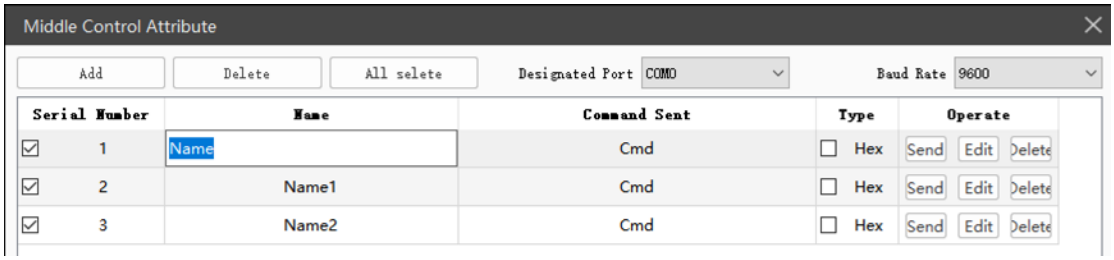



e) Baud rate: Set the specified port rate for central control operation.

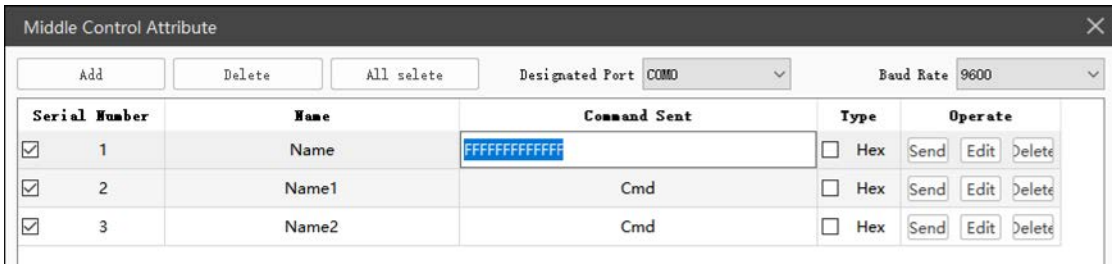



f) List items:

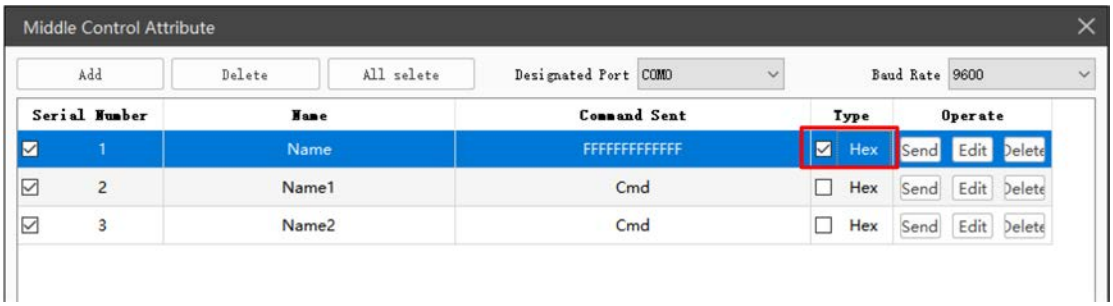
① Name: Double-click the item name to directly change the name of the central control command.



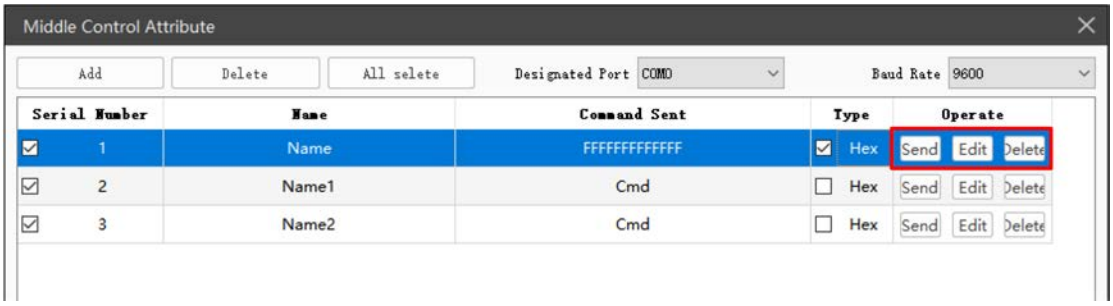

② Command sent: Double-click the item to send instructions directly to the central control.




③ Type: Click item instruction type can switch the central control instruction type.




④ Operations: Send, edit, delete.



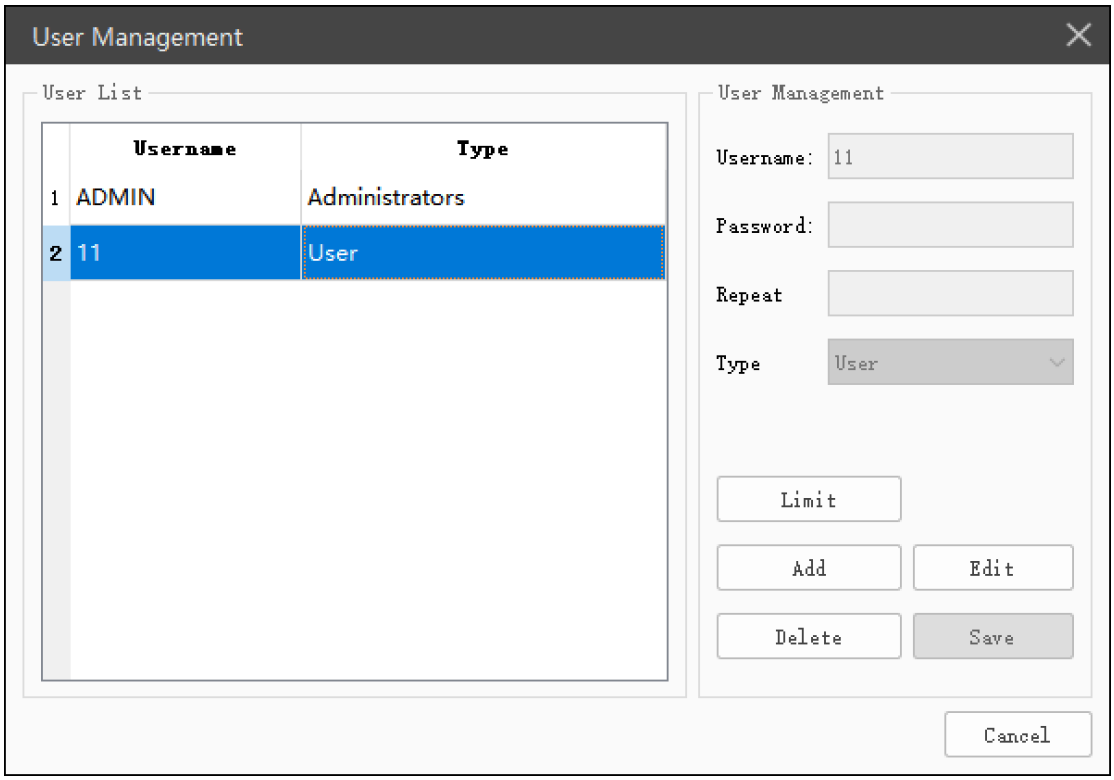

Send: Send the central control command for the current item.

Edit: You can edit the name of the current item, central control command and instruction type.

Delete: Delete the current item, only the current item is deleted.

### 6.4.2 User management

The permission type is Administrator, which is the highest permission user. You cannot set the permission for this user.

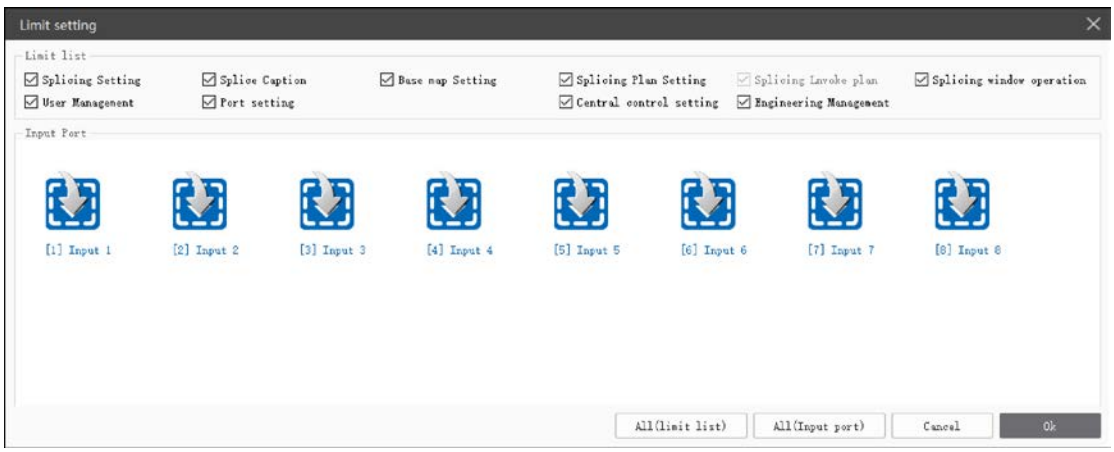



Add: After clicking add, you can set the name and password of new users in the user management section. After setting, click save to complete the addition of users.

Edit: The highest permission can edit the password of all users. Users with user management permission can edit their own password.

Delete: Select the user and click delete to delete the user.

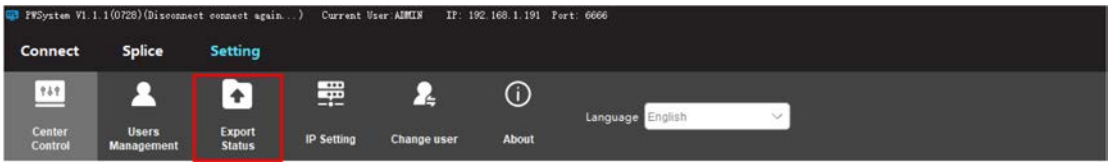
Limit (only administrators have the right to assign rights): as shown in the figure below



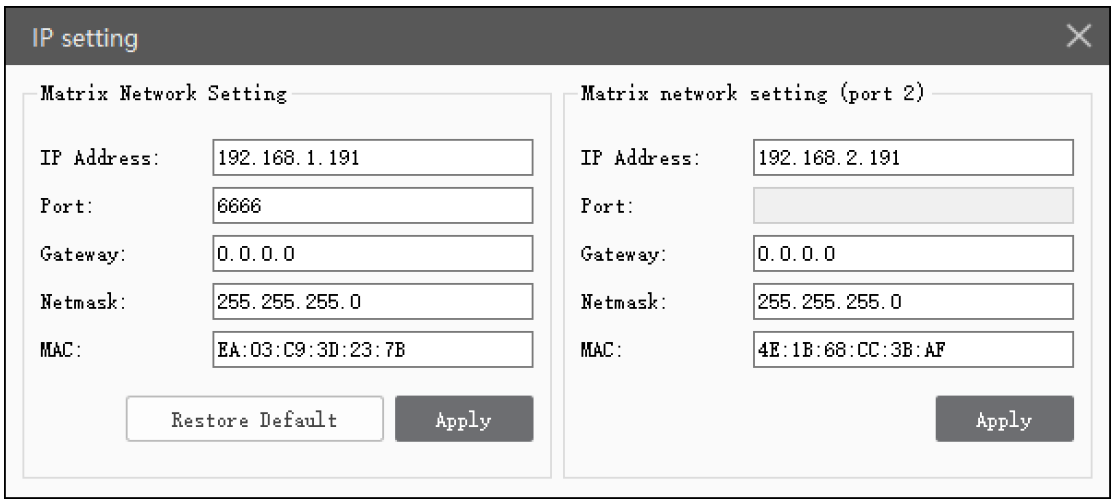

In the administrator mode, select the user to be set, then click the permission to open the permission setting panel, and assign the required permission to the user according to the actual needs.

### 6.4.3 Export status

Export the hardware information of the device to be connected, such as matrix temperature, resolution and other information.




### 6.4.4 IP setting




Set the port IP, port 2 and other information of the device.

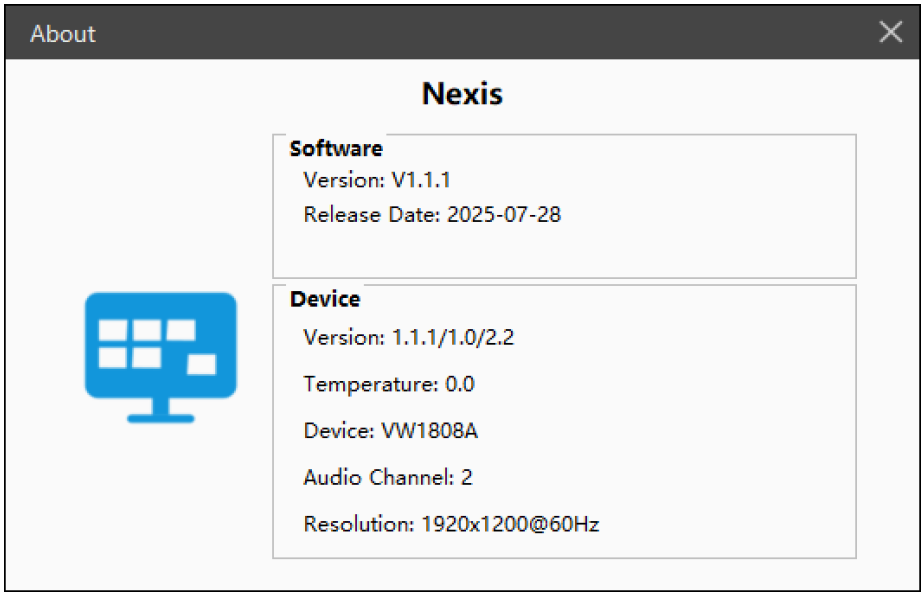
Restore the default IP address of the back-end port: 192.168.1.191. The default port is 6666.

### 6.4.5 Switching users

You can switch to the added user.

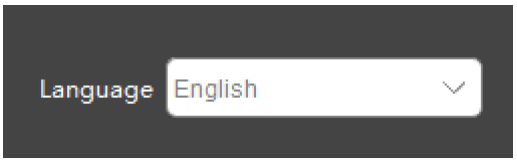
### 6.4.6 Version

View version information.




### 6.4.7 Language switching

Switch the software system language.



# 7.Web Control

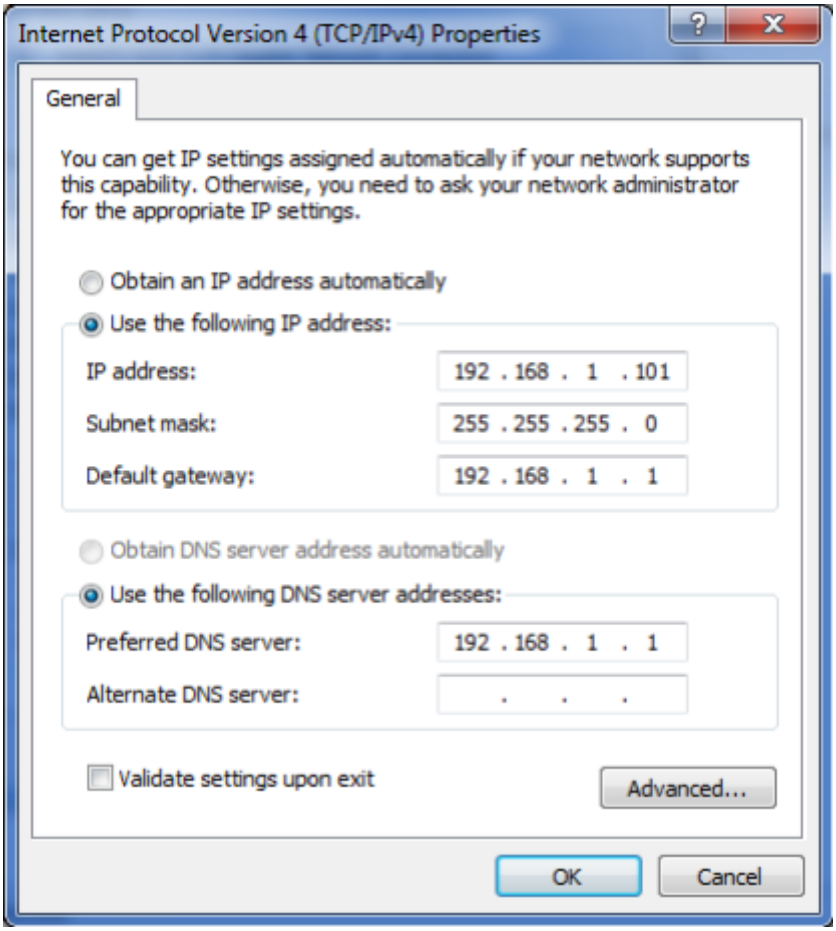
## 7.1 Connect

1. The router can be connected through CTA5 network cable for TCP/IP communication.

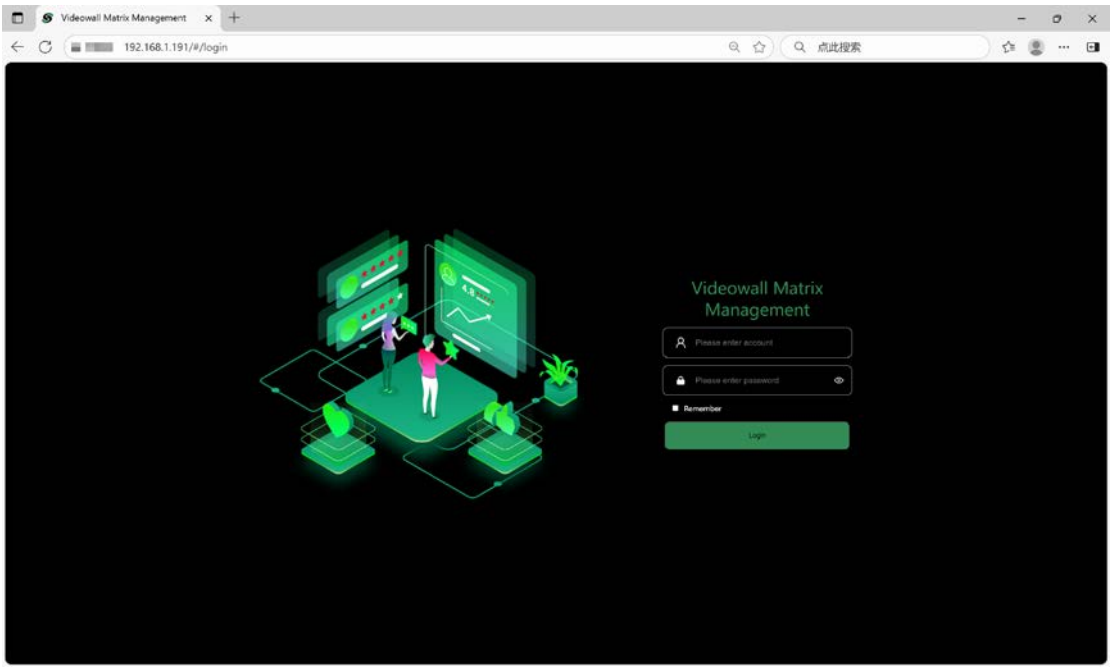


The default IP address of the matrix is 192.168.1.191. Please set the connected router to the same network segment.

2. If you use PC control, please set the following IP.




3. Open the mobile terminal or PC browser and enter the matrix IP: 192.168.1.191 to directly enter the login interface.

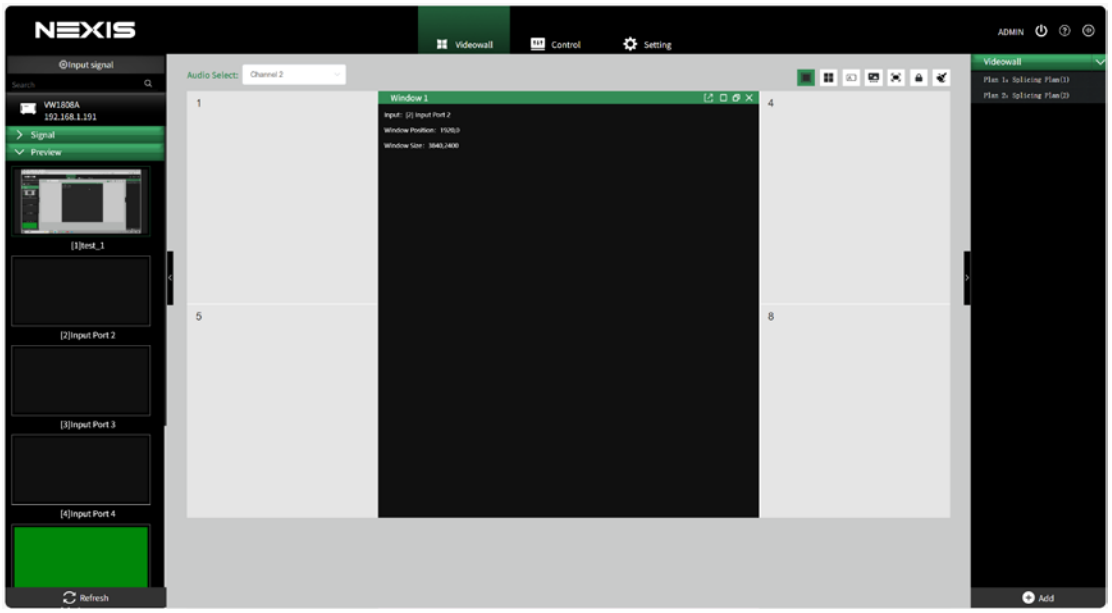



Account number ： ADMIN

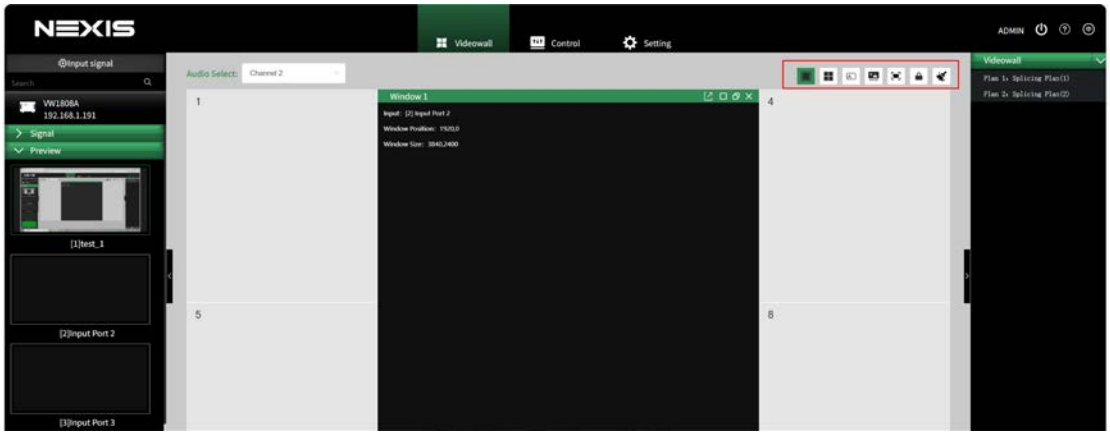
Password: admin123

## 7.2 Interface and function introduction

### 7.2.1 Splicing



a) The splicing toolbar is shown in the red box below

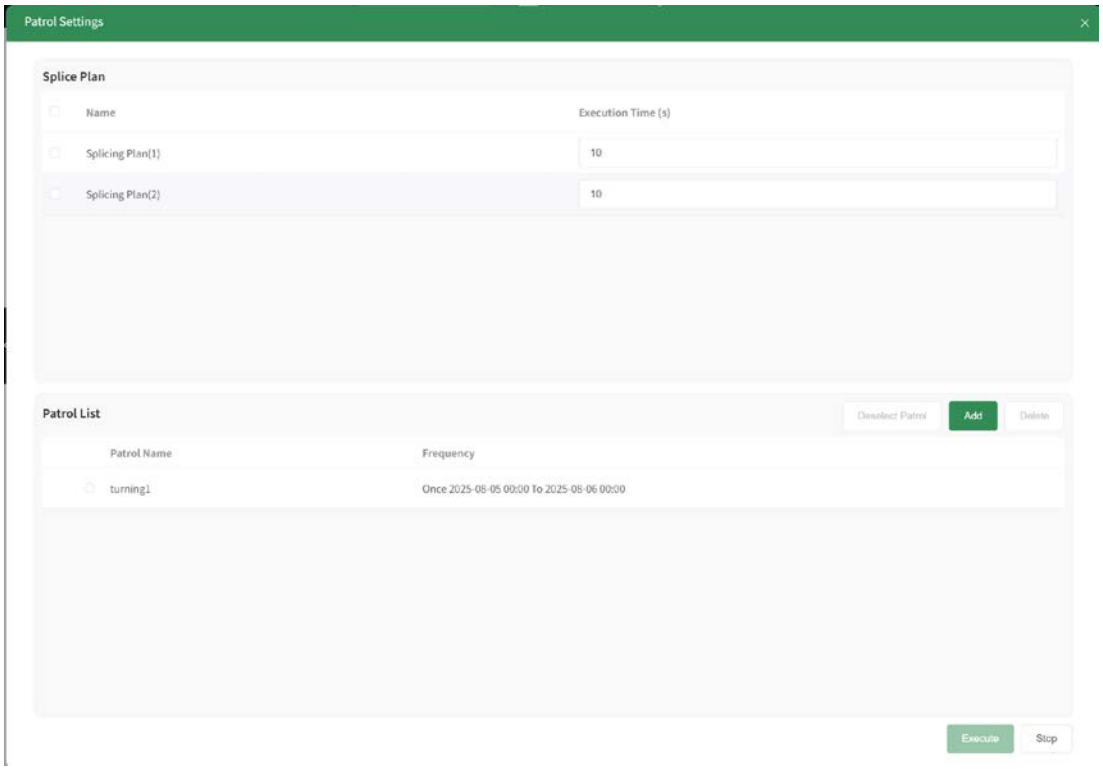



Single screen: Set the virtual screen at the bottom as a single screen for easy drag and drop operation, and do not save.

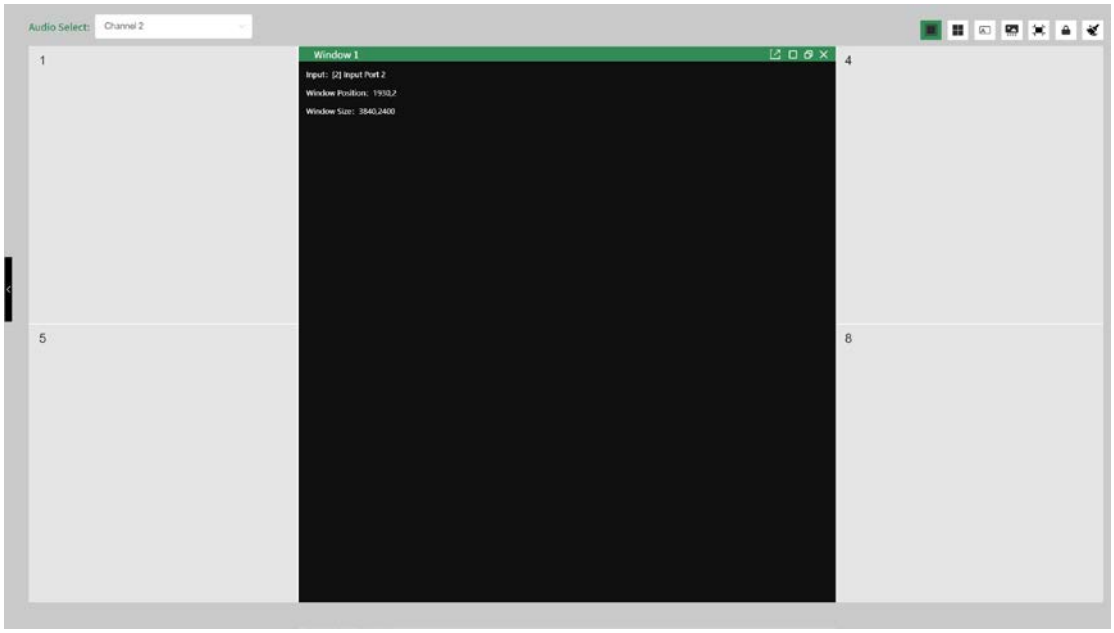
Quartile screen: Set the bottom virtual screen to quartile screen for easy drag and drop operation, and do not save.

Subtitles: The setting of spliced subtitles can be transferred to the related function of spliced subtitles in PC software.

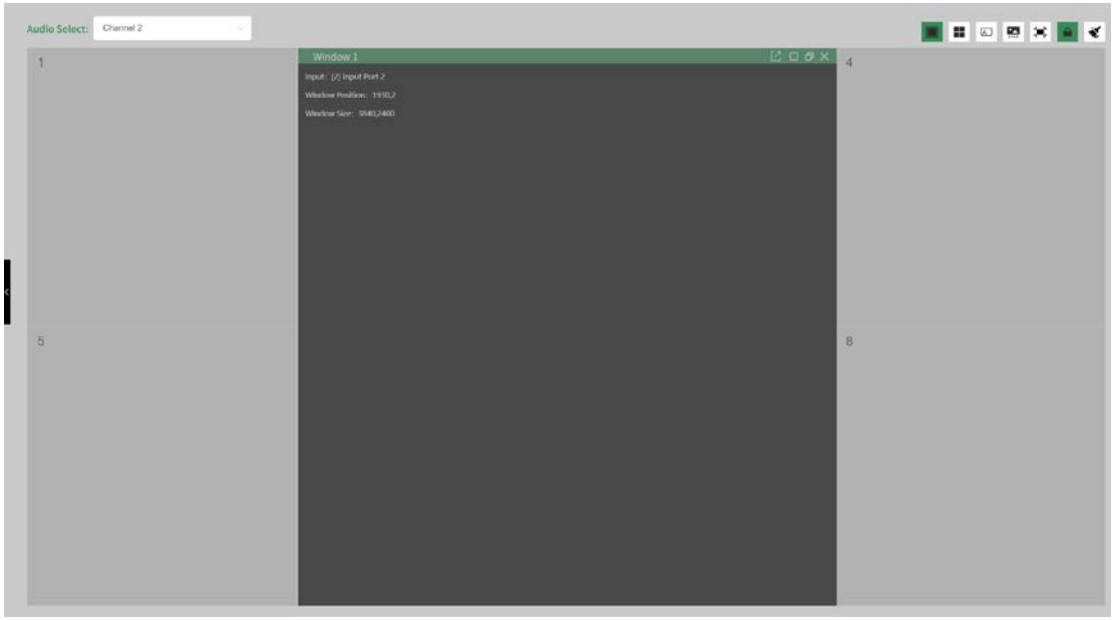
Patrol Settings: Spline plan Patrol Settings, which can be transferred to the PC software's Spline Plan Patrol query function.




Full screen: Perform full screen operation on the splicing output port, as shown in the figure below

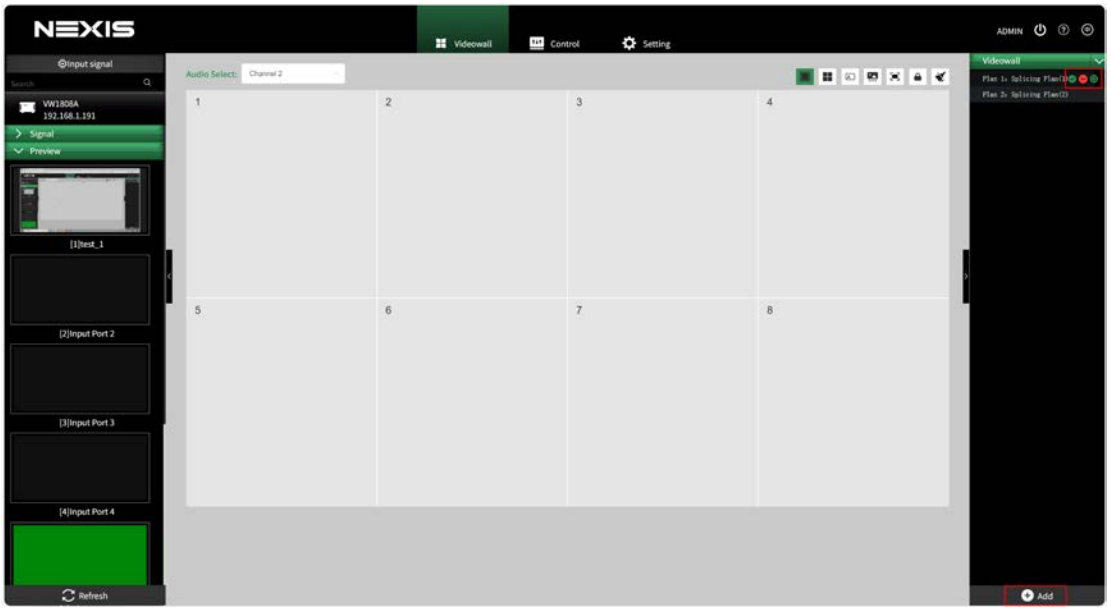



Lock: Lock the splicing wall. Do not operate on this port, as shown in the figure below




Close all ports: Cancel the signal mapping of all ports, which can be understood as close all port display screen.

b) The patch plan is shown below



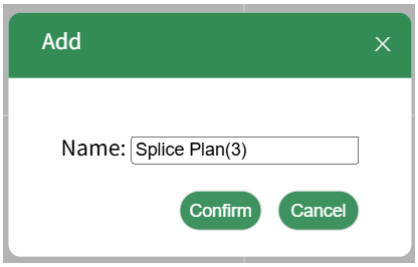

In the figure above, the red box is for saving, deleting, and renaming.

Save saves the current splicing status in the selected plan.

Delete: Delete the plan

Rename: rename the plan name

The content in the red box below the figure is the new plan. Click the new plan to save the current splicing status as a new plan!

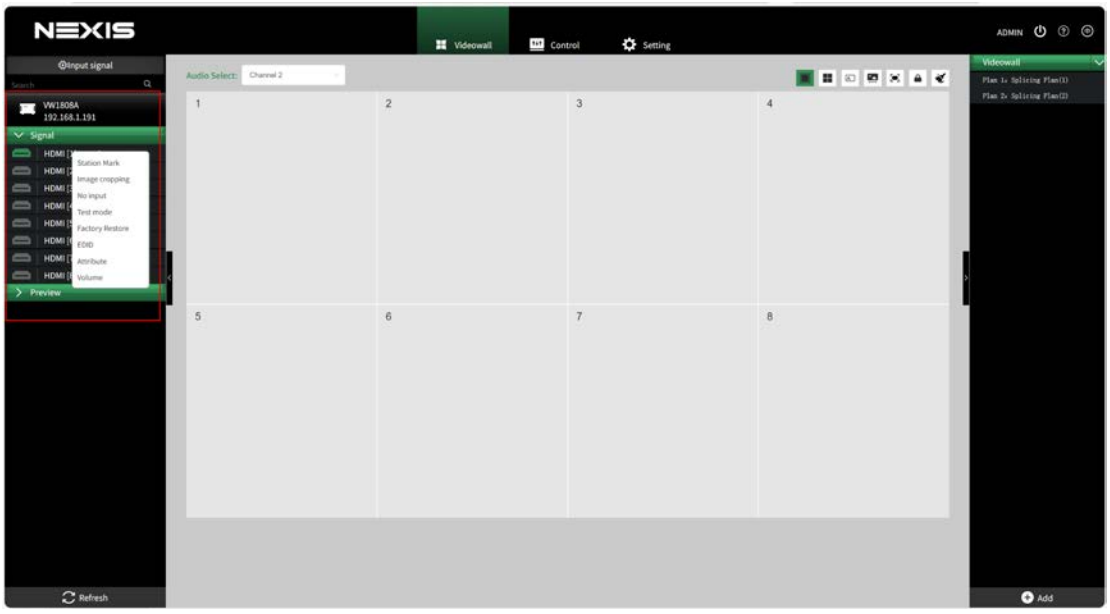



c) Audio selection, as shown below



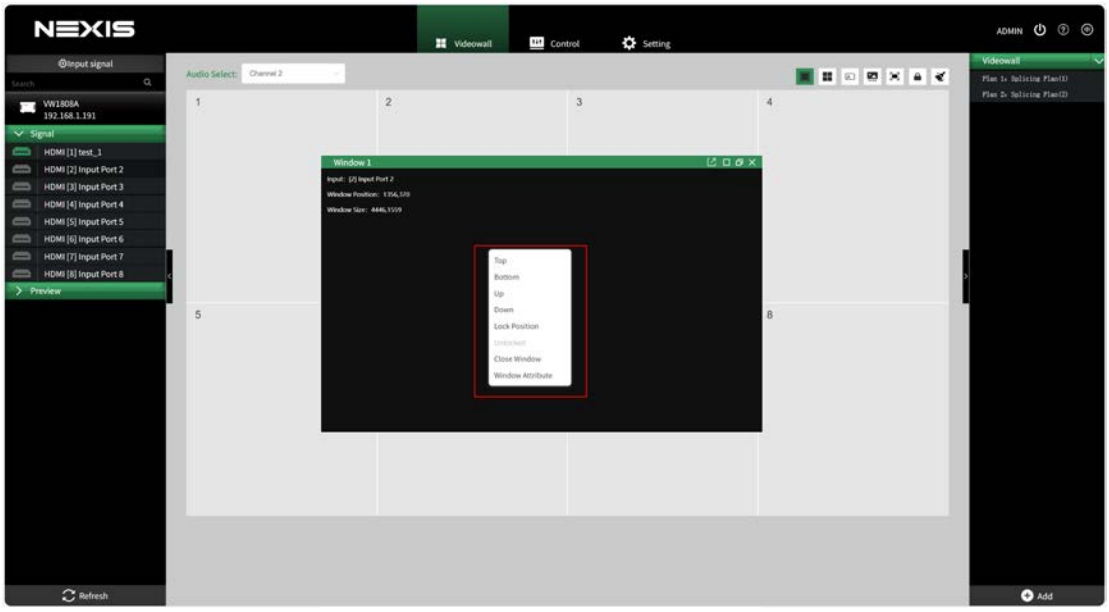

You can select the audio output from the analog 3.5mm audio output interface; you can select to turn off or HDMI input channel 1-8 audio.

d) The matrix input source right-click list is shown below



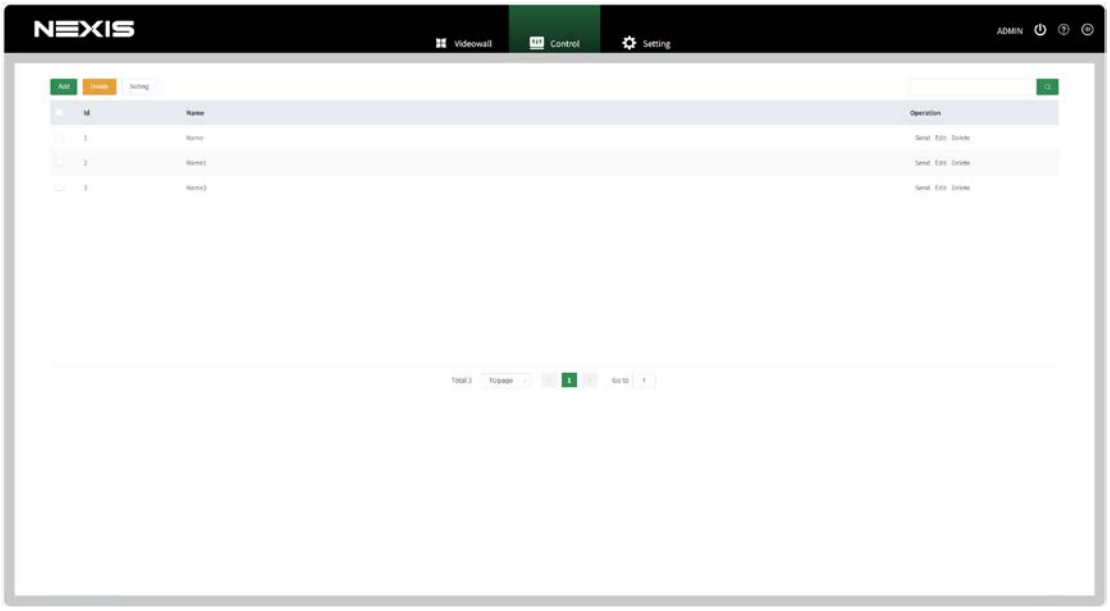

The right-click function list of matrix signal source list on the web page is the same as that of PC software list. Please go to PC software list to query relevant information.

e) Right-click the output window list, as shown in the figure below




The function list of matrix output window on the web page is the same as that of PC software. Please go to the PC software list for relevant information.

### 7.2.2 Central control

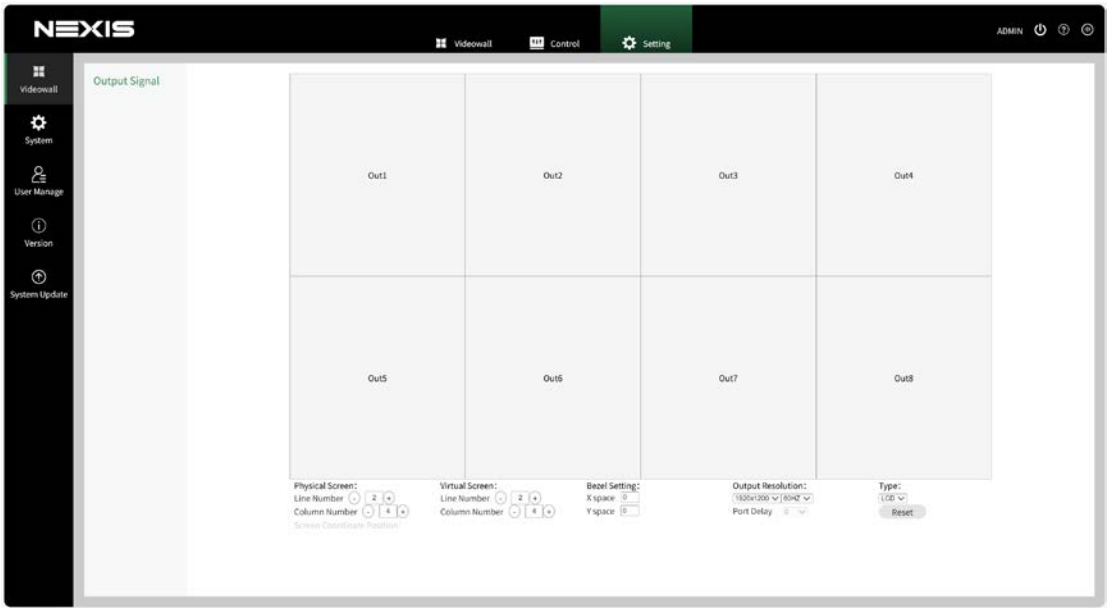



In this case, the central control function is the same as that of the PC software. Please go to the central control of the PC software to query relevant information.

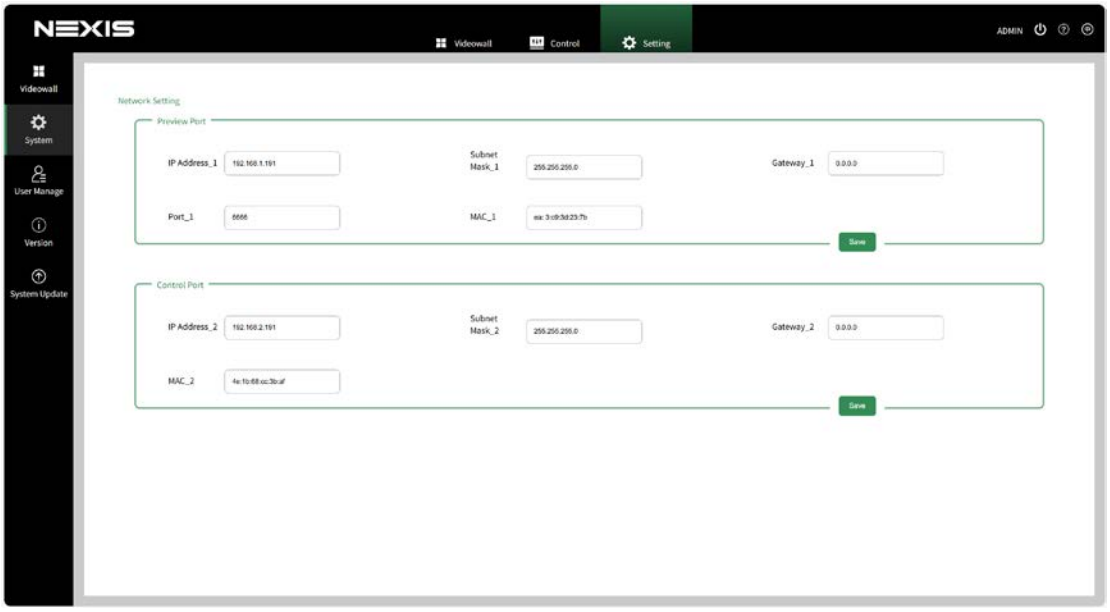
### 7.2.3 Settings

1. Display screen setting: This display screen setting function is the same as that of the PC

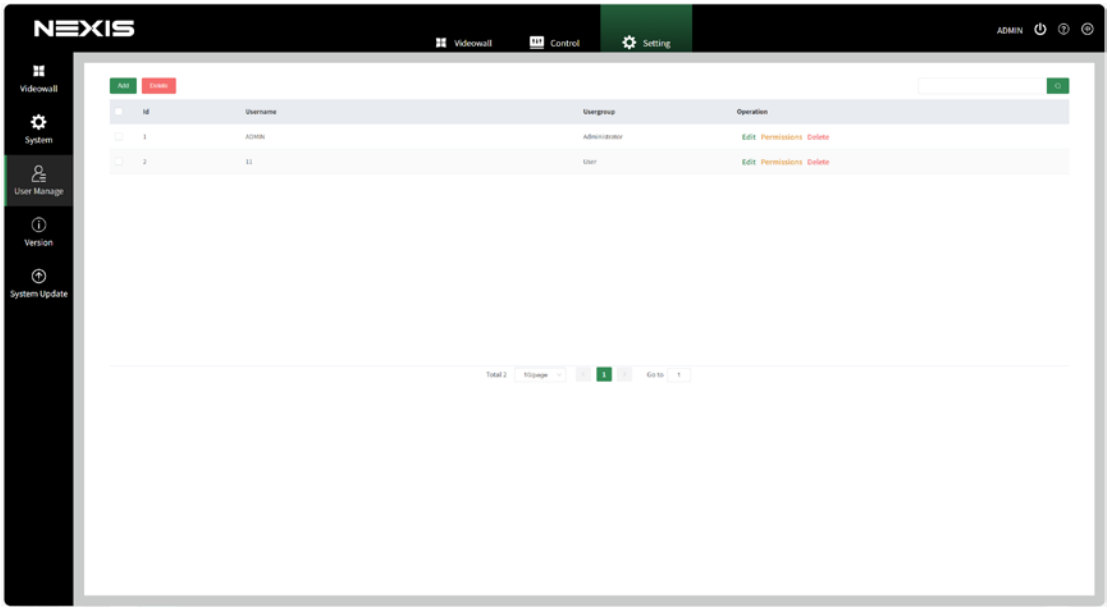
software. Please go to the display screen query information in the PC software.




2. System Settings: Set the IP address of port 1, port 2 and port number.




3. User management: This function is consistent with the user management function of PC software. Please go to PC software to query relevant information.

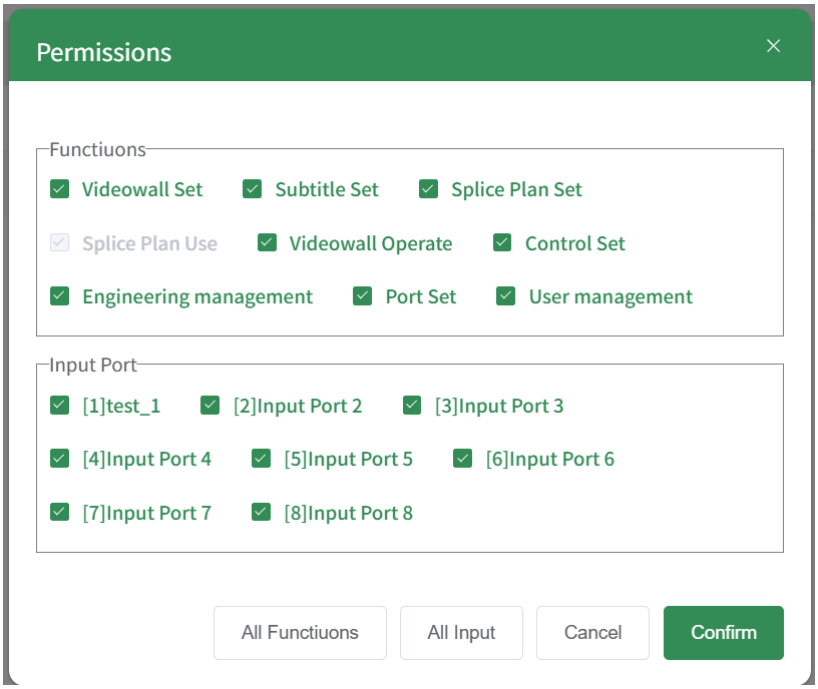



Add: After clicking add, you can set the name and password of new users in the user management section. After setting, click save to complete the addition of users.

Edit: The highest permission can edit the password of all users. Users with user management permission can edit their own password.

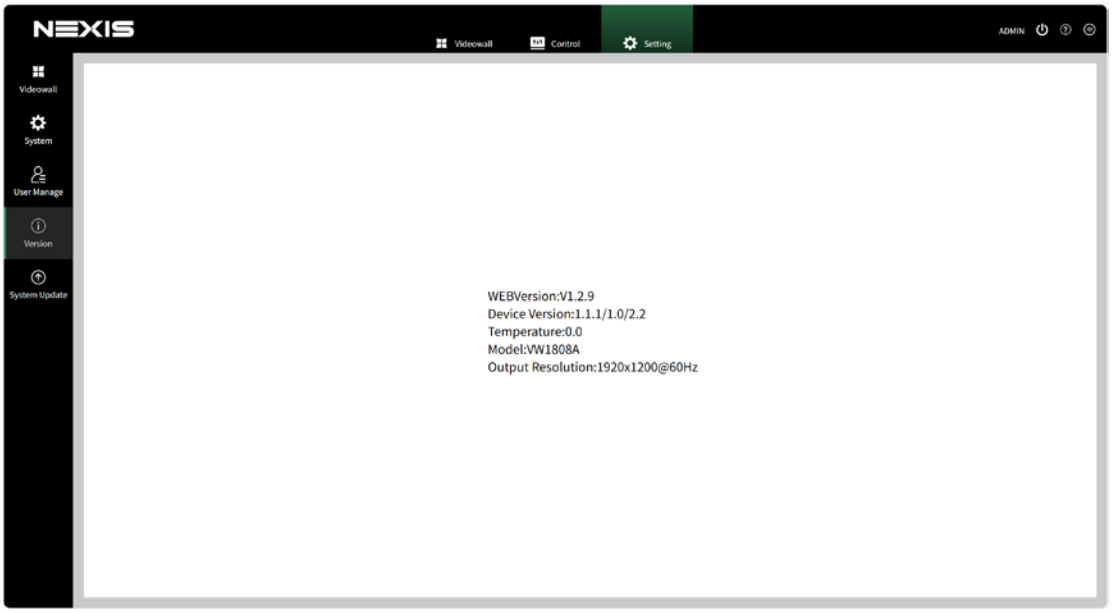
Delete: Select the user and click delete to delete the user.

Permissions (only administrators have the right to assign rights): as shown in the figure below

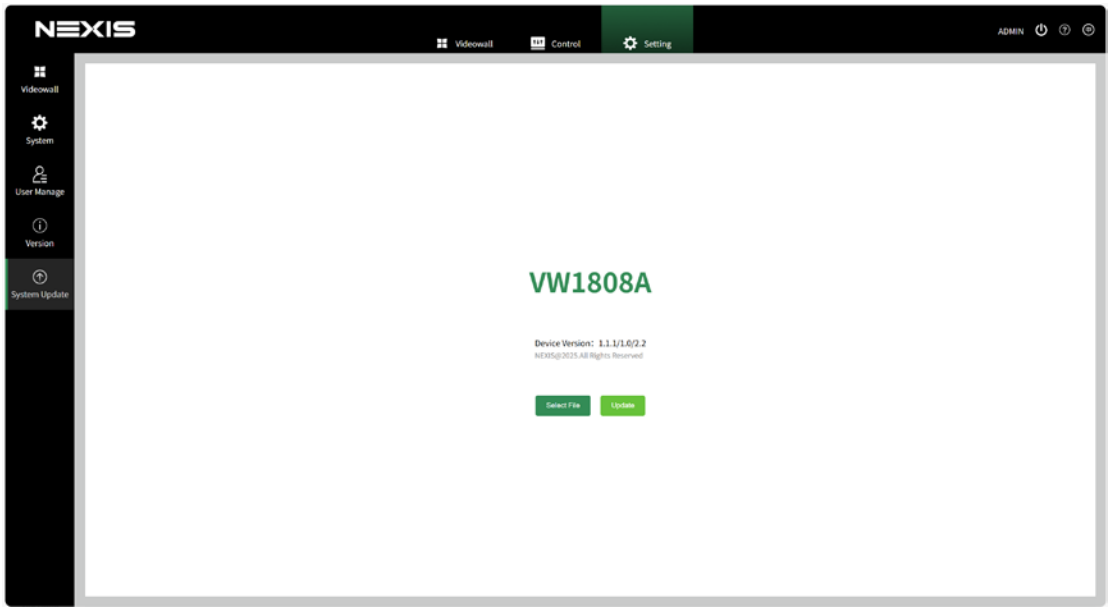



In the administrator mode, select the user to be set, then click the permission to open the permission setting panel, and assign the required permission to the user according to the actual needs.

4. Version: Query software version information.




5. System upgrade: You can upgrade the matrix firmware by uploading update files.




6. Exit login and switch language: as shown in the figure below



# 8.Troubleshooting

| Issues | Solutions |
|---|---|
| The matrix cannot be switched | ● Check whether the instruction input is correct. |
| | ● The device does not respond. Please check whether the wiring of the device is normal. |
| | ● Check whether the power supply of the equipment is normal. |
| The matrix output has no image | ● Send instructions or PC web pages to check whether the corresponding port of the device is normal and working properly, as well as the corresponding firmware version number. |
| | ● Check whether there is an input signal into the matrix. Check through the matrix output or PC web page switching. No input will be displayed when no signal is input. |
| | ● When there is no input source, the output end will automatically generate a black signal to confirm whether the display end has detected this signal. |
| | ● If the signal is normal but no signal is detected, check whether the display device is working properly, whether there is a display when directly connected to the signal, and whether the display device supports the current output resolution of the matrix. If not, change the output resolution of the matrix. Or test whether it is normal to directly connect the matrix to the display. |