RGBlink® Video {processing} for any scale

X2 Quick Start

- Support power module pluggable technology and power 1+1 redundancy function
- Auto input formats detect and conversion
- Support EDID edit for inputs and read EDID for outputs
- Replaceable input and output optional modules
- Support genlock and reference input
- Support resolution real-time total adaptation
- Support output layers 90°, 180° and 270° rotate
- Support color uniformity compensation technology
- Support isolated storage and frame rate conversion
- Support preview all output images
- Support dual pictures operation and DSK
- Support input signals hot backup function
- Used-defined resolution adjustments
- Multiple cascade synchronization split

CONTENT

Product Introduction

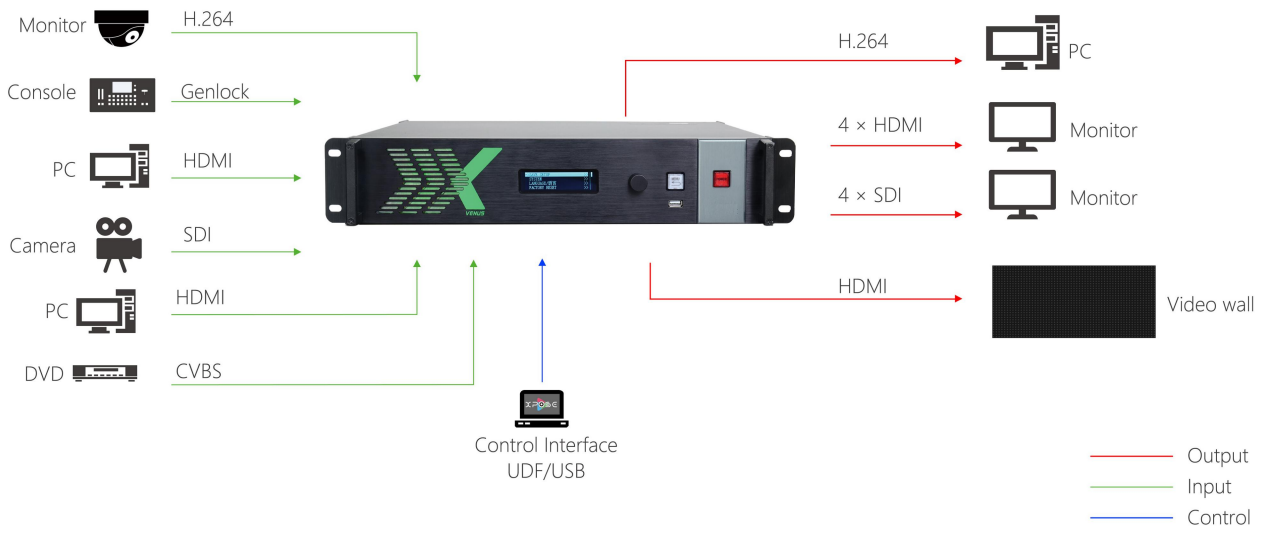
X2 is a multiple outputs video processor, it offers nine card cages that accepts a wide variety of video signals, including VGA, CVBS, S-HDMI, SDI, HDMI, H.264, 4K and USB (for media files play). It combines truly seamless, fade in fade out, glitch-free switching with advanced scaling technologies to meet the requirements of high quality, high resolution video presentations.

X2 supports EDID editing for VGA, HDMI input ports and read EDID for output ports, the EDID can be modified by windows control program, users can edit the EDID of input port according to the resolution of outputs to achieve the optimal input resolution.

X2 also supports resolution real-time total adaptation, color uniformity compensation technology and 90°, 180°and 270°rotate. In addition, it supports local front panel operation, remote widows based software control by Ethernet, and WIFI control. In addition, X2 is based on replaceable input optional modules structure, with different modules, you can reach more possibility and application range.

System Connection

We offer solutions to demanding technical problems. Any application questions, or required further information, please contact with our customer Support Engineers.



X2 System Connection Diagram

Packing Configuration

AC Power Cord

Network Cable

HDMI to DVI Cable

USB Cable

DB9 to Audio Cable

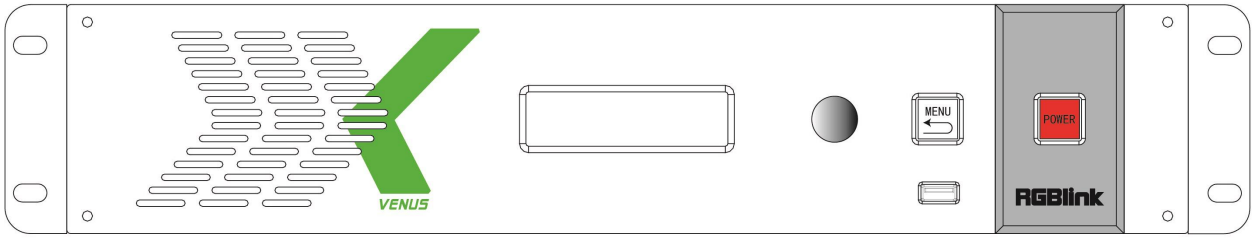
Screw Driver

Antistatic Bag

Note: AC Power Cable supplied as standard according to destination market.

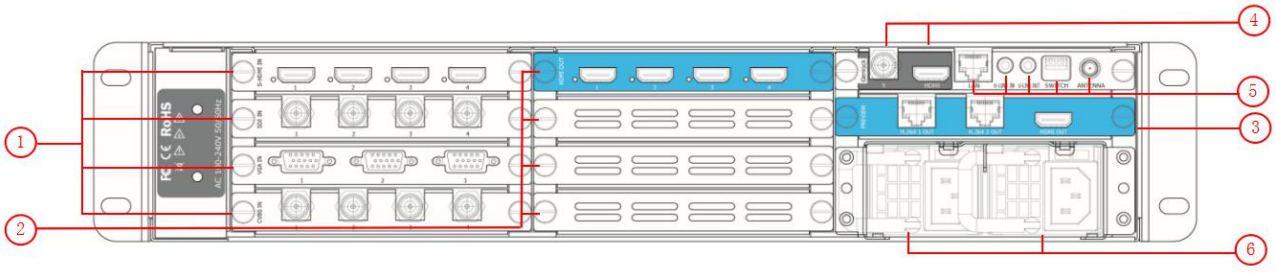
Hardware Orientation

Front Panel



Button Instruction			
	Menu and back button		OLED Panel Show operation menu items
	Power button		Knob-Confirm and adjust OLED menus
	USB interface Used for device upgrade		

Back Panel



Chassis Module Structure			
1	4 input module slots, support S-HDMI, SDI, VGA, CVBS, USB, HDMI, H.264 and 4K optional module	4	Genlock interface, including 1 BNC connector and 1 HDMI-A connector
2	4 program output module slots, support HDMI and SDI optional module	5	Control interface
3	1 preview output card slot, including H.264 output and 1 HDMI output	6	Power module

Software Operation

Software Installation

Environment Requirements:

Processor: 1 GHz or above 32 bit or 64 bit processor

Memory: 2 GB or more

Graphics: Support DirectX 9 128M or above (open AERO effect)

Hard disk space: Above 16G (primary partitions, NTFS format)

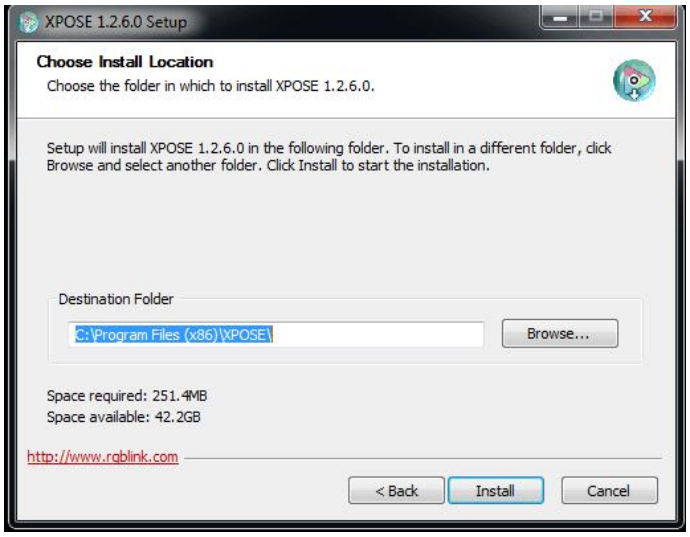
Monitor: Resolution must be 1280 x720 pixel or above (it can not display normally if the resolution is lower than 1280 x720)

Operating system: Windows 7 or above (full version, not Ghost version or compact version)

Double click icon, it will pop-up the installer language box, select the language, for example, select "English", and click "OK" to confirm.

Click "Next" to install:

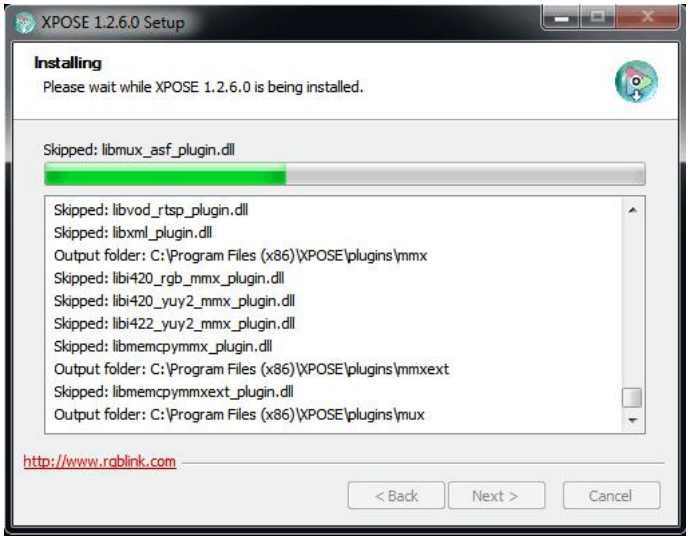
Select "Browse..." to select the XPOSE software install location:



Note

User should get the rights in “Roles Management” when install the software to disk C if the system is Windows 7 or above.

Click “Install”:



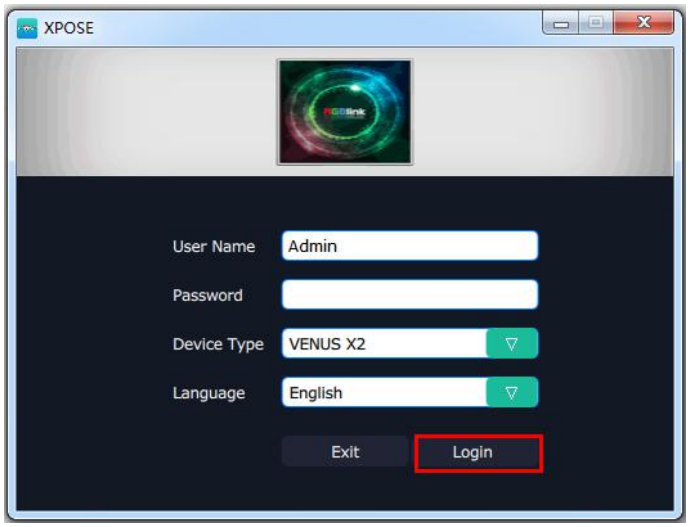
Click “Finish” and is ready to run the XPOSE management software:

Software Operation

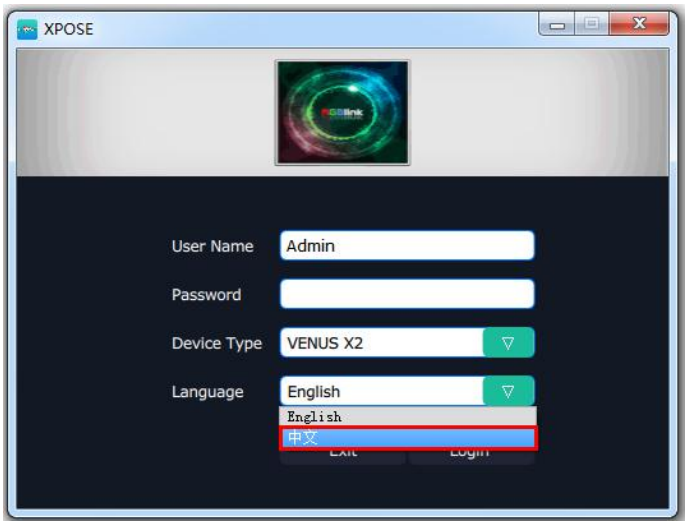
Login to the Software

Double click the icon 

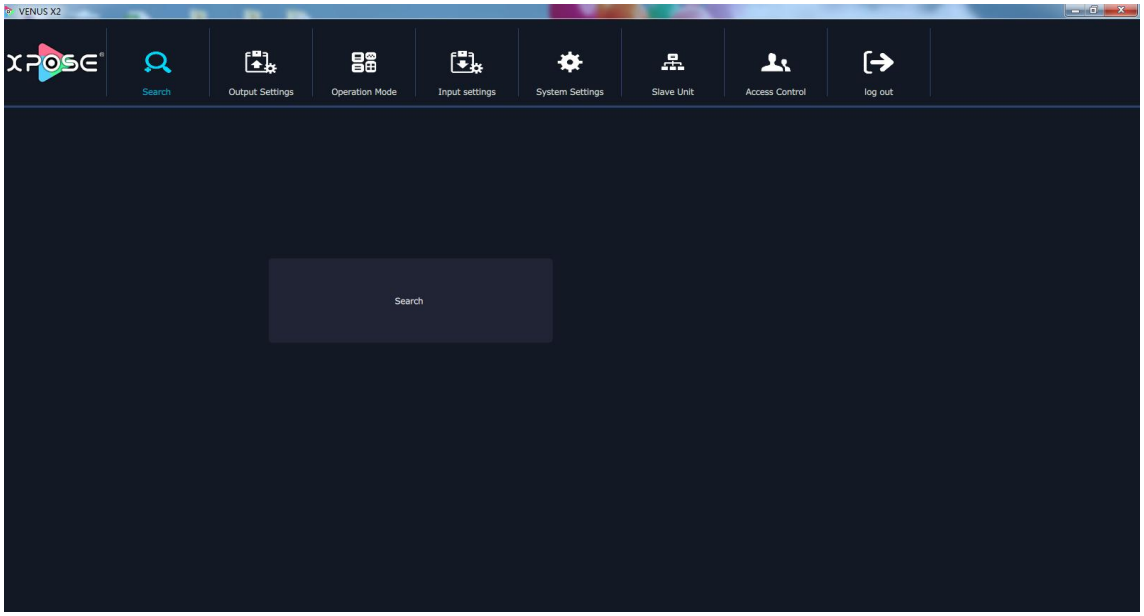
on the desktop. Log in interface will be enter after opening, the user name is Admin, and there is no password, select “VENUS X2”, and enter into the software by clicking “Login”.



If user want to change the language to Chinese, click the drop down arrow after “Language” and select “Chinese”, as shown in the figure below, then click “Login” to enter into the software.



XPOSE management software interface is shown as follows.

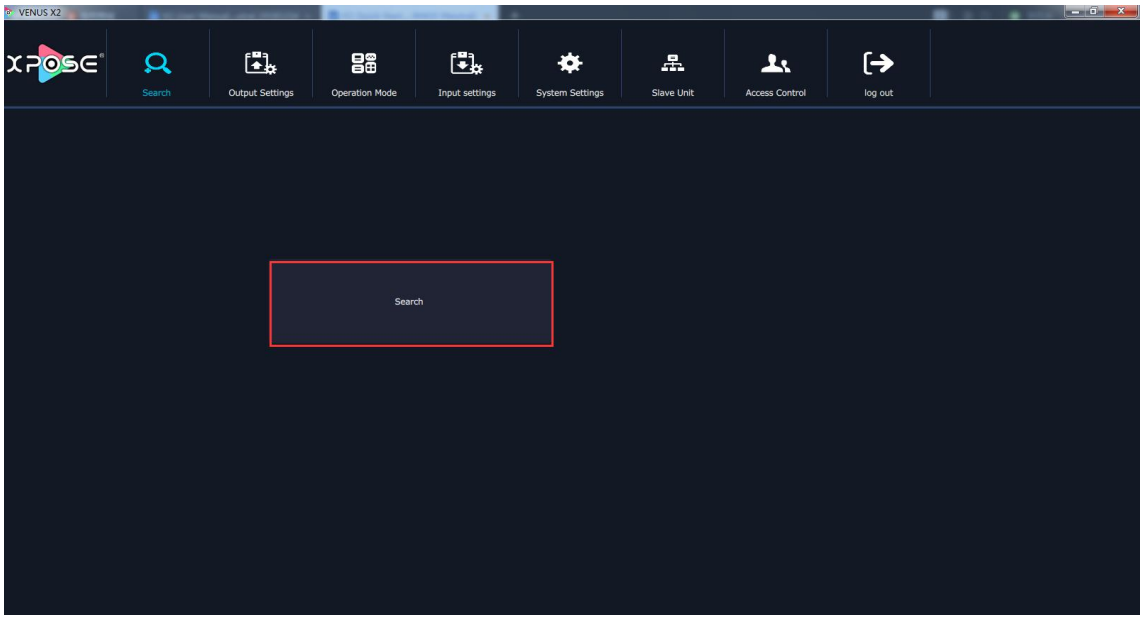


XPOSE management software contains the functions including: web links, search, output settings, operation mode, input settings, access control and system settings. In the following parts, we will introduce these in detail.

Connect the Device

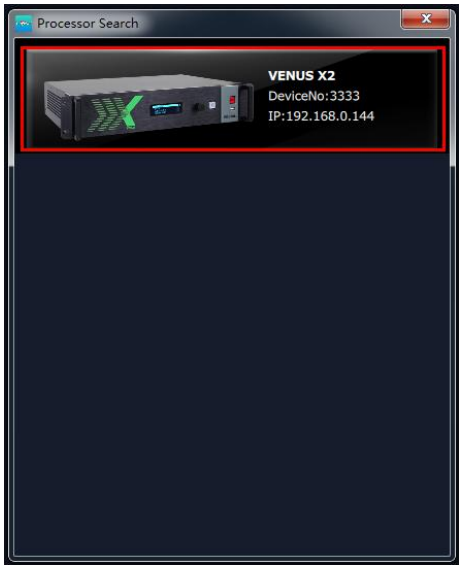
First, set up the device IP, and ensure the IP of the computer and device is on the same network segment. Connect the XPOSE management software to the computer with the network cable and power up the device. Users can find the IP address of the device on its LCD screen after initializing.

Then, click the shortcut “Search” on the operation interface.

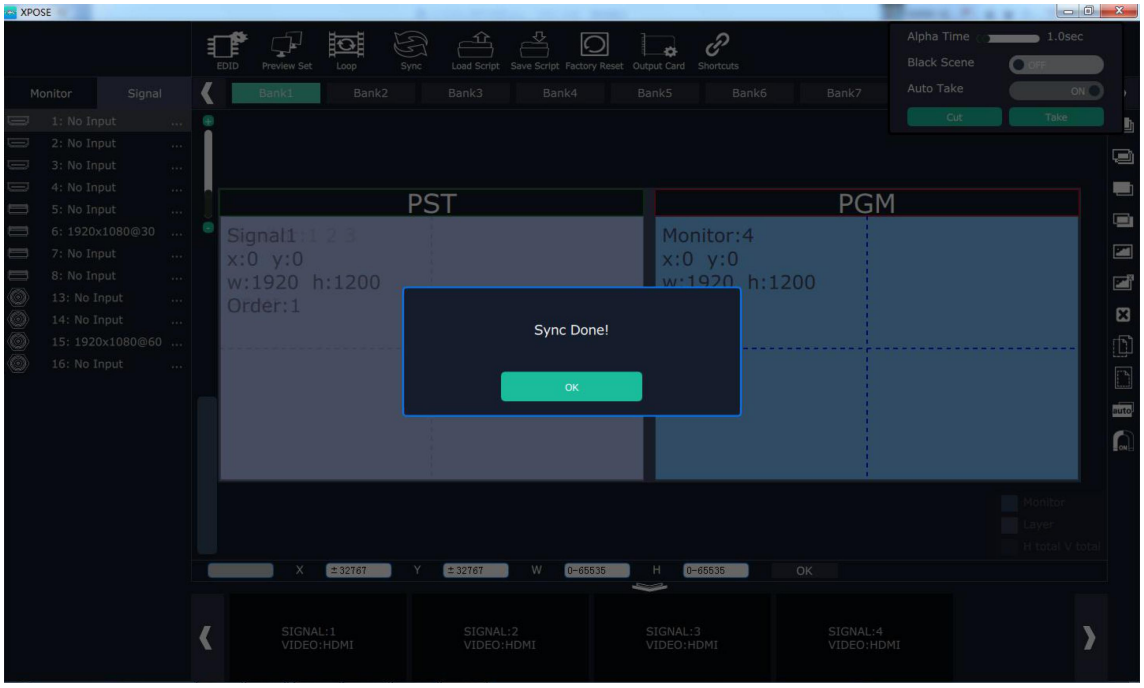


Then it will search the device, and show the device name, device number and IP after search, as shown in the figure below:

Finally, click the device to connect, as shown in the figure below:

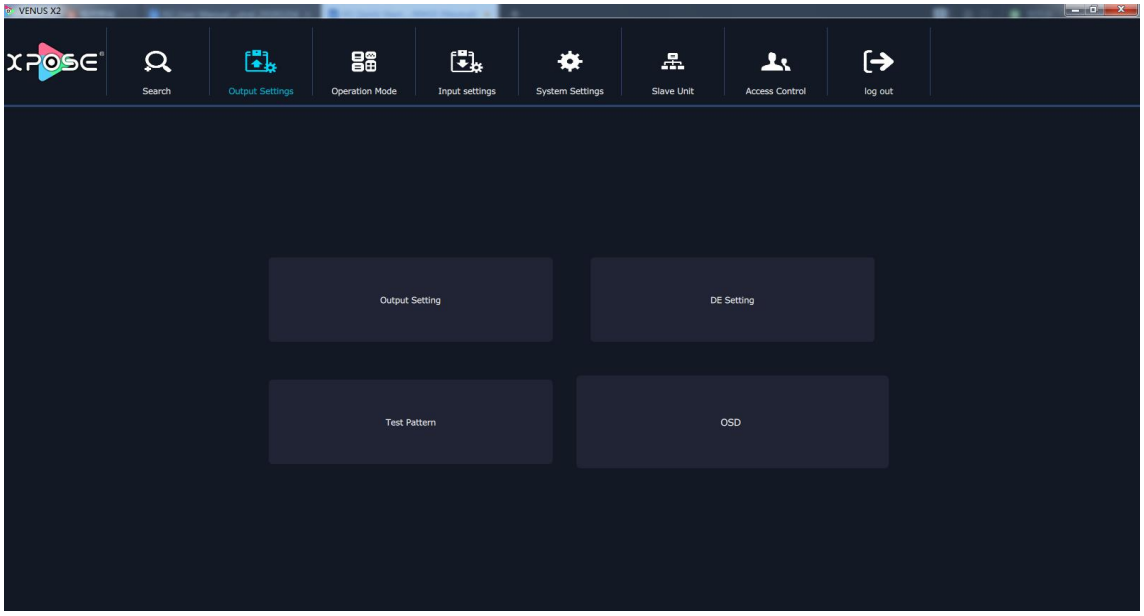


The software will automatically synchronize after connection, as shown in the figure below:



Output Settings

Click the “Output Settings”, and enter to the interface as follows:



Output Setting, DE Setting, Test pattern and OSD are included in output settings, specific as follows:

Output Setting

Click the “Output Setting”, and pop-up window as follows:

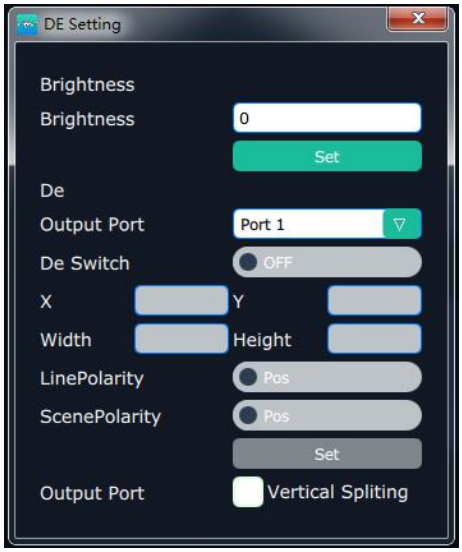
Output: Click the drop down arrow after the format, and select the output resolution in the pull-down menus according to actual need.

Format: The width, height and frequency can be set if select “**Custom**” in “Format”. Click “**Setting**” to confirm.

Genlock: Enable or disable the genlock function by sliding the genlock switch. If select “ON”, the output resolution will be same with the resolution that selected. HDMI or BNC can be selected in “Input Source” by sliding the switch.

DE Setting

Click the “DE Setting”, and pop-up window as follows:

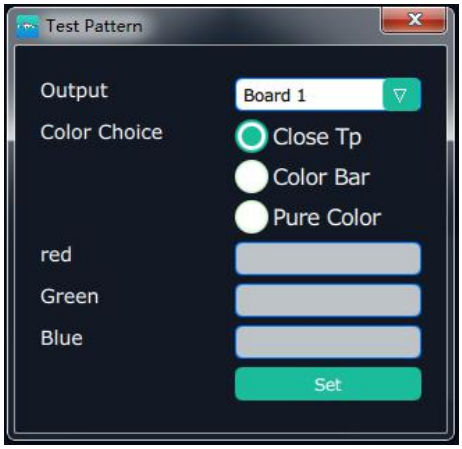


Brightness: The brightness adjustment range is between 0~128. Click "**Set**" to confirm.

De: User can select one port or all ports, and enable the De function by sliding the De Switch. The settings for De include X, Y, width, height, line polarity and scene polarity. Vertical spliting can be selected in "Output Port".

Test Pattern

Click the "Test Pattern", and pop-up window as follows:



Output: User can select any board among the four boards.

Color Choice: TP, colour bar and pure colour can be selected.

Red, Green, Blue: If select "Pure Colour", red, green and blue can be adjusted, the adjustment range is between 0~255.

Click "**Set**" to confirm.

OSD

Click the "OSD", and pop-up window as follows:

Output Mode: One output mode or more output mode can be selected. In one output mode, user need to enable the OSD function and select the output first. The operations are as follows:

Size and Position Adjustment: The size and position can be adjusted by setting X, Y, W and H.

Font Setting: The font, font size, font type and font color can be set. Use can also select font alpha.

BG Alpha: Can set the background color or background alpha.

Input Information: Input the information that will display in the box.

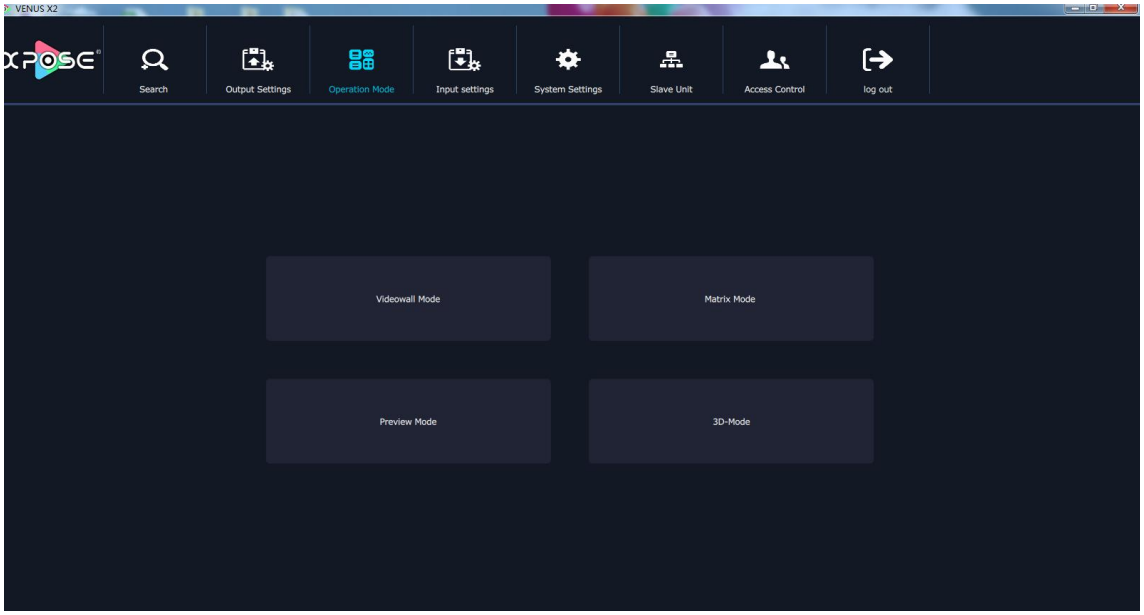
Scrolling Speed: The scrolling speed can be set, and the adjustment range is between 1~16.

OSD Scroll: Can select no scroll, left scroll and right scroll.

Click "**Save**" and "**Apply**" after setting.

Operation Mode

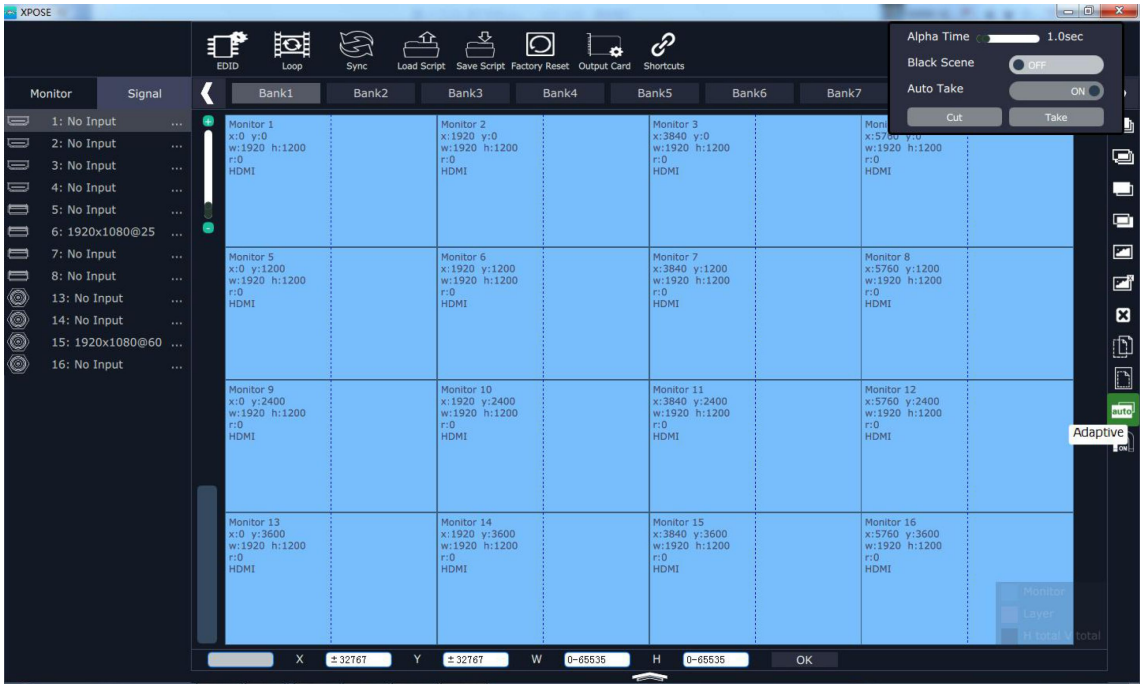
Click the "Operation Mode", and enter to the interface as follows:



Videowall Mode, Matrix Mode, Preview Mode and 3D-Mode are included in operation mode, specific as follows:

Videowall Mode

Click the “Videowall Mode”, and enter to the interface as follows:

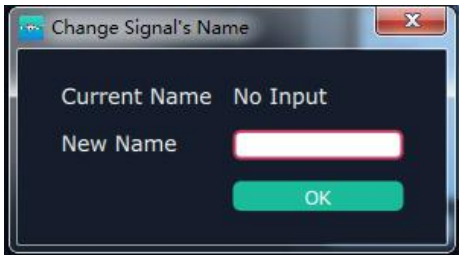


Signal List

The signal list is shown as follows:

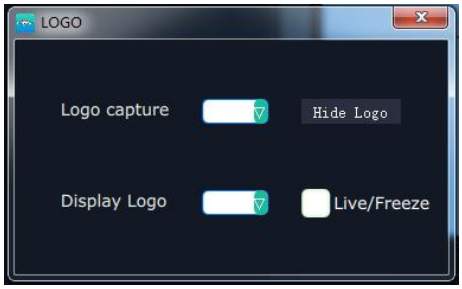
It displays the input module type, the quantity of inputs and input format. Right click the input for the following settings:

Change Name: Select “New Name”, and input the new name, click “OK” after setting.



Refresh Signals: Right click the input and select “Refresh Signals”. If there is signal, it will show the input format, or it will show “No Input”.

LOGO: Right click HDMI/DVI input, and select “LOGO”, it will enter to the LOGO menu items.



LOGO capture: Select the LOGO, there are 10 groups of LOGO. The image is frozen when capture LOGO.

Hide LOGO: Select “Hide LOGO”, the LOGO will be hidden.

Display LOGO: Select the number of “Display LOGO”.

Live/Freeze: Select “Live/Freeze”, the image is frozen. Cancel it, the image is live.

USB Player: Right click the USB input, and select “USB Player”, it will enter to the USB Player interface, including movie and picture, default play the USB movie.

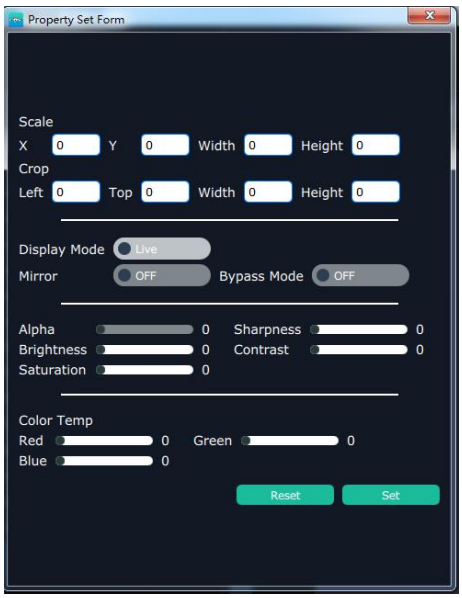
USB movie player setting: Can select play in order, random, single cycle and all cycle, switch to pre or next, pause or play, and read the movie name, progress bar and time.

USB picture play time: Click the picture, it will display the setting interface, default the time is 0s. Set the switch time, and click “Set”.

USB picture player setting: Can select play in order, random, single cycle and all cycle, and switch to pre or next, pause or play.

USB Upgrade: Put the file in the form of MERGE.bin to the USB disk root directory, and connect to the USB input. Right click the USB input, and select “USB Upgrade” to begin to upgrade USB. (Note: upgrade is only for the USB port that connected, user need to upgrade the four USB ports respectively.

Set Input Property: Right click the input and select “Set Input Property”, it will enter to the interface as follows:



Scale: Set the X, Y, width and height.

Crop: Crop the left, top, width and height.

Display Mode: Select “Live” or “Freeze”.

Mirror: Enable or disable the mirror function, default “OFF”.

Bypass Mode: Enable or disable the bypass mode. When select “ON”, the output format will be the same with the input format.

Alpha: Set the alpha, the adjustment range is 0~128.

Sharpness: Set the sharpness, the adjustment range is 0~100.

Brightness: Set the brightness, the adjustment range is 0~100.

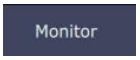
Contrast: Set the contrast, the adjustment range is 0~100.

Saturation: Set the saturation, the adjustment range is 0~100.

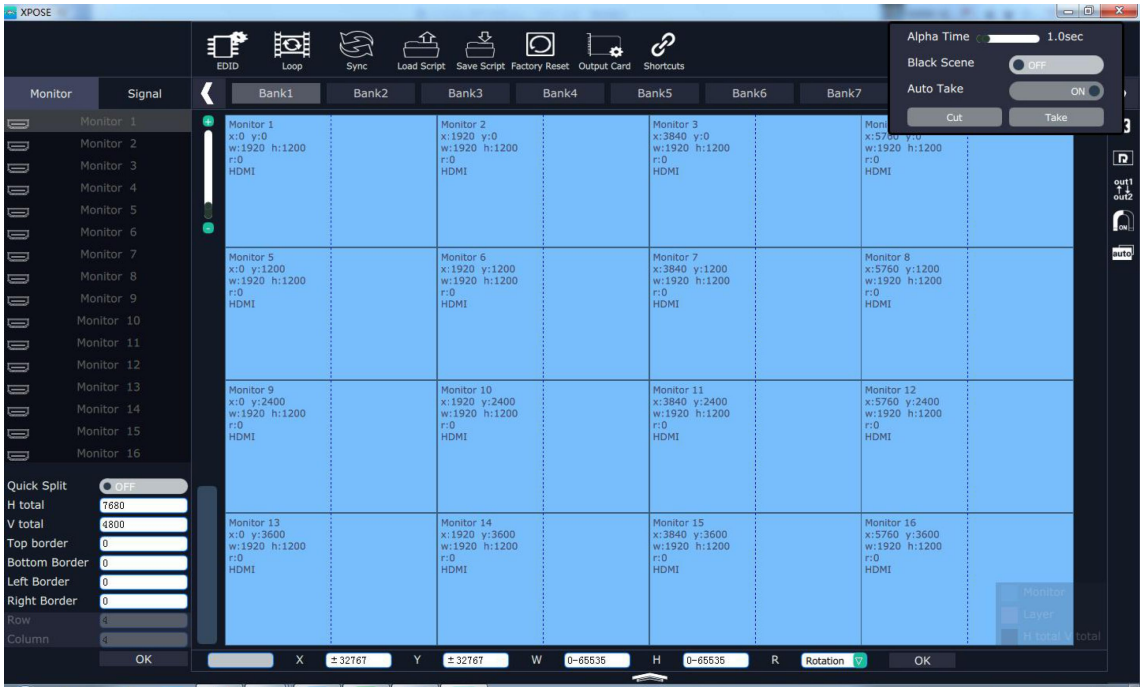
Color Term: Set the color temp (red, green and blue), the adjustment range is 0~100.

Reset: Select “Reset”, the input property will be recover to factory setting.

Output Setting

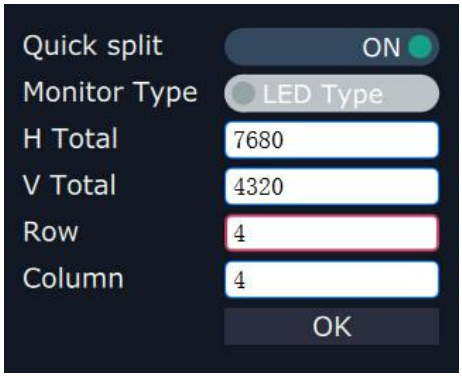
Click “Monitor” shortcut 

, it will enter the interface as follows:

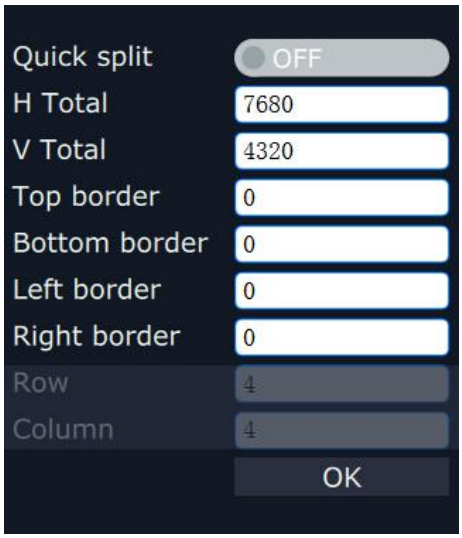


Split Mode: Default quick split “OFF”. User can enable the quick split function by sliding the switch to “ON”. LED type and LCD type can also be selected by sliding the monitor type switch, specific as follows:

LED Type: Default LED type. In LED type, user can custom the H total, V total, row and column, as shown in the figure below:



LCD Type: Slide the monitor type switch, and select “LCD Type”. Besides H total, V total, row and column, user can custom the top border, bottom border, left border and right border in LCD type, as shown in the figure below:



Note

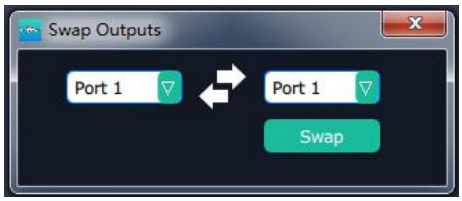
Top border and bottom border, left border and right border are changed equivalently. For example, if set top border as 100, bottom border will be changed to 100 automatically, and if set left border as 200, right border will be changed to 200 automatically.

For example, set the top border, bottom border, left border and right border as 100, as shown in the figure below:

Close monitor: Click the icon  on the top right corner of the monitor to close one monitor, or click the shortcut  on the right side of the interface to close all monitors.

Reset monitor: User can reset the monitor by clicking the shortcut  on the right side of the interface.

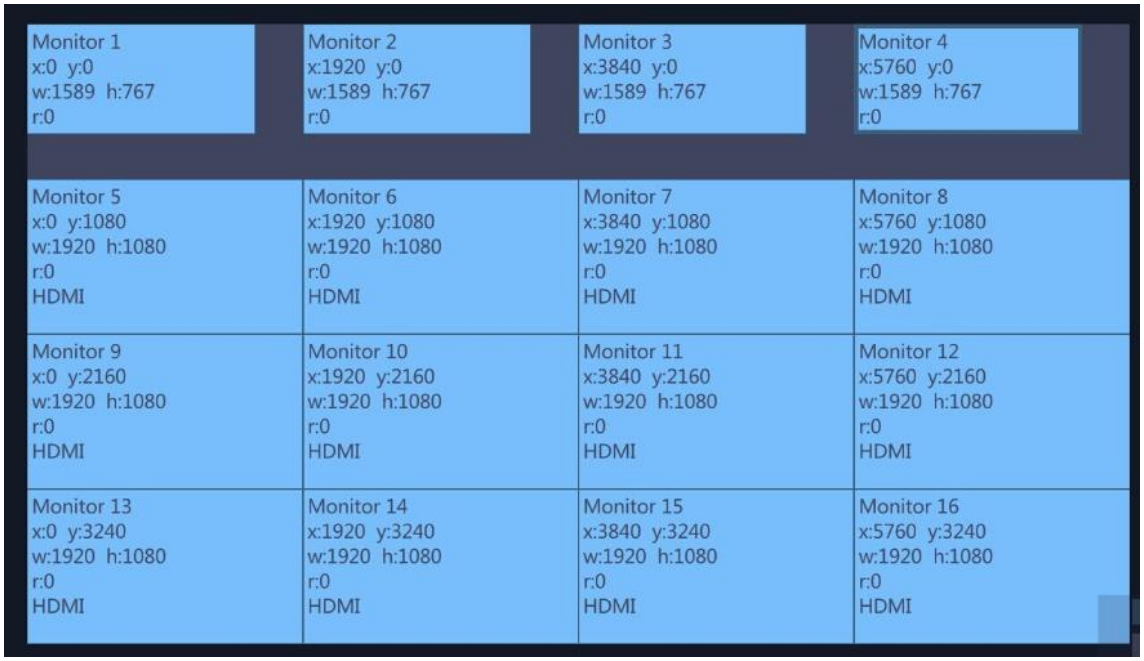
Swap monitor: User can swap the monitor by clicking the shortcut  on the right side of the interface, as shown in the figure below.



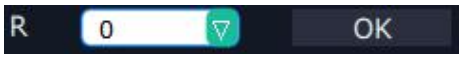
Auto tile: User can enable or disable the auto tile function by clicking the auto tile shortcut  on the right side of the interface. If select auto tile “ON’, the layer will automatically snap to the output grid when move the layer to the position within the threshold value.

Monitor Size and Position Setting: Move the mouse to the lower right brink of the monitor, and press the left key of the mouse. Move the mouse to the suitable position and release the mouse. But this method can only adjust the size and location roughly, if an accurate adjustment is needed, select the monitor, and set the X, Y, width and height in the bottom of the interface.

Monitor Size changed equivalently: Select any monitor, for example, select monitor 1, and adjust the size. Click this monitor, then press button C and don’t let go, select the monitor that will set, the size of the selected monitor will be changed to the same size of monitor 1, as shown in the figure below:



Rotation: Select the monitor, and set the rotation as 0°, 90°, 180° and 270° in the bottom of the interface. Click "**OK**" to confirm. As shown in the figure below:

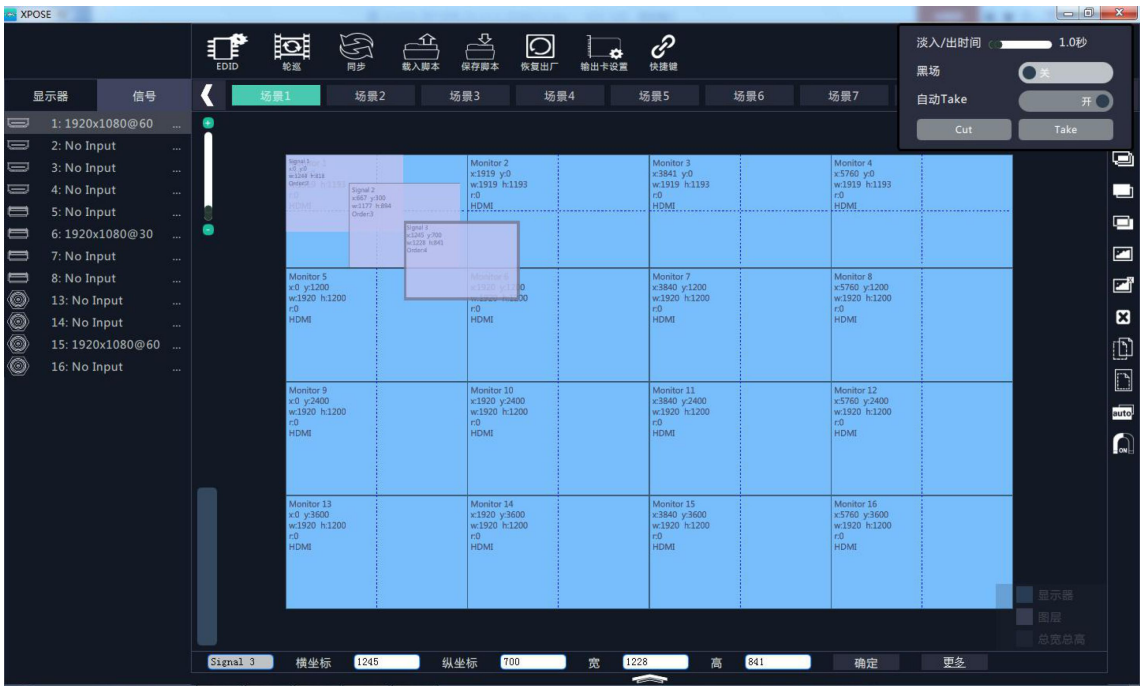


Right click the monitor can also rotate the monitor.

Output Area Size Setting: Move the mouse to the output area and slide the mouse wheel, the output area size can be zoom in and out.

Layer Setting

New Layer: In output screen zone of controlling software, press the left mouse key and drag on the intended output screen to cover the whole current screen. And the below interface will be displayed. A layer can also be opened by double clicking the left signal source to be shown on the window.



Adjust Layer: Two ways can change the size and location of the opened layer:

a. Drag the opened layer by mouse. The details are: move the mouse to the brink of the opened layer, when the mouse shows"<—>", press the left key of the mouse and drag the window to a suitable size and then release the mouse. Or move the mouse to the lower right of the opened layer, press the left key of the mouse and drag the window to a suitable size and then release the mouse. Move the mouse to the opened layer and press the left key of the mouse and move the mouse, then the layer will be moved, release the mouse when moved to the suitable location. But this method can only adjust the size and location roughly, if an accurate adjustment is needed, the second method can be used.

b. Select the layer to be adjusted, and set the X, Y, width and height in the bottom of the interface.

Hierarchical relations between layers: After creating the layers, the hierarchical relations can be changed by the following: click the shortcut key bring layer to top "  ", bring layer to bottom "  ", layer forward "  " or layer backward "  ". The layer can be set as background by click "  " and click "  " to remove the layer background.

Close one layer or all layers: Click the icon  on the top right corner of the layer to close one layer, or click the shortcut key "  " to close all layers.

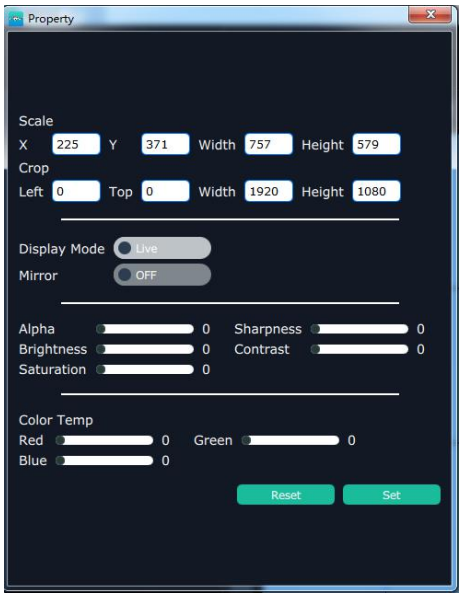
Lock the layer: Click the icon  on the top right corner of the layer to lock the layer, the layer can't be moved or adjusted if be locked.

Full the layer: Click the icon  on the top right corner of the layer to full cell, and click the icon  to full screen.

Copy and paste bank: Select the bank that to copy, and click the copy bank shortcut "  " on the right side of the interface, then select the bank that to paste, and click the paste bank shortcut "  ". The selected layer will pasted to the bank.

Adaptive: If scale the output area to a large area, click the adaptive shortcut "  " on the right side of the interface, the output area will be return to the best position.

Layer Property Setting: Select the layer to be adjusted, click the More shortcut "  " in the bottom of the interface, and enter the interface as follows:



Scale: Set the X, Y, width and height.

Crop: Crop the left, top, width and height.

Display Mode: Select “Live” or “Freeze”.

Mirror: Enable or disable the mirror function, default “OFF”.

Bypass Mode: Enable or disable the bypass mode. When select “ON”, the output format will be the same with the input format.

Alpha: Set the alpha, the adjustment range is 0~128.

Sharpness: Set the sharpness, the adjustment range is 0~100.

Brightness: Set the brightness, the adjustment range is 0~100.

Contrast: Set the contrast, the adjustment range is 0~100.

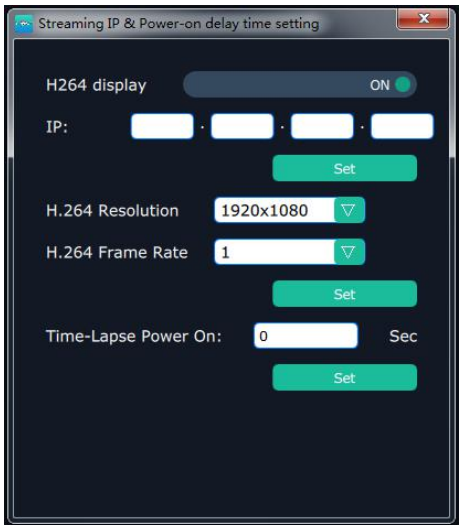
Saturation: Set the saturation, the adjustment range is 0~100.

Color Term: Set the color temp (red, green and blue), the adjustment range is 0~100.

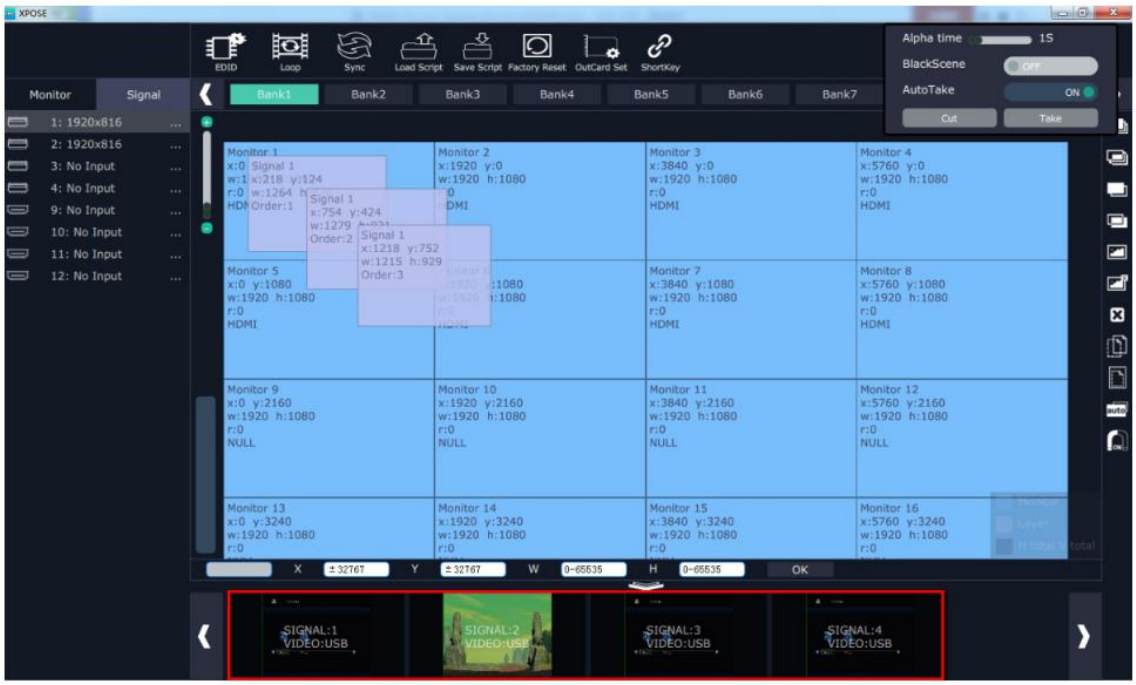
Reset: Select “Reset”, the input property will be recover to factory setting.

H264 Video Preview

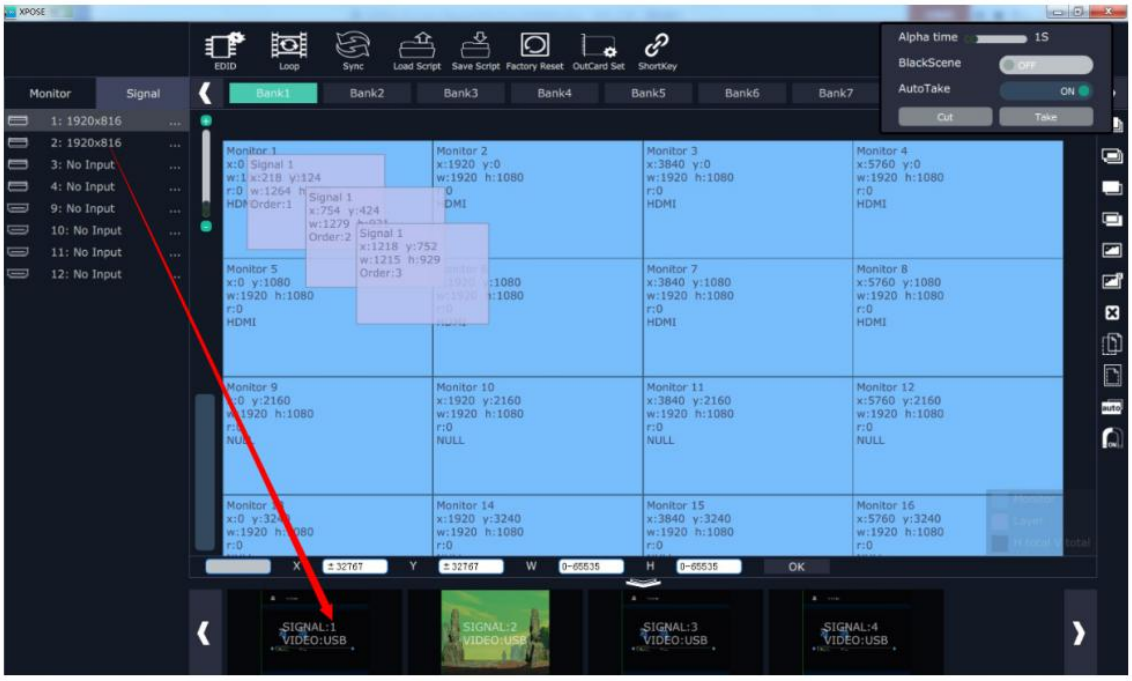
Select “System Settings” and click “Streaming IP & Power On Setting”, Set “ON” for “H264 Display”, as shown in the figure below:



Then enter to the videowall mode, the bottom of the interface will display the H264 video, as shown in the figure below, which is for preview.



Drag the signal to the H264 video area, the preview signal will be switched, as shown in the figure below:



Click the arrow on both sides of the H264 video, the groups of the preview signals will be switched, as shown in the figure below:

Take

The take interface is shown as the figure below:

Set the alpha time, and the adjustment range is 0~10S.

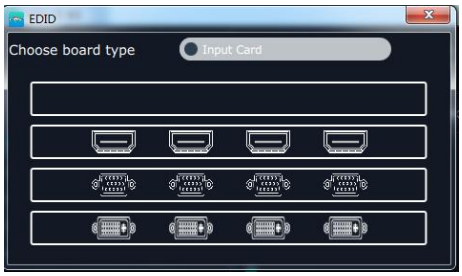
Slide the black scene switch to enable or disable the black function. Auto take on is the default state. If select black scene and auto take on, the preview image will black or seamless switch to LED display instantaneously.

Click “Cut” or “Take”, the preview will be cut or seamless switch to LED display.

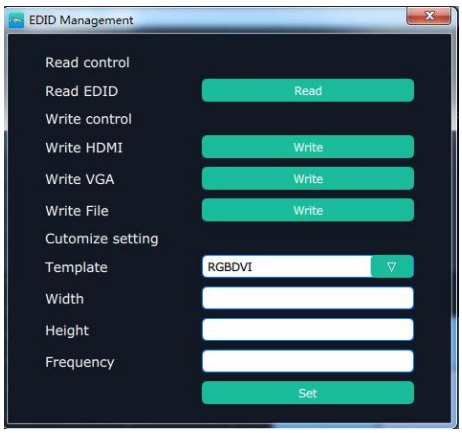
EDID

Click the EDID shortcut “ 

”, and pop-up window as follows:



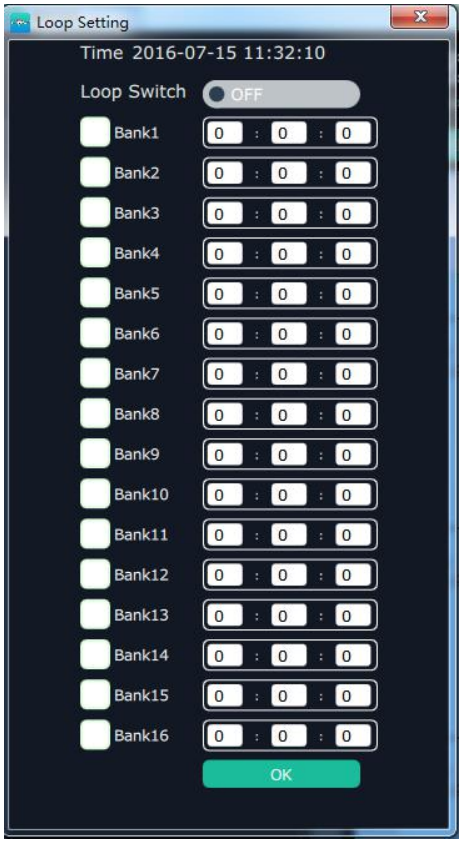
The special display project or LED display application would like to require special resolution settings to meet the requirement. Select the input or output board to read and write the EDID. As shown in the figure below:



Loop

Click the loop shortcut “ 

”, and pop-up window as follows:



Slide the loop switch to enable or disable the loop function for the bank. If select “ON”, the bank play time can be set.

Sync

Click the sync shortcut “ 

” to synchronize the current data.

Load Script

Click the load script shortcut “ 

”, user can load the data from the computer.

Save Script

Click the save script shortcut “ 

”, user can save the data to the computer.

Factory Reset

Click the factory reset shortcut “ 

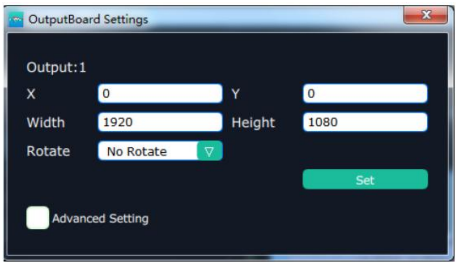
” to reset to factory settings.

Out Card Set

Click the out card set shortcut “ 

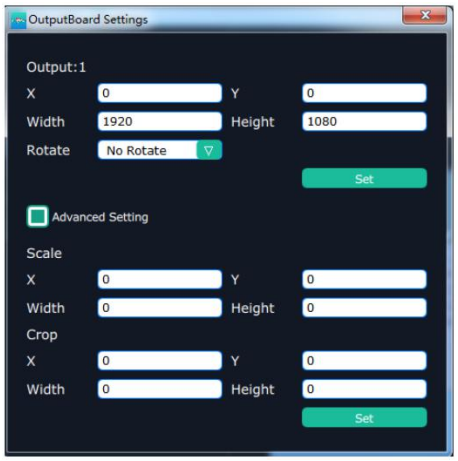
”, and pop-up window as follows:

Click any output, and pop-up window as follows:



X, Y, width, height, rotate can be set.

If click “Advanced Setting”, pop-up window as follow:

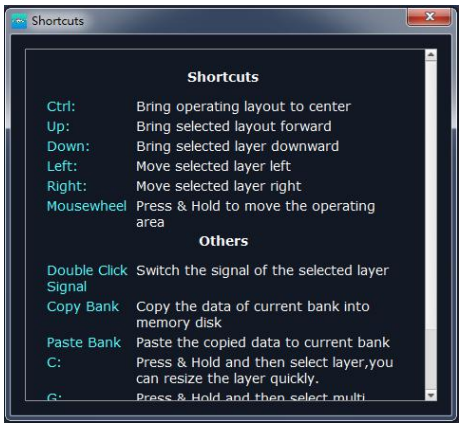


In advanced setting, scale and crop can be set. **Not recommended to use “Advanced Setting”.**

Short Key

Click the shortcut “ 

”, and pop-up window as follows:

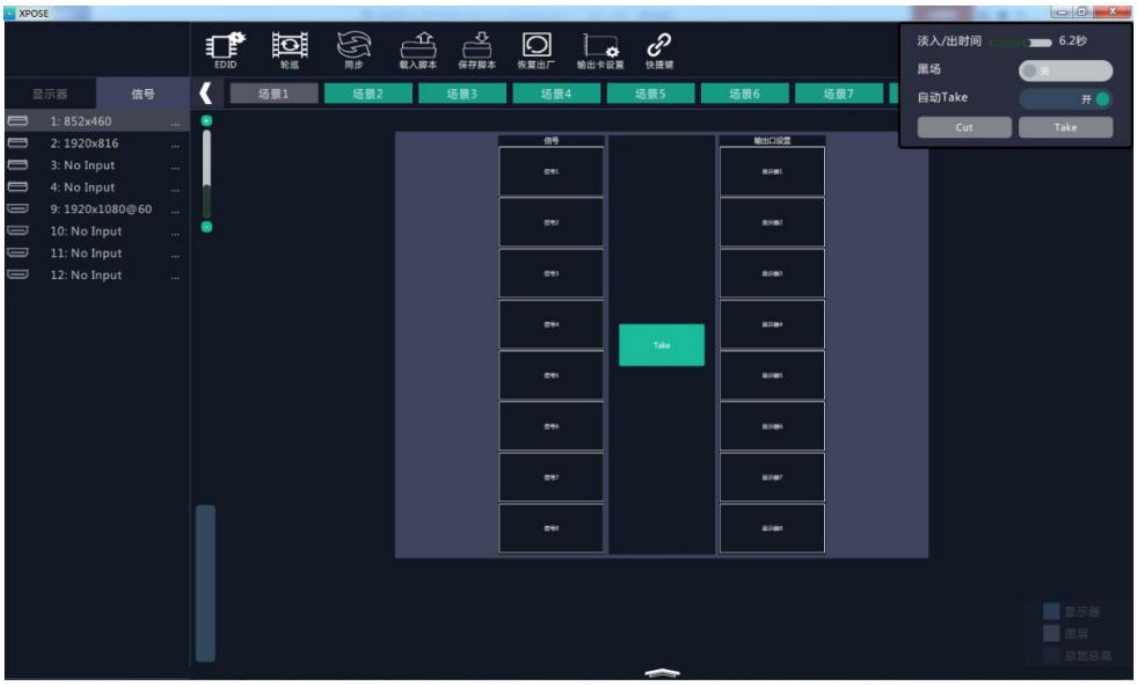


Use shortcut key to operate fast and easily.

Matrix Mode

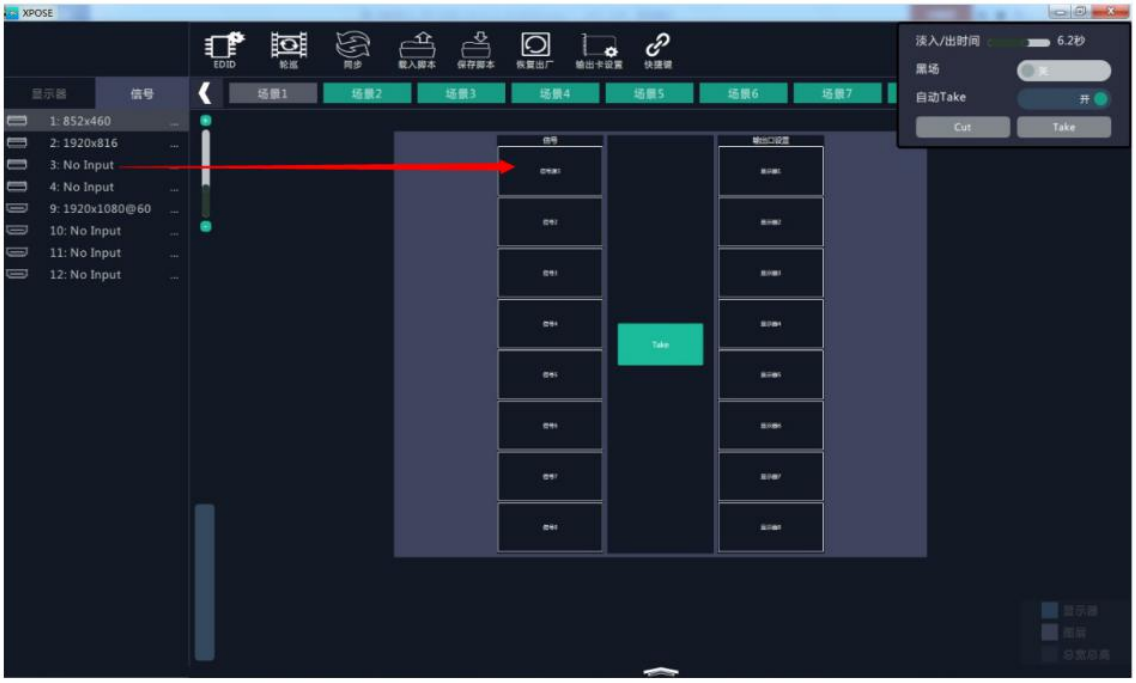
Click the “Matrix Mode”, and pop-up window as follows:

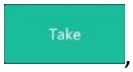
Click “OK”, and the system will synchronize the data, about 5 seconds later, it will enter the interface as follows:



In matrix mode, any operations are unavailable except signal selection, bank selection, alpha time and black scene setting.

Default source 1 to monitor 1, source 2 to monitor 2, and so on. Select the signal, and drag it to the source that will set. For example, set signal 3 for source 1, as shown in the figure below:

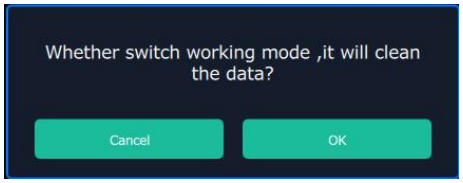


Source 1 will be switched to signal 3, click source 1, then click “TAKE” icon 

, the signal will be switched to the corresponding monitor. Connect the signal to the corresponding output after setting.

Preview Mode

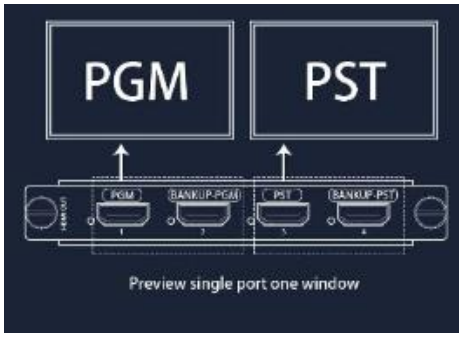
Click the “Preview Mode”, and pop-up window as follows:



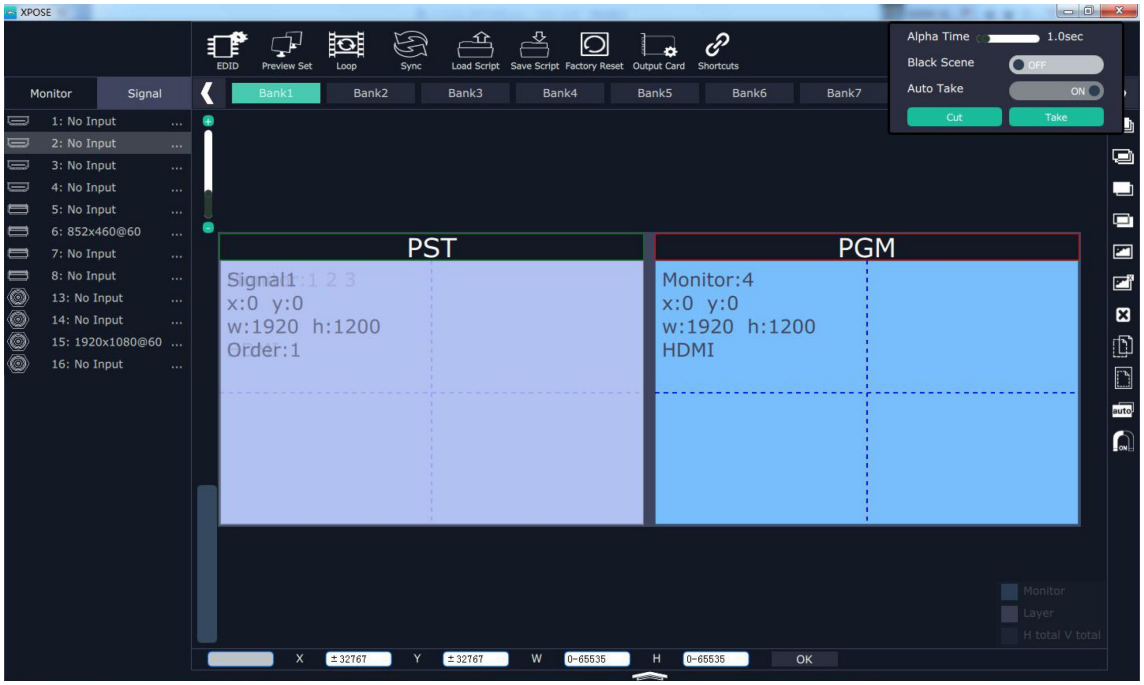
Click “OK”, the system will synchronize the data, and it will finish about 5 seconds later, click “OK”, it will enter the interface as follows:

Select the preview mode, and select multiview or splice multiview, then select the preview image according to actual need. User can select max three outputs in one output card.

The connection diagram area will show the corresponding splice guidance figure, as shown in the figure below:



Click “Ok”, the settings will be displayed in the monitor, as shown in the figure below. Click “Take” or “Cut” in “Take” box to seamless switch or cut the preview signal to the LED display.

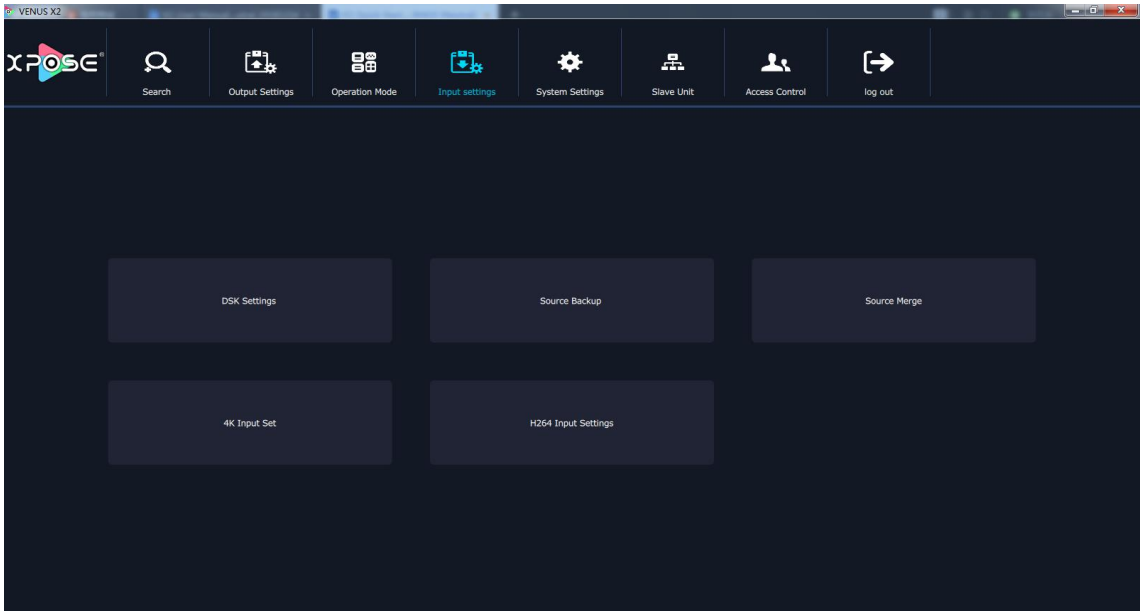


Note

The adjustment for monitor is available when there is no any layer in PST or PGM window.

Input Settings

Click the “Input Settings”, and enter the interface as follows:



DSK settings, source backup, source merge and H264 input settings are included in input settings, specific as follows:

DSK Settings

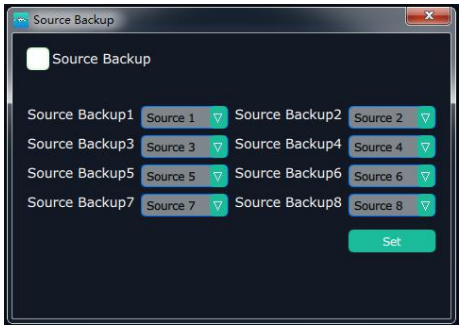
Click the “DSK Settings”, and pop-up window as follows:

Select DSK ON, as shown in figure 

, then set the input ports, including preset selection, custom mode, alpha and color setting. Click “**Set**” to confirm.

Source Backup

Click the “Source Backup”, and pop-up window as follows:



Enable the hot backup function, as shown in figure 

, and set the backup signal for Hot Backup 1 to Hot Backup 8. It will switch to the backup signal if the signal is interrupted.

Source Merge

Click the “Source Merge”, and pop-up window as follows:

The S-HDMI input optional module support signal merger. Click any valid input board, for example, select 

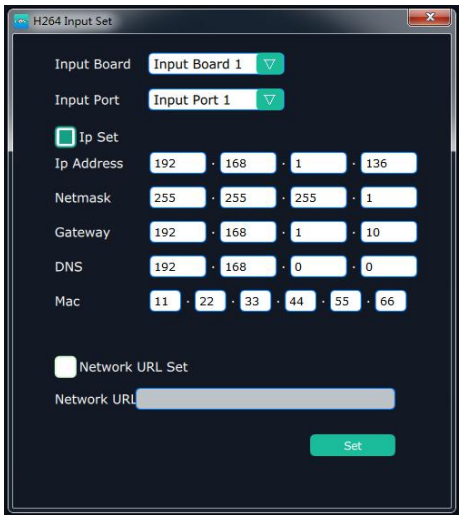
, then select the merger mode, for example, select 
, as shown in the figure below:

Click any layer, then click any source, and the layer source can be switched, as shown in the figure below:

User can also scale or crop the layer.

H264 Input Settings

Click the “H264 Input Settings”, and pop-up window as follows:



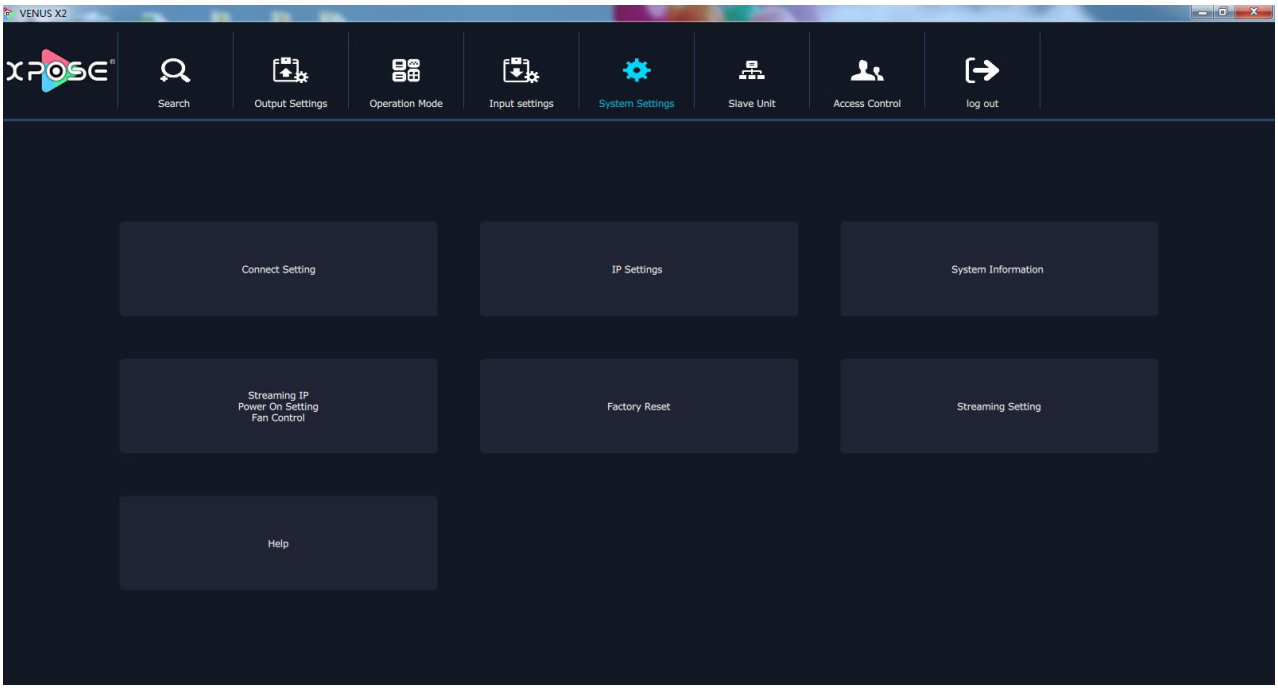
Select the input board and input port.

IP Set: Select “Ip Set”, and Ip Address, Netmask, Gateway, DNS and Mac can be edited.

Network URL Set: Select “Network URL Set”, it will read the URL address automatically, user can also input the network URL.

System Settings

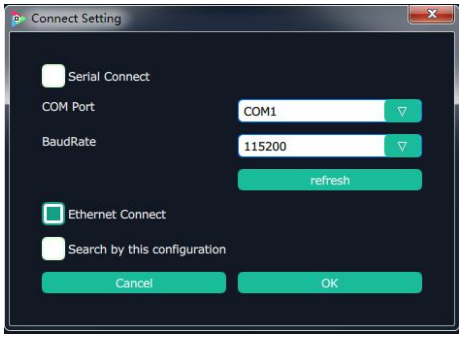
Click the “System Settings”, and enter the interface as follows:



Connect Setting, IP settings, System information,Streaming IP Power on Settin Fan Control, Factory Reset and Streaming Setting are included in system settings, specific as follows:

Connect Setting

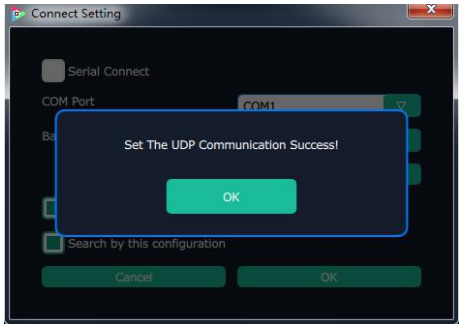
Click the “Connet Setting”, and pop-up window as follows:



Select the serial connect and Ethernet connect, the software will search all the devices if not select “Search by this configuration”.

If select “Serial Connect” and “Search by this configuration”, the software will search all the devices with corresponding serial port.

If select “Ethernet Connect” and “Search by this configuration”, the software will search all the devices with corresponding IP.



System Information

Click the “System Information”, and pop-up window as follows:

Display the device version information. Including device model, serial number, IP address, firmware version, etc.

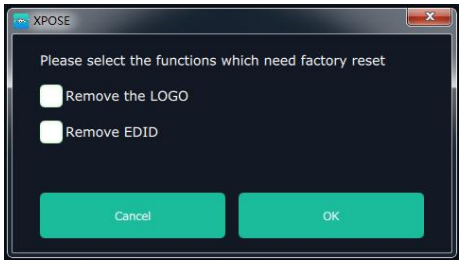
IP Settings

Click the “IP Settings”, and pop-up window as follows:

Default “Auto get ip address”. Users can also set IP address, mask and gateway manually. This is usually used if one computer control some devices or remote control. It takes effect after reboot the software if change IP through network.

Factory Reset

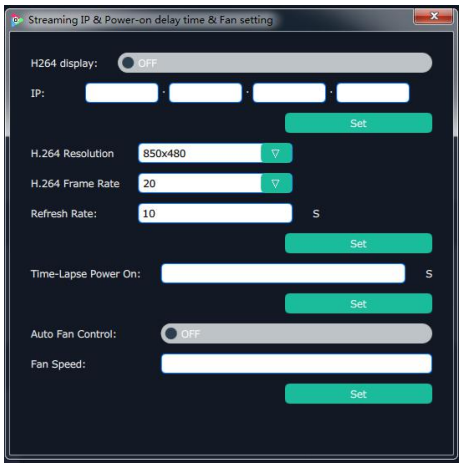
Click the “Factory Reset”, and pop-up window as follows:



Select “Remove the LOGO”, and click “**OK**”, the LOGO will be removed.
Select “Remove EDID”, and click “**OK**”, the EDID will be removed.

Streaming IP & Power On Setting & Fan Setting

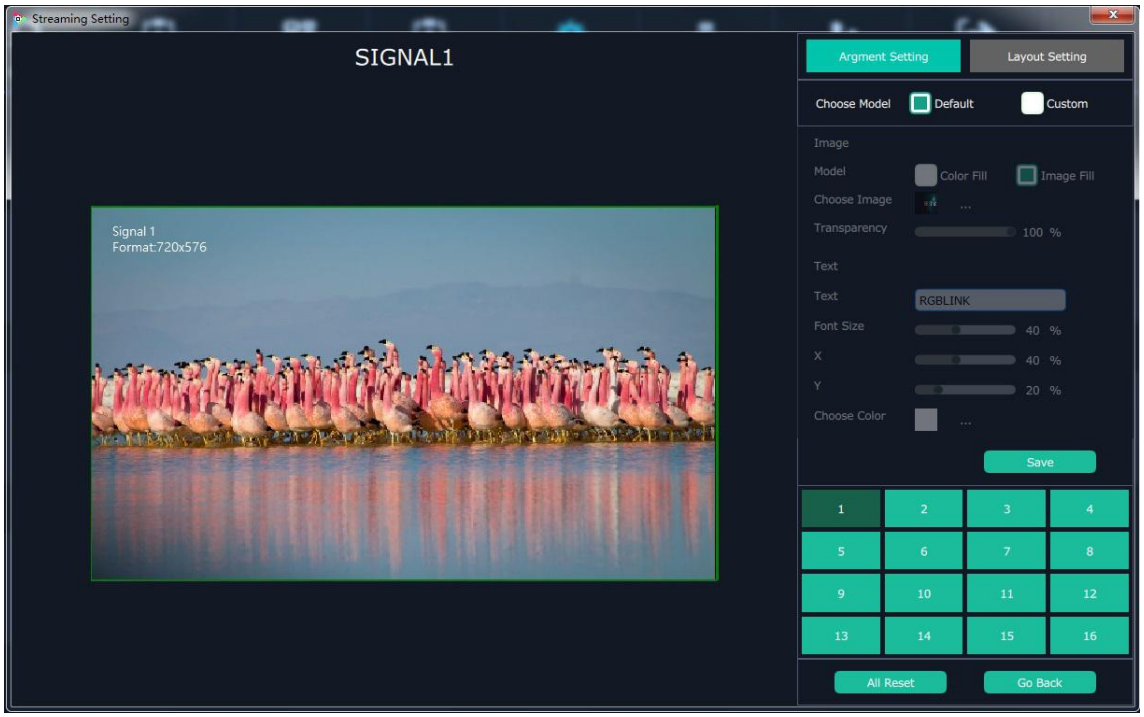
Click the “Streaming IP Power On Setting Fan Control”, and pop-up window as follows:



H264 Display: Enable or disable the H264 display function. If select “ON”, the interface will display the H.264 video when enter to the operation mode, which is for preview.
IP: Set the IP address of H264 video, click “**Set**” after setting.
H.264 Resolution: Set the resolution of H.264.
H.264 Frame Rate: Set the frame rate of H.264.
Time-Lapse Power On: The adjustment range is 0~255, click “**Set**” after setting.
Auto Fan Control/Fan Speed: OFF/ON to enable or disable auto fan control. If disable it, **Fan Speed** can be adjusted manually. The rang of Fan Speed is 0-100.

Streaming Setting

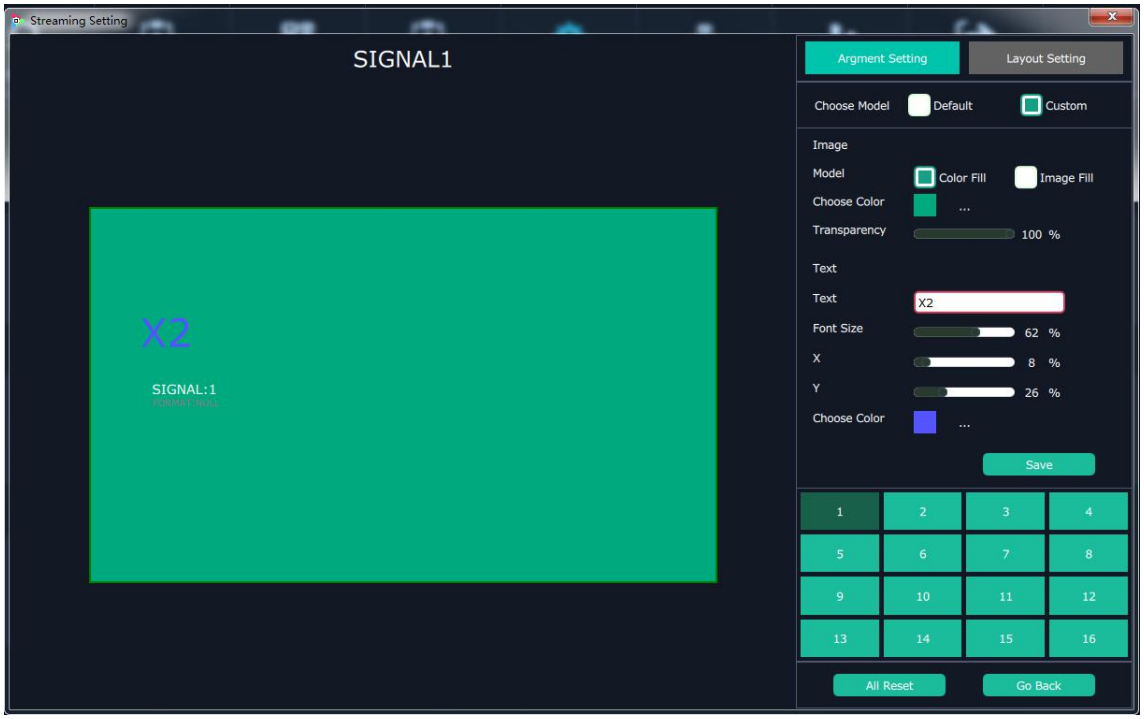
Click the “Streaming Setting ”, and enter the default mode of Streaming Setting and pop-up window as follows:



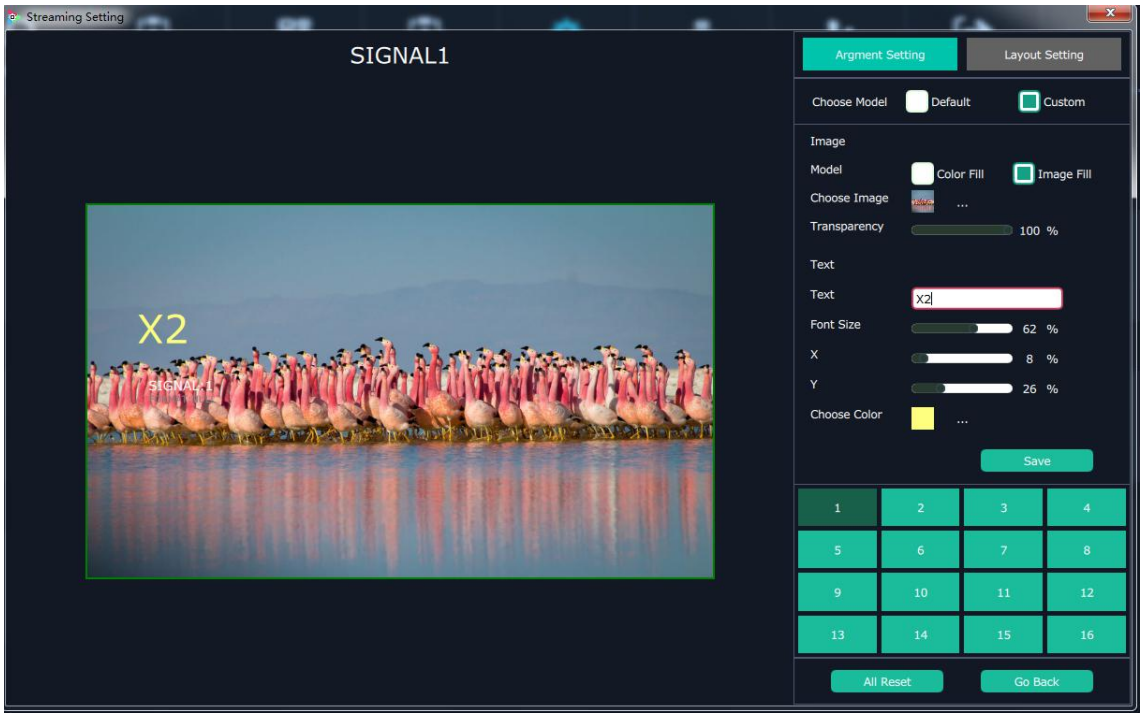
Users can choose any one from the 16 signal source from right bottom section.

Users can custom the streaming display by selecting Custom and choose Color Fill or Image Fill.

Choose Color Fill as following example:



Choose Image Fill, users can load image from computer, see below:



Transparency: range from 0-100 which can ajust the transparency of the the filled image or color on the streaming display

Text

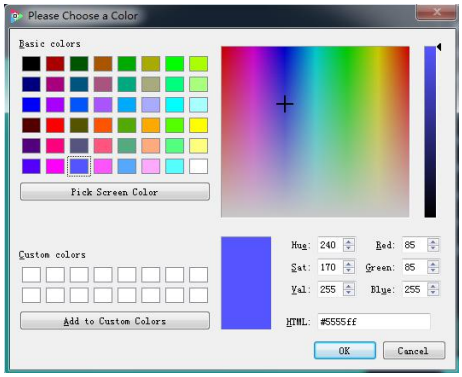
Text: Users can type in the text to show on the streaming display.

Font Size: Adjust the font size of the text, range from 0-100

X: Adjust the text horizontal position

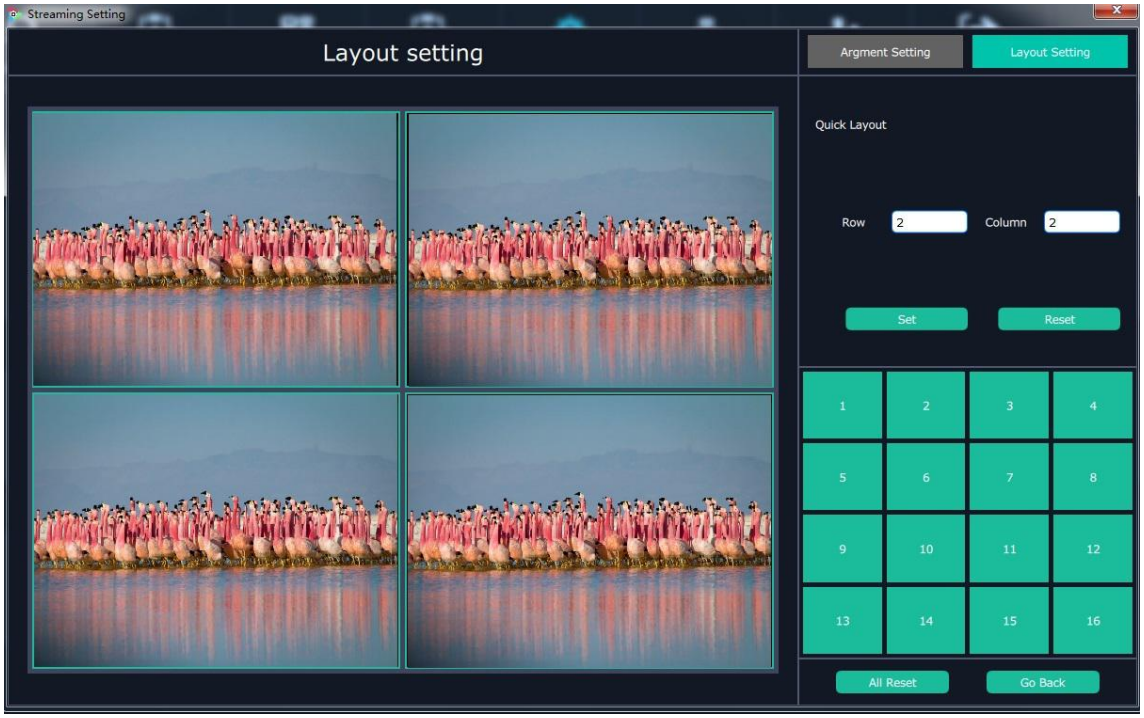
Y:Adjust the text vertical position

Choose Color: Choose color for the Text.



Choose **Layout Setting**

Users can set layout of the streaming display of the 16 inputs. Quick Layout is offered, for example 2 Row 2 Column, as picture below:



Total number of Row can not exceed 4, neither does the Column.

Slave Unit

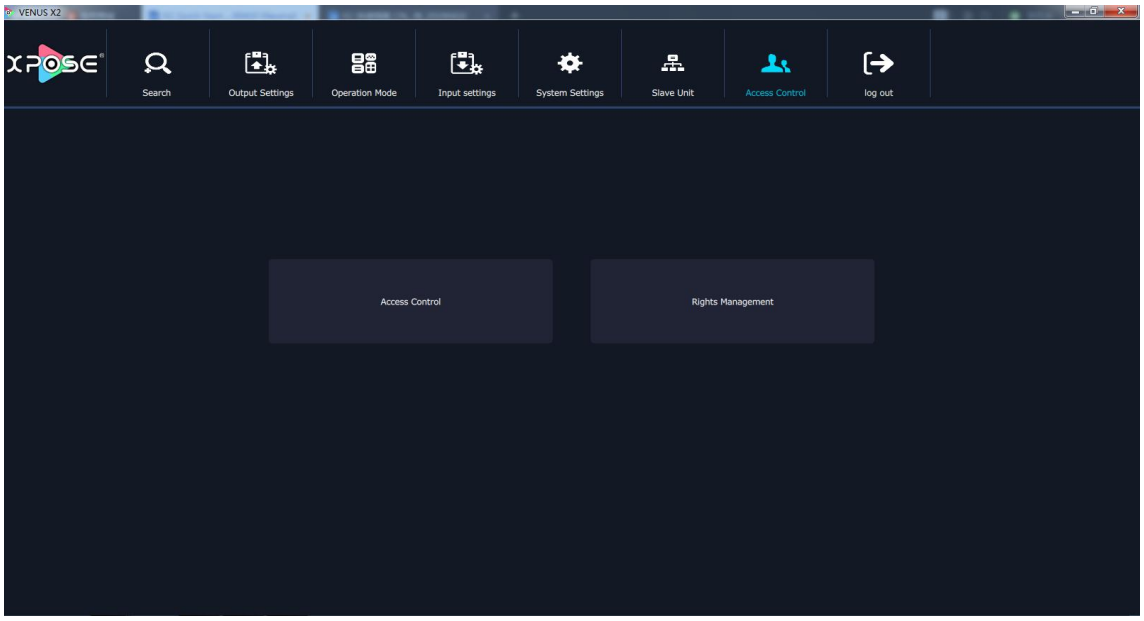
Click the “Slave Unit”, pop-up window as follows:

If X2 need to cascade with other devices, type in the number of devices and **Set Numbers**.
IP of other devices will be shown. Users can close/open one by one or all.

When any connecting port is open the dot behind Index number will turn green, otherwise it keeps red.

Access Control

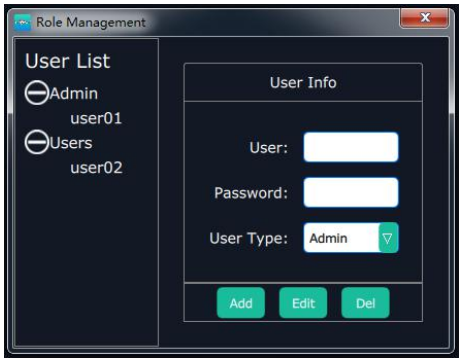
Click the “Access Control”, and enter the interface as follows:



Role management and rights management are included in access control, specific as follows:

Role Management

Click the “Role Management”, and pop-up window as follows:



Add: Input the user name and password, and select the user type as “Admin’ or “Users”, click “**Add**” after setting.

Edit: Select the admin or users in user’s list, then edit the password or user type, click “**Edit**” after setting.

Del: Select the admin or users in user’s list, then click “**Del**”, the selected user will be deleted.

Rights Management

Click the “Rights Management”, and pop-up window as follows:

Select the admin or users in user's list, then click the rights in "Managements Detail". Click "**OK**" after setting. User can operate the rights that selected.

User Info: Display all the Admin or Users list, double click it will unfold or fold the list.

Management Details:

The admin can manage all the admin users and users user.

Admin users can manage all the users user, except the admin users.

Users can not mange all the users, including admin user and users user.