

SolarWall Net (SWNet)

IoT Management System User Guide

This user guide provides instructions for setting up SEADA SolarWall Net (SWNet) IoT Management System using the SWNet UMP Platform, SWNet Designer Software and SWNet Client.



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1. SolarWall Net (SWNet) IoT Management System Introduction

1.1. SWNet Overview

The SolarWall Net (SWNet) IoT Management System is an innovative management platform for configuring and operating multiple video walls, KVM matrix, RTSP IP streaming, encoders/decoders, and controlling 3rd party devices. SWNet simplifies the deployment of complex AV-over-IP projects, without the need for any pricy server to run it on.

1.2. Key Features

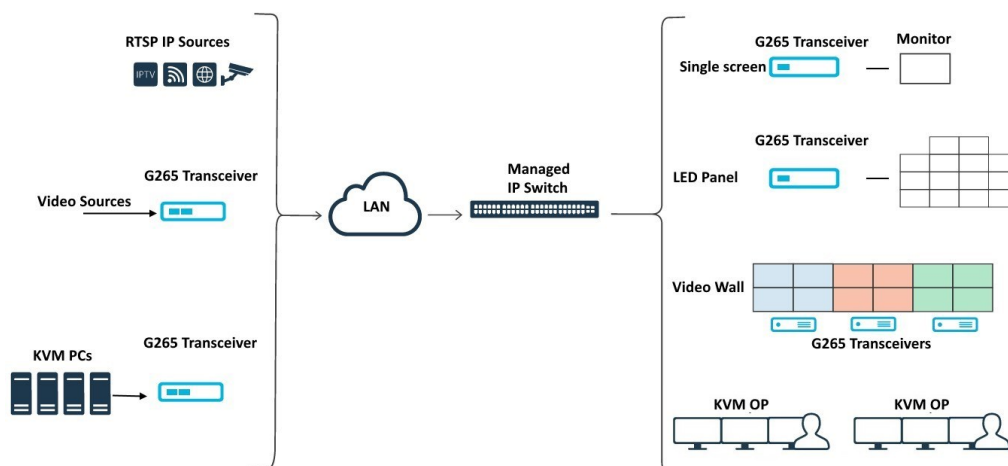
- No server needed
- A universal solution with simple installation and administration
- Supports unlimited number of endpoints
- Compatible with standard RTSP streaming
- Supports controlling 3rd party devices
- Supports multi video walls
- Supports multi-level users
- Supports move & switch between monitors on KVM
- Supports sources preview on KVM and video wall
- Supports drag & drop on KVM and video wall
- Supports push & pull between KVM stations
- Supports push & pull between KVM and video wall
- Supports marking on sources to highlight important contents
- Supports audio volume control with mouse wheel
- Supports KVM up to 2x4 per station
- Supports OSD
- Supports all SEADA Genesis 265 transceivers
- Supports scrolling text on video wall
- Supports customised pre-set layouts

1.3. Specifications

Endpoint Device Cooling	Fanless Passive Cooling
Power Supply	PoE or 12V DC
3rd Party IP Streaming	Real Time Streaming Protocol
Decode Support	H.264/265
API for 3rd Party Devices	Yes
3rd Party Device Protocol	UDP
KVM Station	Up to 2x4
Minimum Network Switch Requirement	
Ethernet Port Speed	1Gb/s
Uplink Port Speed	10Gb/s
Management	Fully Managed, Layer 2 or 3
IGMP Snooping	Enabled, V3 implemented
IGMP Snooping Querier	Enabled
Prompt-Leave	Enabled
CAT Cable	Category 6 or above

1.4. Endpoint Models

Models	Type	AV In	AV Out	USB Port	Audio In	Audio Out	Control
G265HDRT	Transceiver	1 x HDMI	1 x HDMI	2 x USB A	1 x Phoenix	1 x Phoenix	2x Phoenix
G2654KHRTF	Transceiver	1 x HDMI	1 x HDMI	2 x USB A	1 x Phoenix	1 x Phoenix	4x Phoenix



System Diagram

2. Connection Setup

2.1. Set up endpoint devices for the SWNet system

Before starting up, user first needs to set up the SWNet endpoint devices for the SWNet system. The steps will be as follow:

1. Use CAT6 (or higher) to connect each SWNet endpoint device into the same network with an IP switcher that supports IGMP and multicast with PoE (optional). (SEADA SD29 series IP Switcher is recommended)
2. Check the switches on the back of each device and ensure they are on the correct side for the receivers (RX) and transmitters (TX).
3. Connect the receivers to output screens, such as the videowall and monitors with HDMI cables.
4. Connect the input sources, such as media players and PCs, to the transmitters with HDMI cables.
5. If the user is going to set up the KVM matrix, connect a USB cable from the PC to the same transmitter as the HDMI cable is connected to. Ensure that the same USB cable and HDMI cable are connected to one transmitter. Also, connect a set of keyboard and mouse to the receiver.
6. Connect the system control devices, such as light switches to the endpoint devices, either transmitters or receivers, using ports on the back panel.
7. Connect additional devices that support RTSP streaming to the IP switcher under the SWNet network.

Note that only the USB port on the right of the two USB ports for G265HDRT/G2654KRTF can be used for the KVM matrix on Tx when connecting to the PC, while both USBs can be used for the connection of the keyboard and mouse on Rx.

2.2. Ethernet (LAN) connection with the control PC

Connect the control PC into the same network as the SWNet endpoint devices.

The default static IP address of each endpoint device for SWNet is stated on the device between 192.168.1.2 and 192.168.1.254. The user needs to change the IP address of the control PC to a static IP address and the same network segment as the devices at TCP/IPv4 in 'Ethernet Properties'.

- **IP address:** any address between 192.168.1.2 and 192.168.1.254 except the address which has been taken by the endpoint devices.
- **Subnet Mask:** 255.255.255.0
- **Default Gateway:** 192.168.1.1

We would recommend using a managed IP switch meets the following requirements for the SWNet system to have reliable performance.

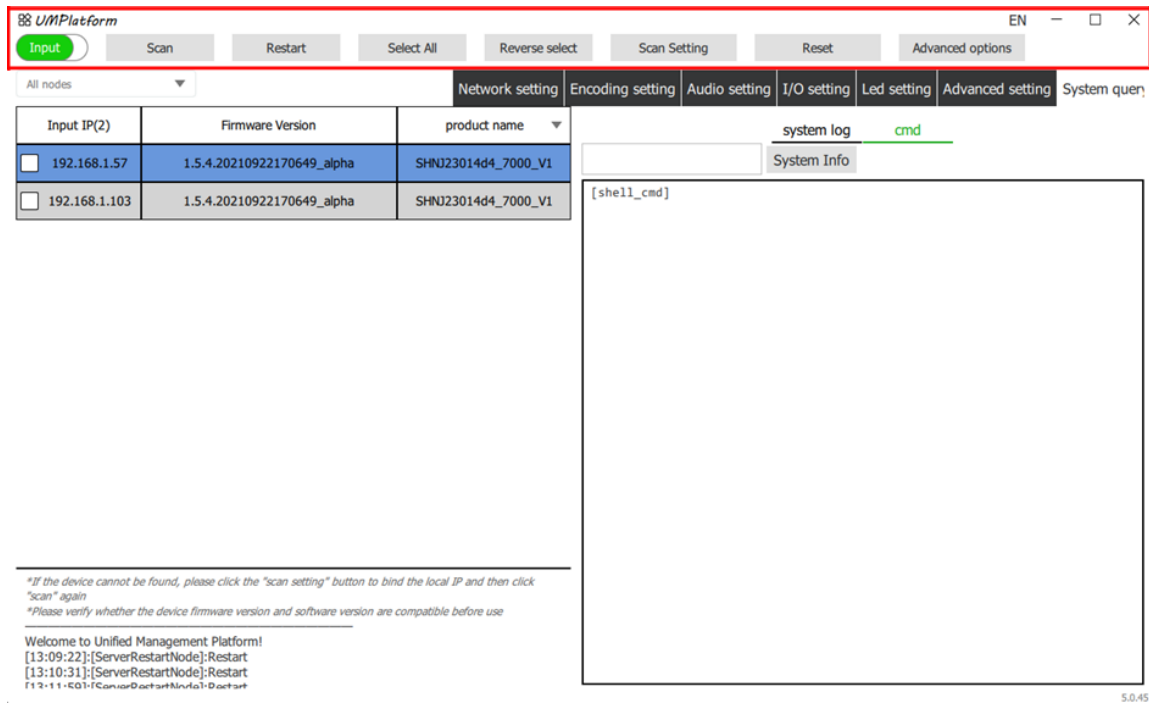
1. **Support Multicast**
2. **Support IGMP (Internet Group Management Group)**
3. **Support Dynamic VLAN Assignment**
4. **Support Jumbo Frame**

3. SWNet UMP Platform User Guide

Run 'SWNet UMPPlatform', user can change parameters, such as the network setting and output setting, for the Tx and Rx in the system if necessary.

3.1. Main Tabs:

This tab provides basic functions to operate the endpoint devices in the SWNet system.



Input/Output: Switch between the list for the transmitters and receivers.

Scan: Scan and display the endpoint devices under the current Input/Output list in the SWNet system.

Restart: Restart all the selected devices.

Select All: Select all the devices in the current Input/Output list.

Reverse Select: Reverse-select the devices in the current Input/Output list.

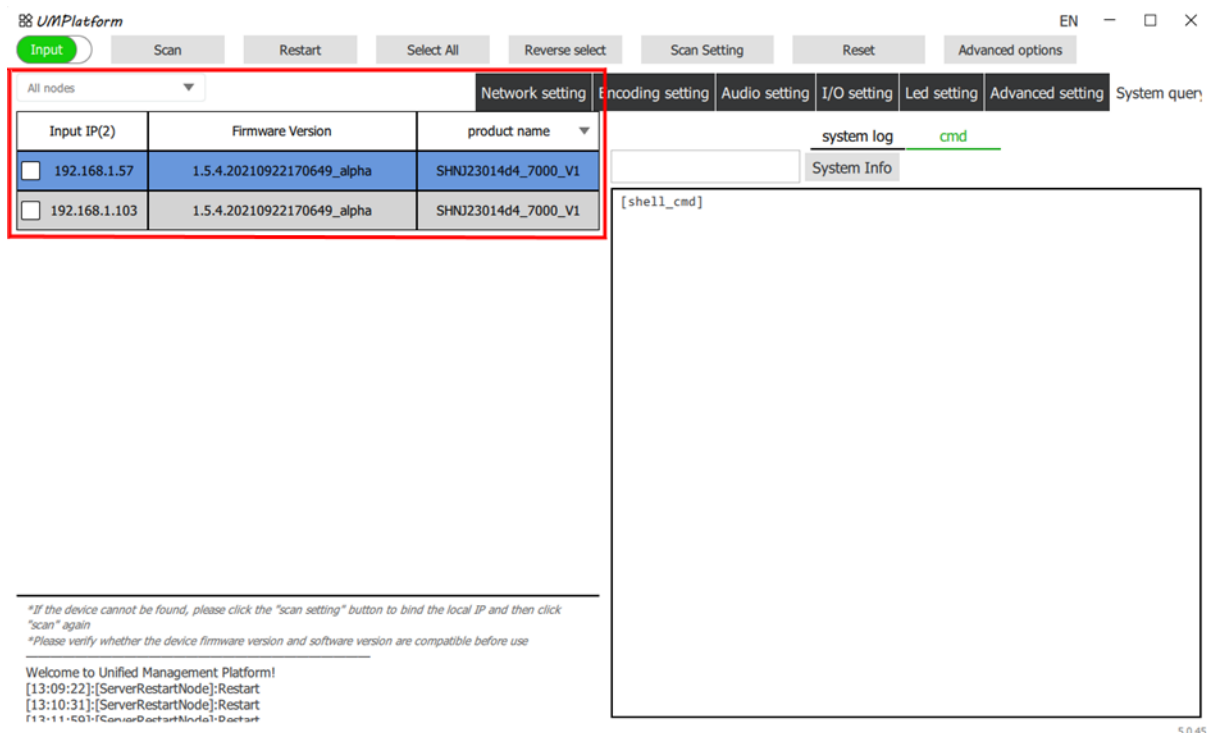
Scan Setting: Bind the local IP address of the control PC to scan the endpoint devices. If the device is not displayed in the list, click the 'scan setting' button to bind the local IP and then click 'Scan' again.

Reset: Reset the selected device. The selected device must be restarted after being reset.

Advanced options: Gain access to additional functions for internal engineering use.

3.2. Information-Tabs:

This tab contains information about the endpoint devices in the SWNet system.



UMPPlatform EN - □ ×

Input Scan Restart Select All Reverse select Scan Setting Reset Advanced options

All nodes Network setting Encoding setting Audio setting I/O setting Led setting Advanced setting System quer

Input IP(2)	Firmware Version	product name
<input type="checkbox"/> 192.168.1.57	1.5.4.20210922170649_alpha	SHN023014d4_7000_V1
<input type="checkbox"/> 192.168.1.103	1.5.4.20210922170649_alpha	SHN023014d4_7000_V1

system log cmd

System Info

[shell_cmd]

*If the device cannot be found, please click the "scan setting" button to bind the local IP and then click "scan" again
*Please verify whether the device firmware version and software version are compatible before use

Welcome to Unified Management Platform!
[13:09:22]:[ServerRestartNode]:Restart
[13:10:31]:[ServerRestartNode]:Restart
[12:11:50]:[CameraRestartNode]:Restart

5.0.45

Input IP: The IP address of the device.

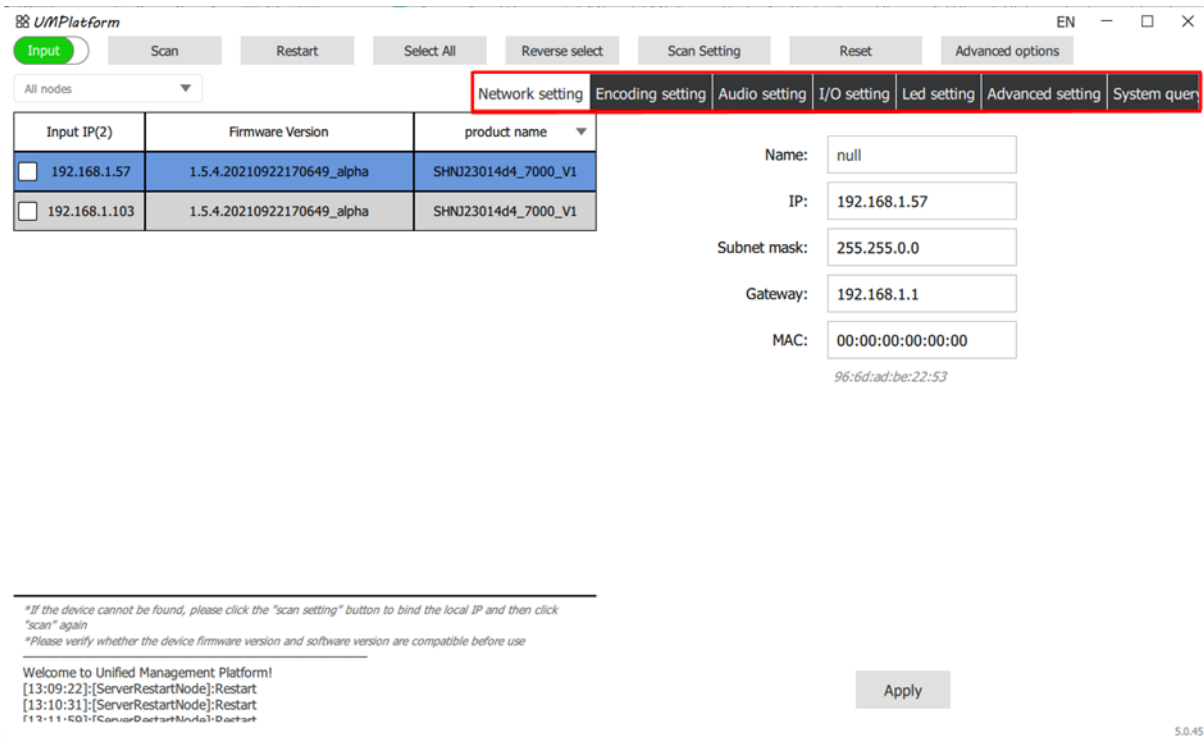
Firmware Version: The firmware version of the device.

Device information (Click to swap between the following information)

- **Name:** The name of the device.
- **External devices:** The external peripherals connected to the endpoint devices, such as mouse and keyboard. When the peripheral is connected, the corresponding icon will turn green.
- **Master-slave:** The master/slave state of the device. It also displays the synchronisation status of the device. If the slave device is synchronised with the master device, there will be a green 'synchronised' displayed and if not, a purple 'unsynchronised' will show. The synchronisation normally takes about 3-5 minutes depending on the number of devices in the SWNet system.
- **Product name:** The name of the product.
- **Resolution:** Only visible for the transmitters, giving the input resolution.

3.3. Sub-Tabs – Transmitter (Encoder - TX):

This tab provides customised configurations for the selected transmitter.



The screenshot shows the UMPPlatform interface. At the top, there are several buttons: 'Input', 'Scan', 'Restart', 'Select All', 'Reverse select', 'Scan Setting', 'Reset', and 'Advanced options'. Below these is a dropdown menu for 'All nodes'. A red box highlights the 'Network setting' tab, which is currently selected. To the right of the tabs are other tabs: 'Encoding setting', 'Audio setting', 'I/O setting', 'Led setting', 'Advanced setting', and 'System quer'. Below the tabs is a table with columns 'Input IP(2)', 'Firmware Version', and 'product name'. The table contains two rows of data. To the right of the table is a configuration panel for network settings with fields for Name, IP, Subnet mask, Gateway, and MAC. Below the configuration panel is an 'Apply' button. At the bottom of the interface, there is a status bar with a welcome message and a version number '5.0.45'.

Input IP(2)	Firmware Version	product name
<input type="checkbox"/> 192.168.1.57	1.5.4.20210922170649_alpha	SHN023014d4_7000_V1
<input type="checkbox"/> 192.168.1.103	1.5.4.20210922170649_alpha	SHN023014d4_7000_V1

Name: null
 IP: 192.168.1.57
 Subnet mask: 255.255.0.0
 Gateway: 192.168.1.1
 MAC: 00:00:00:00:00:00
 96:6d:ad:be:22:53

Welcome to Unified Management Platform!
 [13:09:22]:[ServerRestartNode]:Restart
 [13:10:31]:[ServerRestartNode]:Restart
 [12:11:50]:[CameraDetectorNode]:Detect

5.0.45

(Always click ‘Apply’ to apply modifications to the endpoint device)

Network setting: Configure the network parameters for the device, including name, IP address, subnet mask, gateway, and MAC address.

Encoding setting: Configure settings for the mainstream and substream of the device.

Audio setting: Configure the audio setting for the transmitter. The default setting is ‘3.5mm’, corresponding to the ports on the back of the device. The user can change it to ‘HDMI’ to use the HDMI port.

I/O setting: The user can set up the endpoint device to control third-party devices. This includes system control via RS232, RS485, I/O, IR, and TCP/IP. More details can be found in the practical examples.

Led setting: Configure the endpoint device for the LED screen.

Advanced setting: Configure the functions of the selected Transmitter (TX).

- **Multi-cast:** Configure multi-cast streaming.
- **Loop out:** Configure the signal from the loop-out device, such as brightness and sharpness.
- **Master-slave:** Change the master-slave mode. Make sure there is only one ‘Master’ in both the input and output.

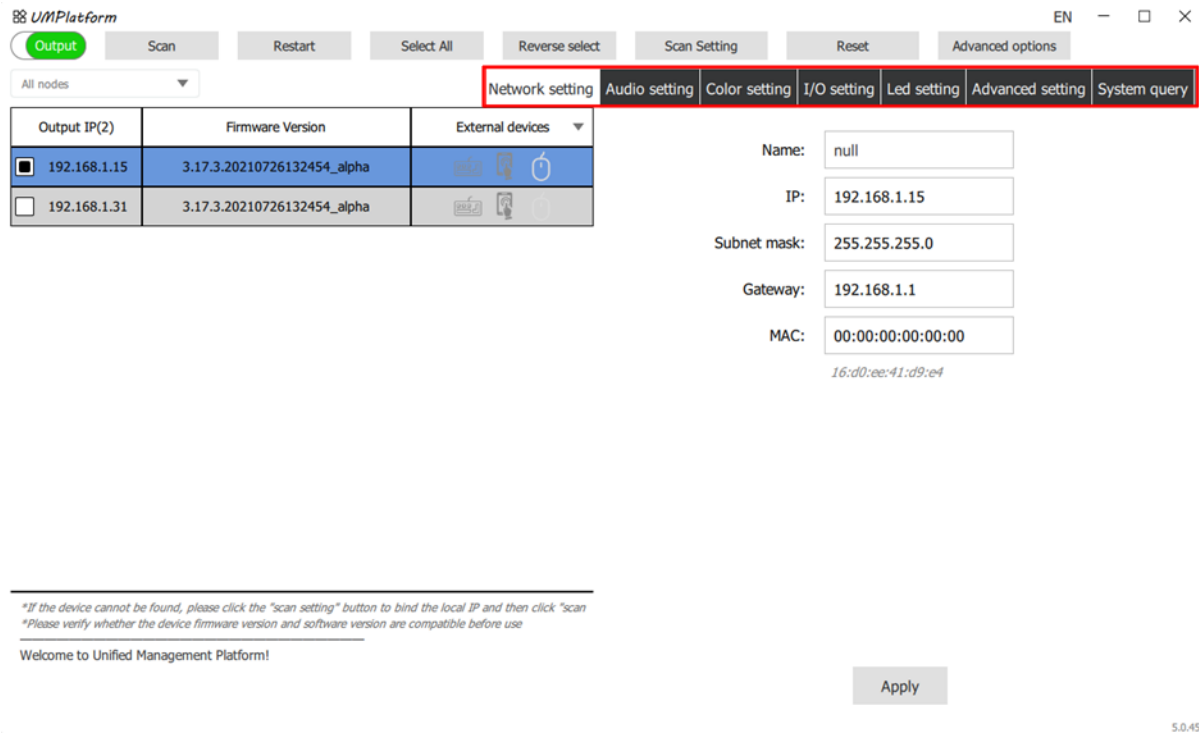
- Crop: Crop the input signal to any size.
- OSD: Add OSD onto the input signal.
- System Info: The information of the device. As '**Switch to output**' function is no longer being used, user needs to toggle the switch on the back of the endpoint devices and restart them to switch between transmitters and receivers.

System query: Display the system log of the selected endpoint device. (For internal engineer use.)



Firmware Update: Update the firmware of the selected device. Note that this function is only visible when the software is full screen.

3.4. Sub-Tabs – Receiver (Decoder - RX):

This tab provides customised configurations for the selected receiver.



The screenshot shows the UMPPlatform interface. At the top, there's a navigation bar with buttons: Output (highlighted), Scan, Restart, Select All, Reverse select, Scan Setting, Reset, and Advanced options. Below the navigation bar is a table of nodes:

Output IP(2)	Firmware Version	External devices
<input checked="" type="checkbox"/> 192.168.1.15	3.17.3.20210726132454_alpha	
<input type="checkbox"/> 192.168.1.31	3.17.3.20210726132454_alpha	

To the right of the table is the 'Network setting' configuration panel, which is highlighted with a red box in the original image. It contains the following fields:

- Name: null
- IP: 192.168.1.15
- Subnet mask: 255.255.255.0
- Gateway: 192.168.1.1
- MAC: 00:00:00:00:00:00

Below the configuration panel, there is a note: "Welcome to Unified Management Platform!" and an 'Apply' button. At the bottom right, the version number '5.0.45' is displayed.

(Always click 'Apply' to apply the modification to the device)

Network setting: Configure the network parameters of the device, including name, IP address, subnet mask, gateway, and MAC address.

Audio setting: Configure the audio setting for the receiver. The default setting is '3.5mm', corresponding to the audio port on the back of the device. The user can change it to 'HDMI' to use the HDMI port.

Colour setting: Configure the output video, including brightness, contrast, hue, and saturation.

I/O setting: The user can set up the endpoint device to control third-party devices. This includes system control via RS232, RS485, I/O, IR, and TCP/IP. More details can be found in the practical examples.

Led setting: Configure the endpoint device for the LED screen.

Advanced setting: Configure the functions of the selected SWNet Receiver (RX).

- **Decoding:** Configure the decoded output signal.
- **Master-slave:** Change the master-slave mode. Make sure there is only one 'Master' in both the input and output.
- **Functions:** For internal engineer use. Only use this function to change the protocol version from 'json' to 'scode' if necessary.

- **Background:** Set up the background for the receiver when there is no content being displayed. User can also use this function to remove the background picture after it has been set up in the SWNet Designer Software.
- **System:** The information of the device. As '**Switch to input**' function is no longer being used, the user needs to toggle the switch on the back of the endpoint devices to switch between transmitters and receivers.

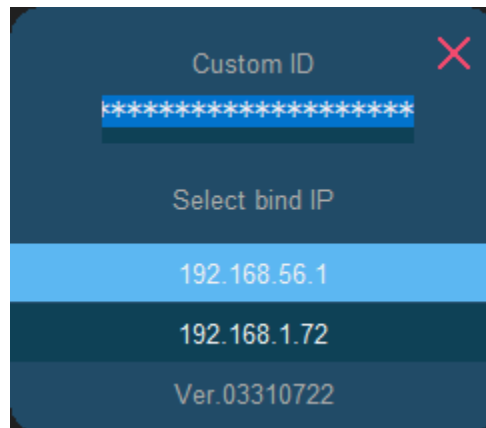
System query: Display the system log of the selected endpoint device. (For internal engineer use.)

Firmware Update: Update the firmware of the selected device. Note that this function is only visible when the software is full screen.

After configuring the endpoint devices using the SWNet UMP Platform, the user can then use the SWNet Designer Software to set up the SWNet IoT management system, such as videowall, KVM matrix and system control.

4. SWNet Designer Software User Guide

4.1. Login Window



Double-click '**SWNetDesigner.exe**', the login dialog will pop up and to login to the SWNet Designer software, the user needs to first enter the custom ID. The custom ID will be provided when purchasing the product. With the custom ID, the user can enter the '**Authorised version**' of the Designer software with access to all functions.

The user can also login to the software with the custom ID '**null**' (low-capital) to enter the '**Free version**'. All accessible functions in the '**Free version**' are the same as '**Authorised version**', except an unremovable scrolling text '**Test**' will be displayed on the top of the videowall.

Before login, the user needs to change the IP address of the control PC to a static IP address and the same network segment as the endpoint devices at TCP/IPv4 in '**Ethernet Properties**'.

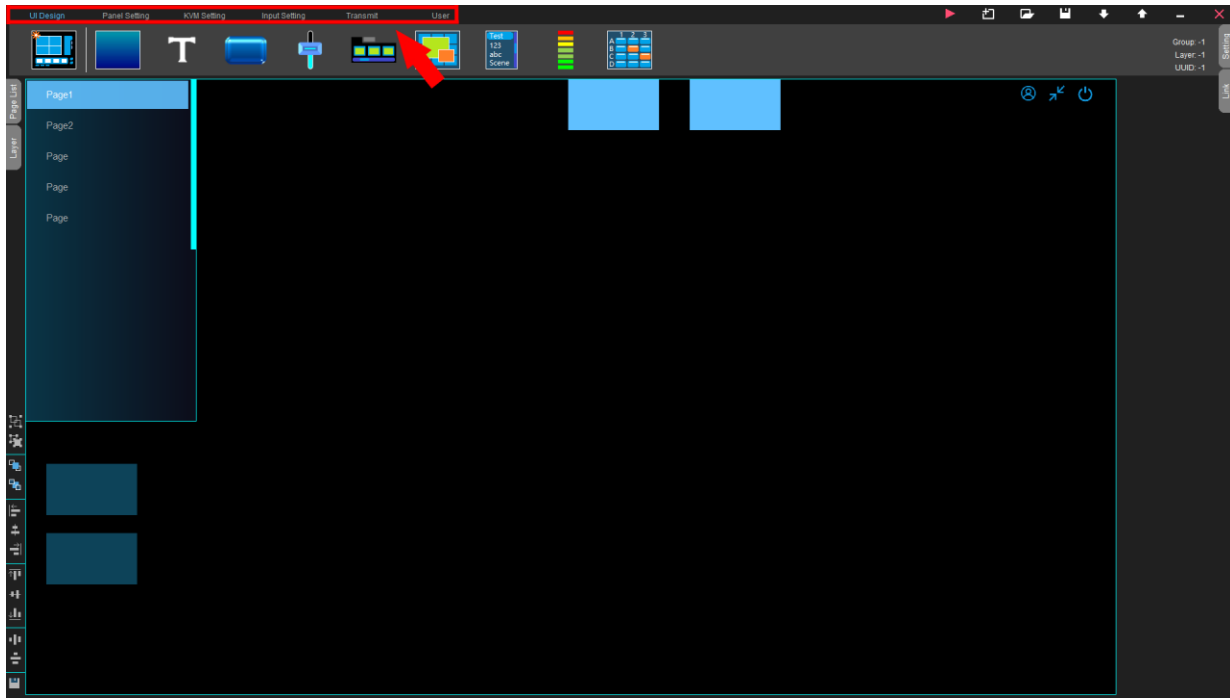
- **IP address:** any address between 192.168.1.2 and 192.168.1.254 except the address which has been taken by the nodes.
- **Subnet Mask:** 255.255.255.0
- **Default Gateway:** 192.168.1.1

After entering the custom ID and selecting the binding IP of the control PC, the user can login to the SWNet Designer software.

Note that the protocol version on all the endpoint devices must be set to 'scode' (can be checked/modified in the SWNet UMP Platform) before using the SWNet Designer Software.

4.2. Designer Menu

This is the main menu of the SWNet Designer Software and it contains all the functions supported by the SWNet system.



UI Design: Contain components to build up the User Interface (UI) for the SWNet System.

Panel Setting: Configure the videowall and its audio settings.

KVM Setting: Assign KVM matrix to control PCs with sets of keyboard and mouse on one monitor or across multiple monitors.

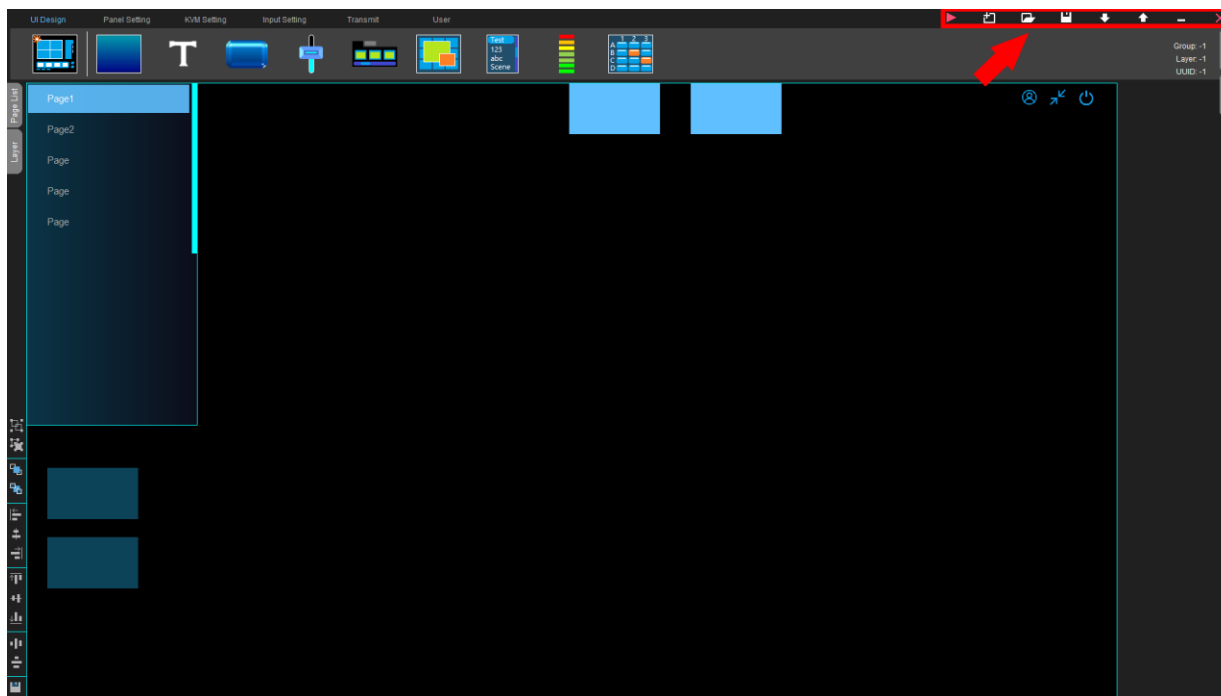
Input Setting: Scan and manage input signals.

Transmit: Bind additional devices in the SWNet system to receivers.

User: User management for the SWNet system.

4.3. Designer Tool Menu

This menu contains basic functions to operate the designer.



Run test: Enter the test mode to check the UI design of the software, such as page switching and button binding.

Note that this mode runs offline and is only used to check the UI design. Therefore functions that require the connection to the SWNet system, such as setting up the videowall and KVM, cannot be tested under this mode.

Clear then New: Clear the current UI design and create a new one.

Open: Open an existing design.

Save as...: Save the current design into a **'txt'** file.

Download: Download the design from the SWNet system. Note that the design will be downloaded from a random endpoint device in the SWNet system.

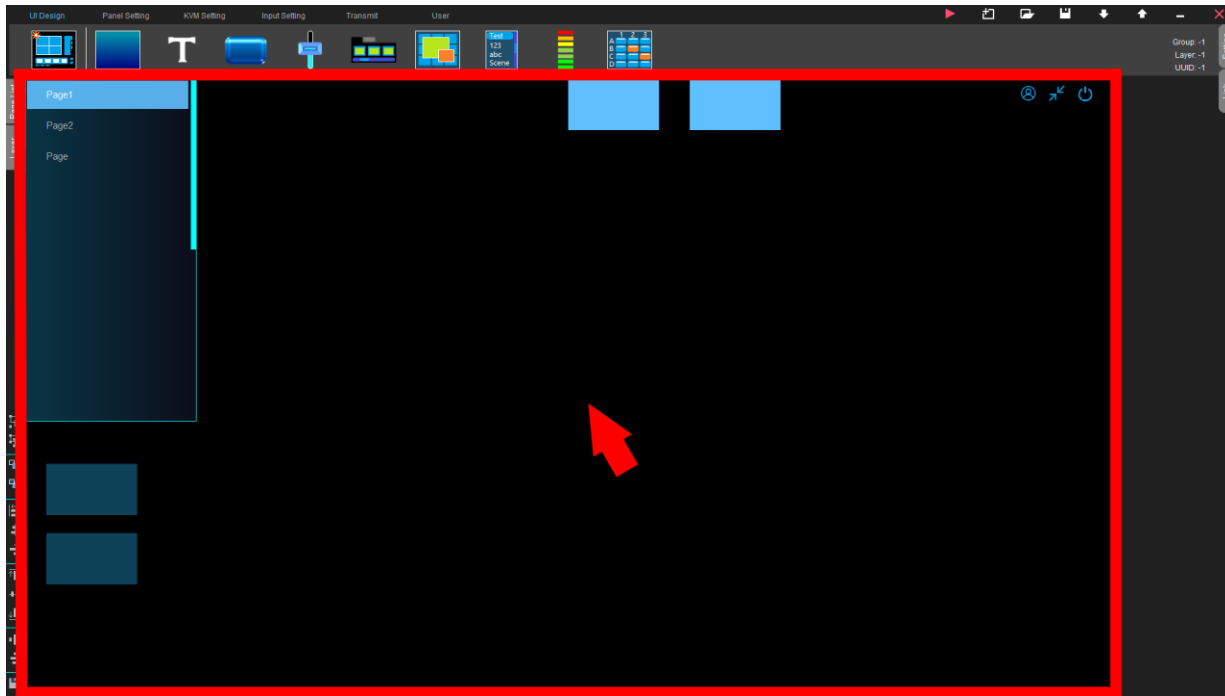
Upload: Upload the current design to the SWNet system. Note that the design will be uploaded into all endpoint devices in the SWNet system.

Hide: Hide the Designer software.

Save then Exit: Save the current design and exit the SWNet Designer Software.

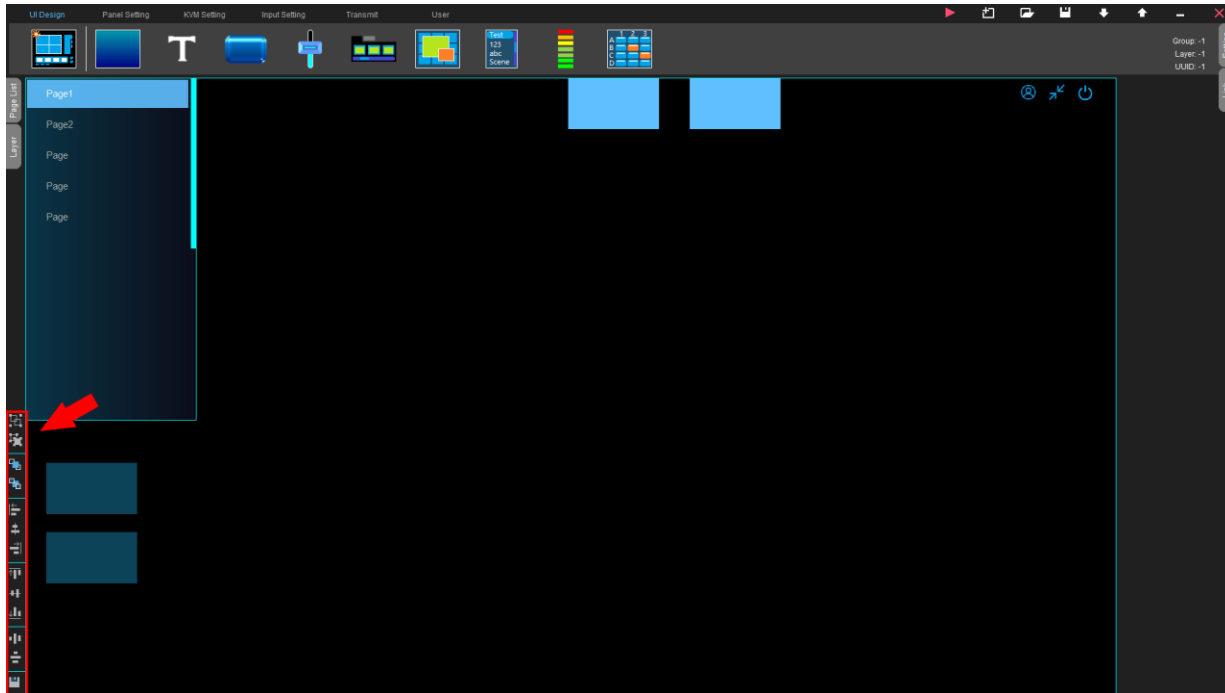
4.4. UI Design Area

This is the area that the UI components for the SWNet Client are created on. The layout of the UI in the SWNet Client will follow the design in the 'UI Design Area'. On the top-right of the area, there are three buttons: 'Login', 'Min' and 'Exit'. They are only accessible in the SWNet Client.



4.5. UI Tool Menu

This menu contains operations that can be made to the UI components in the 'UI Design Area'.



Merge: Merge the selected components into one group.

Cancel Group: Cancel the merge of the selected components.

Set Top: Set the selected component to the top.

Set Bottom: Set the selected component to the bottom.

Left Align: Align the selected components to the left.

Horizontal Center: Align the selected components horizontally centred.

Right Align: Align the selected components to the right.

Top Align: Align the selected components to the top.

Vertical Align: Align the selected components vertically centred.

Bottom Align: Align the selected components to the bottom.

Horizontal Array: Symmetrise the selected components horizontally.

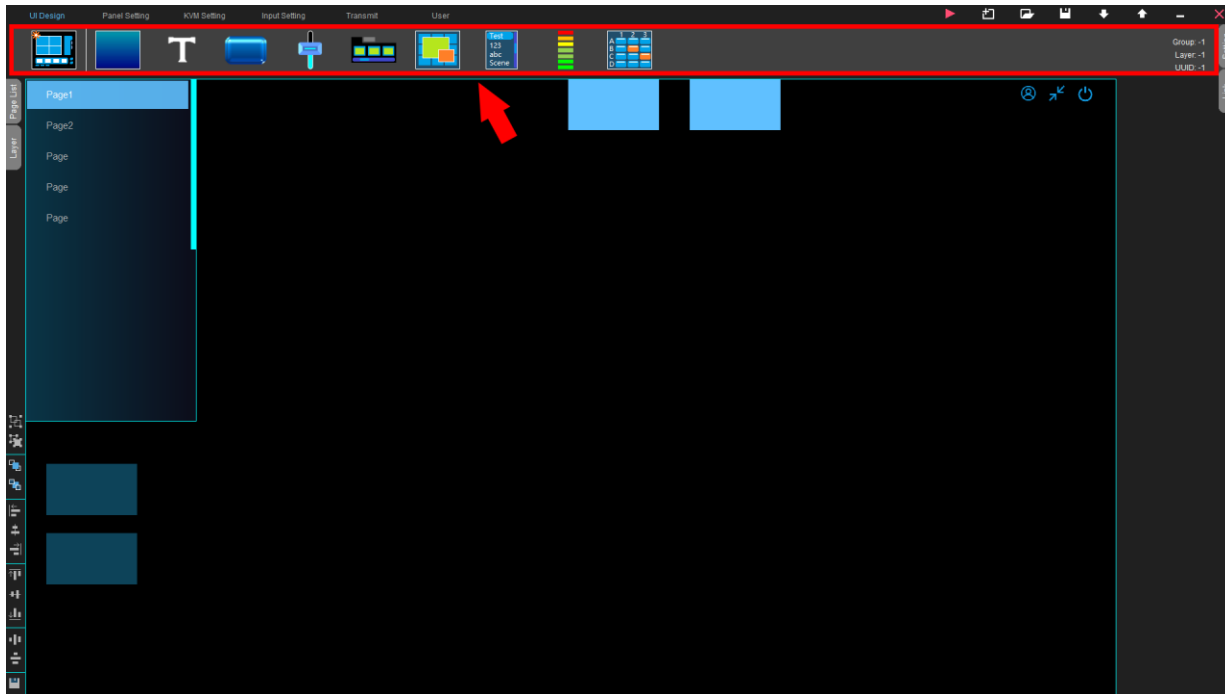
Vertical Array: Symmetrise the selected components vertically.

Export: Export the selected component as a '.itm' file and this file can be opened using 'Open' in the 'Designer Tool Menu'.

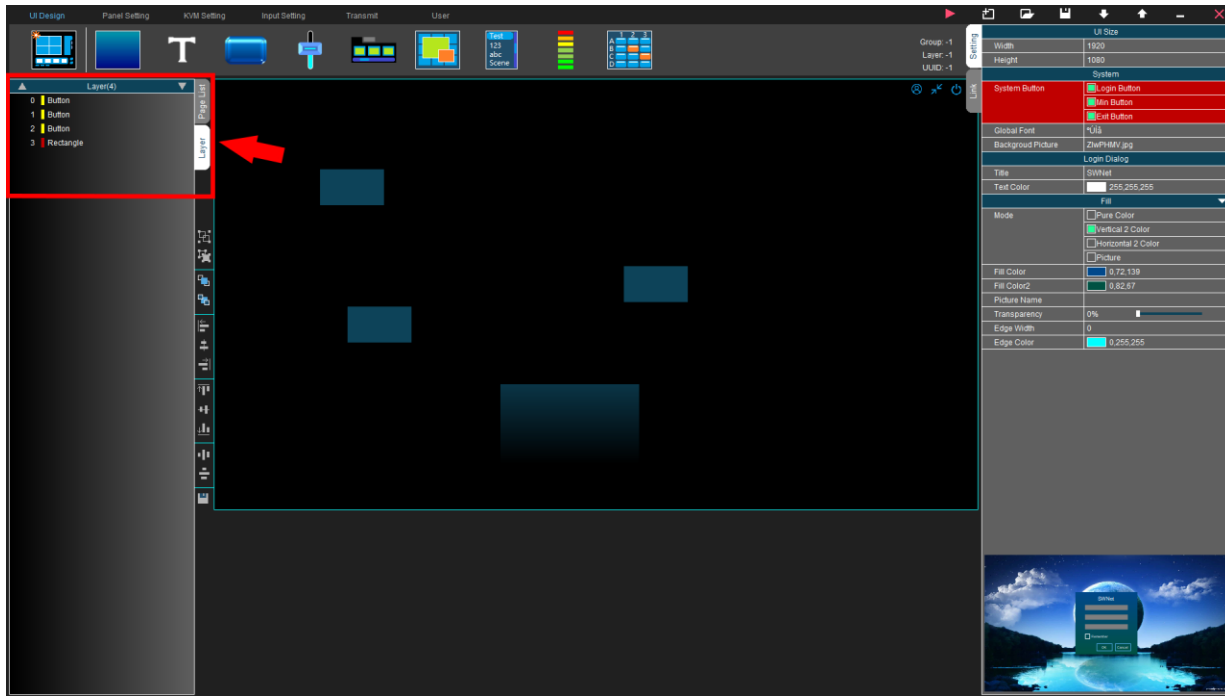
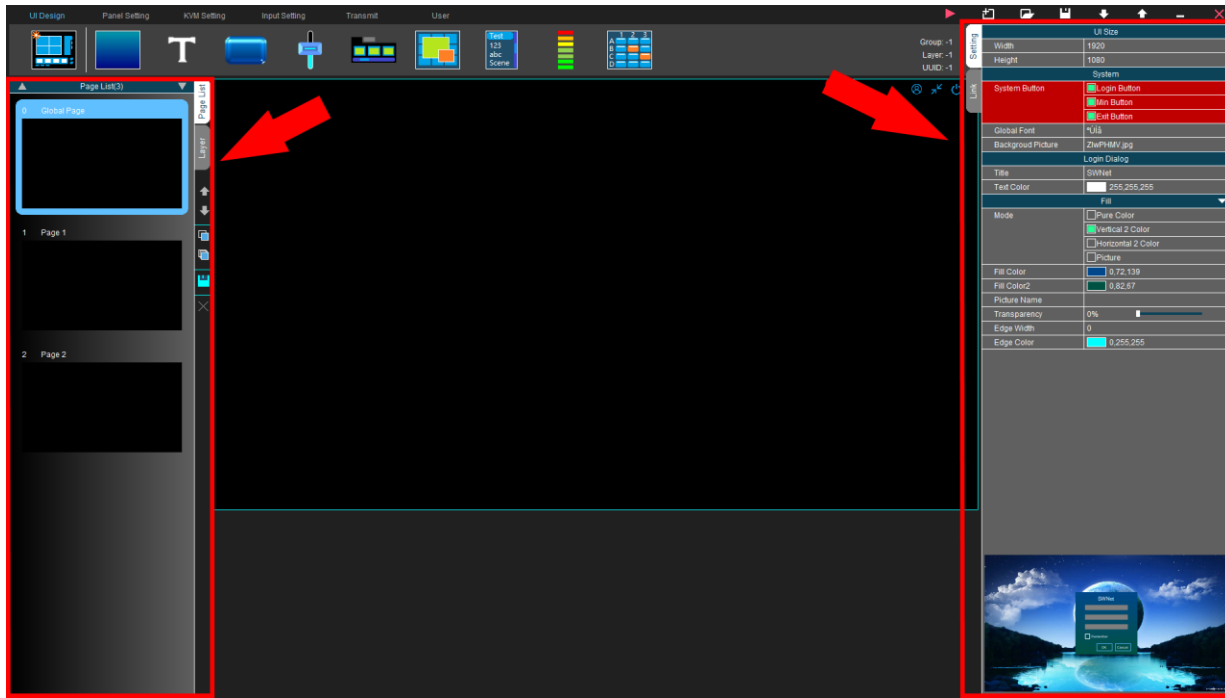
Note that the above functions can also be executed by right-clicking the components.

4.6. UI Design – UI Menu

This menu contains components to build up the UI for the SWNet Client. Except 'New Page', all components can be 'dragged&dropped' onto the 'UI Design Area' to be created. All the UI components can also be deleted by clicking 'Del' on the keyboard after being selected.



4.6.1. New Page



By default, the designer has a global page allowing the user to put components on it. By clicking the '**New Page**' button, the user can create a new page in the SWNet Client for further use. The created page can be viewed in the '**Page List Menu**' and the name of it can be changed by double-clicking the page tab in the page list. In the SWNet Client, the pages can be switched either by a '**Button**' or a '**Page switch list**'.

- **Page List Menu:** Basic operations for the pages created by the '**UI Menu**'.

Move Up: Move the current page up by one.

Move down: Move the current page down by one.

Copy a Page: Copy the current page and paste a new one below it.

Copy to End: Copy the current page and paste a new one at the end of the page list.

Export: Export the current page to a '**.pag**' file and this page can be opened via '**Open**' in the '**Designer Tool Menu**'.

Delete Page: Delete the current page.

Note that the global page cannot be deleted.

- **Login Dialog Setting Menu:** Configuration of the '**Login Dialog**' in the SWNet Client.

UI Size: Configure the window size of the SWNet Client.

System: Modify the system buttons '**Login**', '**Min**' and '**Exit**' and also fonts shown in the SWNet Client. The background picture of the '**Login Dialog**' can also be changed in this section.

Fill: Change the colour or background design of the '**Login Dialog**'.

The expected Login Dialog UI can be previewed on the bottom of the '**Login Dialog Setting Menu**'.

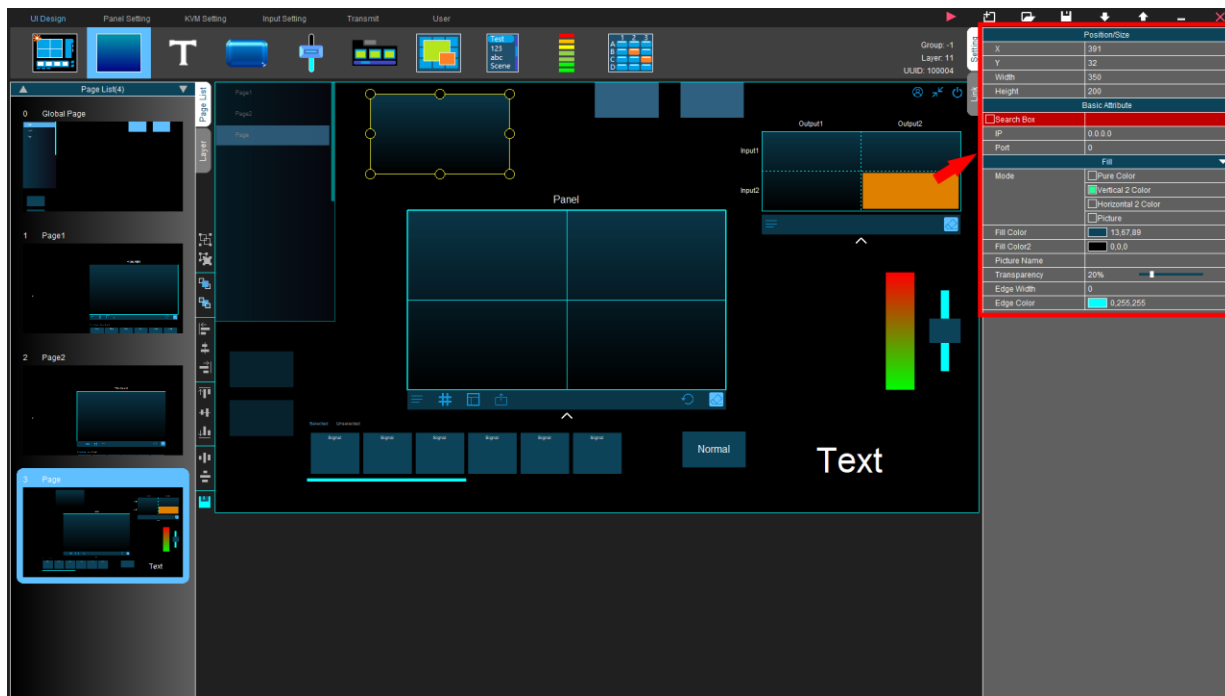
- **Layer:** The layer of the components on the current page.

Layer: The colour shows the type of the UI component. The number represents the layer level of the component and components on the top are assigned with bigger numbers.

- **Link:** Additional functions supported by the component. More details will be given during the introduction of the components and their practical use.

4.6.2. Rectangle

The rectangle component is normally used for setting up backgrounds or searching signals.

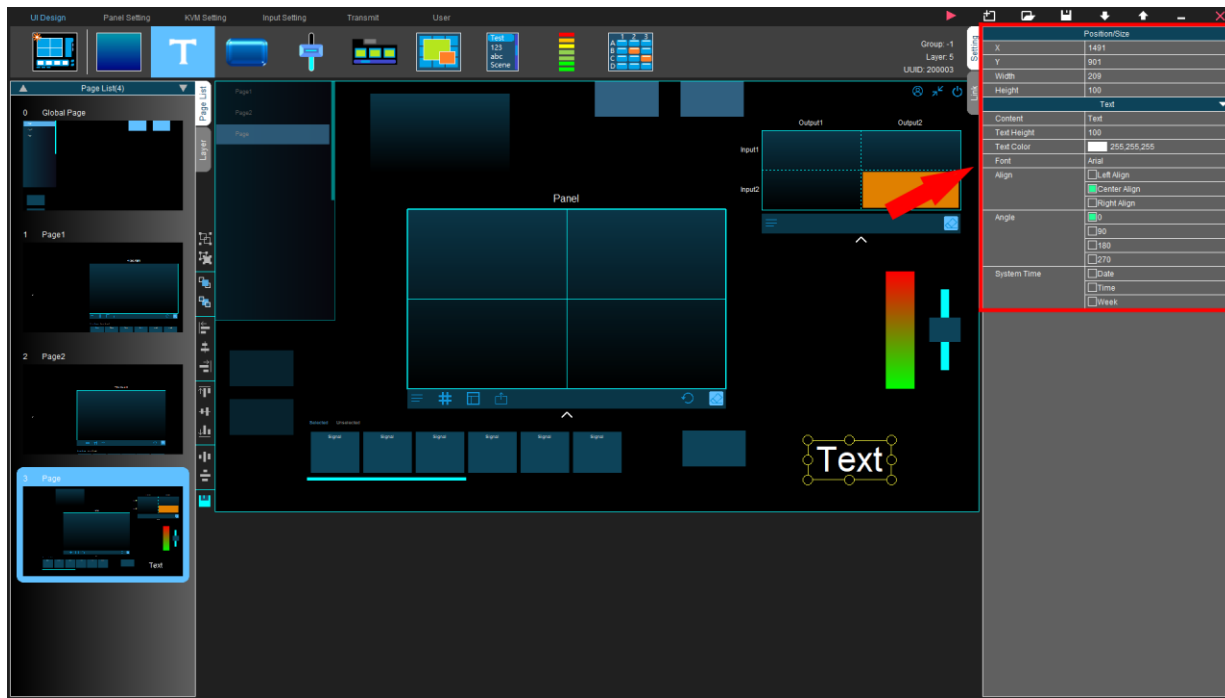


Position/Size: Configure the position and size of the rectangle component. They can also be adjusted by dragging the yellow adjustment box around the component in the 'UI Design Area'.

Basic Attribute: The rectangle component can be used as a search box. When there is a signal group list or signal component in the 'UI Design Area', selecting the rectangle component, holding 'Ctrl' and dragging the component into the rectangle component will bind them together. Afterwards in the SWNet Client, when there are a large number of input signals, the user can use this rectangle component to search the specific input signal from the signal group list or signal component by entering the name of the signal.

Fill: Change the colour or background design of the rectangle component. By change the size of the rectangle component and making it on the bottom of other UI components, the rectangle component can be used as a background.

4.6.3. Text

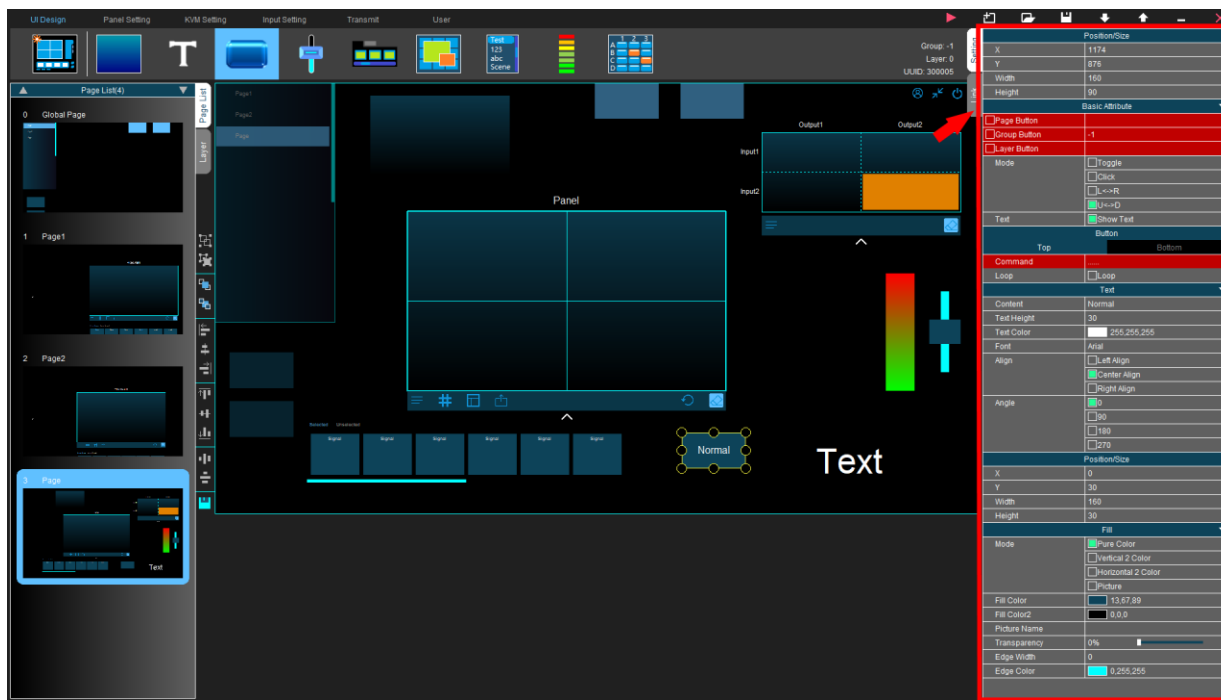


This component creates a text box allowing the user to enter texts.

Position/Size: Configure the position and size of the text box. They can also be adjusted by dragging the yellow adjustment box around the component in the 'UI Design Area'.

Text: Change the format of the texts in the text box, such as the font, size and colour. The text can also be rotated at different angles. In the case time information is required in the SWNet Client, the text can be set in a time format displaying the system time of the control PC.

4.6.4. Button



This component can be used as a button.

Position/Size: Configure the position and size of the button. They can also be adjusted by dragging the yellow adjustment box around the component in the 'UI Design Area'.

Basic Attribute:

(a) **Page Button:** When there are multiple pages being set up, by clicking the box on the right and choosing a page number, the selected button can be used as a page switch button. In the SWNet Client, when the button is clicked, the client will jump to the corresponding page.

(b) **Group Button and Layer Button:** Selecting a button, holding 'Ctrl' and 'dragging&dropping' a signal component into it will bind the signal component to this button. In the SWNet Client, when the button is clicked, the signal component will become visible and when it is clicked again, it will become invisible. By setting multiple Layer Buttons in the same Group Button (setting them to the same number), only one signal component will be visible at a time depending on the button being pressed.

The user can also configure the mode of the button. Each mode has two different states, for example, the 'Click' mode has the 'Normal' and 'Push' states. The former represents the state when the button is released and the latter when the button is pressed. The function and format for each button state can be set separately. By ticking 'Show Text', the user can put texts onto the button.

Button: Set up the button to make it work as a data transmission and communication tool, which allows system control by the SWNet system.

The user must enter the following information to set up the command communication:

SN	TCP	HEX	IP	Port	Interval(ms)	Command Data
1	<input type="checkbox"/>	<input type="checkbox"/>	127.0.0.1	41234	0	

- **TCP:** Whether via TCP/IP or serial port.
- **HEX:** Send commands in HEX.
- **IP:** IP address of the target device.
- **Port:** Port number of the target device.
- **Interval (ms):** Interval before the command is sent.
- **Command Data:** the command to be sent.

Note that the SWNet system only supports sending out commands in HEX.

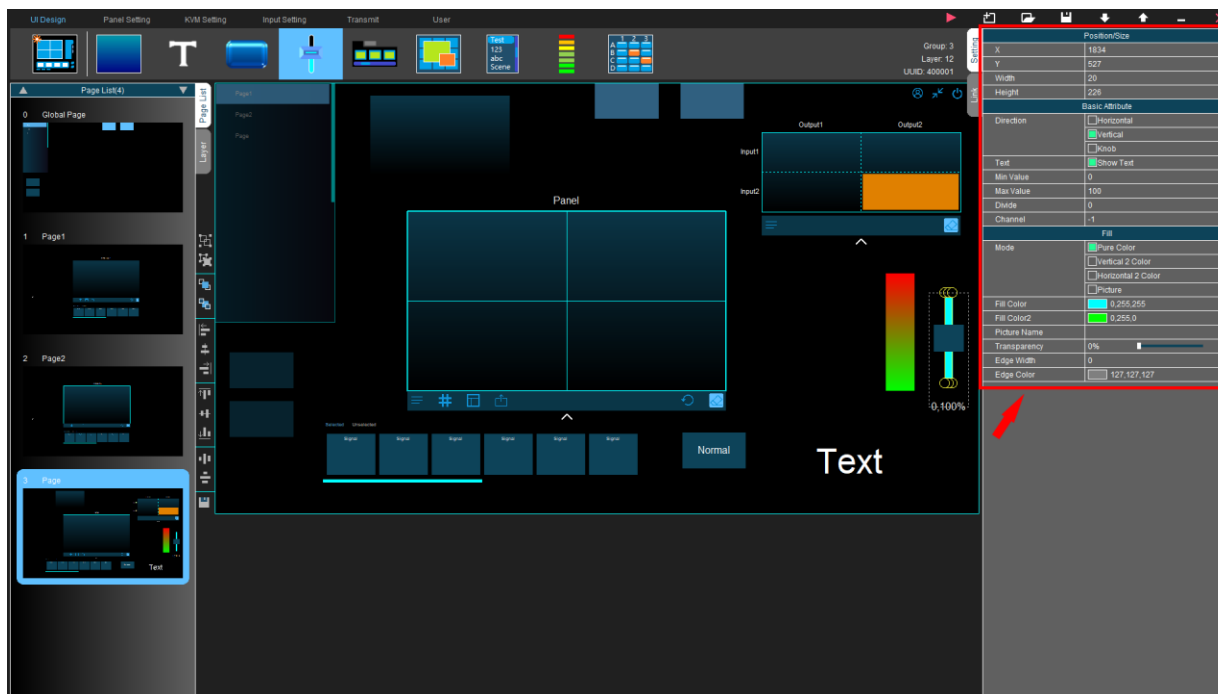
By clicking the button in a way depending on its state, the SWNet Client can send out commands to either a third-party device or one of the endpoint devices in the SWNet system to control it. The function for each state, for example, 'Normal' and 'Push', can be set separately. More details about system control can be found in the practical examples.

Fill: Change the colour or background design of the button. The design for each state of the button can be set separately.

Text: When 'Show Text' is triggered, this section will show and the user can modify the texts and their formats in the button. The text in each state can also be set separately.

Position/Size: This section is only visible when 'Show Text' is ticked and can be used to adjust the position and size of texts in each state of the button.

4.6.5. Slider



By default, the slider component is used to adjust the volume of the output audio.

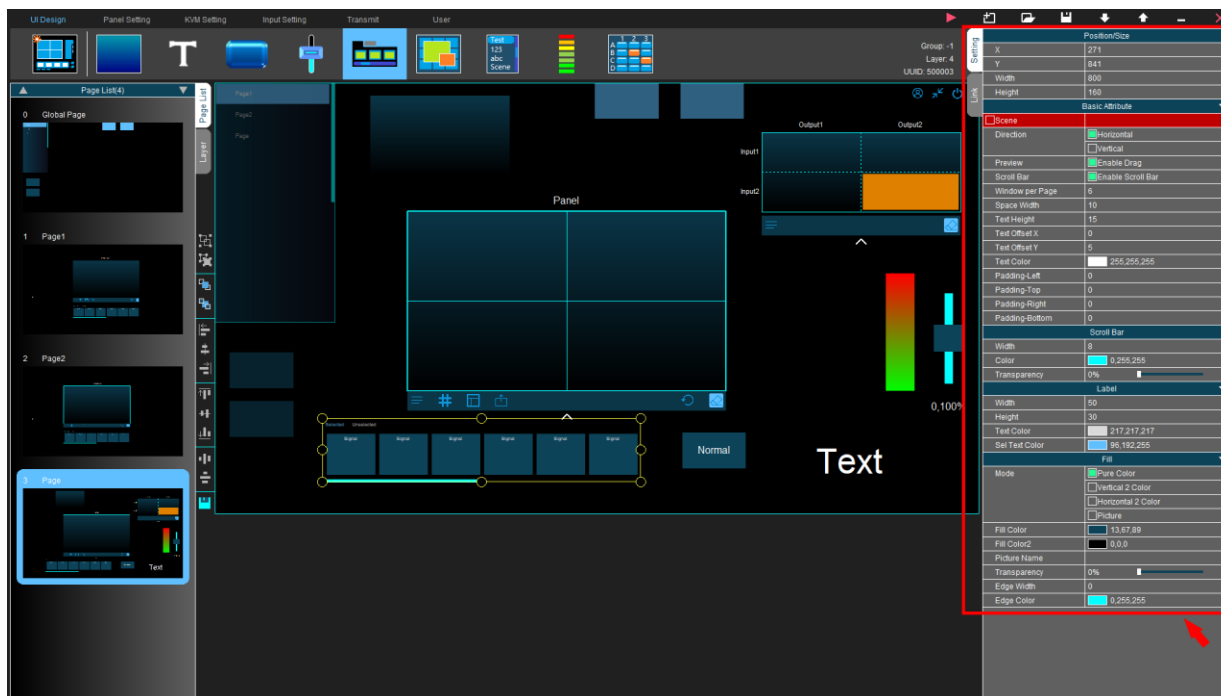
Position/Size: Configure the position and size of the slider. They can also be adjusted by dragging the yellow adjustment box around the component in the 'UI Design Area'.

Basic Attribute: The slider can be set either in a horizontal or a vertical direction. It can also be set in the form of a knob. By ticking 'Show text', a percentage marker can be displayed by the slider, representing the value change of the slider. The user can also set the min/max value of the slider and its divides. The sliders can be assigned to different channels by entering a number in the channel sections. More details about the audio setup can be found in practical examples.

Fill: Change the colour or background design of the slider.

In the 'Link' tab, the user can also set different commands for the slider component to send out when it is being operated.

4.6.6. Signal



The signal component can be assigned with input signals from different devices, such as IP cameras and media players and show real-time previews from the input devices in the SWNet Client.

Position/Size: Configure the position and size of the signal component. They can also be adjusted by dragging the yellow adjustment box around the component in the 'UI Design Area'.

Basic Attribute: The signal component can be set in a horizontal or vertical direction. When 'Preview' is enabled, the user can 'drag&drop' the input video source onto the videowall from the signal component. In the SWNet Client, the text 'signal' in each preview tab will be replaced by the name of the input signal set up in 'Input Setting'. The format of this text, including the size and colour, as well as the size of the preview tab, can be changed in this section. The user can also use the signal component to preview and recall the saved layouts by ticking 'Layout' and choose a certain videowall.

Scroll Bar: Change the width and colour of the scroll bar.

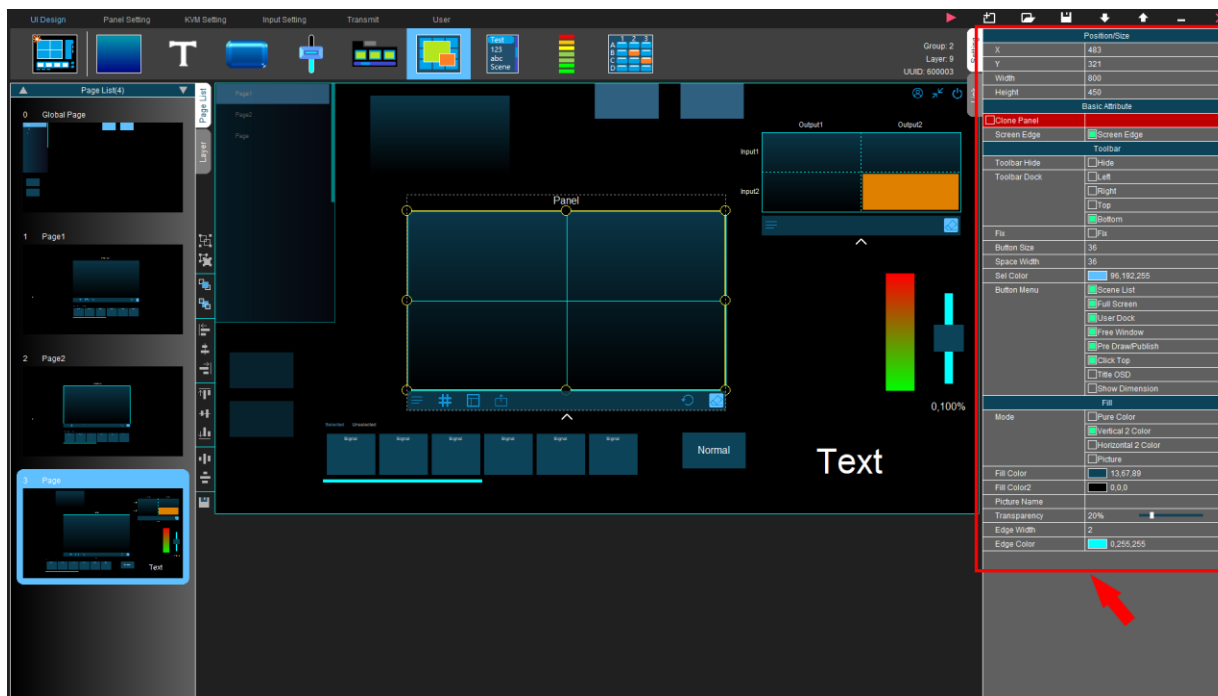
Label: Change the size and text colour of the signal group selection menu.

Fill: Change the colour or background design of the preview tabs.

After setting up the signal component, the user must go to the 'Link' tab to link the signal component to one or more signal groups, otherwise there will be no input signals visible in the signal component.

For more details about how to set up the input signal group, please refer to the practical examples.

4.6.7. Panel



The panel component is the area where the videowall will be set up.

Position/Size: Configure the position and size of the panel component. They can also be adjusted by dragging the yellow adjustment box around the component in the 'UI Design Area'.

Basic Attribute: If 'Clone Panel' is ticked, by choosing one of the other panel components, the contents on the chosen panel component will follow the cloned one. For example, in the videowall, when input signals are put onto the screens of the cloned panel, the same content will be displayed on screens of the original panel. When 'Screen Edge' is unticked, the grids on the videowall will be invisible.

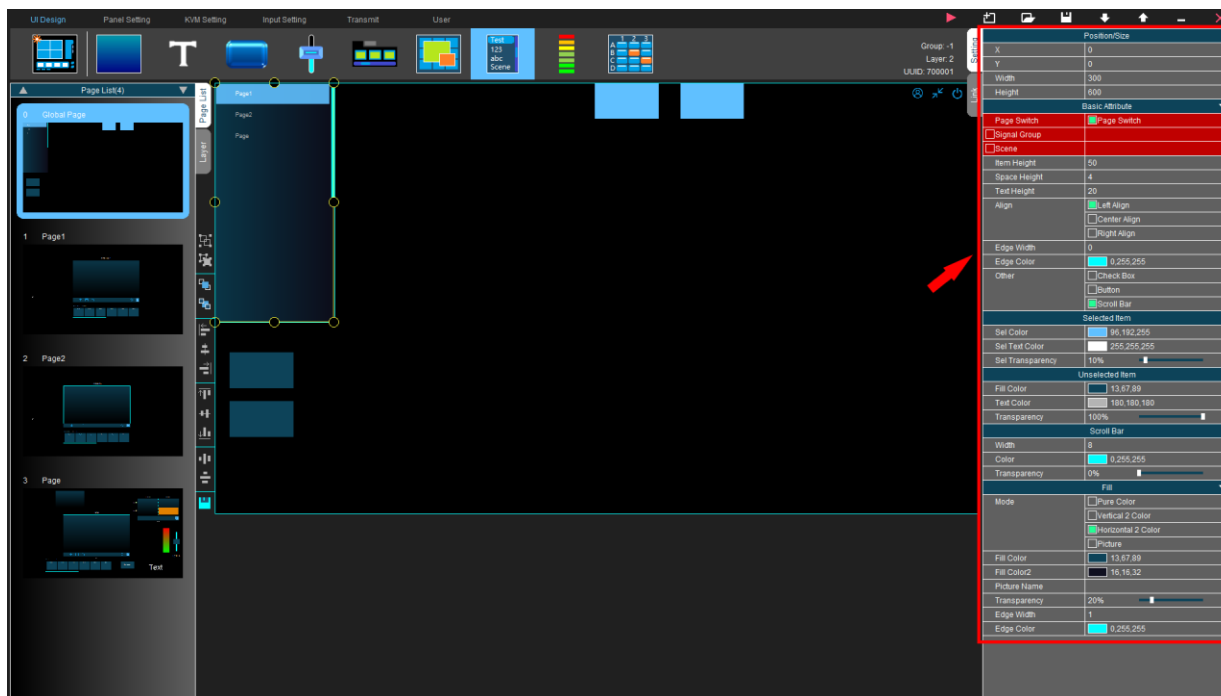
Toolbar: By default, the toolbar is located on the bottom of the panel and it can be changed. Multiple function buttons are available on the toolbar and users can change the size, colour and visibility of them. More details about these function buttons can be found in the SWNet Client User Guide section.

Fill: Change the colour or background design of the panel component.

By double-clicking on the main panel, the user can access the 'Panel Setting' to set up the videowall.

More details will be given in the Panel Setting section and practical examples.

4.6.8. List



The list component can be used as a list in multiple ways.

Position/Size: Configure the position and size of the list component. They can also be adjusted by dragging the yellow adjustment box around the component in the 'UI Design Area'.

Basic Attribute:

The list component can be used in multiple ways:

- (a) **Page Switch:** Show all the pages that have been created in the list and this list can be used to switch between different pages in the SWNet Client.
- (b) **Signal Group:** Choose the input signal group and all the input signals in this group will show in the list. Users can use this list to switch the input signal. Note, real-time preview of the input signals is not available when using the list component.
- (c) **Layout:** ~~No longer used.~~

Users can also change the format of the items in the list, such as the size and space between different items. Useful tools like check boxes and tool buttons can also be added to the list components.

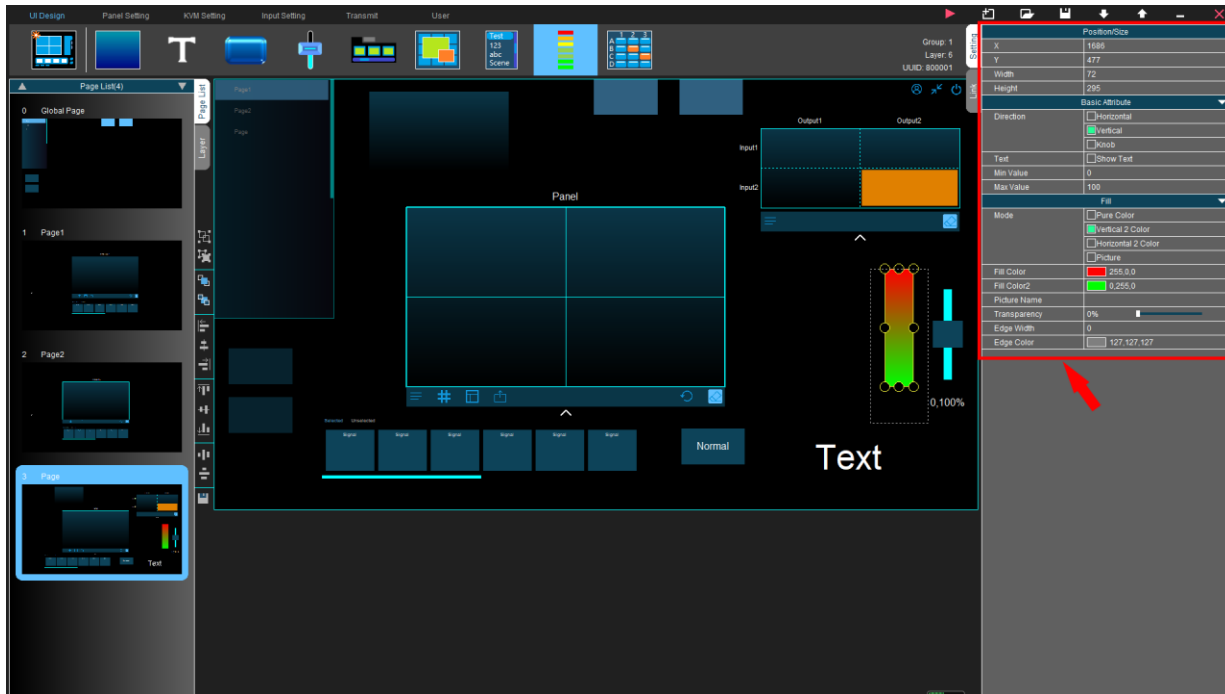
Selected item: Change the colour of texts for the items in the list when they have been selected.

Unselected item: Change the colour of texts for the items in the list when they have not been selected.

Scroll Bar: Change the width and colour of the scroll bar.

Fill: Change the colour or background design of the list component.

4.6.9. Get Back



By default, the get back component reads the output audio volume and display it in the SWNet Client similar to an amplitude bar.

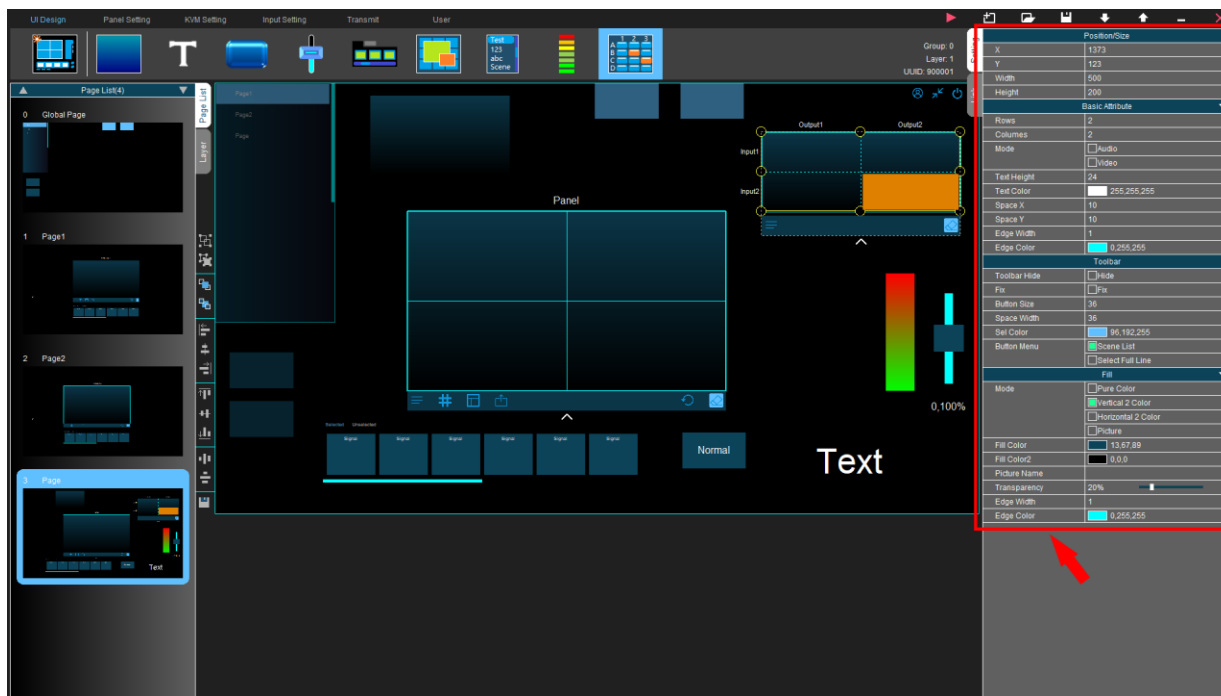
Position/Size: Configure the position and size of the get back component. They can also be adjusted by dragging the yellow adjustment box around the component the 'UI Design Area'.

Basic Attribute: The get back component can be set either in a horizontal or a vertical direction. It can also be set in the form of a knob. By ticking 'Show text', a value marker can be displayed by the slider, representing the value change of the get back component. The user can also set the min/max value of it.

Fill: Change the colour or background design of the get back component.

In the 'Link' tab, the user can set different commands for the get back component to query and receive from the endpoint devices.

4.6.10. Martix



Position/Size: Configure the position and size of the matrix component. They can also be adjusted by dragging the yellow adjustment box around the component in the 'UI Design Area'.

Basic Attribute: Change the number of inputs and outputs for the matrix switcher. The matrix component can be used both for switching audios and videos of the input and outputs. The text format can also be changed.

Toolbar: Change the format of the toolbar on the bottom of the matrix component.

Fill: Change the colour or background design of the matrix component.

By clicking on either input or output in the matrix component, in the 'Link' tab, the user can bind the endpoint devices to it. When the binding is completed, the matrix can be used to switch the video/audio between the input and output in the same way as a matrix switcher. More details can be found in the practical examples.

Note that when binding the output with devices in the 'Output List', the parameter '\$X_CD1', which corresponds to the UUID of the output panel, will be automatically filled with a temporary number. If user wants to use it with the actual output panel, it is necessary to fill the actual UUID of the output panel, for example, '600001' for the default design.

Above are the UI components used for designing the SWNet system. For more information about how to make use of certain components, please refer to the practical example section in this guide.

4.7. Panel Setting

'Panel Setting' is designed for the user to bind windows in the videowall to each receiver. By either clicking 'Panel Setting' or double-clicking a certain panel component in the 'UI Design Area', the user can enter this page.

4.7.1. Scan Output

By clicking 'Scan Output', the receivers (RX) connected to the SWNet system will show in the 'Output List'.

4.7.2. Bind windows to outputs

First the user needs to select the panel to set up in the panel list. Clicking one of the receivers (RX) in the output list, the screen in the videowall connected to this receiver will turn blue. By clicking the corresponding window in the panel, the receiver will bind to the corresponding screen in the videowall. Afterwards, the designer will choose the next receiver automatically and the user can bind the next one to another window in the panel.

Basic Attribute: Configure the number of rows and columns for the videowall.

Position/Size: Configure the position and size of windows for the videowall.

4.7.3. Mode

The user can also set up the grid layouts (modes) for each screen. The designer software provides a maximum of 8 preset grid layouts. By choosing one of these modes and clicking 'Add', the videowall will light up and the user can then configure the mode.

Basic Attribute: The user can change the name of the current mode. By entering contents in the form of 'AxB', for example, '2x2', the videowall will be divided into A rows and B columns by grids.

Position/Size: When one window is selected, the position and size of this window can be configured. The user can also set up how signals are being streamed (main-stream/sub-stream) in this window. The user can delete certain windows and change the size of other windows to achieve the 'merge' of windows. The configured modes can then be used in the SWNet Client. **It is recommended to set all windows to sub-stream for the modes where the user has multiple-windows in one screen when using G265HDRT as the receiver due to its decoding ability.**

4.7.4. Audio Follow

User can bind a transceiver with the output panel to provide audio from the output. Choosing 'Audio Follow', clicking 'Add New', clicking on the output panel in the middle and choosing a transceiver from

the '**Output List**' can easily bind the transceiver with the output panel. User can then use the slider component and get back compeont to observe and control audio volume for the output panel.

Note that user needs to use the UMPlatform to switch the audio between 'HDMI' and '3.5mm'.

For more information about how to set up and operate the videowall, please refer to the SWNet Client User Guide and practical examples.

4.8. Input Setting

'**Input Setting**' allows the user to arrange the input devices in the SWNet system and assign signals from them into multiple groups if necessary.

4.8.1. Scan Input

By clicking '**Scan Input**', the connected transmitters (TX) will show in the '**Input List**'. The user can add and delete inputs manually by clicking the '+' and '-' buttons at the bottom of the '**Input List**'.

Note that all the input signals including ones that have been used before will be visible in the '**Input List**'. However, only the input signals that are currently connected with the transmitters will show in green. Both the unused ones and input signals from additional devices will be in white. The user can use this way to check the connection of transmitters in the SWNet system.

4.8.2. Configure Inputs

By selecting one of the input signals from the '**Input List**', the user can configure the input signal.

Input Node: The user can change the IP address and name of the selected input. It is also possible to set up a '**Switch Hot Key**' that can be used in the KVM to make it easier for the user to switch between different input signals. The address of '**mainstream**' and '**substream**' can be modified manually, which can be useful for devices such as an IP camera, which doesn't have video output sockets.

4.8.3. New Group

By clicking the '**New Group**' button, a new signal group can be created. The users can set up multiple signal groups depending on their requirement. The name of the signal group can be changed by double-clicking the name. Each signal group can be assigned with different input signals respectively by ticking the input signals in the '**Input List**'. To delete a signal group, simply choose it and click '**X**' on the right.

4.8.4. Group Signal

This function merges two or more input signals into one group signal and can be '**dragged&dropped**' onto the videowall as one input signal. By clicking one of the '**Group**' buttons in the '**Input Setting tool menu**', for example, 1x2 Group, an input signal corresponding to this group will be visible in the '**Input List**'.

Basic Attribute: The designer provides multiple choices of group signal samples, as well as a customised setting for the number of rows and columns. The user can also change the name of the group signal if necessary. After setting up the group signal, the user can assign input signals to each window of it, similar to setting up the videowall panel. After ticking this group signal in the '**Input List**', it will be accessible in the SWNet Client.

4.9. KVM Matrix Setting

'KVM Setting' sets up KVM matrix for the SWNet system.

4.9.1. Scan Output

By clicking '**Scan Output**', the connected receivers (RX) will show in the '**Output List**'.

4.9.2. Bind windows to outputs

Clicking one of the receivers (RX) in the output list, the screen connected to this receiver will turn blue. By clicking the corresponding window in the panel, the receiver will bind to the corresponding monitor. Afterwards, the designer will choose the next receiver automatically and the user can bind it to another window in the panel.

Background Picture: The user can set up a background picture for KVM when there is no input signal on the screen. The background picture can be either an actual picture or a solid coloured background. The background picture can also be set respectively for each screen or set as one across all screens.

Basic Attribute: Besides the pre-set KVM samples in the '**KVM Setting tool menu**', the user can manually configure the number of rows and columns for the monitors in KVM. The user can also set KVM in 4K if necessary.

For more information about how to set up and use the KVM Matrix, please refer to the SWNet KVM Matrix User Guide and practical examples.

4.10. Transmit

'Transmit' is used to transmit other input signals into the SWNet system, such as the IP camera.

4.10.1. Add customised input devices

In the 'Input Setting', by clicking the '+' button on the bottom of the input list, the user can add a customised input device to the SWNet system. The user needs to enter the IP address and name of the device, as well as the mainstream and substream address for the device. After all the settings are done, the user can click 'enter' to save the input signal.

4.10.2. Bind the customised input device to outputs

In 'Transmit', by clicking 'Scan Output', the receivers (RX) connected to the SWNet system will show in the 'Output List'. After selecting one of the receivers, a box will be visible in front of each input in the 'Manual Added Input List'. The user needs to tick a certain box to bind the input device with the receiver. Each input device can be bound to multiple receivers. After this, the input signal from this device can be previewed and used in the SWNet system.

Note that the user can still use the signal from the customised input device without binding it to a receiver (RX), but the preview will be lost and limitations such as no frame lock will happen in such a case.

Note that binding a 3rd party device will cause 1-2 seconds delay in opening up the signal.

Note that each G265HDRT can bind maximumly 4 additional devices and G2654KRTF can bind maximumly 9 additional devices.

For more information about how to add customised input devices, please refer to practical examples.

4.11. User

'User' is designed for user management. The default user is 'admin' and the password is 'Admin12345'. This user has the highest user level and can access all the functions in the SWNet system. The user level can be set between 1-254 for all added users.

Each user can be set individually with the accessibility to different pages in the SWNet Client, input signal groups, KVM stations and videowalls.

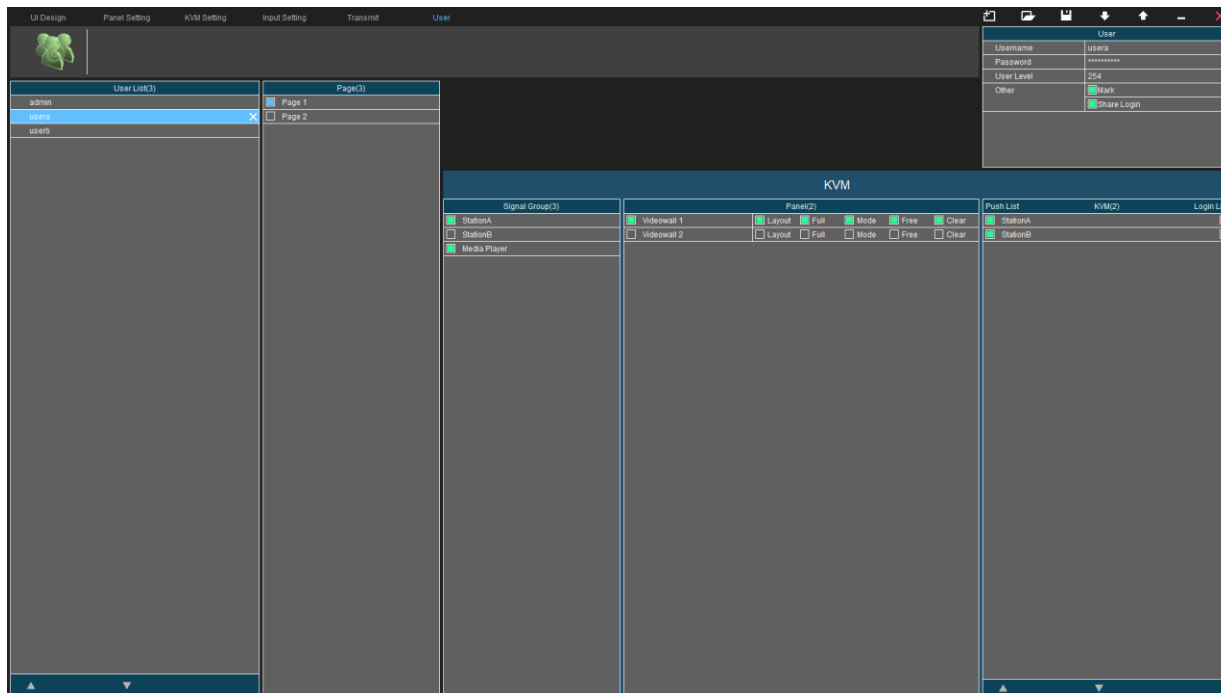
4.11.1. New User

By clicking 'New user', the system can add a new user level. As an example, in the picture below, a new user level named 'usera' is added. The password is set and this user has the user level 1.

According to the setting, this user can only access the global page and page 1 of the SWNet Client. This user can operate videowall 1 and KVM station A with the input signal from a media player and Station A.

Mark: Enable painting function for the selected user on the screen.

Share Login: Enable the same user logging in from different KVM stations at the same time.



5. SWNet Client User Guide

After the design in the SWNet Designer Software has been uploaded successfully into the endpoint devices in the SWNet system, the SWNet Client can be used to access the SWNet system from devices operated either in Windows, IOS or Android.

5.1. Login Window



Users can run the SWNet Client directly without installation. The client can be downloaded from the SEADA website (<https://seada.co.uk/downloads>).

Run the SWNet Client software to get the Dialog box on the right.

The '**Username**' and '**Password**' follows the setting from the SWNet Designer Software.

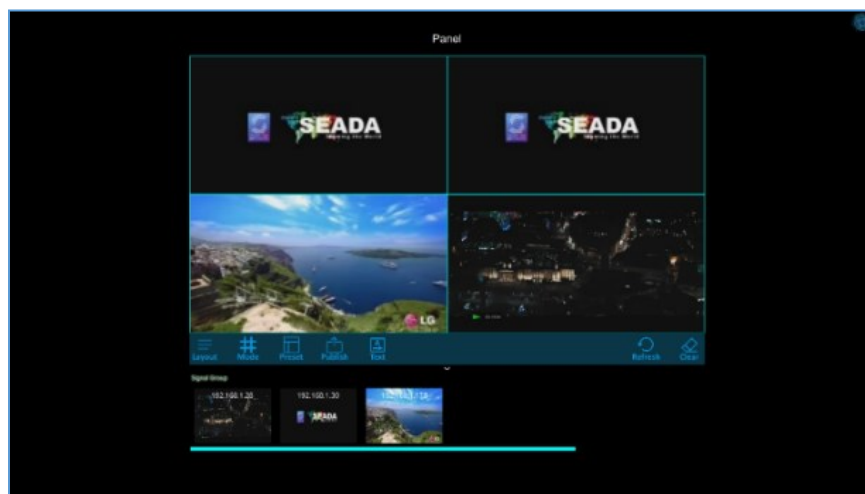
Note: Ensure to set up a username/password in the SWNet Designer Software if it is the first-time login.

By entering the local IP address of the control PC in '**IP**' and clicking '**OK**', the SWNet Client will be connected automatically.

If the login is failed, please refer to the troubleshooting section at the end of this document.

Note that 'Server Ip' can be left empty as it is for further development.

5.2. Run the videowall



The example setting here when starting the software is a 2x2 videowall with 3 input signals. Users can set up the videowall by '**dragging&dropping**' the input signals onto the panel. The function of each tab on the panel for setting up a videowall will be:

- **Layout:** Manage the layouts for the videowall, such as saving layouts, recalling layouts, editing layouts, and looping layouts. (Maximumly 1000)
- **Mode:** Set up the grid layouts for each screen – (1) Full; (2) Free; (3) Default and (4) other grid layouts saved using the '**SWNet Designer Software**'.
- **Preset:** Preset the videowall offline.
- **Publish:** Apply the offline preset layout onto the videowall.
- **Text:** Display scrolling texts on the videowall.
- **Refresh:** Refresh the layout in the SWNet Client to match the videowall.
- **Clear:** Clear the current videowall

By double-clicking the input signal, the user can see the preview of the input signal and there are some additional functions available.



- **Crop:** Crop the selected input signal to any size.
- **OSD:** Add OSD onto the input signal. (Signals from RTSP streaming and PC do not support OSD.)
- **Pen:** Enable the function to draw on the input video signal.
- **Cursor:** Remote control the input source if it is a PC connected with USB and HDMI to Tx.

By double-clicking the panel when there are no windows on it, the user can choose a picture to set as the background for the videowall. (To remove the background, the user needs to use the UMP Platform and disable the background function for each receiver.)

The user can press a certain window opened on the videowall to bring it to the front or long-press to send it to the back.

Note that, each G265HDRT supports maximumly one 1080p/60 output or four 540p/60 outputs, and each G2654KRTF supports maximumly one 4k/30 output, four 1080p/60 outputs or sixteen 540p/60 outputs. Errors may happen to the outputs on the videowall when exceeding this limit.

Scrolling text

Content: The content of the scrolling text

X/Y: Position of the scrolling text

Red box: The colour of the scrolling text

Black box: Background colour of the scrolling text

T: Transparent of not

H: Height of the scrolling text

Direction: Direction of the scrolling text – left/right

Font: Font of the scrolling text

Time: The speed of the scrolling text

Suspend: Tick or untick to place the scrolling text on top or out of the output panel in the G265 Client. This parameter will not affect the actual output panel.

Apply: Apply the setting and show the scrolling text

Show: Show the scrolling text

Hide: Hide the scrolling text

Cancel: Exit the window



5.3. System Control

As introduced in the SWNet Designer Software User Guide, there are many other components that can be added to the SWNet Client.

The user can set up the endpoint device to control third-party devices. This includes system control via RS232, RS485, I/O, IR, and TCP/IP.

As an example, below is a SWNet Client designed using the SWNet Designer Software and the SWNet UMP Platform. It has a 1x2 videowall with multiple input signals. It also contains four buttons to switch between different functions. On the right-bottom of the client, the current time of the control PC will be displayed.

- **TV Control:** The TV Control allows the user to use the SWNet Client as a remote controller to operate the TV using the infrared serial port on the SWNet endpoint devices.
- **Light Control:** The Light Control works like the modern smart house, allowing the remote adjustments of brightness and ON/OFF for lights.
- **Camera Control:** The Camera Control makes use of the TCP/IP and serial port functions in the SWNet endpoint devices and makes it possible to control the camera, such as moving up/down and zooming in/out.
- **Audio Control:** The Audio Control adjusts the volume of the input signals and output signals for a practical videowall setting.

More details about how to set up a videowall and make use of system control can be found in the practical example section.

Video Wall

Signal

Signal

Signal

Signal

TV Control

Light Control

Camera Control

Audio Control

Power control ●

System one-key switch

ON/OFF

OK

+

-

Home

Menu

Return

2022-1-25
14:03:01

Aisle light switch

OFF

Hall switch 1

OFF

Hall switch 2

OFF

Hall switch 3

OFF

Hall switch 4

bright adjustment

Left camera control

Zoom +

Zoom -

Right camera control

Zoom +

Zoom -

INPUT

IN1

IN2

IN3

IN4

IN5

OUTPUT

OUT1

OUT2

OUT3

OUT4

OUT5

6. SWNet KVM Matrix User Guide

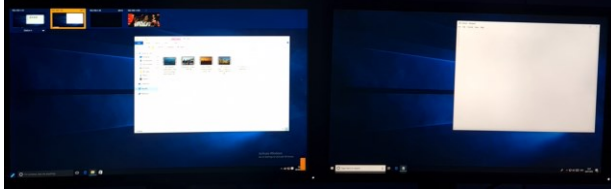

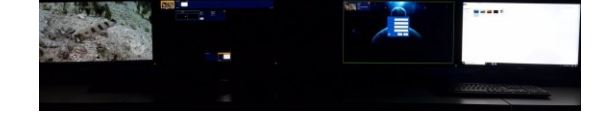
The SWNet KVM matrix allows users to control multiple PCs with one set of keyboard and mouse on one monitor or across multiple monitors.

After setting up KVM with the SWNet Designer Software, connect one of the receivers (RXs) to one set of keyboard and mouse. Then connect the transmitters to the PC with a USB cable. (Make sure that one transmitter is connected to the same PC with the USB cable and the HDMI cable.)

The Login Page for KVM matrix can be accessed by pressing the “**Ctrl**” button 3 times on the keyboard. After entering the username and password at the login dialog, and clicking ‘**Enter**’, by default, the user will enter the SWNet KVM matrix. By pressing the ‘**Ctrl**’ button 3 times, the user can view the KVM matrix menu, and ‘**drag&drop**’ input signals onto the monitor. After pressing ‘**Esc**’, the user can move and switch between the monitors to control PCs with the keyboard and mouse. The shortcuts for SWNet KVM are:

- **Press ‘Ctrl’ 3 times under the KVM matrix:** Show the KVM matrix menu.
- **Press ‘Shift’ 3 times under the KVM matrix:** Show the KVM communication menu.
- **Press ‘Alt’ 3 times under the KVM matrix:** Show the videowall menu.
- **Press ‘Esc’ under any menu:** Exit from any menu back to KVM matrix.
- **Press ‘Home’ under any menu:** Logout.
- **‘Orange bar’ under the KVM matrix menu:** Control the audio level of the input signal and can be adjusted by the mouse wheel.
- **‘Pen’ under the KVM matrix menu:** Draw on the screen.

Note if the user tries entering a menu not activated, for example, press ‘shift’ 3 times when there is only one station, the system will lock, and the user can double-click ‘Esc’ to exit this status.

<p>KVM Matrix:</p> <p>The user can move and switch between monitors in the KVM matrix. The user can also drag and drop signals from other sources onto the monitor. With G2654KRTE, the user can access multiview KVM on a single monitor.</p>	
<p>KVM Videowall:</p> <p>The user can push signals onto the videowall and pull contents from the videowall onto the monitor. Basic operations such as save/recall layouts and right-click to send contents to bottom are also available in the KVM videowall mode.</p>	
<p>KVM Communication:</p> <p>The user can push contents from one station to another to share information.</p>	

7. Practical Example

In the following sections, some practical examples will be given for a quick start of using SWNet combining the use of the SWNet UMP Platform, SWNet Designer Software and SWNet Client. Each example will also have a demo video available to refer to, which can be found at the link below:

<https://youtube.com/playlist?list=PLsYOGn3lM9ldcplHLzQ42VxQNDaqeTNvA>

7.1. Setting up a 2x2 videowall with 2 media player

1. Ensure that the receivers and transmitters are correctly connected with the media players and output screens.
2. Login to the SWNet Designer Software.
3. **'Drag&Drop'** one panel component and one signal component into the **'UI Design Area'**.
4. Double-click the panel component and in **'Panel Setting'**, change the number of rows and columns to 2 and assign receivers to each window in the panel.
5. In **'Input Setting'**, tick the input signals that will be used as the inputs.
6. Go back to **'UI Design'**, click on the signal group and in the **'Link'** tab, choose the signal group assigned to this signal component.
7. Click **'Upload'** in the **'Designer Tool Menu'**. When it is completed, a window should pop up with **'Upload succeed'**.
8. Login to the SWNet Client and the user should be able to set up the videowall now.

7.2. Setting up a 1x2 KVM and a 1x2 videowall with 2 media players and 2 PCs

1. Ensure that the receivers and transmitters are correctly connected with the media players, PCs, and output screens.
2. Login to the SWNet Designer Software.
3. **'Drag&Drop'** one panel component into the **'UI Design Area'**.
4. Double-click the panel component and in **'Panel Setting'**, change the number of rows and columns to 1 and 2 and assign the receiver to the window in the panel.
5. In **'Input Setting'**, tick the input signals that will be used as the inputs.
6. In **'KVM Setting'**, choose **'1x2 KVM'** and assign the receivers to each window in the KVM.
7. Click **'Upload'** in the **'Designer Tool Menu'**. When it is completed, a window should pop up with **'Upload succeed'**.
8. Connect a set of mouse and keyboard to one of the receivers.

9. Press the **'Ctrl'** button 3 times to enter the login page.
10. Enter the username and password, and press **'Enter'**. The user should be able to access the functions of KVM matrix, including KVM and videowall setup now.

7.3. Setting up two 1x2 KVM stations for user A and user B with 4 PCs

1. Ensure that the receivers and transmitters are correctly connected with the media players, PCs, and output screens.
2. Login to the SWNet Designer Software.
3. In **'KVM setting'**, choose **'1x2 KVM'** and assign the receivers to each window in the KVM, and choose **'1x2 KVM'** again and assign the receivers to each window in the KVM.
4. Rename the first KVM to **'Station A'** and the second to **'Station B'**.
5. In **'Input Setting'**, tick the input signals from the PCs that will be used as the inputs.
6. In **'User'**, click **'New User'** and rename the added user to **'usera'**.
7. Click **'New User'** again and rename it to **'userb'**.
8. Click **'Upload'** in the **'Designer Tool Menu'**. When it is completed, a window should pop up with **'Upload succeed'**.
9. Connect a set of mouse and keyboard to one of the receivers for station A and another for station B.
10. Press the **'Ctrl'** button 3 times to enter the login page.
11. Enter the username and password, and press **'Enter'**. Both users should be able to access the functions of KVM matrix, including KVM and KVM communication now.

7.4. Setting up a 3x3 videowall with 1 media player and 1 IP camera

1. Ensure that the receivers and transmitters are correctly connected with the media player, IP camera and output screens.
2. Login to the SWNet Designer Software.
3. **'Drag&Drop'** one panel component and one signal component into the **'UI Design Area'**.
4. Double-click the panel component and in **'Panel Setting'**, change the number of rows and columns to 3 and assign receivers to each window in the panel.
5. In **'Input Setting'**, tick the input signal that will be used as the input.
6. Click **'+'** at the bottom of the **'Input List'** and choose the added input.

7. Enter the IP address of the IP camera and assign it with a name.
8. Enter the mainstream and substream of the IP camera. (Normally available in its manual and the user can test it using the VLC software.)
9. Click **'Enter'** to save the added input.
10. Go to **'Transmit'**, select one of the receivers from the **'Output List'** and tick the box shown in front of the IP camera in the **'Manual Added input List'**.
11. Go back to **'UI Design'**, click on the signal group and in the **'Link'** tab, choose the signal group assigned to this signal component.
12. Click **'Upload'** in the **'Designer Tool Menu'**. When it is completed, a window should pop up with **'Upload succeed'**.
13. Login to the SWNet Client and the user should be able to set up the videowall now.

7.5. Control a 3rd party device with the SWNet system via TCP/IP

1. Ensure that the 3rd party device is connected into the same network as the SWNet system.
2. Login to the SWNet Designer Software.
3. **'Drag&Drop'** one button component into the **'UI Design Area'**.
4. In **'Setting'**, change the **'Mode'** to **'Click'**.
5. Leave the command in **'Normal'** tab empty and in the **'Push'** tab, click **'.....'** and a window will pop up.
6. Tick **'TCP'** and **'HEX'**.
7. Enter the **'IP address'** and the **'port number'** of the 3rd party device.
8. Enter the **'Command Data'** to be sent.
9. **'Drag&Drop'** one panel component into the **'UI Design Area'**.
10. Double-click the panel component and in **'Panel Setting'**, change the number of rows and columns to 1 and assign the receiver to the window in the panel as it requires at least one videowall to enter the SWNet Client.
11. Click **'Upload'** in the **'Designer Tool Menu'**. When it is completed, a window should pop up with **'Upload succeed'**.
12. Login to the SWNet Client and the user should be able to click the button to send out commands to the 3rd party device.

7.6. Control the SWNet system using a 3rd party controller with TCP/IP

1. Ensure that the receivers and transmitters are correctly connected with the media players and output screens.
2. Ensure that the receiver/transmitter to send the command to is connected into the same network as the 3rd party controller. (Here Hercules SETUP utility installed on a control PC will be used.)
3. Login to the SWNet Designer Software.
4. **'Drag&Drop'** one panel component and one signal component into the **'UI Design Area'**.
5. Double-click the panel component and in **'Panel Setting'**, change the number of rows and columns to 3 and assign receivers to each window in the panel.
6. In **'Input Setting'**, tick the input signals that will be used as the inputs.
7. Go back to **'UI Design'**, click on the signal group and in the **'Link'** tab, choose the signal group assigned to this signal component.
8. Click **'Upload'** in the **'Designer Tool Menu'**. When it is completed, a window should pop up with **'Upload succeed'**.
9. Login to the SWNet Client and set up a videowall.
10. Go to the **'UDP'** tab in the Hercules SETUP utility software.
11. Enter the **'Module IP'**: 224.168.1.1
12. Enter the **'Port'**: 41234 and the **'Local Port'** of the control PC.
13. Click **'Listen'**.
14. To save a layout, enter **{SaveScene;600001;1,1}**, where 600001 is the videowall number that can be found in the SWNet Designer Software, the first **'1'** is the number of the layout and the second is the name of the layout.
15. To recall a layout, enter **{CallScene;600001;1}**, where 600001 is the videowall number that can be found in the SWNet Designer Software and the **'1'** is the number of the layout.
16. To display change of the layout on the videowall in the SWNet Client, the user needs to press the **'refresh'** button in the SWNet Client.

7.7. Audio Setting with a 1x2 videowall with 2 media players

1. Ensure that the receivers and transmitters are correctly connected with the media players and output screens.
2. In the SWNet UMP Platform, check if the audio setting for all the devices is set to **'HDMI'**. (The user can also use the **'3.5mm'** ports on the back of devices if necessary.)
3. Login to the SWNet Designer Software.
4. **'Drag&Drop'** one panel component and one signal component into the **'UI Design Area'**.
5. Double-click the panel component and in **'Panel Setting'**, change the number of rows and columns to 1 and 2 and assign receivers to each window in the panel.
6. Click **'Audio Follow'** in the menu and then click **'Add'**.
7. Enter **'1x2'** in **'Divide'** and assign each receiver to the corresponding window.
8. Ensure that each window has a **'Link Node'** to one of the receiver by entering the IP address.
9. In **'Input Setting'**, tick the input signals that will be used as the inputs.
10. Go back to **'UI Design'**, click on the signal group and in the **'Link'** tab, choose the signal group assigned to this signal component.
11. **'Drag&Drop'** one slider component and one get back component into the **'UI Design Area'**.
12. Click on the slider component and in **'Link'**, click **'.....'** and then choose the receiver from the **'Output List'**. Then the slider component will be bound to the chosen receiver.
13. Click on the get back component and in **'Link'**, click **'.....'** and then choose the receiver from the **'Output List'** in **'Query'** and **'Receive'**. Then the get back component will be bound to the chosen receiver.
14. Repeat the above three steps (11-13) for the other receivers.
15. Click **'Upload'** in the **'Designer Tool Menu'**. When it is completed, a window should pop up with **'Upload succeed'**.
16. Login to the SWNet Client and the user should be able to adjust the volume of each screen with the SWNet Client and each screen will provide sounds.

8. Troubleshooting

Always ensure that all the SWNet endpoint devices are powered up and connected into the same network.

8.1. Device missing in the SWNet UMP Platform/Software Designer

1. Check if all the devices are powered on.
2. Check if the switch of each device is on the correct side.
3. Check if all the devices are connected to the same network.
4. Reset and then restart all the devices.

8.2. Outputs showed unauthorised in the SWNet Software Designer

1. Check if the custom ID and IP are entered correctly.
2. Check if the protocol version of the receivers is set on 'scode' using the SWNet UMP Platform.
3. Restart all the devices.

8.3. Upload failed in the SWNet Software Designer

1. Check if all the devices are correctly connected using the SWNet UMP Platform and the SWNet Designer Software.

8.4. SWNet Client connection failed (Download resource failed, please reload.)

1. Check if all the devices are correctly connected using the SWNet UMP Platform and the SWNet Designer Software.
2. Check if the username, password and IP address are correct.
3. Ensure that there is at least one videowall being set up in the SWNet Designer Software.

8.5. No preview for input signals in the SWNet Client

1. Open the SWNet Software Designer and check if there is any other IP address displayed except the Ethernet connection. If so, disable such connections and restart the SWNet Client.

8.6. Unable to login KVM

1. Ensure that the username and password are correct.
2. Check if the user is authorised to the station using the SWNet Designer Software.

8.7. Unable to use videowall or KVM communication in KVM (Screen lock)

1. Ensure that there is at least one videowall being added to the SWNet system. (KVM videowall)
2. Ensure that there are at least two stations being added to the SWNet system. (KVM communication)
3. Check the authorisation status of the current user to the specific station.

8.8. Mouse move in the wrong direction between screens

1. Check if the HDMI cable and the USB cable are connected between the same PC and transmitter.

8.9. Unable to send out commands to a 3rd party device

1. Ensure that the 3rd party device is connected into the same network as the SWNet system.

8.10. Unable to control the SWNet system with a 3rd party controller

1. Ensure that the 3rd party controller is connected into the same network as the SWNet system.
2. Check if the 3rd party controller sends commands out via UDP.

8.11. Unable to use/preview signals from RTSP streaming

1. Ensure the parameters for the additional device is entered correctly (IP address/Main/sub-stream address) (The user can check the stream address using the Potplayer/VLC software.)
2. Ensure a receiver has been binded to the additional device.
3. Ensure that the output resolution does not exceed the decoding limitation of the receiver.

8.12. Outputs on the videowall does not perform properly (frame lock lost/stuttering/blurring)

1. Ensure that the resolution of the outputs on the videowall does not exceed the decoding limitation of the receiver.
2. Ensure all the devices have been synchronised in the UMP Platform.
3. Ensure that the IP switcher meets the minimum requirement as specified.

SEADA are always available to offer support, including full online training videos, webinars and more advanced 1 to 1 training. If you do need to contact us, please get in touch through our phone, the number is +44 01527 584364 or send us an email at sales@seada.co.uk.

Commands

UDP Socket:

IP address: 224.168.1.1

Port: 41234

Save Layouts

{SaveScene;Panel_ID;Scene_ID,Scene_Name}

Panel_ID: The UUID of the videowall, which can be found in the SWNet Designer Software starting from 600001.

Scene_ID: The ID for the saved layout.

Scene_ID: The name of the layout that can be viewed in the SWNet Client.

For example:

{SaveScene;600001;001;L01}: Save the current layout for videowall 600001 as layout ID 001, of which the name is L01.

Recall Layouts

{CallScene;Panel_ID;Scene_ID}

Panel_ID: The UUID of the videowall, which can be found in the SWNet Designer Software starting from 600001.

Scene_ID: The ID for the saved layout.

For example:

{CallScene;600001;001}: Recall the layout ID 001 for videowall 600001.

Delete all Layouts

{ClearScenes;Panel_ID}

Panel_ID: The UUID of the videowall, which can be found in the SWNet Designer Software starting from 600001.

For example:

{ClearScenes;600001}: Delete all the layouts for videowall 600001.

Delete certain layouts

{DeleteScene;Panel_ID;Scene_ID}

Panel_ID: The UUID of the videowall, which can be found in the SWNet Designer Software starting from 600001.

Scene_ID: The ID for the saved layout.

For example:

{DeleteScene;600001;001}: Delete the layout ID 001 for videowall 600001.

Get layouts IDs

{GetSceneNames;Panel_ID}

Panel_ID: The UUID of the videowall, which can be found in the SWNet Designer Software starting from 600001.

For example:

{GetSceneNames;600001}: Get all the layouts IDs including saved using KVM and SWNet Client for videowall 600001.