

SWPro Management Software User Manual

(SWPro)

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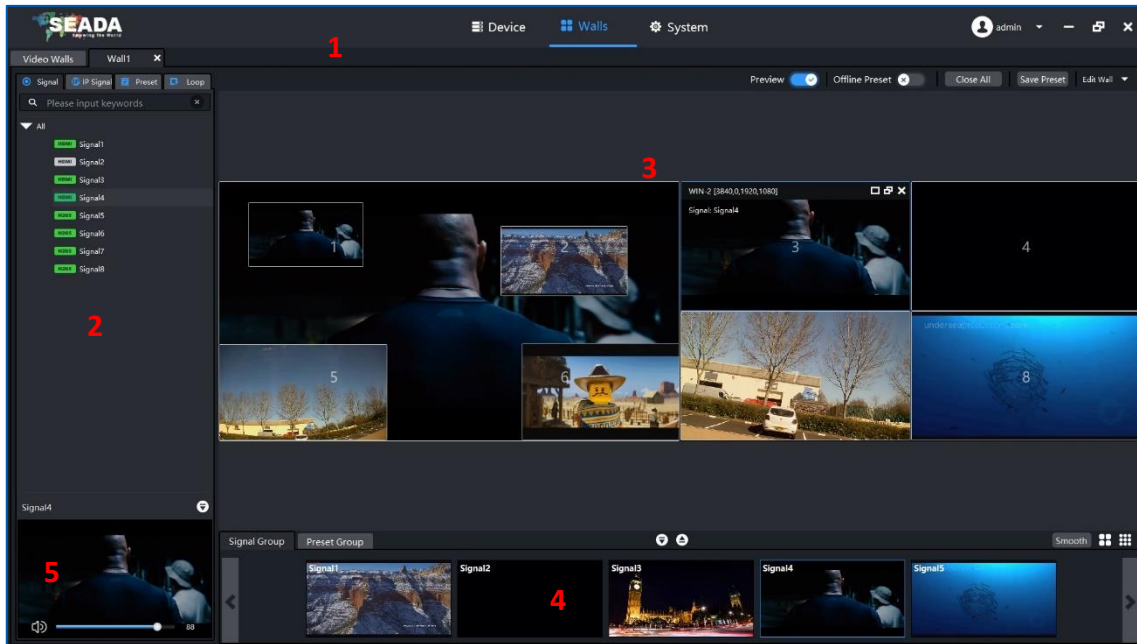
Note:

Before starting to use this manual, it is recommended to follow the instructions in 'SolarWall Pro Controller Quick Start Guide' to ensure the SWPro software has been properly installed and the controller has been configured and connected to the control PC.

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0. overview



SWPro.exe is a program that is used to control the SolarWall Pro video wall controllers. It provides a GUI in ribbon style for the users and enable users to interactively move, resize, position and crop any input capture windows. The whole GUI consists of four main parts:

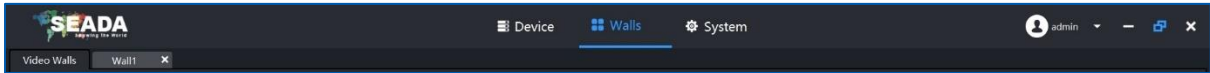
1. Toolbar
2. Application Toolbar
3. Video Wall Display Area
4. Group Preview Toolbar
5. Individual Preview and Audio Volume Control

SWPro.exe enables users to create and save video wall layouts and load them whenever needed. Moreover, it also allows users to create a layout looping schedule to automatically switch between different layouts.

- Friendly user interface
- RS232 and Telnet
- Create, copy, save and delete layouts
- Import or export layouts
- Hot key for each layout
- Looping ability between layouts
- Text overlay on any input source
- Text overlay on any output source
- Position, re-size and crop input windows
- Input signal preview
- Support audio for each input/output
- Support Windows2000/XP/Vista/7/8/10.
- User authority management
- Drag and drop easy operation
- Unlimited video walls control simultaneously

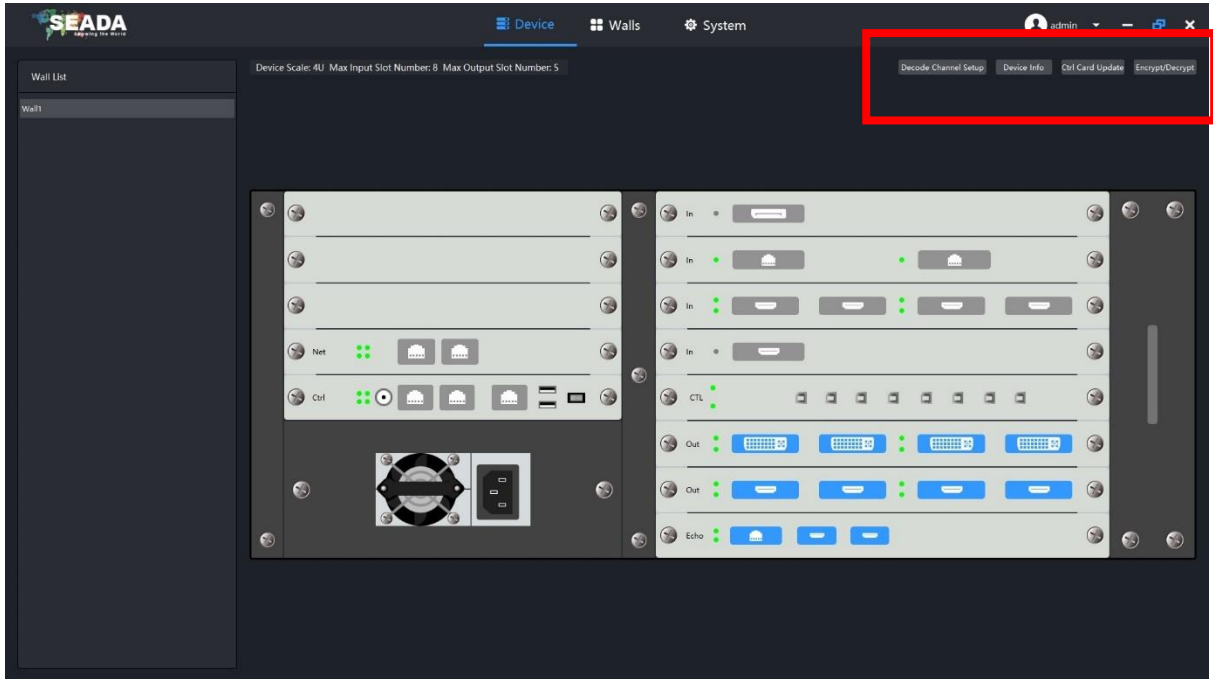
1. Toolbar

The ribbon style tool bar has three groups of tools: **Device**, **Walls** and **System**.



1.1. Device

All the parts' information will be displayed in this '**Device**' section. All the input and output cards will be automatically detected and displayed in this section.



- Decode Channel Setup



If the system is equipped with IP decode cards, users are able to adjust the Brightness, Hue and Contrast for each decode channel individually.

- Device Info
- Ctrl Card Update
- Encrypt/Decrypt

Showing the version of each card in the system

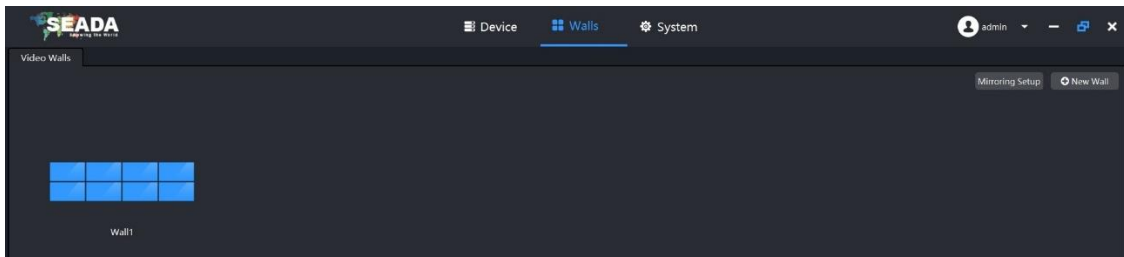
Used to update the control card firmware

Demo unit active period control



In '**Device**', users can add OSD on both output ports and input ports (OSD on input can also be added in **Video Wall Display Area**)

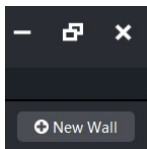
1.2. Walls



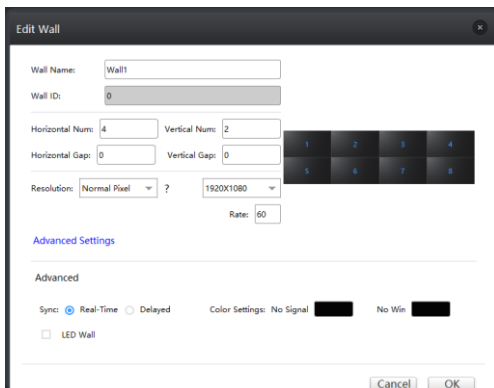
In 'Walls' section, users are able to create/delete the video walls and set up the configuration for the video walls.

Once connected, the previous configured layout will be shown in Video Walls Configuration Interface as above (see Wall1 of 2x4 above).

1.2.1. Create New Wall



SW Pro controllers support multi video walls in one controller. Users are able to create unlimited video wall layouts and configurations in one controller. Users can add new video wall by pressing the **New Wall** button at top right corner of the screen to open the **Edit Wall** dialog box as below.



- **Horizontal Num and Vertical Number**
The number of screens and the layout of the screens for the video wall
- **Resolution**
The signal format, resolution and frame rate can be set up in this section.
- **Horizontal Gap and Vertical Cap**
In this section, screen bezel can be compensated to obtain accurate display of the image. Add negative number for overlay needed for edge blending application.

Bezel compensation calculation:

Unit: pixel, and assume the parameter as follow

Monitor Bezel width: left = a, right = b

Monitor Bezel width: top = c, bottom = d

Monitor dimension (exclude bezel) = L x H

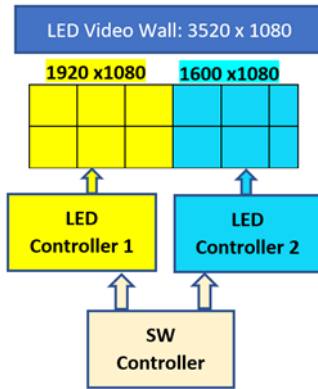
Monitor resolution = $x * y$ pixel (e.g. 1920 x 1080)

$$\text{Vertical} = \frac{a+b}{L} * x$$

$$\text{Horizontal} = \frac{c+d}{H} * y$$

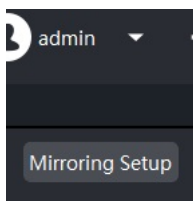
- In **Sync** section, users can set up outputs frame lock as **Real-Time** for LCD/LED/DLP when every output needs to be perfect frame locked, or choose '**Delayed**' for old CRT screens for the video wall.
- **Color Settings** enable users to choose the output window display colour when there is no signal and the background colour.
- Set up LED Video Wall

e.g. To set up SW Pro controller for a LED video wall with 3520 x 1080 pixels, controlled using two LED controllers which are supplied with video source from SEADA SW Controller.

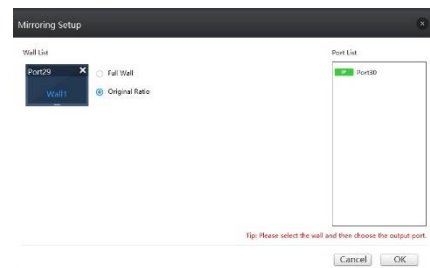


1. Set up a 1 x 2 LCD screen video wall with 1920 x 1080 and zero bezel correction (1, 2, 3 above)
2. Set up LED wall with the total solution of 3520 x 1080 (No.5 in image above)
3. Both outputs of SW controller will send out 1920 x 1080 resolution, But the 2nd output with 320 x 1080 pixel at the right side will not show any video source (show black screen) to LED controller 2.
4. Use LED controller 2 to crop the 1600 x 1080 from the 2nd output from SEADA SW controller to crop out the black screen section to match the LED screen pixel by pixel.
5. Log screen is used to split the LED video wall into certain amount of equal sections for displaying input windows.

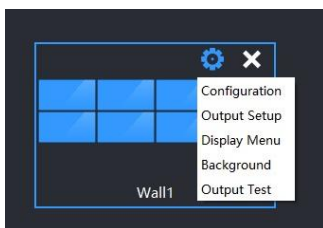
1.2.2. Mirroring Setup



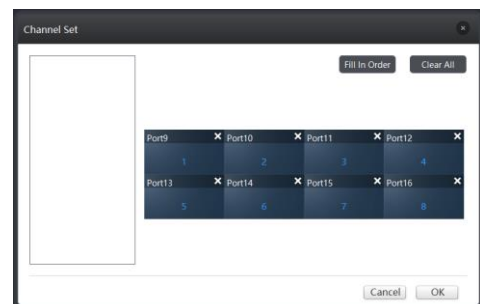
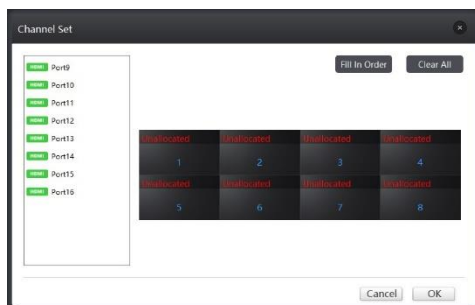
This feature is optional and enabled with 'SWPro-MP' card added in the system. The card is Video wall mapping card with 2 HDMI and 1 IP outputs, supporting mapping up to two video walls per card via HDMI or IP, supporting audio as well. With this feature, some users are able to see the whole video wall content at 1080@60fps quality at a local PC in their offices instead of in the command and control room.



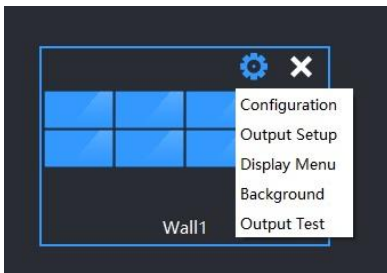
1.2.3. Output Channel Setup




Click on Setting button on Video Wall to open the drop down menu and choose 'Output Setup'. In this section, users need to match the output card ports location to the video wall screen locations to make sure the output to the right screen in the video wall.




1.2.4. Edit Existing Video Walls

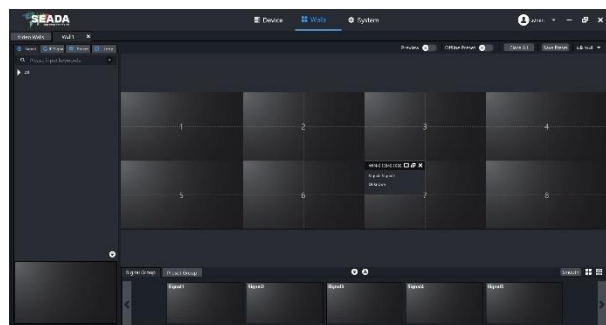


Users can delete the existing wall simply by clicking the  button on the video wall. Users are also able to edit the existing video wall using the drop-down menu by right-clicking on the video wall.

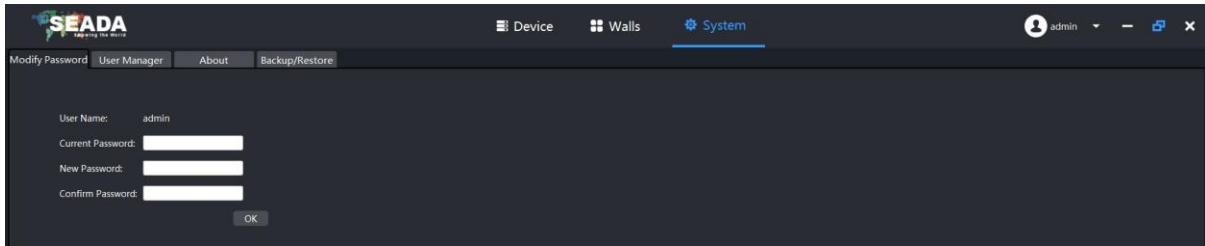
- Configuration: it is to open the 'Edit Wall' dialog box for users to edit the configuration to the video wall
- Output Setup: it is to open the 'Channel Setup' dialog box for users to edit the configuration to the video wall
- Display Menu: it is to open the 'Display Menu Setup' dialog box for users to add the scrolling text OSD to the video wall.
- Background: it is to open the 'Wallpaper Setup' dialog box for users to add the desktop wallpaper (jpg format) to the video wall.
- Output Test: users can test the individual ports of the output cards to ensure they work properly.

1.2.5. Open the Video Wall User Interface

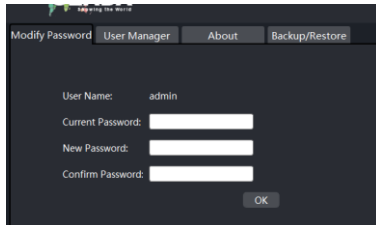
Users can open the video wall user interface by double-clicking the video wall layout icon. Please be aware that the default setting for Preview is off. Preview  needs to be enabled to see the live video in SWPro software



1.3. System



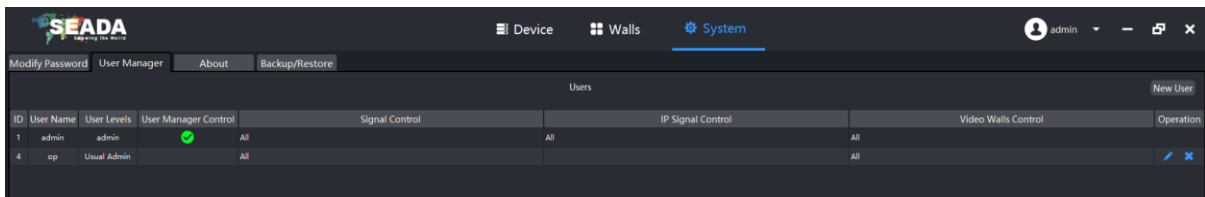
➤ Modify Password



Users can change the system log in password here.

Note: Please record and store the new password somewhere secure for future reference.

➤ User Manager



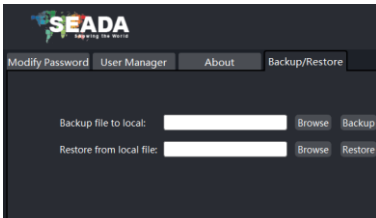
Users can create different user levels here with different authorities.

➤ About



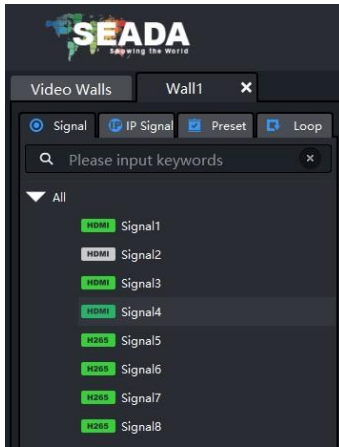
It shows the software version information

➤ Backup/Restore



It backs up and restores the SW Pro video wall controller's system setup here.

2. Application Toolbar



2.1. Signal

The **Signal** window displays a list of input sources that can be displayed onto the video wall. The system will automatically identify the type of source.

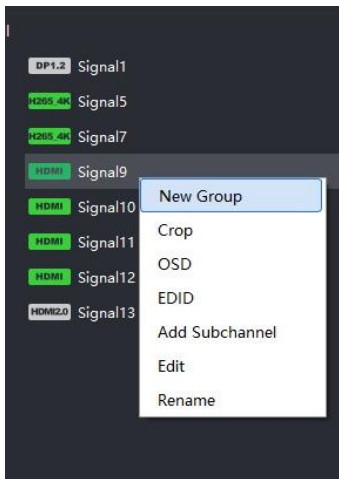
It will show green colour if there is signal on the port or grey if there is not (except IP decode cards, all ports show green all the time)

2.1.1. Open a Window

Use the mouse to select the required input and then drag & drop to a preferred position on the **Video Wall Display Area**. The system will automatically fit the new open window onto one of the displays on video wall.

Or select the required input and then draw a window on the **Video Wall Display Area**.

2.1.2. Drop Down Menu



- New Group**

Users can create a new group here and separate the input sources into different groups for easier identification.

- Crop**

Users can crop any part the signal to be displayed. Unit is in Pixel.

Left Border	Distance from left edge
Top Border	Distance from the top edge
Right Border	Distance from the right edge
Bottom Border	Distance from the bottom edge

Note: leave all them in '0', the signal will be back to normal

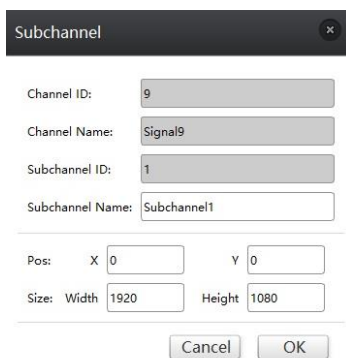
- OSD**

User can add OSD on the input video source

- EDID**

User can customise the EDID for each input source

- Add Subchannel**



User can create unlimited subchannels with different cropped area from the same input video source.

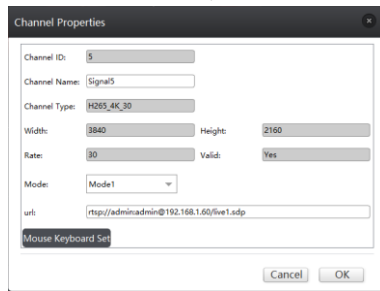
The unit is Pixel.

Pos. X	start pixel point at the X axis
Pos. Y	start pixel point at the Y axis
Size Width	cropped window width
Size Height	cropped window height



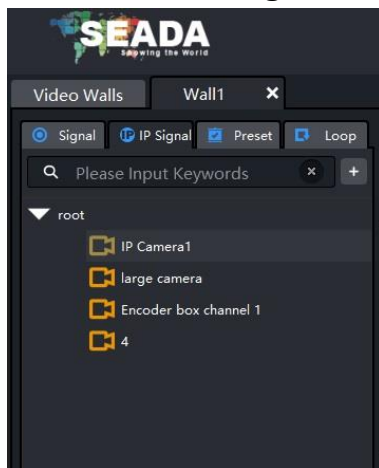
- **Edit** Users can set up the KVM for this port if KVM feature is enabled

Note: For IP card, users can add IP streaming address and set up IP card mode here



- **Rename** Users can rename the input signal for easier identification

2.2. IP Signal



In this section users are able to set up the entire IP input source for system to decode and capture RTSP IP signals. SEADA **SWPro-IN-IP16** IP decoder card is able to decode & capture up to 16 channels of 1080P or 36 channels of 720p IP sources.

Note: IP streaming IP addresses need to be at the same group of IP decode cards.

Before going any further, ensure the RTSP address of the IP signal has been obtained either through IP camera manual or suppliers.

For example: D-Link-2230 has the RTSP address of **rtsp://x.x.x.x/live1.sdp** where the **x.x.x.x** represents the IP address of the camera. Therefore the RTSP address for SolarWall video wall controller is **rtsp://a:b@x.x.x.x/video1.sdp** where **a** represents

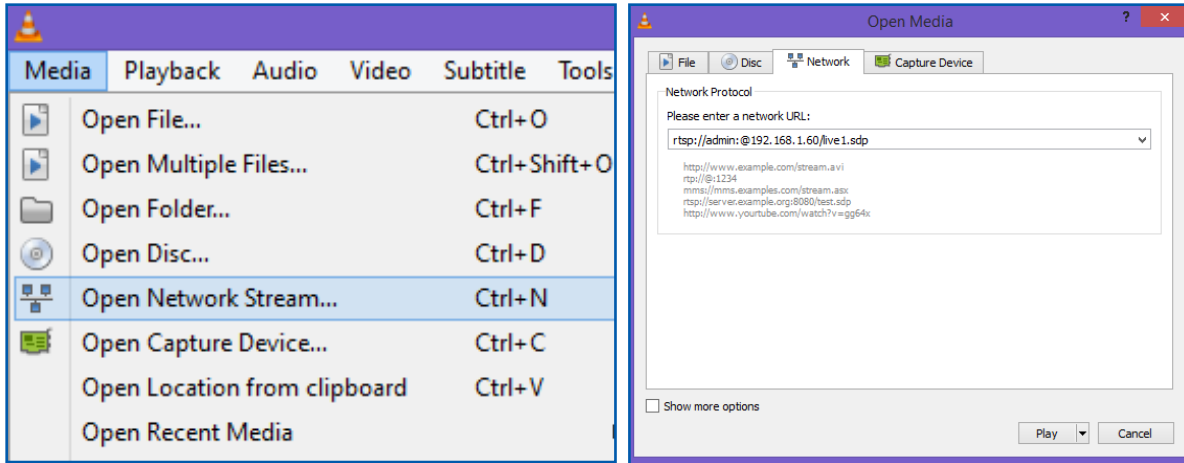
username and **b** represents password for the camera. If there is no password, please leave **b** empty.

Note: if the rtsp address for SolarWall system does not include username and password, the system will ask for username and password every time when the IP camera being used.

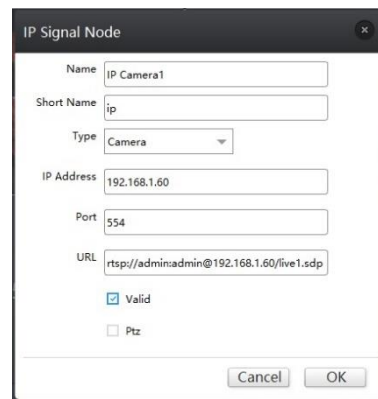
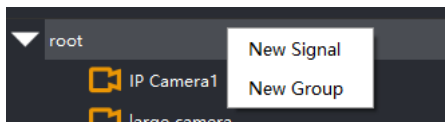
- 1) Using the software coming with the device to set up the IP address of each device to match the IP group of SolarWall Controllers (the default IP address for SW controller is: **192.168.1.65**). Ensure each input has a unique IP address in the system.
- 2) Use free download software of VLC media player to test the RTSP address of devices to ensure the RTSP address is valid. Ensure the cameras connect to control PC and IP cards at the same time through Ethernet switch, not connect to IP cards port directly.

Assume the IP address of D-Link-2230 is **192.168.1.60** and the username is **admin** without password, the RTSP address for this IP camera is **rtsp://admin:@192.168.1.60/live1.sdp**

The below setting will open the IP streaming from this D-Link-2230 IP camera



2.2.1. Add New IP Source

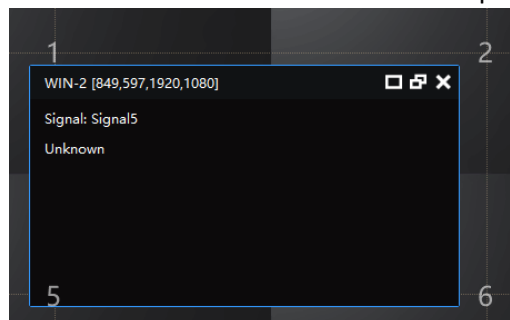


Right click on the root and choose 'New Signal' to open the 'IP Signal Node' box and then type in all the information needed for setting up the IP source.

2.2.2. Set up the decode card for the IP sources

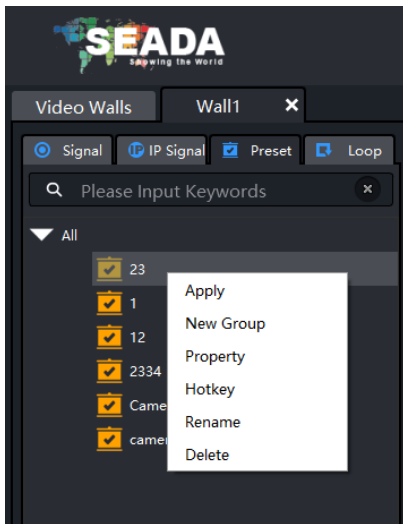
Once the IP address and decode mode has been set, the IP decoder card is ready to be linked to IP cameras accordingly. There are two ways to link them together

- 1) Drag and drop
 - I. Open one IP window from Signal Management to **Video Wall Display Area**. It will be a black window since there is no IP camera input on this channel.



- II. And then go to camera list to drag the IP camera and drop into the window to form a link.
- 2) Enter rtsp address to decode card directly
Enter the rtsp address of IP cameras in 'Edit' in 2.1.2 accordingly

2.3. Preset



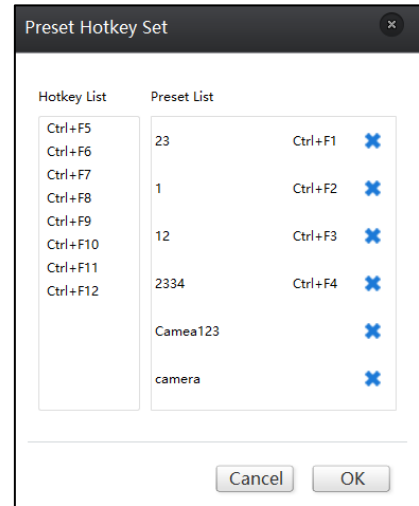
In **Preset**, it lists all the preset layouts of the video walls for users to choose from.

- **Recall a preset layout**

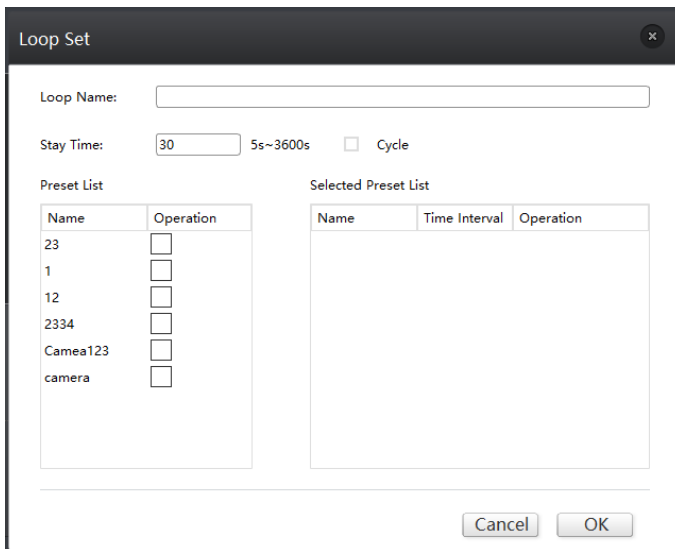
Users can Recall a layout by double clicking the layout or press 'Apply' in drop down menu

- **Hotkey**

Users can arrange up to 12 hotkeys so that users can recall the preset layouts using keyboard.



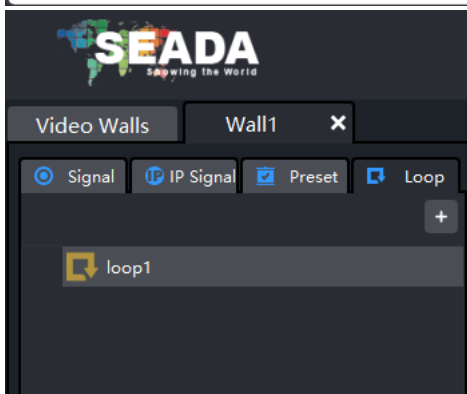
2.4. Loop



This offers the function to cycle through the pre-set layouts in a specific time interval automatically allowing users to view each layout in turn.

Click to open Loop setting window to choose the pre-set layouts for the input contents looping. The time gap and sequence of the layouts can be set up in this window as well.

Note: please tick the Cycle if a nonstop looping is needed. Otherwise, the looping will stop after one cycle.



Once setup, the new loop name will be shown in loop of Application Toolbar.

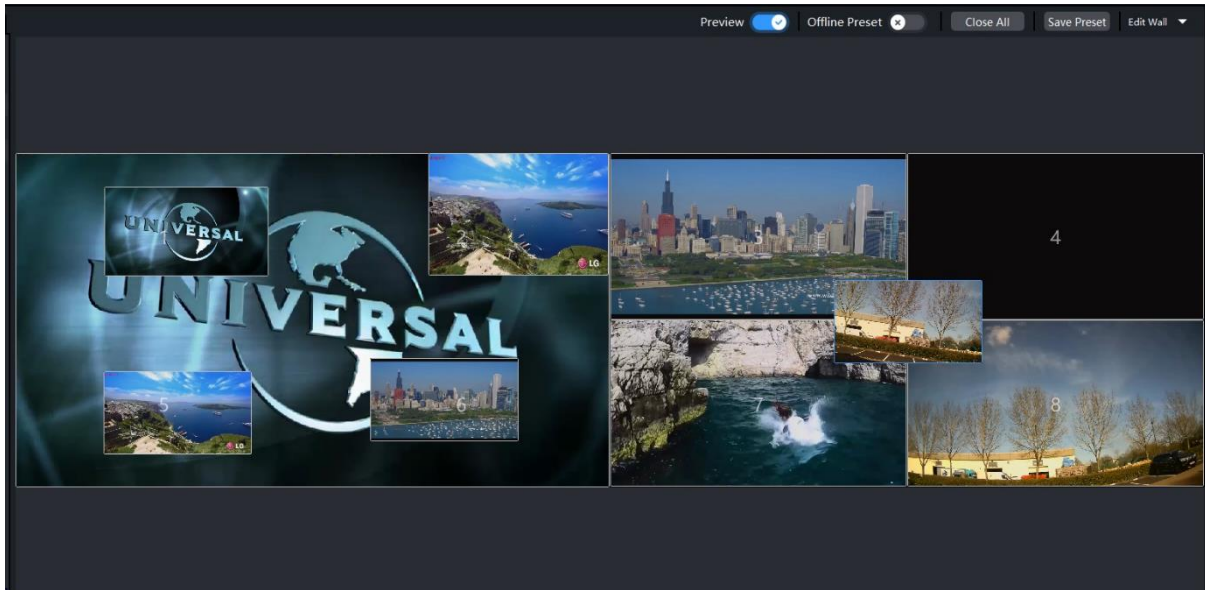
Users can double click to activate it and double click to deactivate it

Tip:

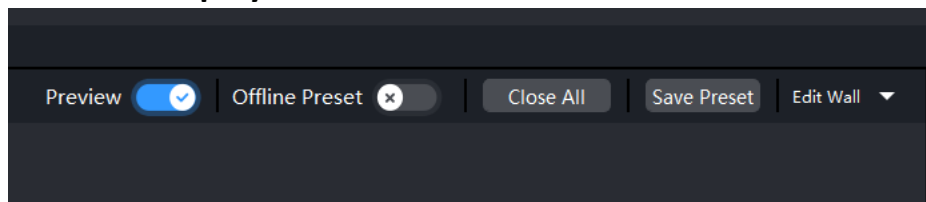
The Cycle logo is yellow when inactive and becomes green when it is active.

3. Video Wall Display Area

In **Video Wall Display Area**, users are able to control the input video source windows on the video walls.



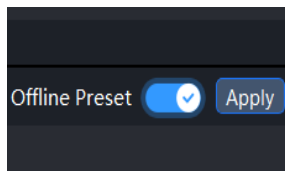
3.1. Display Area Toolbar



➤ **Preview**

It enables and disables the preview function

➤ **Offline Preset**



When it is enabled, users can create a new layout without affecting the live layout on video wall until pressing 'Apply' to change the layout on video wall with the new layout on PC screen.

Note: all changes on SWPro software will not come alive until the Apply is pressed or this function is disabled.

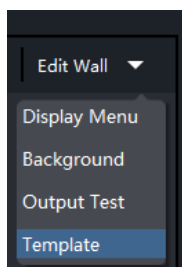
➤ **Close All**

Close all the windows on video wall

➤ **Save Preset**

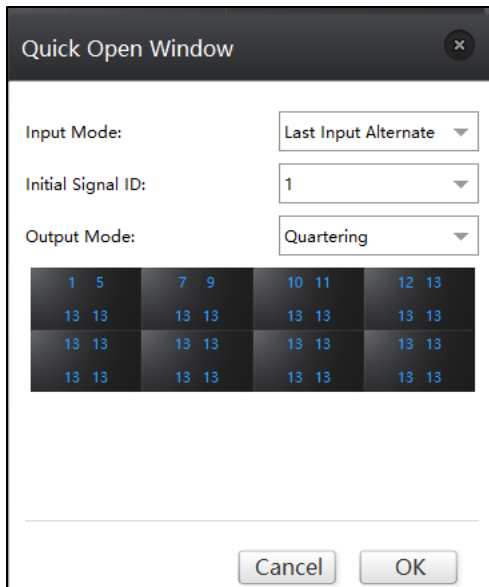
Save the current layout as preset layout onto the controller

➤ **Edit Wall**



- 1) **Display Menu:** it is to open the 'Display Menu Setup' dialog box for users to add the scrolling text OSD to the video wall.
- 2) **Background:** it is to open the 'Wallpaper Setup' dialog box for users to add the desktop wallpaper (jpg format) to the video wall.
- 3) **Output Test:** users can test the individual ports of the output cards to ensure they work properly.

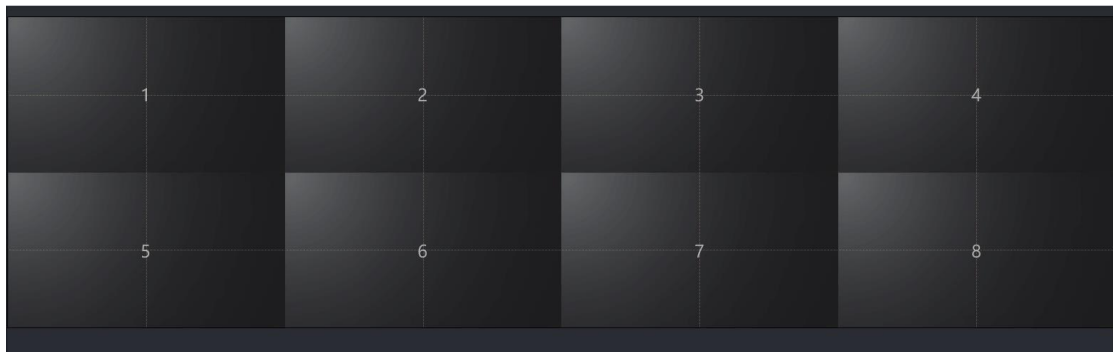
4) Template



In 'Template', users can choose the preset template for the windows opened on the video wall in order to simplify opening windows procedure.

3.2. Control the Windows

The below image shows what it looks like when the **Display Area** without any open windows




3.2.1. Open windows

- 1) Use the mouse to select the required input in **Application Toolbar** (2.1.1) and then drag & drop to a preferred position on the **Video Wall Display Area**. The system will automatically fit the new open window onto one of the displays on video wall.
- 2) Highlight the input source in **Application Toolbar** and then draw the window in **Video Wall Display Area**
- 3) Drag & drop the input window onto **Video Wall Display Area** from **Group Preview Toolbar**

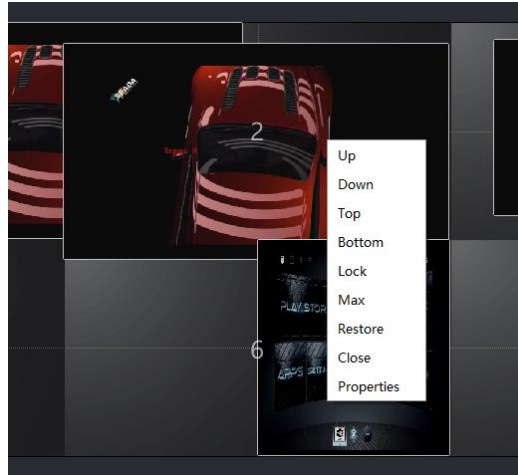
3.2.2. Resize a window

- 1) Move the mouse to the border of the window. The cursor will be changed to a resize cursor. Press and hold the left mouse button and drag the border to resize the window to required size
- 2) Double click the video window to automatically resize the window to fit the grid area (each window is divided into 4 even grids in default) where the window was in.

3.2.3. Restore a window

- 1) Either click the **Restore**  button on the title bar to restore the window


- 2) Or right click the window and then choose Restore in the drop-down menu




3.2.4. Move a window

- 1) Use the mouse to highlight the window and position the cursor on the window
- 2) Press and hold the left mouse button and drag the window to the required position, and release the mouse button

3.2.5. Close a window

- 1) Either click the Close button  on the title bar
- 2) Or right click the window and then choose **Close** in the drop-down menu

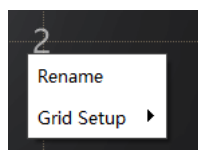
3.2.6. Full Screen

- 1) Either click the Full Screen button  on the title bar
- 2) Or right click the window and then choose **Max** in the drop-down menu

3.2.7. Lock Screen

- 1) Right click the window and then choose **Lock** in the drop-down menu. The locked window will not be moved until unlocked.

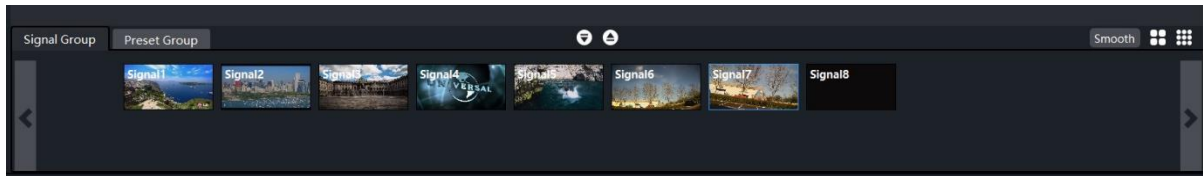
3.3. Video Wall Windows Grids Setup



Right click on the empty Display Area and choose Grid Setup to change the window grid setup for the video wall

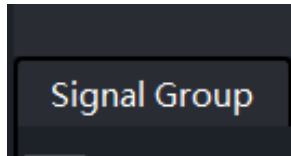
The default setting is 2x2 for each screen and users can set it up for 1x1, 2x2, 3x3, 4x4

4. Group Preview Toolbar



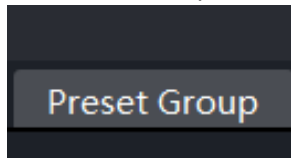
Users can preview all the input video sources and the preset layouts in this section by choosing 'Signal Group' or 'Preset Group' buttons

➤ Signal Group



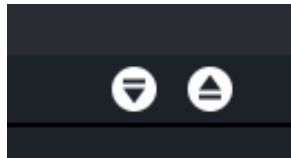
- Users can drag&drop from the Signal Group to open the windows directly and recall the preset layouts by double clicking the preset layout
- Double click each preview window to open a larger single window to enable users to observe more detail

➤ Preset Group



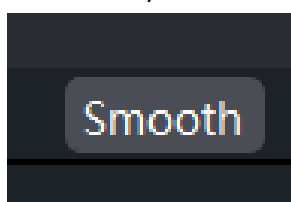
- It illustrates all the preset layouts
- Users can recall the preset layouts by double clicking the preset layout

➤ Space Buttons



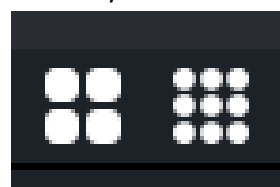
- Users can reduce/increase or hide the Preview Toolbar using these two buttons

➤ Smooth/HD



- Users can choose the quality of the preview video source between Smooth and HD.
- Smooth mode will make sure the frame rate is high enough to ensure the smooth view
- HD mode offers 1080p resolution with low frame rate.

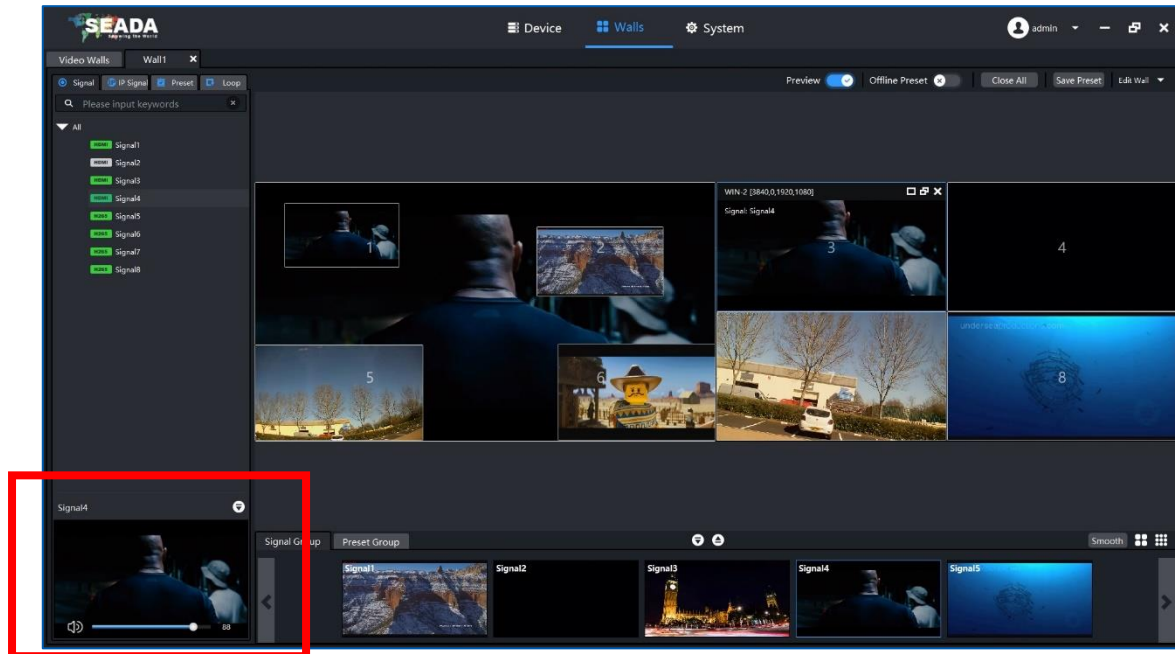
➤ Array



- Users can change the size of the input video thumbnails to get more detail by increasing the size of the thumbnails or get more sources to be visible by reducing the size of thumbnails

5. Individual Preview and Audio Volume Control

Users can preview each input video source, IP source and preset layout before doing any actions. Users can also control the audio volume in this section for input signals individually.



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