SPROLINK®

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MODULAR VIDEO WALL CONTROLLER

3D/4K PIXEL-TO-PIXEL LARGE SCALE SOLUTION

VD2

USER MANUAL

Content

1. Product Features

- Customize Output Resolution by Module

- EDID Management

- 3D Splicing and Switching

- Pixel-to-Pixel Splicing of Multi-channel 4K Inputs

- Visualization Software

- IPAD Control

- Projection Edge Blending

- Display up to 8 Layers by Single Port

![SPROLINK logo]

2. Project Introduction

3. Hardware Overview

3.1 Input Slots

VD2 provides 3 input option slots

Flexible configuration with any input module combination. With a wide range of options available including DVI-M, HDMI, Display port, VGA, DVI, Dual Link DVI, SDI, CVBS, HDBaseT, YPbPr/YCbCr, IP, Fiber, suitable for more application requirements.

VD SERIES Input Module Group		
Input	Quantity	Description
DVI-M	4	Support 2K input, compatible with HDMI/DVI/VGA/YPbPr/CVBS (With adapter) Support max. 1920x1200@60fps Support customized input resolution in EDID management Support Input Crop and OSD Support auto adjust for analog signal
DVI-D	4	Support HDMI 1.3 / DVI 1.0 input, HDCP compatible VESA Standard. Support max.1920x1200@60fps Support customized input resolution in EDID management Support Input Crop and OSD
VGA	4	VGA-VESA Standard Support max.1920x1200@60fps Support customized input resolution in EDID management Support Input Crop and OSD Support auto adjust
HDMI	4	Support HDMI 1.3 / DVI 1.0 input, HDCP compatible VESA Standard. Support max.1920x1200@60fps Support customized input resolution in EDID management Support Input Crop and OSD SMPTE Standard. Support 480i | 576i | 720P | 1080i | 1080P
SDI	4	SD-SDI | HD-SDI | 3G-SDI Standard. Support deinterlacing Support Long-line automatic equalization(100m) Support Input Crop and OSD
CVBS	4	SMPTE Standard. Support 480i | 576i Support Input Crop and OSD
HDMI 4K	2	Support HDMI 1.4b / HDMI 1.3 / DVI 1.0, HDCP compatible Support 3840x2160@30fps in max Support Input Hot Backup
4K@60fps HDMI/DP	3	Support DisplayPort 1.2 / HDMI 2.0, HDCP 2.2 compatible Support 3840x2160@60fps in max

IP	2	Support webcams / Ethernet streaming within 2k resolution
		Support H.264 & H.265 streaming from IP camera or other stream
HDBaseT	4	Support HDBaseT signal within 2K resolution
		Support 1920x1200@60fps in max
		Support Input Crop and OSD
Dual link DVI/DP	2	Support Dual-link DVI (24+1) and DP 1.1a
		Support max. 3840x2160@30fps or 3840x1200@60fps
		Support Input Crop and OSD
DP1.1a 4K	2	Support DP1.1, HDCP compatible
		Support 3840x2160@30fps in max
HDBaseT+ HDMI 4K	2+2	Support HDBaseT and HDMI 1.4
		Support 3840x2160@30fps in max
		Support Input Crop and OSD
Fiber	4	Support 4 channel Fiber input, HDCP compatible
		Support 10km transcend in single mode and 300m transcend in multi-mode
		VESA Standard. Support max.1920x1200@60fps
		Support customized input resolution in EDID management
		Support Input Crop and OSD
		SMPTE Standard. Support 480i	576i	720P	1080i	1080P

3.2 Output Slots and Expandable I/O Slots

To meet varied projects, both input & output Module are compatible with flexible I/O Slot, which offering more possibilities. The Slot config are different based on model.

VD2 provides 2 output option slots

VD SERIES Output Module Group		
Output	Quantity	Description
DVI	4	Output format support SMPTE 720P|1080P Support max.1920x1200@60fps Support customized output resolution (Bandwidth optimization) Horizontal resolution maximum 3840 pixels Vertical resolution maximum 1920 pixels Support 8 layers configuration Compatible with VGA adaptor for analog signal
HDMI	4	Support HDMI1.3 / DVI 1.0 Support customized output resolution (Bandwidth optimization) Horizontal resolution maximum 3840 pixels Vertical resolution maximum 1920 pixels Support 8 layers configuration
Dual-Link DVI	2	Support Dual-Link DVI Support 3840x2160@30fps or 3840x1200@60fps in max
HDMI 4K	2	Support HDMI 4K 1.4b / HDMI 1.3 / DVI 1.0 Support 3840x2160@30fps in max
Fiber	4	Support 4 channel Fiber input, HDCP compatible Support 10km transcend in single mode and 300m transcend in multi-mode VESA Standard. Support max.1920x1200@60fps Support customized input resolution in EDID management Support Input Crop and OSD SMPTE Standard. Support 480i | 576i | 720P | 1080i | 1080P
HDBaseT	4	Support HDBaseT signal within 2K resolution Support 1920x1200@60fps in max
90° Rotate Output	2	Support 1920x1200@60fps in max Support (0°-90°-180°-360°) Rotation
Any Rotation Output	2	Support 1920x1200@60fps in max Support (0°-360°) Rotation in any degree

| H.264 Preview Module | 2 | Support H.264 preview by net port |
		The default IP for H.264 preview is:192.168.1.210
		Default streaming rtsp://192.168.1.210:554/main
		Support input preview by HDMI out
DVI Preset Module	2	Output card Preview
		Preview the content of 8 outputs in single port
HDMI 2.0	1	Support 3840x2160@60fps in max with downward compatibility
		Support 8 layers free roaming

3.3 Control Slots
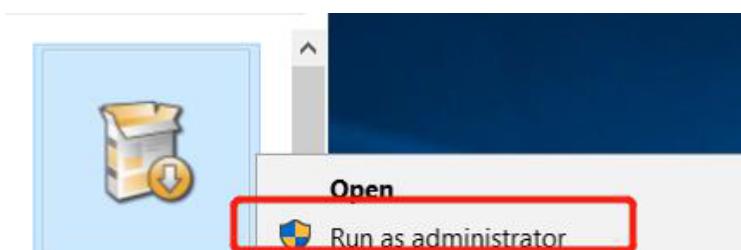
Comm. Board	3	Support RS232 / RJ45 control
		Default IP: 192.168.1.200
		RS232 out for external control

4. Operations

4.1 Installing Multiview Controller Software
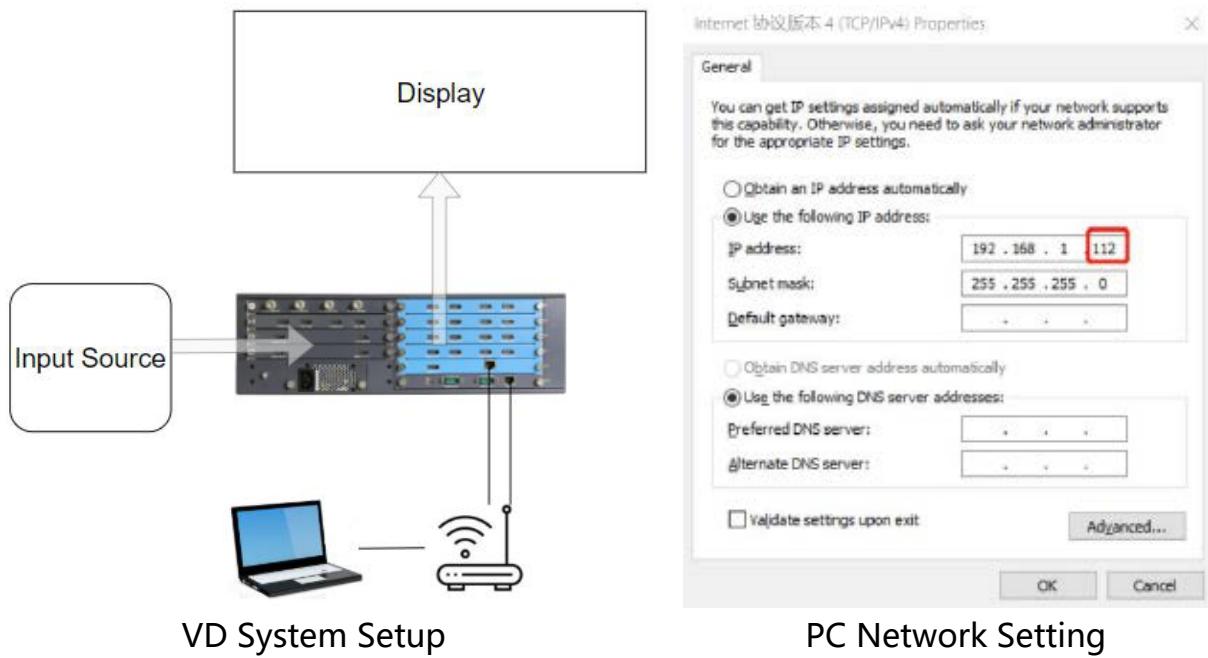
Right click icon, install software as administrator.

4.2 Connect the Device

Set up the device like below and ensure the IP of the computer and device is on

the same network segment. Default IP on VD is 192.168.1.200. Default IP on H.264
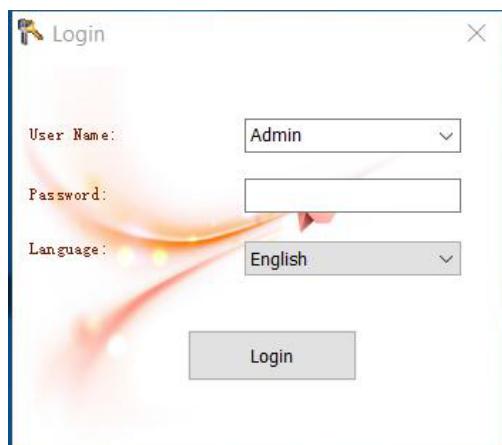
Preview net port is 192.168.1.210. Please note to avoid IP conflict.


VD System Setup   PC Network Setting
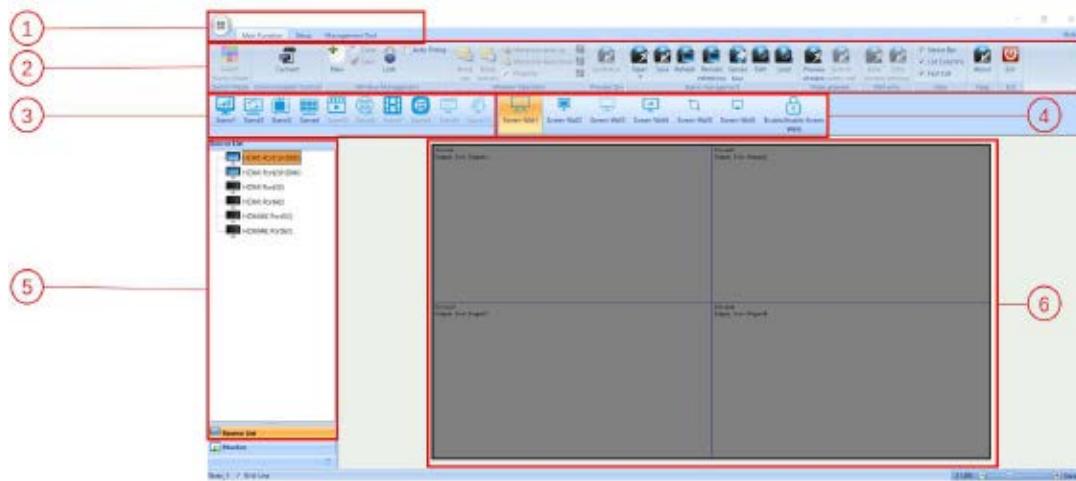
4.3 Log in the Software

Double click the icon ![icon] on the desktop. The log in interface will pop out. The

user name is Admin, and there is no password. Simply enter into the software by

click "Login". (Support user management to set password and authority)
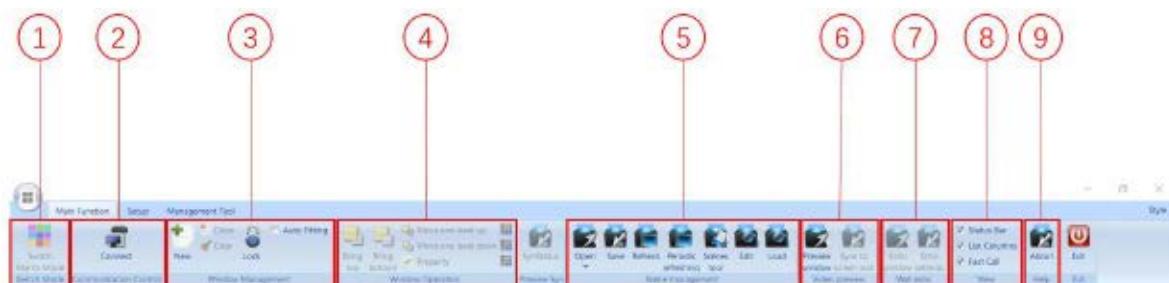
4.4 Homepage

| 1	**Main Function**：Select subsidiary content
2	**Sub - Menu Functions Select**： Parameters and functions setting
3	**Scene**：Load the scene to recall settings
4	**Video Wall Setting**： Individual control for different screen wall
5	**Input Source**：Input Source list
6	**Output Layout**： Configure the output layout according to the screen design
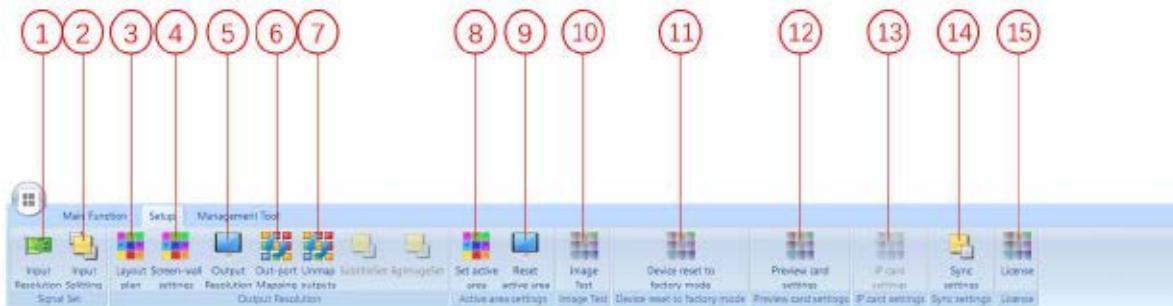
4.5 Main Function

1	**Switch Matrix Mode**： Turn the device to matrix mode
2	**Connect**： Communicate with device via LAN or serial cable.

	The default IP:192.168.1.200
3	**Layer Management:** New: Build a new layer, the layer can be loaded on the monitor directly. Close: close the layer Clear: clear all the layers Lock: lock the selected layer
4	**Layer Operation:** Layer order configuration. Move the chosen layer forward on top or backward on bottom.
5	**Save and Load:** Open：Load scene（less than 10 of the scene can directly load by the shortcut. Support 128 scene in max） Save：Save the present setting on specific scene. Refresh：Refresh the scene, periodic refreshing, scene Tour Edit：Edit the scene or content name. Load：Load the saving scene（read the scene after replacing the PC）
6	**Video Preview:** Need to select IP input card to preview the input and output layout.
7	**Wall Echo:** Need to select H.264 preview input card to realize output preview
8	**View：** Status Bar and List Columns open or close
9	**About:** Device information or software version

4.6 Setup Introduction
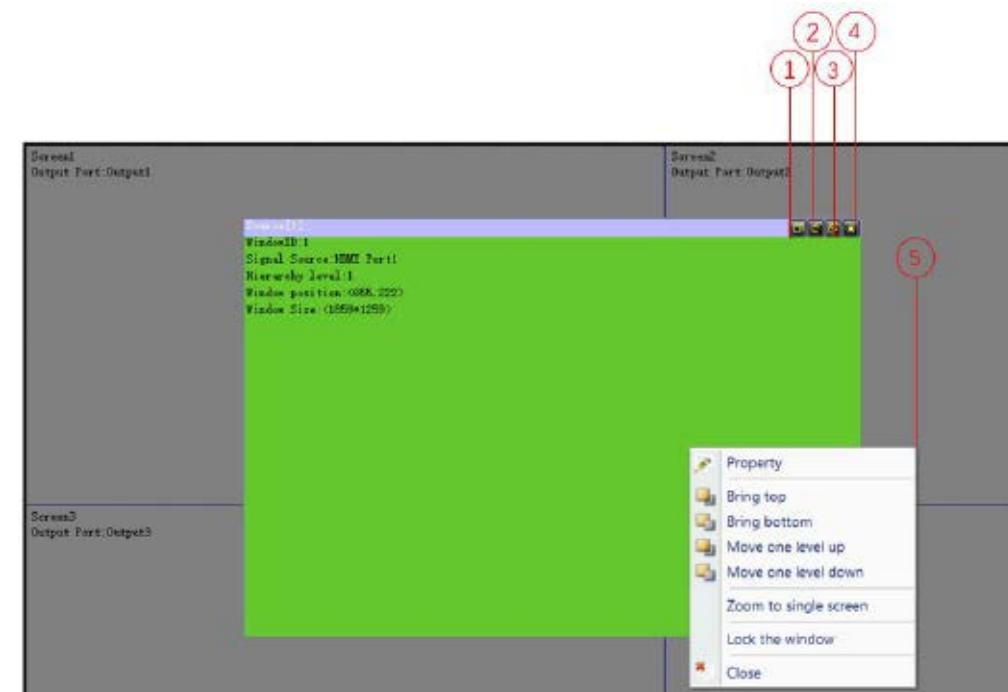
1	**Input Setting**：Rewrite the input EDID
2	**Input Splitting**：Crop the input signal
3	**Layout Plan**：Layout setting and output parameters
4	**Screen-wall Setting**：Setting the video wall location individually
5	**Output Setting**：Setting the output resolution and added the new customized resolution
6	**Out-port Mapping**： Config the output port to any location(output port swap)
7	**Unmap Outputs**：Reset all the output port
8	**Set Active Area**：Set the output window active area
9	**Reset Active Area**：Cancel the active area
10	**Image Test**： Test pattern, Background setting, OSD setting
11	**Device Reset to Factory Mode**： Reset device inputs, outputs and control
12	**Preview Card Setting**： Set the quality and quantity for streaming preview
13	**IP Card Setting**： Select IP input card and setting the IP card parameters
14	**Sync Setting**： Set the Sync mode is sync with back panel
15	**License**：Device working status

4.7 Management Tools

1	**Save Script:** Save the present setting, including layout and resolutions
2	**Load Script：** Load the script
3	**User Management：** Set the password and user authority
4	**Port Set:** Set the protocol and configuration for RS232
5	**Power On:** Turn on the screen by RS232 control
6	**Power Off:** Turn off the screen by RS232 control
7	**Network Camera：** Configure for IP camera
8	**Batch Processing:** Batch processing the script files

1	**Maximum Unit**：Make the layer to maximum unit
2	**Full Screen**：Make the layer full screen
3	**Restore**：Restore the layer to previous setting
4	**Close layers**：Close the layer
5	**Layer property**：Right click the layer and set the layer property

4.8 Project Operation

Project Information:

Led screen pixel size: 11928*1344
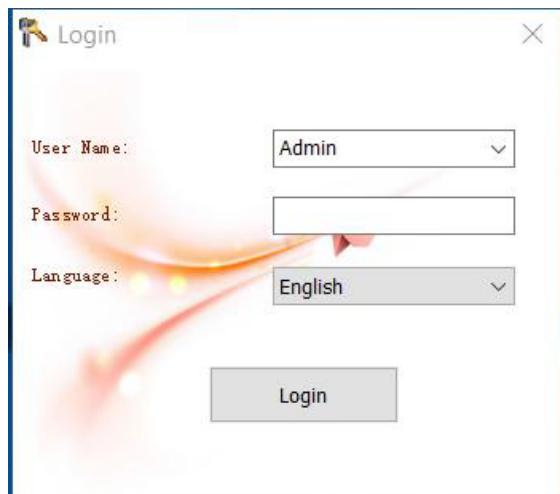
Requirement: Apply 8 sender cards to realize the pixel by pixel display.

4.8.1 Installation and Connection：

Copy the Multiview software to PC, double click to install the software. The

operation system support: Windows XP, Windows Server 2003, Windows 7/8,

Windows Sever2008, Windows 10.

4.8.2 Connection
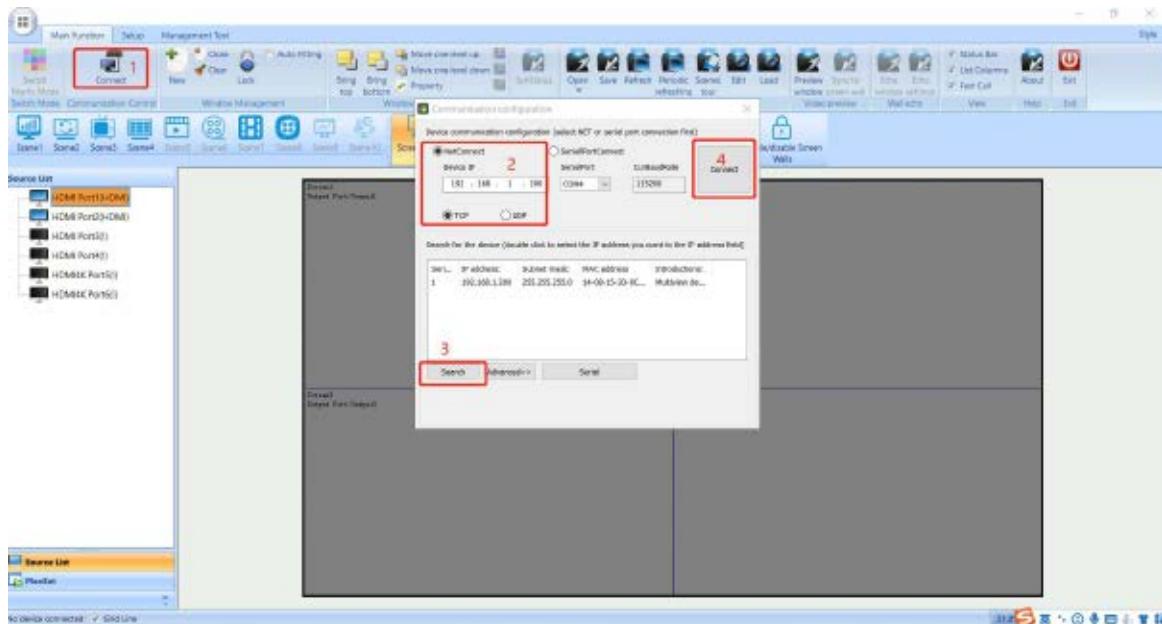
Click Login

Device default IP address: 192.168.1.200; IP of the control PC should be in the same

IP segment (E.g. 192.168.1.100)
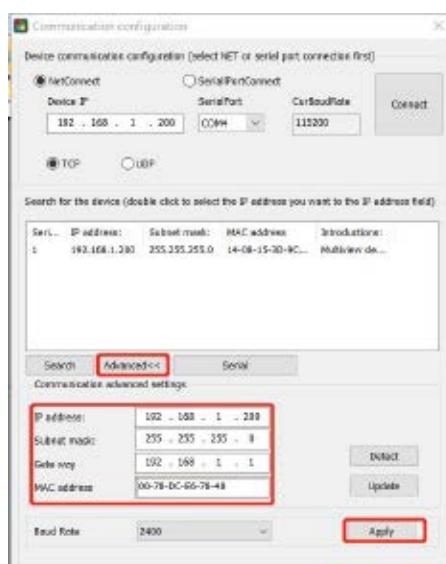
Select NET connection, Set IP address then connected.

Select RS232 serial connection, default baud rate is 115200.

4.8.3 IP address modify

Click advanced, the dialogue box will pop-up. Input the IP address, then click

Modify, the new IP will take effect after rebooting the device.

![SPROLINK logo]
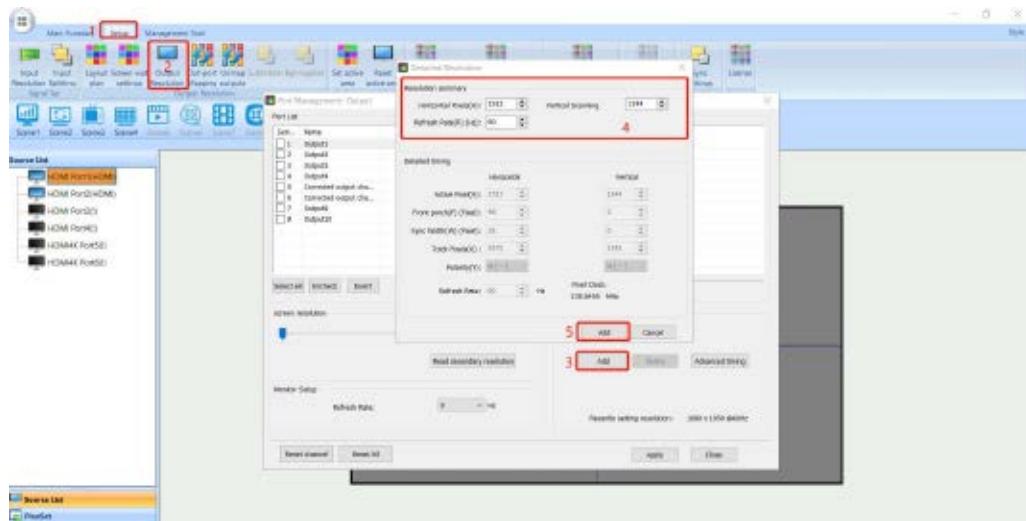
4.8.4 Output layout setting
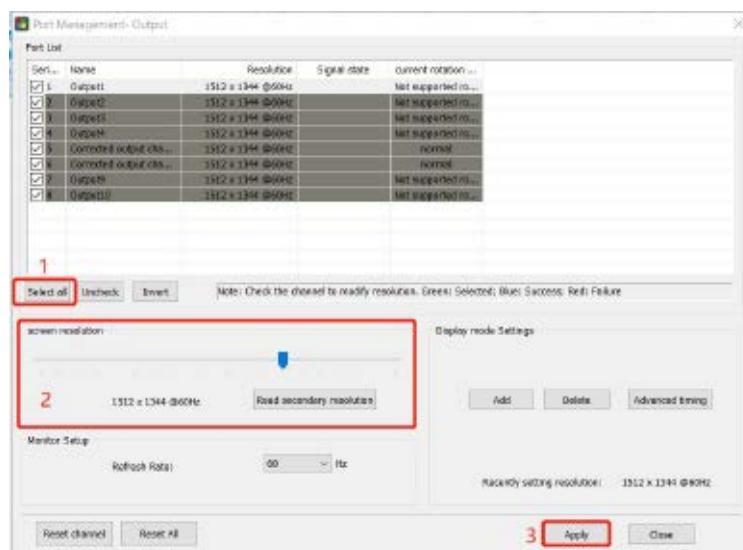
Screen size is 11928*1344, with 8 sender cards in total, 7 pieces 1512*1344 and

1 piece in 1344*1344, the parameters setting as following picture.

1. Output resolution setting: set the output resolution to 1512*1344 (sender card

maximum loaded setting)
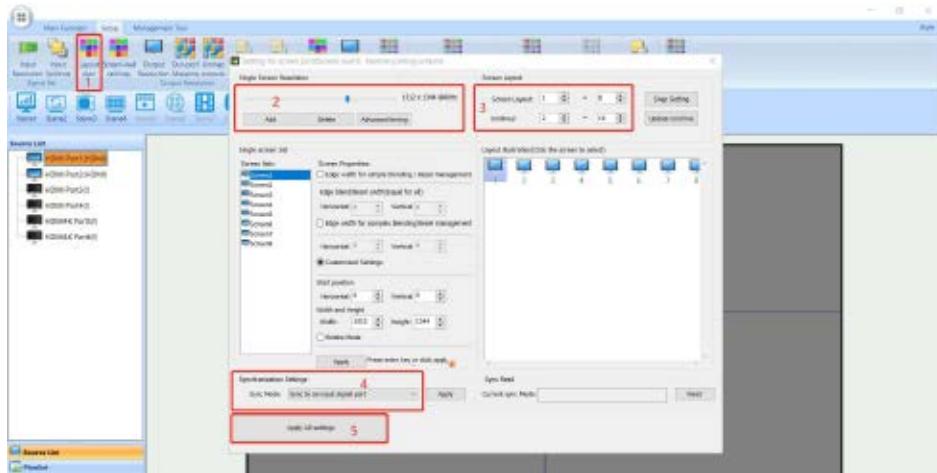
2. Select all the output ports, change the resolution to 1512*1344 and add

application, the signal status will prompt success.

3. Set the output layout, enter the splicing setting and select the resolution as

1512*1344, select the large screen combination as 1*8, align the grid line to 2*16,

then select the synchronization mode to synchronize to an input port. After that,

select the 4K HDMI interface as the sync source, then applies the splicing settings.
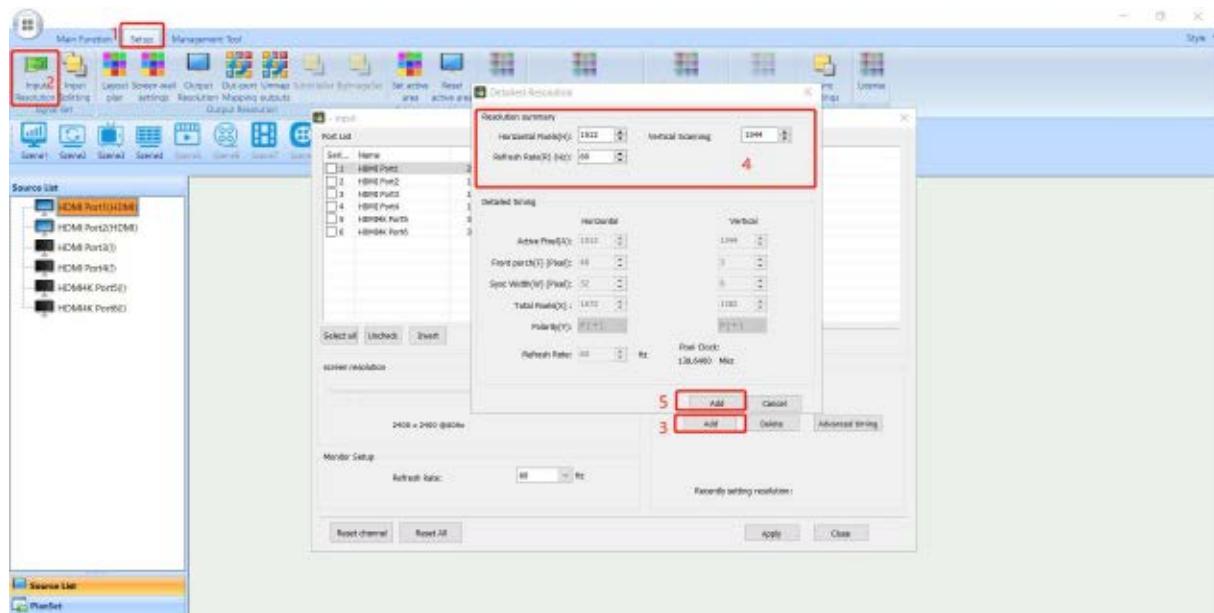
4. The output layout as the following picture shown.
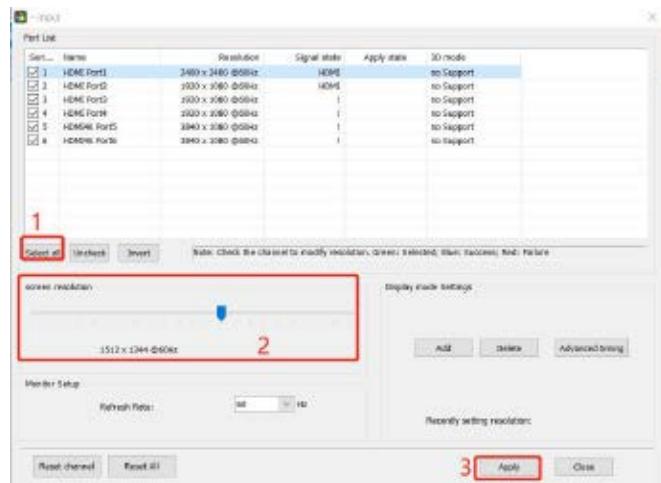
4.8.5 EDID Input Setting

1. Add an input resolution as 1512*1344 for Pixel to Pixel Display

![SPROLINK®]

2. Select the input interface (need to change the input resolution) and change the resolution to 1512 * 1344, then click application (some PC) need to re-plug the signal or restart the computer to take effect).
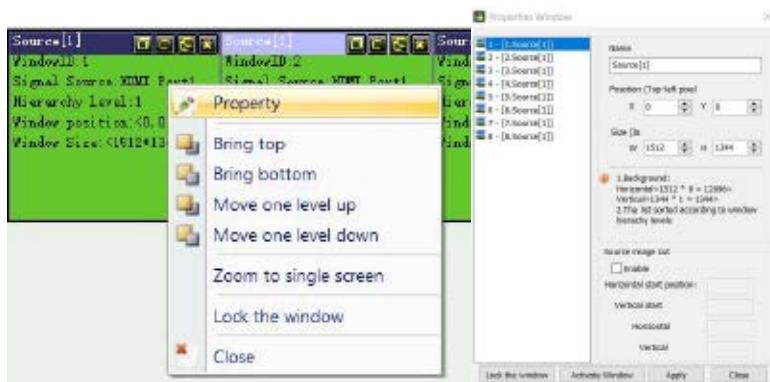
4.8.6 Three Ways for Layers Configuration
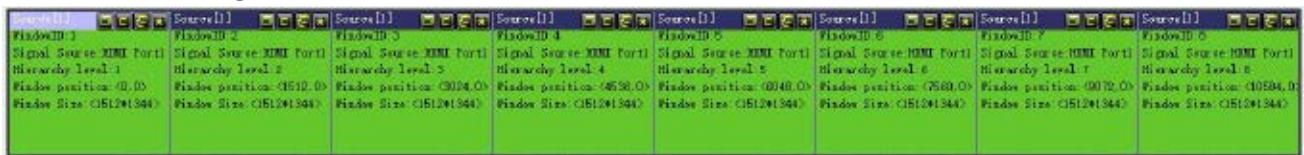
a. In the monitor, left click to drag a signal.

b. Select the signal source, then drag the signal to the corresponding output.

c. Click the main function to add new:
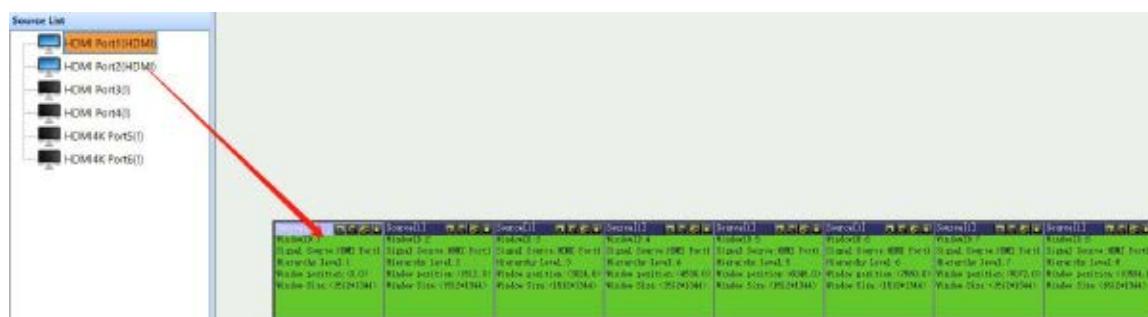
1. According to the project that 8 layers should be added to the screen.

2. Set the image size and position. Right click to choose property, set all the images parameters to 1512*1344.

As the following picture shown:
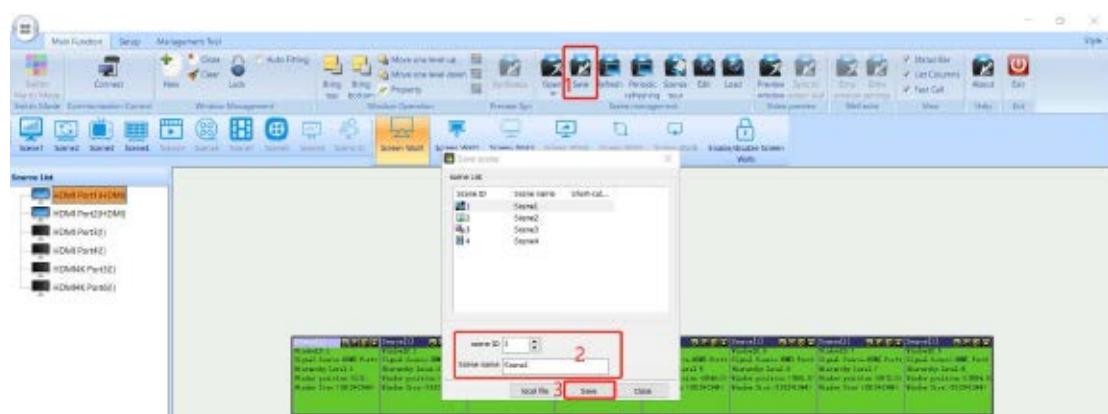
3. Drag the corresponding signal source to the monitor (or choose the monitor,

then double click the signal source).

4. Save the setting.

Click Save, set the scene ID and customize the scene name, hit save to confirm.
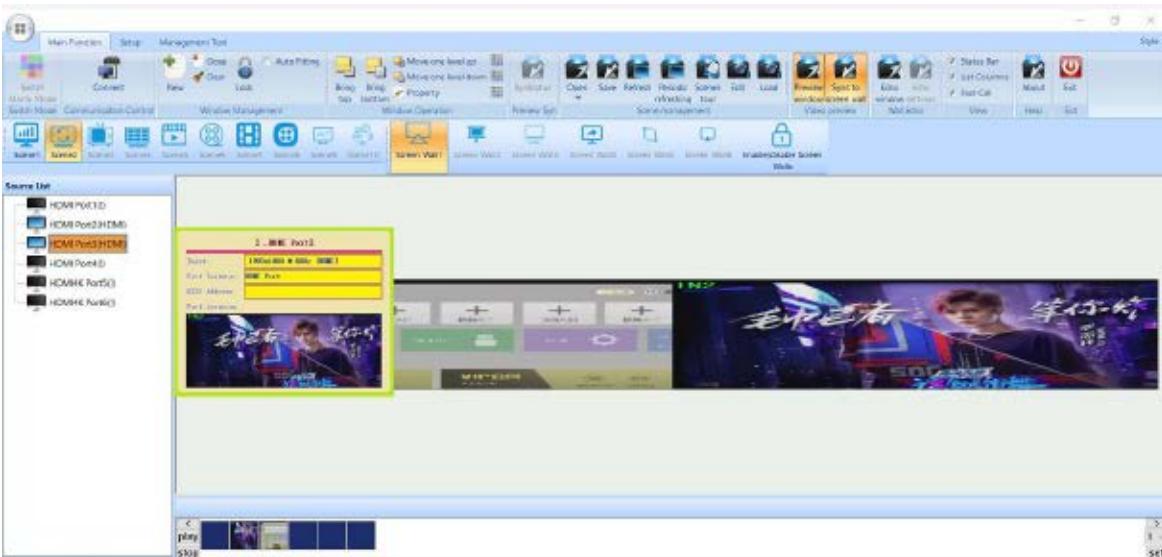
5. Adjust the layers if there are some signals or screen size need to be changed,

and save to other scenes.

6. Switch between different scenes.

4.8.7 H.264 Preview Streaming

Turn on Live Preview if the VD is equipped with H.264 Preview module.

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CREATIVE VIDEO REVOLUTION