

LCD Monitor

User Manual

UD.6L0203D1207A02

About this Manual

This Manual is applicable to LCD Monitor (V1.4).

The Manual includes instructions for using and managing the product. Pictures, charts, images and all other information hereinafter are for description and explanation only. The information contained in the Manual is subject to change, without notice, due to firmware updates or other reasons. Please find the latest version in the company website

Please use this user manual under the guidance of professionals.

Legal Disclaimer

REGARDING TO THE PRODUCT WITH INTERNET ACCESS, THE USE OF PRODUCT SHALL BE WHOLLY AT YOUR OWN RISKS. OUR COMPANY SHALL NOT TAKE ANY RESPONSIBILITIES FOR ABNORMAL OPERATION, PRIVACY LEAKAGE OR OTHER DAMAGES RESULTING FROM CYBER ATTACK, HACKER ATTACK, VIRUS INSPECTION, OR OTHER INTERNET SECURITY RISKS; HOWEVER, OUR COMPANY WILL PROVIDE TIMELY TECHNICAL SUPPORT IF REQUIRED.

SURVEILLANCE LAWS VARY BY JURISDICTION. PLEASE CHECK ALL RELEVANT LAWS IN YOUR JURISDICTION BEFORE USING THIS PRODUCT IN ORDER TO ENSURE THAT YOUR USE CONFORMS THE APPLICABLE LAW. OUR COMPANY SHALL NOT BE LIABLE IN THE EVENT THAT THIS PRODUCT IS USED WITH ILLEGITIMATE PURPOSES.

IN THE EVENT OF ANY CONFLICTS BETWEEN THIS MANUAL AND THE APPLICABLE LAW, THE LATER PREVAILS.

Regulatory Information

FCC Information


FCC compliance: This equipment has been tested and found to comply with the limits for a Class A digital device, pursuant to part 15 of the FCC Rules. These limits are designed to provide reasonable protection against harmful interference when the equipment is operated in a commercial environment. This equipment generates, uses, and can radiate radio frequency energy and, if not installed and used in accordance with the instruction manual, may cause harmful interference to radio communications. Operation of this equipment in a residential area is likely to cause harmful interference in which case the user will be required to correct the interference at his own expense.


FCC Conditions

This device complies with part 15 of the FCC Rules. Operation is subject to the following two conditions:

1. This device may not cause harmful interference.
2. This device must accept any interference received, including interference that may cause undesired operation.

EU Conformity Statement

 This product and - if applicable - the supplied accessories too are marked with "CE" and comply therefore with the applicable harmonized European standards listed under the EMC Directive 2004/108/EC, the RoHS Directive 2011/65/EU.

 2012/19/EU (WEEE directive): Products marked with this symbol cannot be disposed of as unsorted municipal waste in the European Union. For proper recycling, return this product to your local supplier upon the purchase of equivalent new equipment, or dispose of it at designated collection points. For more information see: www.recyclethis.info


 2006/66/EC (battery directive): This product contains a battery that cannot be disposed of as unsorted municipal waste in the European Union. See the product documentation for specific battery information. The battery is marked with this symbol, which may include lettering to indicate cadmium (Cd), lead (Pb), or mercury (Hg). For proper recycling, return the battery to your supplier or to a designated collection point. For more information see: www.recyclethis.info

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Safety Instruction

These instructions are intended to ensure that user can use the product correctly to avoid danger or property loss. The precaution measure is divided into “Warnings” and “Cautions”.

Warnings: Serious injury or death may occur if any of the warnings are neglected.

Cautions: Injury or equipment damage may occur if any of the cautions are neglected.

	
Warnings Follow these safeguards to prevent serious injury or death.	Cautions Follow these precautions to prevent potential injury or material damage.



Warnings

- In the use of the product, you must be in strict compliance with the electrical safety regulations of the nation and region.
- Please refer to technical specifications for detailed information.
- Do not connect several devices to one power adapter as adapter overload may cause over-heating or a fire hazard.
- Please make sure that the plug is firmly connected to the power socket.
- If smoke, odor or noise rise from the device, turn off the power at once and unplug the power cable, and then please contact the service center.
- If the product does not work properly, please contact your dealer or the nearest service center. Never attempt to disassemble the device yourself. (We shall not assume any responsibility for problems caused by unauthorized repair or maintenance.)



Cautions

- Make sure the power supply voltage is correct before using the device.
- Do not drop the device or subject it to physical shock.
- Make sure the AC outlet is unplugged or switched to OFF before the repair or maintenance in case of the human injury.
- Do not aim the device at the sun or extra bright places. Blooming or smearing may occur otherwise (which is not a malfunction), and affect the endurance of screen at the same time.
- When the product is mounted on wall or ceiling, the device shall be firmly fixed.
- Do not bend, pull or drag the power cord, and do not change the position of the power cord randomly. Make sure the power cord is away from the heat resource in case of the fire or electric shock. Please contact the dealer if there is anything wrong with the power cord.
- The screen may be burned out by a laser beam, so when any laser equipment is in using, make sure that the surface of screen will not be exposed to the laser beam.
- To avoid heat accumulation, good ventilation is required for operating environment.
- Keep the device away from liquid while in use.
- While in delivery, the device shall be packed in its original packing, or packing of the same texture.
- Improper use or replacement of the battery may result in hazard of explosion. Replace with the same or

equivalent type only. Dispose of used batteries according to the instructions provided by the battery manufacturer.

- Some mechanical or electrical components possess the special safety protection function. Those protection functions may be ignored by unawareness during the safety exam. However, the special safety function (high rated voltage or rated power, etc.) cannot be gained on the replaced components. All those original electrical components with the special safety function are listed on the international dangerous symbols. And the electrical components replaced the originals may cause electric shock, fire or other potential danger.

Chapter 1 Safety Precaution

Any repair or maintenance should be done by the professional technicians who are quite familiar with the safety precaution measures. Please follow the safety precautions below during the repair or maintenance.

- The LCD monitor is fragile, please handle it with care. Do not crush on the screen with hands or other things. Never rub or tap the device with hard objects. Make sure the device faces upward in case of the screen crush. Our company bears no responsibility for damage caused by the customer.
- Clean the rear panel and screen before installation.
- Do not display static images on the screen, otherwise they will remain "residual image" on the screen and affect the general use of the LCD monitor.
- Make sure all the components are correctly installed, and no objects left in the box after the repair or maintenance.
- Do not turn on/off the video wall frequently, and the duration between the ON and OFF should be longer than 3 minutes.
- Do not place the device in extremely hot, cold (the operating temperature shall be (0 °C to 40 °C), dusty or damp locations, and do not expose it to high electromagnetic radiation.
- Please make sure that the device in the package is in good condition and all the assembly parts are included.
- Do not drop the device or subject it to physical shock. Do not place the LCD monitor on an unstable objects or unsafe area.
- To avoid heat accumulation or it may cause the device to be overheating.
- Do not use the LCD monitor in a dusty, high humidity, oily or humid environment, it may cause a fire or damage to the device.
- Do not over tighten when install the screen.

1.1 Cleaning the Device

Use the non-dust cloth to wipe the frame and screen after the power is switched off. Do not wipe the screen with the harsh stuff or touch the screen directly with your hands and the chemical cleanser is not allowed, either.



- Dedicated non-dust cloth is provided to clean the frame and the screen. You can moisten the cloth with water or absolute ethyl alcohol, or you can also use the dry compressed air (oil-free) to blow the dust on the screen.
- Do not use the cotton or hemp-free paper moisten with the organic solvent or volatile solvent, such as alcohol (except for absolute ethyl alcohol), gasoline, banana oil, washer fluid, or liquid detergent, etc., which will cause the protective layer spalling or ageing. The rubber or the plastic materials fall on the screen surface for a long time will turns to a stain which will affect the image quality.

Chapter 2 Installation and Connection

2.1 Installation Precaution

- Make sure that all the related equipment is power-off during the installation.
- Check the specification of the products for the installation environment.
- Make sure the installation surface is strong enough to withstand four times the weight of the device and the mounting.
- The non-professionals are not recommended to do the installation.
- Do not block the vents. It may cause a device exception if the internal temperature of LCD monitor rises.
- Use the mounting base and wall-mounting bracket which were specially designed for the LCD monitor.
- Do not grasp the screen for moving the LCD monitor. It may cause a damage of the product.
- The LCD monitor should be mounted vertically. If necessary, keep the gradient between 0° to 20°.

2.2 Interface Description

The main interfaces of different models are shown below:

DS-D2046NL-B/DS-D2046NH-B/DS-D2055NL/DS-D2055NH

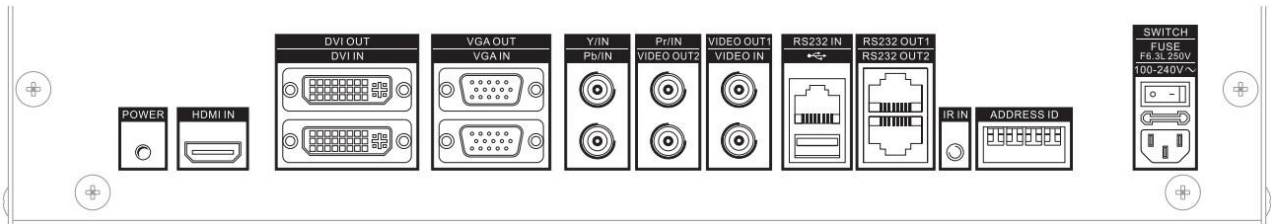


Figure 2. 1 Real Panel Interface (1)

DS-D2046NH-C/DS-D2046NL-C/DS-D2055NH-B/DS-D2055NL-B

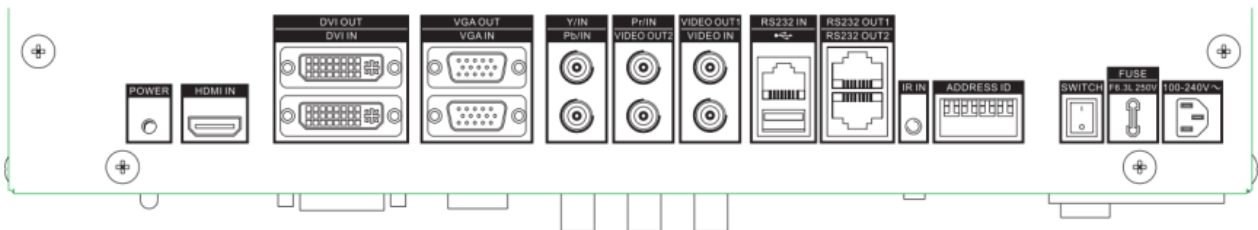


Figure 2. 2 Real Panel Interface (2)

Table 2. 1 Interface Description

Interface	Description	Interface	Description
Power	Connecting the power cable	VIDEO OUT 1	CVBS Analog Signal Loop Video Output1
HDMI IN	HDMI Digital Signal Input	VIDEO OUT 2	CVBS Analog Signal Loop Video Output2

DVI IN	DVI Digital Signal Input	RS232 IN	Serial Port Input
DVI OUT	DVI Digital Signal Loop Video Output	RS232 OUT 1	Serial Port Loop Video Output1
VGA IN	VGA Analog Signal Input	RS232 OUT 2	Serial Port Loop Video Output2
VGA OUT	VGA Analog Signal Loop Video Output	USB	USB Interface
Y/IN	Y Component Signal Input	ADDRESS ID	Dial Switch
Pb/IN	Pb Component Signal Input	IR IN	IR Input Interface
Pr/IN	Pr Component Signal Input	POWER	Power Indicator
VIDEO IN	CVBS Analog Signal Input		

DS-D2046NL-B/Z/DS-D2046NH-B/Z/DS-D2055NL-Y

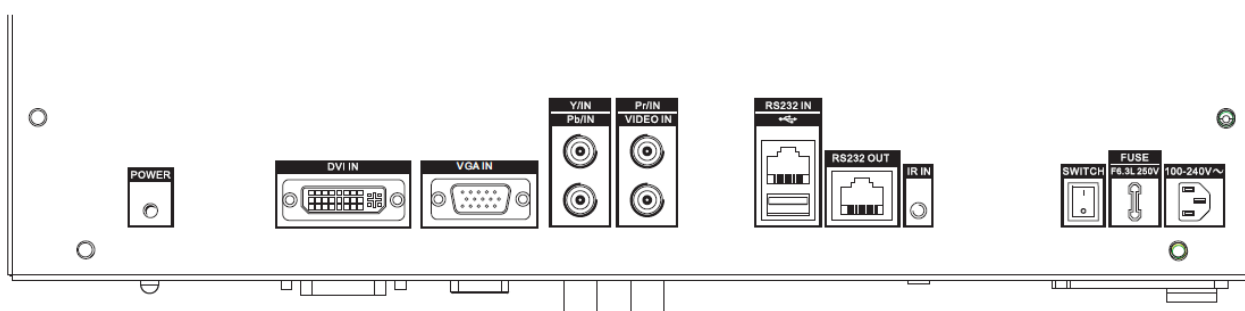


Figure 2. 3 Real Panel Interface (3)

Table 2. 2 Interface Description

Interface	Description	Interface	Description
Power	Connecting the power cable	VIDEO IN	CVBS Analog Signal Input
DVI IN	DVI Digital Signal Input	RS232 IN	Serial Port Input
VGA IN	VGA Analog Signal Input	RS232 OUT	Serial Port Output
Y/IN	Y Component Signal Input	IR IN	IR Input Interface
Pr/IN	Pr Component Signal Input	USB	USB Interface
Pb/IN	Pb Component Signal Input	POWER	Power Indicator



- The video may not be displayed properly because of the unmatched video card of the PC.
- The analog signal channel may not be able to properly display an image with a resolution of 1920 × 1080. In this case, check your PC (video card) settings to verify whether the input signal can be matched with the specification of the LCD monitor.
- Use DVI, VGA and BNC cables for signal input.
- Use BNC cable for YPbPr signal Input.
- Use BNC cable for composite video connector.
- The PWR indicator shows the different working statuses of the screen with different colors. Green indicates properly working. Red denotes standby. Orange denotes the fan exception of the screen.

2.3 Power Connection

Plug the female end of the power cable to the power interface on the rear panel of the LCD monitor. Plug the other end of the cable to a power outlet (220 V AC, 50/60Hz) with a good grounding capability.

- Power Specification: 100 to 240 V AC, 50/60Hz.
- Turn off the main power switch of the monitor, and pull the plug from the power outlet if the LCD monitor is used for a long time.
- Never connect the device to a DC power

Power Interface

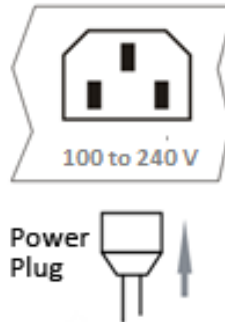


Figure 2. 4 Power Interface

2.4 System Connection

Correct connection method helps you to better control and properly display the video on the video wall. A video wall with 2 × 2 layout mode is taken as an example to describe the connection as follows.



Figure 2. 5 Video Wall Layout

The system connection is divided into two phases: the control signal connections and the video signal connections.

● The Control Signal Connection

The cables need to be connected ordinarily in accordance with the order of the screen numbers. The screen numbers are generally sorted row-by-row or column-by-column.

And you have to set the virtual and physical screen linkage in the **Link Screen** interface. See *Chapter 3.5.4*

Follow the wiring method shown in the figure below to complete the connection.

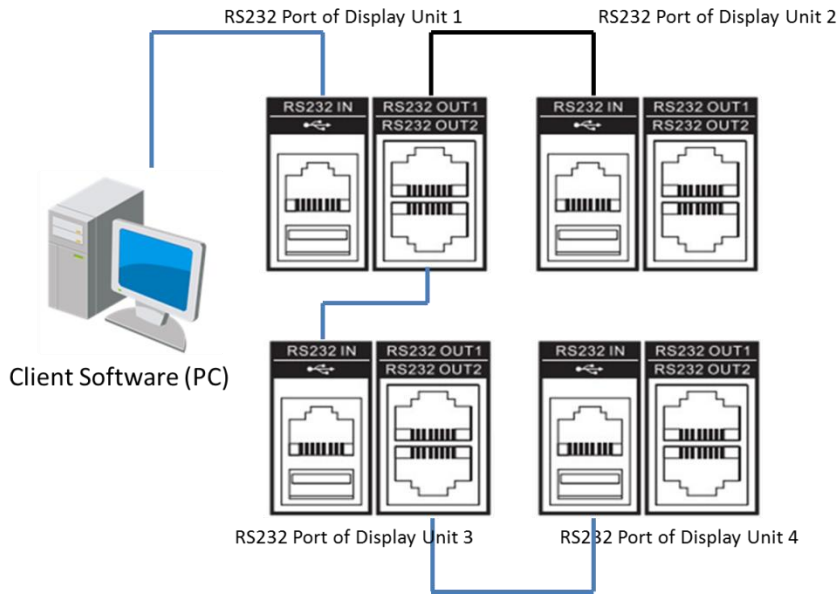


Figure 2. 6 Wiring Method

● **The Video Signal Connection**

The monitor achieves the video signal from the signal loop video input port (for example, the DVI-IN), and send the signal to the next unit through the signal loop video output port.

Follow the wiring method shown in the figure below to complete the connection.

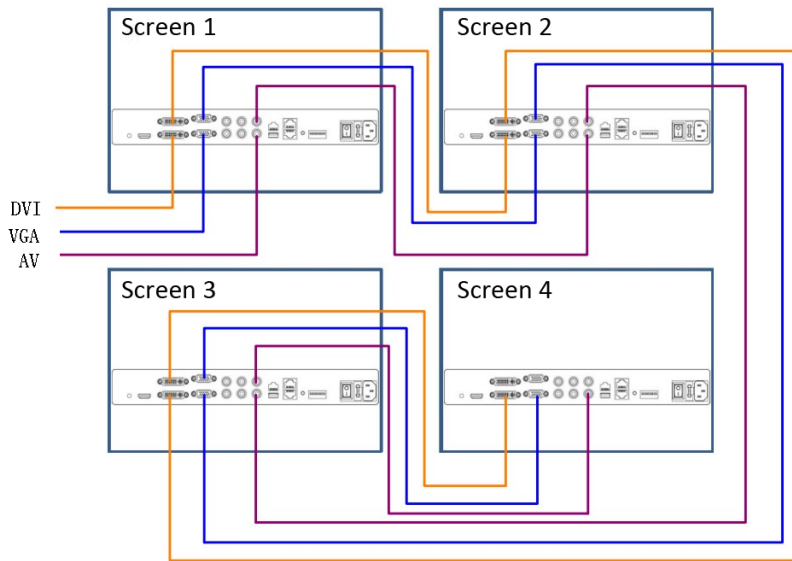


Figure 2. 7 Video Signal Connection



- The length of the cable as well as the environment condition may impact the image quality.
- The DVI-IN interface is suggested to be used as the signal input port.
- When operating on the cable connections, you must turn off the main power switch and pull out the power plug.
- Do not confuse the input and output interface, or it may cause the device exceptions or other problems.

Chapter 3 Controlling the LCD Monitor

3.1 Installing and Uninstalling the Screen Control Client Software

Purpose:

To control the screen, you must install the screen control client software and run the server on your PC.

Steps:

1. Double click the setup program to enter the client software's Install Shield Wizard. Follow the steps and complete the installation.

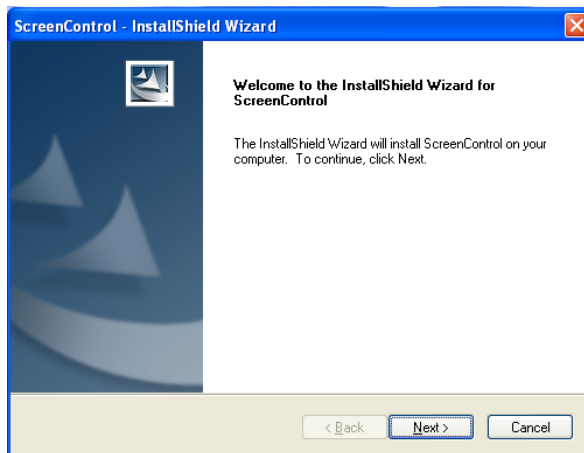


Figure 3. 1 Install Shield Wizard

2. Run the application program again, and you can enter the updating interface of the program.
3. Or you can enter the Start menu, and select All Programs > Screen Control > Uninstall Screen Control to uninstall the program.

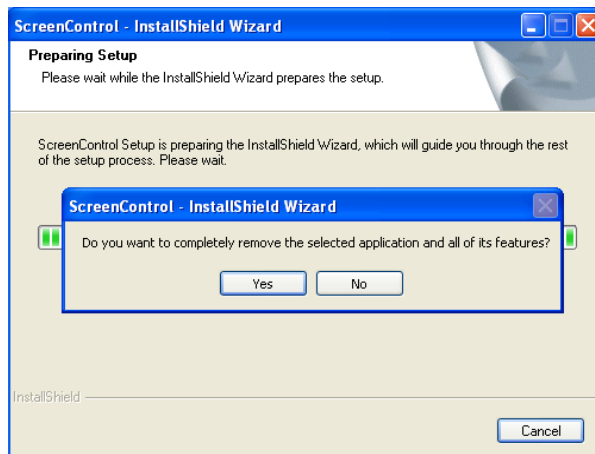



Figure 3. 2 Uninstall the Software

3.2 Running the Client Software

Follow the steps to access the software.

3.2.1 Running the Client software

Steps:

1. Click the  icon to run the software after the installation is completed.
2. Choose the User Name with admin and guest available, input the the password, select the corresponding screen type and cotrol mode with only serial available.

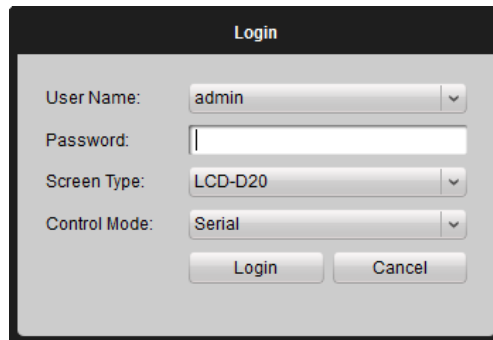


Figure 3. 3 Login Interface



- The admin's default password is 12345 which cannot be changed.
 - The LCD-D20 is the default screen type. Apart from default screen type, many screen types are available like LCD-D20/SDI, LCD-D20/DP, LCD-D20-TVI, LCD-D20-Hdbase and LCD-D20.
 - LCD-D20/SDI includes VGA, HDMI, DVI, YPBPR, BNC and SDI signal sources.
 - LCD-D20/DP includes VGA, HDMI, DVI, YPBPR, BNC and DP signal sources.
 - LCD-D20-TVI includes VGA, HDMI, DVI, YPBPR, BNC, and TVI signal sources.
 - LCD-D20-Hdbase includes VGA, HDMI, DVI, YPBPR, BNC and Hdbase signal sources.
 - LCD-D20 includes VGA, HDMI, DVI, YPBPR, and BNC signal sources.
3. Click **Login** to enter the client.

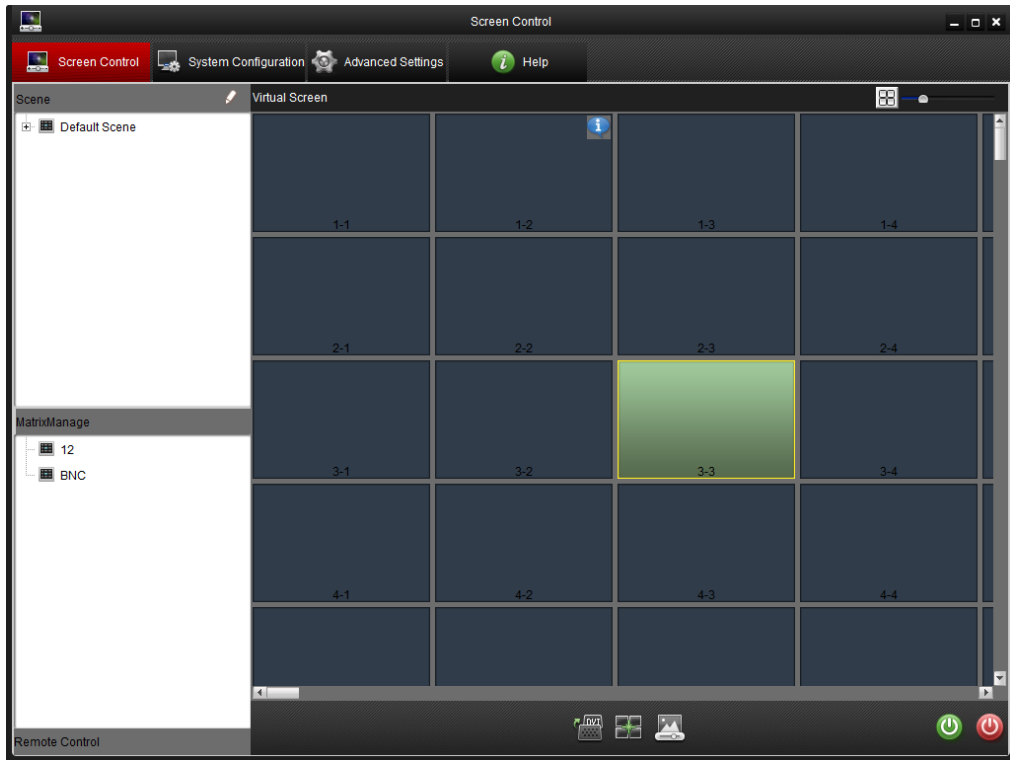




Figure 3. 4 Screen Control Interface

3.2.2 Video Wall Layout

Purpose:

Click  to enter the **Screen Control** page. Follow the steps shown below, and you can set the video wall mode in this section.

Steps

1. On the **Screen Control** page, click  in the upper-right side to pop up the **Split Screen** interface to input the required row and column number (ranges from 1 to 15) into the corresponding textbox to set the split screen mode.

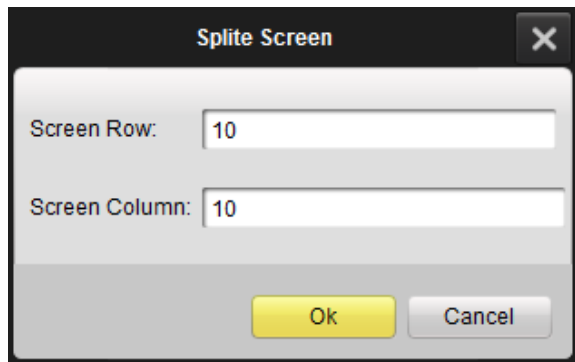
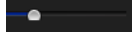


Figure 3. 5 Split Screen Box

2. Click **OK** to complete the settings. The screen layout is displayed on the **Screen Control** page.

- Slide the  to zoom in and zoom out the virtual screen.

3.3 GUI Introduction

The GUI is shown below:

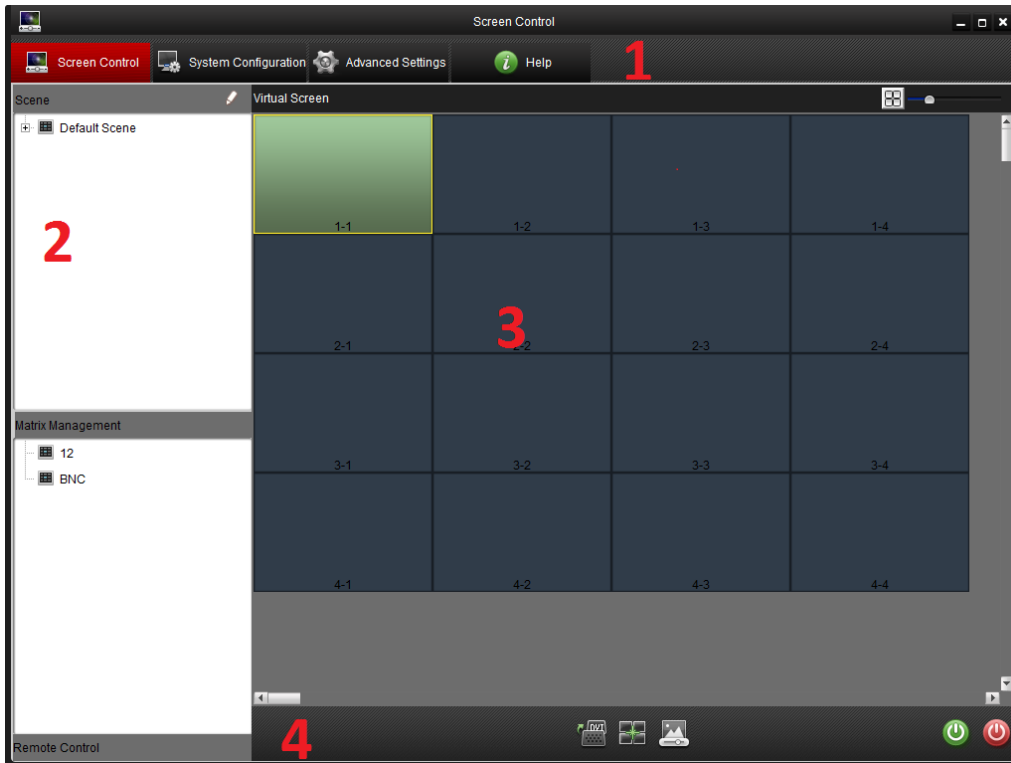


Figure 3. 6 Screen Control Interface

Table 3. 1 GUI Description

Area	Name	Description
1	Menu Bar	Screen Control, System Configuration and Advanced Settings
2	Control Area	Scene, Matrix Management and Remote Control
3	Display Area	Show Monitor
4	Tool Bar	Signal Source Switch, Span/Split Screen, Image Parameters, and Turn on/off the Screen

3.4 Control and Management

3.4.1 Scene Management

Purpose:

The **Scene** management enables you to save the video wall layout configuration and show it by clicking on the scene name.

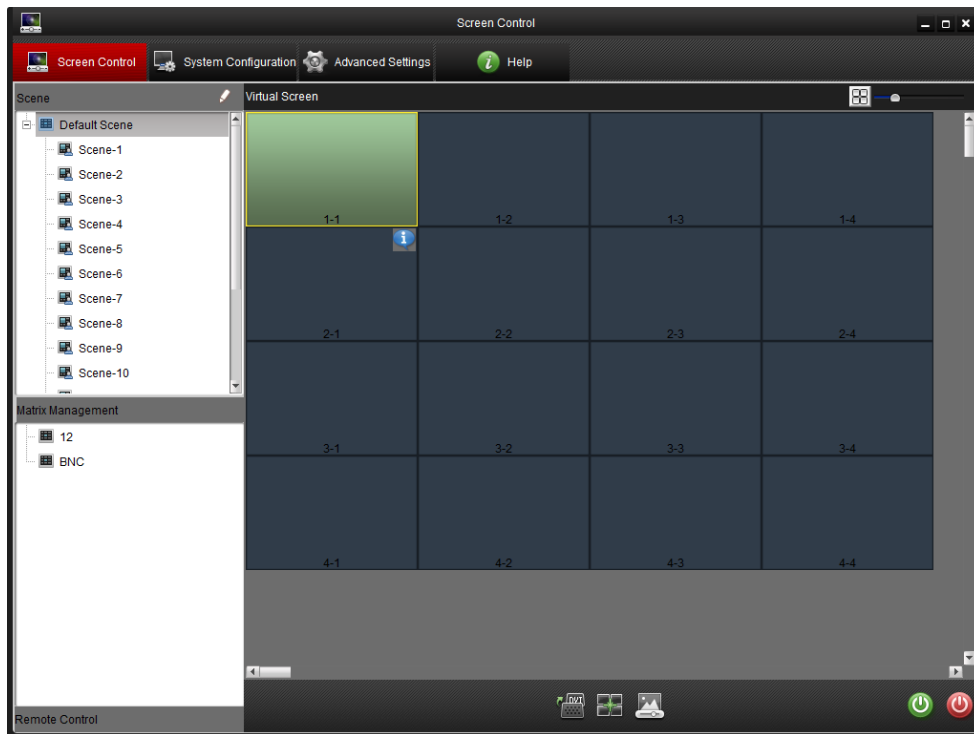


Figure 3. 7 Screen Control Interface

- **Save the Scene**

After you set the screen and the matrix, right click a scene from the scene list, and select **Save** to save current scene.

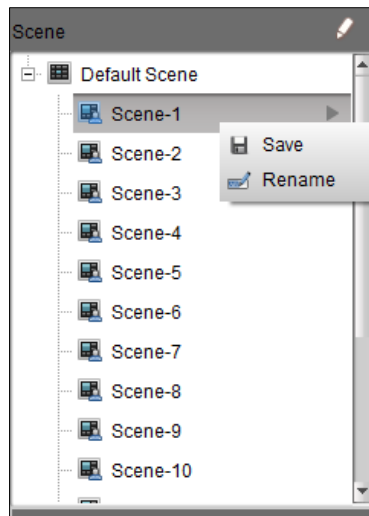



Figure 3. 8 Scene List

- **Display the Scene**

Select a scene from the scene list on the left side of the page. Click  to display the scene on the virtual screen.

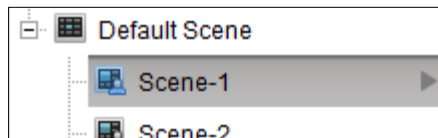


Figure 3. 9 Display the Scene

- **Rename the Scene**

Select and right click a scene from the scene list. Select **Rename** to rename the scene.

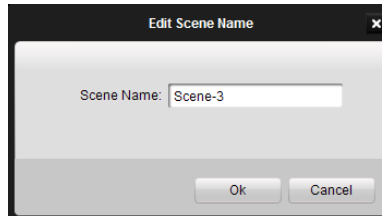


Figure 3. 10 Edit Scene Name



Up to 16 scenes can be configured.

3.4.2 Remote Control

Purpose:

The remote control in the software allows you to remotely control the screen with this client software. The function of this remote control is similar to the real one.

Steps:

1. Click **Remote Control** on the lower side of the left panel to display the virtual remote control.

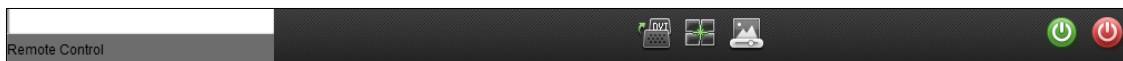


Figure 3. 11 Tool Bar


2. You can drag the remote control to anywhere on the **Screen Control** page. Click the icon  on the upper-right corner of the remote control to close it.



Figure 3. 12 Remote Control Interface



Figure 3. 13 Remote Control Description

3.4.3 Turn on/Turn off the Screen

Purpose:

After the serial port configuration is completed, you can remotely turn on/turn off the screen through the software.

Steps:

1. Select a virtual screen and its background color turns green.
2. Right click the selected virtual screen and select to **Turn on/off** the screen.

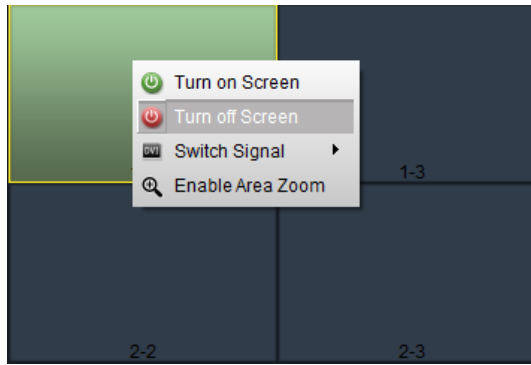




Figure 3. 14 Turn on/off the Screen

3. You can click the button  on the lower-right side of the page to control the screen.
4. You can also click  on the remote control to close the window.

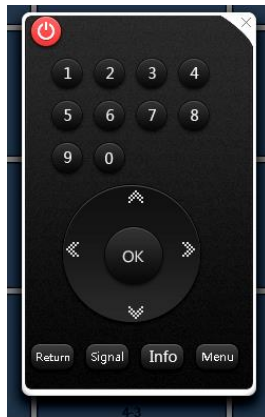



Figure 3. 15 Remote Control Interface

3.4.4 Signal Source Switch

Steps:

1. Select a screen to control.
2. Right click and select **Switch Signal** to list the signal sources. Select a signal source for the screen.
3. You can also click the icon  on the lower-middle side of the page to choose a signal source for the screen.

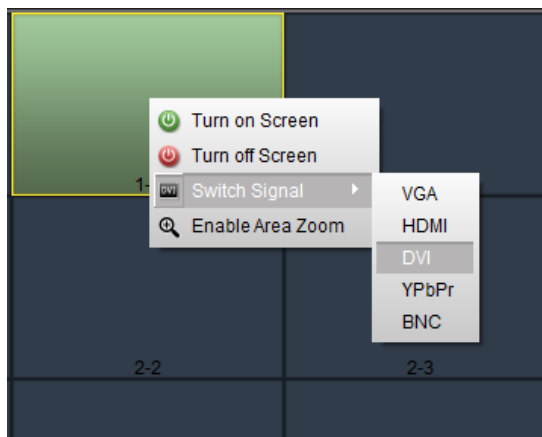





Figure 3. 16 Signal Source Switch

3.4.5 Enable/Disable Area Zoom

Steps:

1. Select a screen to control.
2. Right click and select **Enable Area Zoom**, then the cursor changes to 
3. Drag the  from the lower left corner to the upper right corner to zoom in the screen which can be zoom in for multiple times with the same operation. Drag the  from the reverse direction to restore the screen to the original size.

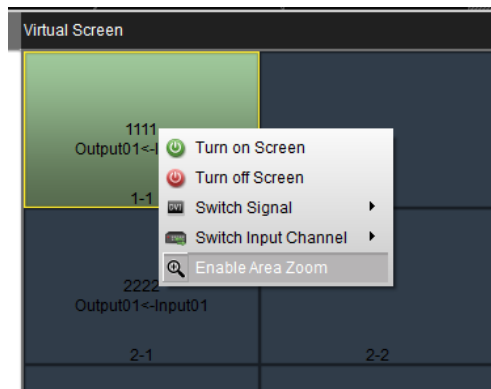


Figure 3. 17 Enable Region Zoom

4. Right click and select **Disable Area Zoom** and the  changes to cursor again.

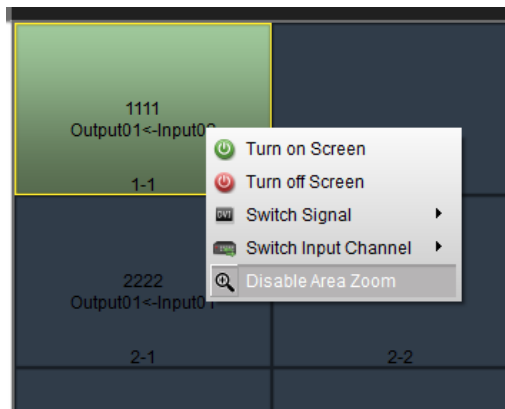



Figure 3. 18 Disable Region Zoom

3.4.6 Screen Status

1. Move the cursor to a screen, and the  icon appears in the upper-right corner

2. Move the cursor to  icon, and the **Screen Status** pops up.

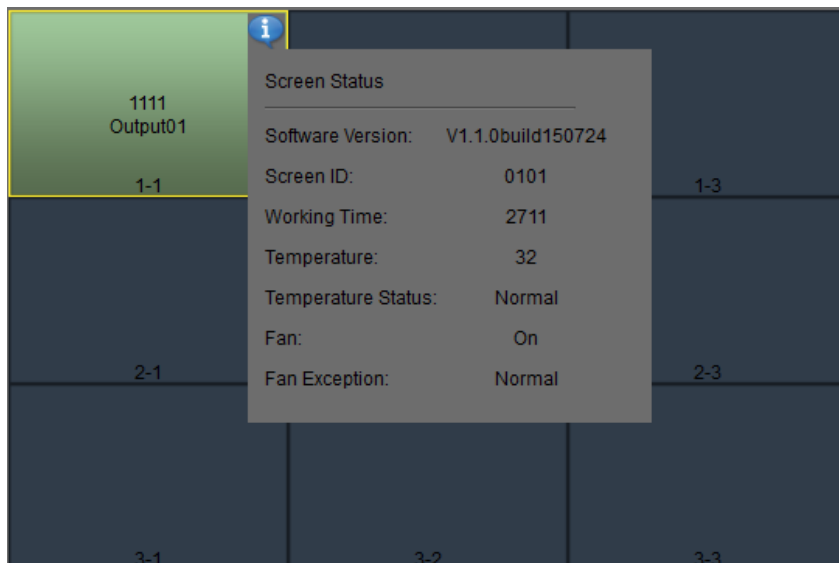


Figure 3. 19 Screen Status (1)

- **Software Version**
Software Version includes the version information.
- **Screen ID**
Screen ID displays the screen's ID number.
- **Working Time**
Working Time records the working hours.
- **Temperature**
Temperature displays the current screen temperature.
- **Temperature Status**
Temperature Status includes Normal and Abnormal.
- **Fan**
Fan includes On and Off
- **Fan Exception**
Fan Exception includes Normal and Abnormal.



When the screen is unconnected the following screen status shows up.

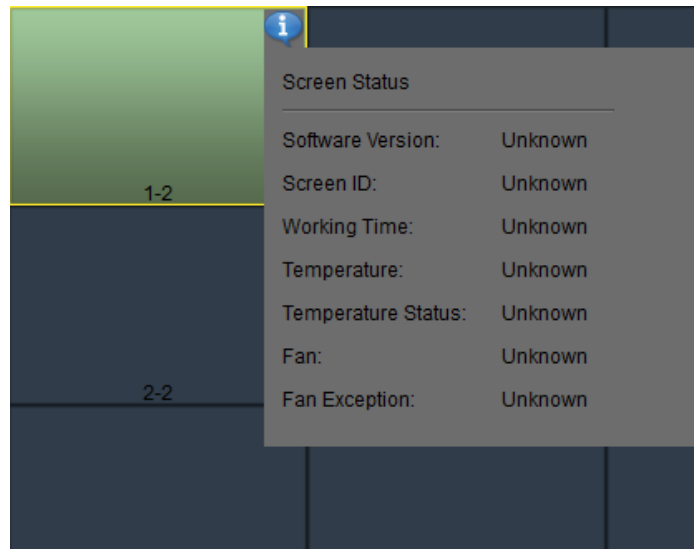


Figure 3. 20 Screen Status (2)


3.4.7 Window Spanning Settings

Purpose:

Several windows can be spanned in to one window with the same signal source, and the spanned window can also be split into several windows.

- **Span the Screen**

Steps:

1. Click and drag screens which need to be spanned.
2. Click the icon  to make these screens to be spanned into one and to display the video from one signal source. You are recommended to connect the same video source for the screens to be spanned, so that the image of the video can be displayed properly on the spanned screen.

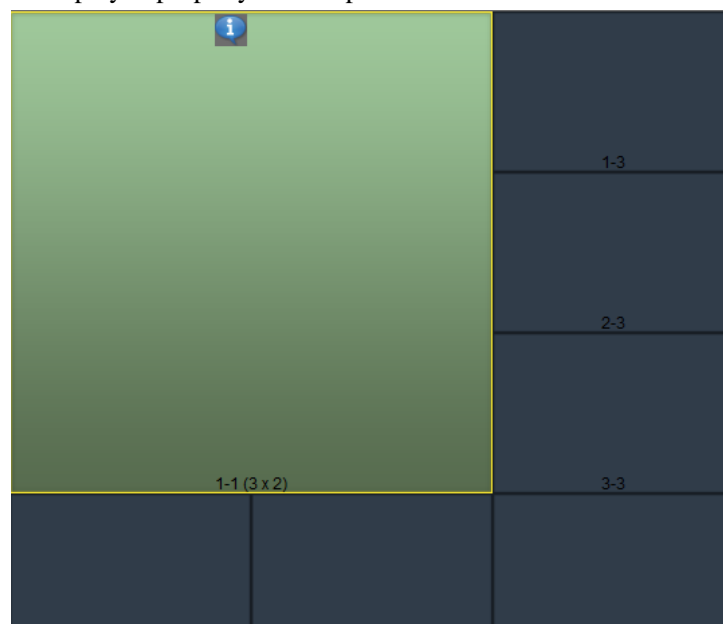



Figure 3. 21 The Spanned Screen

- **Split the Screen**

Steps:

1. Select the spanned screen
2. Split the spanned screen by clicking the icon  again.

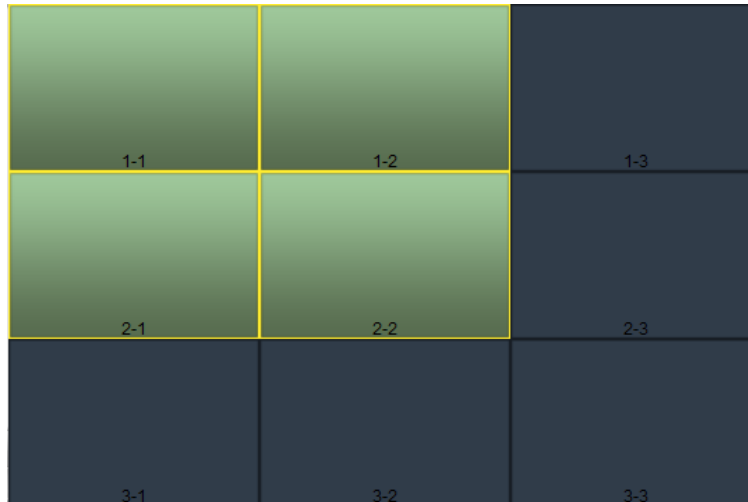



Figure 3. 22 The Split Screen

3.4.8 Image Parameters Configuration

Purpose:

In image parameters configuration interface image can be set in different ways.

Steps:

1. Select the screen which needs to be controlled.
2. Click the icon  to enter the image parameters configuration page. You can modify basic image parameters such as brightness, sharpness, contrast, color and hue on this page.

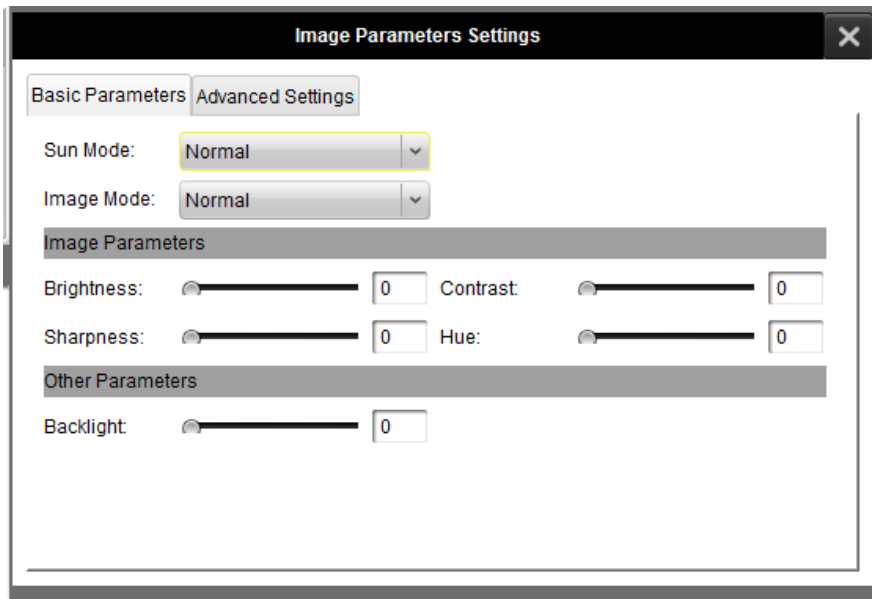


Figure 3. 23 Image Parameters Configuration

Sun mode is a set of parameters which you can choose to change the image parameters on the video wall.

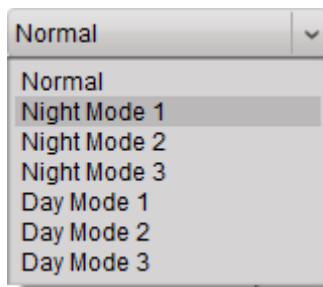


Figure 3. 24 Sun Mode

The software presets four image modes to make the configuration to be easier. You can set the image mode as normal, dynamic, soft and custom.

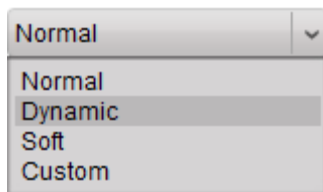


Figure 3. 25 Image Mode

If the mode is selected as **Normal**, **Dynamic** or **Soft**, the system configures the image parameters automatically according to the requirement. If all the three modes cannot make you satisfied, you can select **Custom** as the image mode, and to configure the image parameters manually.



The image parameters configuration requirements might be different for different signal sources. Therefore, the non-professionals are not recommended to do such configuration.

For VGA Input

The basic image parameters such as brightness, contrast, phase, clock horizontal position and vertical position are adjustable for the VGA input.

The Backlight option on the **Other Parameters** panel can be used to adjust the brightness of the backlight of the image.

You can adjust the image position by click the **VGA Auto Adjust** button on the lower side of the page.

For Other Signal Source

The basic image parameters such as brightness, contrast, sharpness and color hue are adjustable for other signal sources.

The Backlight option on the **Other Parameters** panel can be used to adjust the brightness of the backlight of the image.

3. Click **Advanced Settings** to adjust color temperature and ADC adjustment where RGB gain and offset can be set.

Figure 3. 26 Advanced Settings



Non-professionals are not recommended to perform advanced settings.

3.5 System Configuration

The system configuration page allows you to set communication settings, matrix related parameters settings and screen ID settings.

Click **System Configuration** to enter the system configuration page.

3.5.1 Serial Port Settings

Purpose:

The communication settings are necessary before you start to control the video wall.

Steps:

1. Click **Serial Port Settings** to enter the communication settings page. Select the serial port, corresponding baud rate and check the check box of **Enable Serial Port When Startup**.
2. Click **Set** to save the settings.

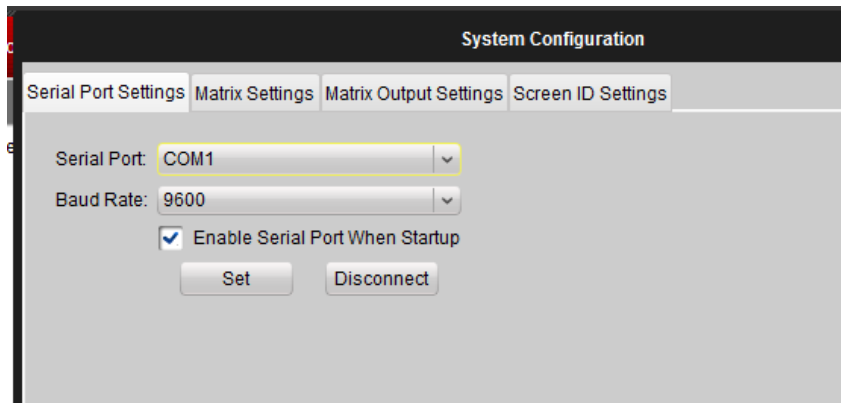


Figure 3. 27 System Configuration Interface



You may be unable to control the screen if the communication settings are incorrect.


3.5.2 Matrix Settings

Purpose:

Click **Matrix Settings** to enter the matrix settings page. The matrix related parameters are configurable on this page. You can add matrices and modify the matrix parameters by the following steps below.

Steps:

1. Add a Matrix

- 1) Click  icon on the **Matrix List** panel to open the **Add Matrix** window.
- 2) Input a matrix name, and click **OK** to complete the settings.

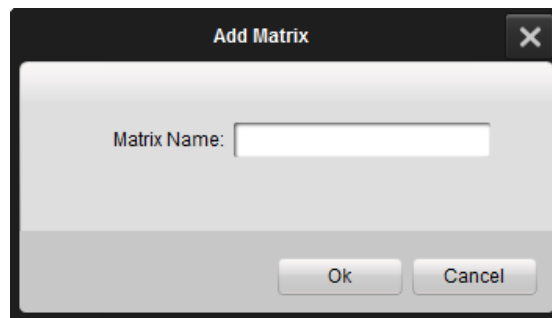




Figure 3. 28 Add Matrix

2. Select a matrix in the list, and click the icon  to rename the matrix. You can also delete this matrix by clicking the icon .

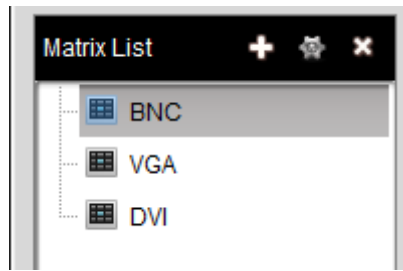


Figure 3. 29 Matrix List

3. Matrix Parameters Configuration

You can modify the matrix parameters on the **Matrix Parameters** panel.

Steps:

- 1) Select a loop mode for the matrix. If the mode is selected as **YES**, the control signal is transmitted to the matrix through the monitor.
- 2) Set the **Serial Port** mode as **Open** to enable the connection.
- 3) Select the appropriate serial port number, baud rate, data bit, stop bit and parity.
- 4) Select a matrix type and a protocol for the matrix, and enter input/output number into the corresponding textbox.
- 5) Click **Save** to save the settings.

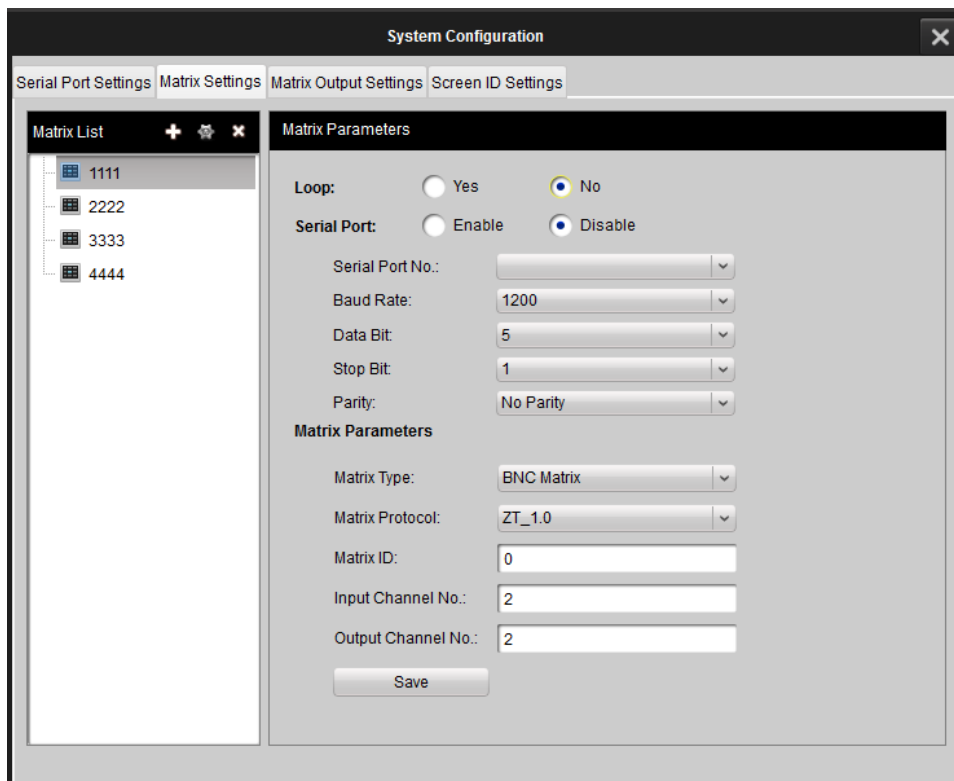


Figure 3. 30 Matrix Settings

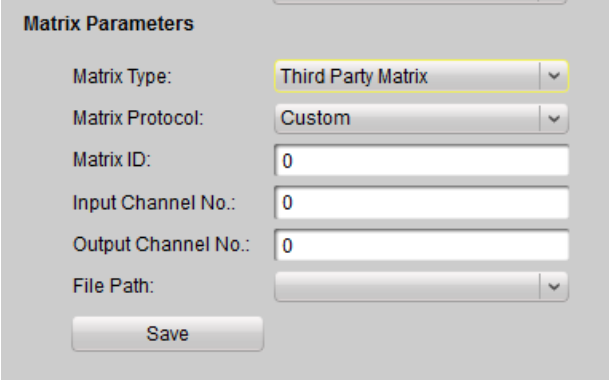
4. Custom Matrix

Purpose:

When using the third-party matrix, you should choose custom matrix to perform the corresponding operation. Otherwise the matrix is unable to work normally. Custom matrix settings can be done on matrix settings interface.

Steps:

- 1) Select custom matrix in **Matrix Type** and the **Matrix Protocol** changes to custom automatically.
- 2) Set the **Matrix ID**, **Input Number**, and **Output Number**.
- 3) Click **File Path** and chose xxx.XML file generated from the third-party protocol.
- 4) Click **Save** to finish the settings.



Matrix Parameters

Matrix Type: Third Party Matrix

Matrix Protocol: Custom

Matrix ID: 0

Input Channel No.: 0

Output Channel No.: 0

File Path:

Save

Figure 3. 31 Custom Matrix Settings

3.5.3 Matrix Output Settings

Purpose:

Click **Matrix Output Settings** to enter the matrix output settings page. You can bind the matrix output with any of the screen monitor.

Steps:

1. Select a matrix from the Matrix Output List. Click and drag it to any of the virtual screen on the right panel of the page.

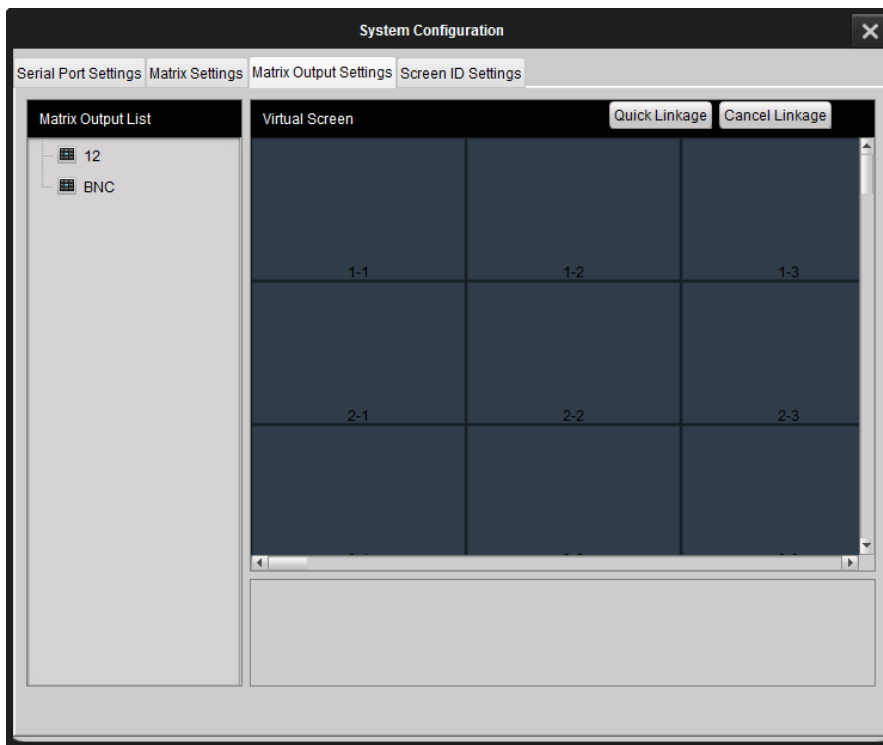


Figure 3. 32 Matrix Output Settings

- To cancel a linkage, select a matrix linked virtual screen, and click **Cancel Linkage** to cancel the linkage.

3.5.4 Screen ID Settings

Purpose:

The screen ID links the physical screen to the virtual screen on the control client, so that when you control the screen, you can control it by clicking the corresponding screen location on the screen.

Steps:

- Click **Screen ID Settings** to enter the page.
- Click **Start Match** to pop up an attribute code on the physical screen.



The screen ID code is the code used to define the screen.

- Select a virtual screen of the corresponding location with the physical screen settings.
- Input one attribute code you just saw on the physical screen into the textbox on the virtual screen.
- Click **OK**, and then the physical screen and the virtual screen are linked..
- Click **End Match** to finish the linkage settings.

After the linking setting, when you choose the virtual screen you know clearly which one you are controlling.

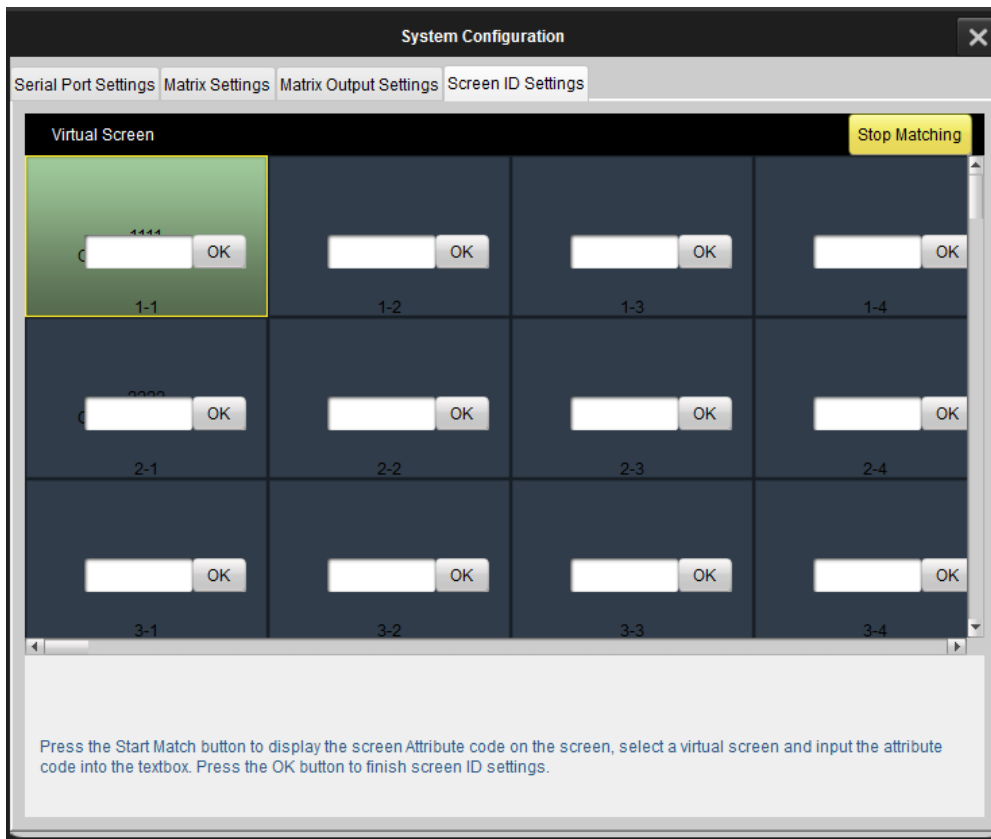


Figure 3. 33 Screen ID Settings



The linking of the attribute code is necessary for the first commissioning of the video wall. You can also set the screen linking with an infrared remote control or the dial switch on the rear panel of the device.

3.6 Advanced Settings

Click **Advanced Settings** to enter the advanced settings page. You can do fan settings, maintenance, edge blanking, time settings and other operations.

3.6.1 Fan Settings

Purpose:

Click **Fan Settings** to enter the fan settings page.

Steps:

1. Click on a virtual screen to be controlled.
2. Select **Normally Open** or **Auto** as the fan working mode for the screen.
3. (Optional) If Auto is selected, you must set the threshold of the temperature triggering the fan to work.
4. Click **Set** to save the settings.

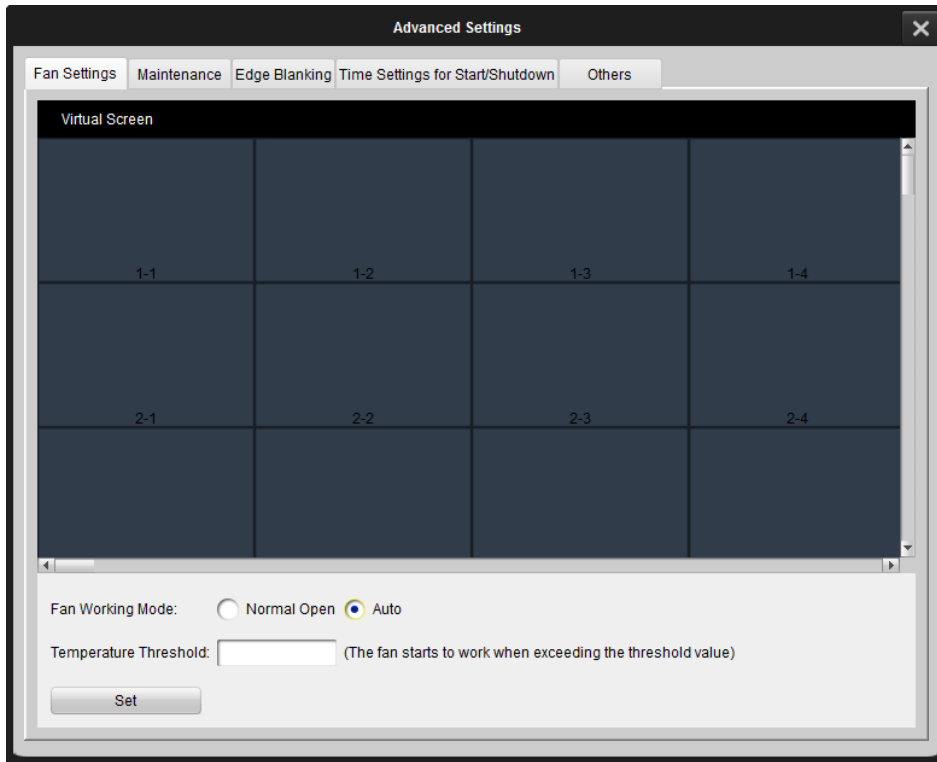


Figure 3. 34 Fan Settings

3.6.2 Maintenance

Purpose:

Click **Maintenance** to enter the maintenance page. You can reset the device on this page.

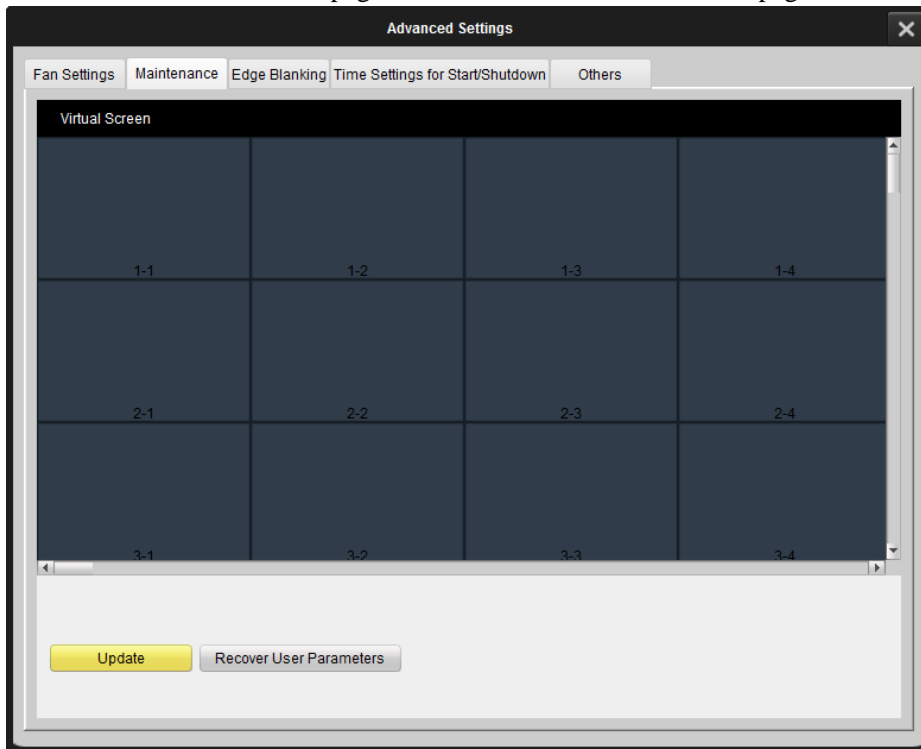


Figure 3. 35 Maintenance Interface

- **Update**

Insert the USB disk which contains update program in the screen's back panel. Click **Maintenance** to enter the maintenance interface. Select the screen you want to update and click **Update** to finish the screen update.

- **Recover User Parameters**

Select a screen needs to be recovered, and click **Recover User Parameters** to complete the settings.

The device then reboots automatically. All the parameters except the serial number are recovered to the default.

3.6.3 Edge Blanking

Purpose:

Click **Edge Blanking** to enter the configuration page. The edge of the image is shielded after configuring the horizontal and vertical size of the image.

Steps:

1. Select a screen needs to be configured.
2. Check the **Enable** check box to enable the edge blanking.
3. Input the required horizontal and vertical size of the margin you want to shield.
4. Click **Set** to complete the settings.

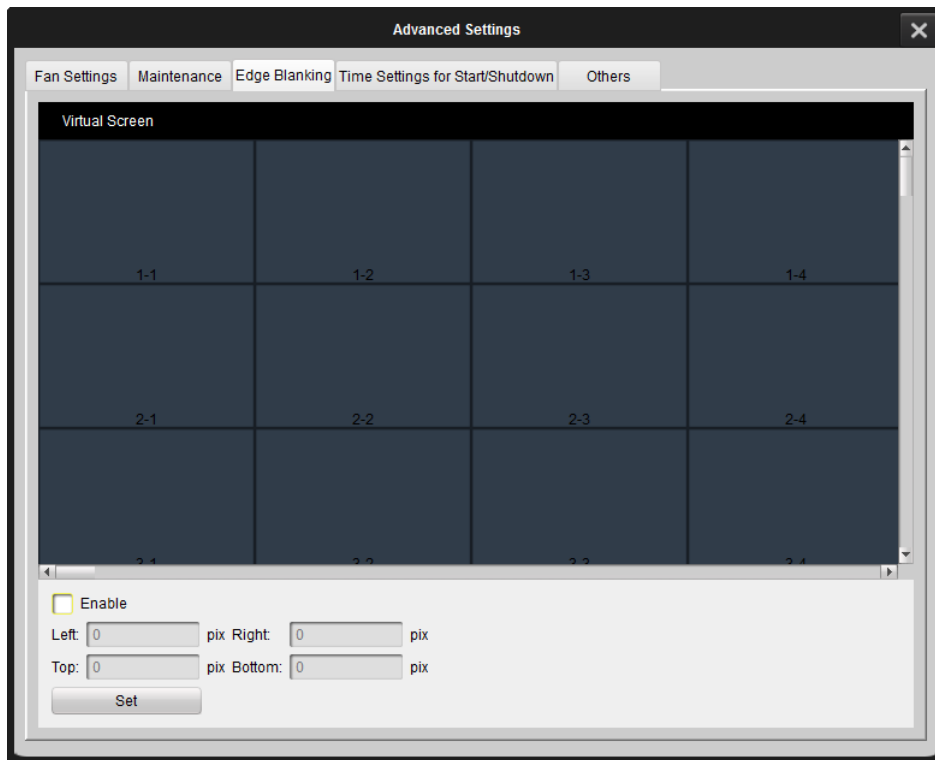


Figure 3. 36 Edge Blanking Interface


3.6.4 Time Settings

Purpose:

The time settings are for the screen timed startup and shutdown.

You can set the schedule by week.

Steps:

1. Choose **Draw Time Segment By Week** and move the cursor to draw the time segment.
2. Select the time segment.
3. You can click the  button to copy the same setting to other days by selecting the green area first.
4. Click **OK** to finish copy.

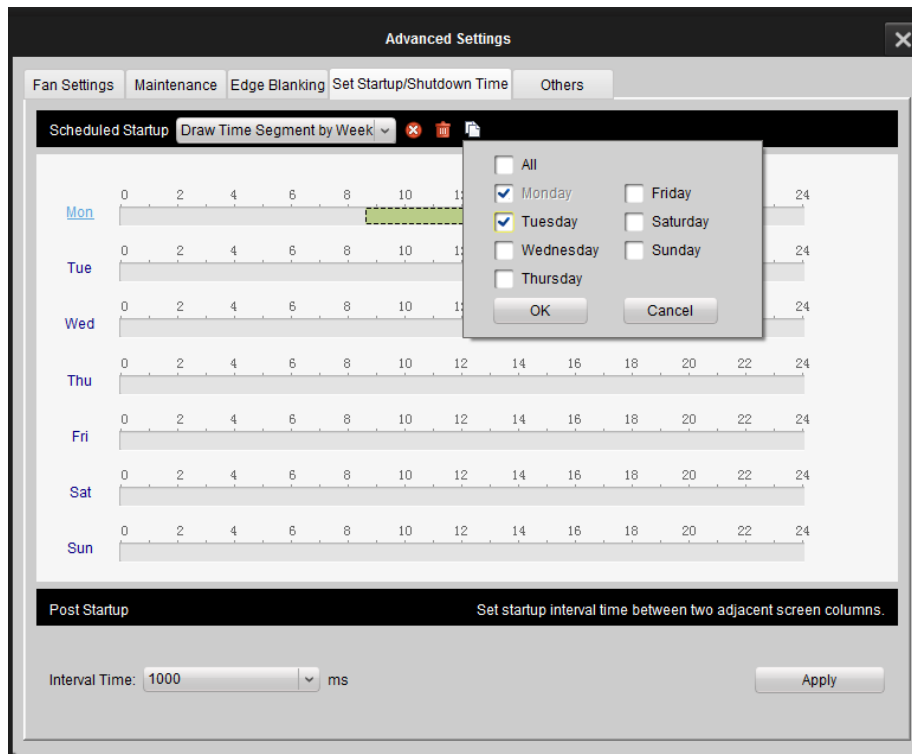




Figure 3. 37 Time Settings (1)

5. Select the time frame and click  to delete it.
6. Click  to delete all.

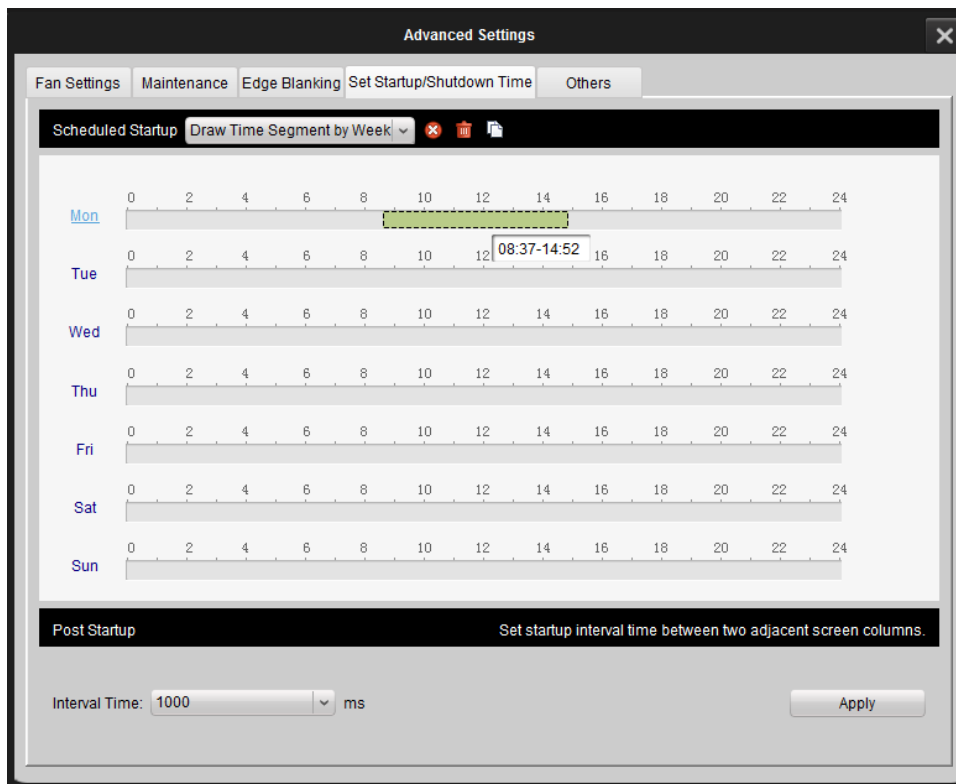



Figure 3. 38 Time Settings (2)

You can also set it day by day.

Steps:

1. Choose **Input Working Time Manually** from the drop down list.
2. Edit the time you want the screen to start up or shut down.
3. Check the checkbox to enable it.
4. Click  to delete it.

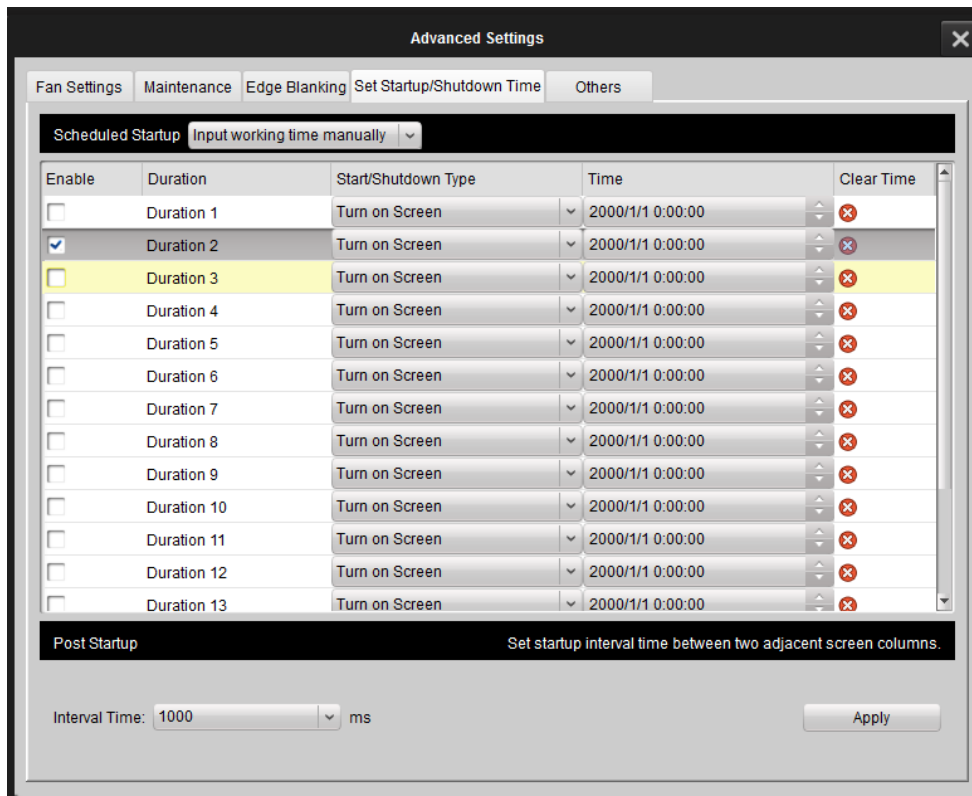


Figure 3. 39 Time Settings (3)

You can set the power-on delay time to have the screen opening successively to avoid the power fault caused by the simultaneously bulk startup.



Figure 3. 40 Set Power-On Delay Time

3.6.5 Others

Purpose:

Click **Others** to enter the page. You can set the no-signal screen mode and OSD menu on this page.

No-Signal Screen Mode

Steps:

1. Select Black, Blue or Show Logo to change the screen to be blue, black and display a logo respectively when there is no video signal received.
2. Click **Set** to save the settings. After set the settings, the screen change to the status you set.

OSD Menu

Steps:

1. Select language, transparency and disappearance time for the OSD menu.
2. Click **Set** to complete the settings.

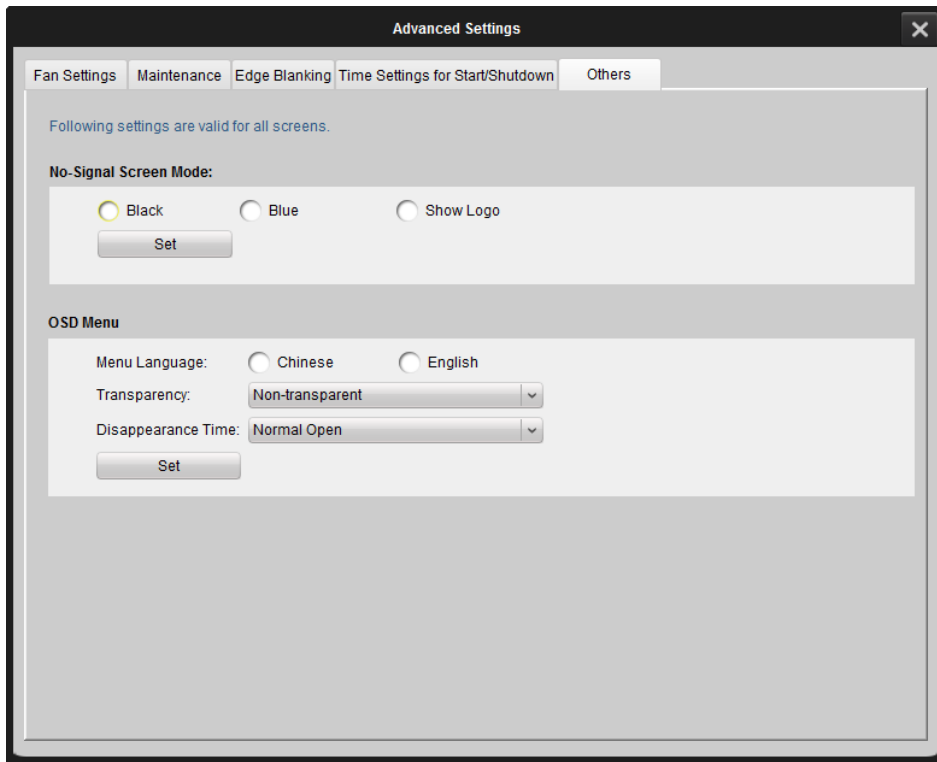


Figure 3. 41 Others Settings Interface

Chapter 4 Appendix

4.1 Specifications

DS-D2046NL-B/ DS-D2046NH-B

Model	Monitor	DS-D2046NL-B	DS-D2046NH-B	
Display	Diagonal Size(inch)	46"		
	Backlight	LED Backlight (Direct type)		
	Resolution	1920×1080		
	Color	16.7M		
	Visual Angle	Horizontal:178 °; Vertical:178 °		
	Response Time	8 ms (G to G)		
	Contrast	4500:1		
	Brightness	500 cd/m ²	800 cd/m ²	
	Dot Pitch	0.021" (0.53 mm)		
	Color Saturation	92%		
	Display Area	40.08" (H) × 22.55" (V)		
Seam Size	Bi-side Seam	0.21" (5.3mm)	0.22" (5.5mm)	
Interface	Video Input Interface	VGA × 1, DVI × 1, BNC × 1, YPbPr × 1, HDMI × 1		
	Video Output Interface	VGA × 1, DVI × 1, BNC × 2		
	Control Interface	RJ45 for RS-232		
Power	Power Dissipation	111W	139W	
	Power Requirement	AC 90 to 264 V, 50/60 Hz		
Working Environment	Working Life	≥ 60,000 Hours		
	Operating Temperature	0 °C to 40 °C (32 °F to 104 °F)		
	Operating Humidity	10% to 85% (No Condensation)		
	Frame Width	0.14" (Left/Upper), 0.07" (Right/Lower)	0.15" (Left/Upper), 0.07" (Right/Lower)	
	Dimension (W × H × D)	40.31" × 22.8" × 5.2"		40.31" × 22.77" × 4.48"

DS-D2046NH-B/Z

Model	Monitor	DS-D2046NH-B/Z
Display	Diagonal Size(inch)	46"
	Backlight	LED Backlight (Direct type)
	Resolution	1920 × 1080
	Color	16.7 M
	Visual Angle	Horizontal: 178 °, Vertical: 178 °
	Response Time	6.5 ms (G to G)
	Contrast	4000:1
	Brightness	700 cd/m ²
	Dot Pitch	0.021" (0.53 mm)
	Color Saturation	92%
	Display Area	40.08" (H)×22.55" (V)
Seam Size	Bi-side Seam	0.21" (5.4 mm)
Interface	Video Input Interface	VGA × 1, DVI × 1, BNC × 1, YPbPr × 1
	Video Control Interface	RJ45 for RS-232
Power	Power Consumption	139W
	Power Requirement	100 to 240V AC, 50/60Hz
Working Environment	Working Life	≥ 60,000 Hours
	Operating Temperature	0 °C to 40 °C (32 °F to 104 °F)
	Operating Humidity	10% to 90% (Non-condensing)
Physical Features	Frame Width	0.15" (Left/Upper), 0.071" (Right/Lower)
	Dimension (W × H × D)	40.30" × 22.77" × 4.47"

DS-D2046NL-C/DS-D2046NH-C

Model	Monitor	DS-D2046NL-C	DS-D2046NH-C	
Display	Diagonal Size (inch)	46"		
	Resolution	1920 × 1080		
	Panel	S-PVA		
	Backlight	LED Backlight (Direct type)		
	Display Area	40.08" (H) × 22.55" (V)		
	Dot Pitch	0.021" (0.53 mm)		
	Color	16.7 M		
	Color Saturation	92%		
	Contrast	4500:1		
	Brightness	500 cd/m ²	800 cd/m ²	
	Response time	8 ms (G to G)		
	Visual Angle	Horizontal:178 °, Vertical:178 °		
	Working Life	≥ 60,000 Hours		
Interface	Video Input Interface	VGA × 1, DVI × 1, BNC × 1, YPbPr × 1, HDMI × 1		
	Video Output Interface	VGA × 1, DVI × 1, BNC × 2		
	Control Interface	In: RS-232, Out: RS-232 × 2		
Power	Power Requirement	90 to 264 V AC		
	Power Dissipation	139 W		
Physical Feature	Dimension (W × H × D)	40.24" × 22.7" × 4.74"		
	Physical Seam	0.14" (3.5 mm)		
	Frame Width	0.09" (Left/Upper), 0.05" (Right/lower)		
Working Environment	Operating Temperature	0 °C to 40 °C (32 °F to 104 °F)		
	Operating Humidity	10% to 85% (Non-condensing)		

DS-D2046NL-B/Z

Model	Monitor	DS-D2046NL-B/Z
Display	Diagonal Size (inch)	46"
	Resolution	1920 × 1080
	Color	16.7M
	Visual Angle	Horizontal:178 °;Vertical: 178 °(CR ≥10)
	Response time	6.5 ms (G to G)
	Contrast	4500:1
	Brightness	500 cd/m ²
	Dot Pitch	0.021" (0.53 mm)
	Color Saturation	92%
	Display Area	40.08" (H) × 22.55" (V)
Seam Size	Bi-side Seam	0.21" (5.4 mm)
Interface	Video Input Interface	VGA × 1, DVI × 1, BNC × 1, YPbPr × 1
	Video Control Interface	RJ45 for RS-232
Power	Power Dissipation	103W
	Power Requirement	100 to240 V AC, 50/60Hz
Working Environment	Working Life	≥ 60,000 Hours
	Operating Temperature	0 °C to 40 °C (32 °F to 104 °F)
	Operating Humidity	10% to 90%
	Frame Width	0.14" (Left/Upper), 0.08" (Right/Lower)
	Dimension (W×H×D)	40.30" × 22.77" × 4.47"

DS-D2055NL/DS-D2055NH

Model	Monitor	DS-D2055NL	DS-D2055NH	
Display	Diagonal Size (inch)	55"		
	Backlight	LED Backlight (Direct type)		
	Resolution	1920 × 1080		
	Color	16.7 M		
	Visual Angle	Horizontal: 178 °, Vertical: 178 °		
	Response Time	8ms (G to G)		
	Contrast	4000:1		
	Brightness	500 cd/m ²	800 cd/m ²	
	Dot Pitch	0.025" (0.63 mm)		
	Color Saturation	92%		
	Display Area	47.62" (H) × 26.79" (V)		
Seam Size	Bi-side Seam	0.22" (5.5mm)	0.21" (5.3mm)	
Interface	Video Input Interface	VGA × 1, DVI × 1, BNC × 1, YPbPr × 1, HDMI × 1		
	Video Output Interface	VGA × 1, DVI × 1, BNC × 2		
	Control Interface	RJ45 for RS-232		
Power	Power Dissipation	145 W	190W	
	Power Requirement	100 to 230 V AC		
Working Environment	Working Life	≥ 60,000 Hours		
	Operating Temperature	0 °C to 40 °C (32 °F to 104 °F)		
	Operating Humidity	10% to 85% (Non-condensing)		
	Frame Width	0.15" (Left/Upper), 0.07" (Right/lower)	0.14" (Left/Upper), 0.067" (Right/lower)	
	Dimension (W × H × D)	47.85" × 27.01" × 5.08"		47.85" × 27.02" × 4.48"

DS-D2055NL-B

Model	Monitor	DS-D2055NL-B
Display	Diagonal Size (inch)	55"
	Resolution	1920 × 1080
	Panel	S-PVA
	Backlight	LED Backlight (Direct type)
	Display Area	47.62" (H) × 26.79" (V)
	Dot Pitch	0.025" (0.63 mm)
	Color	16.7 M
	Color Saturation	92%
	Contrast	4000:1
	Brightness	500 cd/m ²
	Response Time	8ms (G to G)
	Visual Angle	Horizontal: 178 °; Vertical: 178 °
	Working Life	≥ 60,000 Hours
Interface	Video Input Interface	VGA × 1, DVI × 1, BNC × 1, YPbPr × 1, HDMI × 1
	Video Output Interface	VGA × 1, DVI × 1, BNC × 2
	Control Interface	RJ45 for RS-232
Power	Power Requirement	AC 90 to 264 V
	Power Dissipation	192 W
Physical Feature	Dimension (W × H × D)	47.78" × 26.94" × 4.44"
	Physical Seam	0.14" (3.5 mm)
	Frame Width	0.09" (Left/Upper), 0.047" (Right/lower)
Working Environment	Operating Temperature	0 °C to 40 °C (32 °F to 104 °F)
	Operating Humidity	10% to 85% (Non-condensing)

DS-D2055NH-B

Model	Joint Monitor	DS-D2055NH-B
Display	Diagonal Size(inch)	55"
	Resolution	1920 × 1080
	Backlight	LED (Direct Type)
	Color	16.7 M
	Visual Angle	Horizontal:178 °, Vertical:178 °
	Response Time	8 ms (G to G)
	Contrast	4000:1
	Brightness	800 cd/m ²
	Dot Pitch	0.025" (0.63 mm)
	Color Saturation	92%
	Display Area	47.62" (H) × 26.79" (V)
Seam Size	Bi-side Seam	0.14" (3.5 mm)
Interface	Video Input Interface	VGA × 1, DVI × 1, BNC × 1, YPbPr × 1, HDMI × 1
	Video Output Interface	VGA × 1, DVI × 1, BNC × 2
	Control Interface	RJ45 for RS-232
Power	Power Requirement	AC 90 to 264 V
	Power Dissipation	192 W
Working Environment	Operating Temperature	0 °C to 40 °C (32 °F to 104 °F)
	Operating Humidity	10% to 85% (Non-condensing)
Physical Property	Working Life	≥ 60,000 Hours
	Dimension (W × H × D)	47.78" × 26.94" × 4.38"
	Frame Width	0.09" (Left/Upper), 0.047" (Right/Lower)

DS-D2055NL/Y

Model	Joint Monitor	DS-D2055NL/Y
Display	Diagonal Size (inch)	55"
	Resolution	1920 × 1080
	Color	16.7 M
	Visual Angle	Horizontal:178 °, Vertical: 178 °(CR≥10)
	Response Time	8 ms (G to G)
	Contrast	4000:1
	Backlight	500 cd/m ²
	Dot Pitch	0.008" (H) × 0.025" (V)
	Color Saturation	92%
	Display Area	47.62" (H) × 26.79" (V)
Seam Size	Bi-side Seam	0.22" (5.5 mm)
Interface	Video Input Interface	VGA × 1, DVI × 1, BNC × 1, YPbPr×1
	Control Interface	RJ45 for RS-232
Power	Power Dissipation	171W
	Power Requirement	AC 100 to 240V, 50/60 Hz
Working Environment	Working Life	≥ 60,000 Hours
	Operating Temperature	0 °C to 40 °C (32 °F to 104 °F)
	Operating Humidity	10% to 90%
	Frame Width	0.14" (Left/Upper), 0.073" (Right/Lower)
	Dimension (W × H×D)	47.85" × 27.02" × 2.26"

Input Resolution

Video Input Resolution	Signal	Resolution
	CVBS/YPbPr	PAL, TSC
	VGA	XGA/60HZ, SXGA/60HZ, 720P/60HZ, 720P/50HZ, 1080P/60HZ, 1080P/50HZ, UXGA/60HZ
	DVI/HDMI	XGA/60HZ, SXGA/60HZ, 720P/60HZ, 720P/50HZ, 1080P/60HZ, 1080P/50HZ, 1080I/60HZ, 1080I/50HZ, UXGA/60HZ

4.2 Trouble Shootings

Phenomenon	Solutions
Unable to power on (power indicator is off)	<ol style="list-style-type: none"> 1. Check if the power cable is damaged; 2. Check if the power supply is connected; 3. Confirm the power switch is ON; 4. Check if the power switch is damaged; 5. Check if the safety fuse is fused.
All the Screens are out of control	<ol style="list-style-type: none"> 1. Check if the port number of the montage software is correct. 2. Check if the serial line is damaged, and the interface has a good contact with the device and the computer. 3. Check if the computer serial is good by change to another computer to have a try. 4. Check if the address configurations of the screens are correct. Please refer to the address settings.
Some of the screens are out of control.	<ol style="list-style-type: none"> 1. Check if the address configuration of the specific screen is correct. 2. Check if the sole control to the specific screen is able to work.
Single or multiple devices provide no VGA/DVI input.	<ol style="list-style-type: none"> 1. Check if the contact of the screen and the signal interface is good. 2. Test with another VGA/DVI cable. 3. The device configuration is in correct input status. 4. The input signal is between the input ranges. 5. If the DVI input is selected, please make sure there is a DDC with the output.
There are Image display exceptions.	<ol style="list-style-type: none"> 1. Replace with the new cables. 2. Add a signal amplifier. 3. If there is an overexposure or underexposure of the image, please adjust the brightness of the image. 4. If there are stripes displayed on the screen, please check the device connections or ask to repair or exchange the device. 5. If there is a color deviation of the image, please check the device connections, or restore the image settings to the default.
The remote control cannot control the device.	<ol style="list-style-type: none"> 1. Check and replace the battery. 2. Clean the controller with Professional guidance. 3. Ask to repair or exchange the controller.
There is no response from the device while doing software control	<ol style="list-style-type: none"> 1. Check the device connections. 2. Please ensure that the COM port of the host PC is the same as which of the software. 3. Check whether the device IP address is correct. 4. Connect the maintenance point for technical support.