MIG-CL9400series

User manual V1.1

⚠ Before using this Video Wall Controller，please read this manual carefully and preserved for reference in the future.

MAGNIMAGE

Video Wall controller

Statements

The product specifications and information mentioned in this manual is just for reference, will not give prior notice if there is any updated. Unless there is a special agreement, it is just used as guidelines. All the statements or information in this manual shall not constitute any form of guarantee.

Directory

Briefs

Thanks for your purchasing our Video wall Controller. Do hope you can enjoy the experience of the product performance. The design of the Video wall Controller conforms to international and industry standards. But if with improper operation, there will be a personal injury and property damage. In order to avoid the dangerous, please obey the relevant instructions when you install and operate the product.

Trademark Credit

- VGA and XGA are the trademarks of IBM.
- VESA is a Video Electronics Standards Association's trademark.
- HDMI mark and High-Definition Multimedia Interface are all from HDMI Licensing LLC.
- Even if not specified company or product trademarks, trademark has been fully recognized.

About Software

Do not change, decompile, disassemble, decrypt or reverse engineer the software installed in the product, these acts are illegal.

Feature

- The pure hardware architecture, full channel RGB 24bit/60HZ
- Support DP and HDMI 4K * 2K/60Hz input, and DP support 8K*1K/60Hz
- Support adjusting the size and position of display layer, full screen roaming
- Single outputs support 4 separate layers and a HD background
- Support saving 3 HD background
- Support Caption Overlay Function
- Support HDCP1.4&2.2
- Save the work scene, and quickly call the template
- support EDID, support for customized output resolution
- The group control for layers, fade switching for layers
- Support a variety of control devices, IPAD and computer software
- Support caption and label function
- Support LED, LCD, projection screen splicing and fusion
- The blade-board design, dual power backup

Safety Notice

- The power input voltage for this product is 100-240VAC50/60Hz, please use the correct power supply
- When you need to connect or plug out any signal or control line, please confirm all the power line have been plugged out
- When do you want to add hardware device into the product or to remove it, please confirm all signal and power lines have been previously removed
- Before any hardware operation, please prior switch off the power of MIG-CL9400, and you can release your body electrostatic through touch the ground surface
- Please use it in a clean, dry and ventilated environment, do not use this product in high temperature and humid environment
- This product is electronic products, please stay away from fire, water and inflammable and explosive dangerous goods
- this product has high pressure parts, please do not open the case or for the maintenance of the equipment by yourself
- supposing it has smoking, odor and other abnormal situation, please immediately turn off the power switch, and contact with dealers

Summary

CYCLONE video wall controller is an video processing equipment of pure hardware architecture, mainly be applied in LED large screen with small pixel spacing, realize multi displays seamless splicing and running multi window, it can apply in security monitoring, administration, military command, exhibition display, education and scientific research and other industries.

CYCLONE host adopts the hardware architecture which based on large capacity high speed FPGA array and high speed digital matrix, for a variety of input signal, internal processing the RGB 24bits/60Hz, ensure the high reducibility of the signal, also built in high performance scaling engine, support multi screen output when the seamless splicing, to ensure the output image is clear, smooth, without delay.

Support for multi signal input, including DVI, VGA, HDMI, DP, SDI, IP. EDID management can be achieved on the input signal.

We provide after-sale service for all series of products, support USB upgrade and network control, convenient technical support and after-sale maintenance; maintenance.

CL9400 series can be divide into 3U case MIG-CL9403 and 4U case MIG-CL9404 and 8U case MIG-9408

MIG-CL9403:with 3 output board slots, 5 input board slots

MIG-CL9404:with 5 output board slots, 8 input board slots

MIG-CL9408:with 8 output board slots, 12 input board slots

Video wall controller is made up of case, input boards and output boards.

technical specifications

Input signal specification		
Interface	**Number**	**Specifications**
VGA	4	VESA standard
DVI	4	VESA standard，support EDID
HDMI	4	HDMI-1.3standard
SDI	4	480i、576i、720p、1080i/p（3G SDI）
DP	2	DP 1.1 standard 3840×1080/60 Hz, support EDID management
HDMI(4K)+ DP(4K)	1+1	HDMI2.0, DP1.2, 3840×2160/60Hz, support EDID management
IP	2	H.264

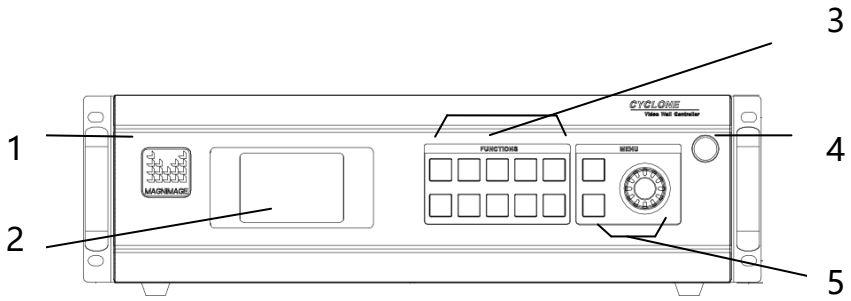
Output signal specification		
Interface	**Number**	**resolution**
DVI	4×1 （ Single port 4 layers ）	1024×768/60Hz 1366×768/60Hz 1440×900/60Hz1440×1440/60Hz 1280×1024/60Hz 1680×1050/60Hz 1600×1200/60Hz1920×1080/60Hz 2560×816/60Hz customized output resolution Maximum horizontal 2560 , Maximum Vertical 2160
SDI	4×1 （ Single port 4 layers ）	1080P/60Hz,1080i/60Hz, 720P/60Hz

Electrical specifications	
Input power	100～240VAC，50/60Hz
working temperature	0~45℃
working temperature	10% -90% non-condensing

For boards type and specification please refer to the board introduction chapter

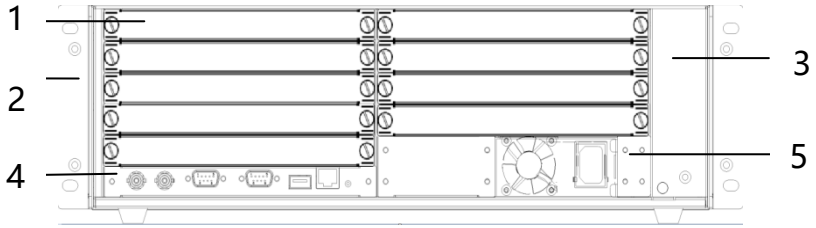
Front and rear panel of Video Wall controller

MIG-CL9403 Front Panel



1、LOGO	Magnimage
2、LCD display	Mainly used for showing the status of the device, including the input and output board configuration, firmware version, ambien temperature, network configuration and other information
3、Functional key area	Buttons 1~10, for the input of the machine configuration information, such as the IP address in the network configuration, subnet mask, etc.
4、Menu operation area	OK key、↩key，As well as the knob；using LCD display，car browse the local menu system

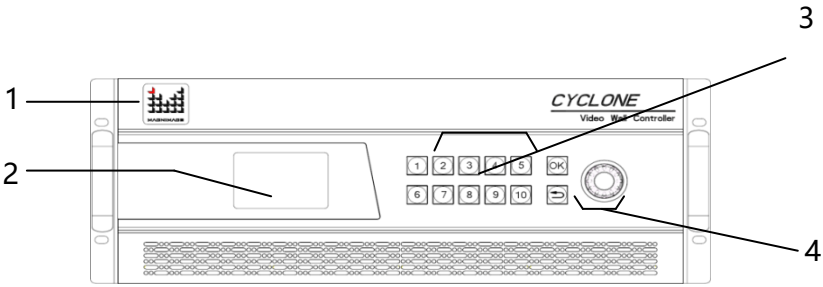
MIG-CL9403 Rear Panel



1、Board slot	MIG-CL9403 has a total of 8 board slots, in the back of the case, it has 1 to 8 of the numerical identification
2、Dust-against bracket	The dust-against bracket can be disassembled conveniently for replacing a new one.
3、Fan bracket	Fan bracket can be easily removed for cleaning or replacing
4、Control board	Control board is the MIG-CL9400 control center, with a serial ports, network port, USB port, as well as reference synchronization port
5、the power	the power supply, Can be extended to dual power supply

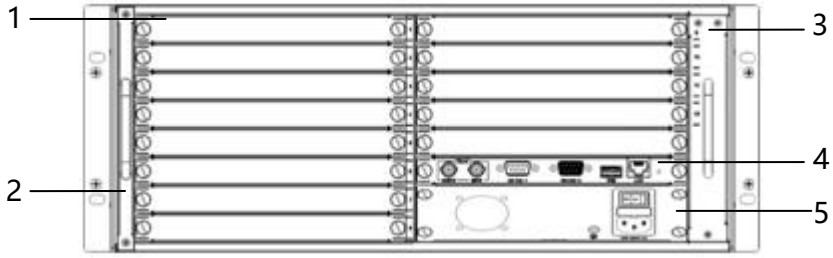
Input configuration area(the dark area)	5 input board slots (1st to 5th slots)
Output configuration area(the light area)	3 output board slot (7th to 9th slot), each board slot supports the main output

MIG-CL9404 Front Panel



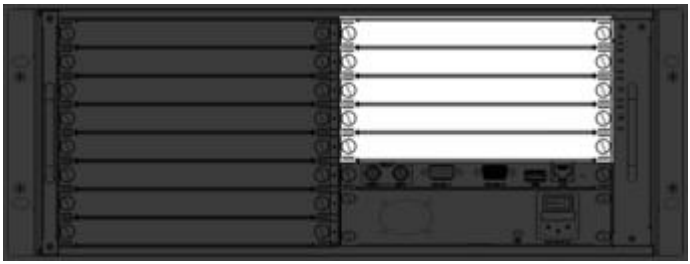
1、LOGO	Magnimage
2、LCD display	Mainly used for showing the status of the device, including the input and output board configuration, firmware version, ambient temperature, network configuration and other information
3、Functional key area	Buttons 1~10, for the input of the machine configuration information, such as the IP address in the network configuration, subnet mask, etc.
4、Menu operation area	OK key、⮌key，As well as the knob；using LCD display，can browse the local menu system

MIG-CL9404 Rear Panel



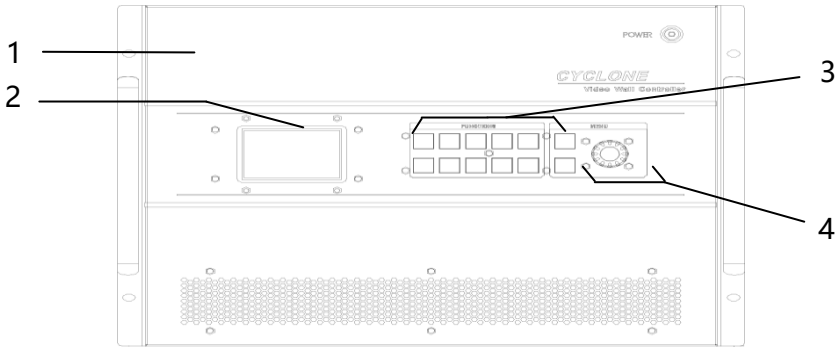
1、Board slot	MIG-CL9404 has a total of 13 board slots, in the back of the case, it has 1 to 13 of the numerical identification
2、Dust-against bracket	The dust-against bracket can be disassembled conveniently for replacing a new one.
3、Fan bracket	Fan bracket can be easily removed for cleaning or replacing
4、Control board	Control board is the MIG-CL9400 control center, with a serial ports, network port, USB port, as well as reference synchronization port
5、the power	the power supply, Can be extended to dual power supply

MIG-CL9404



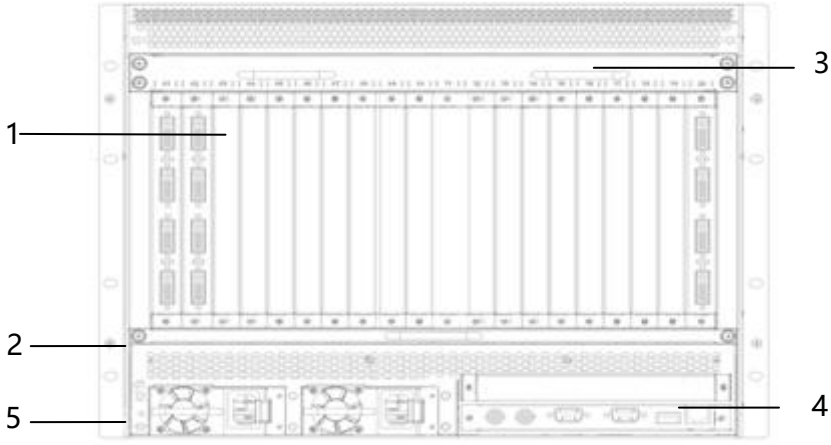
Input configuration area(the dark area)	8 input board slots (1st to 8th slots)
Output configuration area(the light area)	5 output board slot (9th to 13th slot), each board slot supports the main output

MIG-CL9408 Front Panel



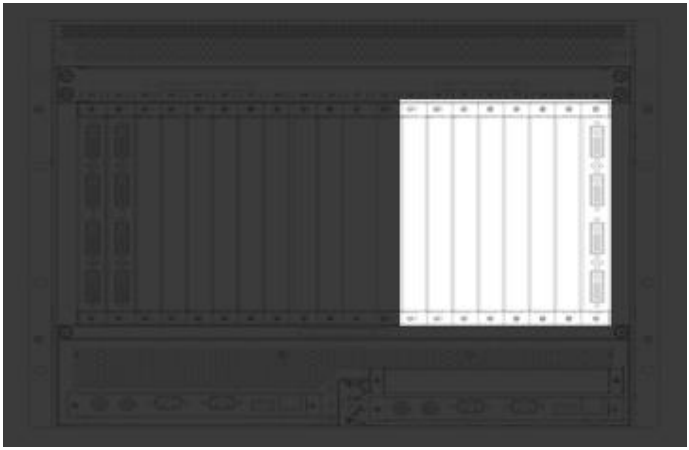
1、LOGO	Magnimage
2、LCD display	Mainly used for showing the status of the device, including the input and output board configuration, firmware version, ambient temperature, network configuration and other information
3、Functional key area	Buttons 1~10, for the input of the machine configuration information, such as the IP address in the network configuration, subnet mask, etc.
4、Menu operation area	OK key、↩key，As well as the knob；using LCD display，can browse the local menu system

MIG-CL9408 Rear Panel



1、Board slot	MIG-CL9408 has a total of 20 board slots, in the back of the case, it has 1 to 20 of the numerical identification
2、Dust-against bracket	The dust-against bracket can be disassembled conveniently for replacing a new one.
3、Fan bracketand LED switch	Fan bracket can be easily removed for cleaning or replacing. LED switch to turn on or turn off the LED light.
4、Control board	Control board is the MIG-CL9400 control center, with a serial ports, network port, USB port, as well as reference synchronization port
5、the power	dual power

MIG-CL9408

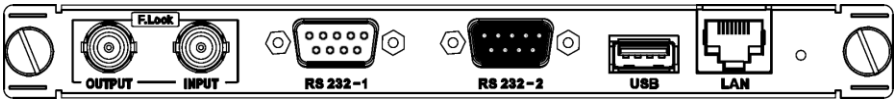


Input configuration area(the dark area)	12 input board slots (1st to 12th slots)
Output configuration area(the light area)	8 output board slot (13th to 20th slot), each board slot supports the main output

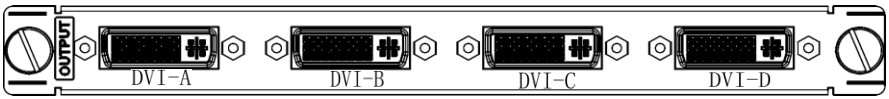
Board Introduction

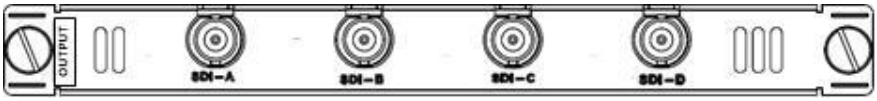
MIG-CL9400 series of multi videos controller has abundant boards for selection. The control board, as a standard configuration, is the core part of the whole device; input and output boards are matched configuration which can be matched freely according to the actual demand.

Control board

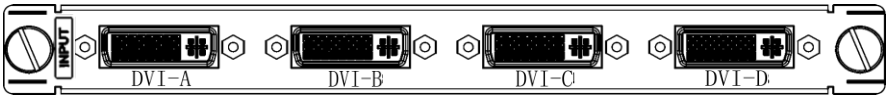
Control board	
	
F. Lock	Frame synchronization locking signal input and output interface
RS 232-1/2	RS232-1 is a serial port control interface for connection control equipment; RS232-2 is the external matrix control interface, used to control the external matrix
USB	The USB interface is used to update the firmware, or for import HD background configuration information
LAN	Network control interface, used to connect the host computer; the controller's LAN port IP address

Output board

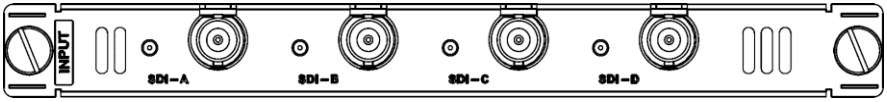
MIG-CL9000-OUT404DVI: [DVI 4×1@6Layer Output board]]	
	
DVI interface	4 DVI individual output mode.
Working mode	Program output
Layer description	Standard output mode, it supports 4 separate image layers, and a HD background
Output resolution	The best output resolution is 1920 x 1080@60Hz, and supports customized output resolution

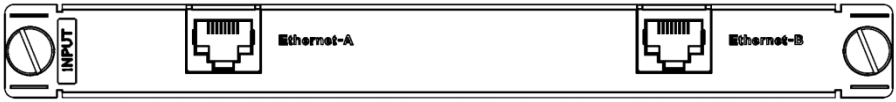
MIG-CL9000-OUT404SDI: [SDI 4×1@4Layer Output board]]	
	
SDI interface	4 SDI ports are individual output
Working mode	S Program output
Layer description	Standard output mode, each SDI output port support 4 image layers, and a HD background
Output resolution	The best output resolution is 1920 x 1080@60Hz, and supports 1080i/60Hz，720P/60Hz

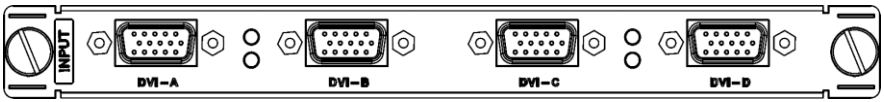
Input board

MIG-CL9000-INDVI: [DVI ×4 Input Board]	
	
Signal specification	Support only VESA standard DVI-D digital signal, support EDID management function
Interface description	24+5 pin / head interface

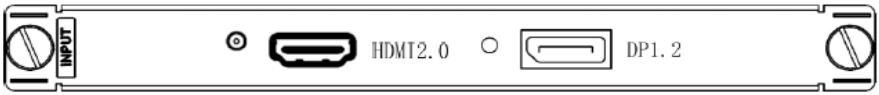
MIG-CL9000-INHDMI: [HDMI ×4 Input Board]	
	
Signal specification	EIA/CEA-861 standard, HDMI-1.3 standard
Interface description	HDMI Type A

MIG-CL9000-INSDI: [SDI ×4 Input Board]	
	
Signal specification	480i、576i、720p、1080i/p(3G SDI)
Interface description	BNC / head interface

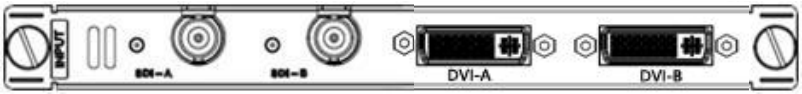
MIG-CL9000-INIP: [IP ×2 Input Board]	
	
Signal specification	IP Video streaming / H.264
Interface description	RJ45 × 2

MIG-CL9000-INVGA: [VGA ×4 Input Board]	
	
Signal specification	VESA standard
Interface description	15pinD-sub / head interface

MIG-CL9000-IN2DP: [DP ×2 Input Board]	
	
Signal specification	DP1.1 standard (3840 ×1080/60hz), support EDID
Interface description	Full Size 20 pin

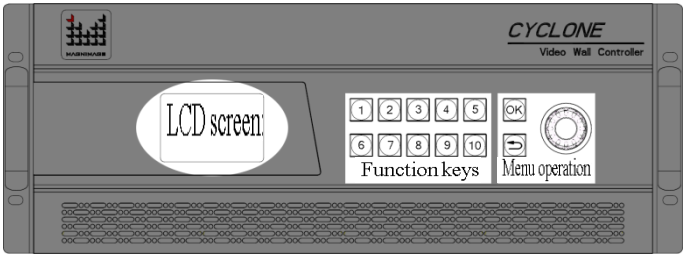
MIG-CL9000-INDP12: [DP×1,HDMI×1 Input Board]	
	
Signal specification	HDMI2.0, DP1.2 standard, support 3840×2160/60Hz, support EDID management
Interface description	HDMI Type A and DP Full Size 20 pins, input ports optional,

MIG-CL9000-INSDIVGA:[SDI×2&VGA×2 input board]	
	
Signal specification	2 SDI input, 2 VGA input
Interface description	SDI：BNC / head interface VGA：15pinD-sub / head interface

MIG-CL9000-INSDIDVI: [SDI×2，DVI×2**Input Board**]	
	
Signal specification	2 SDI input, 2 DVI input
Interface description	SDI：BNC / head interface DVI：24+5 pin / head interface

System menu

As shown in the following figure, MIG-CL9400'ssystem menu, it consists of the front panel of the LCD screen, buttons, and the knob, it can real-time view of the operation information of the system



LCD screen: colorful LCD screen, used to display all the information menu, as well as the user settings menu

Function keys: button 1~10, in the specific menu page, you can complete the user input setting

Menu operation: OK key, refers to confirm the key, but also as a menu call button; ⮌ key refers to return key, step by step to return to the upper menu; knob for menu browsing

Status Icons

Icons	Names	characteristics
	Temperature state	The icon is in white, which means the environment temperature is appropriate; Yellow, the temperature is high; The Red color indicates the temperature is too high.
	System error	When the icon appears, refer that it has an error on the system input and output modules
	USB Device connection	when USB device is connected to the control panel, it will display the icon
	Electrical circuit error	When this icon is displayed, it means having errors in the system circuit, such as current, voltage bias, or partial small, etc.

Menu browsing

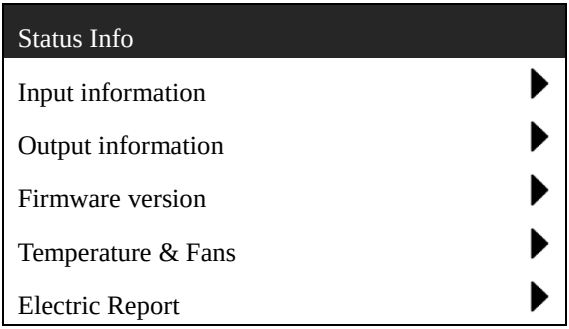
On the front panel, OK key refers to confirm key, it also a menu calling button; ⮌key to return key, step by step to return to the upper menu; knob for menu browsing. On the default interface, press the OK key to call out the main menu interface.

Main menu

In the boot default interface, press the OK key, you can call out the main menu, LCD screen display as shown below:

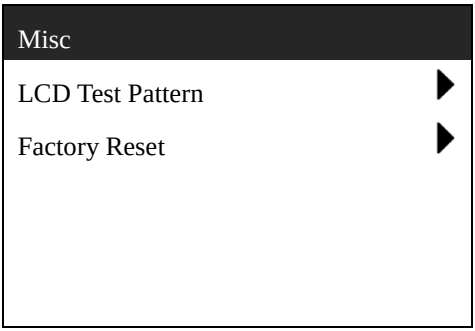
Status Info	It can display input and output configuration information; each module firmware version information; environment temperature and fan state; each board current and voltage state
Misc	Equipment with its LCD screen test; factory reset function
Communication	Set the network parameters of the device: IP address, subnet mask, etc.
Language/菜单语言	Setting the language for user
About Magnimage	This page is to provide the company's Website, WeChat QR code for customers to scan

Status information



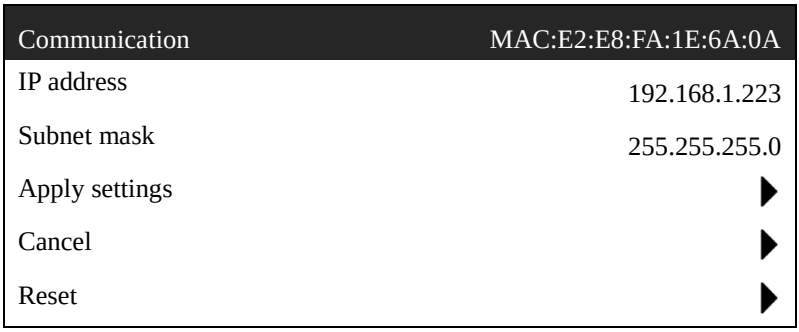
Input information	Graphical show the input Info directly , green color of the port indicates that the port has been detected in the effective input signal
Output information	Graphical show the input Info directly
Firmware version	Display firmware version information on all boards
Temperature & Fan	Display the temperature of all the board, as well as the working state of the system fan
Electric Report	Display the current and voltage of all board circuit and other real-time monitoring data

Function setting



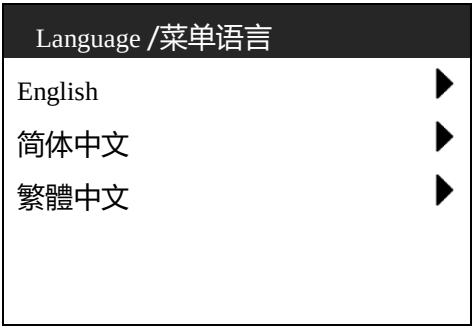
LCD Test Pattern	In the menu, move around knob for selecting test card, OK keys or ⮌ key can exit the state
Factory Reset	Make all settings of the machine to initial state of factory, after the operating, you need to restart the power

Communication setting



IP address	In This interface, we use figure keys and OK keys to input the IP address, for example: 1、9、2、1、6、8、1、OK、2、2、3、OK
Subnet mask	In This interface , the use of figure keys and OK keys to input the subnet mask, for example: 2、5、5、2、5、5、2、5、5、OK、10、OK
Apply settings	Apply the above two items setting to the network module of the device, and exit the interface
Cancel	It is set to return to the last application of network state, and exit the interface
Reset	Restore the network settings to the factory settings state, and exit the interface

Language



English	Set menu display language
简体中文	Set menu language in simplified Chinese
繁體中文	Set menu language in traditional Chinese

About Magnimage

About Magnimage



http://www.magnimage.com

Software

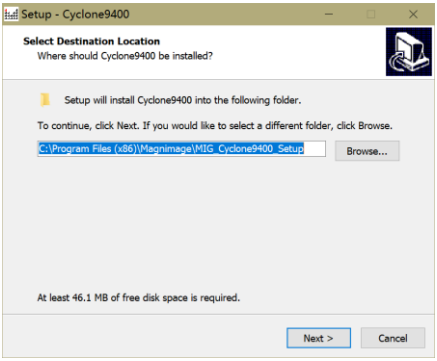
MIG Cyclone Multi-display System,MIG-CL9400Host computer software (hereinafter referred to as the PC software), for Cyclone series multi screen display controller is developed for the professional control software. Software interface is intuitive and simple, easy to operate, almost all the functions of the controller, the need to use the PC software to achieve. With the "network replay board", in the host computer software related interface, you can view the input image signal in real time, a network replay the graphics board, support up to 18 input signal real-time monitoring.

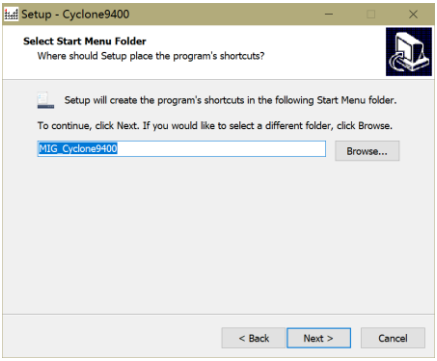
Operating environment

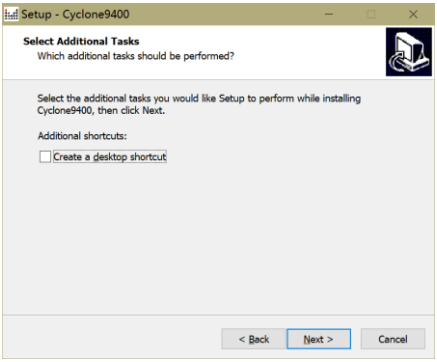
- The CPU frequency ≥ 1.6GHz
- The memory ≥ 1G
- The display memory ≥ 512M
- Windows XP \ Windows 7 (32 or 64), Windows 8 (32 or 64),
- Minimum display resolution: 1024 * 768

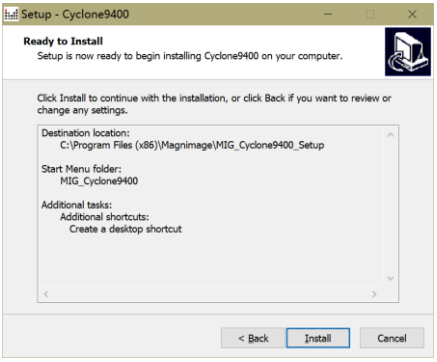
Installation

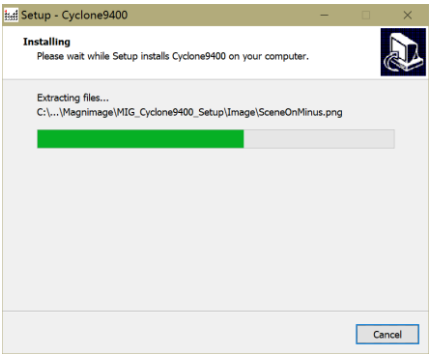
Open the CD attached to the controller, to find "MIG_Cyclone-Setup9400_Setup.exe" file, double-click the file, install it in the new PC which did not install the software, the computer will start to install a boot program.If the PC have been installed in PC software, the computer will start the repair or uninstall program guide.

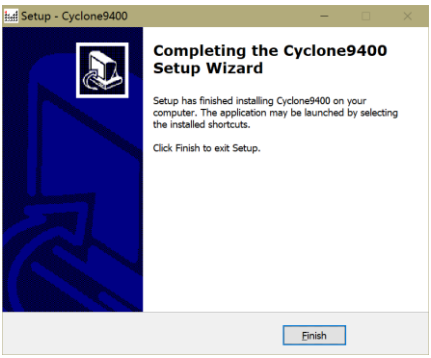






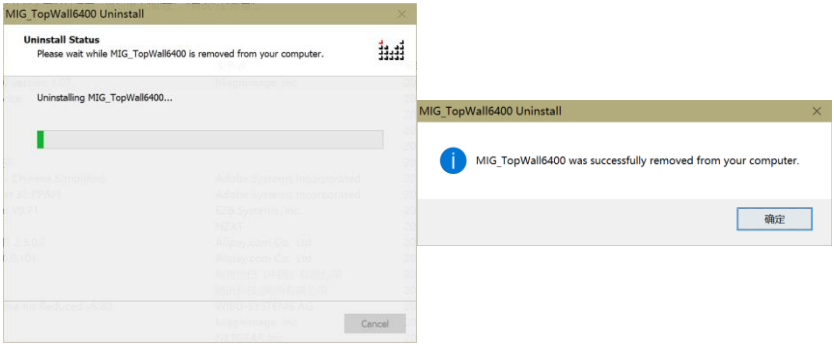






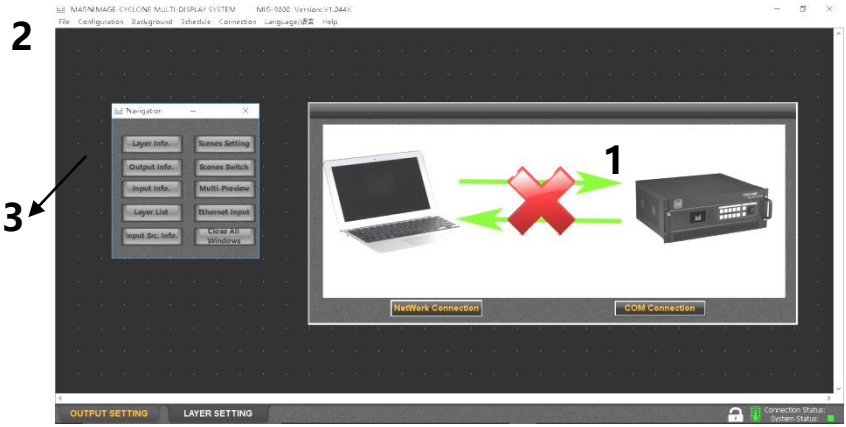
- Click the setup program, start the installation process, click "Next"to go to the next step
- Select the program installation position, and users need to install this program
- The installation information confirmation, if the previous settings are correct, please click "Next" to go to the next step
- Start in the installation process
- The user account control dialog box of the operating system, select "yes"
- In the process of installation process
- At the end of the installation, click on "Close

Unloading



- Click the setup program, start the unloading process, click "Next" to go to the next step
- At the unloading end, click on "Close"

Running software



Open the software, the interface will show above graph, including:

1.Connection window

2.The main program window

3.Guide window

Connection window

Click on the two buttons below the Connection window, it will pop up the menu:

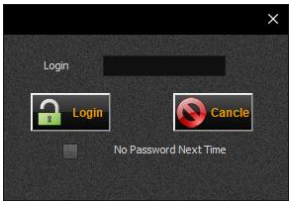
1, network connection

A> target IP：the IP address of video wall controller, if the network has multiple devices, it will be displayed on the IP address list, so you can select the target IP wanting to control

B> local IP：the IP address of the local device connected to the Video wall controller (for control)

2, Serial port connection

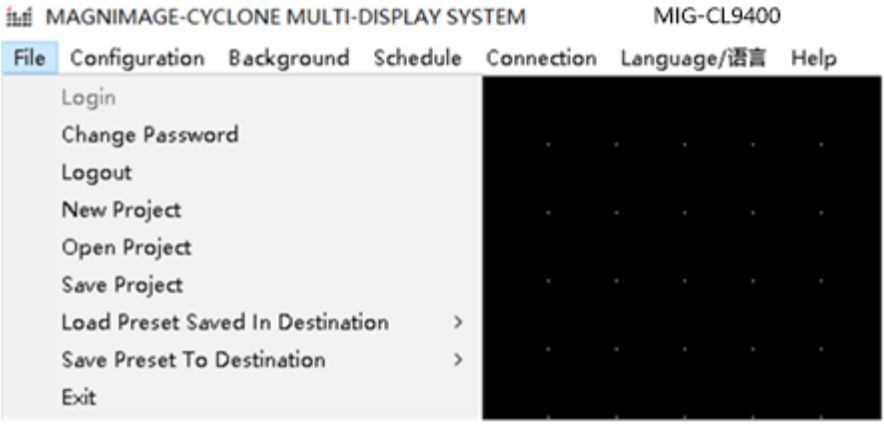
Splicer can be connected through the RS232 serial port, the default baud rate 115200



Pass word：123456

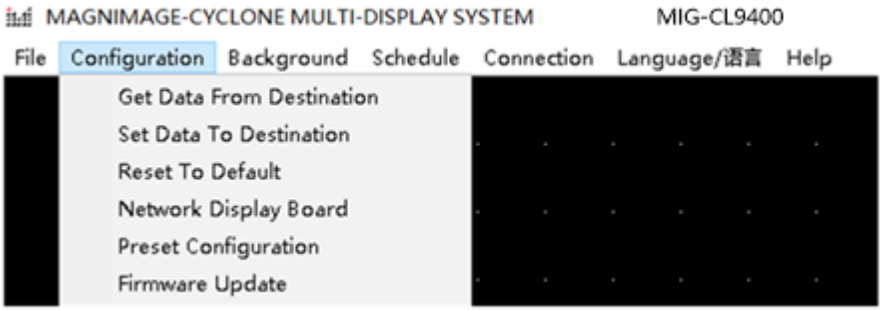
Main Program Window

File Menu



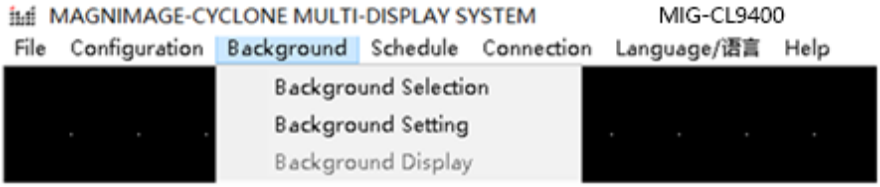
Change password	
New Project	Create new project file to store all configuration data and information in current project
Open Project	Open established project file
Save Project	Save a project file
Load Preset Saved In Destination	Load the presets
Save Preset To Destination	Save the presets
Exit	Exit upper machine software

Configuration menu



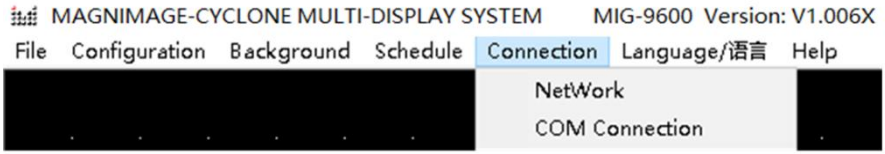
Get Data From Destination	Read current configuration data in the devices
Set Data To Destination	Set current configuration data to the devices
Reset To Default	Restore host machine to default, restart power after completion
Network Display Board	Switch Network Display Board On or Off here, where there is tick shows in the left, that means display function is started.
Preset Configuration	Save or call the preset.
Firmware Update	Burn and upgrade firmware for splicing device

Background Menu



Background Selection	Enter the background selection interface, view or select the background of each output port
Background Settings	Enter the background settings interface, view or select the background of each output port
Background Display	Display current preview of background in the stage of main program area

Connection Settings Menu



Network	Configure the network connection and build connection with splicing device in net model
COM Connection	Configure COM connection, and build connection with splicing device in serial interface mode

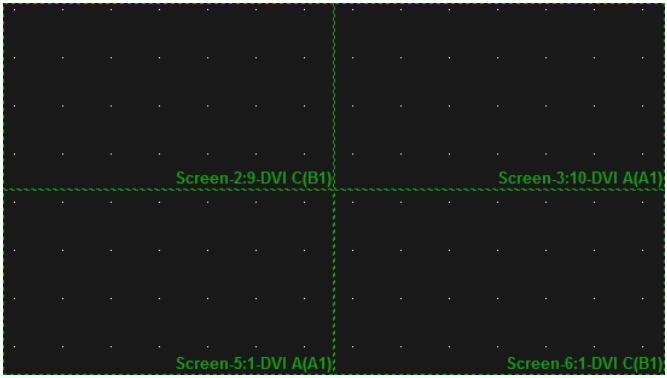
语言/Language Menu

中文/Chinese	The menu will display in Chinese
English/英文	The menu will display in English

Help Menu

About	Check current software version of the upper machine

Stage

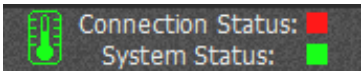


Stage is the largest area in the window of the entire software, namely the black part of the window, which is used to put all the display screen and input layer. Display screen will be displayed as output rectangular wire-frames in the stage, what in scope of the wire-frames is the corresponding content to be output.
The input image layer, will be also displayed as rectangles(can also be displayed as corresponding input images when network echo is available) in the stage. The output effects of the multi-screen display controller are identified by these positions of images and output rectangular.

Stage Type Switch

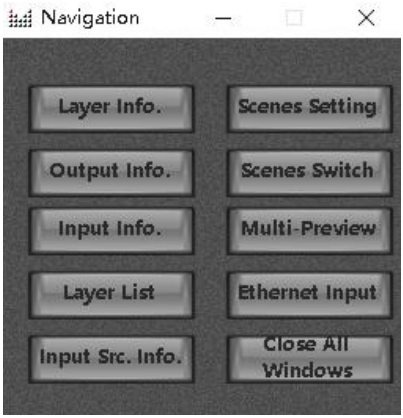
Output Setting	Only the wall's output setting will be seen on the stage, in order to set and adjust the wall's position
Layer Setting	The output wall of the stage is fixed and a green dotted box will be seen. Under this circumstance, the stage is used to set and adjust the layer of the input image

Status Bar



Temperature Status	Icon stands for thermometer, green or white say in normal range.Yellow or dark golden say on high side.When the temperature increased to a certain degree, the splicing divide will enter a low-power protected mode(abnormal working status).
Connecting Status	Red says unconnected, green says connected
System Status	Green says system normal due to real-time monitoring function of feedback results, red says system abnormal

Guide Window



Layer Info.	Shows the current selected layer information and the layer packet information
Output Info.	Shows the output port list and the current information of the selected output port
Input Info.	Shows all the input information of the ports
Layer List	Shows the layer list including all the information of layer setting
Input Scr. Info.	Shows input port type, input signal specification and related information
Scenes Setting	Manages scene file
Scenes Switch	Able to preview the scene or read the scene directly.

Multi-Preview	Multi-preview is available when multi-preview cards existed in lower machine.
Ethernet Input	Ethernet Tablet is available when network input card existed in lower machine
Close All Windows	Close all above windows

Software Using

Preparation

1. Network Connection Model: (password 123456)
   a) Connect upper machine and lower machine to same LAN by Ethernet cable
   b) Set the IP address of local connection in network adapter on upper machine, eg.:

   i. IP Address:192.168.1.100

   ii. Sub-net Mask:255.255.255.0

   iii. Default Gateway:192.168.1.1

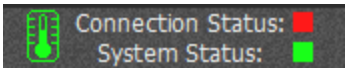
   c) Set the machine IP address in “Communication Settings” of lower machine, ensure it is the same as LAN segments, e.g.:
      i. IP Address:192.168.1.223
      ii. Sub-net Mask:255.255.255.0
   d) Open the software and select 192.168.1.100 in local IP drop-down list of the network communication(if no IP address in the list, please click "refresh" button laterally). And then all available lower machine IP address in this segment will show in the IP address sequence. The IP above the dialog box will be updated with the selected one after double click on destination IP address, meantime, click 'connect", upper machine software will start communication automatically.

2. COM Connection：(password 123456)

   a) Connect upper machine and lower machine with a serial port DB9 cable.
   b) Open the upper machine software, select the connection port in the serial port communication configuration dialog, such as COM3, and click "connection" button, then the upper machine software will start communication automatically.

3. Check Connection Status

   There is connection status indicator icon in lower right corner in upper machine

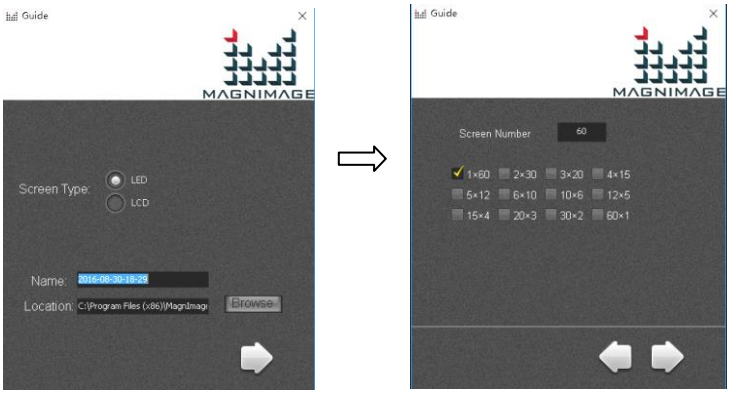


Red says unconnected, click the red icon to open the connection configuration dialog; green says connected.

New Project

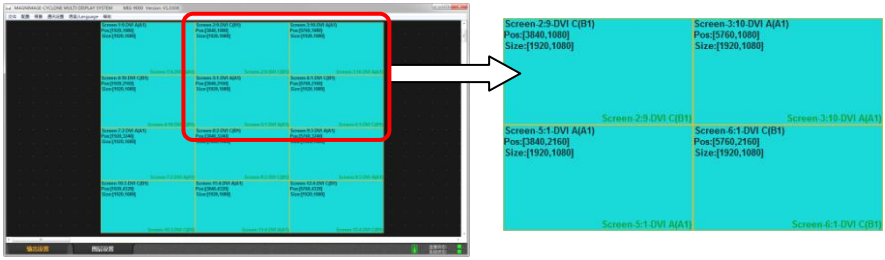
Create New Project

Select new project in "File" menu, it come out a create new project dialog box:



Screen Type	Different screen makes difference on the setting in next step LED: no need to consider the frame between screens LCD:LED: no need to consider the frame between screens
File Name	Name as current local time default, it can be modified as whatever customer like
Location	Local save path of project file

No. of screens can be set here means:No. of output port. Take 12 as an example, set screen No. as 12, several combination will be offered below(No. of row x No. of column, like 4x3 means 4 rows x 3 column). Select proper combination, click next step, the software will bu i l d output display automatically, as below images show:



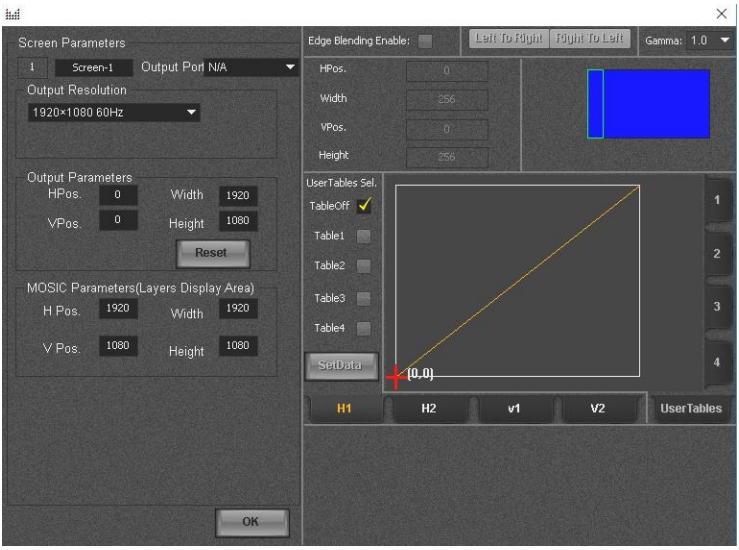
Each rectangle stands for output shows three kinds of information, as shown below.

Take Screen-3 as an example, the content shown as below:

Screen-3:10-DVI A(A1)	Output screen number: Output port slot number - port type Port number
Pos:[5760,1080]	Position of the output screen in the stage: [Horizontal position, Vertical position]
Size:[1920,1080]	Size of the output screen in the stage: [Horizontal size, Vertical size]

While upper machine software automatically creating output screen, all the screen output resolution is default, which is 1920x1080@60Hz, and the output screen is defaultly full screen. Users can set resolution and output screen of each output screen according to requirement of the projects.

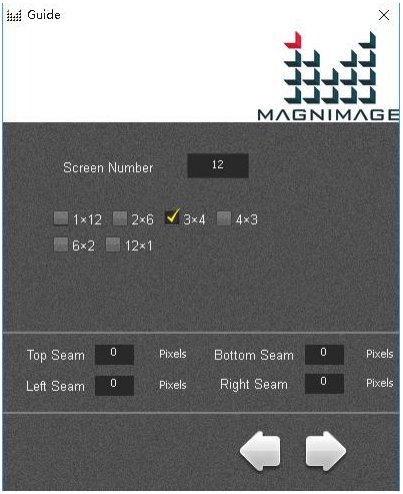
Right-click on rectangle that represent output screen, select “Screen Properties”, it will come out screen parameters adjusting dialog, as shown in the table below:



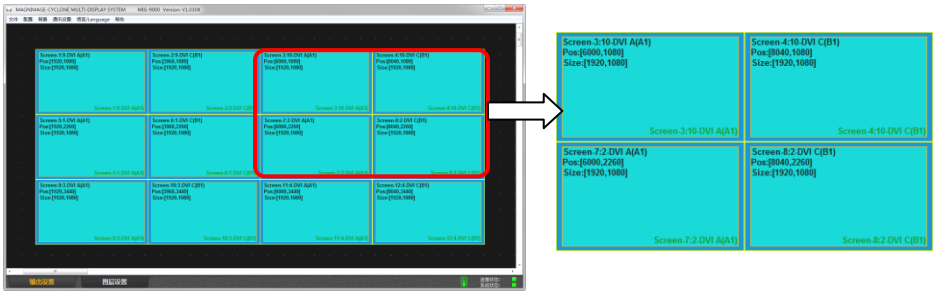
Screen Parameters	In order from left to right is: screen number, screen name, and related output port
Output Resolution	Output resolution adopted by the output port
Output Windows	Setting the size and position of output image
Stitching Parameters	This group parameters determine the display scope of current screen in the stage

Creating New LCD Project

While creating new project, suppose the screen type is LCD, after set file name and save location, click the right arrow to next setting, as shown in the image:

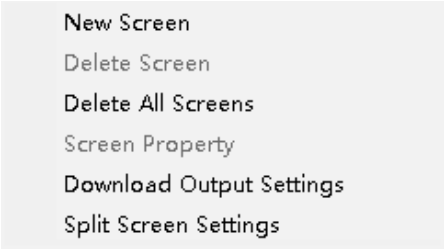


No. of screens can be set here, namely:number of output port. Take 12 as an example, set the screen number as 12, several kinds of combination will be offered(No. of row x No. of column, eg. 3x4 means 3 row x 4 column). Select proper combination,and convert the seam of LCD into pixels, fill in the seam table below, click next, the software will build output screen automatically, as shown in below image.



Send output Settings

After all the output set, need to send the output of upper machine to the stitching machine. Meanwhile, the sub menu can be called in the stage of output setting, and select "Send output Settings".



New Screen	Add new display screen
Delete Screen	Delete selected screen
Delete All Screens	Delete all screens
Screen Property	Open selected screen properties dialog
Download Output Settings	Send current screen data to stitching machine, the machine shall equip all the function of output port; This process will continue for a while, please do not send duplicate output settings, in case increasing the pending time.

Layer Placement

After output setup completed, switch "layer settings" TAB of the stage type, all the screen will display as green dotted box and locked to be not editable. Then the layer can be put on the stage,that is image display configuration. Only after the configuration, related image can be displayed on the displayer or LED Screen.

Click on "input resource" on navigation window, menu shown as below image will come out:

Drag the image input port to be displayed to the stage with mouse, and place it on the output display area of the screen, then the image can be seen on the display or LED screen, the image can dragged directly to change size or position.


Layer List

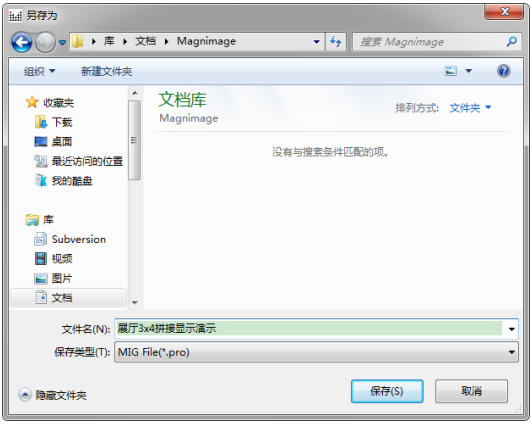
Layers	Source	H Pos.(pixels)	V Pos.(pixels)	Width(pixels)	Height(pixels)	Transparency	On/Off	Border Color
1	1-SDI A	1920	1080	3840	2160	0	On	On
2	1-SDI A	3840	2160	3840	2160	0	On	
3	1-SDI A	7680	1080	3840	2160	0	On	On
4	1-SDI A	7680	3240	3840	2160	0	On	
5	1-SDI A	1920	4320	3840	2160	0	On	On
6	1-SDI A	11520	1080	1920	2160	0	On	On
7	1-SDI A	11520	3240	1920	3240	0	On	
8	1-SDI A	5760	5400	5760	1080	0	On	
9	1-SDI A	5760	4320	1920	1080	0	On	On

Open the layer list window (shown as pictured above) In the navigation window, drag the layer to be displayed to the stage with mouse or double click related layer switch position, turn the OFF to ON.

The value of input source, horizontal starting, vertical start, width, height and transparency in the layer list can be edit by double click the mouse regardless the layer switch is ON or OFF. Therefore,iffamiliar, we can set the properties first and then double click the layer switch position to switch OFF state to ON

Save Project

After the above process is completed and the lower machine output image normally, it shall be saved. Select and click "Save Project" in the "File" menu, and setup the project name and path, and finally click "save". As shown in below figure:

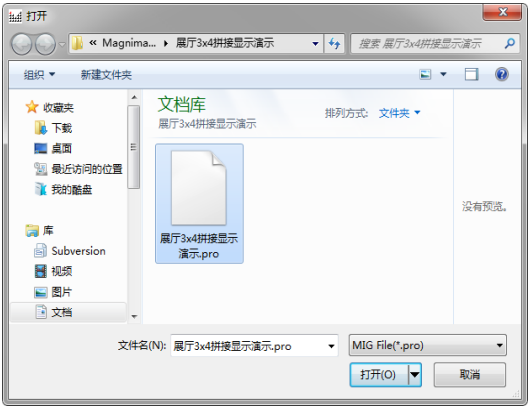


Actually we have already saved project file during the construction.In general, we don't need to save the project deliberately,normally exit PC program after setup is OK, because the upper computer software will save the current project in normal exit.

Default project file name is computer local time when creating new project, so user may not clear which one is a project file. Thus, after satisfied with the project Settings, we canuse the save project function to save the project in local computer with a more reasonable name and path separately, so that we can easily find it in future.

Open Project

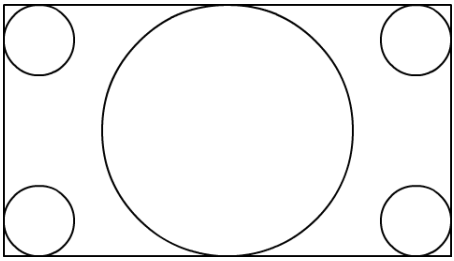
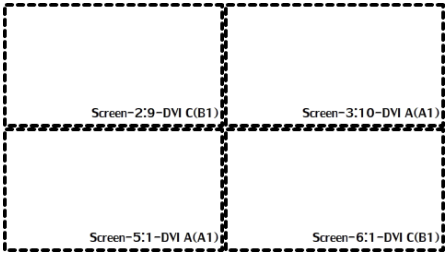
Click "Open Project" in "File" menu, and select project file in the dialog box, and click "Open", shown as below figure:



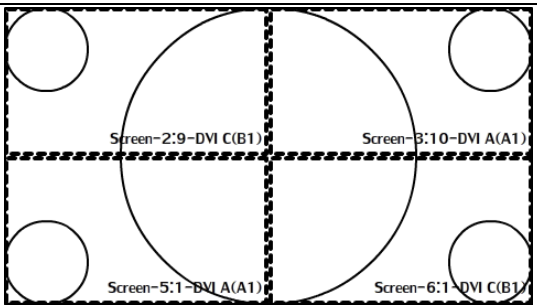
All the hardware configuration information of the splicing device and users setting data are saved in the project file. That's offers quick switch between avarietyof applications for the splicing device

Deepen Understanding

Relation between stage, stitching parameters and screen parameters

Suppose there is a input image, shown as below figure ※:	Four output screen grouped in the form of 2 x 2 and set the height same as width in stitching parameters, then the stage shown as below:
	

Drag the input image into a stage as layers or signal source, and set the size, location to fulfill the four output screen, as shown in the figure below※:



Summary

To sum up, the stage is used to present, place all display area, as well as the input image, when he input image overlap with any display area on the stage, the overlap area will display on related output screen. And stitching parameters is what just described.

Screen parameters, no signal on the stage, that means screen parameter is related to the display Settings.Detailed speaking, screen parameters only defines what resolution of the video should be output to the display, and which area the image captured by the display stage shall be displayed in the screen.

People ever used LED screen can understand why setup like this better.

With above principle, users of LED screen can easily realize tiled display of different screens with different pixel pitch, and with above principle, users of LCD screen can easily realize tiled display of different screens with different physical size and resolution.

Upper Software Interface Detail

Layer Interface and Operation

Layer No.	The greater the number of layer is, the upper, upper layer will cover lower layers
Input Source	A layer can display an input image signal, such as the layer 2 above, which indicates the input image signal from the input port "7 - VGA B"
Position and Size	horizontal starting, vertical start, width and height parameters, determine the location and scope of the signal layer on the stage
Transparency	0 ~ 255, the greater the value is, the more transparent the layer is, the layer will be completely hidden at the maximum value.
Zoom in and Windows mobile	The four parameters is aimed at vertical and horizontal of the input signal image layer, it can be 1 to 10 times continuous zoom in, when zoom more than 1 time, layer can only show the input image signal, windows mobile parameters available in this case.

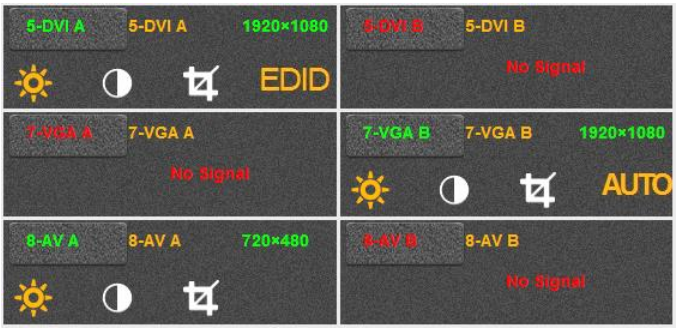
Layer Group

- Layer can be divided into eight groups, as shown above, from Group A to Group H
- Click the icons of the eight group, will come out layer selection interface, as shown in the picture shown above
- Below each group icons, there are two buttons: "Fade In" and "Fade Out"
- Click "Fade In" button below the Group A , all layers in it act Fade In
- Click "Fade Out" button below the Group A , all layers in it act Fade Out
- The edit box of the fading effect time is on the right side of the "Fade In and Fade Out "button, default time is 1 second

Related Interface and Operation of Input Source

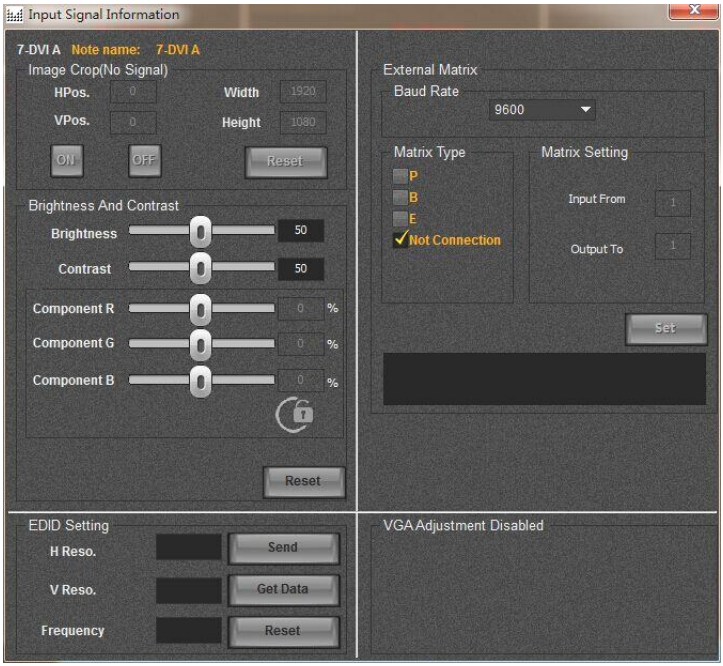
Input Information

As shown in above figure, after splicing device hardware information collected while PC software connected, display all the input port information in input information window intensively



e.g.: 5-DVI A	Input port Indicator
1920x1080	Input signal resolution
EDID	EDID function available
No Signal	No signal Indicator
AUTO	Automatic correction available
	Image capture available
	Brightness adjustable
	Contrast adjustable

Click on any square of the input port information, it will pop up "input signal information and adjust" dialog box.



In this interface, we can adjust the parameters of the current input signal source, including image capture, brightness, contrast, EDID, VGA automatic correction, etc.

Input Source Information

As shown in the above, all the input port of lower machine are listed in the input source information window, if one page shows up, it will be divided into multiple pages, users can switch the current page by the page button in top right of the window

The meaning of each input source correlation display information shown as below figure:

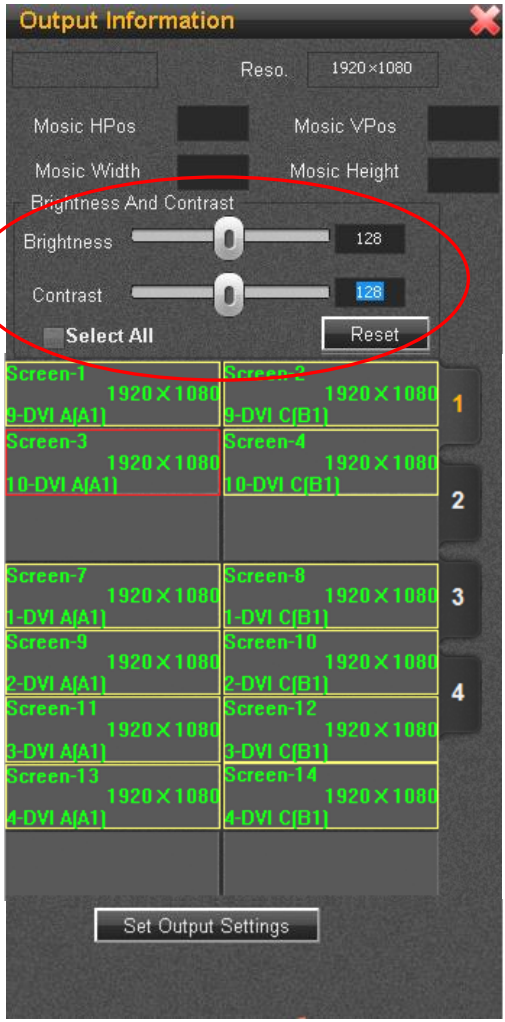
Red light means no effective signal in this input port

Green light means effective signal in this input port

Change the name by double-click the dark gold character

Output port related interface and operation

Output Information



Scenario related interface and operation

Scene Settings

I. New scene file, click on the green plus sign documents icon to create new scene file

II. Save current settings to a scene file, click on a scene file, make its name appeared as yellow, and click "save to the selected file"

III. Remove a scene file, click on the red minus sign on the scene file icon

IV. If too many scene files can't be displayed on one page of "Scene setting" window, it may be divided into multiple pages, please click on the button in the top right corner of the page to switch.

Scene Switching

I. “Scene switching, i.e., send all information that saved in scene file to lower machine device to update it's working status, so that users can realize rapid switching of the device.

II. Double-click a scene file for rapidly scene switch.

If users are not sure which scene file should be switched to, please click on the "preview" button at the top right of the window and switch to the scene preview".

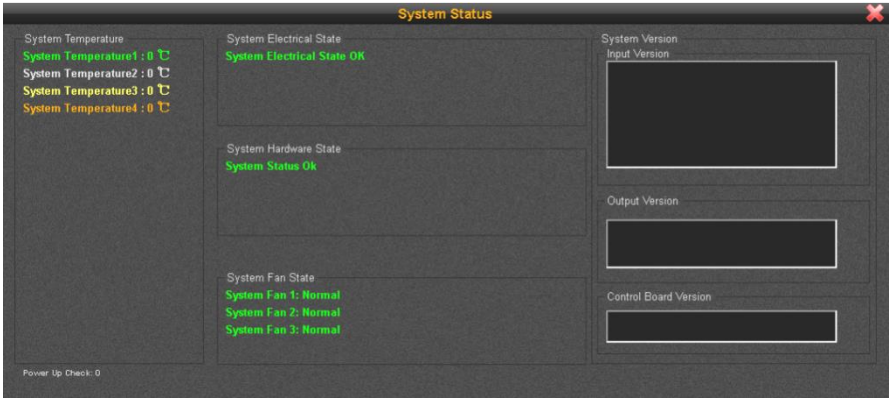
Scene Preview

I. “Scene preview provides function of preview the scene file, it's used to add information that saved in the scene file to the upper machine interface, so that users can see general effect of the scene, and the these settings will not be sent to the stitching machine by this time

II. Double-click a file if the scene fileneeds to be previewed

When user confirmed need to load a scene after preview or any other effective access, please click on "Switch button" at the window to "Scene Switch" and double-click the file.

Interface of System State



Upper machine software can monitor system, so users can check the system state real time. As above figure shows, the state includes: system temperature, electrical state, hardware state, fan state, firmware version, etc.

Warranty

The whole unit warranty

- two years from the purchasing invoice date
- If the invoice is lost, the 60 days after the production date will be the warranty start date for the product.

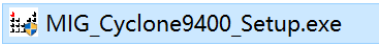
The non-warranty provisions

- The machine soaking and collisions produced besmirch or surface scratches and other abnormal using causes of malfunction or damage;
- Demolition machine or modification, which is not to be agreed by our company;
- Using in the not specified used working conditions, resulting in fault of damage (such as high temperature, low voltage or unstable etc.);
- Force majeure(such as fire, earthquake, etc) or natural disasters(like lighting, etc) caused the fault or damage;
- Expired the product warranty.

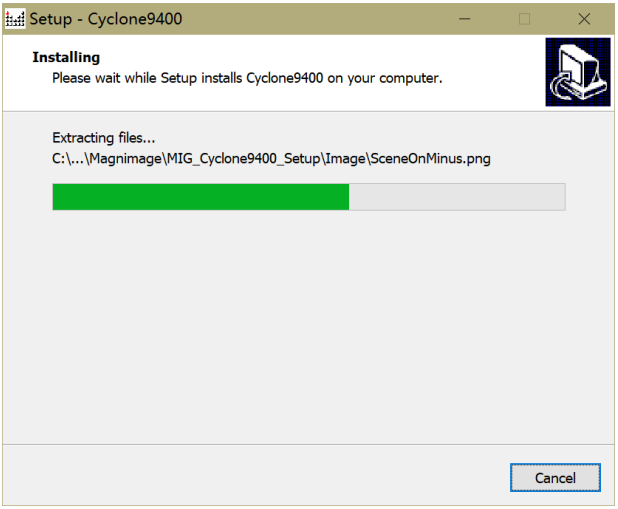
Quick use guide

Step one: installing software

Read the data in the U disk, open the install program to start installing,



Double click and the following installing interface will appear, click next to continue, until the accomplishing interface occurs.

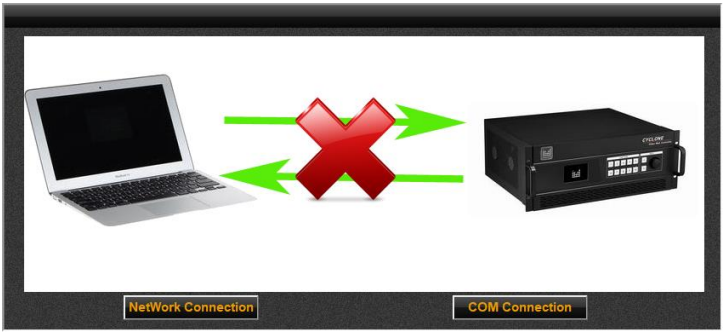


Step two: connect video wall controller

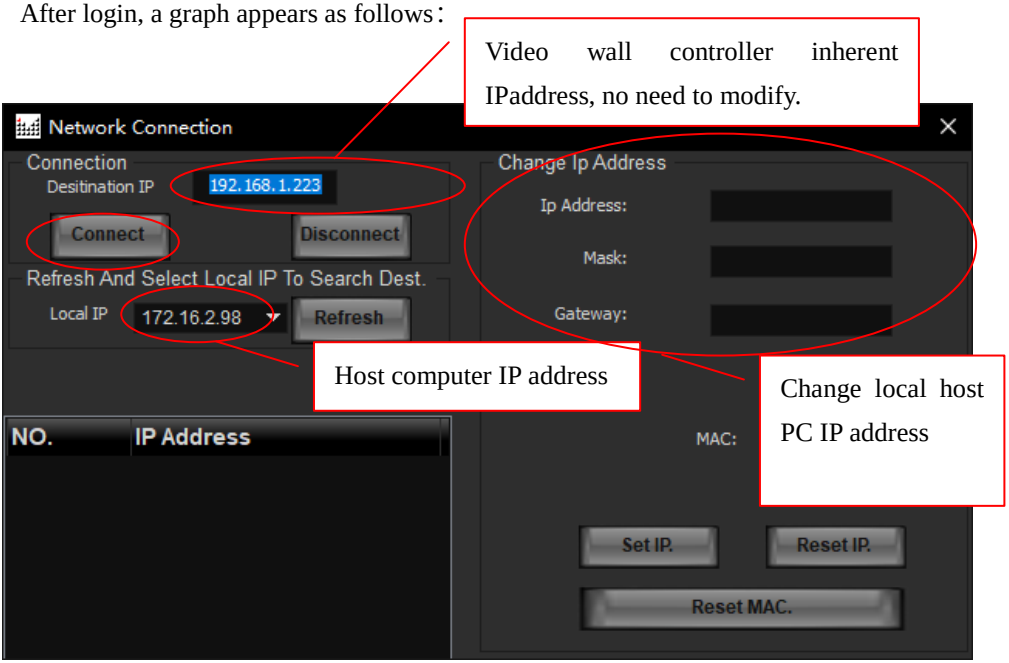
(1) network connection

Use cable to connect the video wall controller and host computer directly, make both of them in the same local area network.

Double click icon  in your desktop,open the software connection window, click “network connection”, the original login password is 123456



After login, a graph appears as follows：

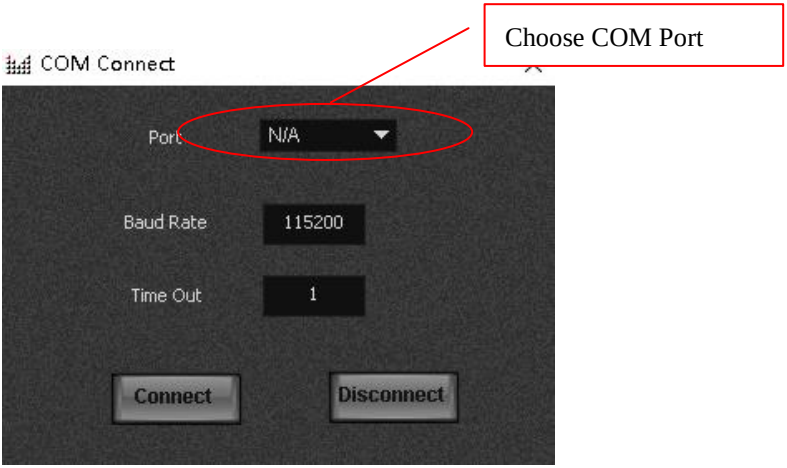


After the correct local IP address selected, please click “connect” button Hostcomputer software connection indicator in the bottom right of the interface.

the green light keeps on when system connected successfully

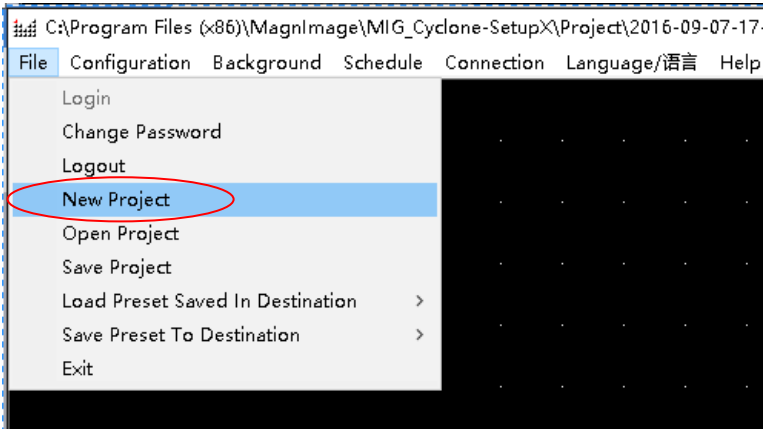
(2) COM connection

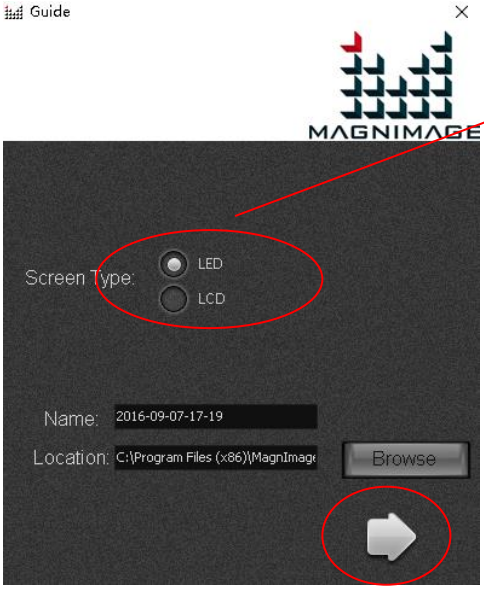
Use serial port cable to connect the machine to host computer or the other controlling device, click “COM connection”. The login password is 123456, the following interface will appear. Select the correct COM port, and click “connect” button.



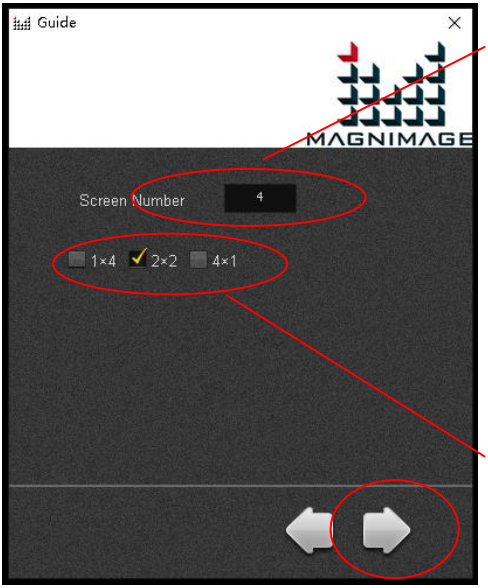
Step three: create new project

Click the toolbar,file,new project





Select the type of screen controlled



The number of parts to be spliced for the large screen. It means to put a few separate screens together, in this case the number of screens needs to be input, for example, a screen that needs 4 sending cards, and number 4 needs to be entered.

Select splicing configuration, for example 2×4, means that 2 tiers in height and 4 tiers in width.

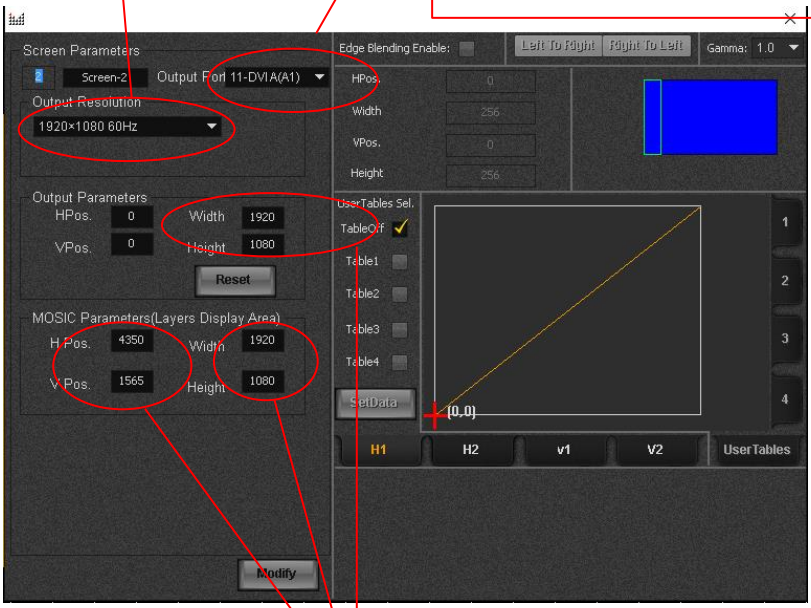
Click to continue, a menu appears as below:

The default resolution and size of window for each output port is 1920*1080

Select one output and right click, enter the screen property setting to set parameters of each output.

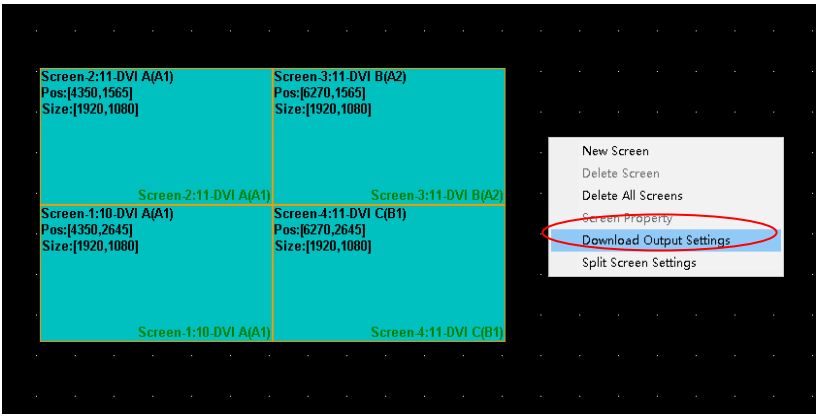
Set current output port resolution

Select output port corresponding to the screen needed to correct parameters.

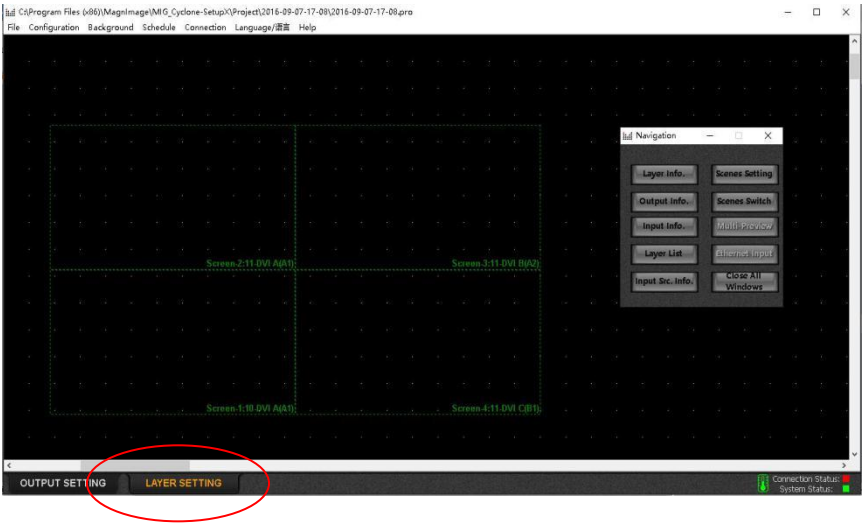


The threegroups parameters need to be corrected to be identical with size of current output port which loads LED screen

After the parameters of all the output port has been set successively, right click, select “download output settings”

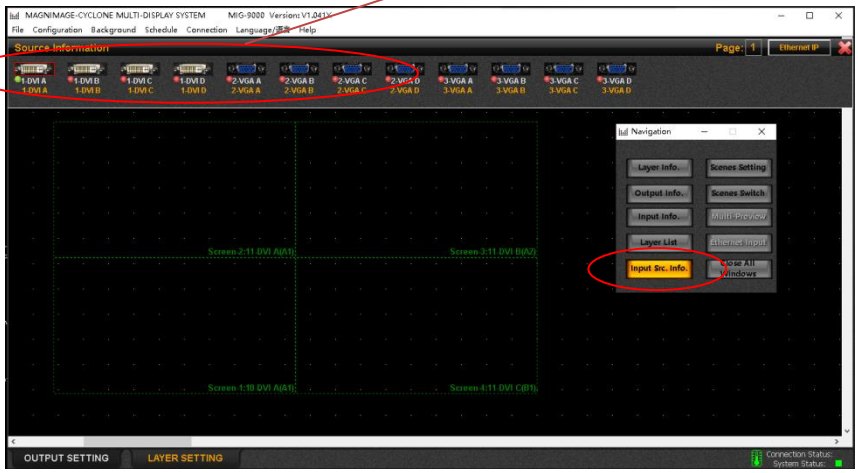


After sending process accomplished, get into layer setting interface automatically, click the “layer setting” menu in the bottom left, all the previous output settings has become dotted box.

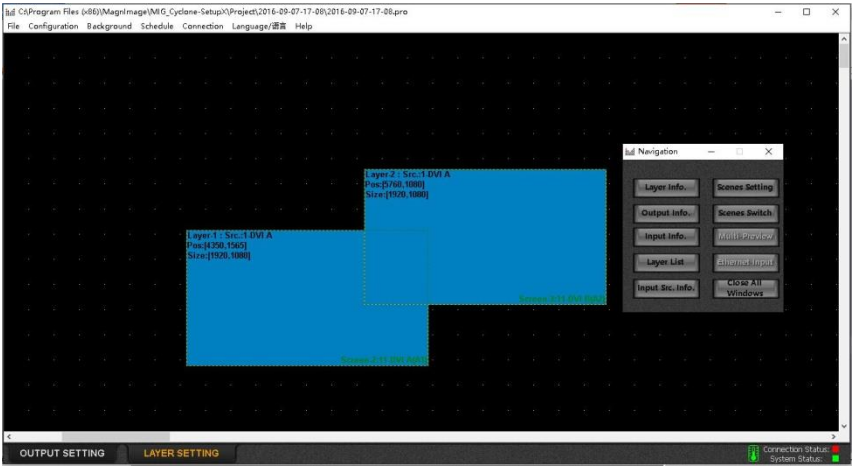


Select “input information” in the navigation menu to load the input signal source.

Input source status, green means signal is available

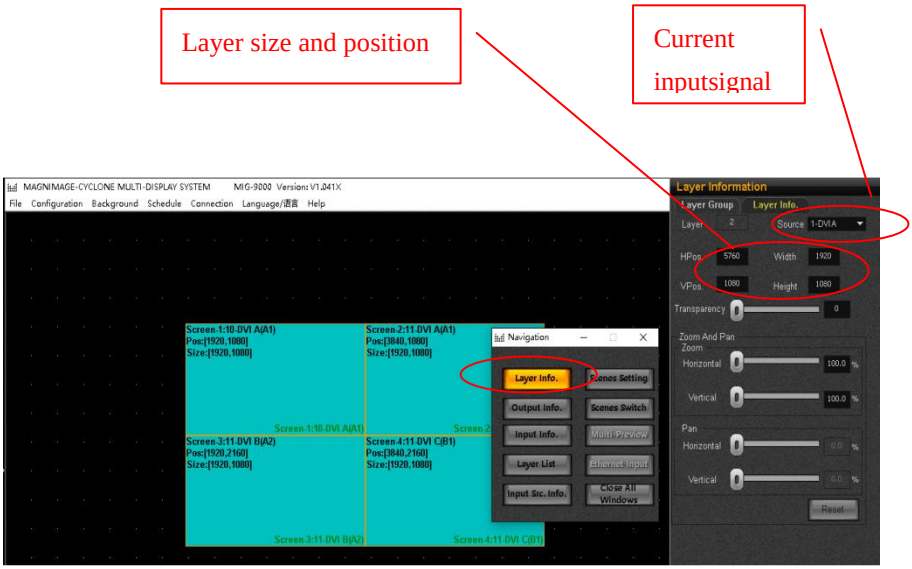


Use mouse to click one channel input source, then press the left key of the mouse to drag the source to the output. Thus we can achieve large spicing display requirements. Double click the layer, it can achieve quick full screen to this output port.



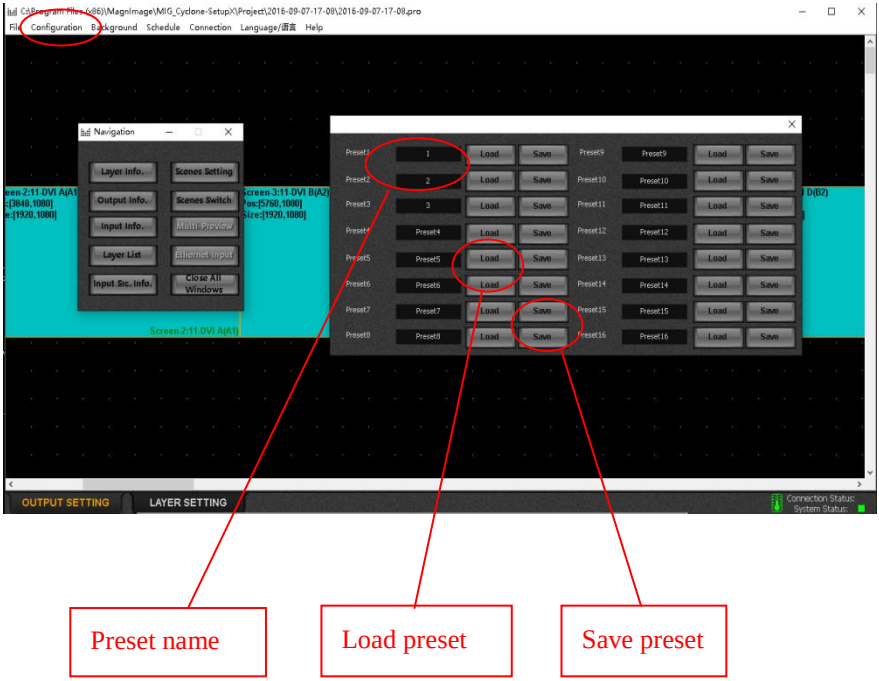
If you need to modify the size and position of one signal source, select the signal

source layer, the click the “layer information” in navigation bar to correct.



Step four: save and load presets

When all the parameters have been set correctly, you can save all the current data and to store it as a preset, and it would be convenient for later loading and quicker switching. Find “configuration--preset configuration” item in the toolbar, the preset loading and saving interface will appear in the drop-down menu, graph as below.



Or you can proceed relevant operation about presets in the “file---save/load presets” menu.