CK5X Series
Digital HD Display Wall Processor

User Manual

V1.0

Shenzhen Createk Electronic Co., Ltd.

http://www.ckdz.com/

Note: Please read the User's Manual carefully before using the products, and kept the manual properly for future reference.

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1、Safety Instructions

Danger

There's high voltage in processor. To avoid danger, please do not open rear cap without authorization.

Warning

1. Do not allow liquid, small particles or other objects to get into the device;
2. Do not place the system near fire and water;
3. To keep good ventilation, please place the system at least 20 cm away from a wall surface;
4. If any noise, smoke, smell, please cut off the power at once and contact your local suppliers;
5. Do not connect or disconnect DVI signal cable when the power is on.

Notice

1、Read the manual carefully before using the system, and keep it safely;

2、Check the packing list to confirm if there is any missing .If there is, please contact the local supplier.

3、Cut off the power if thunder or the machine is not used for long term ;

4、You should be well trained before operating the system;

5、Do not slip anything from vent to prevent broken or electric shock;

6、Do not place the device near liquid or moisture;

7、Do not put the device near heat sink or high temperature environment;

8、Keep the power cable properly;

9、If the following situations happen, please cut off the power and for maintenance

   1) Liquid splash to device;
   2) Device fall down or the cabinet is broken;
   3) Any abnormality or malfunction in the system

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2、CK5X overview

CK5X series HD digital display wall processor is the newest version of image controller designed by Shenzhen Createk; it displays the various analog/digital image, video source on the output device: LCD wall, surveillance system or others. Createk's display wall processor adopts brand new modular concept that the input cards and output cards can be used in any combination, in any order and in any slots on the backplane; moreover, display devices can be controlled and connected via transmitting signal with multiple display wall processors used in seamless conjunction.

2.1 System connection diagram

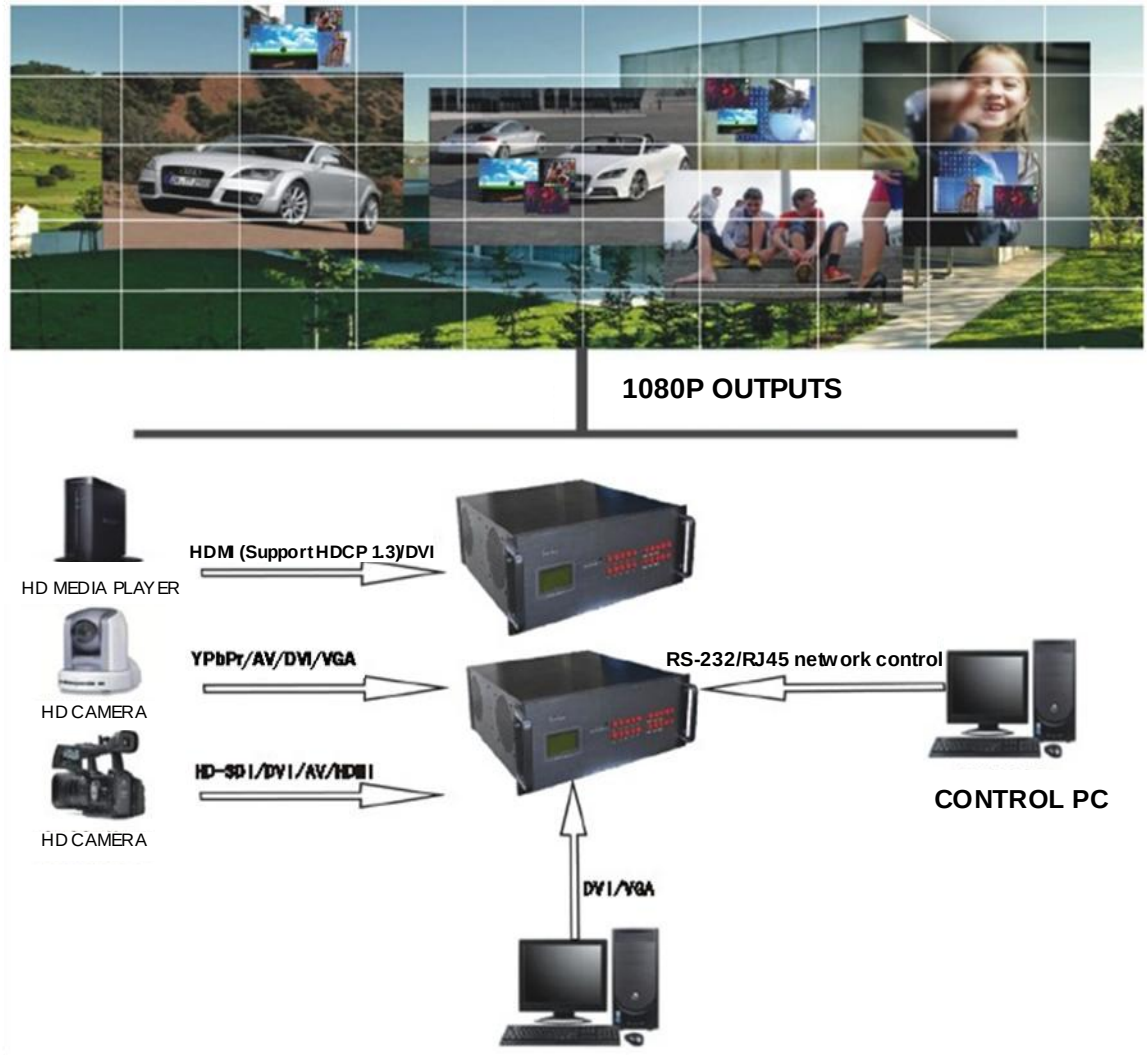


Figure 2.1 CK5X series system connection diagram

2.2 Technical specification

CK5X Series HD digital display wall processor	
Description	Up to sixteen video windows per display channel
Inputs (Optional)	DVI/HDMI/VGA/YpbPr/VIDEO/SDI/S-Video
Input resolution	XGA/SXGA/SXGA+/UVGA/WUXGA/1080p,etc, compatible with custom ultra-high resolution
Output Signal	DVI/VGA output
Output resolution	1920*1200/60HZ (compatible with standard resolution)
system control software	AppPresenter dedicated control software
Power	Dual power supplies 100AC~240VAC,50/60Hz, more trustable hot-swappable power supply working mode, internationally self-adaptive power
consumption	12w per channel
working temperature	-20℃——60℃
working humidity	5-95%
Chassis size	4U/6U/10U/15U standard rackmount chassis
Serial port	RS-232, 9 pin, D-type connector
Baud rate	115200
Serial port architecture	2=TX，3=RX，5=GND
Ethernet control port	RJ-45 female ports, TCP/IP protocol
Ethernet control speed	Self-adaptive 10M or 100M, full duplex or half duplex
Working hours	7 days x 24 hours

Table 2.1 CK5X series technical datasheet

2.3 Product size (Unit mm)

Chassis type	4U	6U	10U	15U
total PCI express slots	8	14	24	36
L	483	483	483	483
W	490	490	490	490
H	178	268	445	666

Table 2.2 CK5X series main chassis size

Note:

1. Above product size is theoretical value only. For actual size, please refer to the final goods.
2. Above size has been precise to 1mm, with tolerance ±1mm, (H) is 13mm without feet.

2.4 CK5X Key Features

1 Reliable

CK5X adopts the standalone modular hardware architecture design, the equipment power, cooling fans, signal capture card and output cards are all hot-pluggable. Malfunction of arbitrary module will not affect the overall system. This design enables the shortest MTTR (Mean Time To Repair) and longest time MTBF (Mean Time Between Failures) to meet the user's demand on the reliability and stability of display wall processor system.

2. Special virtual display technology

We offer perfect system solutions such as to custom design ultra-high output resolution for customers, as high as N×M, 1920*n(V)，M=1080*m(H).

3 CAN controlling technology

CAN is short for Controller Area Network, it is a serial communication network effectively supporting both the distributed control and real-time control. Thanks to flexible and convenient means of communication and brand new data coding, non- destructive bus arbitration technology as well as the advanced short-frame structure, the data transmission time becomes shorter. And powerful troubleshooting capabilities and communication media diversification, as well as the combination of flexibility are comprehensively applied in CK5X series products. In conjunction with multiple devices, the response speed through the CAN control should be faster.

4 all digitalized processing

All digital path, CK5X adopts pure digital signal processing system, with the input and output signals according to the interface specifications of the particular device can be digital can be simulated, but all signals in the system's internal transmission for pure digital methods, and is no attenuation of the long-distance transmission. All signal processing, including cropping, scaling, de-interlacing, noise reduction is completion of the CK5X within the system.

5 Full channel real HD 1080P signal processing

Normally, equipments which are capable for 1080P HD input and 1080P HD output often adapts compression processing to 1080P signal due to the bandwidth limitations, and then zoom in to 1080P output. However, CK5X series is not only a pure digital signal processing systems, but full channel real HD 1080P signal processing system, it adapts the unique distributed control technology developed by Shenzhen Createk Electronic Co.,

Ltd., with independent processing of each 1080P input signal processing which is always full HD 1080P signal without any compression.

6 Advanced pure hardware structure

Pure hardware architecture, internal self-core computing mechanisms, no CPU and no OS, no blue screen and free from viruses trouble, no plug in card processor crash, start-up time less than 5 seconds, double-backup redundant power supply and support hot backup, able to continue to work throughout the year.

7 Powerful image processing capability

Powerful computing and data transmission capacity, data rates up to 6.25Gbps, all modular cards use specialized chips which could be used in huge amount of data transfer splicing system. The chips are researched and developed by our company independently. This completes eradication of bottleneck of slow and unstable splicing system caused by low data bus bandwidth for the multi-screen processor the displays, so that multi-screen processor has an unparalleled display of speed.

Multi-screen processor adopts high-speed data transmission technology based on the full cross-scheduling framework, the underlying data transfer is controlled by our original data scheduling chip technology, enabling to set dedicated point-to-point data channels for each input, DVI, HDMI, RGB, video signals, network image has its own of channel transmission to ensure to display in real time at the speed of up to 60 frames / sec, all input channels may smoothly play HD motional image without any limitation.

8. Flexible operation control system

All output ports can be arbitrarily specified with the output number, arranged modes can be of any combination so that the client can install the display at will, which greatly facilitate the construction. Any video input signal can be zoomed in, zoomed out, at any ratio and at any location, freely roaming across screen or full-screen display and all video signal windows could be overlapped , zoomed (no zoom ratio limitation), the aspect ratio can be adjusted, with the CBD area control, single screen can open up to 16 video windows.

9 Customizable character overlay function for the input signal

Support character overlay function for the input signal, to facilitate real-time display the source of the signal.

10 Easy to control mode

There are network port and RS232 port for controlling, supporting almost all control equipment on the market at the same time such as Crestron. CK5X series processor also supports remote control of Windows, Linux and other network access through TCP / IP protocol, any PC with network access can be used as a remote console, users can control the processor simply by entering the IP address of the device without the need to change the existing network environment,

If multi-users are connected at the same time, only one user is able to connect in this case. Moreover, it support multiple Ethernet connections, means that through our own brand control software applied in network, multiple display ends can show the same control interface at the same time in the high-resolution desktop, the display window size can be arbitrarily adjusted.

11 The input signal selectable

Users can select different types of input signals, there are six options: DVI / VGA, YPbPr / AV, AV, DVI, HDMI, SDI cards. If want to change the type of the input signal, you only need to replace the card.

In addition, with the company's unique DVI-X technology using a adapter cable or adapter connected to a DVI interface, each capture card can capture six kinds of videos such as; video, YPbPr, HDMI, DVI, VGA, S-Video; If the unique 5W modules uses the adapter cable to connect the VGA interface each capture card can capture up to 16 channels of video signal inputs.

2.5 Key features

1. POP Picture Out Picture Mode: Multiple or part signals are displayed to full screen or part screen in any rectangle shape, single panel can open 4 video windows at most.

Figure 2.2 POP Tile mode

2. Single screen can open 16 video windows at most: in the same whole screen, can set 4 CBD areas, each CBD can open 4 windows, i.e. single screen can open 16 windows at most.

Figure 2.3 Single screen with opening multiple video windows capability

3. PIP mode: use certain one picture as background; the other video windows adopt tile mode.

Figure 2.4 PIP mode

4. Overlapping mode: use certain one channel as background, the other channels are also displaying on the screen with the overlapping part invisible.

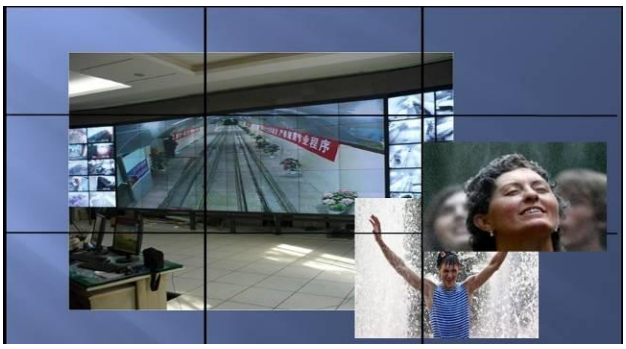


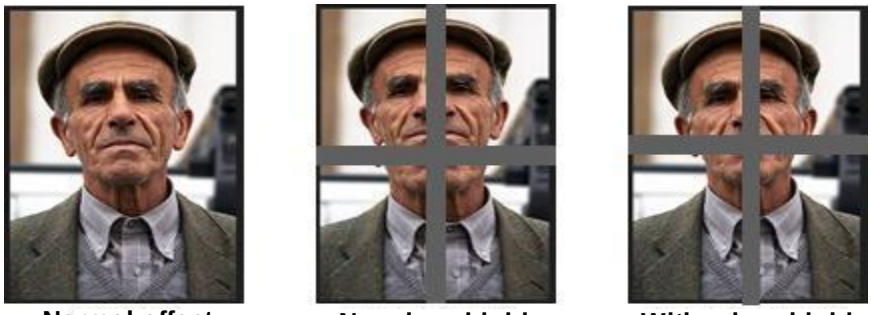
Figure 2.5 windows overlapping mode

5. Scaling and Positioning: Size is scalable and position adjustable.

Figure. 2.6 window scaling and positioning

6. Edge shield technology: Under traditional splicing technology, when encountered with video wall consisting of rear projector, Panel TV, LCD/PDP or DLP, CRT, as their pictures are spliced after being divided and the adjacent displays cannot display the cutting edge because of the gaps, the overall picture will become abnormal unnaturally.

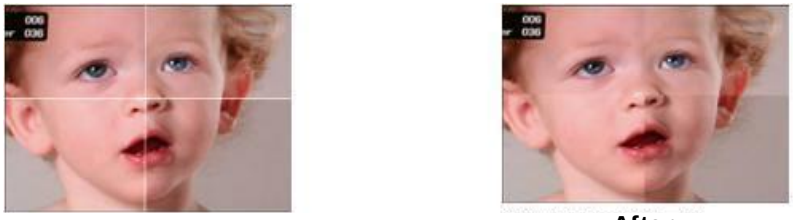
The unique edge shield techniques developed by Shenzhen Createk Electronic Co., Ltd., through refined pixel adjustment and the edge signal automatically extended, the edge covering part is shielded to achieve a natural and intuitive viewing. During debugging, users only need to input in the control software the size value of the display unit and the approximate width value of back edge, it will automatically calculate the required shielding range and perform the mask with our unique techniques.



Normal effect **No edge shield** **With edge shield**

Figure 2.7 Effect comparison between edge and non-edge

7. Edge fine-tuning technology: Make adjustment on single pixel of splicing screen edge through the operation of the control software in order to reach seamless splicing. The technique is suitable for front projection, rear projection, DLP display and so on.



Before **After**

Figure 2.8 Effect comparison between before fine-tuning and after fine-tuning

8. User-assigned modes: We offer abundant assignable modes function, there are 30 built-in user-assigned modes, and a lot of external user-assigned modes, and touch panel supported such as Crestron..

9. Image parameters (white balance/brightness/contrast/saturation) adjustment: All the parameters are set as standard state when the goods leaves the factory, users can adjust it according to the actual need. For example, user can adjust the white balance of

each output to make the comprehensive white balance of TV wall/splicing wall reach a state as perfect as possible.

10. Background Logo display (customized requirement): available as a background logo display, according to the demand of customer , we will store the segmentation images in the corresponding interfaces, the background logo can be spliced into a complete image, each on-screen background logo can be activated or deactivated and can be replaced freely as you need.

3、Hardware structure and Operational instruction

3.1 Elevation view of product

Fig 3.1 Elevation view of CK5X series 4U and 6U

Because of the difference capturing signal source and different quantity, our CK5X series all-digital high-definition image processor completely fit the user's actual needs, using different types and different number of input and output video cards, chassis size increases as the video cards increases. See the relevant sections to check out full chassis dimensions, only 4U and 6U chassis elevation view are listed and the following instruction are based on 4U and 6U chassis products considering that other size chassis products should be similar or the same. For more information, please contact our customer service.

3.2 Front panel view

Front panel is built in with digital matrix control panel, as followings:

Fig 3.2 Front panel view

① Power indictor: There are total two lines. Each line has AC and DC indictors, The indicators correspondent with two indicators respectively. When the rear panel is plug with power, AC1 lights on; DC1 indicator lights if turn on the power switch; similar application for the power connector2. (See below panel diagram to check out the power connector)

② LCD display panel: To display equipment's working status, menu and operation setting information;

③ Device indicator: Under normal working, POWER indicator keeps on, ACTIVE indicator blinks; CONTROL indicator flashes only when controlling the equipment; IR is for infrared receiver.

Figure 3.3 Equipment's working indicators and IR receiver

④. Front panel: functions described as follows:

"1,2 ..... 9 ---- numeric buttons, input and output channel selection button

"MODE" ---- mode switch key for switching the select key on the signal; view matrix state.

"SAVE" ---- Save button to save all correspondent relationship between input and output.

"LOAD" ---- Recall button to call correspondent relationship of the input-output saved.

"MENU" ---- Menu, you can set the machine code, communication baud rate, buzzer switches, network control button.

"ESC" ---- Exit. Exit the current menu state.

"ENTER" --- Command execution button, select to confirm the switch, perform switching action.

3.3 Rear panel

Figure 3.4 6u case Rear panel view

①Power Socket: redundant power supply, AC220V 50 HZ,

②Power switch: turn on the power switch and the equipment start to work normally

③Serial communication input, connected to computer or other control equipment

④serial communication output, cascade to following equipment or other equipment ;

⑤Ethernet control: connect the devices to the internet for remote control.

⑥interface： For usage later

⑦Output ports: signals are outputted to the video wall or cascaded to following equipment;

⑧Input ports: signal sources input, collect all kinds of sources.

Attentions:: The above diagram is only for illustration, please refer to the actual rear panel.

3.4 Hardware operation instructions

At normal state (do not press any key 12 seconds or more), the LCD screen display content as shown below:

Figure 3.5At normal state

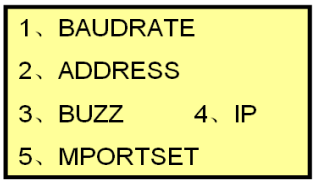


Figure 3.6 First level of the menu

Click the 【MENU 】 button, it will appear first level menu ,as right-hand chart shown above.

【1、BAUDRATE】： Settings of baud rate, enter into the secondary menu by clicking the 【ENTER】button, there are four optional in total: [1, 4800; 2, 9600; 3, 19200; 4, 115200 】

【2、ADDRESS】： Settings of the address code: The screen will display【LOCAL ADDR:001】after clicking the 【ENTER】 button. The default factory set is 000. The user can adjust the value according to actual situation.

【3、BUZZ】： Settings of Buzzer on/off., there are two options 【1, BUZZ ON; 2, BUZZ OFF 】in the screen after clicking the【ENTER】button. Press the button【 1 】or【 2 】to control buzzer on or off;

【4、IPSET】：Settings of Network IP address. Click the button 【ENTER】to enter into the secondary menu;

【5、MPORTSET】：Settings of Network port. Click the button【ENTER】to enter into the secondary menu for port settings;

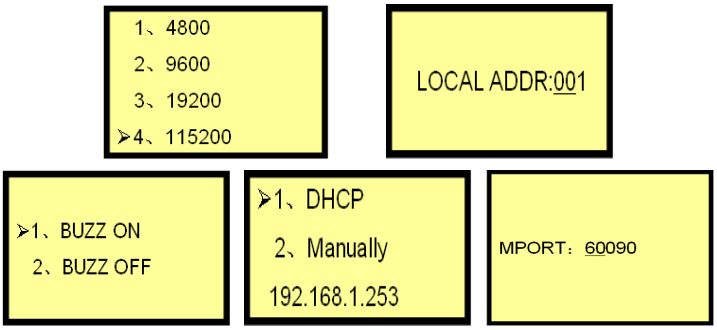


Figure 3.7 Secondary menu

Select【 1 】 indicates automatic access to IP address , select【 2 】 indicates manual setting. For manual settings, press the button【MODE】to switch fields, and then input corresponding value, finally press the button【ENTER】to take into effect.

4、Control software operation

4.1 Software installation

CK5X series full digital high-definition image processor adopts user-friendly design. Its control software requires no installation and the volume is small. The root folder includes four files (as shown below, other documents for automatic generation), you can copy it to any place of the control computer and then double-click it to execute file program. It saves

tedious software installation steps and time. Even computer entry-level users can operate it quickly and easily.

Figure 4.1 Folders of control software system

Program operating environment: CPU: more than P4；

Memory: more than 512M；

Hard disk: more than 40G。

Attention: the above files are all necessary to guarantee the control software operation, and they all need to be in the same file .please do not alter the file, Otherwise it will cause software abnormal use.

4.2 Software Startup

1 Running the program

Double-click application program "AppPresenter" to open the control software interface, as shown in the figure below:

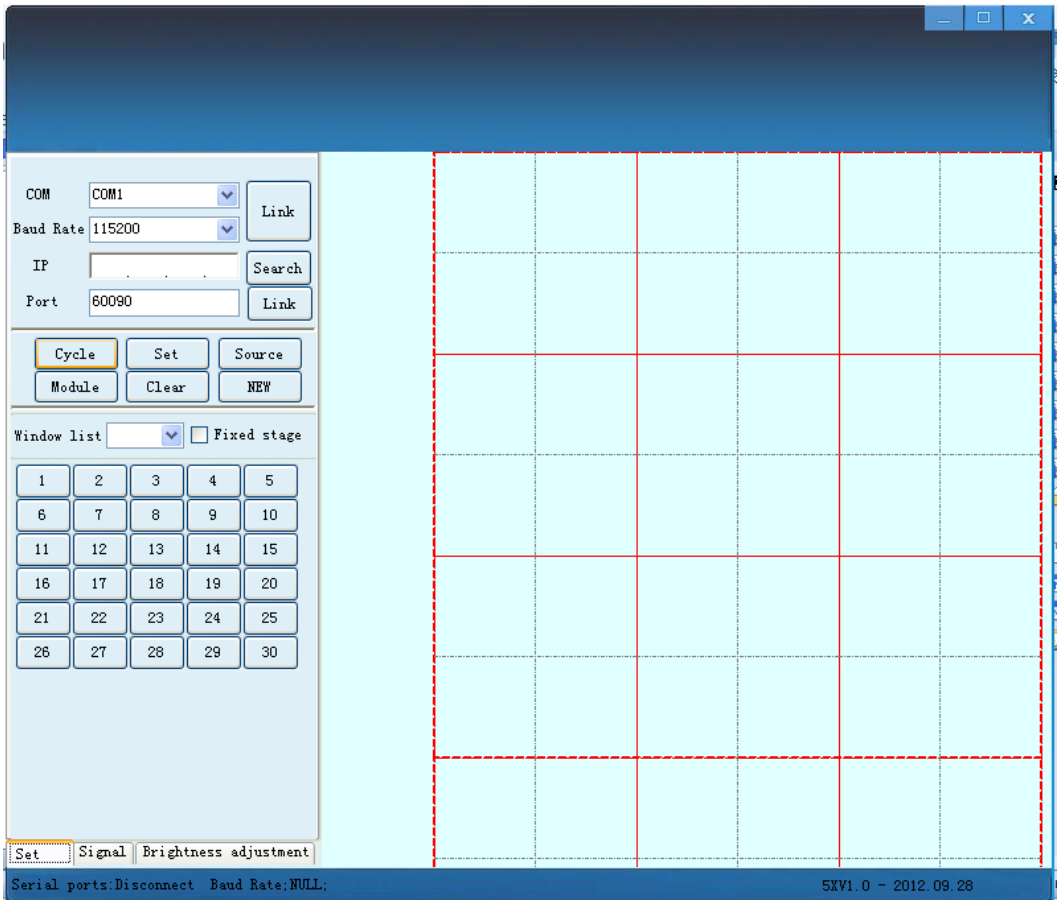


Figure4.2 Control software interface

2 Communication connection

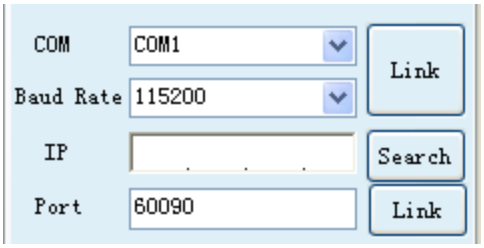


Figure4.3 Connection settings

As the picture above shows ,select serial port number and baud rate , then click the 【Link】 button. If the serial port is already occupied or the connection is in abnormal condition, it would pop-up prompt message as shown in the figure below:

Figure 4.4 Prompt of abnormal connection

If the serial port is connected correctly, the button 【 connection 】turns into【disconnect】. when the user clicks the【disconnect】 button, the connection between software and machine is disconnected.

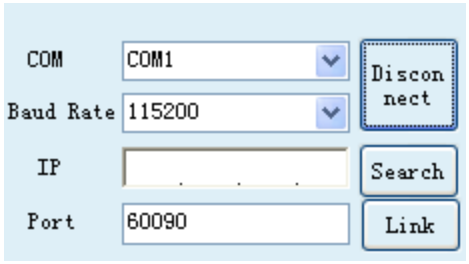


Figure 4.5 Normal connection

4.3 Video window operation

4.3.1 Open video window

Press and drag the left mouse button in the operation interface to create a rectangle window, as show in the figure below.

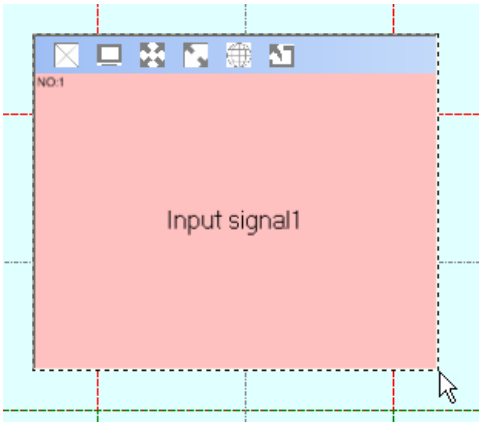


Figure 4.7 Using the mouse to create a window

4.3.2 Adjust the size and position of video window

Move the mouse pointer on the video window, then press and drag it to move the window to a appropriate position, and then loose it.

Move the mouse pointer to the bottom right of the window, and then drag it to change the window size when it turns into a two-way arrow.

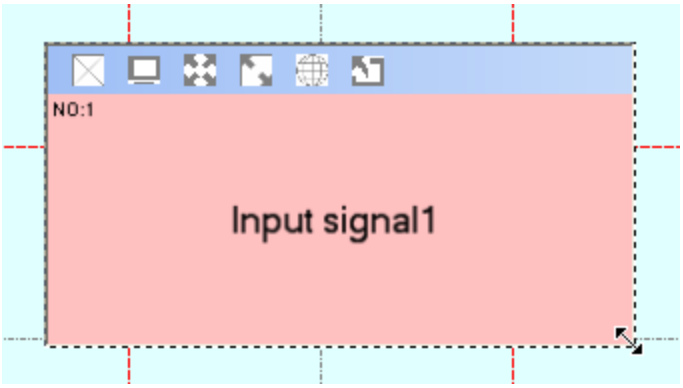


Figure 4.8 Adjust the size and position of video window

4.3.3 Video window menu operation

There are six menus  at the top of each window ,which available for users to do corresponding window operation (Notes: when the machine with 5 w module card, it will has option【video synthesis 】in child menu . These menus will be described individually on the following chapter.

1、 

Menu: It includes all buttons's function description. Click the right mouse button in the open window, it will appear the【 menu 】option. Adding child window in the CBD area , it will also appear【 menu 】option on the top of the window.

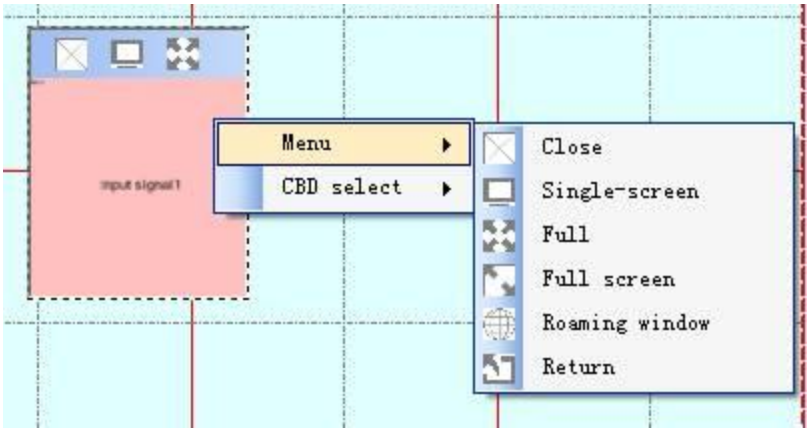


Figure 4.9 Right-click menu

2、 **Close:** Close the current video window

3、 **Single screen:** Red dashed line in operation area represents screens splice. Click the button or select this command, and the current video window displays fully in the screen on the left top of the window, as shown in the left picture below. Click the option【single screen】, the window will displayed on the screen fully, as shown in the right picture below.

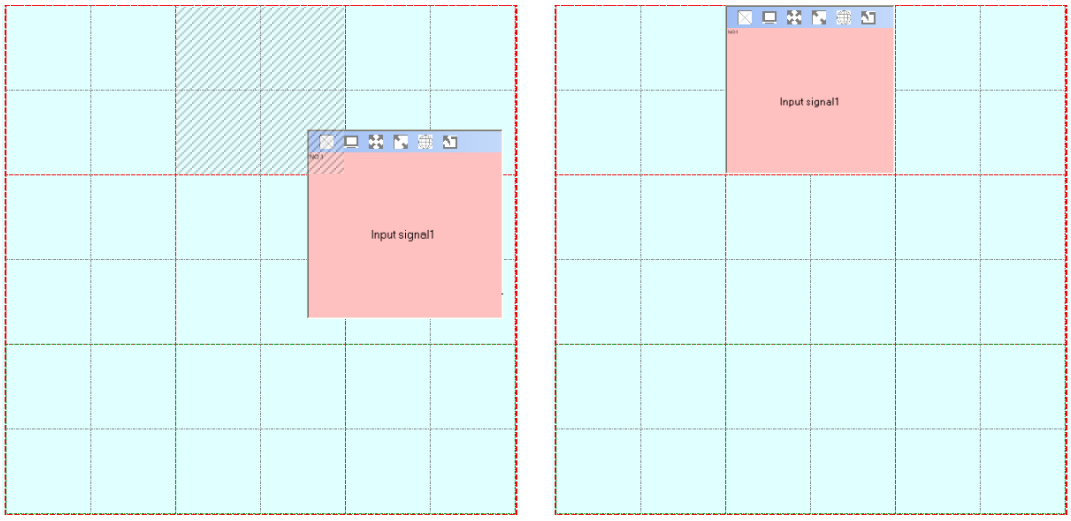


Figure 4.10 Single screen operation

4、 **Cover the whole area:** The red dotted line in the control software area represents of the screen splicing, each screen with a black dotted line is divided into four parts. Click this button or select this command, the current window under the operation uses the a quarter part of itself as one splicing unit and the window covers a quarter of the occupied screen, as shown on the left diagram; The opening video window takes up a quarter of shaded part as shown. After clicking 【Cover】, this video window will be covered in these quarter screen units, as shown on the right diagram.

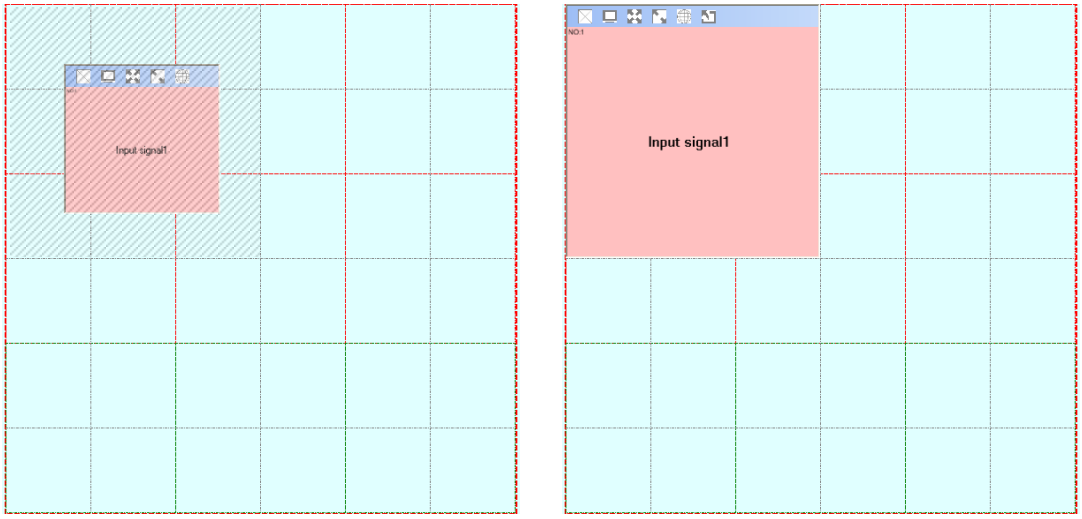


Figure 4.11 Cover the whole area

5、 **Full screen:** The current operation window displays in the entire video wall.

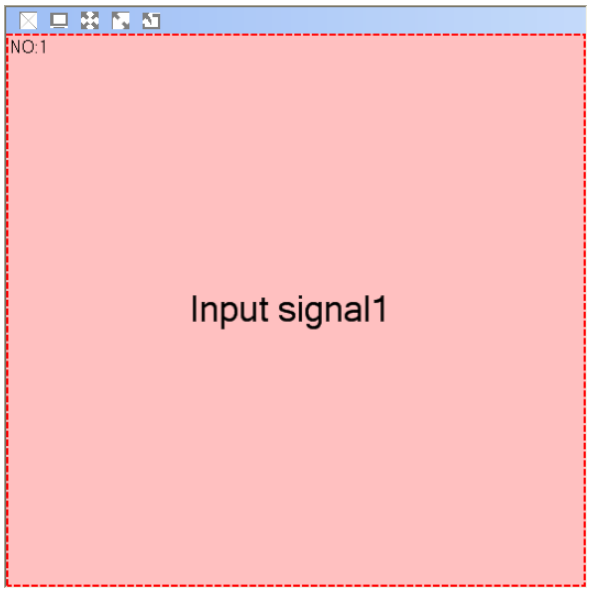


Figure 4.12Full screen display

6、 **Roaming window:** When cascade two machines and set the window roaming, click this button to realize windows roaming among the screens, as shown in the figure below:

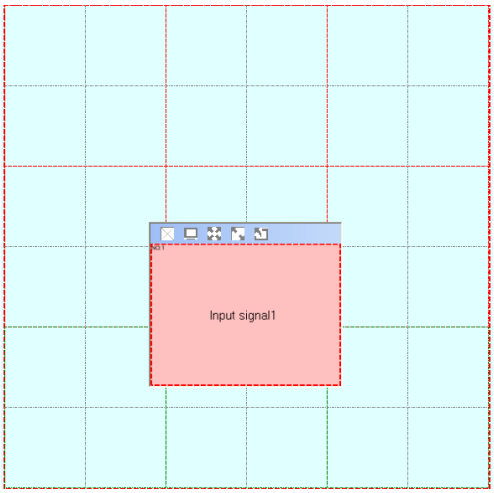


Figure 4.13 Window roaming

7、 **Return:** Click this button or choose this function, the current operation window will return to previous operating status.

4.3.4 Clear video window

Click the button 【Clear】, all video windows on the right side will be closed.

4.3.5 Create video window

Click the button【 new】, the current video window will full display in each screen of the video wall, as shown in the figure below:

Figure 4.14 Create video windows

4.3.6 CBD selection (certain model only)

Click the right mouse button in the operation window, then select the menu【CBD select】, the operation window will turn into CBD area. Click the right mouse button in the window again, and select the option【 add window 】to add a child window, as shown in the figure below:

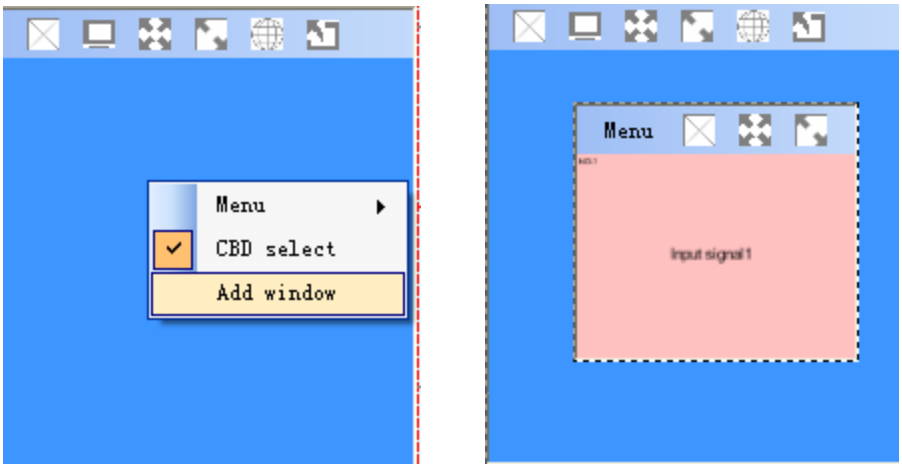


Figure 4.15 Add child window in CBD area

In the CBD area, child window quantity varies with configuration. Each of child windows can realize the operation and function described above.

4.3.7 Adjust the video window level

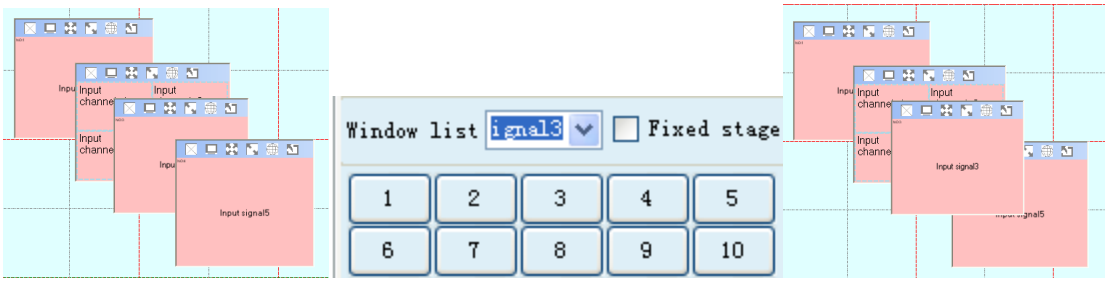


Figure 4.16 Adjust the video window level

For the video windows on the right side, the level can adjust by the operation. If the user choose the【Fixed stage】,the window layer will not change, The latest-opened window is the top layer by default.

4.4 Scene mode recall and saving

4.4.1 Scene saving

Save the current window location and selected signal by click" Ctrl "+ "Scene mode number" key combination , as shown in the figure below,

Figure 4.17 Scene mode recall and saving area

If a button has saved a Scene mode (For example: Mode 1), it will pop up a dialog box when you save this mode again, as shown in the figure below:

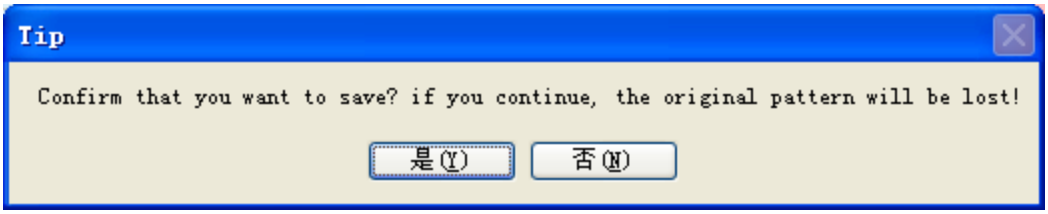


Figure 4.18 Prompt of mode overlay

Click "是" to replace the original scene mode and it will pop up a dialog box -Mode name .Click "否" represents not to make any response.

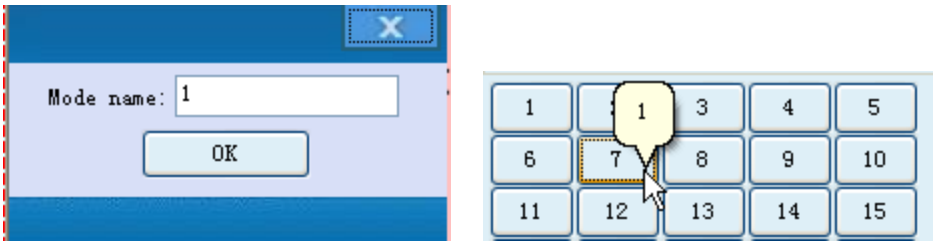


Figure 4.19 To rename for saved mode

Input suitable mode name and click the button [OK]. Move the mouse on the number button of saved scene mode; it will appear the mode name, as shown in the figure above.

4.4.2 Scene recall

Click the number button of saved mode, it will recall the window position, size and input signal of the mode. If the corresponding number button does not save any mode, it will pop up a warning dialog box, as shown in the figure below:

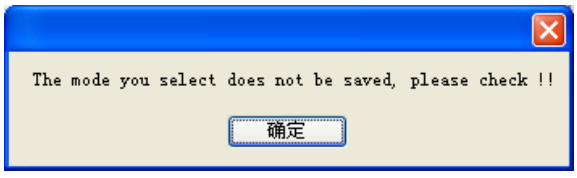


Figure 4.20 Warning of no saved mode

4.4.3 Scene cycling

Click the button【cycle】, it appears a window of cycle setting, as shown below. Set the cycle mode and interval time, and click the button [sure], the selected modes will realize cycle play. Then the button【cycle】turns into【停止】, click it to stop mode cycle.

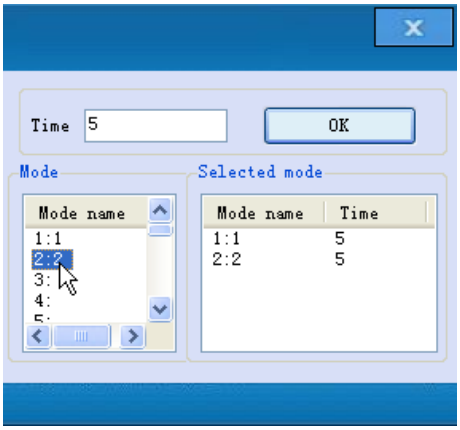


Figure 4.21 Settings of scene cycling

4.5 Signal management

Click the Signal, it displays all input signals, as shown in the figure below:

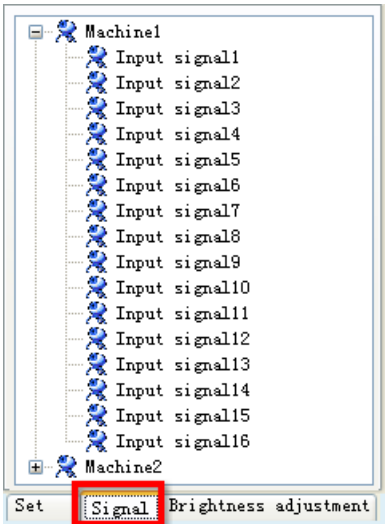


Figure 4.22Signal management

Select one input signal, then hold the left mouse button and drag it to the right side of the window to realize signals switching.

Double-click one input signal to change it's name.

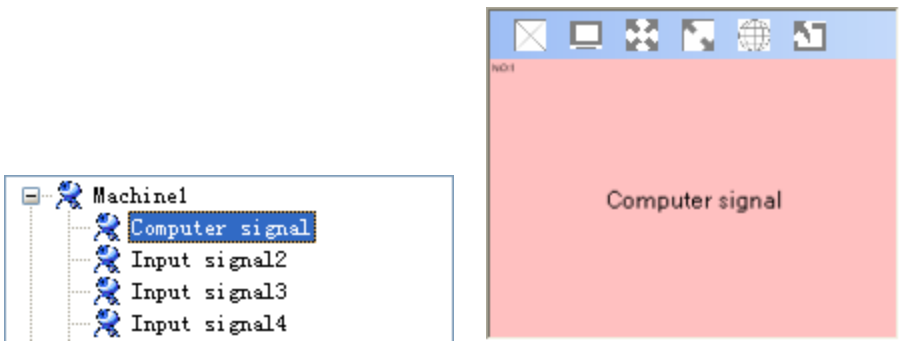


Figure 4.23 Rename of signal sources

When the selected source is VGA or AV, it will appear two function buttons【Auto】and

【ADC】.which can do automatic adjustment and ADC correction for current signal.

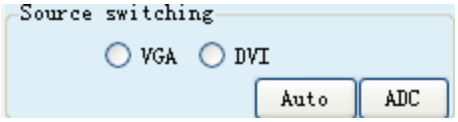


Figure 4.24 Sources adjustment and ADC correction

4.6 Brightness contrast adjustment

Click the button Brightness adjustment, it will display brightness contrast adjustment area, as shown in the left figure below:

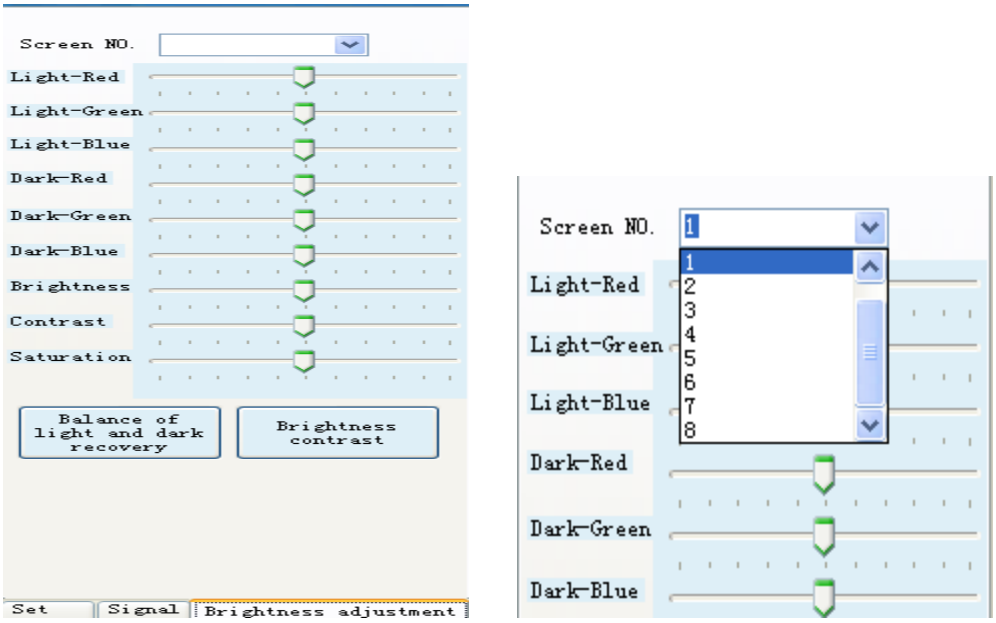


Figure 4.25 Brightness contrast adjustment and screen No.selection

Firstly select the screen No., then do corresponding adjustment for the light balance(red, green, and blue), dark balance(red, green, and blue), brightness, contrast and chroma, when the adjustment effect does not meet the requirements, the user can use the buttons 【Balance of light and dark recovery】and【 Brightness contrast 】 to reset, namely restore to factory default.

Notes: The screen number starts counting from zero. The parameter's fine adjustment can be operated by the button UP, DOWN, LEFT or RIGHT in keyboard.

4.7 5W Module (certain models only)

When the machine with 5 w module card, finish the software configuration and switch to the corresponding input signal, then click the right mouse button in the video window , there will have a new child menu【 video synthesis 】, as shown in the figure below:

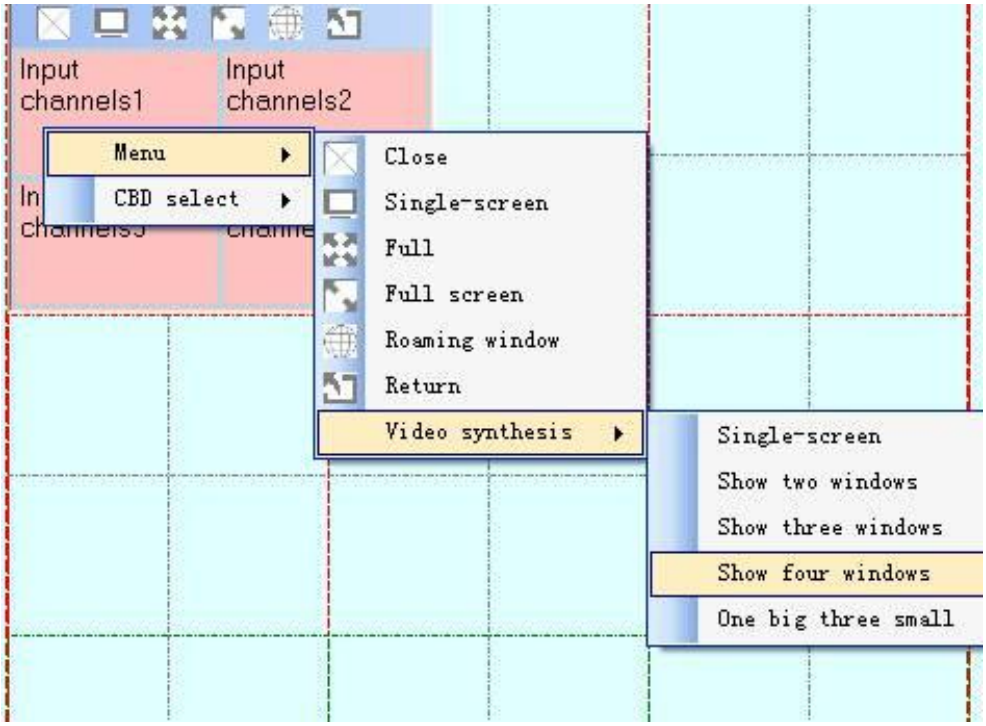


Figure 4.26 child menu of 5W Module

In the secondary menu, the user can select the arrays of 8 video windows.

4.8 Other function setting

In order to protect the equipment and eliminate the non-related staff's incorrect operation, the user need password to configure software's【set】,【source 】and【 module 】.Only with the correct password can realize corresponding configuration.(Consult our sales about the password)

Notes: 1, To ensure the normal operation of equipment, the following functions have been set in as leaving the factory, users do not have to make changes;

2, The operations described in this section is too professional. so for general users, this operation is not suggested. If you do need to operate, please contact with our company sales.

Figure 4.27 Buttons of other function setting

4.8.1 Setting

Click the button【set】, it will prompt the user to input password, as below:

Figure 4.28 Dialog box of password input

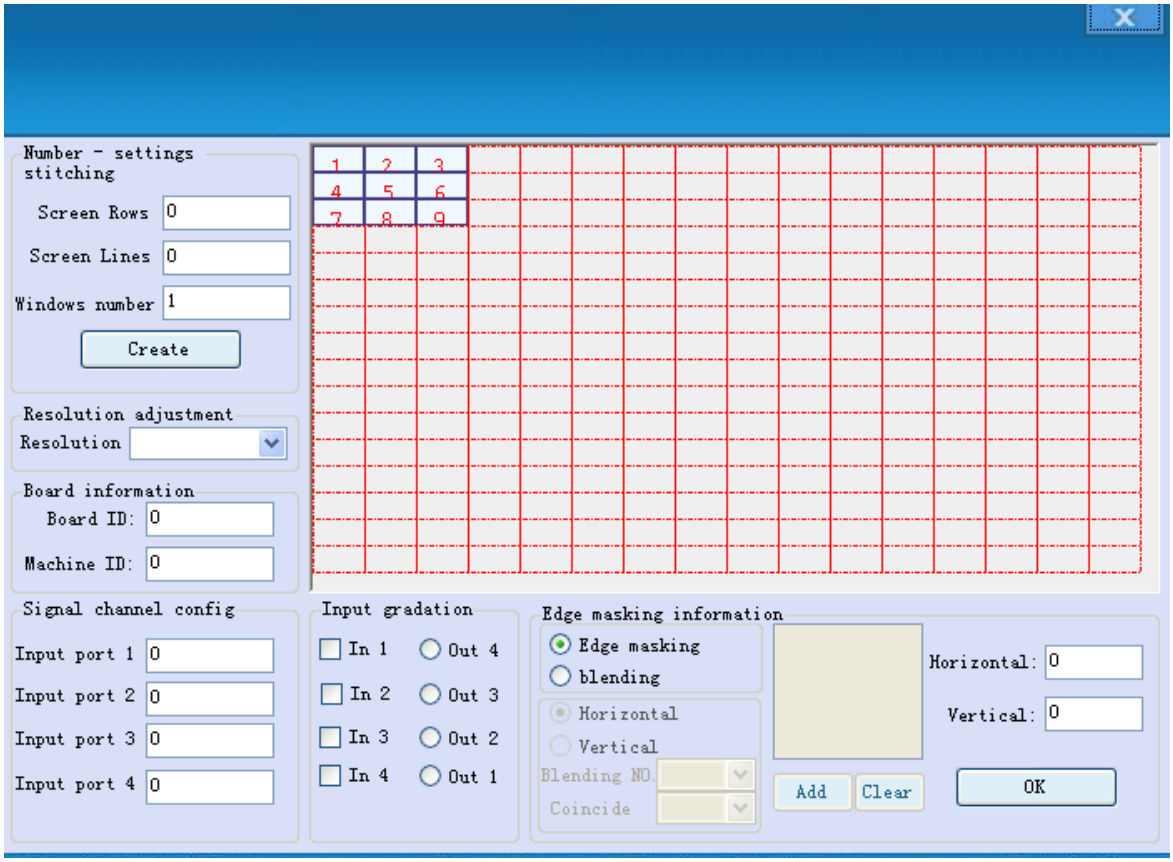


Figure 4.29 Window setting

When the user enters the correct password (password is admin), it will appear the setting window as figure shown above. The general users can set the screen resolution and edge masking parameters. The operations described in this section are too professional. So for general users, this operation is not suggested. If you do need to operate, please contact with our company sales.

4.8.2 Signal

The same as【 set 】, click the button, it will prompt the user to input password. Input the correct password and it will appear a setting window:

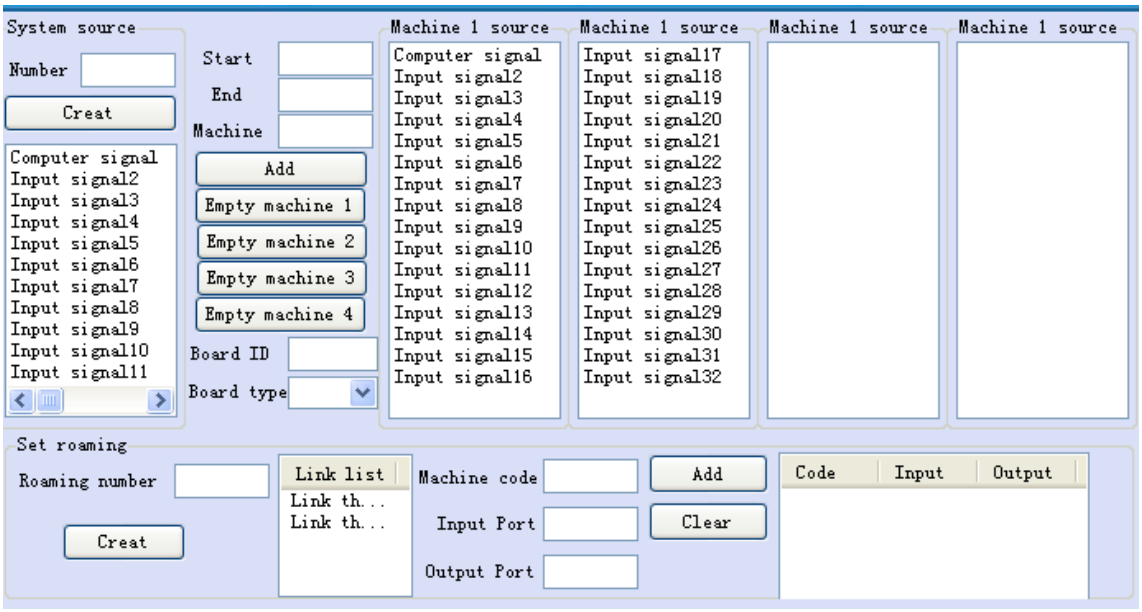


Figure 4.30 Signal setting

In this window, you can set the input sources, the input signal source's board ID and type. The user can also set the roaming channel of the cascaded machine. The operations described in this section are too professional. So for general users, this operation is not suggested. If you do need to operate, please contact with our company sales.

4.8.3 Module

The same as【 set 】, click the button, it will prompt the user to input password. Input the correct password and it will appear a setting window:

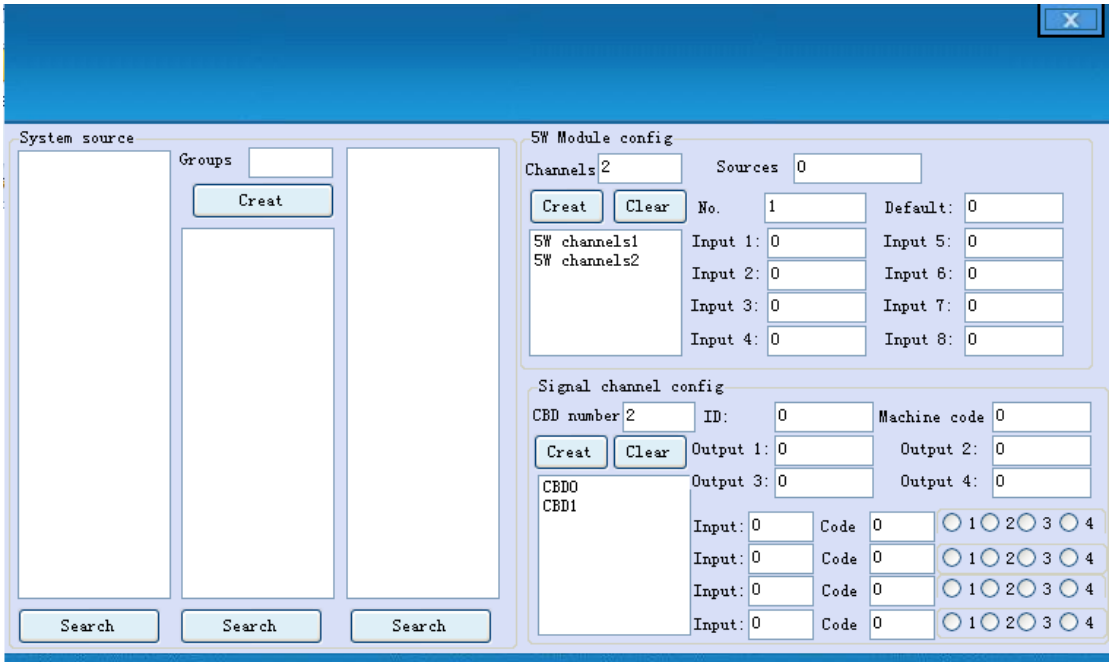


Figure 4.31 Module setting

In this window, you can set the input sources, the input signal source's board ID and type. The user can also set the roaming channel of the cascaded machine. The operations

described in this section are too professional. So for general users, this operation is not suggested. If you do need to operate, please contact with our company sales.

5、RS232 communication port and internal scene recall protocol

5.1 RS232 connection

This equipment offers standard DB9 RS-232 serial controlling port. It can be controlled by any other third party control device. RS232 pin chart is as follows:

Pin#	Name	Description
1	NC	--
2	TXD	Signal transmitter, connect to device RXD
3	RXD	Signal receiver, connect to device TXD
4	NC	--
5	GND	Connect to device GND
6	NC	--
7	NC	--
8	NC	--
9	NC	--

Table 5.1 RS - 232 port pin definition

Attention：Please use RS232 cross cable (RXD to TXD) to connect controller and device. As below

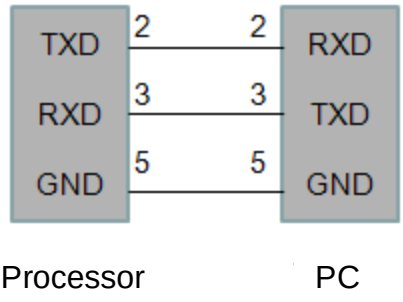


Figure 5.1 Communication cable structure

5.2 internal scene recall protocol code

Users can the use RS232 serial command to recall the saved inner memory of preset, or program it into the controlling device to realize a third party controlling easily. The protocols are as follows:

Control：RS232

Baud rate：115200

Format： Hex

The following protocol is corresponding to the relative memory of preset on the control interface.

Standard configuration is 30 memories of presets.

Preset mode 1	F0 0f 04 05 00 00 00 00 00 00 00 00 ff ff
Preset mode 2	F0 0f 04 05 01 00 00 00 00 00 00 00 ff ff
Preset mode 3	F0 0f 04 05 02 00 00 00 00 00 00 00 ff ff
Preset mode 4	F0 0f 04 05 03 00 00 00 00 00 00 00 ff ff
Preset mode 5	F0 0f 04 05 04 00 00 00 00 00 00 00 ff ff
Preset mode 6	F0 0f 04 05 05 00 00 00 00 00 00 00 ff ff
Preset mode 7	F0 0f 04 05 06 00 00 00 00 00 00 00 ff ff
Preset mode 8	F0 0f 04 05 07 00 00 00 00 00 00 00 ff ff
Preset mode 9	F0 0f 04 05 08 00 00 00 00 00 00 00 ff ff
Preset mode 10	F0 0f 04 05 09 00 00 00 00 00 00 00 ff ff
Preset mode 11	F0 0f 04 05 0a 00 00 00 00 00 00 00 ff ff
Preset mode 12	F0 0f 04 05 0b 00 00 00 00 00 00 00 ff ff
Preset mode 13	F0 0f 04 05 0c 00 00 00 00 00 00 00 ff ff
Preset mode 14	F0 0f 04 05 0d 00 00 00 00 00 00 00 ff ff
Preset mode 15	F0 0f 04 05 0e 00 00 00 00 00 00 00 ff ff
Preset mode 16	F0 0f 04 05 0f 00 00 00 00 00 00 00 ff ff
Preset mode 17	F0 0f 04 05 10 00 00 00 00 00 00 00 ff ff
Preset mode 18	F0 0f 04 05 11 00 00 00 00 00 00 00 ff ff
Preset mode 19	F0 0f 04 05 12 00 00 00 00 00 00 00 ff ff
Preset mode 20	F0 0f 04 05 13 00 00 00 00 00 00 00 ff ff
Preset mode 21	F0 0f 04 05 14 00 00 00 00 00 00 00 ff ff
Preset mode 22	F0 0f 04 05 15 00 00 00 00 00 00 00 ff ff
Preset mode 23	F0 0f 04 05 16 00 00 00 00 00 00 00 ff ff
Preset mode 24	F0 0f 04 05 17 00 00 00 00 00 00 00 ff ff
Preset mode 25	F0 0f 04 05 18 00 00 00 00 00 00 00 ff ff
Preset mode 26	F0 0f 04 05 19 00 00 00 00 00 00 00 ff ff
Preset mode 27	F0 0f 04 05 1a 00 00 00 00 00 00 00 ff ff
Preset mode 28	F0 0f 04 05 1b 00 00 00 00 00 00 00 ff ff
Preset mode 29	F0 0f 04 05 1c 00 00 00 00 00 00 00 ff ff
Preset mode 30	F0 0f 04 05 1d 00 00 00 00 00 00 00 ff ff

6、FAQ

1) Can not operate AppPresenter software

Possible reason: Operating system software that control the computer without a corresponding program.

Solution: Install Microsoft's related program: dotNetFX35setup. Exe and VC_x86Runtime.exe

Notice: To download the program in Microsoft's official website, or install the program from CD in processor. CD installation procedures are as follows (VC x86Runtime. Exe installation steps are similar as dotNetFX35setup.exe)

①Open the relevant software file, and double click "dotnetfx35.Exe" to operate.

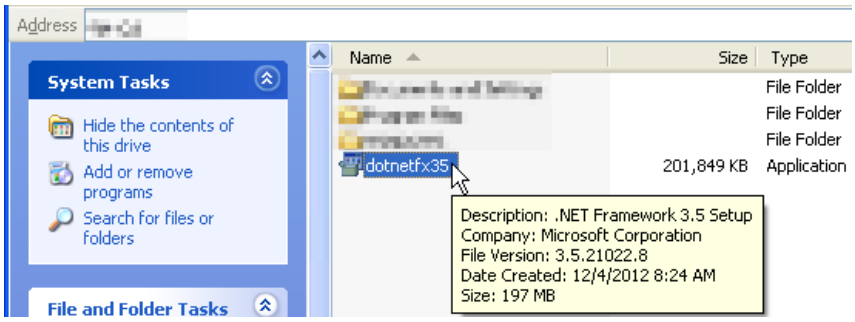


Figure 6.1 Open the dotNetFX35. Exe installation program

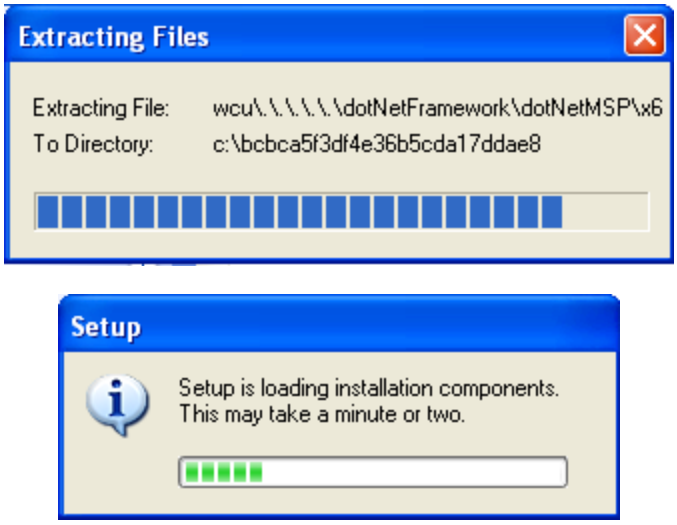


Figure6.2 Installation program start to install

②Select " 

"(I have read and accept the terms in the license agreements), and then click " 

"(installation);

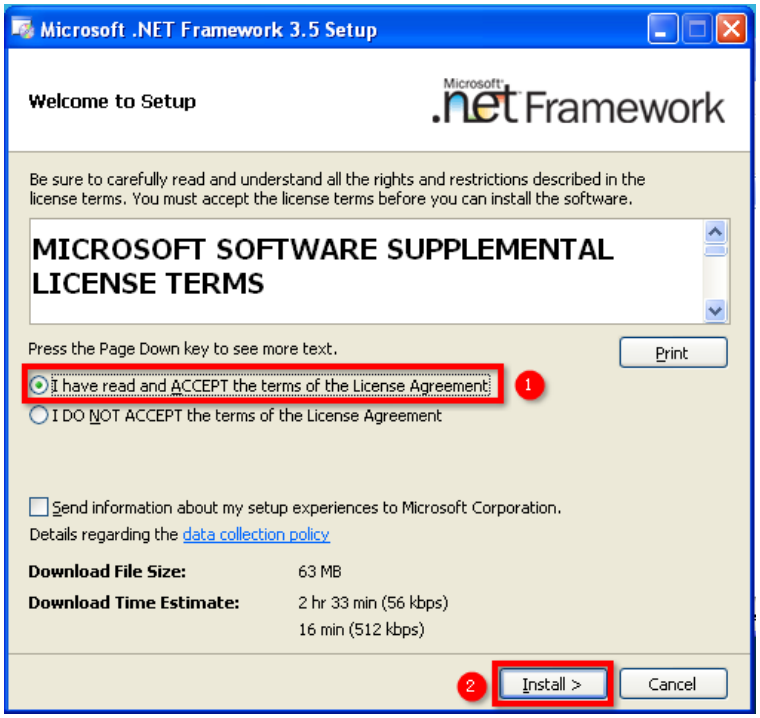


Figure 6.3 Select agreement term and install

③If the computer is connected to the Internet, the program will download installation data from the network automatically, as shown in the following:

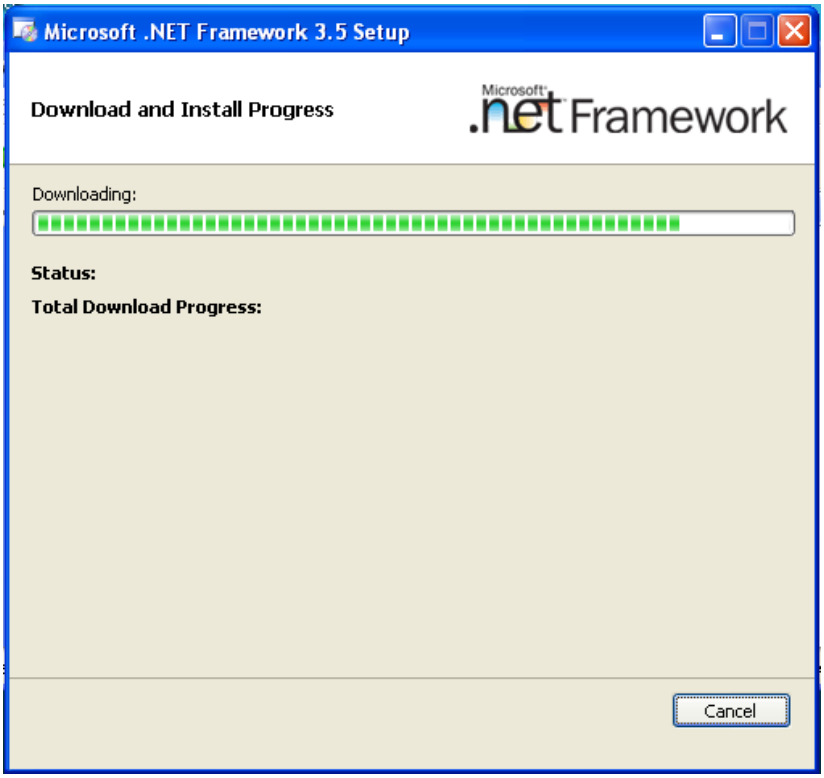


Figure 6.4 The data needed for download installation

④After the download is complete, the program starts to install. As shown in the picture below:

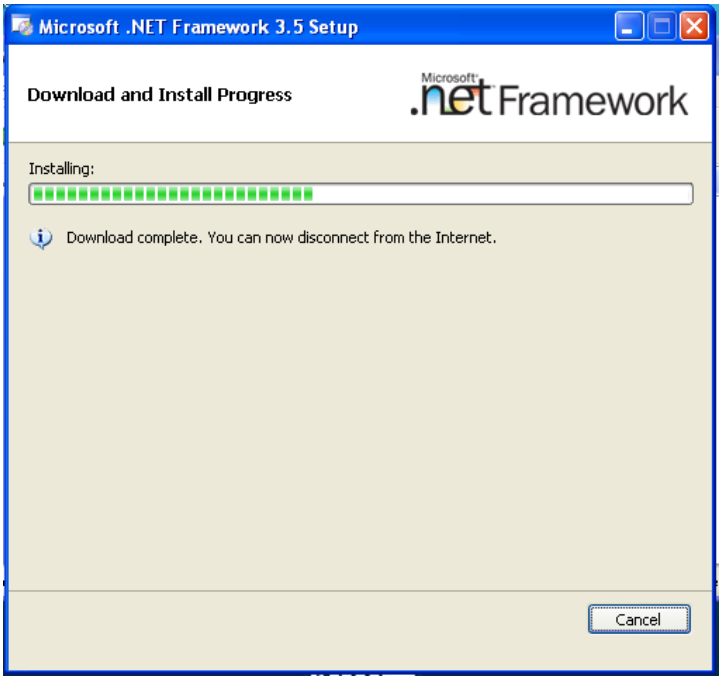


Figure 6.5The program starting to install after the download is completed

⑤To exit after the program installation is complete, as shown in the picture below:

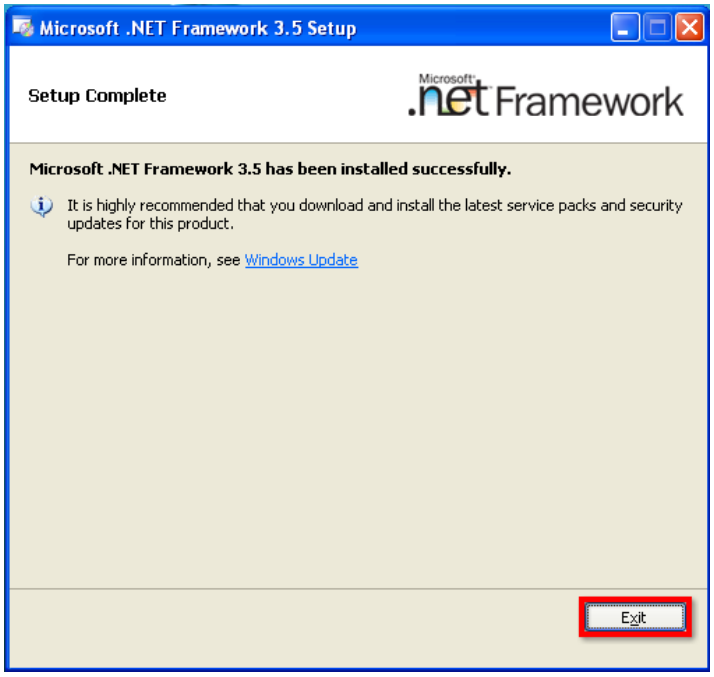


Figure6.6 To exit after installation is completed

2) Serial operation failure, can't control the video wall processor

Possible reasons: A The serial port is not opened

B The serial port already destroyed;

C The USB-RS232 adopter is not installed correctly

Solutions: A Check the status of serial port,

B change serial port or controlling PC

C Correctly install USB-RS232 device;

3) No image

Possible reasons:

A No signal source input;

B Signal switching is not correct, such an example: input video source is VGA, but the output channels are switched to AV input;

C Reversed connection of VGA input and VGA output;

D The display device do not adjust input channel such as adjust the input video source to VGA;

E Video showing is total black

F Output VGA or DVI cable is damaged.

Solutions:

A Please check the input signals states (To detect by connecting the input signal source to the display device directly)

B To confirm whether AV/VGA/DVI/YPbPr channel input are normal, with control software or remote controller to switch the channel

C To confirm the output of the processor connected to the display device properly, and the input signal is connected properly

D To adjust status of display device, for more specific operations please refer to display device specification; adjust the display state of display device. Please refer to the user manual of the display devices for specific operation

E Adjust the content of output signal, suggest using the dynamic picture, and do not use the monochrome screen output.

F To confirm whether the black screen scene has been opened;

G Use good quality VGA cable to ensure the stability and high quality images

4) The picture partial color phenomenon

Possible reasons:

A VGA or DVI interface not connected, loose connection leads to bad contacts

B VGA or DVI cable is damaged

C Color adjustment is not correct;

D Use the software color toning excessively

Solutions:

A After VGA or DVI cable is connected, please tighten the retaining bolt, to prevent loosing because of pulling

B Please change higher quality DVI cable

C Adjust color balance of display device, referring to the user manual.

D Re-adjust color and white balance through controlling software

E、If the input signal is VGA, please do ADC correction for it; the operation method are as follows:

①Select the input signal that needs to do ADC correction to right side window,as shown in the figure below:

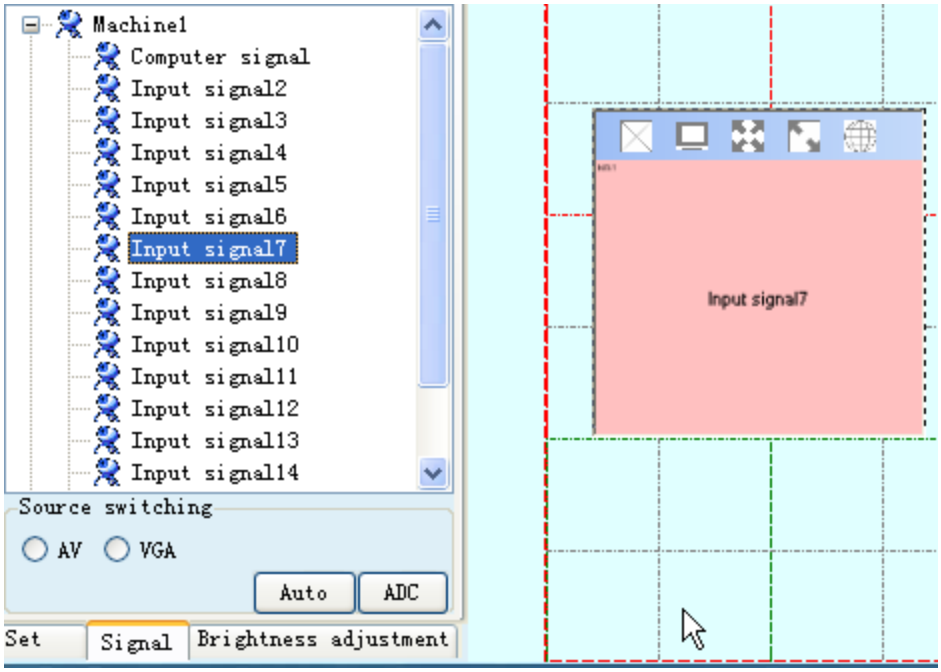


Figure 6.7 Automatic adjustment and ADC correction

②Choose VGA interface or DVI interface, then select the 【ADC】to execute.

5) Image can not display completely, appears black frame

Possible reasons：

A Video wall display unit has cropped for the video output

B Over adjust the image position through controlling software

C The resolution varies according to different display unit

D The video card setting method is not correct;

E The resolution of computer input signal is not standard;

Solutions:

A Please make an auto adjustment to display unit, referring to user manual.

B Re-adjust image position for a better effect through software.

C Select current signal sources and click【Auto】to enter into the "Set ", then select the needed output resolution;

D Enter into graphics card advanced menu, then change the scanning mode to over scan.

E Change the computer input signal to appropriate resolution;

6) Image of some display unit flash, shake, or appear noise

Possible reason：

A Too long VGA or DVI cable leads to serious signal loss.

B Video source device is not stable or cables are damaged

C Failure of display unit

D Video wall processor's output is not compatible with display unit

Solution：

A Please use other stand-alone display unit to connect to the output of video wall processor. If image shows normally, please check the display unit.

B Change the normal output cable with the abnormal cable, if the problems still exist, it shows problems result from display unit.

C Connect the input signal to display unit directly without go through the processor, check whether the output image is normal.

D If the processor and display equipment are normal, it may be matching problem between processor and display equipment. please contact our engineer to solve it. I

Attentions:

1 The above listed is the common failure in after-sales maintenance. If you find the device failure phenomena are not in above range. Please notify the suppliers to solve as soon as possible. Please do not open the case without authorization, so as not to expand the fault or cause unnecessary safety accidents.

2 Our company reiterates: without the permission, you who take device apart will bear all the responsibilities that it may bring.