HDMI integrated splicing processor

user's manual

V1.0

Use this manual:

This manual is suitable for splicing processors, thank you very much for purchasing our products, please read this manual carefully before using the equipment.

All the pictures in this manual are for reference only, please refer to the actual product.

The description in this manual may not correspond one-to-one to the product you purchased or your accessories. The Company reserves the right to modify any information in this manual at any time and will regularly improve or update the contents in this manual based on the enhancement of the product functionality. The updates will be included in the new version of this manual without notice.

catalogue

1. Safety instructions

1.1. source

Please use the 220V AC power supply with single-phase three-wire system with protection ground, and ensure that the whole engineering system uses the same grounding, not the power supply without grounding protection, and the grounding foot of the power cord can not be destroyed.

1.2. interrupt

When the equipment moves or other situations requiring power off, turn off the power to ensure the safety of the equipment.

1.3. cable

It is not allowed to press items on power lines, signal lines, communication lines and other cables, and should avoid cable trampling and extrusion to prevent the occurrence of leakage and short circuit and other dangerous situations.

1.4. signal

Ensure that the signal line, communication line and other wires are well connected, and then start the operation.

1.5. heat radiation

The heat dissipation hole on the surface of the equipment should not be blocked, so as to avoid heat accumulation and damage to the equipment.

1.6. environment

The working environment of the equipment should pay attention to dustproof and moisture-proof to prevent liquid immersion.

1.7. keep in repair

All maintenance work should be completed by professional personnel, without permission, not allowed to avoid the danger of electric shock.

1.8. equipment installation

The equipment shall be installed on a stable and stable working surface or in a standard rack, cabinet and chassis.

1.9. Safety precautions

1) There is high pressure in the equipment, and non-professional maintenance personnel are not allowed to open the chassis to avoid danger.
2) Do not place containers with liquid on and near the equipment.
3) No equipment near the fire source.
4) Ensure adequate ventilation, and the front and rear panels of the equipment shall maintain at least a 20CM gap.
5) In the case of lightning or long-term not in use, please unplug the power plug.
6) Do not block the ventilation holes of the equipment to avoid causing damage to the equipment.
7) Do not place this device near the liquid.
8) Please place the power cord properly to prevent any damage.
9) In the following cases, unplug and leave it to a professional:

a) When the plug power cord is damaged or worn;

b) When the liquid is splashed into the equipment;

c) When the equipment falls or the chassis is damaged;

d) When the equipment has obvious abnormal function or performance change.

* Note: The equipment is not suitable for operation and debugging by non-professionals, and it must receive professional training or guidance. Please read this manual carefully before using this equipment. The manual should be properly kept for later use.

* Note: This is A Class A product that may cause radio interference in A living environment. In this case, users may need to take practical measures about their interference

注 1：本设备为信息技术设备，其无线电骚扰特性按 A 级信息技术设备要求。

警告
此为 A 级产品，在生活环境中，该产品可能会造成无线电干扰。在这种情况下，可能需要用户对干扰采取切实可行的措施。

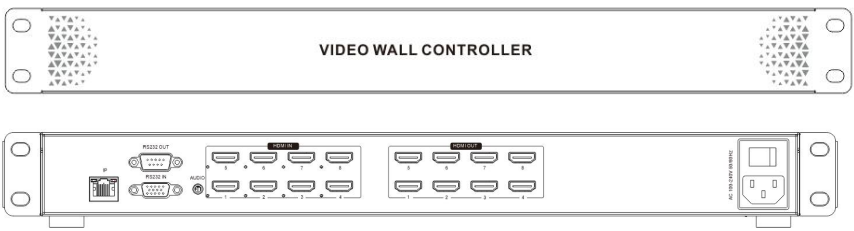
注 2.本次申请产品内部产生或使用的最高频率，或 EUT 工作或调谐的频率为：2.0GHz，本次申请辐射骚扰进行到 6GHz。

2. container loading list

project	name	quantity	unit
1	Splicing processor host	1	short for Taizhou
2	AC 220V National standard power cord	1	individual
3	Quick entry	1	stem or root of plants
4	parvicostellae	1	twig
5	Certificate warranty card	1	fix

3. Quick entry

3.1. A Schematic diagram of the chassis connection

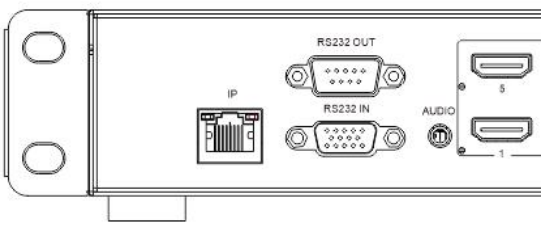


joggle	explain	remarks
IP	10 / 100M Ethernet port	Default IP: 192.168.1.182

RS232 OUT	DB9 male head ring out of the control screen	
RS232 IN	DB9 head central control	Porter rate 1152000
AUDIO	The 3.5mm headphone port output	
HDMI IN	8 HDMI 1080P input, can be switched to 44K30 input	
HDMI OUT	8 channel HDMI output with 1920x1080@60Hz output	Specifications: 4-4,8-8,4-12

3.2. Communication interface description

Master control card



IP	IP network interface, switch / router, also directly connected to computer, web control
RS232 IN	RS232 interface, connect to the computer serial port
RS232 OUT	RS232 ring out, control the large screen
A-O joggle	Independent audio output port (audio of binding output channel 4)

Splice processor default IP: 192.168.1.182, port: 5000

Splice processor default serial port (RS232), baud rate: 115,200 bps;

- **The RJ 45 line order for RS232:**

foot position	definition	explain
2	TX	RS-232 protocol, sending data
3	RX	RS-232 protocol, received data
5	GND	Signal ground

4. installation instructions

4.1. Schematic diagram of the connection

5. Web version control

5.1. give tacit consent to IP

The default IP is 192.168.1.182

5.2. How to obtain and modify the WEB card IP address

5.2.1. Use the IPCTool tool to search for the WEB card IP addresses

Open IPCTool, click Auto Search, and the device version shows Web-CON-xxx for the device

IPCTool Download address: http: / / www.smartrgb.com/upload/file/1647318930.zip

5.2.2. Log in to the web page to modify the WEB card IP address

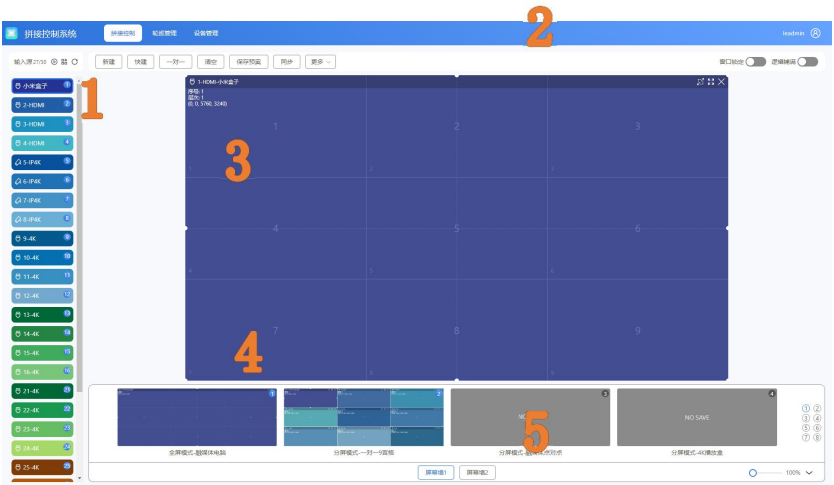
Enter the web page, enter the device management, the device network Settings can modify the WEB card IP address

5.3. Access the browser to enter the operating interface

Connect the terminal (mobile phone, computer or tablet) and the device to a LAN, open the browser access: 192.168.1.182, default user name: admin, password: admin, recommended Google browser

Note: Browsers that do not support the IE browser or the IE kernel

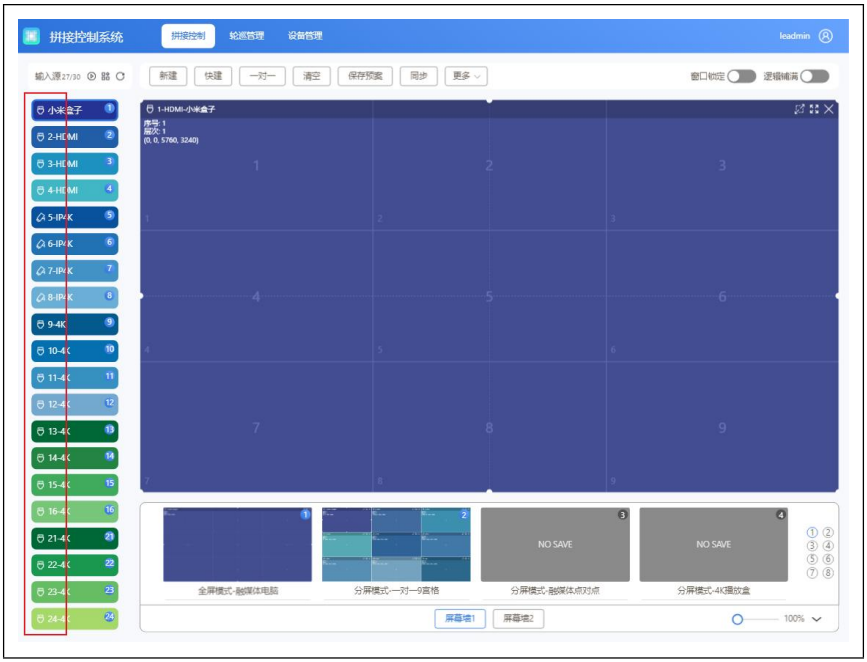
5.3.1. Software area description



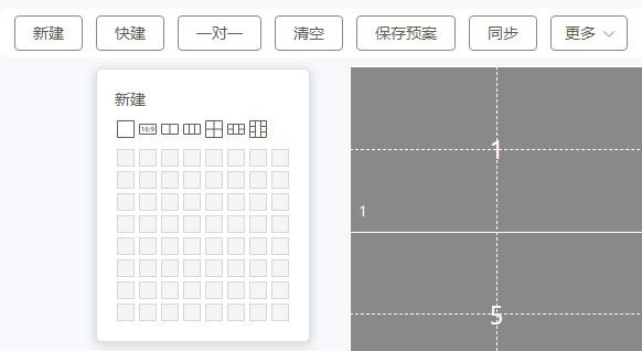
1	Signal bar	Input signal list, webcam list
2	tool bar	New, empty, fast new, screen channel, open screen, close screen, more
3	Virtual screen wall	Window operation area
4	Plan column	Plan preview diagram, click switch plan
5	Screen switch	Multi-screen wall switching

5.3.2. Signal bar

1. Show the total number of signals versus the number of signals 2. Switch from the currently selected input signal to the window in the current screen 3. Tree and list mode switching 4. Input signal refresh 5. The input has a signal in color and no signal is gray	
6. Sliding description: If the signal number in the Pad exceeds the layout, you can slide the red area to adjust the layout	


拼接控制系统
拼接控制
轮巡管理
设备管理
leadmin
新建
快建
一对一
清空
保存预案
同步
更多
窗口锁定
逻辑铺满
小米盒子
2-HDMI
3-HDMI
4-HDMI
5-IPC
6-IPC
7-IPC
8-IPC
9-4K
10-4K
11-4K
12-4K
13-4K
14-4K
15-4K
16-4K
21-4K
22-4K
23-4K
24-4K
1-HDMI-小米盒子
序号: 1
层次: 1
(0, 0, 5760, 3240)
NO SAVE
NO SAVE
全屏模式-融媒体电脑
分屏模式-一对一9宫格
分屏模式-融媒体点对点
分屏模式-4K播放盒
屏幕墙1
屏幕墙2
100%

5.3.3. Function button



new-built	Create a new window for the selected signal in the screen order
Quick construction	Quick window opening function Quickly create a split split window
one-for-one	Create a one-to-one new window according to the input signal source
empty	Empty the screen wall screen
Save the plan	Save the current screen into the preplan
synchronization	Synchronize data for the device
more	Switch / off screen (require device ring to connect screen 232 and protocol to match up)
Window lock	Lock the window of the current screen wall, move or close seamlessly, and switch the signal
The logic is full	Mouse slide open the window, according to the logical split screen dotted line automatically spread the window
more	Pair of all: switch the selected inputs to all windows

	Ring out control screen open / off screen

5.4. Modify the input 2K with the 4K mode

1. Right click select input mode, select 42K or 24K
2. Restart the device

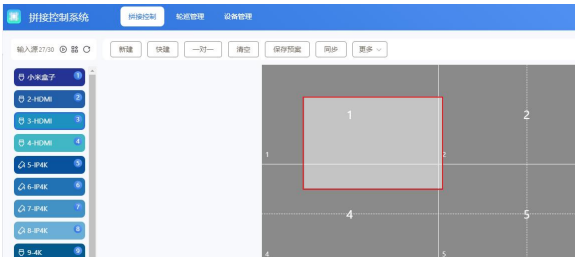
5.5. Window and signal operation

5.5.1. How to signal the opening of a window

3. Drag the signal source to the blank area window

4. Click New, Quick New, or open a one to one window

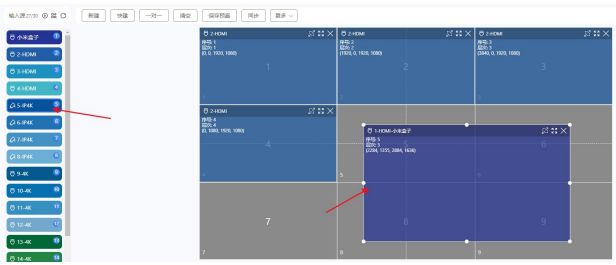
5. Slide the mouse window in the blank area



5.5.2. How to switch the window signal

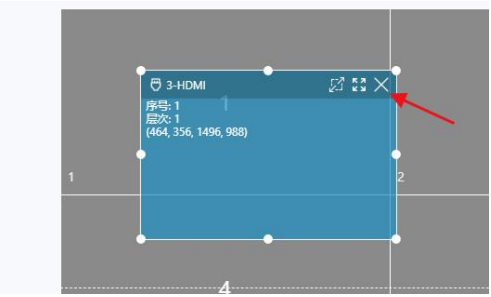
1. Drag the signal signal source to switch

2. Select the window and double-click the signal source switch

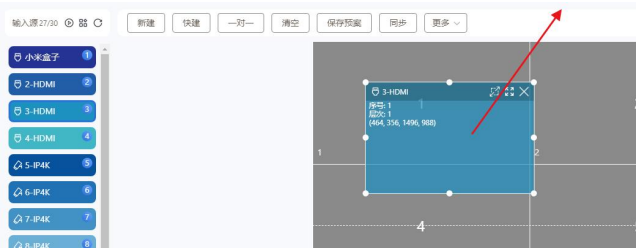


5.5.3. How to close the window

1. Click on the window's X



2. **Drag the window to the outside of the screen wall**

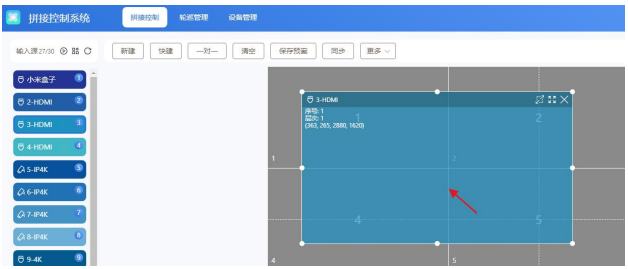


3. **Click empty**

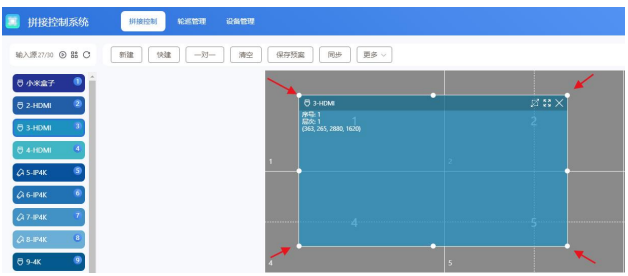
4. **Window right-click to close**

5.5.4. Window size position modification

1. Move the window: click on the window to move the mouse to move the window position



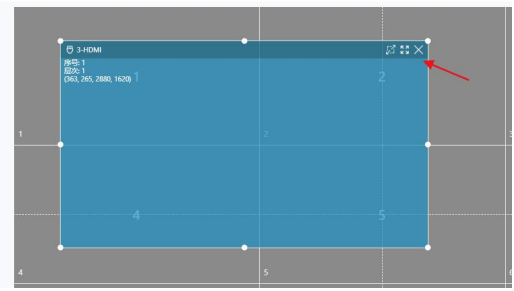
2. Drag the window: Drag the 4 corners of the window to modify the window size



3. Edit coordinates: Right-click the window to edit the exact coordinates of the window

4. Window icon

They are: logical area full, whole screen full screen, closed window



5.5.5. Window locked and logical spread full

- Window lock: After the window is locked, the window cannot be dragged, and the window input signal source can be switched

- Logic full: open the logic full, will be the screen and the solid line for the unit of automatic full window

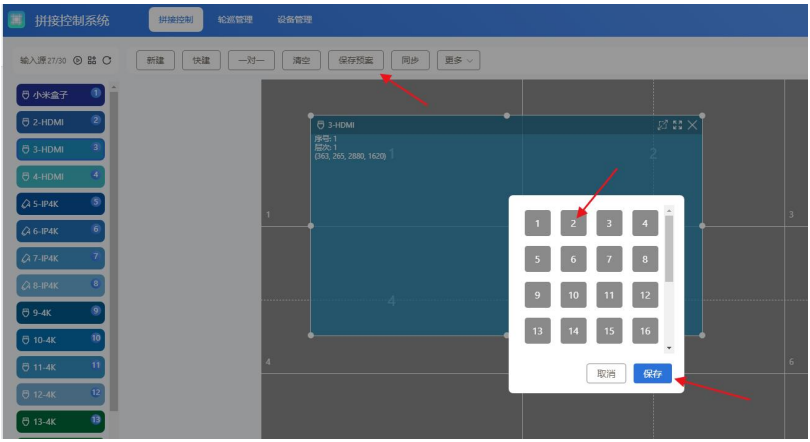
5.5.6. More operations

Ring out control large screen switch screen

5.5.7. Plan operation

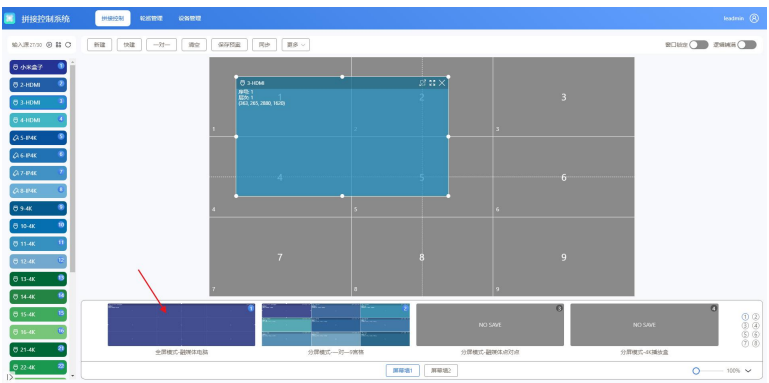
- Save the plan

Click the plan box to be saved, and save it



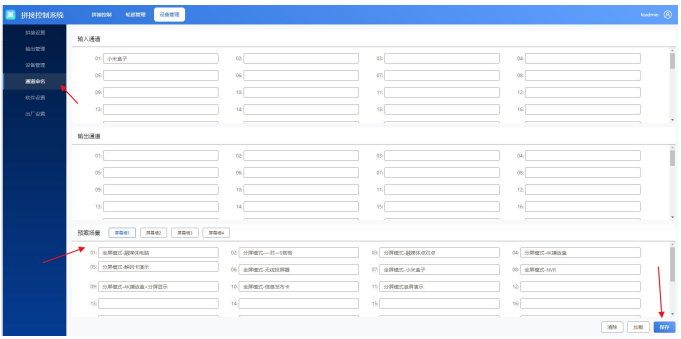
- Loading plan

Click on the plan preview map or the plan serial number



5.5.8. Modify the name of the plan

Device management-> Channel naming-> Scene plan



- Delete the plan

Right click to delete or click the pop box to delete;

- Hide the plan bar

Note: The preview map and name of the plan saved by the client cannot be synchronized with the WEB terminal. Need to load the plan, click synchronization, and then save it

5.5.9. Round patrol management

- **Menu function**

New: new wheel patrol; delete: delete the currently selected round patrol; empty: empty the wheel patrol data;

Start: start all patrol data; stop: stop all patrol data

- **Scene round patrol**

The saved scene is selected for the cycle switching display

	function declaration ● Wheel patrol type: scene wheel patrol ● Round patrol name ● Start automatically ● Mode: Mosaic mode / matrix mode ● Screen wall ● Batch modification interval time ● Add the scene

Channel round patrol

The selected input switches in an output (window)	
	function declaration ● Wheel patrol type: channel wheel patrol ● Round patrol name ● Boot up and start up ● Mode: Mosaic mode / matrix mode ● Screen wall ● Window requiring wheel patrol (the corresponding window of the output) ● Batch modification interval time ● Add input source

Custom wheel patrol

<table>
<tr><td colspan="2">Follow up the central control agreement, customize the round patrol agreement, can support the third party round patrol equipment</td></tr>
<tr><td> 
</td><td>function declaration
● Wheel patrol type: custom wheel patrol
● Round patrol name
● Ring out selection (whether to control the third party device)
● Ring-out port rate selection
● Batch modification interval time
● Add a custom wheel patrol protocol</td></tr>
</table>

Note: If this function is required to use, it is recommended for users with integrated development capability

5.6. device management

5.6.1. Split setting

Screen wall configuration: screen wall name, logical split screen, screen background color

Screen configuration: splicing specifications

5.6.2. Output management

1. Click to empty the output or drag the screen wall out of the screen wall
2. Double-click on the left output channel,

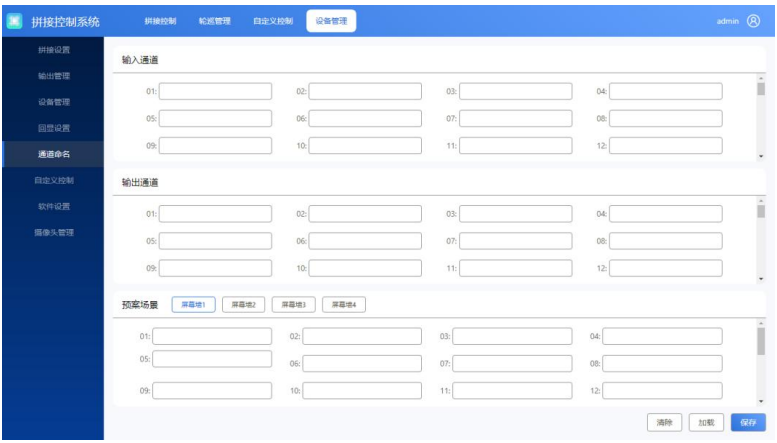
3. Look at the big screen. which screen has a black white cross
4. Drag the output channel to the corresponding screen

5.6.3. device management

● The buzzer switch ● unit type ● WEB board Web Settings ● Ring-out splicing protocol setting ● Board card version query ● Master dashboard network settings	

5.6.4. Channel naming

Custom input, output, plan name



5.6.5. Software Settings

• Set the language • Theme color setting • Software Background Color Settings (virtual screen wall) • Software name modification • WEB software release • UI software release • Software function switch • Software logo settings	

5.6.6. How to modify the user password

1. Click on the user icon	2. Enter a new password
	

6. Central control agreement

6.1. communication port

- Serial port configuration, and port rate: 115200bps; communication format: 1 bit start bit, 8 bit data bit, 1 bit stop bit, no check
- Network port configuration, ports: 5000,5100,5200,5300
- The protocol format is ASCII. If the central control only supports 166, it can be converted to 16 through the tool

6.2. Switch over the input source instructions of the window

<table>
<tr><td>instruction format</td><td colspan="3"><switch,wall_id ,win_id ,src_id ,src_x ,src_y ,src_w ,src_h ></td></tr>
<tr><td>Directive definition</td><td colspan="3">This instruction indicates that the content of a window is the specified input source</td></tr>
<tr><td rowspan="6">protocol specification</td><td>form</td><td>explain</td><td>remarks</td></tr>
<tr><td><</td><td>Protocol Start</td><td>fixed value</td></tr>
<tr><td>switch</td><td>Agreement instruction</td><td>Fixed protocol value</td></tr>
<tr><td>wall_id</td><td>Screen wall ID</td><td>From 0, with a maximum of 3</td></tr>
<tr><td>win_id</td><td>window ID</td><td>From 0, with a maximum of 255</td></tr>
<tr><td>src_id</td><td>signal source ID</td><td>From 1, with a maximum of 144</td></tr>
</table>

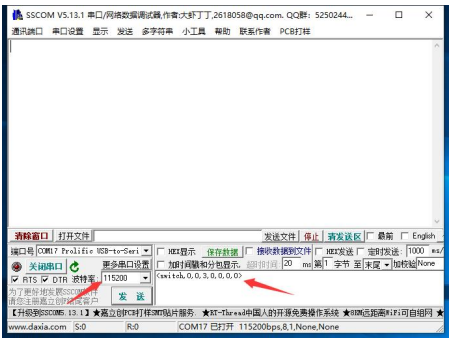
<table>
<tr><td></td><td><table>
<tr><td>src_id ,src_x ,src_y ,src_w ,src_h</td><td>Signal cropping size</td><td>Default values are 0,0,0,0</td></tr>
<tr><td>></td><td>Protocol end</td><td>fixed value</td></tr>
</table></td></tr>
<tr><td>returned value</td><td><switch cmd done></td></tr>
<tr><td>Refer to the agreement</td><td><table>
<tr><td>Refer to the agreement</td><td>explain</td></tr>
<tr><td><switch,0,0,3,0,0,0,0></td><td>Wall 1, the signal source of the window</td></tr>
<tr><td><switch,0,1,3,0,0,0,0></td><td>Wall 1, the signal source of the window</td></tr>
<tr><td><switch,1,3,1,0,0,0,0></td><td>Wall 2, the signal source of the window</td></tr>
</table></td></tr>
</table>

6.3. Call the plan mode command

<table>
<tr><td>instruction format</td><td><call,Wall_ID,Scene_id></td></tr>
<tr><td>Directive definition</td><td>This instruction indicates the scenario mode where the specified screen group calls the saved specified number.</td></tr>
<tr><td>protocol specification</td><td>
<table>
<tr><td>form</td><td>explain</td><td>remarks</td></tr>
<tr><td><</td><td>Protocol Start</td><td>fixed value</td></tr>
<tr><td>call</td><td>Agreement instruction</td><td>Fixed protocol value</td></tr>
<tr><td>Wall_ID</td><td>Screen wall ID</td><td>From 0, with a maximum of 3</td></tr>
<tr><td>Scene_id</td><td>plan ID</td><td>From 1, with a maximum of 32</td></tr>
<tr><td>></td><td>Protocol end</td><td>fixed value</td></tr>
</table>
</td></tr>
<tr><td>returned value</td><td><call cmd done></td></tr>
<tr><td>Refer to the command</td><td>[Example 1] <call, 0,1>
It means that the no. 1 plan mode of the first group display wall is retrieved. The saving and deletion of the plan scene should be saved in advance through the client software.</td></tr>
</table>

Note: The default mode is 1 for all, or all outputs show 1 input

6.4. test tools



- **Conversion tool (string 16)**

https://www.asciitohex.com/

7. Common fault analysis and resolution

7.1. Cannot run after software

Possible reasons: The customer computer lacks the relevant software running support component (Microsoft.NET. Exe); being blocked or deleted by anti-virus software;

resolvent: Enter the software installation directory, in the Tool folder, install. Net40. Temporary close antivirus software or computer butler, or add the program to the computer butler exception.

7.2. Unable to search or connect to the device

Possible reasons: No network or serial port; the IP address conflicts with other devices on the LAN; a network card in a LAN with the device is not selected

resolvent: Using the command prompt, the IP of the Ping device will check whether the network is connected; modify the IP address to reconnect; and re-select the computer network card

7.3. The output picture shows no reason

Possible reasons: No signal input; output line damage or beyond transmission distance; output mapping is not configured correctly.

resolvent: Check the input signal, confirm that the input signal channel is normal, check whether the LED indicator of the port is on; confirm that OUT is the output device and IN is connected to the input device;

7.4. The reason for the color deviation phenomenon of the picture

Possible reasons: The interface is not properly connected, resulting to poor contact; the signal cable is damaged; the color adjustment of the display equipment is incorrect; incorrect color adjustment using the software.

resolvent: 1) After the interface is connected, tighten the bolts to prevent loosening due by pulling;

2) Adjust the color balance of the display equipment according to the operation manual of the display equipment;

7.5. The picture shakes or flower points

Possible reasons: Too long cable causes serious signal loss; the equipment of the input signal is unstable or the wire is damaged.

resolvent: It is recommended to use signal extender to ensure minimum line loss; debug the function definition of input signal and use high quality wire.

7.6. The screen is not complete in the display device

Possible reasons: Your display has a back-end removal of the signal; you adjust the image too much with the control software

resolvent: Follow the instructions for the display device, adjust the default settings in the software; control the software, readjust the position of the image to achieve the effect you need.

7.7. The picture splicing shows the dislocation

Possible reasons: The screen is spliced, and the output map does not match the physical cable

resolvent: Turn the screen to single screen mode; check the setting output mapping

Instructions to update the QR code

Thanks for the use of our company