NETWORK VIDEO & AUDIO DECODER & ENCODER MATRIX

Operating Instructions

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Notice

1. Installation Site

Keep away high temperature environment and avoid direct sunlight.

To ensure proper cooling of the machine, should avoid poorly ventilated places.

The machine should be installed horizontally, in order to prevent electric shock and fire, do not place the machine in flammable and explosive places.

Handle with care to avoid the strong impact of the machine, vibration, etc., will be installed to avoid severe vibration.

To avoid cold, overheated spaces between each other to move the machine, in order to avoid condensation inside the machine, affect the service life of the machine.

2. Avoid electric shock and fire

Remember not to touch the power switch with wet hands and native.

Do not spill liquid on the unit to avoid short circuit or fire inside the machine.

Do not place any other equipment on the upper portion of the unit.

When this unit's power cord to a power outlet connection, even if the machine does not start, still inside the machine voltage.

When wiring during installation or change the line should disconnect the power supply to prevent electric shock.

After switching on the unit, exposed terminals dangerous voltage, remember not to touch.

Important tip:

To avoid damage, it does not automatically open the case, by a qualified professional service personnel in the designated maintenance units for maintenance.

When the cleaning device, do not use strong cleaning agents, when there is dust with a dry cloth to wipe the device.

Not use the machine at the power supply voltage is too high and too low occasions.

Service Please read instruction manual so you know how to properly use the machine. When you read this manual, please keep it well for future reference. If you need service, please contact an authorized service station of the local.

Environmental protection:

This unit conforms to the national standards for electromagnetic radiation, electromagnetic radiation on the human body without harm.

Issuance and sale of the product by the original purchaser under the terms of the license agreement;

Without permission, no unit or individual shall not copy all or part of the reproduction or translated into another electronic medium machine-readable form;

This document is subject to change without notice; due to a software version upgrade caused this manual does not match the software shall prevail.

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Chapter I Overview

I. Introduction

Network video and audio decoder & encoder matrix, also known as digital matrix, is designed for network video surveillance system, is based on professional decoder chip. The Linux operating system, with good facilities and excellent stability decoding capabilities.

H. 265 series products support 4K, H.264 series products support HD 1080P , also the following resolutions online video decoding and output; support for multiple network transport protocols, multiple transmission streams, the network video and audio decoding output, large screen wall decoding, segmentation and Stitching on the display screen wall and other services to provide strong support.

II. The product structure

1, H.265 standard series digital matrix modular structure, each module with two output HDMI 2.0 interfaces, a HDMI2.0 interface input, an audio input and output, a Gigabit Ethernet port output. Single-module support 4 ch 4K or 16 or 32 ch 720P or 1080P 64 ch D1 video and audio decoding, support 1080P input 1 channel coding based on the H.264 standard. Multi-module products can be selected as desired;

2, H.264 standard series digital matrix adopt modular structure, each module with 4 ch output HDMI 1.3 interfaces; can to choose a multi-module based on needs; single module supports 8 or 16 ch 720P or 1080P 32 ch D1 or 64 ch CIF video and audio codecs.

III. The product features

1, H.265 standard series digital matrix function

(1) Single-module decoding function

- ◆ Supports H.265 Main Profile Level5.1, H.264 Baseline / Main / High Profile Level5.0, MPEG4 SP L0 ~ L3 / ASP L0-L5, MJPEG / JPEG Baseline decoding.
- ◆ Single module supports 4 ch 4K / 16 ch 1080P / 32 ch 720P / 64 ch D1 video decoding.
- ◆ Supports 4K, 500W, 300W, 200W, 130W and other standard video decoding.
- ◆ Supports PAL / NTSL other standard formats.
- ◆ Supports standard ONVIF access.
- ◆ Supports video RTSP streaming.
- ◆ Supports for video file playback.

(2) Single-module encoding function:

- ◆ 1 ch supports HDMI 2.0 signal coding.
- ◆ Supports the input signal H.264 Baseline, Main, High Profile Level5.1 standard coding.
- ◆ Supports MJPEG / JPEG Baseline coding.
- ◆ Supports encoding 1080P, 720P resolution, etc.
- ◆ When encoding support resolution and frame rate adjustable.
- ◆ Supports encrypting the encoded video stream.

(3) Single-module output

- ◆ Supports two HDMI2.0 output interfaces; backward compatible HDMI1.3 and other versions.
- ◆1 ch HDMI2.0 output supports 3840 × 2160 @ 60fps, 1 ch HDMI2.0 output 1080P @ 60fps.
- ◆ Single-screen supports up to 36 split display.

(4) Single-module Audio:

◆ With 1-channel audio input and 1 channel audio output.

◆ Supports 16bit voice input and output.

(5) Single-module Network:

◆ External with a 10/100 / 1000Mbps adaptive Ethernet port.

(6) Single machine function:

◆ By a number of stand-alone modules, equivalent to the integration of multi-function module.

◆ With two USB ports, support for access mouse to control digital matrix, or access the USB storage devices for direct playback of audio and video.

◆ With RS485 interface, support equipment access module.

2, H. 264 series digital matrix decoding function:

(1) Single-module decoding function:

- Supports decoding standard H.264, MPEG4, MPEG2, MJPEG, manufacturers and other private stream encoding format.
- Single module supports 8-channel 1080P or 16-channel 720P or 32-channel D1 or 64-channel CIF video and audio decoding.
- Supports PS, RTP and manufacturers proprietary encapsulation format.
- Supports PAL and NTSC image formats.
- Supports 1080P, 720P, SVGA, VGA, 4CIF, DCIF, 2CIF, CIF, QCIF resolution decoding.
- Supports G.722, G.711A, G.711U, MPEG2-L2, ACC audio format decoding.
- Supports using URL taken stream decoding from encoding device.
- Supports VGA / HDMI high-definition output, BNC SD output.
- Supports ONVIF 2.0 or later.

(2) Single network function module

- Standard 10M / 100M / 1000M adaptive Ethernet port, each four outputs match with an Ethernet port, such as 16-output features match four Ethernet ports.
- It supports TCP, UDP, RTP, MCAST transport protocol.
- Supports HTTP, DHCP, DDNS network function.
- Can be configured decoder by browser or client access software.
- Can be upgraded and maintained by the remote network.

(3) Single module output parameters

- Support 4 ch HDMI1.3 standard output.
- Support windows roaming.
- Interface: HDMI-A Block, 19-pin, female.
- Minimum, maximum level: TDMS 2.9V / 3.3V.
- Impedance: 75Ω.
- Pixels Bandwidth: 165MHz, all-digital.
- Interface bandwidth: 2.25Gbps, all-digital.
- Bit clock jitter: <0.25Tbit (20% -80%).
- Bit Rise time: <0.3Tbit (20% -80%).
- Maximum propagation delay: 5nS (± 1nS).
- Support 1920 × 1080P, 1920 × 1080I, 1280 × 720P, 1280 × 720I formats and custom resolution output. HDMI recommends maximum transmission distance: When 1080P, less than 20 meters (recommended certified HDMI dedicated wire).

(4) Single machine function

- By a number of stand-alone modules, equivalent to the integration of multi-function Module.
- Single with USB interface, support for access mouse to control digital matrix.

- Single with RS485, support equipment access module.
- With expansion ports, support for multi-machine cascade.

3 The total hardware resources

(1) H.265 standard digital matrix resources

Output Specifications	Display output	Maximum splicing	Encoding capability	Stand-alone decoding capability	Chassis size
2 *36 split display	1 ch 4K and 1 ch 1080P output	1 × 2	1 CH	64 CH	1U
4 *36 split display	2ch 4K and 2 ch 1080P output	2 × 2	2 CH	128 CH	1U
6*36 split display	3ch 4K and 3 ch 1080P output	2 × 3	3 CH	192 CH	2U
8*36 split display	4ch 4K and 4 ch 1080P output	2 × 4	4 CH	256 CH	2U
10*36 split display	5 ch 4K and 5 ch 1080P output	2 × 4	5 CH	320 CH	2U
12*36 split display	6 ch 4K and 6ch 1080P output	3 × 4	6 CH	384 CH	2U
16 *36 split display	8 ch 4K and 8 ch 1080P output	4 × 4	8 CH	512 CH	4U
20*36 split display	10 ch 4K and 10 ch 1080P output	4 × 5	10 CH	640 CH	4U
24*36 split display	12 ch 4K and 12 ch 1080P output	4 × 6	12 CH	768 CH	4U
28 *36 split display	14 ch 4K and 14 ch 1080P output	5 × 5,4 × 7	14 CH	896 CH	8U
32*36 split display	16 ch 4K and 16 ch 1080P output	5 × 6	16 CH	1024 CH	8U
36*36 split display	18 ch 4K and 18 ch 1080P output	6 × 6	18 CH	1152 CH	8U
40*36 split display	20 ch 4K and 20 ch 1080P output	6 × 6,5 × 8	20 CH	1280 CH	8U
44*36 split display	22 ch 4K and 22 ch 1080P output	6 × 7	22 CH	1408 CH	8U
48*36 split display	24 ch 4K and 24 ch 1080P output	6 × 8	24 CH	1536 CH	8U
52*36 split display	26 ch 4K and 26 ch 1080P output	7 × 7	26 CH	1664 CH	12U
56 *36 split display	28 ch 4K and 28 ch 1080P output	7 × 8	28 CH	1792 CH	12U
60*36 split display	30 ch 4K and 30 ch 1080P output	7 × 8,6 × 10	30 CH	1920 CH	12U
64 *36 split display	32 ch 4K and 32 ch 1080P output	8 × 8	32 CH	2,048 CH	12U

Note: The output specification refers to the number of HDMI output port, the number 64 refer to 64 ch HDMI output.

Encoding capability means HDMI2.0 input up to 1080P coding based on the H.264 standard.

Decoding capability means decoding the largest number of video sources, after dividing the display area the resolution is better than D1 format, the system automatically takes the main stream decoding mode, the system up to the best decoding ability reference "device hardware decoding capabilities", when the resolution of display area is equal to or lower than D1 format , the system will take adaptive sub-stream decoding. 36 split display means the maximum 36 area each screen, the sum of adjacent two HDMI outputs split can not exceed 64. If there is a bigger split display needs, please contact our company, will can open a greater number of dividing resources.

Splicing refers to the maximum number of splicing ability, or splicing any screen no more than the output number

(2) H.264 standard series digital matrix decoding and stitching capability

Product Specifications	Display output	The largest single stitching	Single decoding capability (adaptive)	Chassis
4*16 split display	4 ch 1080P	2 × 2	64 CH	1U
8*16 split display	8 ch 1080P	2 × 4	128 CH	2U
12*16 split display	12 ch 1080P	3 × 4	192 CH	2U
16*16 split display	16 ch 1080P	4 × 4	256 CH	4U
20*16 split display	20 ch 1080P	4 × 5	320 CH	4U
24*16 split display	24 ch 1080P	4 × 6	384 CH	4U
28*16 split display	28 ch 1080P	5 × 5,4 × 7	448 CH	8U
32*16 split display	32 ch 1080P	5 × 6	512 CH	8U
36*16 split display	36 ch 1080P	6 × 6	576 CH	8U
40*16 split display	40 ch 1080P	6 × 6,5 × 8	640 CH	8U
44*16 split display	44 ch 1080P	6 × 7	704 CH	8U
48*16 split display	48 ch 1080P	6 × 8	768 CH	8U
52*16 split display	52 ch 1080P	7 × 7	832 CH	12U
56*16 split display	56 ch 1080P	7 × 8	896 CH	12U
60*16 split display	60 ch 1080P	7 × 8,6 × 10	960 CH	12U
64*16 split display	64 ch 1080P	8 × 8	1024 CH	12U

NOTE: After dividing the display area the resolution is better than D1 format , the system automatically takes the main stream decoding mode, the system up to the best decoding ability reference "device hardware decoding capabilities", when the resolution of display area is equal to or lower than D1 format , the system will take adaptive sub-stream decoding.

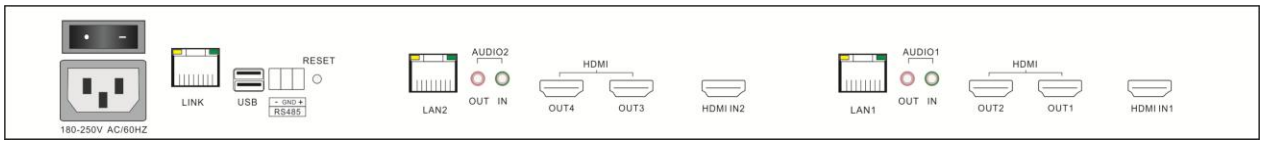
Chapter II Product manual

I. Front panel indicators

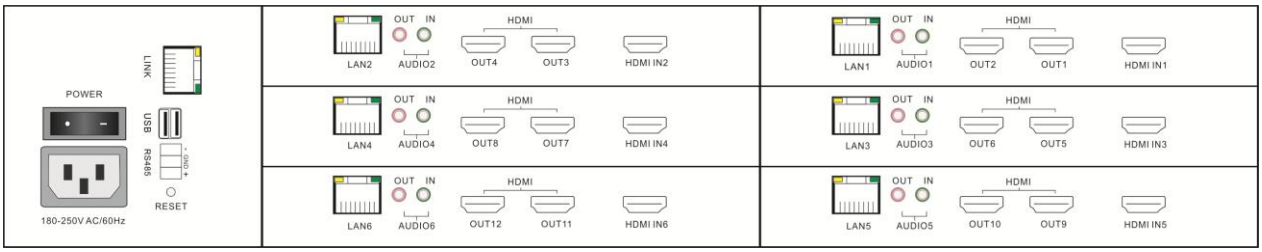


NAME: Network video decoder matrix
POWER: Power status light
SYSETM: System status indicator

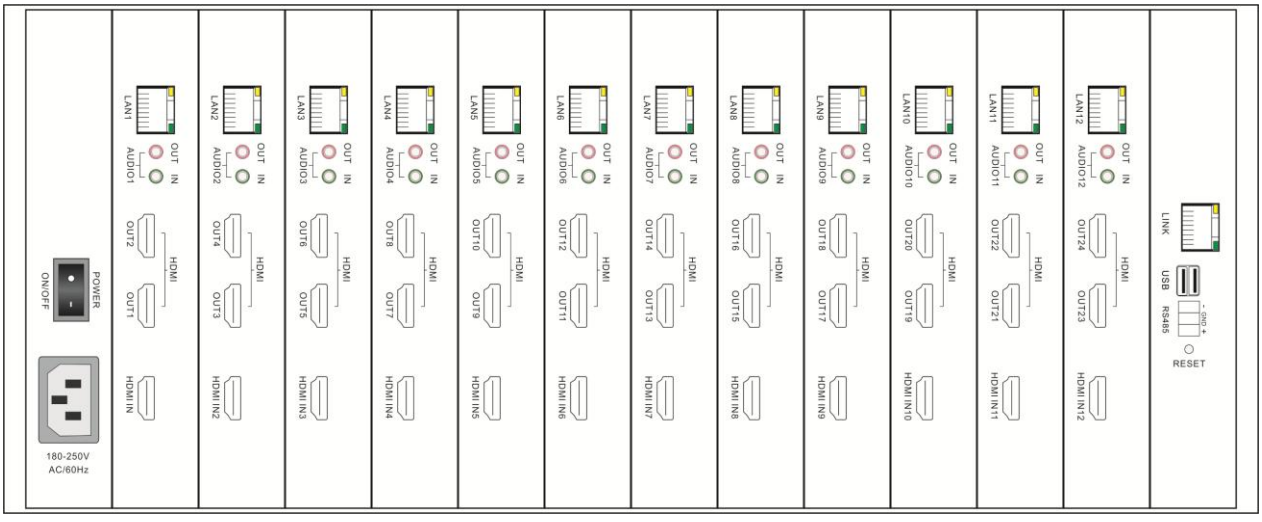
II. The panel connection diagram



[Figure 2-1] The H.265 1U standard digital matrix backplane schematic



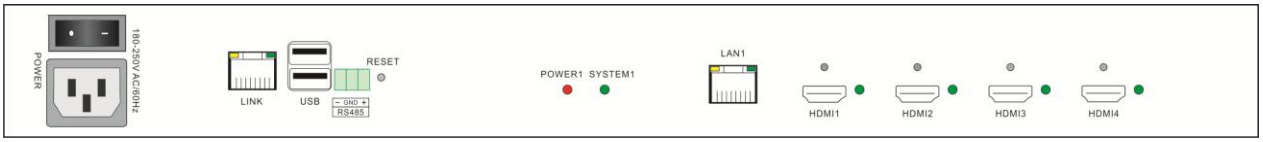
[Figure 2-2] The H.265 2U standard digital matrix backplane schematic



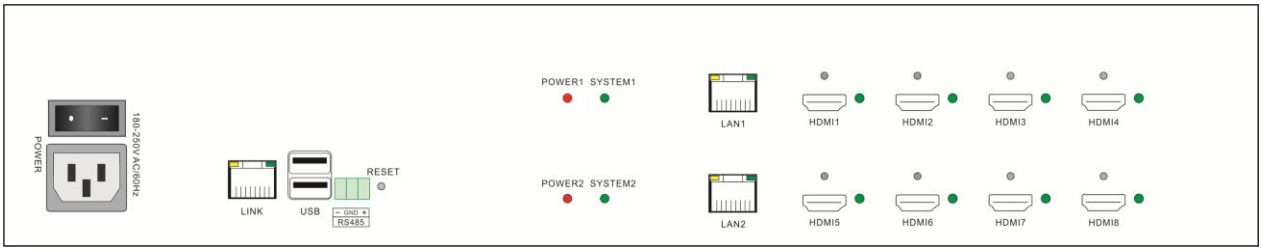
[Figure 2-3] The H.265 4U standard digital matrix backplane schematic

LINK: multi-machine cascade expansion port.
USB: USB port, mouse, and other devices can be connected.
RESET: Reset button, press and hold the power is more than 3 seconds can be restored to the factory default.
Note: After the reset clears all user profiles, please make a backup before reset work.

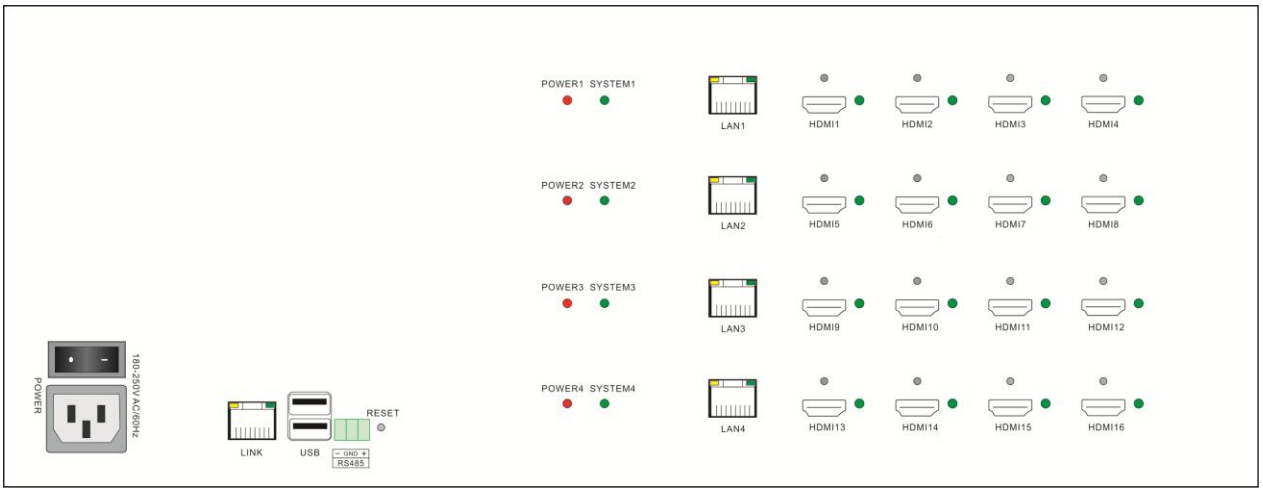
RS485: RS485 port connection, you can access various types of analog equipment.
LAN: Gigabit Ethernet port, you can access the network.
AUDIO OUT: Audio output.
AUDIO IN: Audio input.
HDMI IN: HDMI input, access HDMI signal is encoded.
HDMI OUT: HDMI output, directly connect all kinds of HDMI display device.



[Figure 2-4] The H.264 1U standard digital matrix backplane schematic



[Figure 2-5] The H.264 2U standard digital matrix backplane schematic



[Figure 2-6] The H.264 4U standard digital matrix backplane schematic

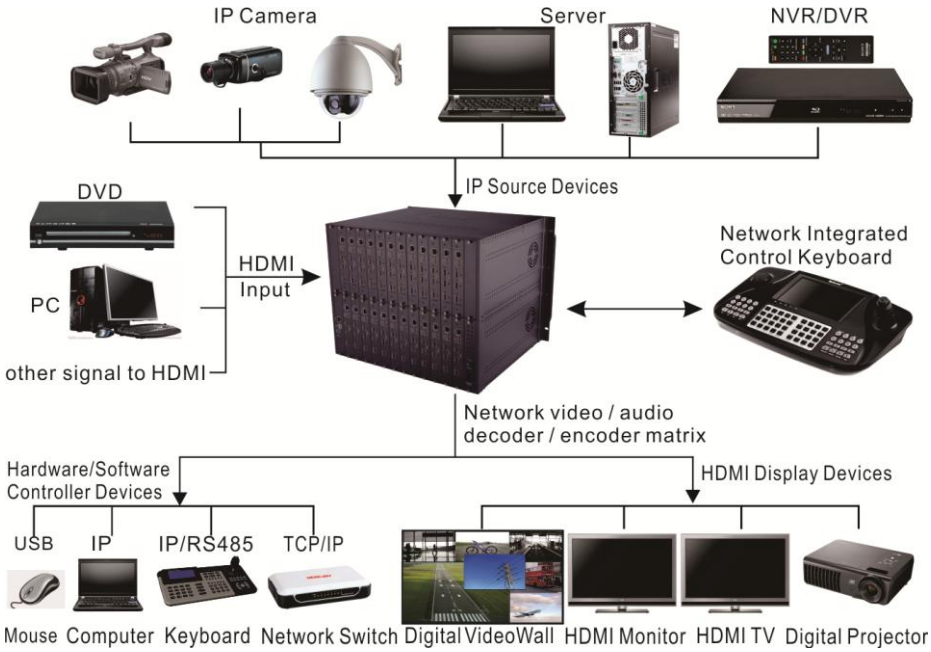
POWER: power switch, press to ON, power is turned on, press to OFF, power is turned off.
Power indicator: When the power is turned on, the power indicator light when the power is turned off, power LED off.
System working indicator: blinks when the system is working properly, the system is not working or not working often destroy or lit.
LAN: Network interface, with two lights, network access normal green light, yellow light flashes when the normal data transmission.
HDMI1-HDMI 16 jack: HDMI output interfaces.
HDMI1-HDMI 16 work indicator: HDMI output to operate properly, the indicator lights.
Note: More than 4 channel, the backplane each hole locations and functions is similar to fig2-6; such as 8 channel output correspond HDMI1-HDMI8. The actual product may be different from the above photo, accurate to the actual product.

III. The system reset

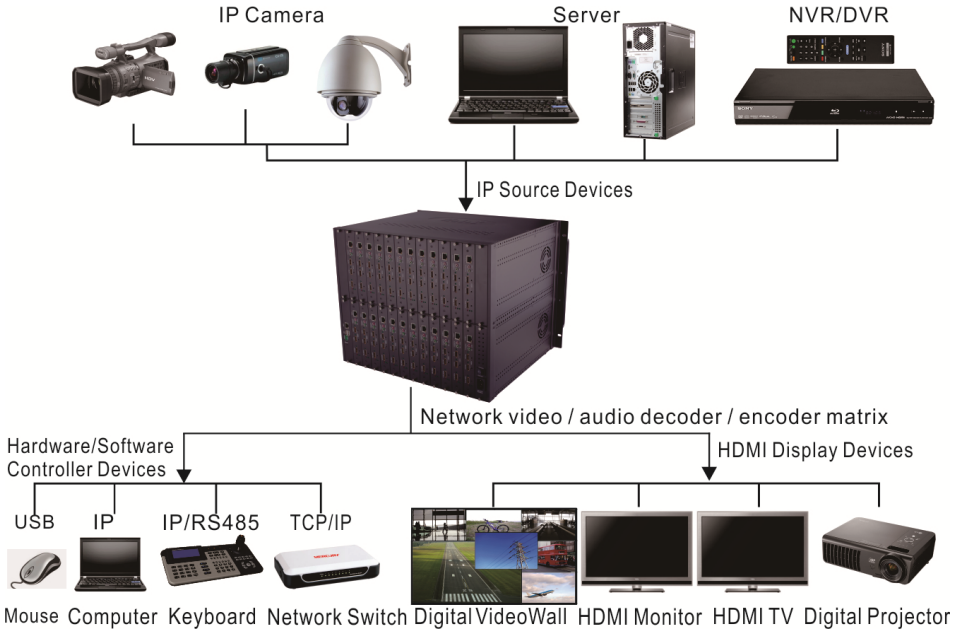
In the energized state, after long press as Figure 2-2 the RESET key more than 3 seconds, the system configuration files will be reset to factory default, user profiles will be lost, please make the appropriate backup before reset..
Reset only reset the configuration will not affect the version number and authorization.

Chapter III Hardware connection diagram

I. The system connection diagram



[Figure 3-1] H.265 series digital matrix connection diagram



[Figure 3-2] H.264 series digital matrix system connection diagram

Note: The product modular design, each module is connected to a network port, because of too much input video source, single network port can not solve multiple video inputs. As management, users need only one module to be managed.

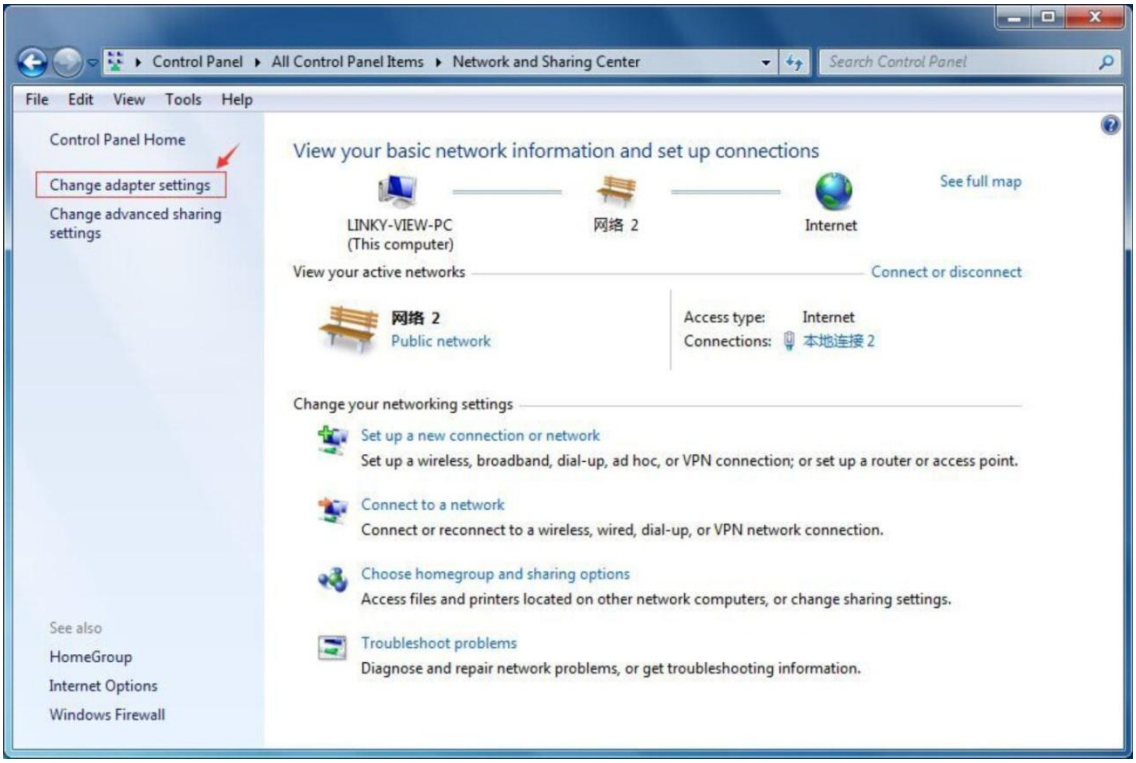
Chapter IV Computer online browser control

I. Equipment factory default

The device is delivered, the default IP address is 192.168.0.200, the default subnet mask: 255.255.255.0, the default user name: admin, default password: admin.

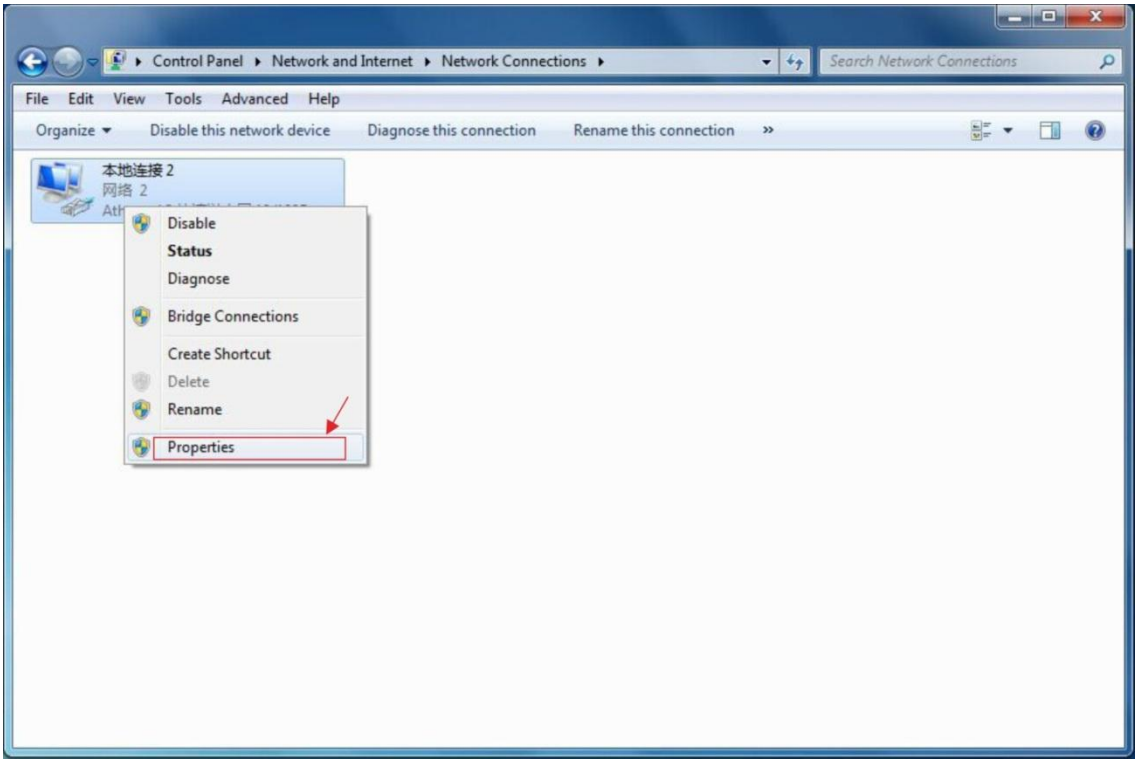
II. The computer IP address settings

Before decoding channel configuration, you first need to set the IP address of the host computer and the decoding matrix the same network segment, you can configure the following configuration (shown in windows7 system).



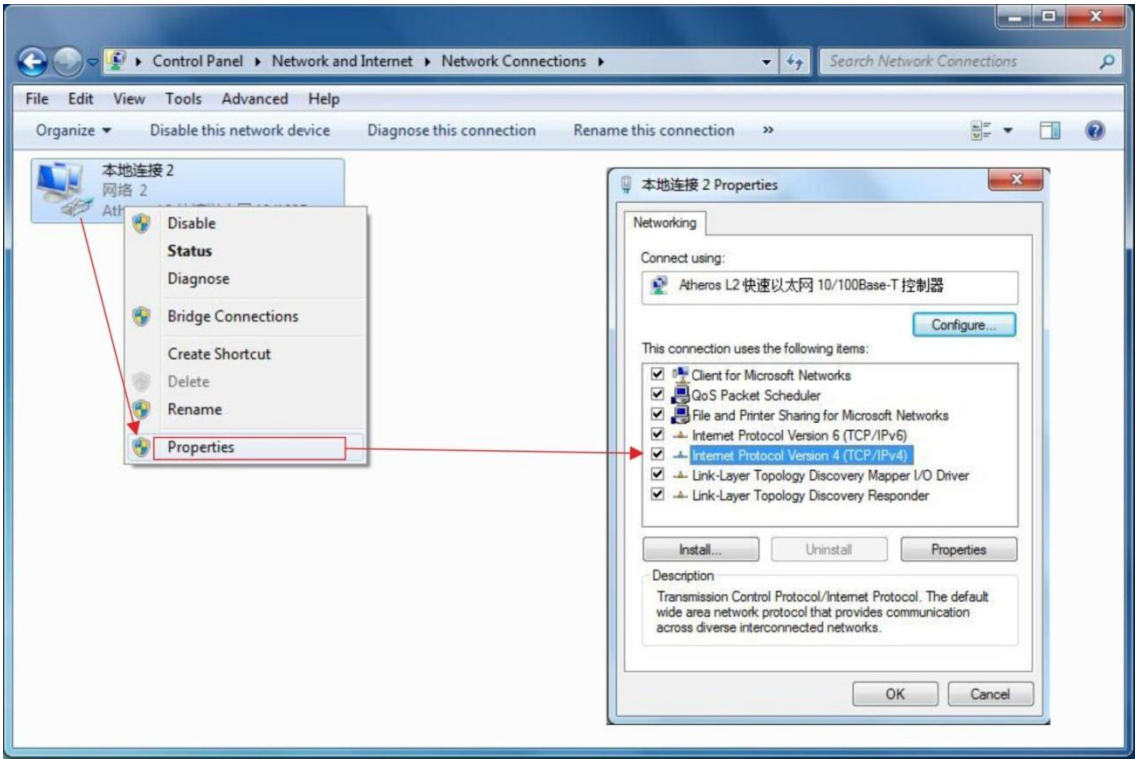
[Figure 4-1] Modify the local IP address - the network and INTERNET

Click on change adapter settings, jump out the window below:



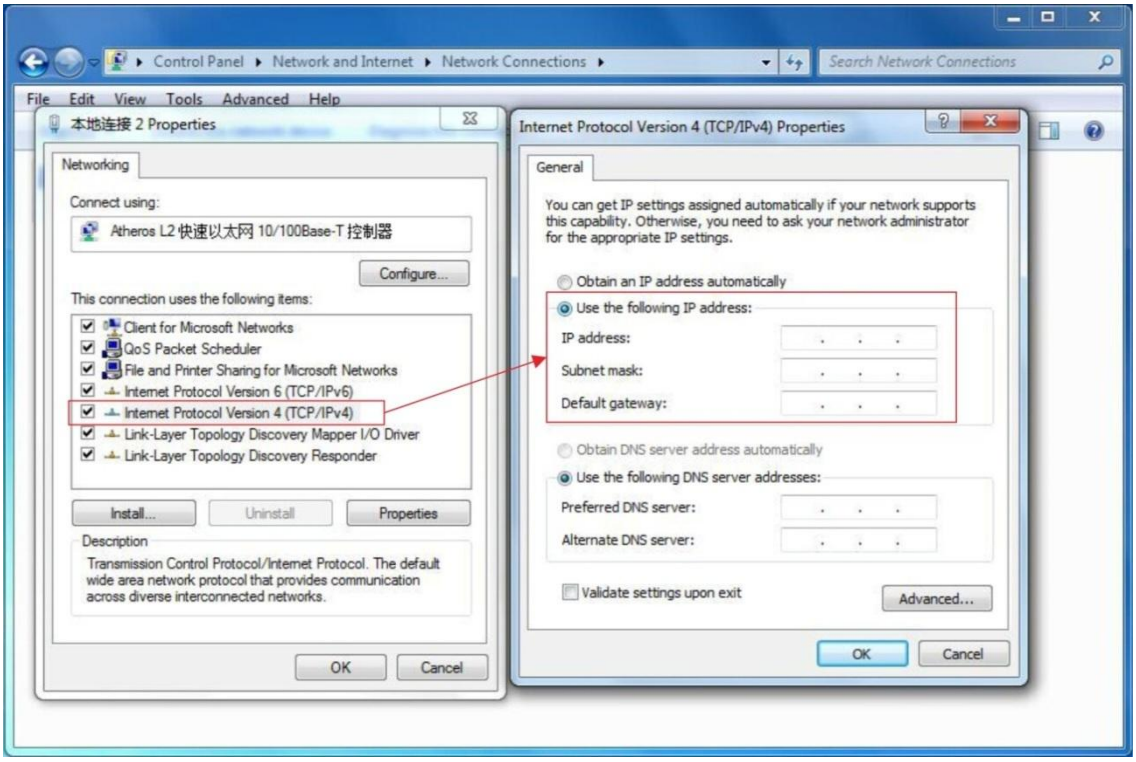
[Figure 4-2]- Internet connection

Right click on Local Area Connection -> Properties, bounce following window:



[Figure 4-3] Local Area Connection Properties

Double-click "Internet Protocol Version 4 (TCP / IPv4)", or select the "Internet Protocol Version 4 (TCP / IPv4)" after the point Properties to bring up the following window:



[Figure 4-4] Internet Protocol Version 4 (TCP / IPv4) Properties

Select Use the following IP address, and fill in the IP address column decoding device on the same subnet address, such as the factory default configuration:

IP Address: 192.168.0.X (X value can be any value 2-254, device defaults except 200)

Subnet Mask: 255.255.255.0; NOTE: The subnet mask will affect the number of network nodes, carefully setting;

Set up after the "OK" button, then a few points on the window above the "OK" button, the local IP address after setting completion.

III. The host computer control device mode

1. Platform software control

Please carefully review the platform software user's guide;

2. The browser directly connect the device control

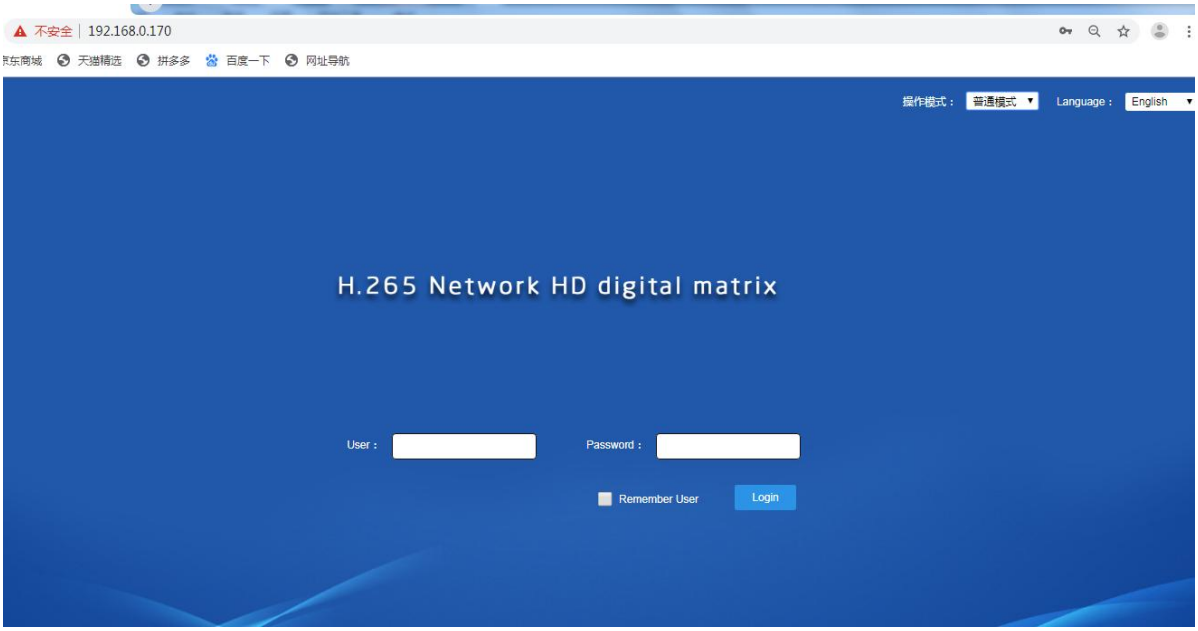
(1) Equipment configuration parameters:

NOTE: The browser must support HTML5, recommends the following version of the above, if you can not operate properly, please download

Browser	Chrome	IE	Firefox	Opera	360 Browser	Sogou browser	Travel browser	QQ browser
Recommended Minimum version	15.0.0	9.0.0	8.0.0	11.52	4.0.3.8	3.1.0.0	V3.2.2	6.8

It recommended IE 11 or Chrome33.0.0 and above versions.

(2) Into the browser, enter the IP address of the device (such as a factory default IP address), press Enter, the following window:

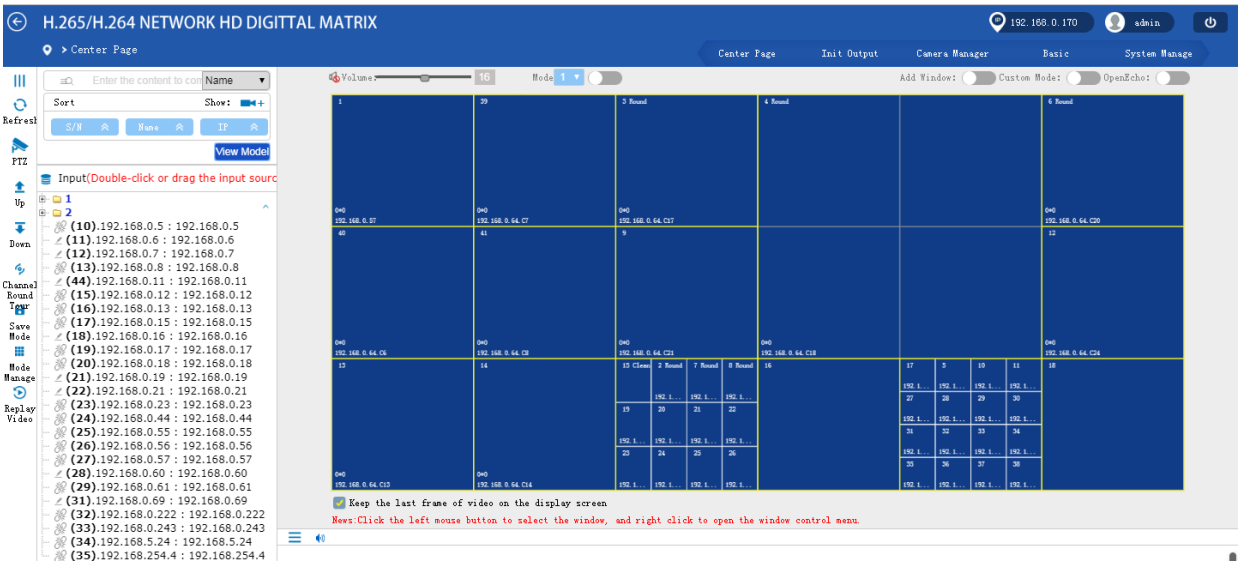


[Figure 4-5] Enter the system login screen

Enter the user name and password, the user name as the default value: admin, password: admin, log into the system of operation window.

(3) The main interface

As shown by a browser to enter a user name and password after landing the following appears:



[Figure 4-6] Home Page

Note: Different versions, or different product models, these pages will be some differences, specific to the actual circumstances prevail.

a. Main menu area: main menu.

c. PTZ control operation area, Support ONVIF protocol devices PTZ operations, including controlling the camera moves up and down left and right, aperture, focal length control. click icon, you can hide in the region, click icon, you can display the region.

d. The input video source display area: A tree type shows all the input video source, there are some layer in group, click "+" icon to open the next level device name; it has two menus: Open to all, selection can show all video sources. Turn off all, display only the uppermost device or group of devices.

e. System information, alarm information display area: scrolling display equipment, systems, users, alarms and other information.

f. Mode display area: Shows have saved pattern list, the user can click on a mode to decode the current output into the selected mode.

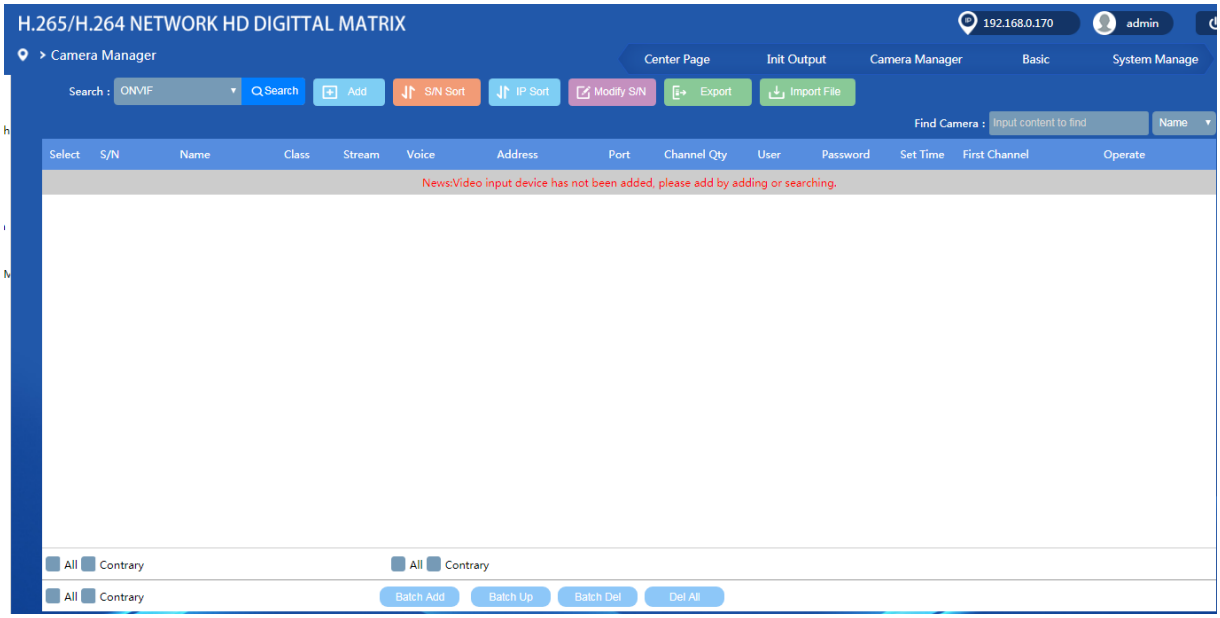
IV. Input Management

Video input source management via an IP network, including various types of IP cameras digital video stream or standard video files;

The input management

(1) The source added automatically

Input management is the management of all video sources, input source here refers to the network cameras and NVR, etc. page Main menu point "Input Manager" -> "Input Source Manager", as shown below: Click the Search button will automatically search the network video source :



[Figure 4-11] Input source management

Click on the "Search" button will automatically search the network video source, as shown below:



[Fig 4-12] Input source window 1

Click "Select All" and then point "Bulk enter the account password" following pop-up window;



[Figure 4-13] Input source window 2

In the dialog box, enter the source user name and password, click OK, the following window;

Then click "Add", then click Upload Up Server, source addition is complete, if the device is not found to be added manually.

Device Name: The default device default IP address, you can manually enter a name in Chinese;

Status: divided into two categories, one is not increased, a conventional decoder / digital matrix device manager list does not contain the video source; another is increase, indicates that the video source has been added to the device management list;

Device Type: Video source type; containing ONVIF, RTST, NVR / DVR and other options;

Streaming protocols: TCP, UDP optional;

Group: The equipment is placed in a device group below;

Device address, port: The device IP address and port number can not be changed;

User name, password: Access the device requires a user name and password;

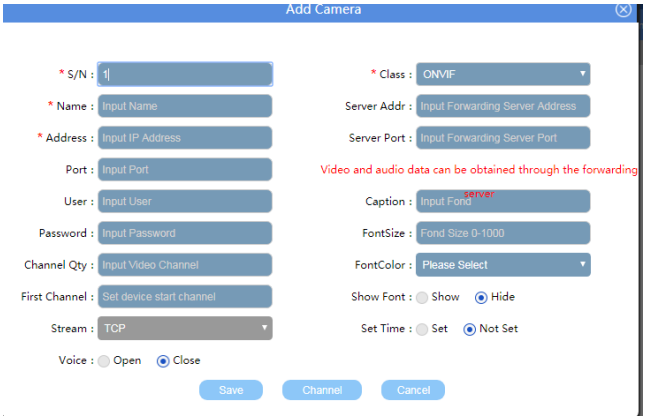
Remark: Note the video source;

After editing the parameters of the video source, you can also modify a single video source, the video source before clicking the "Select" box,

Then click "Edit" to modify the parameters of the corresponding video source.

(2) Manually add the input source

On the input source management page click "Add" button, a window will pop up as follows:



[Figure 4-14] Added manually input source

Reference: Reference video input source.

Equipment: Video source to define a name, then click the name can manage the device.

Device Protocol: Protocol or optional equipment connection type is ONVIF, RTSP, NVR / DVR, etc.

Owning group: The device is currently editing grouped into a device group for unified management.

Streaming Protocol: Optional TCP, UDP, which is the device connection protocol TCP stream connections or UDP connections.

Username: When you access the video source (IPC), the user name of the device settings.

Password: Visit the video source (IPC), a password to access the device settings.

File path / IP Address: Video source (IPC) IP address or file path required to decode video source.

Port number: Video source accessible web ports.

The number of channels: Device as NVR / DVR, the device number of channels, each channel is one video source.

Introduction / Remarks: Remarks on the video source.

Whether clock synchronization: Choose yes, for the video source device to take time from the decoder / digital matrix, manage video source device time synchronized with the decoder / digital matrix time, otherwise non-synchronized.

Subtitles: Add text on the video source window, also known as OSD.

Subtitle size: characters superimposed on the video window size of the font.

Subtitle color: color OSD display on the video window.

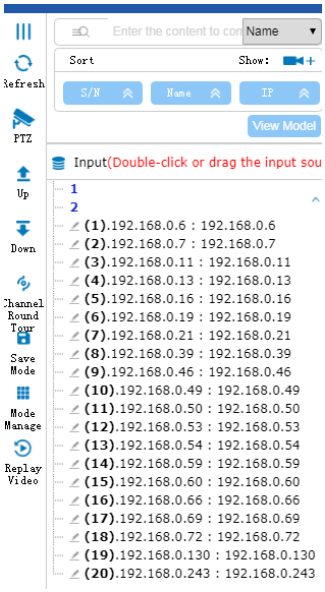
Save: Save the equipment has been completed.

Reset: Clear all data in the current form, fill again.

Note: captions in some models not implemented temporarily.

(3) The input source of the main page display

The setting input source is displayed in the main window of the input source display area, as shown below:



[Figure 4-15] Home page to display the input source

Search: You can search by name, or you can search by IP address, enter the device to search in the input field, click the search icon.

Sort: You can sort by name, it can be sorted by IP address, when the down arrow, from small to large, arrow up, sorted in descending input video source.

: Enter the group expands to show all input sources.

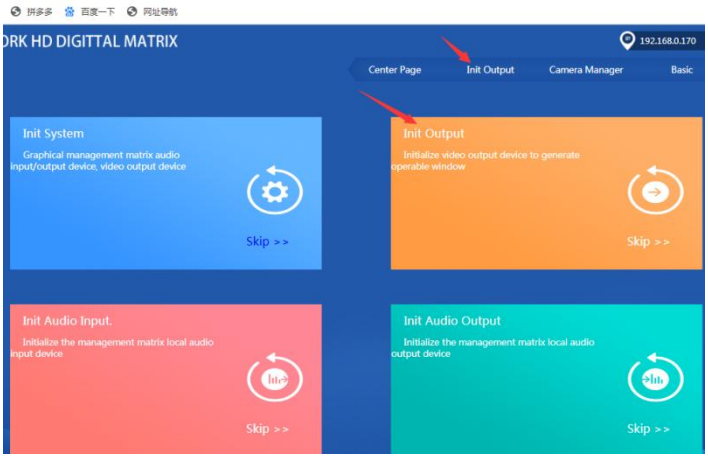
: Hide all the input set of input sources.

V. Output management

1. Initialization

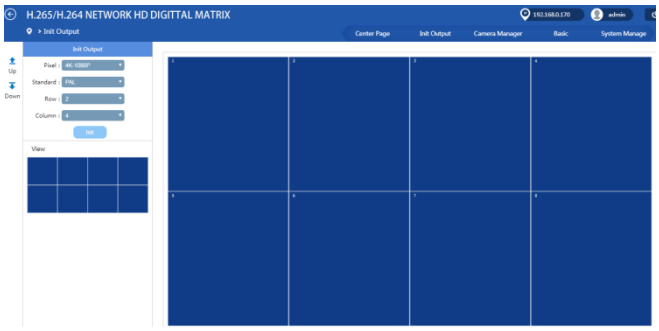
Depending on the product hardware resources, different models correspond different number of HDMI output, the output is initialized, that determine display mode of link four HDMI monitor , such as 2 × 3, compared with six monitors, display mode is 2 rows and 3 columns;

Point menu "Output Settings" -> "initialization", as shown below:



[Figure 4-16] window initialization menu

After you click the left mouse button "Initialize" ， appear fig as the following:



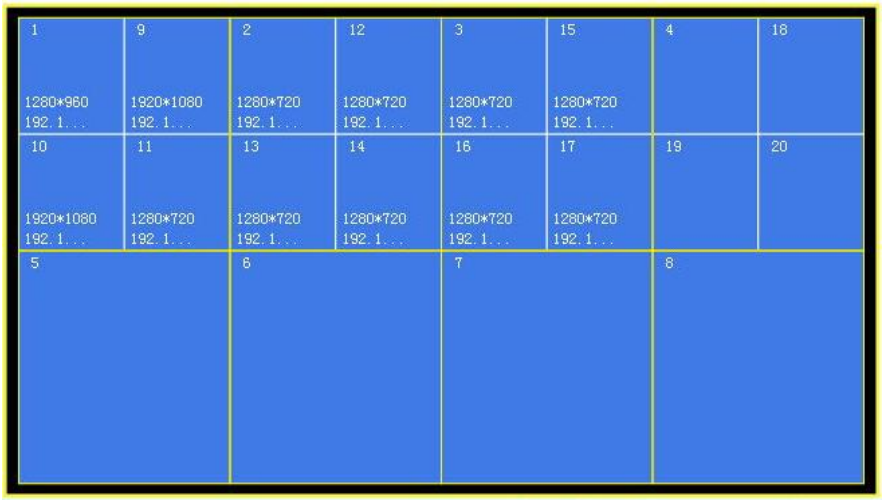
[Figure 4-17] initial setting

Resolution: single monitor display resolution, drop-down menu to select the point, note: here does not refer to total resolution of all monitors spliced together;

Video format: PAL or optional NTSL

Display mode: Optional Standard Mode or Custom Mode:

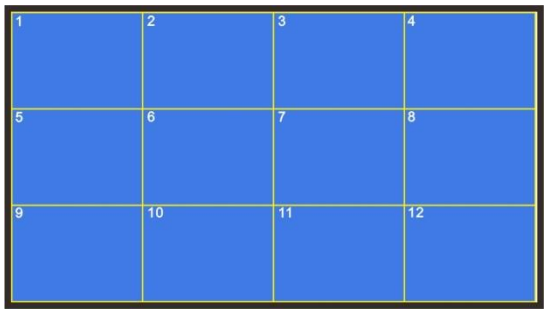
1.1 Custom Mode: Select the row, column, and click initialization appear following pop-up window:



[Figure 4-18] Custom mode

At this point can drag the window according to the big screen scene arrange, then click Save.

1.2 Standard mode: If rows: 3 columns: 4,arrange mode , after confirmation, generated as follows:



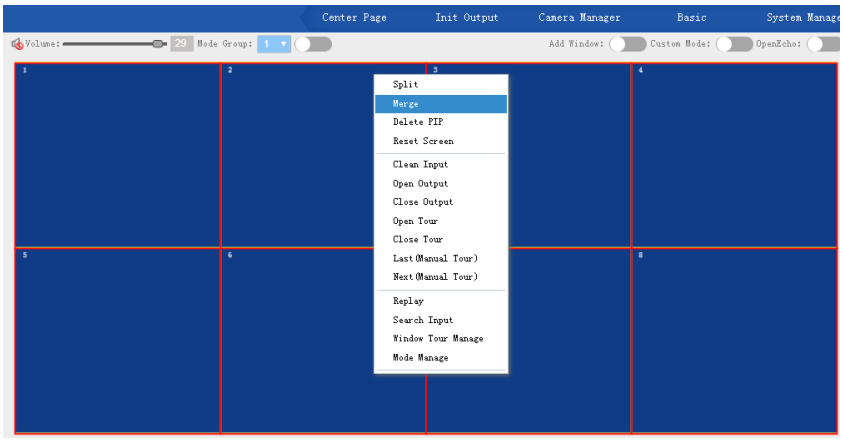
[Figure 4-19] Standard Mode

As described above, in which Fig 1 display area corresponding to 1st monitor, 2 corresponds to the 2nd monitor, and so on.

Note: here the initialize is the display mode of all screen, when the decoder / digital matrix total of outputs and each channel corresponding to one display screen.

(1) Merge (splice)

Click right mouse button and drag to the display area which want be merged , select the area, and the border will be turn yellow into red , then the display window right click popup menu, the following window:



[Figure 4-20] splicing operation

Click menu -> Merge.

Four display area will be merged into one display box, this time, four monitors will display a whole image that each monitor displays one quarter section of the image; as follows:

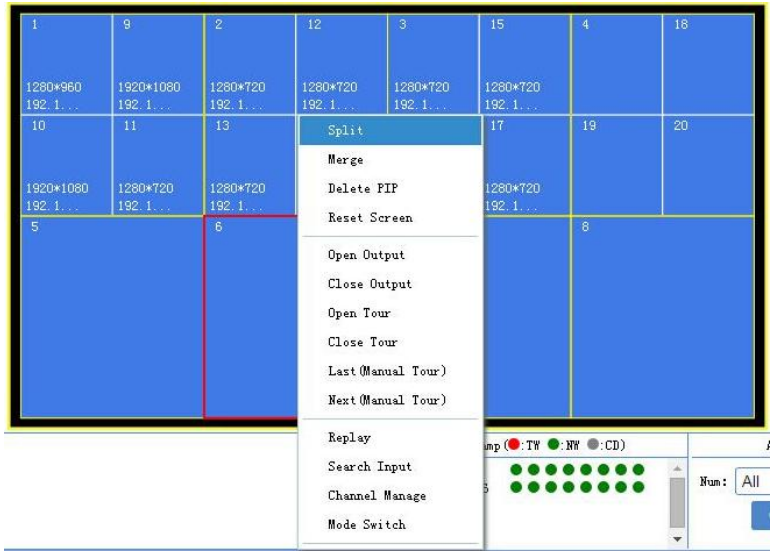


[Figure 4-21] display after the merger

Merge can also hold down Ctrl and click left key, select multiple images, click on the shortcut menu  Button to merge stitching.

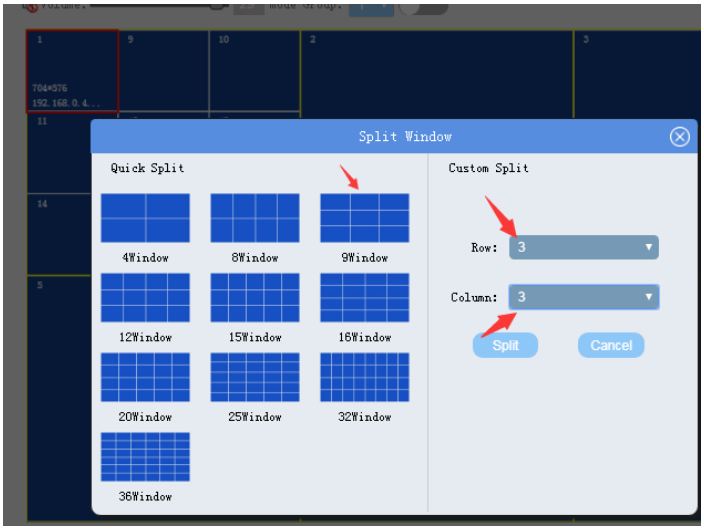
(2)Split screen (Split)

On a display area need to split, click the right mouse button, jump out of the following menu, as follows:



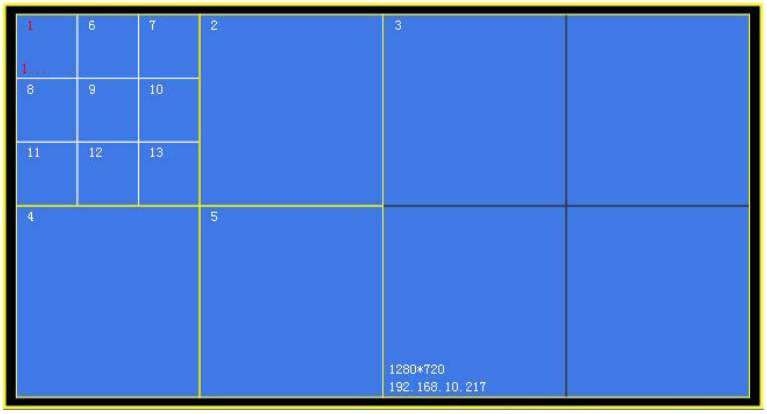
[Figure 4-22] screen division menu

Click split, out of the following window:



[Figure 4-23] Pop-up window of split

Select to split the window into several horizontal and vertical, such as the mode of 3 × 3, is formed following window:



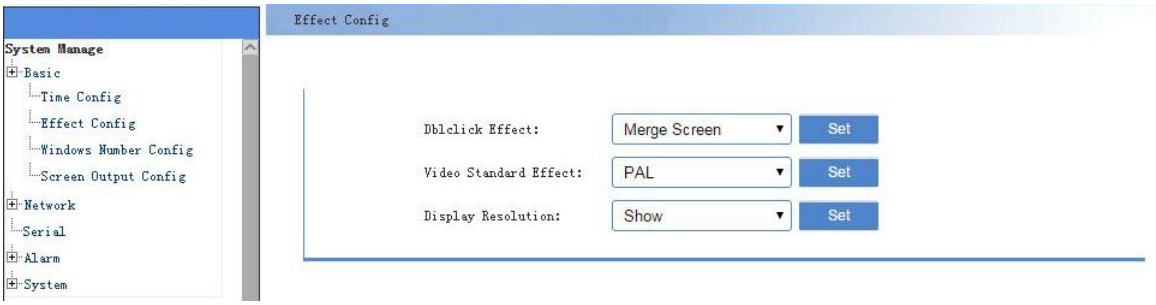
[Figure 4-24] 3 × 3 segmentation Figure

Note: The decoder / digital matrix, a single monitor can achieve a maximum segmentation effect of 4 × **4.**

Also the split screen can select a window, click on the shortcut menu Split button.

(3) Full-screen mode

In the main window, the inside of a display window, double-click the left mouse button, the display area will be converted into a full-screen video display, full-screen concept here is divided into two kinds: one is the current area to display (current port) full-screen, another mode is splicing large screen display, these two ways setting from the main menu -> administration -> system settings -> Double-click display settings under the basic setting item, as shown below:



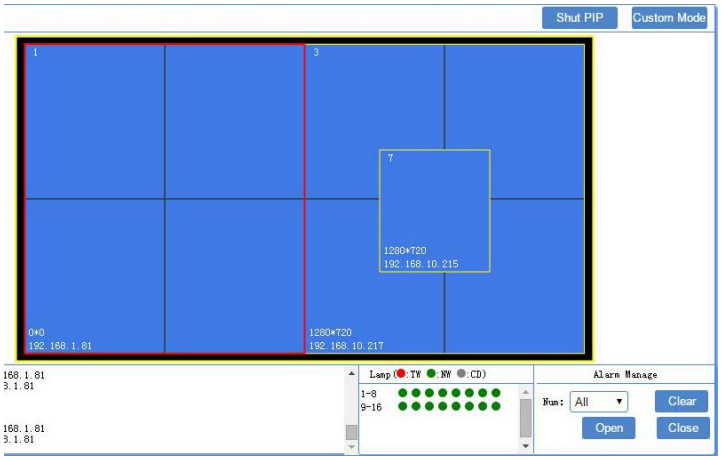
[Figure 4-25] Double-click display setting

Merged-screen display: double-click, then full-screen display the merged screen;

Single-screen display: double-click, then full-screen display the single screen (a single output port).

(4) Window roaming

Screen splicing and roaming through adjust the window size and position roaming achieved, as shown below:

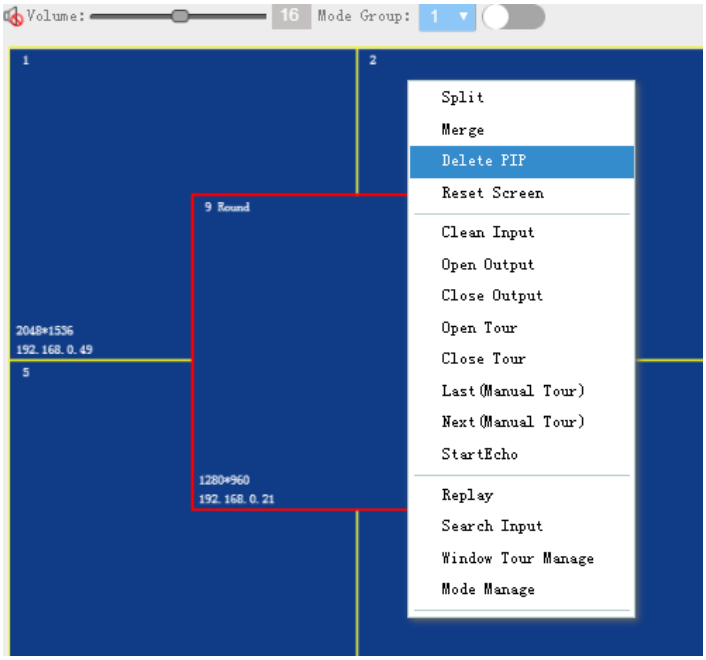


[Figure 4-26] Window roaming PIP effect

a. Increase the window: Click "Add window", press left mouse and drag to a box window, layout on the screen wall, a decoding window will automatically open, realize roaming windows.

b. Window Move: Move the mouse to the window that needs to roam, when the shape of the hand appears, press the left button to move can be realized.

c. Delete roaming window: Move the mouse to the roaming PIP window, right press below the menu pops up, click delete.



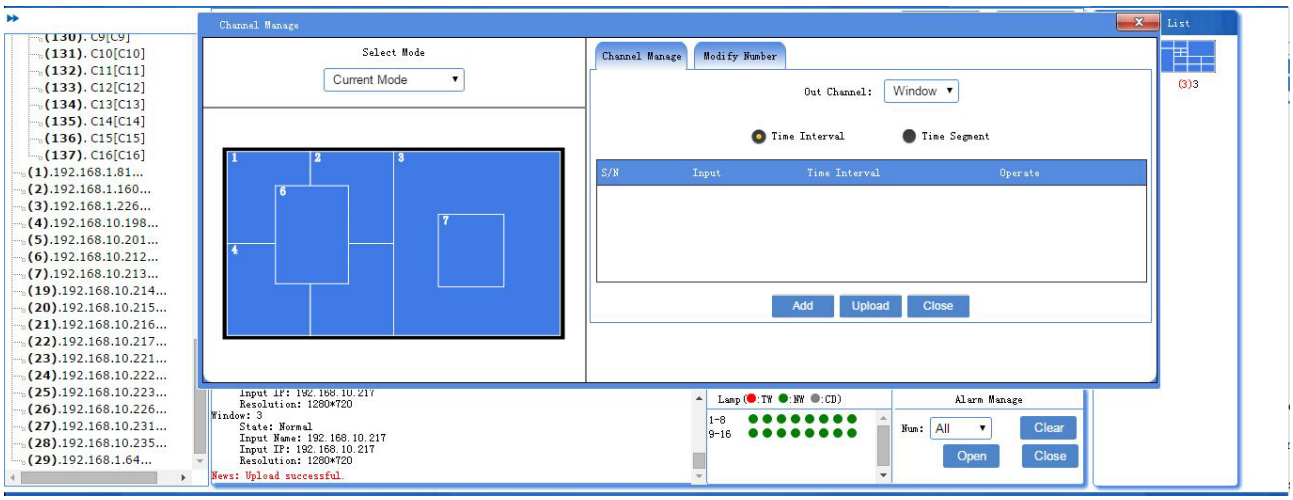
[Figure 4-27] Delete roaming PIP window

2. Channel management

There are several ways to enter:

Click mouse right in any display area of the main window, select the channel management.

Click on menu bar "Output Management" -> "Channel Manager", the following window appears:



[Figure 4-28] Channel Management

Left area is output display shows the division of multi-domain, if you have saved into a plurality of modes, you can select the mode;

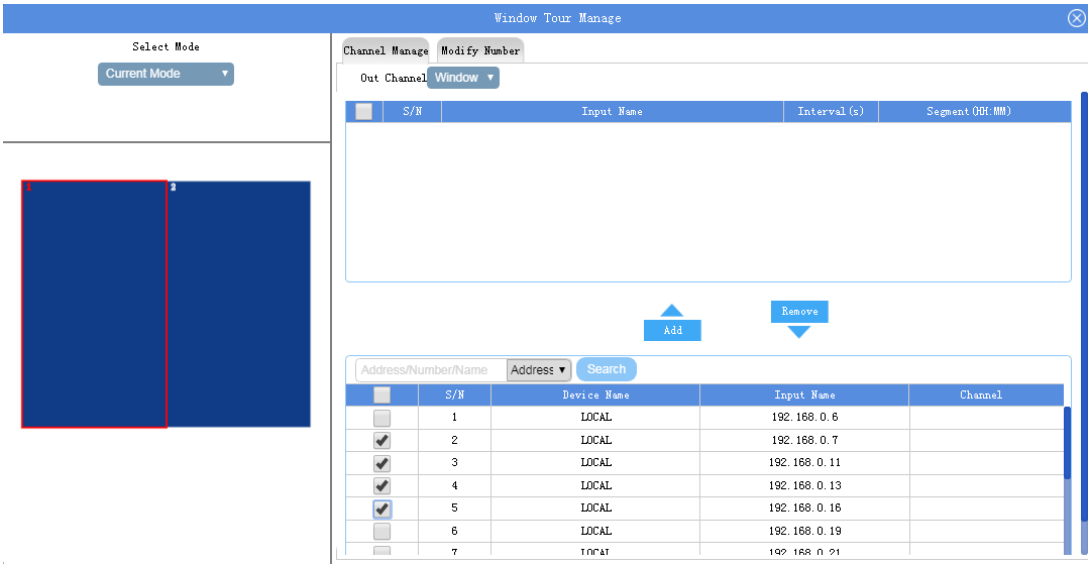
Right area for the output channel settings, select output channel number in the pull-down menu, which corresponds to the left of the same number display area, such as 1st channel.

The video source in a display area, you can use the polling mode, which displays different video sources at different times, there are two types of polling mode: time interval polling and time period polling.

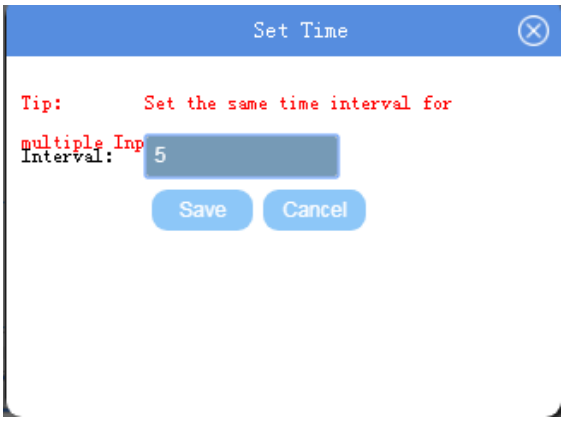
In the case when a display channel settings polling, time period polling is priority mode, if not set period of time means the press time interval priority, and if time period and time interval all not set, only display the specific video.

(1) The time interval polling

That can add multiple video sources, each video source to display a certain length of time, duration in seconds (s) to calculate; in the following figure, add time interval polling ::



[Figure 4-29] Setting time interval polling 1

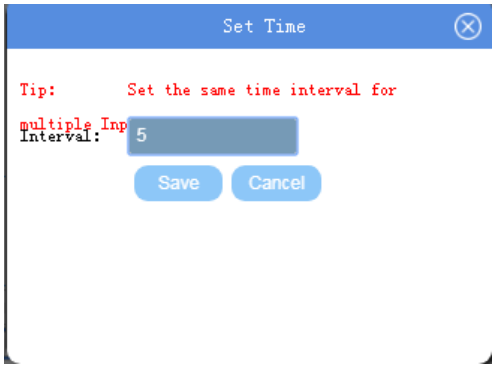


[Figure 4-30] Setting time interval polling 2

As Figure: That video source input source, time of the video source display, in seconds, click "Save" button to add, and then click behind the video source as Figure 6-11 shown "Edit" "delete" button to edit the time and display the video source.

(2) The time period the way

That is, within 24 hours of the day, a display area (channel) is set for a period of time to display a video source, as shown below:



[Figure 4-31] Mode polling period

As shown above, select the input source, enter the start time and end time,the start and end time display format must be aa: bb, aa is the clock, bb is minutes, such as 00:01, it will be added after click save, and then click behind the video source as Figure 6-11 shown "Edit" "delete" button to edit the time period of display the video source.

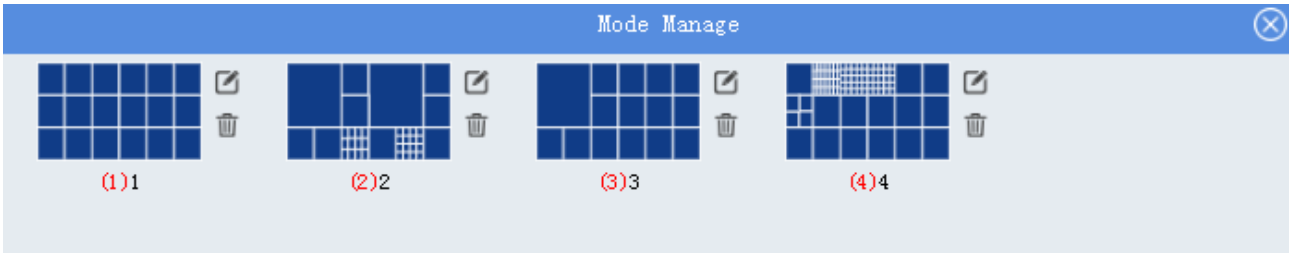
NOTE: When you set the time period, the start time of the next set to be displayed must after the end time of the front, otherwise it will not enter or error.

If you want the polling output applied to the device, click the "Sync" button to transfer the data to the decoder / digital matrix device by setting a good manner.

3. Management mode

the mode is the way as saved of the display to splice and split corresponding to the channel, the pattern can increase and modify. Home set and click shortcut icon Mode Manage to save the mode. then the display area mode in the mode list box can display thumbnails of the pattern.

Select Main Menu "Output Management" -> "management mode", you can modify and delete the schema, as follows:



[Figure 4-32] Mode management

VI. The input and output operations

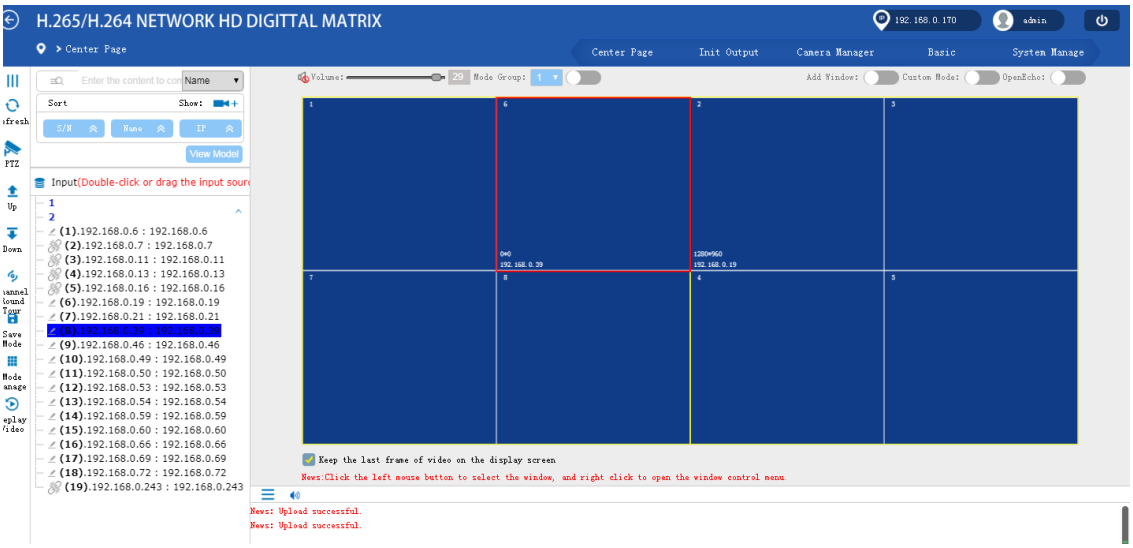
Input and output operations refers to deal with video input sources corresponding to the output display area. The corresponding input and output operations can be accomplished in several ways:

1. To achieve input and output corresponding channel by the management and settings

According to Chapter VI Reference third channel management.

2. Drag the input source to the display area to achieve

Go to homepage, as shown below:



[Figure 4-33] Input and output to display the main window

(1) Corresponding to a single input-output relations

Drag: Press the left mouse button and select an input source, drag it to a display area, the current input source will display in the display area;

Double-click: S Select a display area, click left mouse, the selected area will turn red border, then move to left area on the need for the corresponding input source, double-click the left mouse button, then establishing correspondence between input and output;

(2) Multiple input-output correspondence

The group of input corresponds to output group:

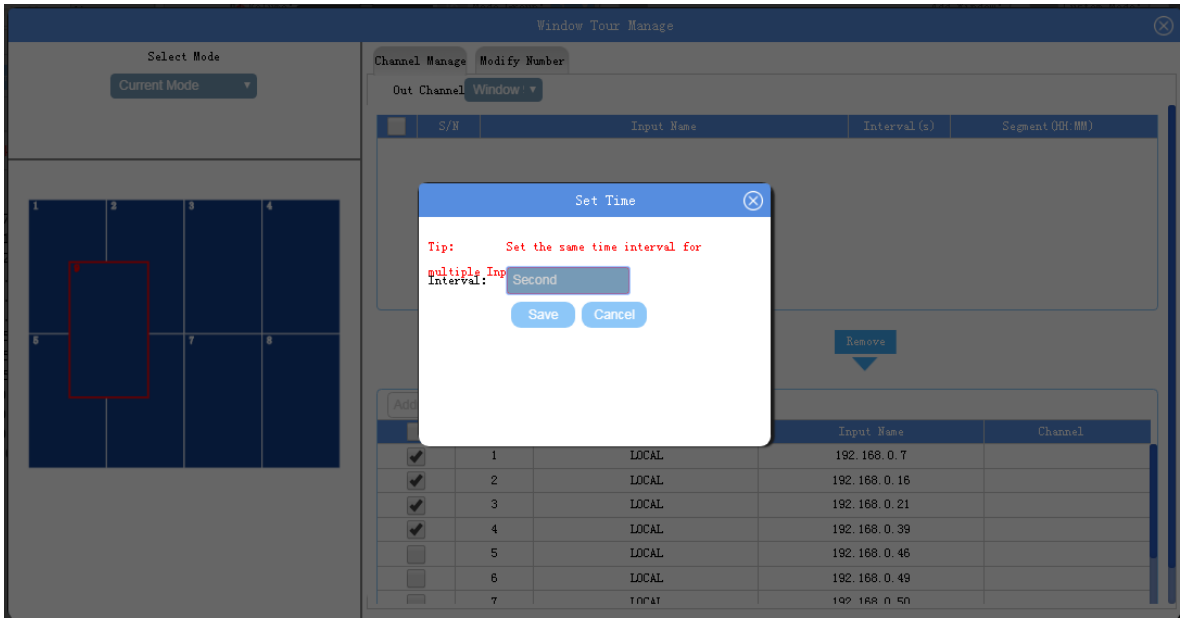
Press the left mouse button and drag to select multiple output display area, then, border selected area will turn red;

Click left mouse button to selecte input group, drag to the selected display area, the system will automatically assigned according to the number and the number of input sources display area:

a. When the display area number is larger than the number of input sources within the input group number, the system will be taken automatically from left to right, top to bottom one correspondence input source to the input display area. If the input source is not assigned to the display area, the

system will maintain the original display area, which is displayed as the original blue screen, continue to the blue screen, and if the original source is displayed as a video decoding is displayed, continue to display for the video source decoding;

b. When the input source number is greater than the selected output display area, display area will be taken automatically assigned one input source from left to right, top to bottom in the order, and according to the above principles to the input source exceeds portion assigned to the display area once more. when there are multiple input sources assigned to the display area, take round robin manner, then, the system will jump out the window, set the rear wheel patrol patrol time decoded output; as follows:



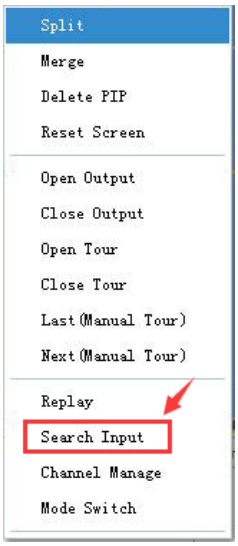
[Figure 4-34] Multiple input corresponding to output the polling settings

3. The display area through search the input source to achieve decoding or switching:

Home in the output area click right, as shown below:



[Figure 4-35] The corresponding input and output by search operation



[Figure 4-36] The right-click menu of the corresponding input and output by search operation

Window Description:

Split: When you select a single window to split

Merge: Merge when you select multiple windows

Remove PIP, roaming: Select PIP window can be deleted.

Resetting the screen: Select any window screen can return to the initializing

Start Output: Output stop state, the election to start output image

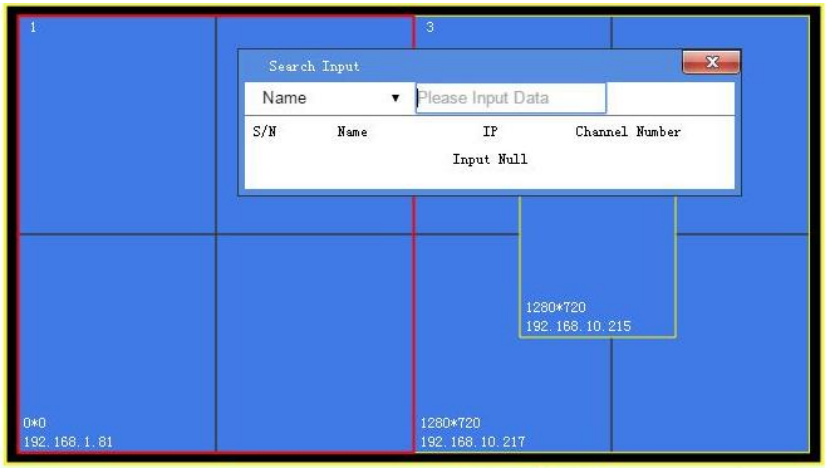
Stop Output: When selected, the window stop output, without decoding the image, the image is not output.

Start polling: A setting up polling window start it, then began polling switch images.

Stop polling: In the window that started polling, click it, stop switch image round robin.

Channel Management: management channel can be set.

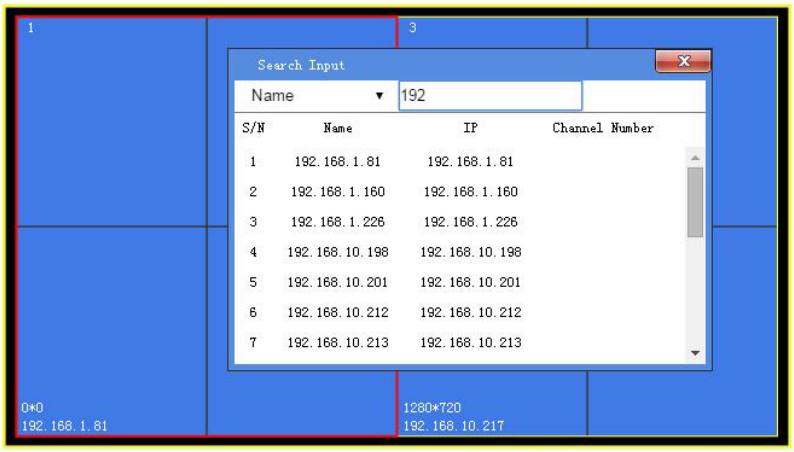
Search input source: the following display:



[Figure 4-37]Display of the search area source input

Now enter in the input box video source IP or name, display all the options of search out , select the input source directly in this option, you can decode video and display in the area, shown in Figure 4-38 :

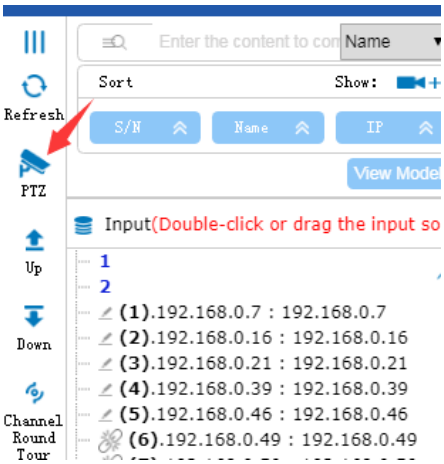
When the selected input source, you can click on the PTZ control window to operate the ball and other equipment which link to the display window.



[Figure 4-38] search input source

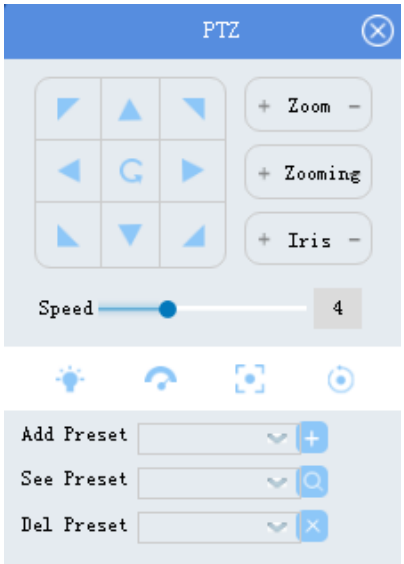
VII PTZ operation

PTZ: Pan / Tilt / Zoom shorthand, you can operate the ball machine and other full (up and down, left and right) movement and zoom lens, zoom control, presets and so on.



[Figure 4-39] PTZ operation button operation area Expand

Click the main window icon, you can expand PTZ operation, the icon to hide PTZ operating area; red arrows marked as above:



[Figure 4-40] PTZ operation area

Expanded operating area as follows:

Arrows: up and down, left, lower left, upper right, lower right operation button;

: Auto-rotate / cruise;

Zoom: also known as zoom out/in, "+" to zoom in the image, "-" Images can be pulled away;

Focus: also known as focusing, adjust the sharpness;

Aperture: Adjust the camera aperture size;

Speed: PTZ speed adjustment, the number is the series, does not represent a specific speed value;

: Representing lighting, wipers, auxiliary focus, lens initialization;

Add Preset: Set PTZ dome presets, can add up to 255 preset positions;

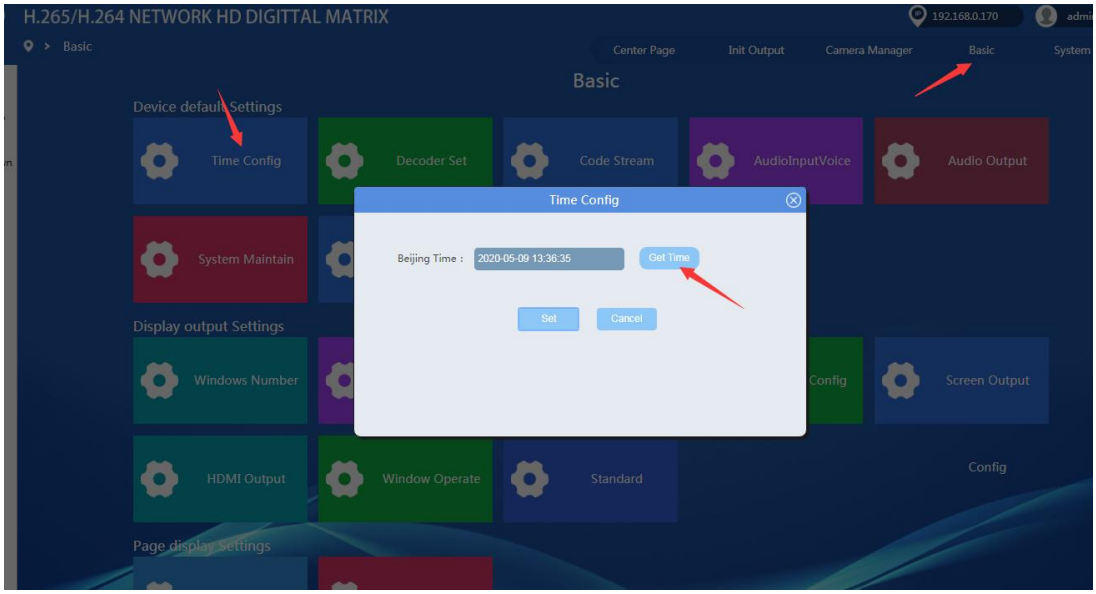
Call preset: select a preset position, and then the PTZ, the ball machine to call the preset position;

Delete Preset: Delete the preset position settings..

VIII. System Administration

1. System settings

Select the main menu "System Management" -> "System Settings", which can change decoder / digital matrix system parameters configuration, as shown below:



[Figure 4-41] System Management

(1) Basic Configuration

Time set: get the current time and can be set to modify in the device.

Double-click Display Settings area: Double-click in the display area to display full-screen.

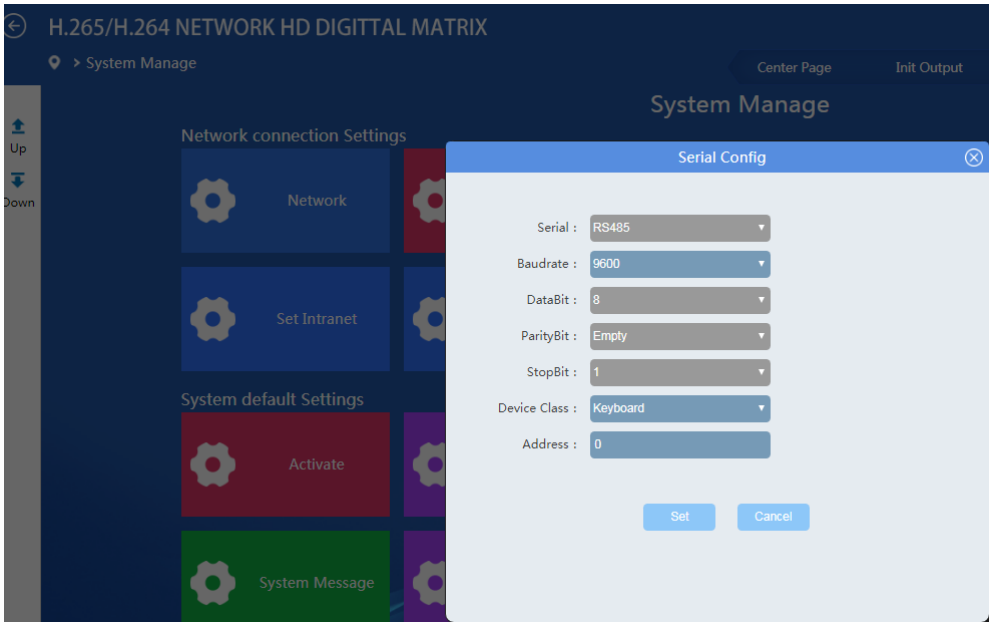
(2) Network Configuration

Modify the device network parameters include: IP address, subnet mask and gateway.

(3) Serial port

Modify decoder RS232 or RS485 parameters:

The following figure:

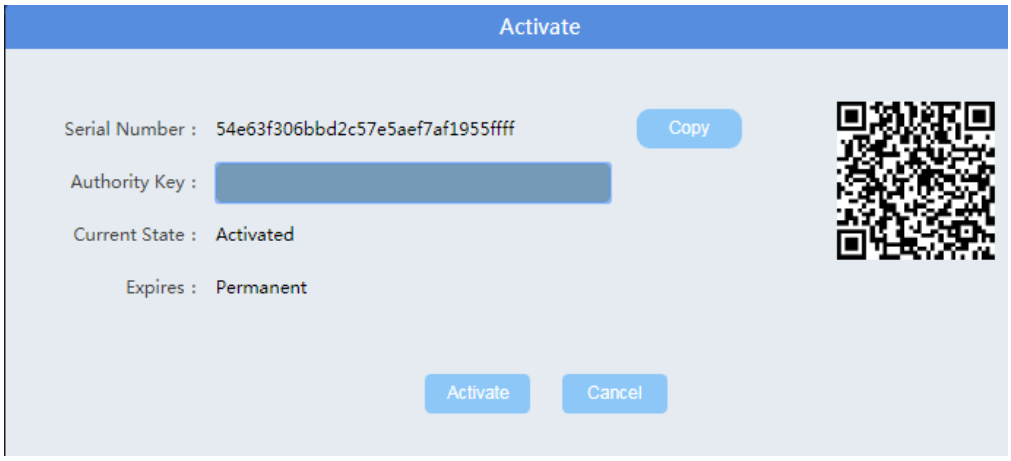


[Figure 4-42] serial port settings

(4) System settings

The decoder can remotely reboot, upgrade, save the configuration file and other operations.

Activate the device: before in use, be authorized by equipment providers, as shown below:



[Figure 4--43] Activate the device, device authorization

The device serial number, each device has its own unique serial number, provide it to the equipment provider, according to the authorization and obtain an authorization code, authorization code is filled Authorization code input box, click the Activate button devices will be authorized to use. The authorization code contains authorization period and if expires, the device will not work properly.

Restart the device: the device can remotely reboot.

Note: Please upload settings before restarting, or they will lose any unsaved data.

Factory default reset: the device reset the factory settings.

Note: If reset, all user settings will be cleared;

Upgrade Device: Users can upgrade by the files provided of the equipment provider official website to download or otherwise will be upgraded to a new version of the device software.

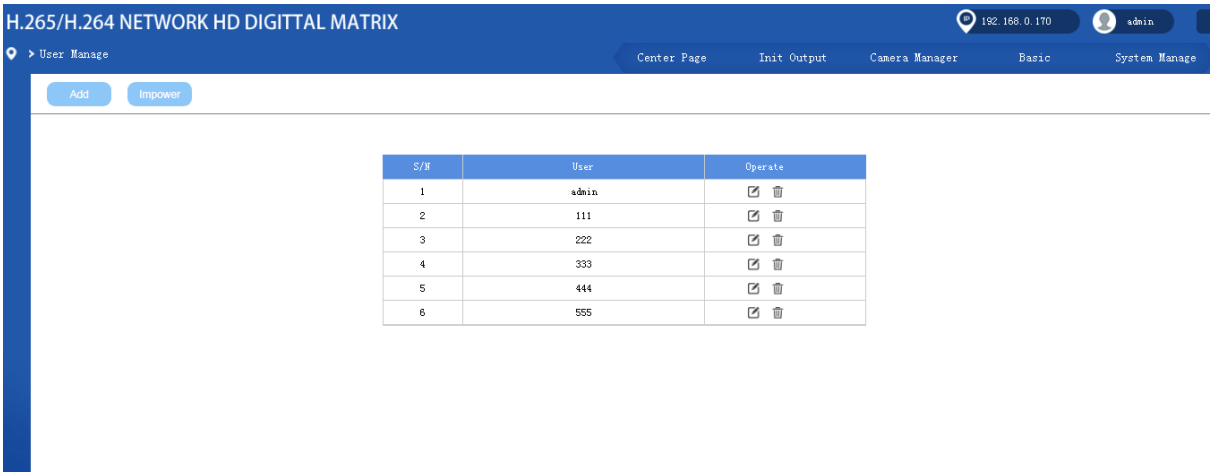
Note: The configuration is possible missing or damaged after the upgrade, please back up the configuration file before the upgrade;

Import / export configuration file: remotely export for backup the device configuration file, or upload the backup data to the device.

System Information: Displays the current device information, such as software version number.

2. User management

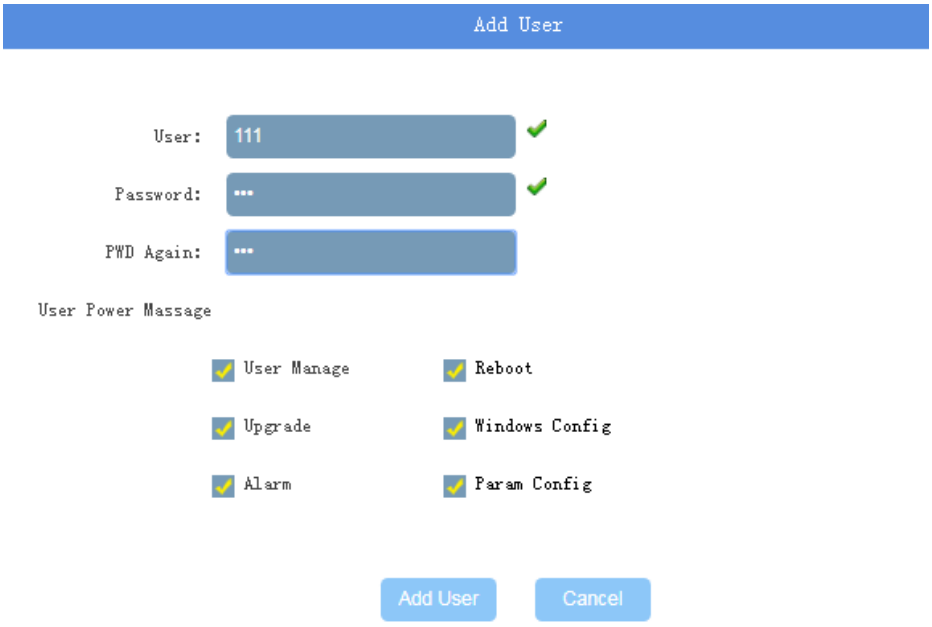
Select the main menu "System Management" -> "User Management", as shown below:



[Figure 4-44 User management

(1) Adding users

"Add" button to add the user to open the window, as shown below:



[Figure 4-45] Add Users

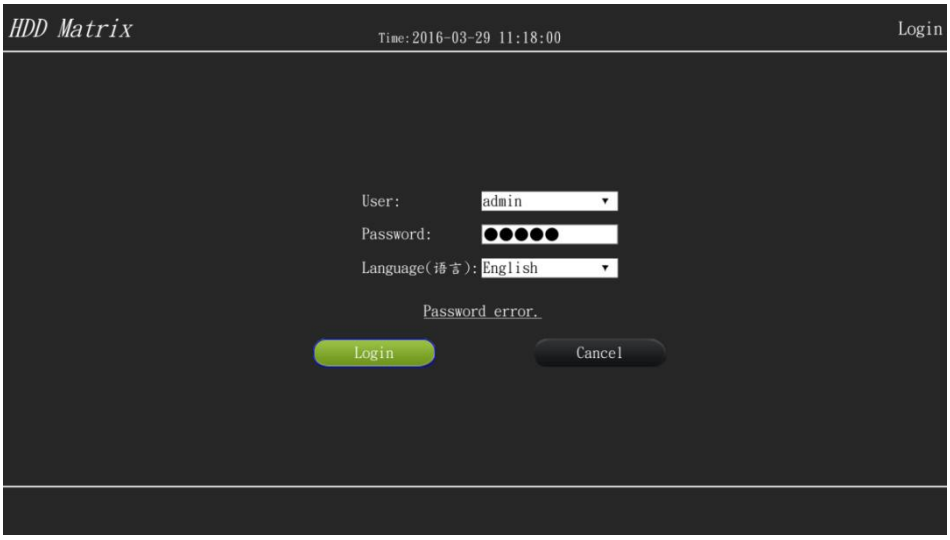
Required to enter a user password, and then determine user permissions, click and save.

(2) Modify the user

Figure 9 - 5, click modify, the user permissions could be modified.

Chapter V Mouse Operation

The mouse into the USB port digital matrix behind, right click the mouse, the user interface will be displayed on the corresponding monitor output port HDMI1; as follows:



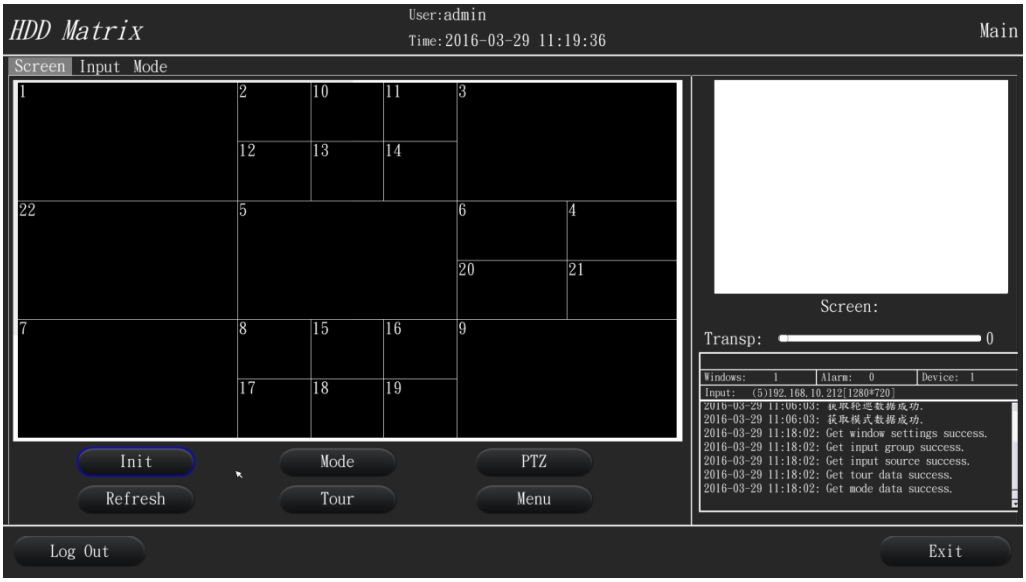
[Figure 5-1] Login screen mouse operation

I. Adjust the transparency of the interface

Slide the mouse wheel, you can adjust the transparency of the interface, you can see the interface at the same time need to see the video of the monitor display, it can increase the transparency of the interface via a pulley-down manner, and if due to high brightness video watch no clear interface, you can reduce the transparency of the user interface;

II. Landing

Shown in Figure 5-1, enter password, login to the digital matrix window; as follows:

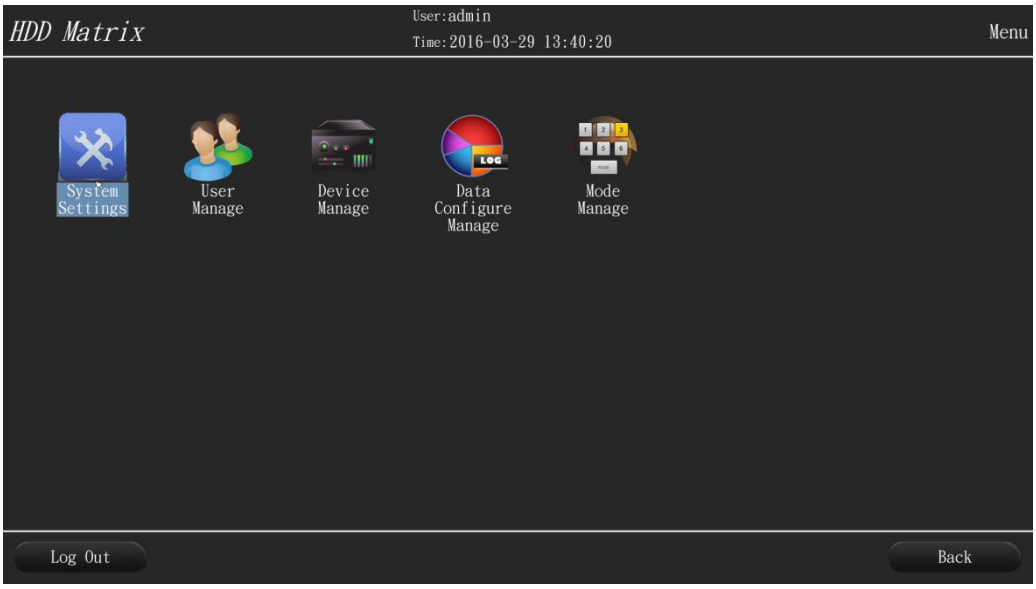


[Figure 5-2] mouse operation main interface

Factory default user name: admin, default password: admin.

III. The main menu operation

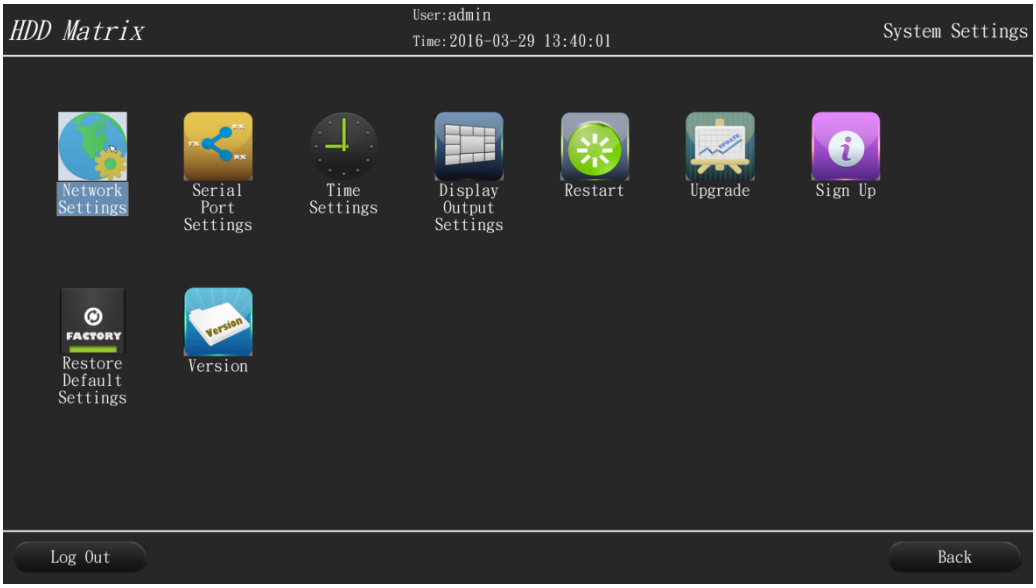
Shown in Figure 5-2, click [Menu] button to enter the main menu of the digital matrix system equipment setup and operation, as follows:



[Figure 5-3] Main menu

1. System settings

You can set parameters related to the device itself, click enter the [System Settings] icon, as follows:



[Figure 5-4] System Settings

(1) Network Settings

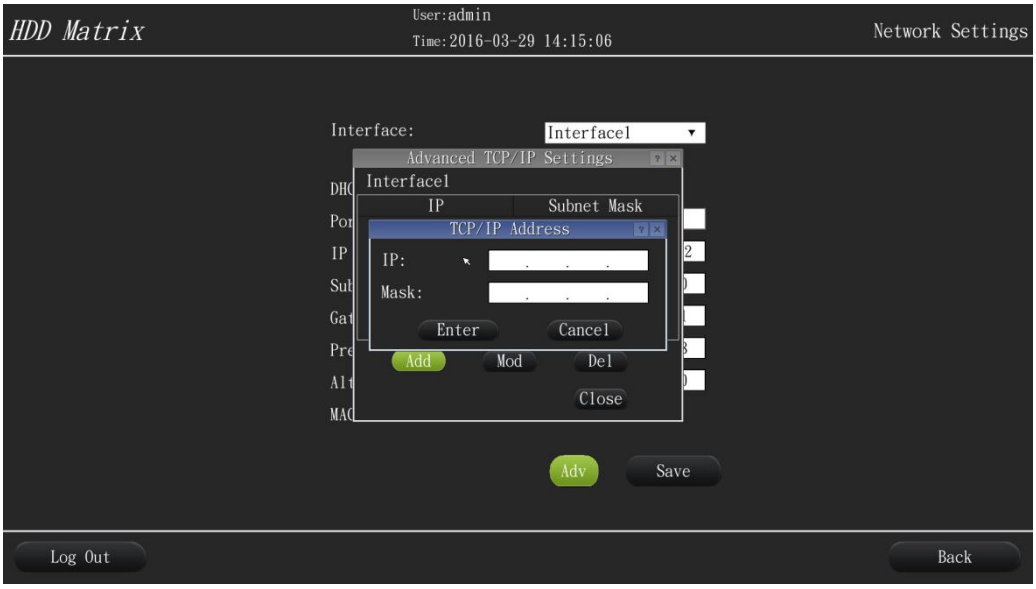


[Figure 5-5] Network Settings

Equipment is modular, each module outputs an HDMI port, with a standard gigabit Ethernet port, as shown above, select the device corresponding to the network interface, then you can set network configuration for each network port;

Different modules can be configured for different IP addresses, this will not affect splicing and dividing;

Any module can also add multiple IP addresses, click [Advanced] button, you can enter the module Advanced TCP / IP settings, such as the need to add the IP address, click [Add] button, and if need to modify, then click the [modify], as shown below:



[Figure 5-6] Device to add multiple IP addresses (para)

Enter the appropriate IP address and subnet mask point [OK] to save.

Tips: You can adjust the subnet mask value to adjust the valid quantity of LAN IP address , and thus access a different quantity of IP devices.

(2) Serial port settings

RS485 setting and the corresponding parameters, as follows:



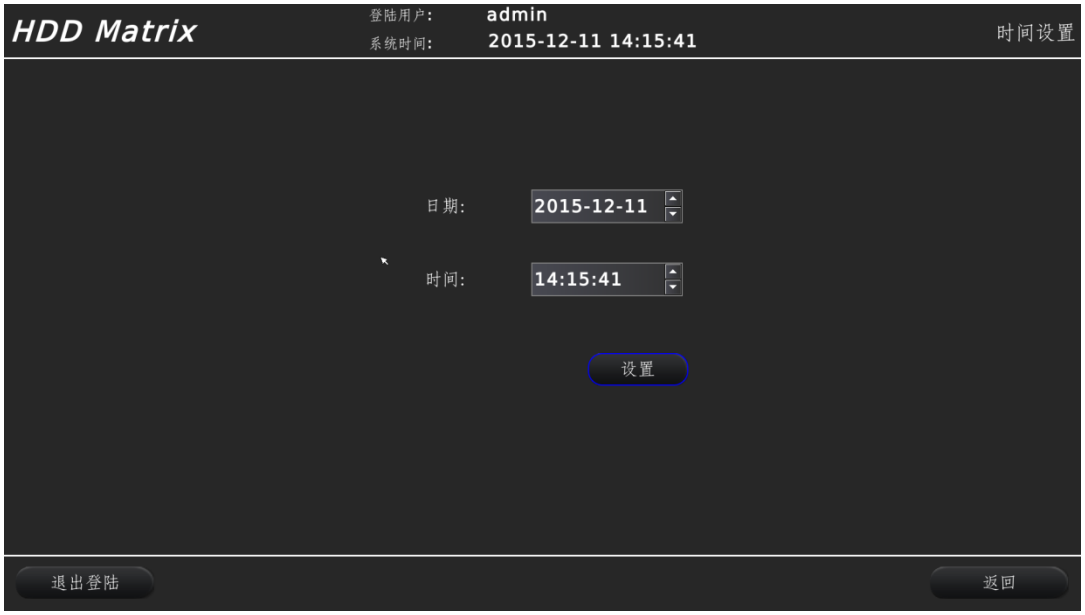
[Figure 5-7] Serial port settings

Address: Set RS485 address;

Baud rate: Set RS485 communication rate;

(3) Time setting

Set the device system time, as shown below:



[Figure 5-8] Set the system time

(4) Output display settings



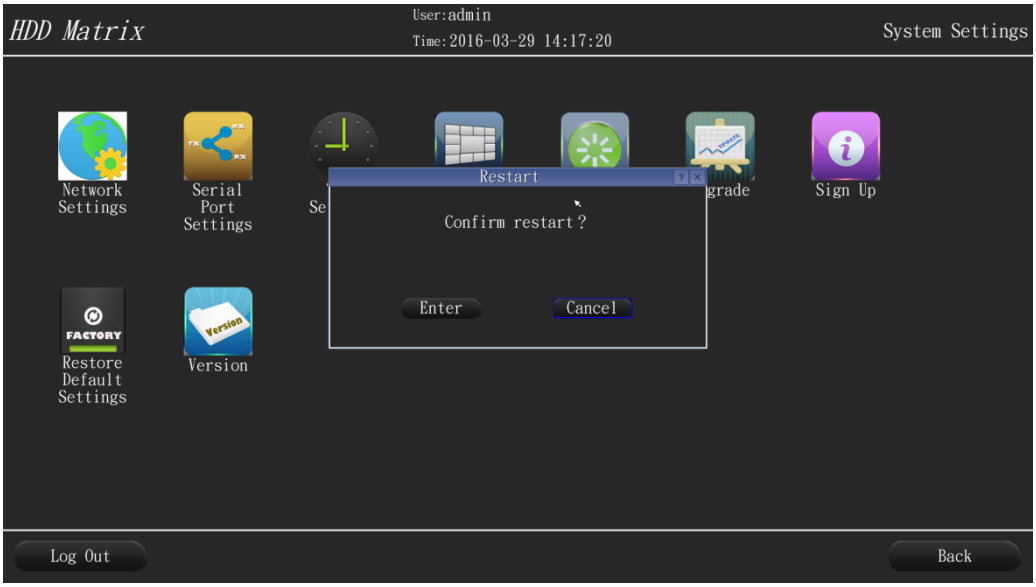
[Figure 5-9] Output display settings

Output 1: Adjust all odd outputs display parameters, drag to the right to increase the value added;

Output 2: Adjust all even output the display parameters;

(5) Restart

In the case of uninterruptible power reboot the system, as follows:

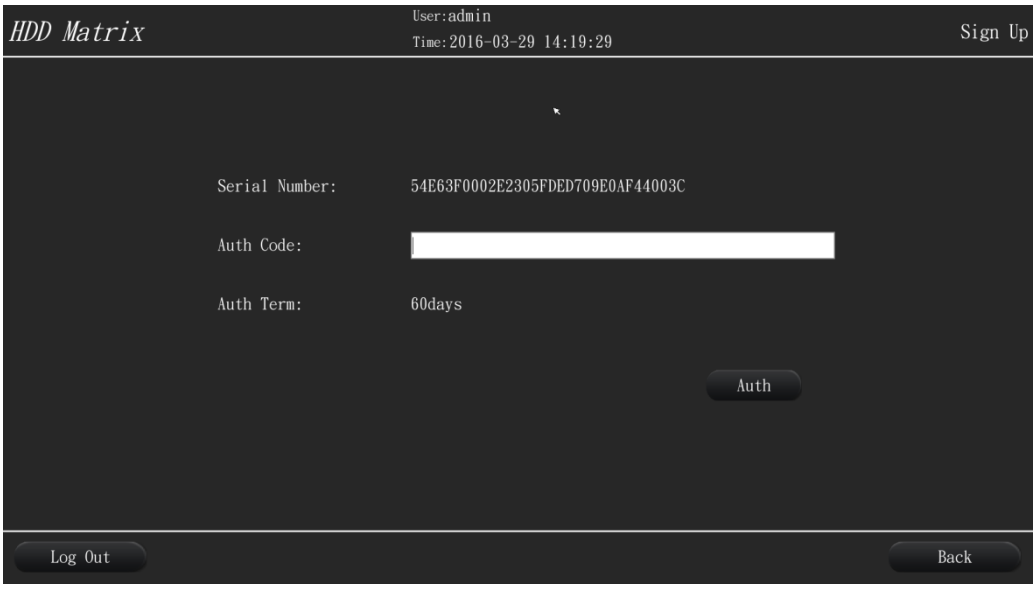


[Figure 5-10] Restart the system

(6) Upgrade

(7) Registered

To protect the interests of users, the system take the way of the authorization code to authorized use, each machine has its own unique machine code, after obtaining authorization code can use within the authorized time and the authorization function item, as shown below.



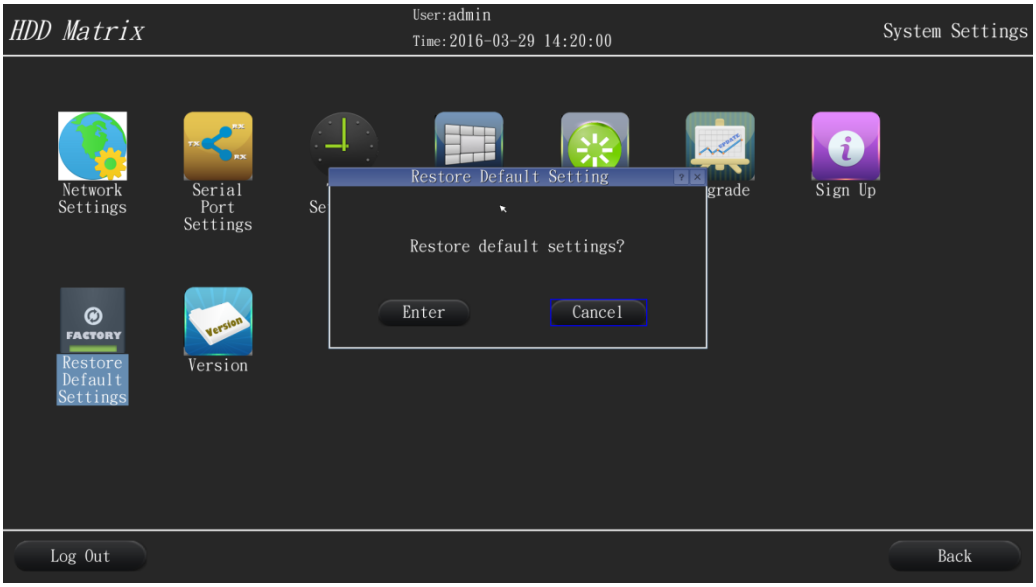
[Figure 5-11] System Registration

Authorization Term: refers to the time limit can be normal use, beyond the authorized period after the system will not operate properly.

(8) Factory Reset

Restore the system to the factory default.

Note: After restoring the original factory value, it will be cleared of all user profiles, restore factory value archive (available Computer Browser control to save the system configuration file), as follows:



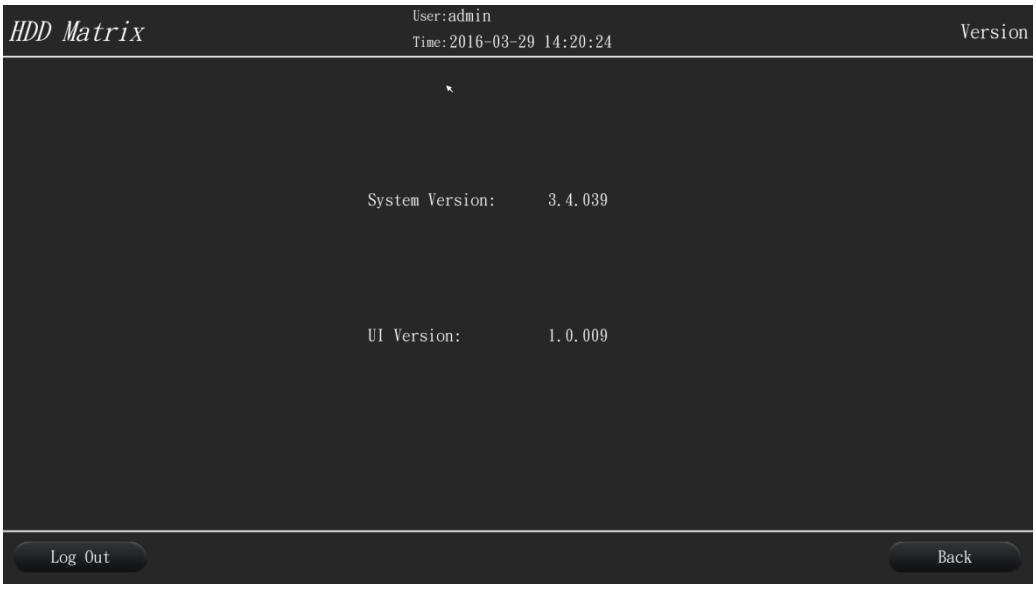
[Figure 5-12] Factory Reset

(9) Version: Displays the current version number of the device.

System Version: The current version number of the underlying system.

Interface Version: The current version number of the interface.

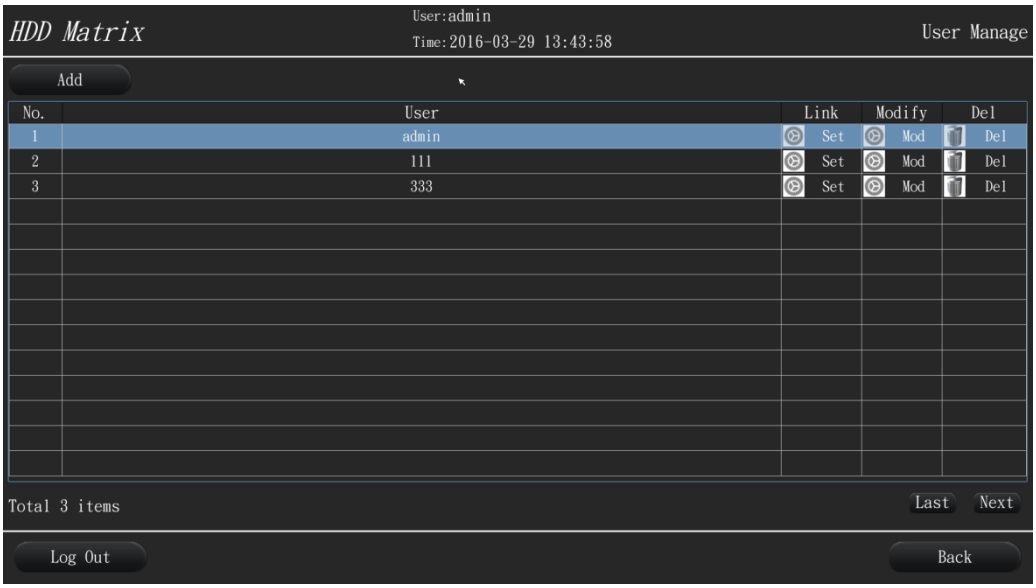
You can upgrade a single interface system version number or version number, it can all be upgraded.



[Figure 5-13] System Version

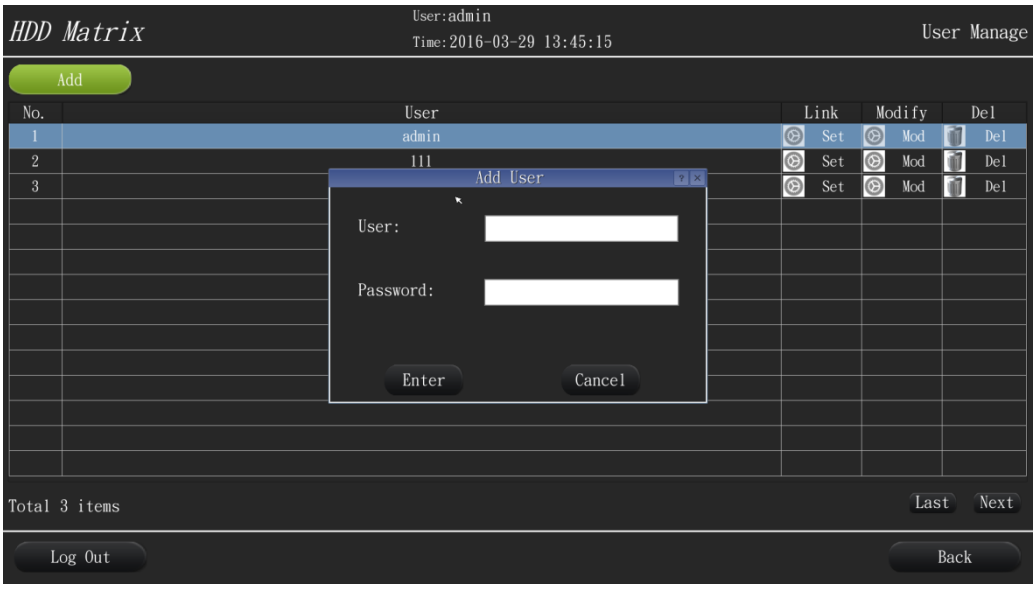
2. User management

Different users can be authorized to equipment operation and management, click the main menu [User Management], as shown below:



[Figure 5-14] User Management

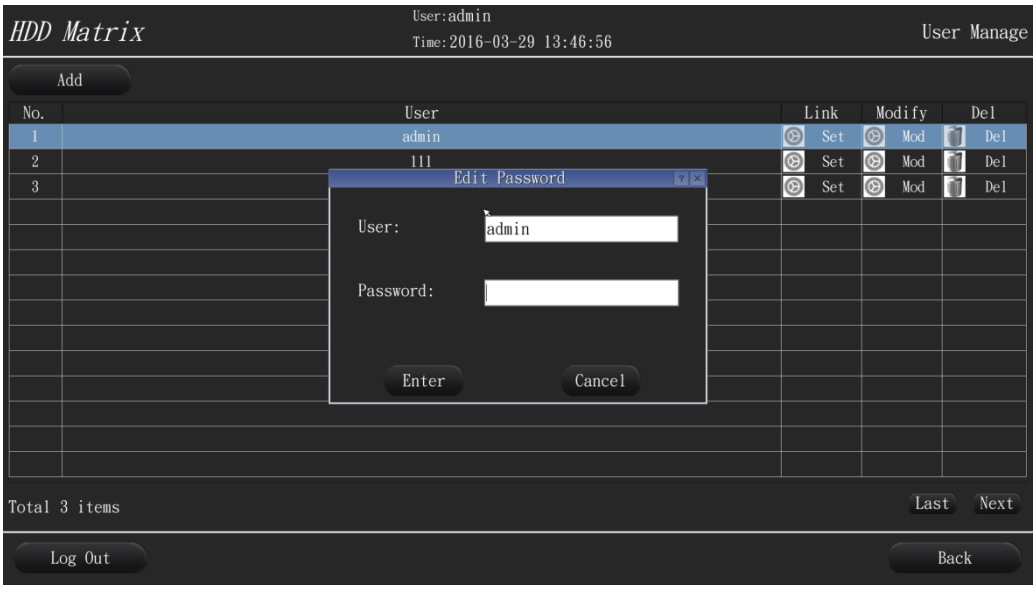
(1) **Add User:** click [Add] button, you can enter adding user interface, as follows:



[Figure 5-15] Add user

(2) Modify User

In the back of the user attribute column click Edit to enter the user password modification interface.



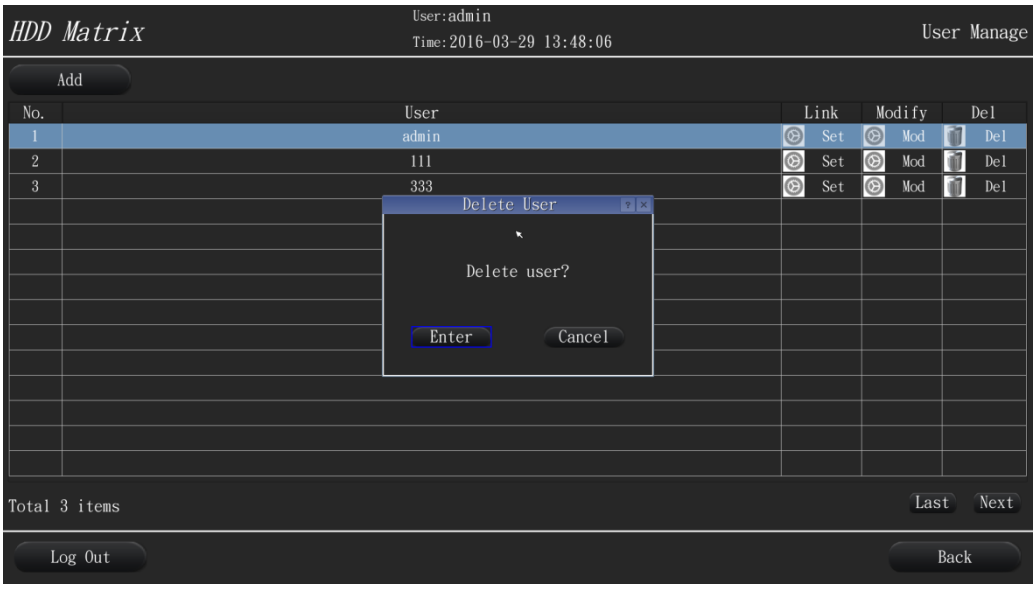
Note: min user password can only be self-modifying, not by other users.

(3) Associated equipment

When the device while managing other devices, you can set the user administrative rights to other equipment.

The default admin users can manage all devices.

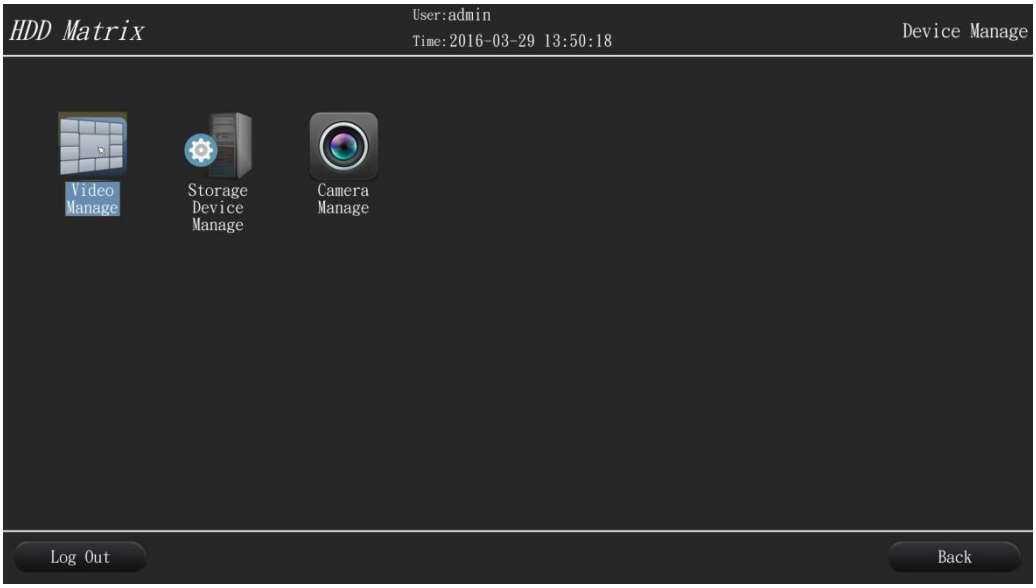
(4) Delete user



You can delete a user, delete the user's own, or delete other users, but admin users can not be deleted.

3. Device Management

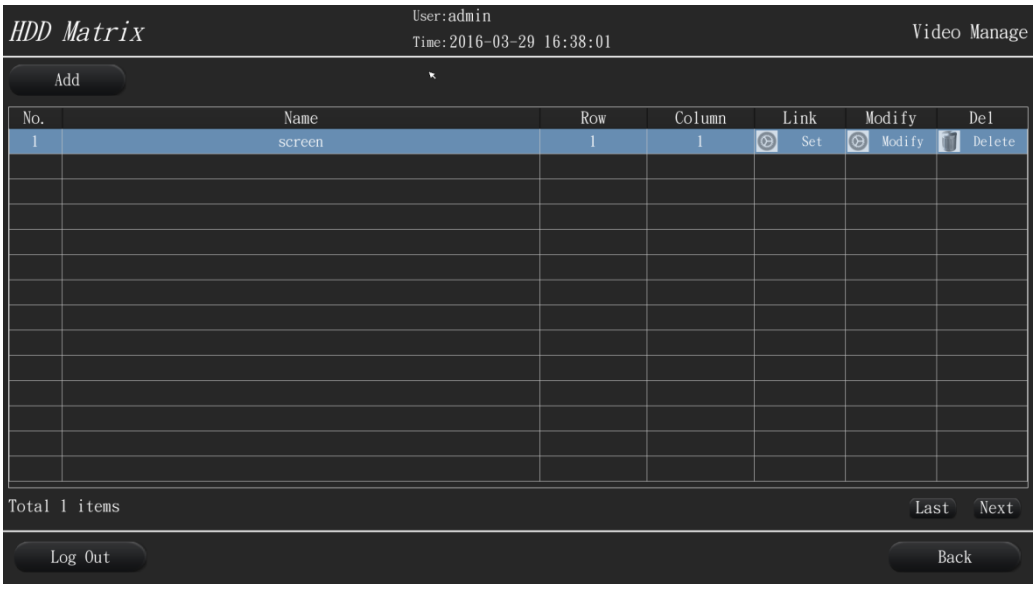
You can manage various types of equipment which access to digital matrix, as follows:



[Figure 5-16] Device Management

(1) TV wall management

The devices support many types multiple TV wall (monitor wall) and placed, under the monitor quality does not exceed. Digital Matrix HDMI output, may be added to the number of rows and columns is not the same output management, as follows:



[Figure 5-17] TV wall management

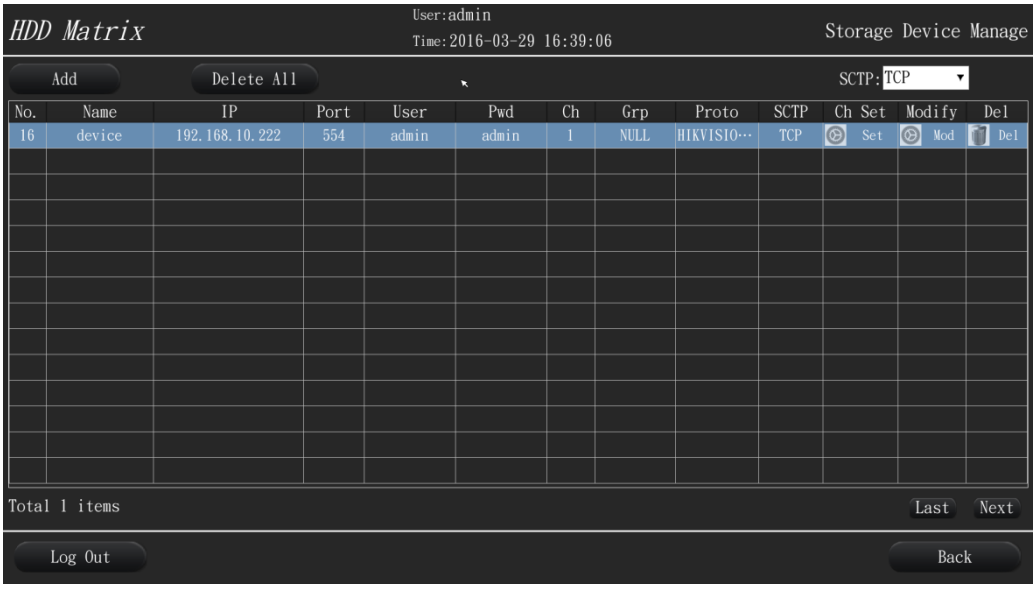
Associated equipment: the device which display output to the TV wall

Modify: Modify the name of the TV wall, the number of rows columns and other parameters;

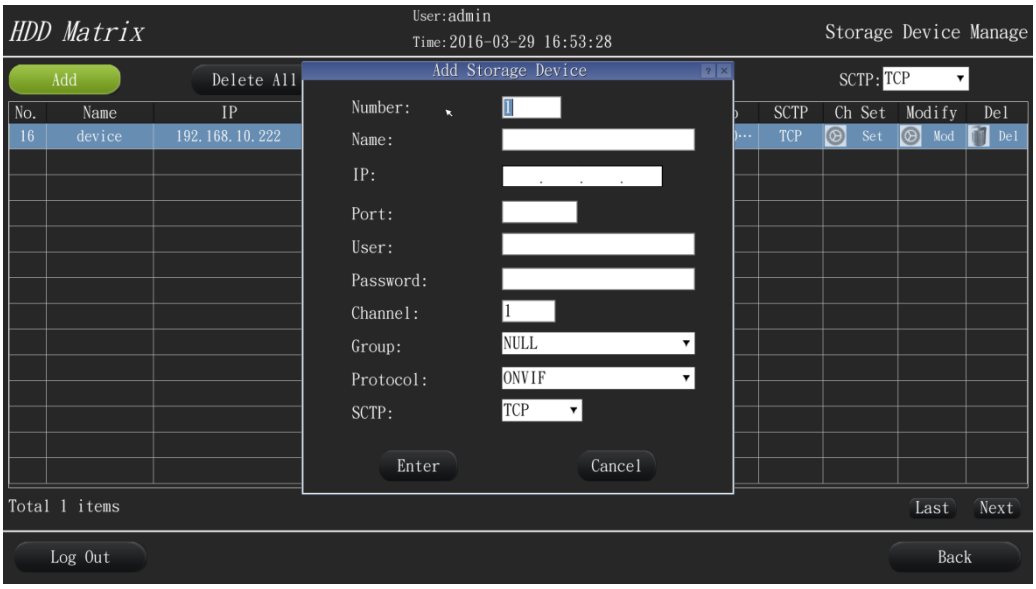
Delete: Delete this video wall configuration.

(2) Storage Management

It can manage the NVR, DVR and other storage devices which access to digital matrix, as follows:



[Figure 5-18] Storage Management



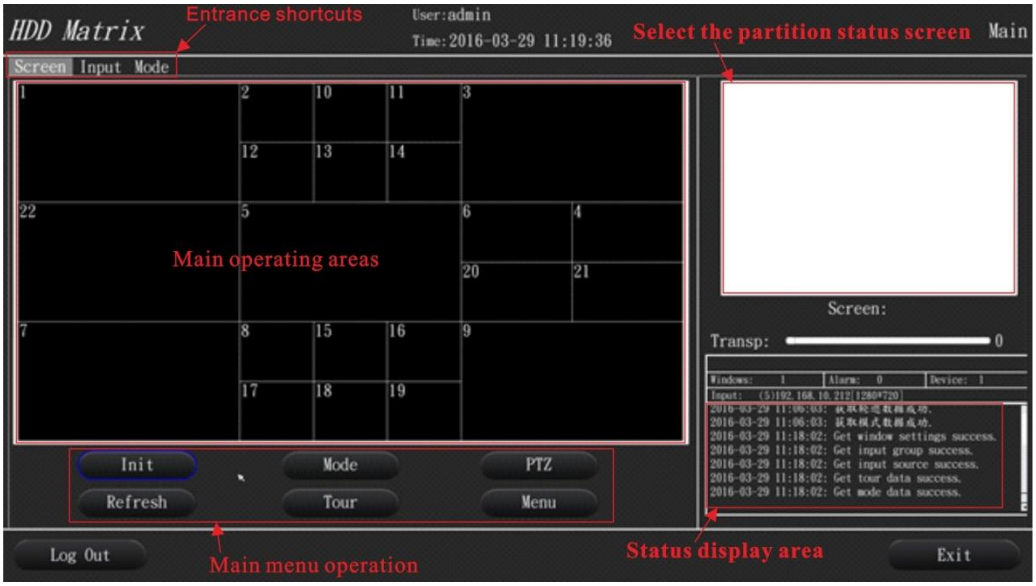
[Figure 5-19] Add storage devices

(3) Camera management

Management of connected various network cameras and video sources.

IV. The system operation

1. The main interface



[Figure 5-20] Main interface

Entrance shortcuts: You can quickly enter the main interface, input source management interface, mode management interface;

Main operating areas: displays the current TV wall splicing and segmentation state, and its operation;

Main menu operation: enter the device all functions settings;

Initialization: the number of video wall and display mode settings, etc.;

Mode: enter mode management interface;

PTZ: enter PTZ operation interface for controlling the camera, ball machine and other related iris, focus, and PTZ parameters;

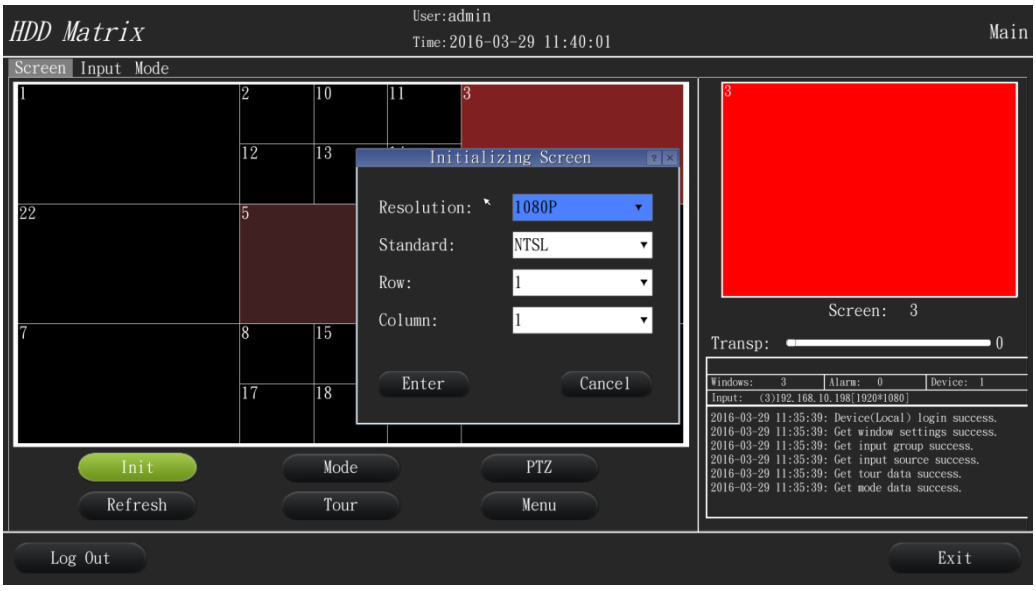
Refresh: the current page and database data synchronization;

Start polling: the current window start polling function;

Menu: enter the main menu, the equipment all aspects of the setting operation.
Select the partition status screen: After selecting the current window, the current window corresponding monitor splicing, divided state, this project is mainly used when a HDMI output port corresponding to the monitor screen is split too much, it can be very intuitive show its pattern;
Status display area: Displays the current operating and system status;
Key input: the current state of the input buttons;
Window: the state of the currently selected (active) window number;
Alarm: The current alarm signal alarm input number;
Equipment: When digital matrix operate and control multiple devices (digital matrix, network keyboard, etc.), the device ID in the state of operation, this number in the main menu -> Device Manager in generation;
Input Source: current window corresponding to the camera (input source) connected state, when there is no input source appears to be empty.
Source format :(input source number) input source IP address [input source display resolution]
Such as (11) 192.168.0.188 [1920 * 1080], refers to the input source connected to the current window No. 11 input source, IP address of the input source is 192.168.0.188, the current resolution of the input source decoder output for 1920 * 1080.
When the current input source is displayed [0 * 0], it indicates that the camera is connected with unsuccessful or decode unsuccessful, check the connection status and compatibility.
Log and status area: located in the input box below the source term, the results of the current operating system and feedback information.

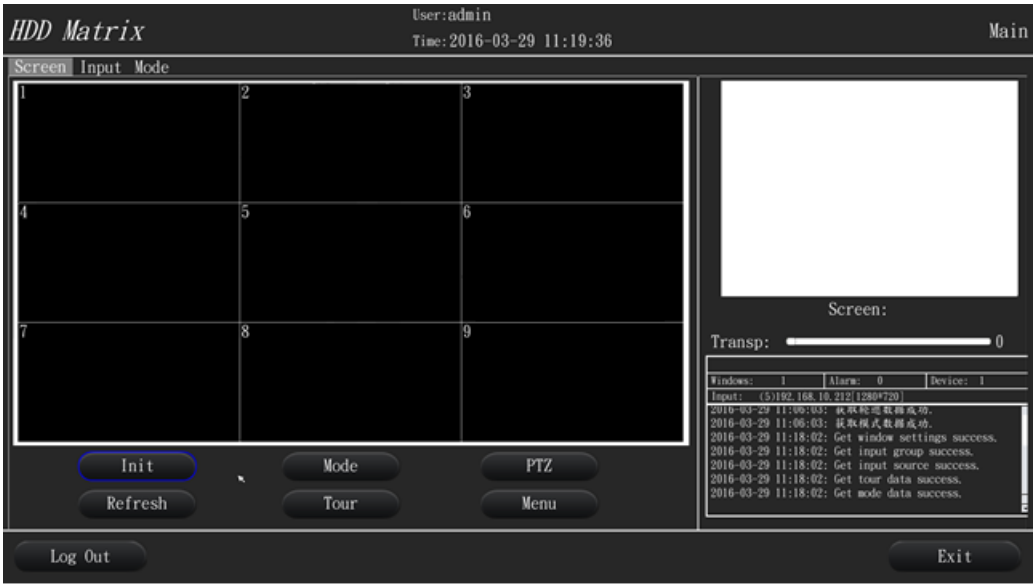
2. Initialization

Initialization refers to configure the number of monitors connected to the HDMI output, the display mode, output resolution and frame rate output.
In the main interface, click [initialization] button to enter the initialization interface, as shown below:



[Figure 5-21] Display initialize

Resolution: refers to the output port for each HDMI output resolution.
System: PAL standard and optional NTSL standard.
Rows: rows quantity of the total of the monitor.
Column: columns quantity of the monitor.
As is initialized to 3 rows and 3 columns, the results are as follows:



[Figure 5-22] Results of 3 rows 4 column initialization

3. Select Window

(1) select a single window:

Click the left mouse directly on the needs to be selected window, then the partition status of the HDMI output port corresponding to the monitor will be displayed in the selection screen partition status column, and in the following text box displays the currently selected window number, the selected window is displayed in red, as shown below, choose window No. 6:

(2) Select more than one window:

You can select multiple windows for splicing, the selected window will turn red, while, the last selected window color is darker than the beginning, as shown below:

4. The operating window (right-click menu)

On the selected window right click, you can open the operating window, as shown below:



[Figure 5-23] Right menu

Split Window: The current window split (split).

Merge window: a plurality of the currently selected window will be combined into one window.

Resetting the screen:

The window is on the screen (monitor) to restore the state to a single screen, no division and no stitching.

Open Output: Open the current window video.

Output Close: Close the current window video.

Open polling: According edited polling table by the window display video carousel.

Close polling: Close the current window carousel.

Input Source:

Open your source list, manually select an input source to this window decoded output.

Video Display: Turn off user interface, display video.

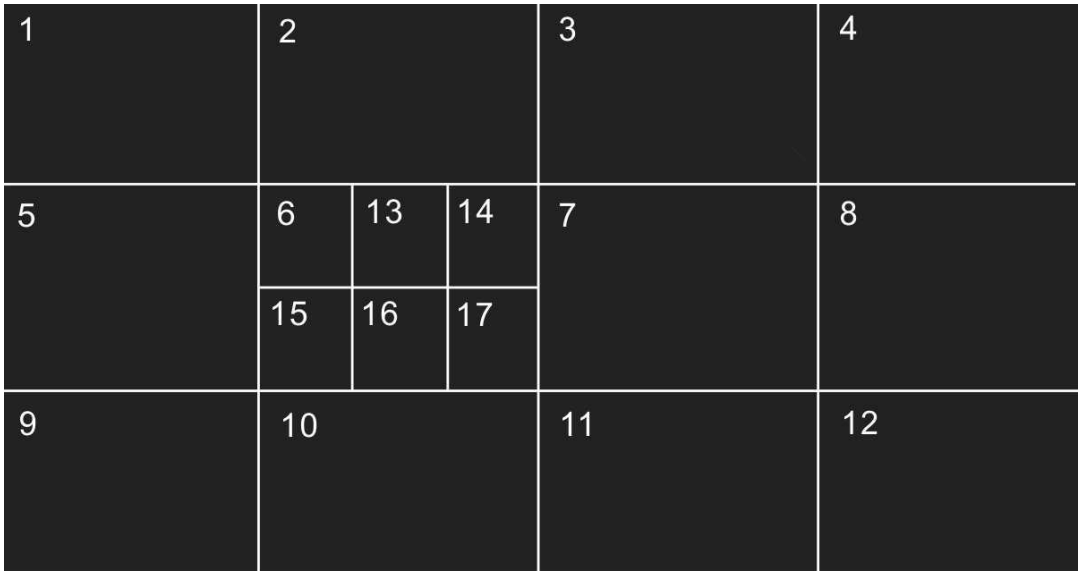
5 Split (Split) window

Split window display area is divided into a plurality of display windows, H.264 standard digital matrix can be split a HDMI port into 16 small windows, H.265 standard digital matrix can be split a HDMI output port into 36 windows ,it displayed by the total resource constraints. To protect the display effect, in H.265 standard digital matrix, the sum of the quantity of each two adjacent window split can not exceed 64. As shown below:



[Figure 5-24] Split window

As shown above, the currently selected window split into rows 3*2, 6 window, as shown below:



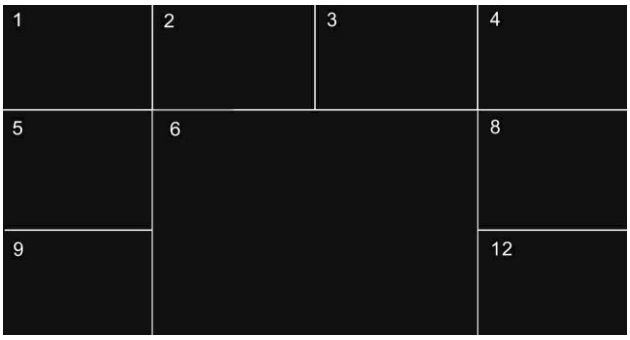
[Figure 5-25] Split window

As shown above, the original window No.6 is split into six windows, which, taking into account the relationship between the corresponding window, the new window number to increase from left to right, top-down approach to the new sequence number is incremented, the original window number unchanged, if necessary, by entering the [mode] -> [window] window to change the number.

6. The merge window

Select the need to merge the top left corner of the window, and then select the lower right corner of the window, click the right mouse button -> [merger] window, all windows can be between two windows combined into one window. As shown below:

Select [Merge Window] and confirm the merger, the combined results are as follows.



[Figure 5-26] Merge window

7. Add PIP, roaming

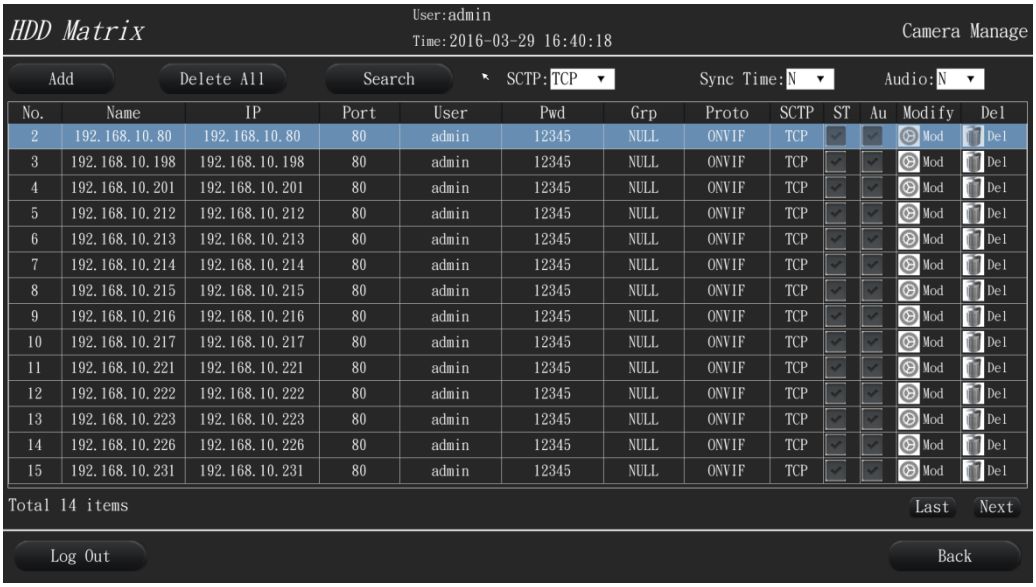
8. Modify window number

For ease of management and operation, can modify on the display window 's number changes, into the main interface -> Mode -> Window, in the list old window number is an existing window , the new window number can be entered manually and determined that is saved after input can:

9. The input source (camera, etc.) management

Input sources is include network cameras, also be standard RTSP flow of other equipment.

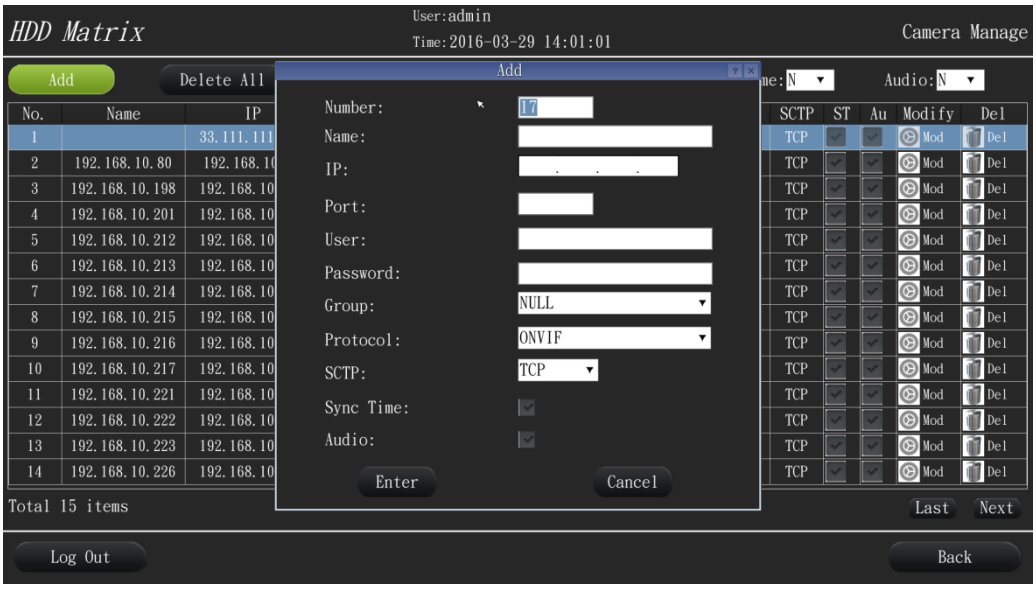
Through the main menu -> Device Management -> Video management, you can access the input source management interface, as shown below:



[Figure 5-27] Input sources (cameras, etc.) management interface

(1) Manually add the input source

Click [Add] button, you can manually add the input source, as shown below:



[Figure 5-28] Manually add the input source

ID: chronologically added automatically, you can manually modify. In the future this number will be the number of input source for calling;

Name: You can name the input source for future management intuitive and easy to remember;

IP: Enter the source IP address, in standard dot IPV4 dotted decimal IP address;

Port: Enter the source port, the different Manufacturers camera port number will be inconsistent:

Username Password: Enter the user name and password to connect source (camera);

Enter the group: When there is an input group, select the input source category belongs;

Protocol: Connect the input source using the protocols or standards, such as ONVIF, RTSP, etc;

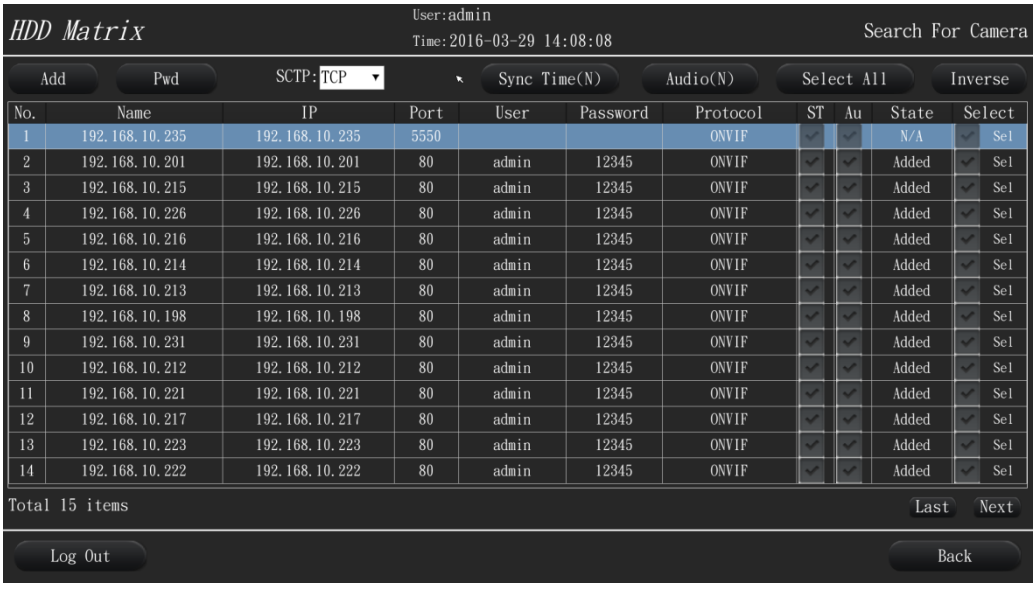
Streaming Protocol: For connecting using TCP connection or UDP connections, in general, UDP connections better, but higher quality requirements of the transmission network, TCP connection better in real-time, when network quality is poor and the video will have loss frame phenomenon;

Time Synchronization: The camera time and synchronization between digital matrix;

Audio: video transmission and also transmit audio.

(2) Add automatic search

The camera management interface, click [Search] button, you can automatically search for the same network camera via ONVIF, and add multiple input sources (video camera), as shown below:



[Figure 5-29] Automatic camera search

List is the search out of camera via ONVIF:

Status: If the device has been added to the input source (camera) list, the status is displayed as "Added", otherwise is displayed as "No";

Time: the camera time will be synchronous digital matrix time; first select the camera, in the selection bar to display a green check mark, then the synchronization time point;

Audio: the audio transmitting along with the video; first select the camera, in the selection bar to display a green check mark, and then point the audio;

Add modify passwords: After selecting the camera, click password, you can add or modify the user name and password;

Streaming protocols: TCP or UDP, TCP is relatively smooth, quality influenced by the web, UDP relatively better in quality, but the poor quality of the network will delay longer , higher requirements for the network;

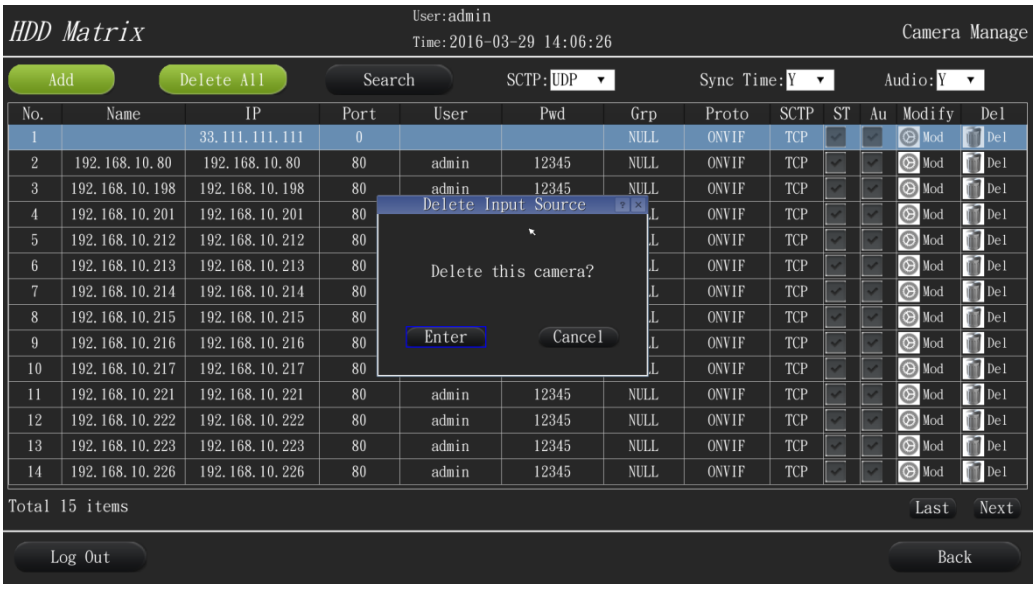
Add: You can first select the camera to be added (green hook), and then choose to add, you can add your camcorder to the device list; you can also click [select all] button, and then click to add, all the cameras at once added to the list.

(3) Add a standard RTSP stream

Digital Matrix can add a standard RTSP streams, such as my company screencast software coding standard RTSP stream, add the same way as a way to manually add cameras, but IP address becomes the standard RTSP streaming address.

(4) Modified to delete the input source

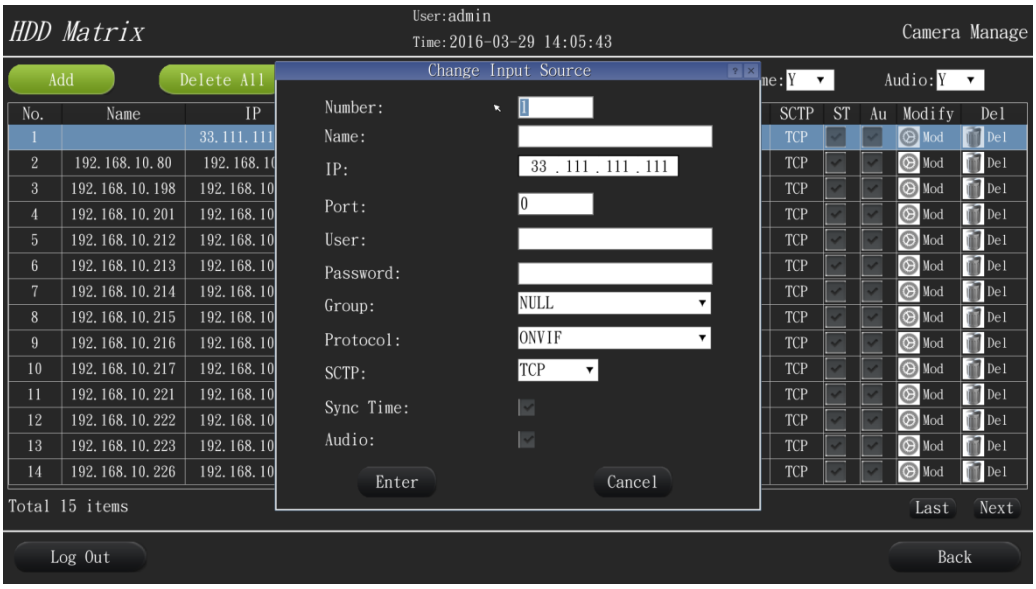
Input sources (cameras, etc.) management interface as shown in Figure 5-34, you can click the [delete all], will remove all the input source, you can choose the camera in the list, click Delete, and delete the selected camera;



[Figure 5-30] Delete all the cameras

(5) Modify the input source (camera)

Select the camera you want to modify, and then edit, can pop correlation window to modify the camera, as follows:



[Figure 5-31] Modify the camera

10. The window corresponding to the input source

Decoding the camera is displayed in the window in the following ways:

(1) Right-click on the main interface, choose the camera, the camera will open the list, as shown below:



[Figure 5-32] camera list

Select the desired input source decode display, the corresponding window will be connected to the input source and decoded output.

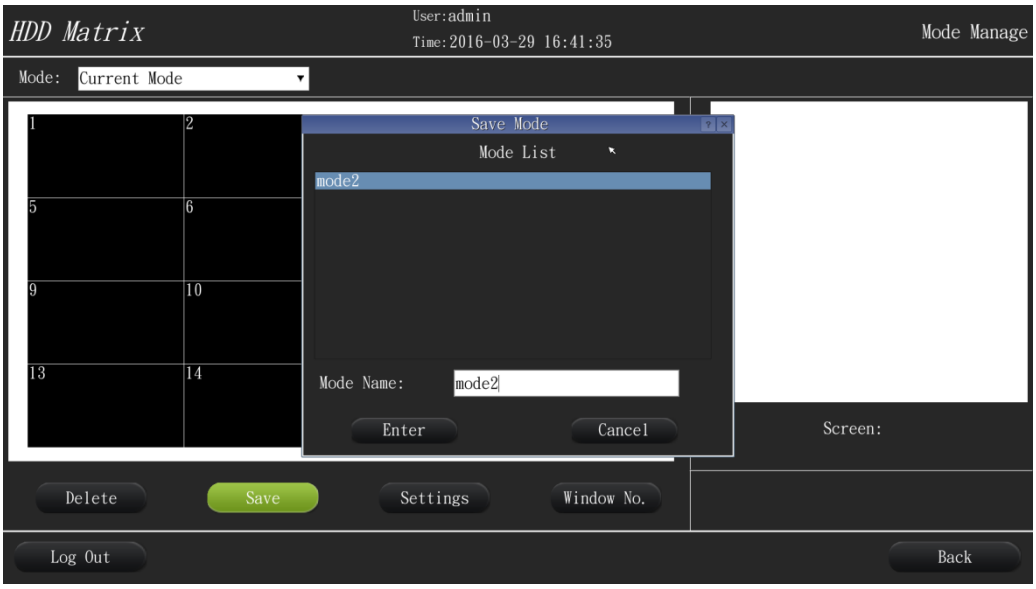
(2) Pattern table corresponding to the window with the input source. See the next section, "management model."

11. Mode management

Mode refers to save the current window in a distributed fashion, the correspondence between the input source and windows, etc., when needed, just select the mode, you can call up the preset mode.

(1) Save mode:

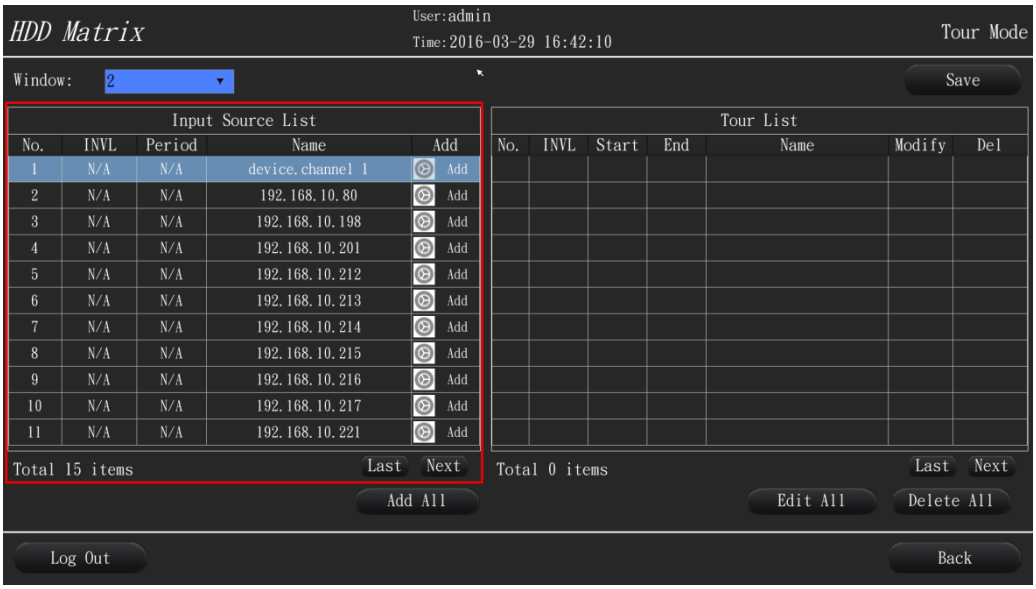
Through the main user interface -> mode, you can enter mode. After entering the menu, distribution in the interface window to display is the current window a distributed fashion, click Save, to save the current distributed way, as shown below:



[Figure 5-33] Save mode

(2) Mode setting

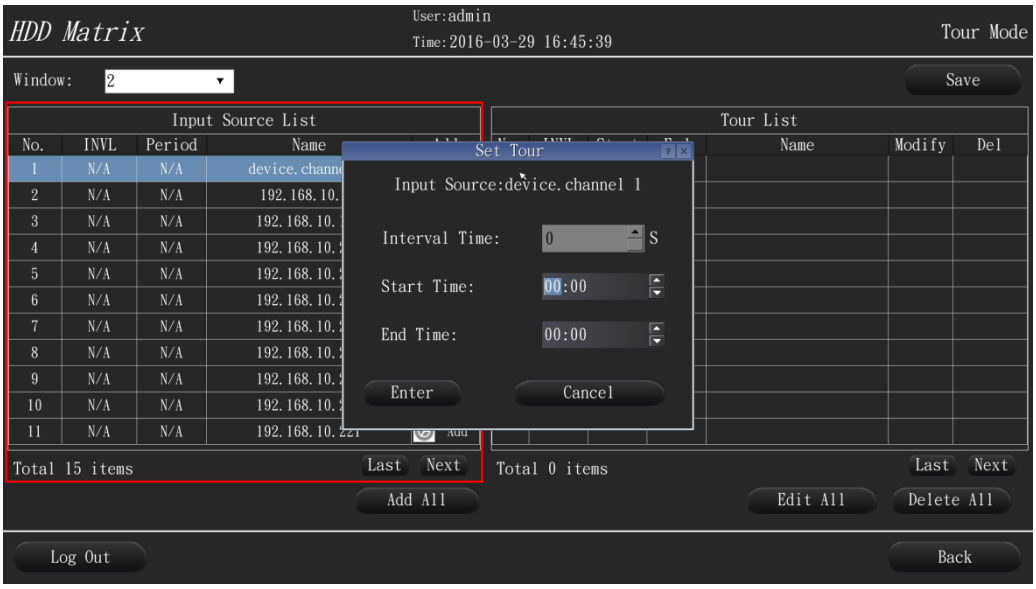
Point setting key to enter the mode setting interface, as shown below:



[Figure 5-34] Mode settings

Window: That this mode corresponding window number, the window can be selected after the input source and select the corresponding round robin.

In the following two windows, the source list on the left window, refers to the input source can be decoded and displayed in the window, can selected need to be decoded, also can add all. You need to add the selected input source, click add, the following window will appear:

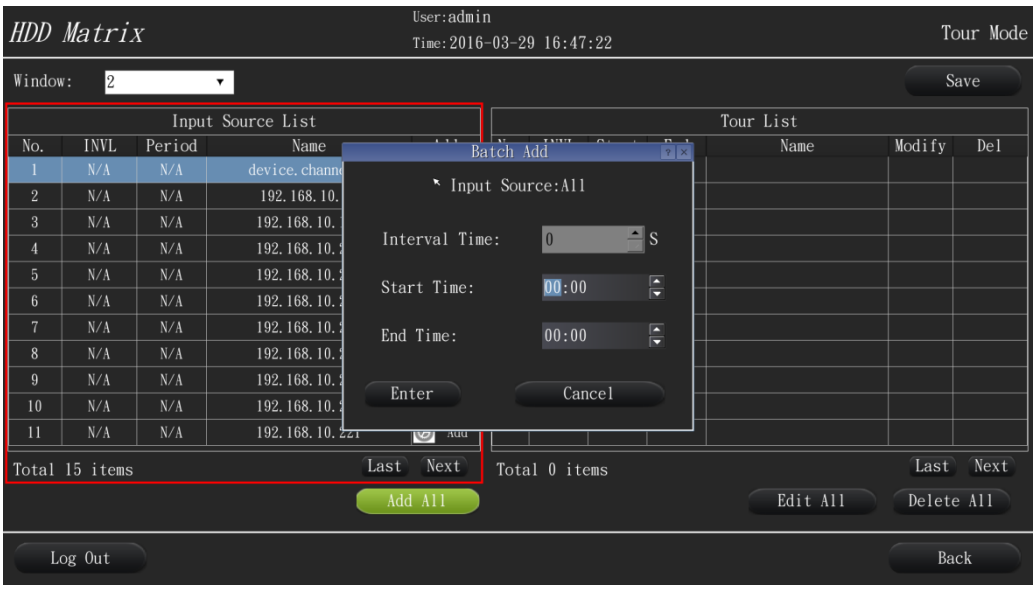


[Figure 5-35] Mode of add a single input source carousel

Interval: This refers to the input source will be displayed decoded how long, and then delivered to the next input source.

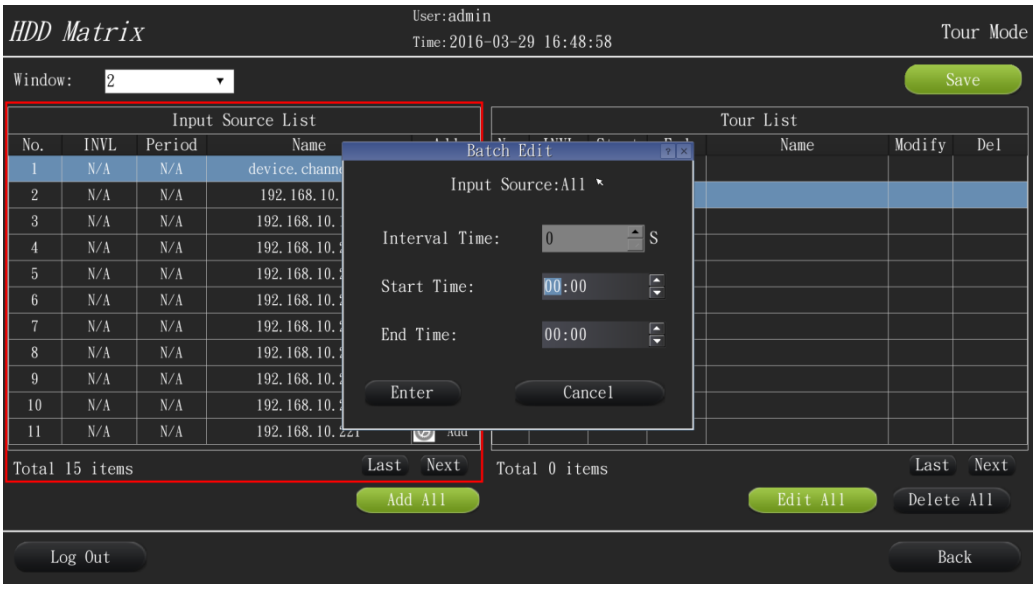
Start Time, End Time: refers to a predetermined time period beginning to the end of each day to display the decoded input source.

When you select [Add all], all the input sources will be added one-time as the mode of interval or period time, as follows:



[Figure 5-36] Bulk add input source to the poll list

Modify Input source and time in the polling list, you can select the input source in the right window, and then deleted, you can delete the polling list of input sources, click modify, can modify the input source, as shown below:



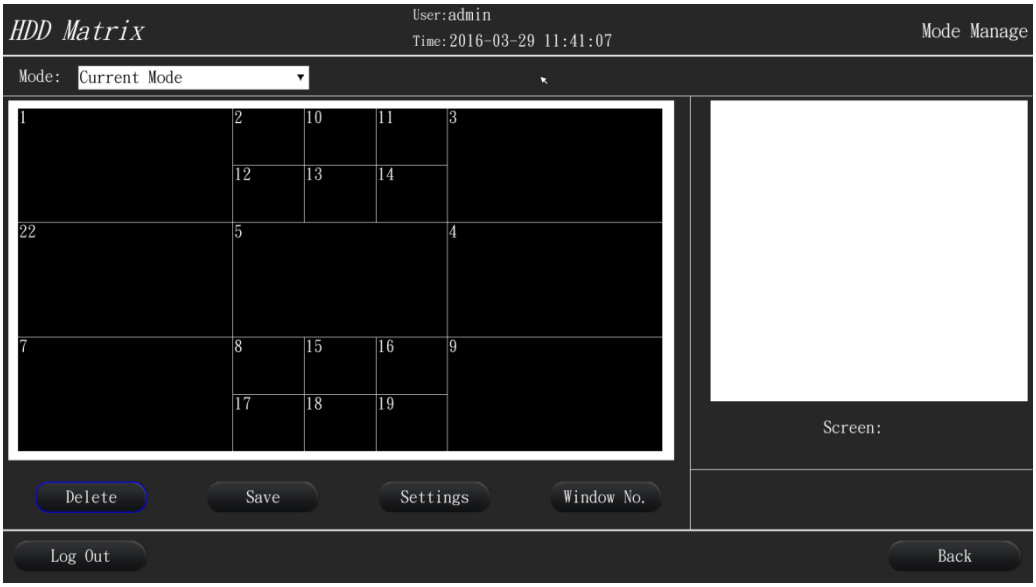
[Figure 5-37] Modify polling list item

(3) Modify window ID:

FIG. 11-38, click [Window] button, you can go to the Edit Number window interface;

(4) Management Mode:

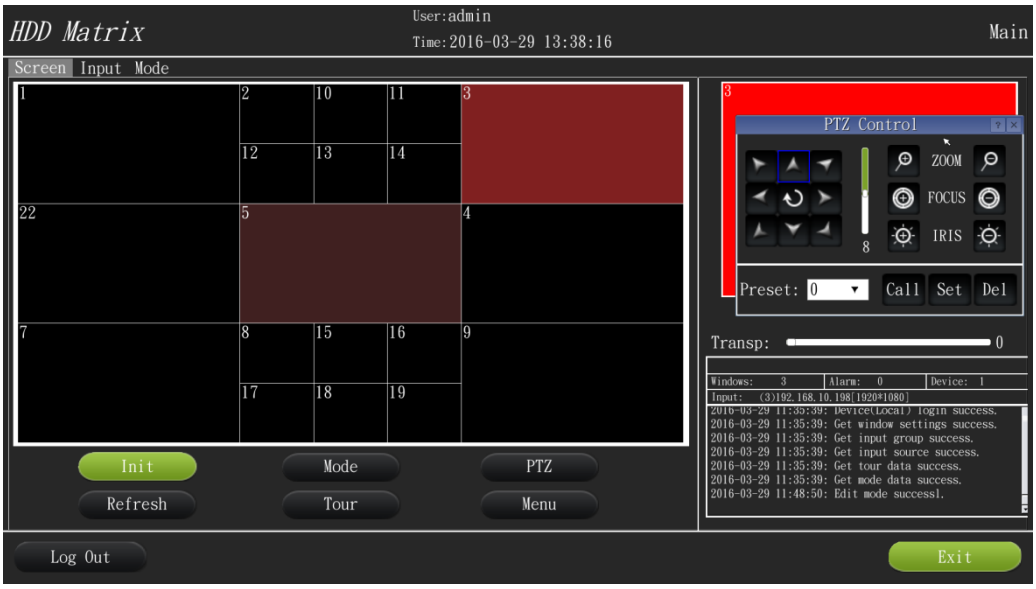
Select Main Menu -> Mode to enter the mode management interface, as shown below:



[Figure 5-38] mode management

12. PTZ operation

Enter the main interface, click PTZ, you can enter PTZ operation interface, as shown below:



[Figure 5-38] PTZ operation interface

Arrow keys: up, down, left, right, upper left, lower left, upper right, lower right and automatically rotate, you can control PTZ directional operation;

Speed adjustment: Drag the arrow keys of the right of the scroll bar, you can set PTZ speed;

Zoom: You can adjust the zoom lens zooms;

Zoom: adjustable focal length;

Aperture: The aperture zoom in or out, can be used to adjust the brightness;

Preset: the current state of the device is located by the [Setup] button to save the preset, by calling the device a saved status to switch to a preset quickly.

Chapter VI Keyboard control digital matrix

I. The analog digital matrix keyboard control

Analog digital matrix keyboard control, you can achieve a digital matrix corresponds to window number input source selection, splicing can be realized split, add PIP roaming capabilities, but for detailed operation and setup, you'll need to use other control.

Former analog keyboard digital matrix, first through a browser or directly into the digital matrix digital matrix UI controls using the mouse, set the RS485 and other related parameters.

1. The control keyboard panel Figure



[Figure 6-1] Analog signal keyboard panel diagram

Description of function keys:

Key	Function	Key	Function
【0】-【9】	Digital input	【 ⬅ 】	Digital clear
【 * 】	cancel the function menu	【 # 】	menu function confirmation
【Esc】	cancel	【Enter】	confirm
【Fn】	macro function	【 ⏏ 】	login / Logout
【 🛠 】	menu programming	【 ☎ 】	Alarm
【ARM】	select alarm point	【DVR】	Select Recorder
【CAM】	Select camera	【MON】	select Monitor
【 ⌖ 】	Call a preset	【 ∞ 】	trajectory scan
【 ⚙ 】	set preset position	【 ⚙ 】	Setting track scanning
【 ✕ 】	Delete preset	【 ✕ 】	Delete scanning track
【 ⟳ 】	scanning cruise	【 ◌ 】	Auto Scan
【 ⏻ 】	auxiliary switch	【 ⌔ 】	Wipers
【 ☼ 】	Lights	【 🌡 】	Thermostat
【 Ⓐ 】	angle information	【 ⮌ 】	Viewing zone return
【 ◎ 】	Focus+	【 ◎ 】	Focus-
【 ☼ 】	Iris+	【 ☼ 】	Iris-
【 🔔 】	Alarm confirmation (DIS-ALARM)	【 🔔 】	Alarm point fortification
【 🔕 】	disarm the alarm point	【 ⏲ 】	linkage output delay
【 ⏀ 】	open linkage output	【 ⏯ 】	close linkage output
【 ▦ 】	Split start	【 ▦ 】	Split ends
【 ▩ 】	Screen consolidated start	【 ▩ 】	screen consolidated ends
【 ▭ 】	Program switching	【 ⁘ 】	Synchronous switching
【 ▣ 】	Group switching, mode	【 ✣ 】	network sites
【 ⬅ 】	witch forward	【 ➡ 】	reverse switch
【 ⟲ 】	return the image	【 ⛶ 】	maintain the image
【 ⛶ 】	single window	【 ▪ 】	4 windows
【 ▦ 】	9 windows	【 ▦ 】	16 windows
【 ⌗ 】	scan	【 ⛶ 】	Monitor
【 ⓘ 】	information	【 📷 】	capture
【 ● 】	recording	【 ■ 】	stop
【 ◀| 】	Frame back	【 |▶ 】	Frame forward
【 ◀◀ 】	rewind	【 ▶▶ 】	fast forward
【 |◀ 】	The first paragraph	【 ▶| 】	The finish paragraph
【 ⏯ 】	Play, Pause		

Vector Joystick Function:

Joystick to control the direction of PTZ and lens aperture, focus, zoom; in the setting functions,it can be controlled to move the cursor, select or deselect items; button on the top of rocker is multifunctional smart key, use smart keys to change vector rocker function.

Operation	Function 1	Function 2
	PTZ up and down left and right action	Cursor up and down and move around
	Four pairs of angular movement of PTZ	the cursor up and down left and right flip
	lens Zoom function	Options cancel and confirmation function

2. Keyboard settings

When digital matrix keyboard control, you must set the keyboard menu with good digital matrix corresponding baud rate, control protocol, the device can be controlled properly.

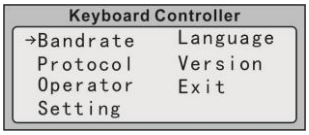
(1) Press and hold the smart key, the keyboard power is turned on, about 5 seconds when the keypad to enter the menu setting state. By operating the vector rocker choose the appropriate menu item; right-handed vector joystick or press [#] key to confirm and enter the menu options; Left-handed vector joystick or press [*] key to give up your choice and exit options.

(2) Keyboard menu items are as follows:

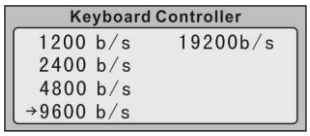
Baud rate(communication rate)	Language (language)
Protocol (control protocol)	Version (version information)
Operator (Operator)	Exit (exit the menu)
Set ting (General Settings)	

(3) Communication rate setting:

Choose〖Baud rate〗items, right-handed vector joystick or press [#] to enter the baud rate selection.



Select the baud rate is to make the keyboard and the controlled device to have the same data transmission rate. Baud rate has five options: 1200, 2400, 4800, 9600, 19200.

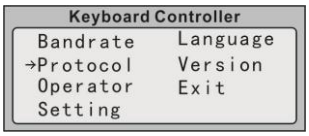


Right-handed vector joystick or press [#] to confirm the selection; Left-handed vector joystick or press [*] key to abort the operation and exit.

NOTE: Digital Matrix default baud rate is 9600.

(4) Control Protocol settings:

Choose 〖Protocol〗items, right-handed vector joystick or press [#] key to enter the control protocol selection.

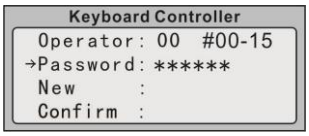


Digital Matrix control protocol selected for: NVDM;

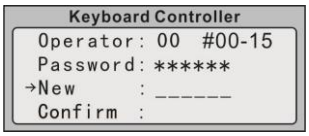
Can be moved up and down cursor control protocol selection; right-handed vector joystick or press [#] to confirm the selection; left-handed vector joystick or press [*] key to abort the operation and exit.

(5) Disposed operator password:

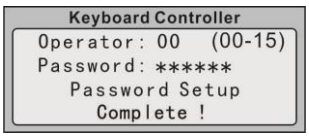
Choose 〖Password〗 key, enter the keyboard number corresponding to the operator current password, the original password is "000000."



Choose〖New〗key, the operator to change the password, enter the new password. Once the password is entered, the right-handed vector joystick or press [#] key to confirm the new password entered.



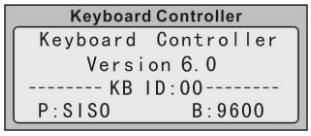
Choose 〖Confirm〗 entry operator to re-enter the new password to confirm. Once the password is entered, the right-handed vector joystick or press [#] key to confirm re-enter the new password.



3. Analog keyboard connect to digital matrix;

(1) Start running:

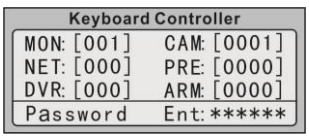
With a 12V DC power supply via the interface box and 8-core flat cable power supply, RS485 and RS485 interfaces with digital matrix, on the box is properly connected.



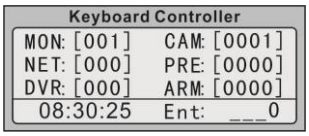
(2) when the power is turned on, the keypad displays the software version number (Ver), the keyboard number (KBID), control protocol (P),the communication rate (B) and other information. After a while the information display keyboard to enter the normal operating state.

(3) When entering numeric keypad in a normal operating state, slightly longer hold the number [0] key, you can clear the numbers. When more than four figures will be cleared automatically, and displays the new digital input.

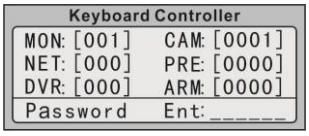
(4) Keyboard Login: power, keyboard and display information after a while, the keyboard displays "Password" prompt enter the operator password. Enter the password (original password 000000), press [⏏] key.



If the password is incorrect, the data display area prompted to re-enter your password; if the password is correct, the display will show the system time monitoring host or "Keyboard".



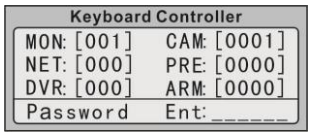
(5) Keyboard Logout: After keyboard operation, in order to prevent the unlawful operation, press [ ] Key keyboard into operation protection status (log off the user), a keyboard screen status display shows "Password."



4. The window, select the camera

[MON] select key window, select the window number, then press [MON] key, you can select the button for the window;

[CAM] key for the input source (camera) select key, first select the input source number, then press [CAM] key, you can select the input source.



5. Switch images

First select the window image you want to switch: input window number numeric keys, then press [MON] key;

To switch to select the input source (camera) numbers numeric keys, then press the keyboard [CAM] key to transforming the input source is switched to decode the window display;

The display of the camera No. 11 to No. 2 video window, the key sequence is: [2], [MON], [11], [CAM].

6. Split (Split) window

First select the required split window: Enter the window number numeric keys, then press [MON] key.

Then enter the number of lines needed after the split window, press the start key division [ ].

Then enter the number of columns need to split the window, press the End key division [ ].

As the No. 3 window split into 2 rows and 8 small window 4, the order of the buttons as follows: [3], [MON], [2], [ ], [4], [ ].

7. Splicing (consolidated) window

First select the window you need to merge the top left corner of the window: Enter the window number numeric keys, press the fight screen (consolidated) start key [ ].

Then select the window you need to merge the lower right corner of the window: Enter the window number numeric keys, then fight screen (consolidated) End key [ ].

As all the windows between the No. 2 to 6 were combined, the key sequence is: [2], [ ], [6], [ ].

8. Splice, split, PIP, roaming.

9. Retrieval mode

No digital press mode key, then press the mode key [ ], Such as calling No. 9 mode, the key sequence is [9], [ ].

10. PTZ control

First select window number, numeric input window number key and press [MON] key, so that corresponding to the input source device PTZ this window can be controlled by the keyboard. As joystick can control PTZ up and down, left and right rotation operation.

II. The network controls the digital numeric keypad matrix (see the numeric keypad instructions)