



# IVR-195

UHD 4K media H.264 encoder

User Manual



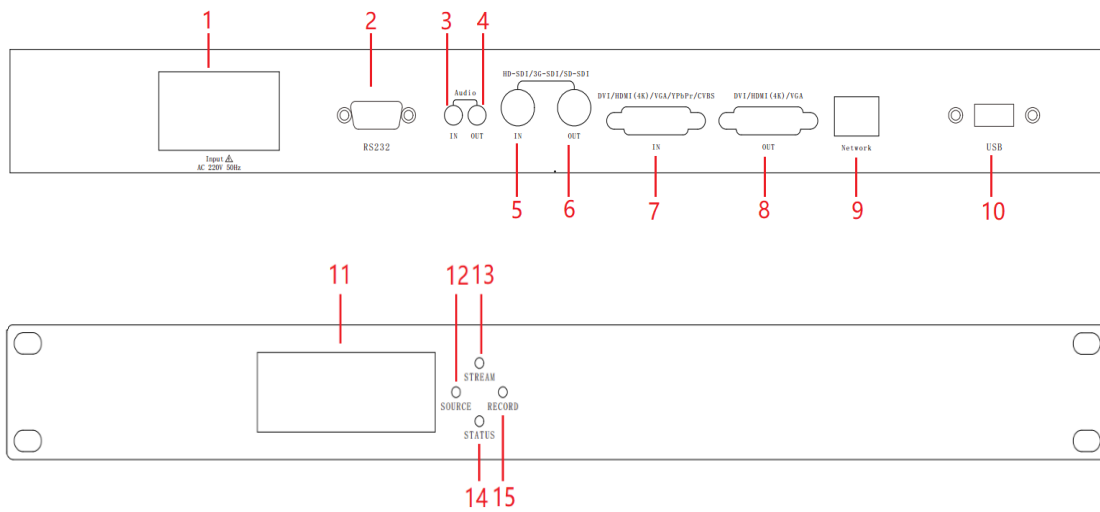
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# Catalog

<b>1</b>	<b>Introduction and description of product appearance</b>	<b>3</b>
<b>2</b>	<b>Live, Record, On Demand</b>	<b>4</b>
2.1	User login:	4
2.2	Live broadcast	4
2.3	Record	5
<b>3</b>	<b>Setting</b>	<b>6</b>
3.1	System setup	6
3.1.1	Network configuration	7
3.1.2	Disk management	8
3.1.3	Network Flow Configuration	10
3.1.4	System configuration	13
3.1.5	User management	16
3.1.6	Online upgrade	16
3.2	Each route configuration	17
3.3	Broadcasting related settings	21
3.3.1	Display mode selection	23
3.3.2	Picture in picture	23
3.3.3	Caption overlay	24
3.3.4	Logo	25
3.3.5	Titles and ends	26
<b>4</b>	<b>Touch screen usage</b>	<b>26</b>
<b>5</b>	<b>SDK interface</b>	<b>26</b>

# 1 Introduction and description of product appearance

## 1.1 Introduction and description of front and rear panel of IVR-195 products:



**Table 1.2 Functional description of front and rear panels**

Serial number	Name	Explain
1	Power Supply	220V AC power input, switch with red light, turn on and turn off.
2	RS232 serial port	RS232 serial port, which can be configured as network transparent serial port or local serial port through software
3	Audio input	Audio In is connected with 3.5 stereo input;
4	Audio output	Audio Out connects 3.5 stereo output;
5	SDI in	Second SDI Input
6	SDI out	Second SDI Relay Output (Loop Output)
7	DVI/HDMI(4K)/VGA /YPbPr/CVBS IN	The first video input can support five types of signal input: DVI/HDMI(4K)/VGA/YPbPr/CVBS
8	DVI/HDMI(4K)/VGA OUT	Video output
9	Mesh port	100M/1000M adaptive network port, two lights are Link lamp and Data lamp.
10	Usb3.0	External Mobile Hard Disk or U Disk (Capacity Requirement >= 16G) USB3.0 Interface
11	Display	Display recording status and IP
12	SOURCE	Retain
13	STREAM	Retain
14	STATUS	Status update
15	RECORD	Control recording start and stop

## 2 Live, Record, On Demand

### 2.1 User login:

- Administrators: In the upper right corner of the general user page, the administrator can log in and press the button to enter or directly input the IP of the integrated recording and broadcasting machine. Default ip: **192.168.18.34** Account **admin** / no password.
- **General users:** Input: http://192.168.18.34:8080 in browser, accessible to general user pages, user name and password please contact the administrator; default ip: **192.168.18.34**

Note: General users need to add 8080 port, administrator is directly 80 port. Administrator pages only have recording and setting buttons, and ordinary users can only watch live and on demand.

Note: English User, please Enter admin and set English Language In the upper right corner.

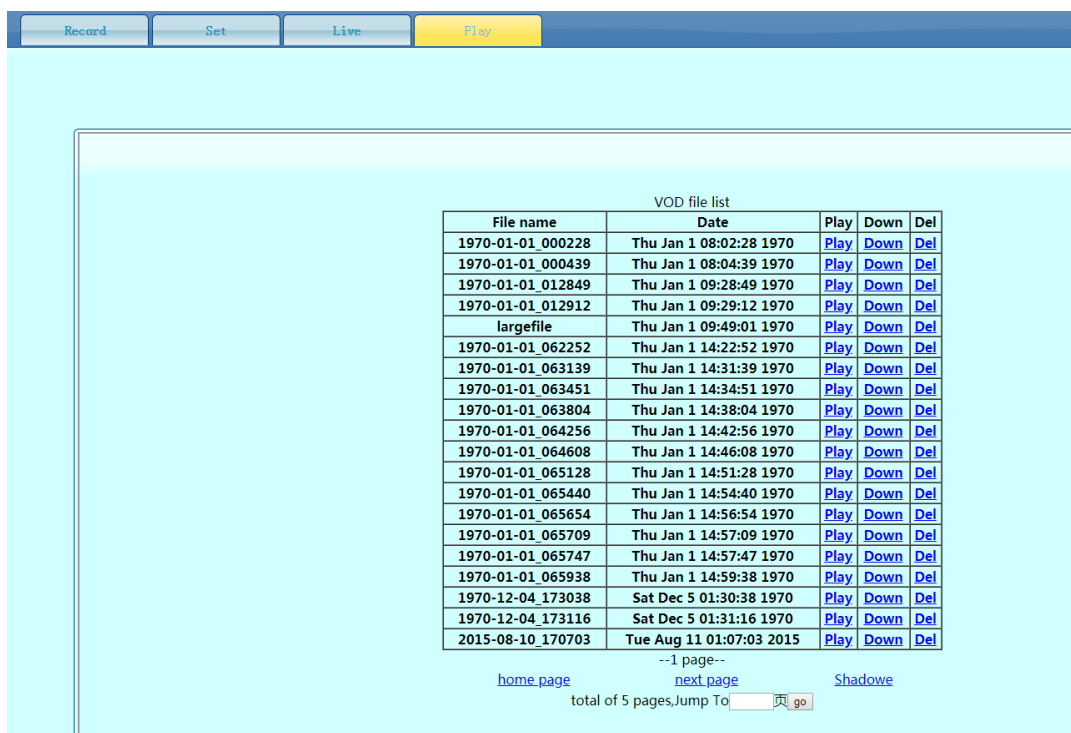
### 2.2 Live broadcast

- **RTMP live broadcast:**

Click the button as follows to watch live broadcasting. Browsers need Flash support to watch:



Click on the button below the viewing page to switch to every channel or broadcast stream.

A screenshot of a web interface showing a "VOD file list". At the top, there is a navigation bar with buttons for "Record", "Set", "Live", and "RTMP". Below this is a large light blue area containing a table of files. The table has columns for "File name", "Date", "Play", "Down", and "Del". Below the table, there are navigation controls including "home page", "next page", "Shadowe", and a "total of 5 pages, Jump To" section with a "页 go" button.

File name	Date	Play	Down	Del
1970-01-01_000228	Thu Jan 1 08:02:28 1970	<a href="#">Play</a>	<a href="#">Down</a>	<a href="#">Del</a>
1970-01-01_000439	Thu Jan 1 08:04:39 1970	<a href="#">Play</a>	<a href="#">Down</a>	<a href="#">Del</a>
1970-01-01_012849	Thu Jan 1 09:28:49 1970	<a href="#">Play</a>	<a href="#">Down</a>	<a href="#">Del</a>
1970-01-01_012912	Thu Jan 1 09:29:12 1970	<a href="#">Play</a>	<a href="#">Down</a>	<a href="#">Del</a>
largefile	Thu Jan 1 09:49:01 1970	<a href="#">Play</a>	<a href="#">Down</a>	<a href="#">Del</a>
1970-01-01_062252	Thu Jan 1 14:22:52 1970	<a href="#">Play</a>	<a href="#">Down</a>	<a href="#">Del</a>
1970-01-01_063139	Thu Jan 1 14:31:39 1970	<a href="#">Play</a>	<a href="#">Down</a>	<a href="#">Del</a>
1970-01-01_063451	Thu Jan 1 14:34:51 1970	<a href="#">Play</a>	<a href="#">Down</a>	<a href="#">Del</a>
1970-01-01_063804	Thu Jan 1 14:38:04 1970	<a href="#">Play</a>	<a href="#">Down</a>	<a href="#">Del</a>
1970-01-01_064256	Thu Jan 1 14:42:56 1970	<a href="#">Play</a>	<a href="#">Down</a>	<a href="#">Del</a>
1970-01-01_064608	Thu Jan 1 14:46:08 1970	<a href="#">Play</a>	<a href="#">Down</a>	<a href="#">Del</a>
1970-01-01_065128	Thu Jan 1 14:51:28 1970	<a href="#">Play</a>	<a href="#">Down</a>	<a href="#">Del</a>
1970-01-01_065440	Thu Jan 1 14:54:40 1970	<a href="#">Play</a>	<a href="#">Down</a>	<a href="#">Del</a>
1970-01-01_065654	Thu Jan 1 14:56:54 1970	<a href="#">Play</a>	<a href="#">Down</a>	<a href="#">Del</a>
1970-01-01_065709	Thu Jan 1 14:57:09 1970	<a href="#">Play</a>	<a href="#">Down</a>	<a href="#">Del</a>
1970-01-01_065747	Thu Jan 1 14:57:47 1970	<a href="#">Play</a>	<a href="#">Down</a>	<a href="#">Del</a>
1970-01-01_065938	Thu Jan 1 14:59:38 1970	<a href="#">Play</a>	<a href="#">Down</a>	<a href="#">Del</a>
1970-12-04_173038	Sat Dec 5 01:30:38 1970	<a href="#">Play</a>	<a href="#">Down</a>	<a href="#">Del</a>
1970-12-04_173116	Sat Dec 5 01:31:16 1970	<a href="#">Play</a>	<a href="#">Down</a>	<a href="#">Del</a>
2015-08-10_170703	Tue Aug 11 01:07:03 2015	<a href="#">Play</a>	<a href="#">Down</a>	<a href="#">Del</a>

At the same time, it can manage file operation by on-demand, download and delete. VOD is the main stream of video recordings. Generally, the image resolution and bit rate are high. If you think of Carton, please download and play. Each route is in standard mp4 format, which can be directly imported into HD non-editing software for post-production.

## 2.3 Record

Click on recording, you can record management, click on the view status, you can know whether the recording host is recording, the following picture is the picture being recorded:



Click Stop, you can stop, stop files will be generated.

The last item in the VOD list is the latest recording, which can be viewed by clicking.

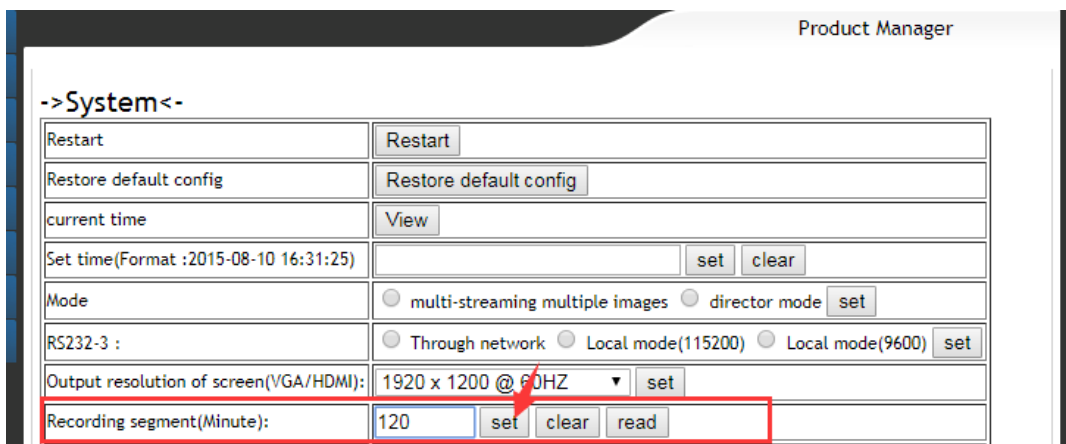
**Note: Loop coverage and automatic segmentation are enabled by default.**

When the available space of local hard disk is less than 4 byte, the oldest files will be deleted automatically to ensure that the hard disk has available space. If the recorded file is very important, please download a copy of the saved file from the VOD list after the recording is completed.

Automatic segmentation means that every 120 minutes after recording, a recording directory will be generated again. Once the click recording starts, the device will record all the time.

**Note: If you do not turn off the power directly in the recording state, stop the operation at the touch screen/serial port or browser midpoint, the file being recorded will be generated.**

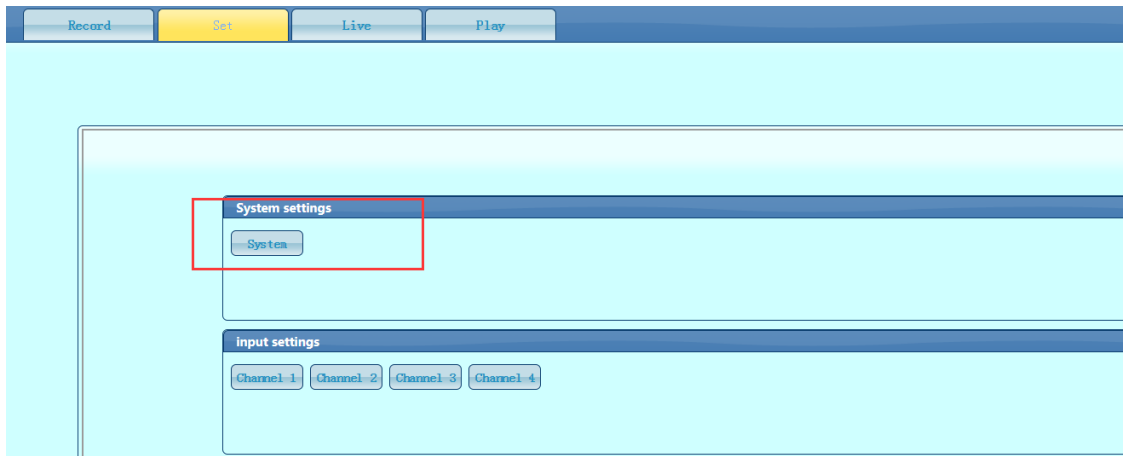
Note: Automated time division can be set arbitrarily. The default is 120 minutes. The setting method is as follows:



System -> System Settings -> Recording Segments. Click Read to view the current configuration. Click Set to set new Segments, Unit Segments.

### 3 Setting

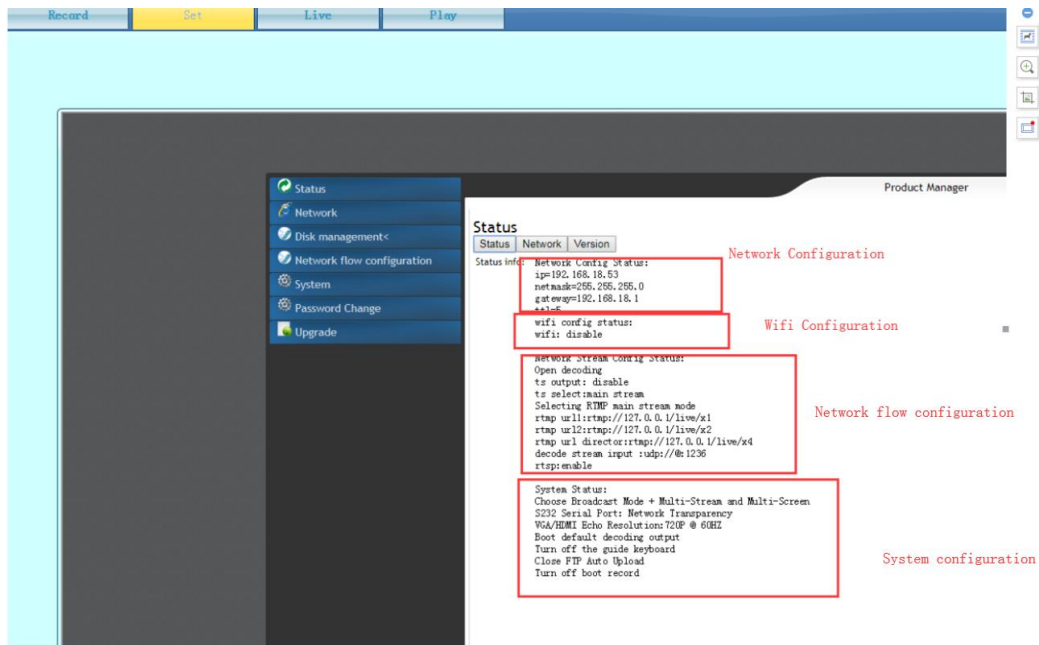
Enter the Administrator Page of the Recording and Broadcasting Unit -> Settings Enter the Configuration Interface:



#### 3.1 System setup

With regard to system configuration, point settings -> System -> running status can view system information about configuration, network and version.

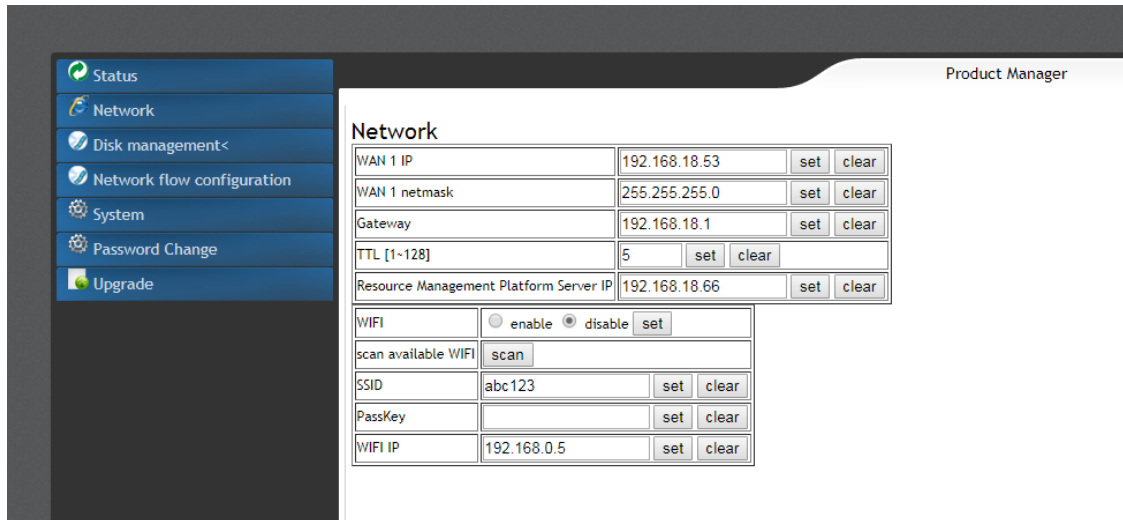
As shown in the following figure, point system -> running state -> configuration to view the current configuration:



The following is a detailed description of the system configuration:

### 3.1.1 network configuration

Netport (default:192.168.18.34)



- **Change configuration requires point system settings - > reboot button to take effect. View the running status of key points - > configuration button.**

- **Use of Wifi:**

Access to USB wifi, click the scan button to view the currently connected wifi, SSID to fill in the name of the connected wifi, passkey to be the password of the connected wifi, and WiFi IP to be set as the IP of the integrated recording and broadcasting machine. Note that this IP should be in the same network segment as WiFi (see the IP segment of the router that knows wifi) and can not be consistent with the network segment of gateway 1.

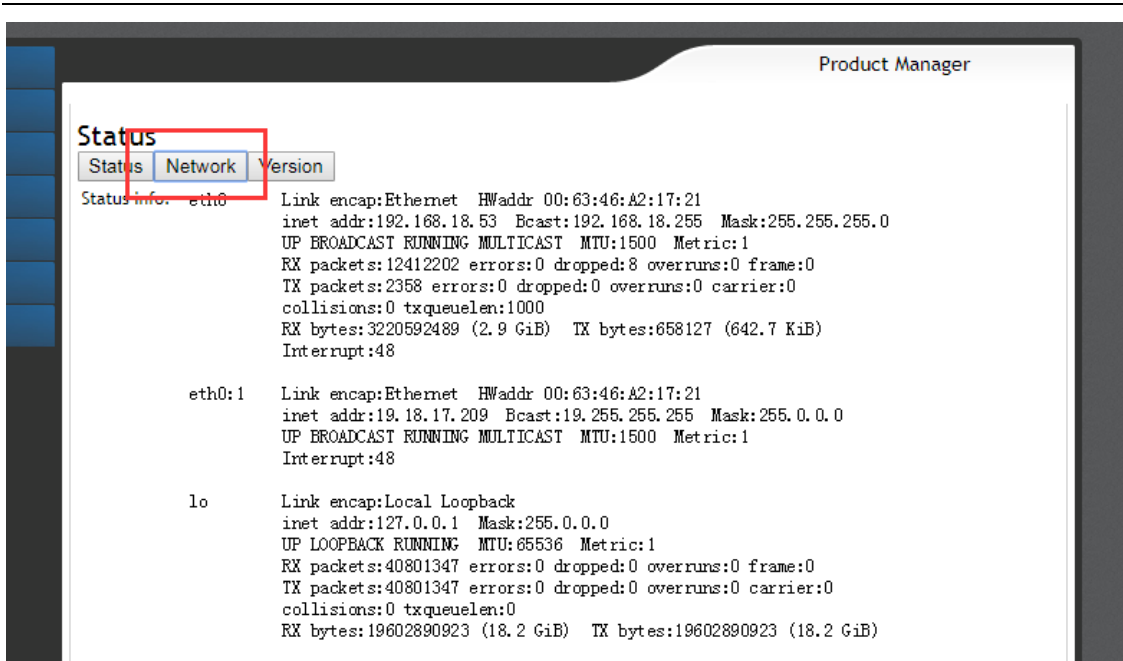
- **Forget how to deal with encoder IP**

Accessed with 19.18.17.209, the configuration can be checked by running status - > configuration. This IP can not be changed.

- **View the current working IP address**

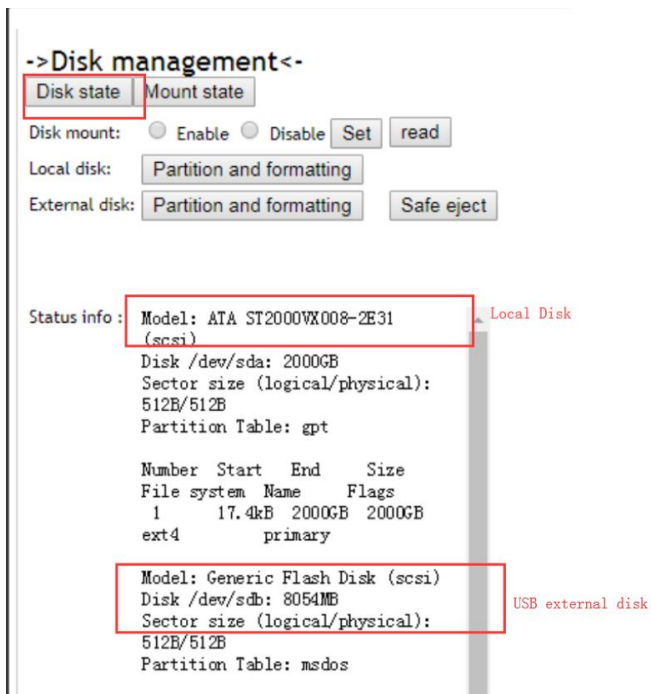
Eth0 corresponds to the IP of the first network port, you can see the MAC address, send and receive packets.

Eth0:1 corresponds to the default IP (19.18.17.209), this IP can not be modified, forget that IP can use this IP to log on to the web page



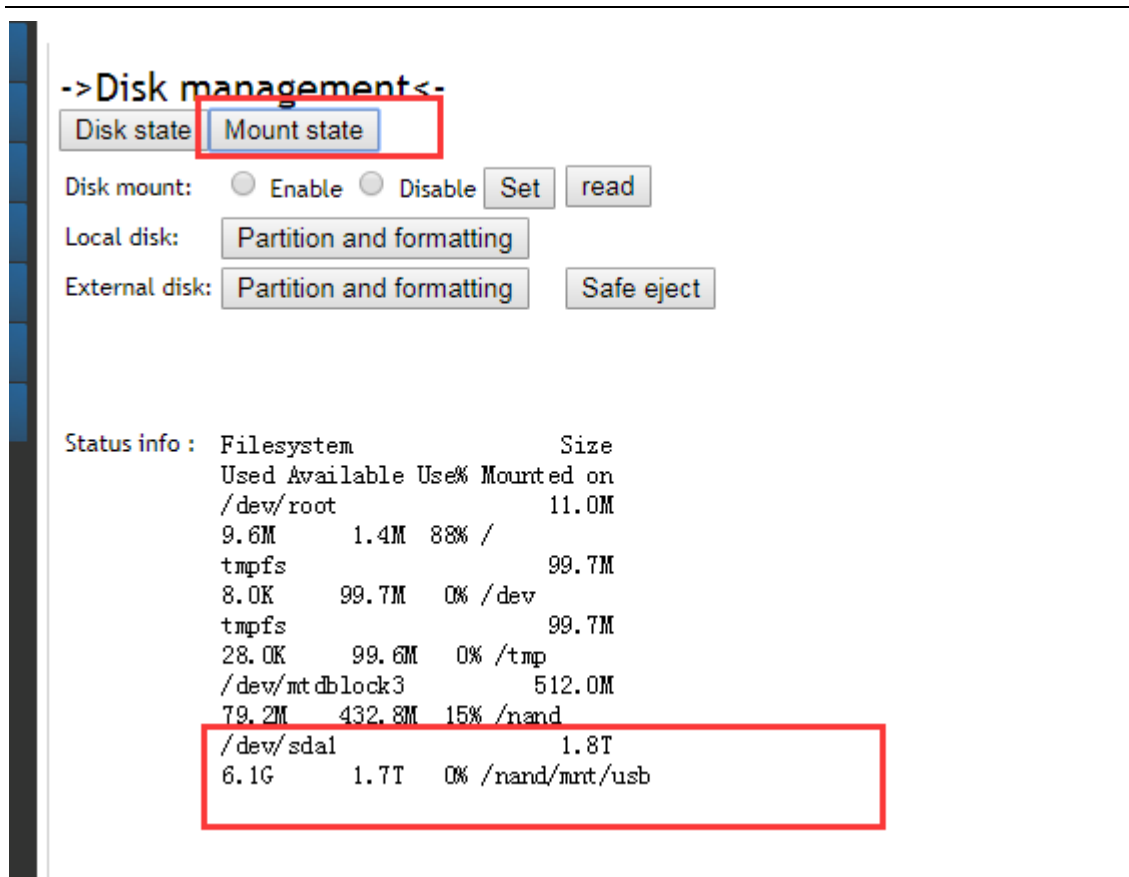
### 3.1.2 Disk management

- Equipment Definition:
  - SATA interface is called local disk, which is usually fixed inside the device.
  - USB interface accesses external disks, usually U disks or mobile hard disks.
- To check the status of the hard disk, confirm that the hard disk recognition is normal:



- Check the mount status to confirm whether the mount is normal:

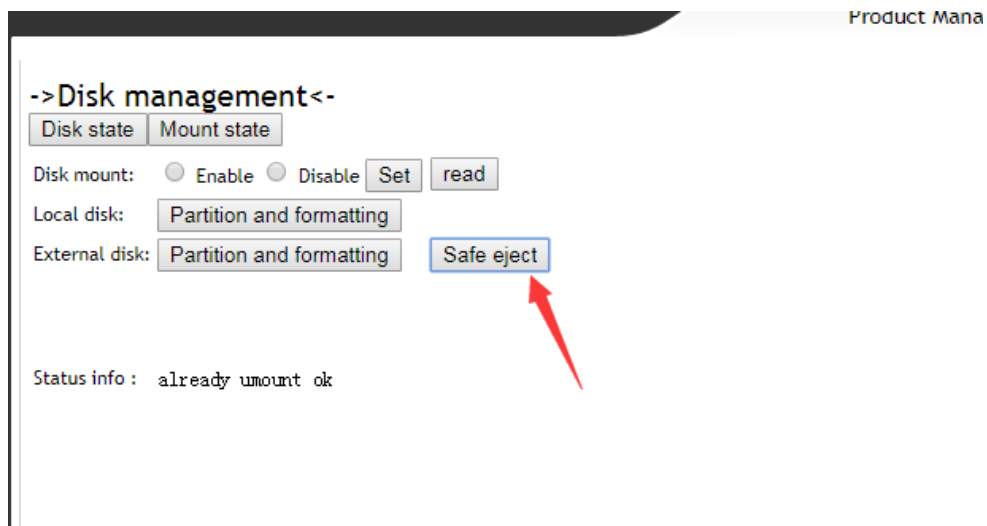




If the mount is successful, you can record it. The above is a screenshot of the successful mount  
 If the mount is unsuccessful, you need to format the disk

After recording stops, unplug the USB external disk:

You can point the safe pop-up button and pull it out when the status returns to ok.

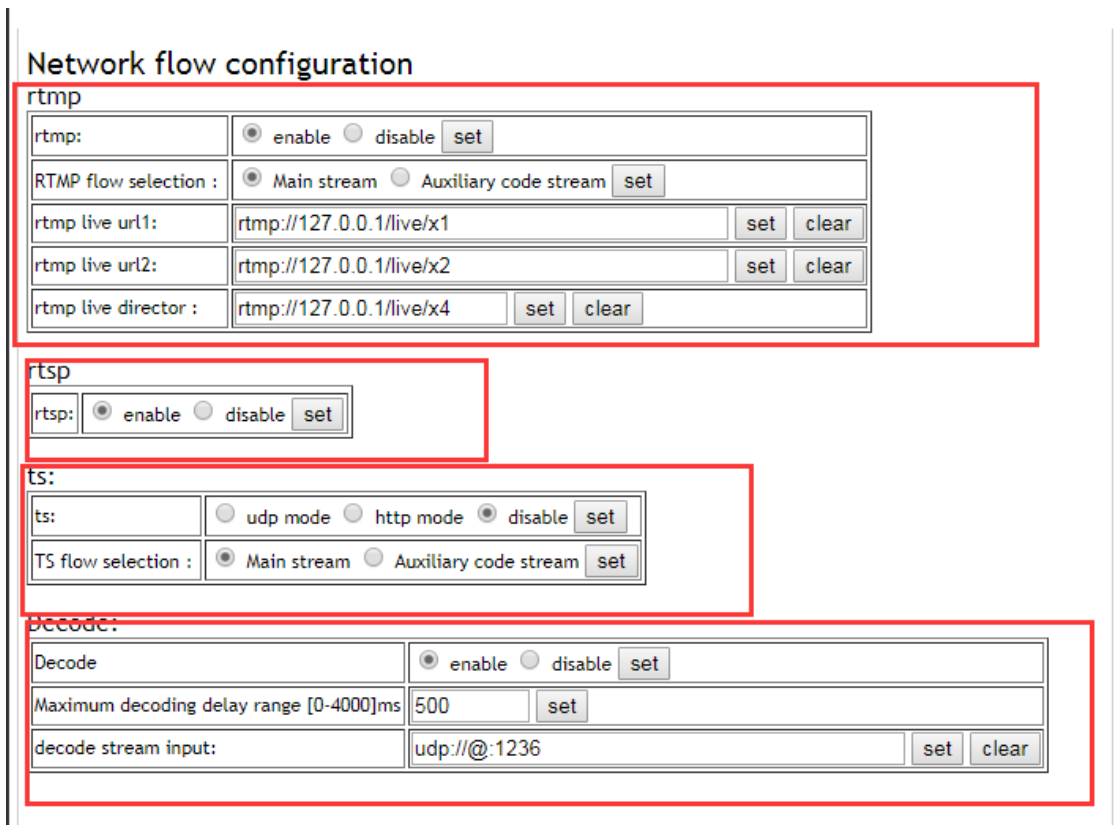


If you want to unplug a pop-up, you need to wait 45 seconds after the recording stops.  
 Otherwise, it is possible that the file will be damaged.

- Open the disk mount and use it. The default configuration is to turn it on. If you don't need it, click Close.



### 3.1.3 Network Flow Configuration



#### 3.1.3.1 rtmp:

**RTMP stream selection:** Main stream and auxiliary stream. (You can choose to push the mainstream or auxiliary stream).

**rtmp live url1, 2, 3, 4:** Every RTMP push address must be configured differently.

**External RTMP server:** Fill in the complete path of RTMP directly. For example, the IP of the computer installed with FMS is 192.168.18.120. Fill in rtmp://192.168.18.120/live/ch1, 2, 3, 4 and push four streams to the server.

Use the internal RTMP server function: please change the stream address IP to 127.0.0.1 internal ip.

### 3.1.3.2 RTSP configuration:

In the system - > video output configuration - > RTSP can be turned on. Rtp Stream Address: (Password password is the password of web page login, this password can be modified, IP is the IP of the integrated recording and broadcasting machine), can be played directly by tools such as CMS software or vlc, supporting multi-user concurrency.

Channel 1

Mainstream rtsp://admin:password@ip:8554 with 2 for each subsequent port

Auxiliary stream rtsp://admin:password@ip:8555 (after each port plus 2, mainstream port + 1)

Guided broadcast stream

Mainstream rtsp://admin:password@ip:8558

Auxiliary stream rtsp://admin:password@ip:8563 (mainstream port+1)

Note: RTsp transmission is sent in UDP mode by default. For public network transmission, use RTSP over TCP to transfer only one port with tcp. Vlc playback Please add - RTSP - TCP parameter, ffmpeg Please add - rtsp\_transport tcp; decode yourself after the stream address add? TCP;

### 3.1.3.3 TS flow configuration:

- Ts stream output can choose primary or secondary stream. Ts stream output mode, you can choose HTTP or UDP mode, you can also disable.

TS stream HTTP mode Ts Select HTTP mode live address

Channel 1: http://192.168.18.34:10000/1

Channel 2: http://192.168.18.34:10000/2

Channel 3: http://192.168.18.34:10000/3

Channel 4: http://192.168.18.34:10000/4

Guided broadcast stream: http://192.168.18.34:10000/5

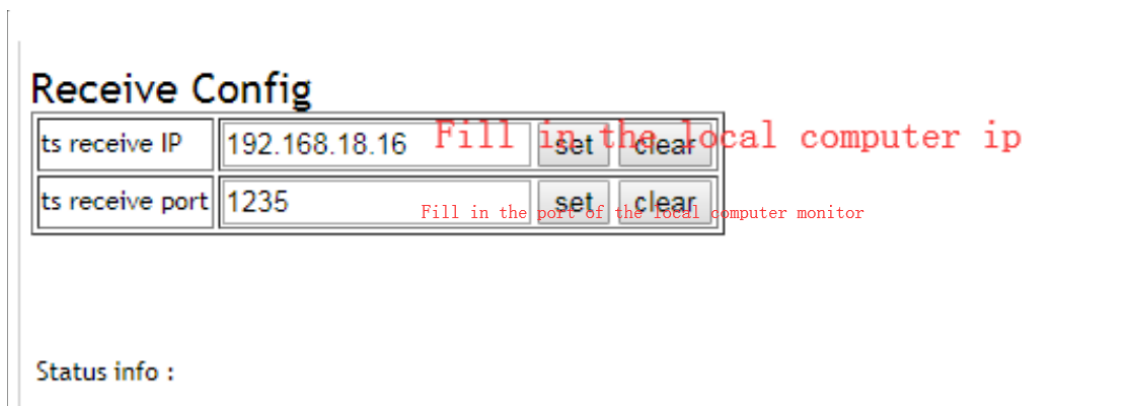
192.168.18.34 is the IP address of the integrated recording and broadcasting machine.

1-2 is the first and second channel, the pilot stream is 3.

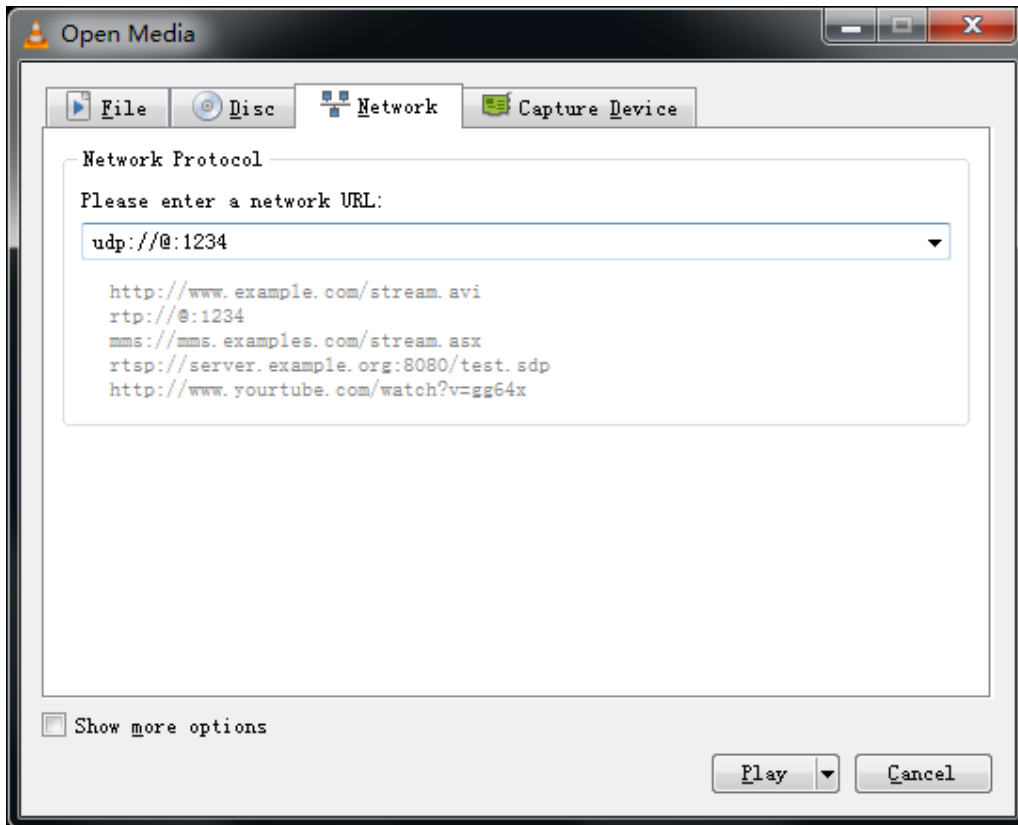
- TS stream UDP mode

1) Take the first route as an example, the receiver configuration:

TS receiver ip: fill in the IP of the computer to view the image, TS receiver port: the IP port of the computer to view the image (default 1234)



2) Open network stream in VLC, enter udp://@: port (default udp://@: 1234), no VLC can download one online. Computer IP and port must match to see, as follows:



UDP - TS mode supports not only unicast but also multicast

For example, the receiver of TS stream fills in 239.1.1.1 multicast and `udp://@239.1.1.1:1234` when broadcasting, but it must add @ or it can not be broadcasted, and the gateway of the recording and broadcasting integrated machine needs a network segment of your computer before multicast can be sent out.

### 3.1.3.4 Decode:

Decode:

Decode	<input checked="" type="radio"/> enable <input type="radio"/> disable <input type="button" value="set"/>
Maximum decoding delay range [0-4000]ms	500 <input type="button" value="set"/>
decode stream input:	udp://@:1234 <input type="button" value="set"/> <input type="button" value="clear"/>

1) The address of the stream to be solved is filled in the decode stream input, and the decoding delay is recommended to be 500 ms.

**Note:** When decoding is turned on, the input point set button of decoding stream will be replayed in real time.

2) If decoding RTSP stream, add TCP parameter to cross public network or ensure quality decoding, at this time only one port transport stream is occupied.

3) Support RTSP / UDP RTSP / TCP TS / HTTP TS / RTMP stream decoding, please use VLC / ffmpeg and other tools to test the stream playback ok, then fill in the stream address, check the current configuration please point to run status -> configuration acquisition.

### 3.1.4 System configuration

#### 3.1.4.1 System setup

System	
Restart	<input type="button" value="Restart"/>
Restore default config	<input type="button" value="Restore default config !!"/>
current time	<input type="button" value="View"/>
Set time(Format :2015-08-10 16:31:25)	<input type="text" value="2015-08-10 16:31:25"/> <input type="button" value="set"/> <input type="button" value="Synchronize browser time"/> <input type="button" value="clear"/>
Mode	<input type="radio"/> multi-streaming multiple images <input type="radio"/> director mode <input checked="" type="radio"/> multi-streaming multiple images + director mode <input type="button" value="set"/>
RS232-3 :	<input checked="" type="radio"/> Through network <input type="radio"/> Local mode(115200) <input type="radio"/> Local mode(9600) <input type="button" value="set"/>
Output resolution of screen(VGA/HDMI):	VGA/HDMI display ▼ 1080P @ 60HZ ▼ <input type="button" value="set"/>
Recording segment(Minute):	<input type="text" value="120"/> <input type="button" value="set"/> <input type="button" value="clear"/> <input type="button" value="read"/>
FTP	<input type="radio"/> enable <input checked="" type="radio"/> disable <input type="button" value="set"/> <input type="button" value="View the current FTP configuration"/>
FTP IP:	<input type="text" value="192.168.18.88"/> <input type="button" value="set"/> <input type="button" value="clear"/>
FTP Upload File Storage Directory:	<input type="text" value="ftp"/> <input type="button" value="set"/> <input type="button" value="clear"/>
FTP port:	<input type="text" value="21"/> <input type="button" value="set"/> <input type="button" value="clear"/>
FTP account:	<input type="text" value="admin"/> <input type="button" value="set"/> <input type="button" value="clear"/>
FTP password:	<input type="text"/> <input type="button" value="set"/> <input type="button" value="clear"/>
H264 encoder Profile	<input checked="" type="radio"/> High <input type="radio"/> Main <input type="radio"/> Baseline <input type="button" value="set"/>
Boot record:	<input type="radio"/> enable <input checked="" type="radio"/> disable <input type="button" value="set"/>

Restart: Restart (this can also be done on the touch screen)

Return to factory: Return to factory configuration for all configurations (this can also be done on the touch screen)

View time: current time

Setting time: Please follow the format of 2015-08-1016:31:25, otherwise it will not be successful, you can also synchronize browser time;

System Settings -> Mode Selection

**Multi-stream and multi-screen mode:**

This mode records only 1-4 routes, and does not record directed streams.

**Broadcasting mode:**

Through the local touch screen/serial port/remote TCP command/webpage broadcasting press button to send the broadcasting command, real-time switching 1,2,3,4 single screen full-screen/composite screen/decode six kinds of signal output. This mode only records directed streams.

**Broadcast + Multi-Stream and Multi-Screen Mode:**

**This mode records every channel and broadcast stream. Recording generates five recording files (default selection of this mode)**

#### 3.1.4.2 VGA / HDMI display

Click Settings -> System Settings -> VGA / HDMI Echo Resolution Settings on the home page to set the output resolution of VGA / HDMI interface.

## System

Restart	<input type="button" value="Restart"/>
Restore default config	<input type="button" value="Restore default config !!"/>
current time	<input type="button" value="View"/>
Set time(Format :2015-08-10 16:31:25)	<input type="text" value="2015-08-10 16:31:25"/> <input type="button" value="set"/> <input type="button" value="Synchronize browser time"/> <input type="button" value="clear"/>
Mode	<input type="radio"/> multi-streaming multiple images <input type="radio"/> director mode <input checked="" type="radio"/> multi-streaming multiple images + director mode <input type="button" value="set"/>
RS232-3 :	<input checked="" type="radio"/> Through network <input type="radio"/> Local mode(115200) <input type="radio"/> Local mode(9600) <input type="button" value="set"/>
Output resolution of screen(VGA/HDMI):	VGA/HDMI display ▼ 1080P @ 60HZ ▼ <input type="button" value="set"/>
Recording segment(Minute):	<input type="text" value="120"/> <input type="button" value="set"/> <input type="button" value="clear"/> <input type="button" value="read"/>
FTP	<input type="radio"/> enable <input checked="" type="radio"/> disable <input type="button" value="set"/> <input type="button" value="View the current FTP configuration"/>
FTP IP:	<input type="text" value="192.168.18.88"/> <input type="button" value="set"/> <input type="button" value="clear"/>
FTP Upload File Storage Directory:	<input type="text" value="ftp"/> <input type="button" value="set"/> <input type="button" value="clear"/>
FTP port:	<input type="text" value="21"/> <input type="button" value="set"/> <input type="button" value="clear"/>
FTP account:	<input type="text" value="admin"/> <input type="button" value="set"/> <input type="button" value="clear"/>
FTP password:	<input type="text"/> <input type="button" value="set"/> <input type="button" value="clear"/>
H264 encoder Profile	<input checked="" type="radio"/> High <input type="radio"/> Main <input type="radio"/> Baseline <input type="button" value="set"/>
Boot record:	<input type="radio"/> enable <input checked="" type="radio"/> disable <input type="button" value="set"/>

There are three modes: dual display, HDMI and VGA output separately; HDMI 4K only supports HDMI output separately;

### 3.1.4.3 RRS32-3 Serial Port Mode

## System

Restart	<input type="button" value="Restart"/>
Restore default config	<input type="button" value="Restore default config !!"/>
current time	<input type="button" value="View"/>
Set time(Format :2015-08-10 16:31:25)	<input type="text" value="2015-08-10 16:31:25"/> <input type="button" value="set"/> <input type="button" value="Synchronize browser time"/> <input type="button" value="clear"/>
Mode	<input type="radio"/> multi-streaming multiple images <input type="radio"/> director mode <input checked="" type="radio"/> multi-streaming multiple images + director mode <input type="button" value="set"/>
RS232-3 :	<input checked="" type="radio"/> Through network <input type="radio"/> Local mode(115200) <input type="radio"/> Local mode(9600) <input type="button" value="set"/>
Output resolution of screen(VGA/HDMI):	VGA/HDMI display ▼ 1080P @ 60HZ ▼ <input type="button" value="set"/>
Recording segment(Minute):	<input type="text" value="120"/> <input type="button" value="set"/> <input type="button" value="clear"/> <input type="button" value="read"/>
FTP	<input type="radio"/> enable <input checked="" type="radio"/> disable <input type="button" value="set"/> <input type="button" value="View the current FTP configuration"/>
FTP IP:	<input type="text" value="192.168.18.88"/> <input type="button" value="set"/> <input type="button" value="clear"/>
FTP Upload File Storage Directory:	<input type="text" value="ftp"/> <input type="button" value="set"/> <input type="button" value="clear"/>
FTP port:	<input type="text" value="21"/> <input type="button" value="set"/> <input type="button" value="clear"/>
FTP account:	<input type="text" value="admin"/> <input type="button" value="set"/> <input type="button" value="clear"/>
FTP password:	<input type="text"/> <input type="button" value="set"/> <input type="button" value="clear"/>
H264 encoder Profile	<input checked="" type="radio"/> High <input type="radio"/> Main <input type="radio"/> Baseline <input type="button" value="set"/>
Boot record:	<input type="radio"/> enable <input checked="" type="radio"/> disable <input type="button" value="set"/>

Status info :

---

RS232-3 serial port can use network transparent serial port (default) or local serial mode.

➤ Network Transparent Serial Port Represents Accessing Device TCP 3002 Port to RS232-3 Serial Port (Baud Rate 9600)

Local serial mode means that access to network 3002 ports will be disabled, the data sent and received by the serial port will be connected with the recording and broadcasting machine internally, and the external serial port can send the following commands, baud rate 115200/9600 can be selected, no flow control.

Local serial mode supports the following command control:

Command list, character [start, character] end.

[BN:6]start recording

[BN:7]Record stop

[BN:10]restart

[BN:29]Reset

[BN:1]Choose the First Way for Full Screen/Guide Mode

[BN:2]Second Full Screen/Broadcast Mode Choose Second Way

[BN:3]Choose the Third Way for Full Screen/Guide Mode

[BN:4]Fourth Way Full Screen/Broadcast Mode Choose Fourth Way

[BN:5]Picture Selection in Four Pictures/Broadcast Mode

[BN:8]Guided Decoded Stream

### 3.1.4.4 Coding Format Selection (h264/h265)

When H265 coding format is selected, recording/live/on-demand is encoded in H265 format, which is the same as H264.

**Note: For the time being, only RTSP is supported for H265 network flow, and the model with S suffix has H265 coding function.**

### 3.1.4.5 FTP automatic upload

Every time a new recorded directory is generated for a period of time, the upload operation will be triggered, and only the newly generated recorded directory will be uploaded.

Using FTP function requires configuring FTP IP, FTP upload file storage path, FTP port, FTP account password.

For example:

FTP	<input type="radio"/> enable <input checked="" type="radio"/> disable	set	View the current FTP configuration
FTP IP:	192.168.18.88	set	clear
FTP Upload File Storage Directory:	ftp	set	clear
FTP port:	21	set	clear
FTP account:	admin	set	clear
FTP password:		set	clear

---

FTP IP: 192.168.18.6

FTP file save path: lubo

FTP port: 21

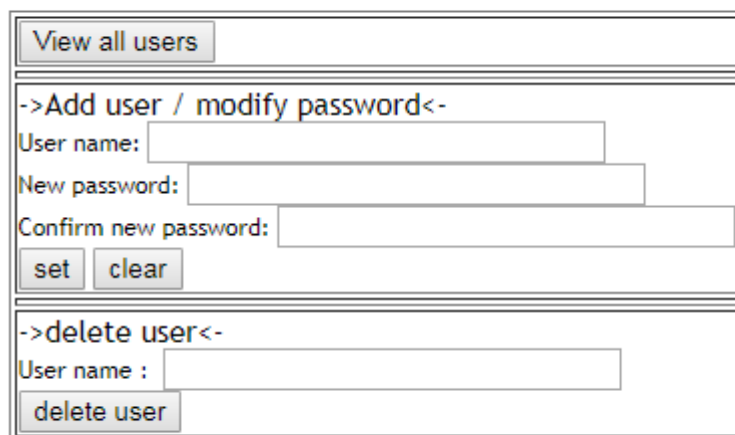
FTP account: admin

FTP password: 1234

All sets, the most important thing is to choose FTP automatic upload function must choose 'yes' FTP automatic upload function.

### 3.1.5 User management

#### Password Change



The screenshot displays a user management interface with the following elements:

- A button labeled "View all users" at the top.
- A section titled "->Add user / modify password<-" containing three input fields: "User name:", "New password:", and "Confirm new password:". Below these fields are two buttons: "set" and "clear".
- A section titled "->delete user<-" containing one input field: "User name :". Below this field is a button labeled "delete user".

Administrator has only one account admin, can modify the password, if you forget the password, please click on the touch screen panel to restore the factory settings can be restored to the factory password.

Ordinary users: general users need to visit the web page and mobile APP. Can add, delete, modify passwords, view all users and other operations.

Note that the password changes will take effect in real time. Please refresh the page.

### 3.1.6 Online upgrade

On-line upgrade please submit our special upgrade package, if submitting the wrong documents may make the equipment wrong and can only be repaired back to the factory, please operate cautiously!!!

It is generally recommended to submit with Google Browser. After successful upgrade, the following figure is shown.

Upgrade Endpoint System Settings - > Restart will take effect;



## 3.2 Each route configuration

### 3.2.1 View configuration information:

The screenshot displays the 'Channel 1 settings' interface. On the left is a navigation menu with options: Status, Video In, Video Code(Main Stream), Video Code(Second Stream), Audio, Receive Config, OSD, and Pan-Tilt. The main area is titled 'Run Status View' and contains the following configuration information:

- Video input configuration:** >>>>VGA input, Read: detect format, Video resolution: 1920x1080, 60HZ.
- Primary/secondary coding configuration:** Main stream bitrate=2000000 bit/s, Auxiliary stream bitrate=2000000 bit/s, Main frame rate choice: CBR, Auxiliary frame rate choice: CBR, Main frame flow:25, I frame interval:25.
- Audio configuration:** enable audio, 3.5 audio, Audio sampling rate:48000 Hz, Audio stream:128000 bit/s.
- TS configuration:** Receiving port configuration, TS stream receiver ip:192.168.18.16, TS stream receiver port:1235.

### 3.2.2 Video input configuration:

Signal source selection:

Each signal input can choose five signal types, VGA, DVI-D, HDMI/SDI, CVBS, YPbPr. If it is a computer, VGA or DVI-D or HDMI are usually selected. Camera/STB usually selects HDMI/YPbPr, and CVBS is selected.

The screenshot displays the 'Channel 1 settings' interface, specifically the 'Video In' configuration section. The left navigation menu is the same as in the previous screenshot. The 'Video In' section includes the following controls:

- Signal Input Source Select:** A dropdown menu currently showing 'VGA' with other options: DVI-D, HDMI, CVBS, YPbPr.
- Auto Detect Format:** Radio buttons for 'enable' (selected) and 'disable', with a 'set' button.
- Resolution format:** A dropdown menu showing '80 @ 60HZ' with a 'set' button.
- Phase adjustment:** Radio buttons for 'enable' (selected) and 'disable', with a 'set' button.
- Phase value:** A dropdown menu showing '16' with a 'set' button.
- hs/vs modify:** Input fields for 'vs' and 'hs' with 'set' and 'clear' buttons.
- Sensitive area setting:** Radio buttons for 'enable' (selected) and 'disable', with 'set' and 'clear' buttons. Includes input fields for x, y, width, and height.
- Region of interest:** Radio buttons for 'enable' (selected) and 'disable', with 'set' and 'clear' buttons. Includes input fields for x, y, width, and height.
- Status:** A button at the bottom of the section.

Note: If this is the SDI interface along the way, this option can be ignored.

Automatic Detection: Yes/No

Turn on automatic detection, boot will work according to the new detection effective signal resolution, and turn on by default.

Turning off automatic detection will only work with the resolution in the formatted list.

Note: Live plug-in signal is not recommended, there may be security risks. Change the signal source, please turn off and insert the signal before turning on.注意: If the signal source is turned on or off, the device will detect the validity or invalidity of the signal source in real time. If the signal source is invalid, the image of no video will be inserted to replace the signal source.

Note: Since the effective signal source resolution can only be detected on-line, if the effective signal source resolution needs to be replaced in the use process, please point the system settings -> restart.

It is not clear what the resolution is. It can detect and analyze the resolution of the input signal.

Note: This analysis operation is only valid if the source type is selected correctly.



Detection Information Description:

True Framerate[fps]= 60 -- Detection frame rate is 60 FPS

detect video:

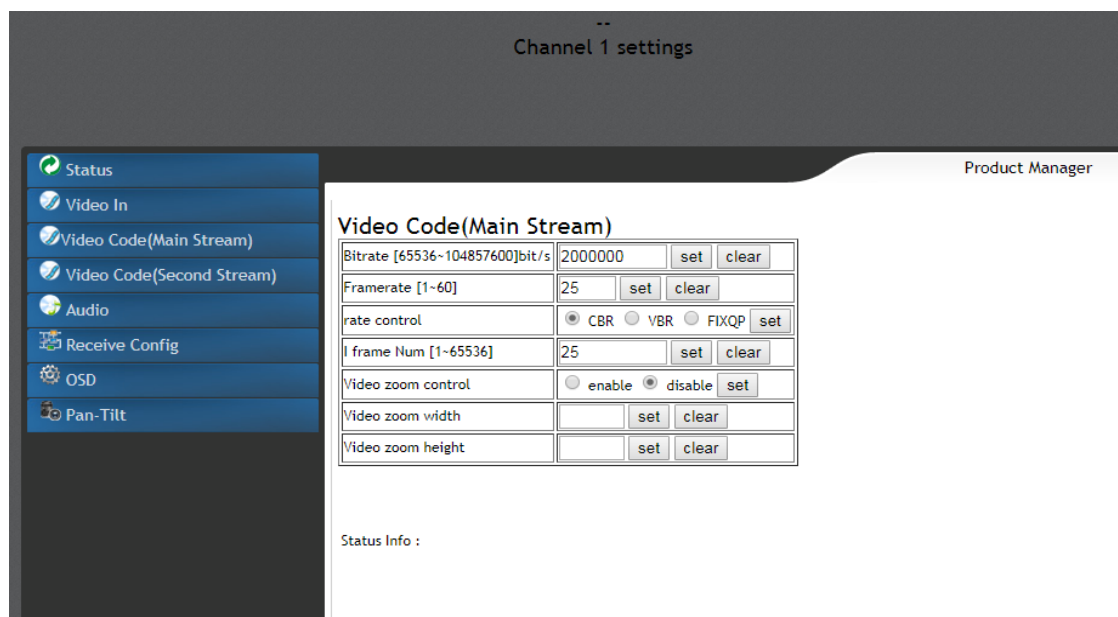
value= 1124, 5, 3378

1080P, 60hz -- Detection format

Note that in fixed format acquisition mode, the frame rate must be paired, otherwise the recorded file speed will be abnormal, such as the camera is 1080p25, must be configured to 1080p25, do not know that the frame rate can be obtained through the detection button.

### 3.2.3 Video Main and Auxiliary Bit Stream Configuration

Video main stream coding configuration and video auxiliary stream coding configuration, users can set according to their own needs.



Note: Bit stream unit is bit/s, 2000 kbps, please configure it to 2000000.

### 3.2.4 Audio configuration

Users can choose whether to encode audio, type of encoding and volume enhancement according to their needs.

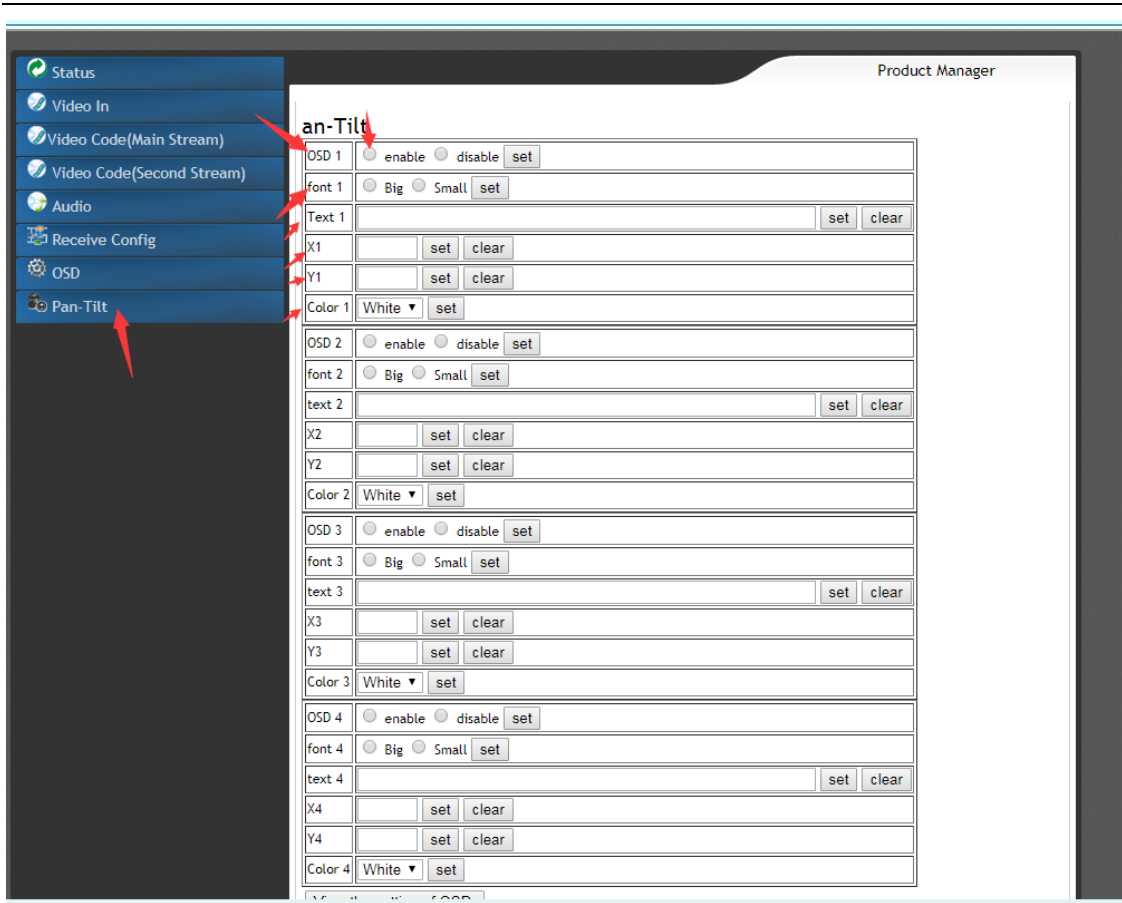
Note: The first audio corresponds to the 3.5 audio input port of the integrated recording and broadcasting machine. If you want to use digital audio, please select HDMI / SDI embedded.

For 3.5 volume enhancement, the general range is 0-30, too high may have background noise. Please adjust according to the actual situation.

### 3.2.5 Subtitle Overlay Settings

Take the first road as an example:

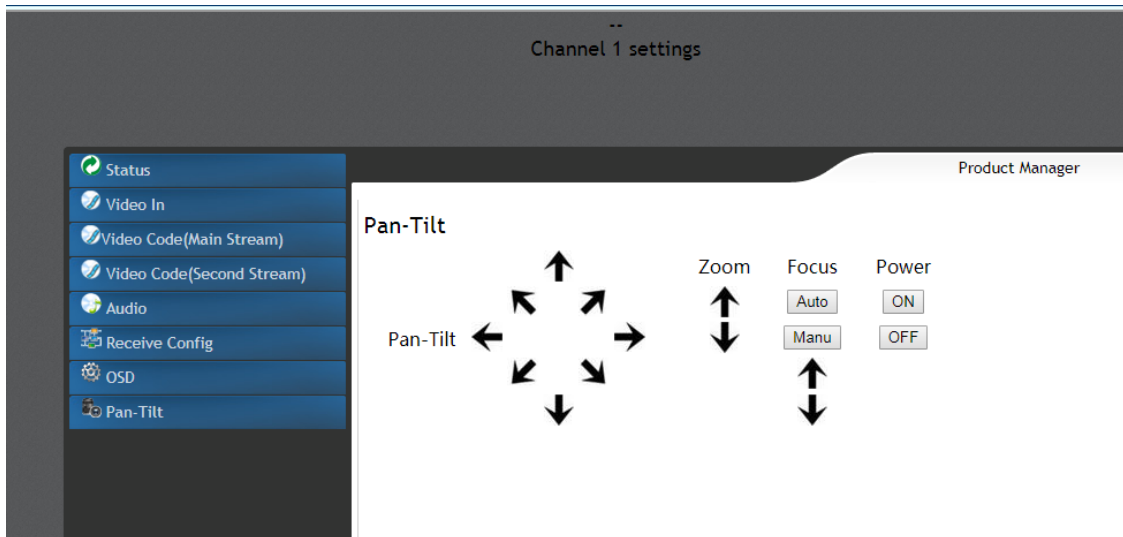
In the home page, click Settings -> First Way -> Subtitle Overlay to overlay the corresponding subtitle display in the video. Among them, font content, font coordinates, font size and color can be defined by customers themselves.



Click on the subtitle settings to view the current settings, a total of four lines, each line with five parameters as follows:

- subtitle1: disable (Enable means to open / disable means to close the first line of subtitles, a total of four lines of subtitles)
- x1:300 y1:300 (X represents transverse coordinates, Y represents longitudinal coordinates) (Four colours are preferable)
- subtitle value: First line subtitles
- lu=1 (The red caption represents the set caption information, which can be set arbitrarily.)
- font1:big (The font size can be large or small. The large font size is 48x48 and the small font size is 32x32.)

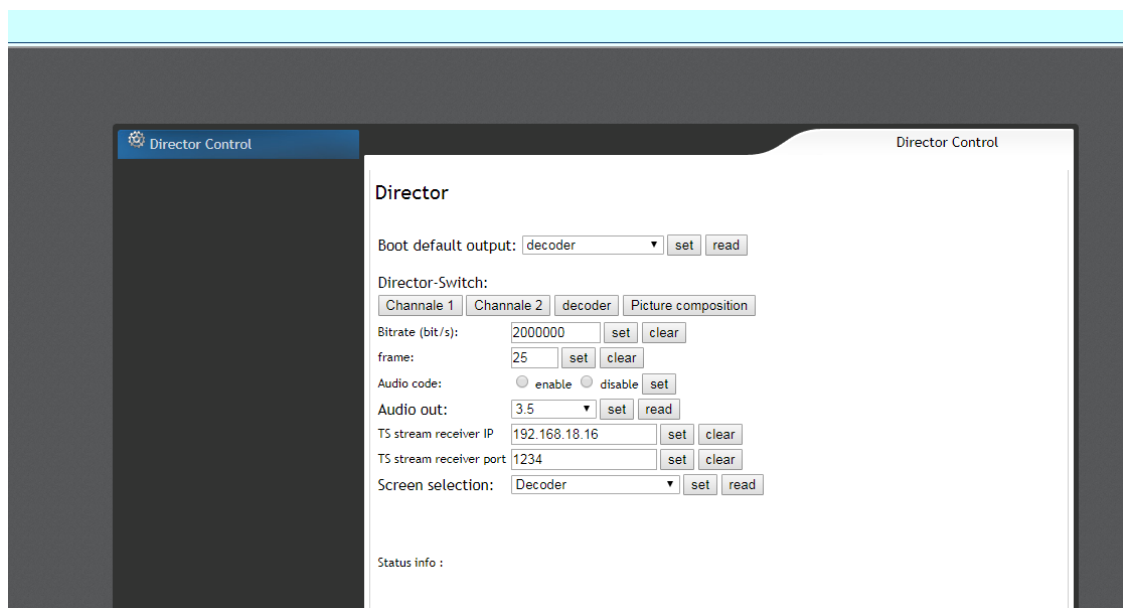
### 3.2.6 Pan tilt control



The serial ports 1, 2 and 3 on the panel correspond to the platform configuration in the first, second and third configuration respectively.

## 3.3 Broadcasting related settings

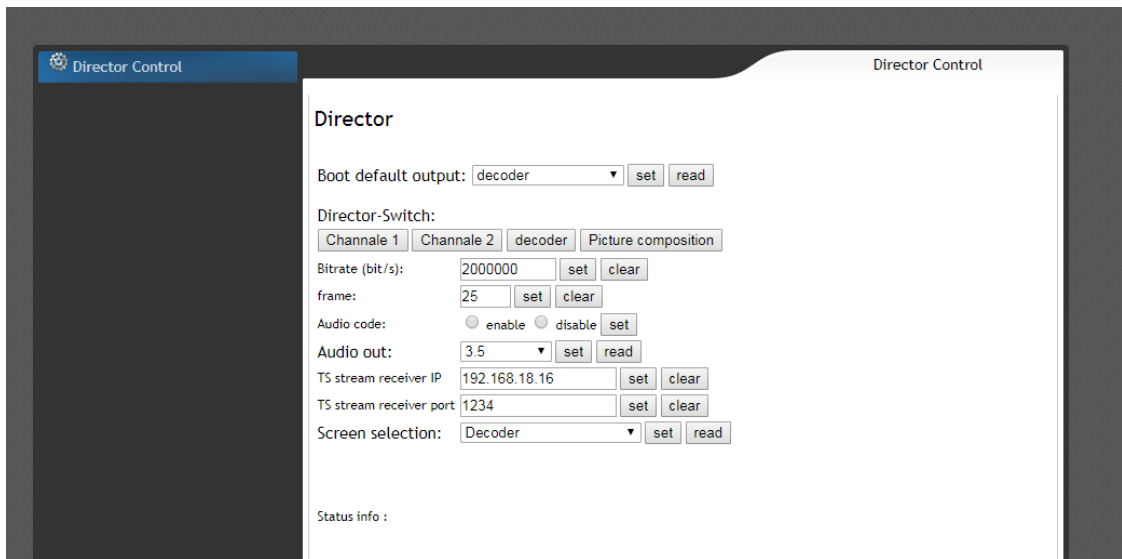
Guided broadcast control



#### 3.3.1.1 Boot default broadcast mode output

The default boot echo screen and the default selection screen can be set.

### 3.3.1.2 Display Switching and Real-time Broadcasting



Click to switch the local echo screen and the broadcast screen in real time. It can also be switched by serial port, touch screen and SDK command.

#### 3.3.1.3 Guide keyboard

The keyboard can realize the control of the recording and broadcasting host.

#### 3.3.1.4 bitstream

Configure the bit stream of the pilot stream;

#### 3.3.1.5 frame rate

Configure the frame rate of the pilot stream;

#### 3.3.1.6 Audio

Configure whether the audio of the pilot stream is turned on and the audio output format.

Bitrate (bit/s):	<input type="text" value="2000000"/>	<input type="button" value="set"/>	<input type="button" value="clear"/>
frame:	<input type="text" value="25"/>	<input type="button" value="set"/>	<input type="button" value="clear"/>
Audio code:	<input type="radio"/> enable <input type="radio"/> disable	<input type="button" value="set"/>	
Audio out:	<input type="text" value="3.5"/> ▼	<input type="button" value="set"/>	<input type="button" value="read"/>
TS stream receiver IP	<input type="text" value="192.168.18.16"/>	<input type="button" value="set"/>	<input type="button" value="clear"/>
TS stream receiver port	<input type="text" value="1234"/>	<input type="button" value="set"/>	<input type="button" value="clear"/>

### 3.3.1 Display mode selection

Echo refers to the output of video output interface (VGA/HDM).  
There are four mode choices as follows

The screenshot shows the 'Director' web interface. At the top, there is a 'Boot default output:' dropdown menu set to 'decoder', with 'set' and 'read' buttons. Below this is the 'Director-Switch:' section, which includes two tabs: 'Channale 1' and 'Channale 2'. The 'decoder' tab is selected, and there is a 'Picture composition' button. The configuration options include: 'Bitrate (bit/s):' with a text input '2000000' and 'set/clear' buttons; 'frame:' with a text input '25' and 'set/clear' buttons; 'Audio code:' with radio buttons for 'enable' and 'disable', and a 'set' button; 'Audio out:' with a dropdown menu set to '3.5' and 'set/read' buttons; 'TS stream receiver IP' with a text input '192.168.18.16' and 'set/clear' buttons; 'TS stream receiver port' with a text input '1234' and 'set/clear' buttons; and 'Screen selection:' with a dropdown menu showing 'Decoder', 'Full screen', 'Three small and one big', and 'Decoder' (highlighted), with 'set/read' buttons. At the bottom, there is a 'Status info :' label.

a.Guided full screen

Broadcasting Full Screen: It refers to the single-screen full screen display of echo and streaming.

b.Five small and one big

Five primary schools and one primary school: refers to the echo display of five primary schools and one major school screen, the large school screen is to display the guide stream screen, the guide stream is a single picture full screen.

c.Decoding output

Decoded output: refers to the echo is decoded output and can not be switched, the pilot stream can be switched.

d.Four split screen

Quadruple screen: Like single screen, the difference is that when you cut the picture in the picture, you echo the four pictures, and when you broadcast the stream, you cut the picture in the picture.

### 3.3.2 Picture in picture

Picture-in-picture refers to a device that can synthesize each picture and decode the five images along the way, enter the echo or guide stream input, and realize live broadcasting and recording applications.

Picture synthesis management is to manage the design of composite pictures, each road can choose to close.

## Picture synthesis

Picture synthesis management:

Channel 1:

<input type="button" value="disable"/>	<input type="button" value="Status"/>						
vs:	<input type="text"/>	<input type="button" value="set"/>	<input type="button" value="clear"/>	hs:	<input type="text"/>	<input type="button" value="set"/>	<input type="button" value="clear"/>
width:	<input type="text"/>	<input type="button" value="set"/>	<input type="button" value="clear"/>	height:	<input type="text"/>	<input type="button" value="set"/>	<input type="button" value="clear"/>

Channel 2:

<input type="button" value="disable"/>	<input type="button" value="Status"/>						
vs:	<input type="text"/>	<input type="button" value="set"/>	<input type="button" value="clear"/>	hs:	<input type="text"/>	<input type="button" value="set"/>	<input type="button" value="clear"/>
width:	<input type="text"/>	<input type="button" value="set"/>	<input type="button" value="clear"/>	height:	<input type="text"/>	<input type="button" value="set"/>	<input type="button" value="clear"/>

Decoder:

<input type="button" value="disable"/>	<input type="button" value="Status"/>						
vs:	<input type="text"/>	<input type="button" value="set"/>	<input type="button" value="clear"/>	hs:	<input type="text"/>	<input type="button" value="set"/>	<input type="button" value="clear"/>
width:	<input type="text"/>	<input type="button" value="set"/>	<input type="button" value="clear"/>	height:	<input type="text"/>	<input type="button" value="set"/>	<input type="button" value="clear"/>

Status info:

The setting requirements of coordinate values are as follows:

The values of abscissa and width are multiples of 8, and their sum cannot exceed the values of transverse pixels.

The height must be even, and its sum with the ordinates must not exceed the value of the vertical pixels.

Click on the status of each road to see the coordinates of each road and whether it is open or not.

Examples are as follows:

1: picture in picture

The first full screen, the second in the lower right corner:

Route 1: 0,0,1024,768; Route 2: 640,480,320,240; Route 3/4 closed

2: The first way in 3D mode and the second way are about half each.

Route 1: 0,0,512,768; Route 2: 512,0,512,768; Route 3/4 closed

### 3.3.3 Caption overlay

Click on the subtitle settings to view the current settings, a total of four lines, each line with five parameters as follows:

subtitle1:disable (Enable means to open / disable means to close the first line of subtitles, a total of four lines of subtitles)

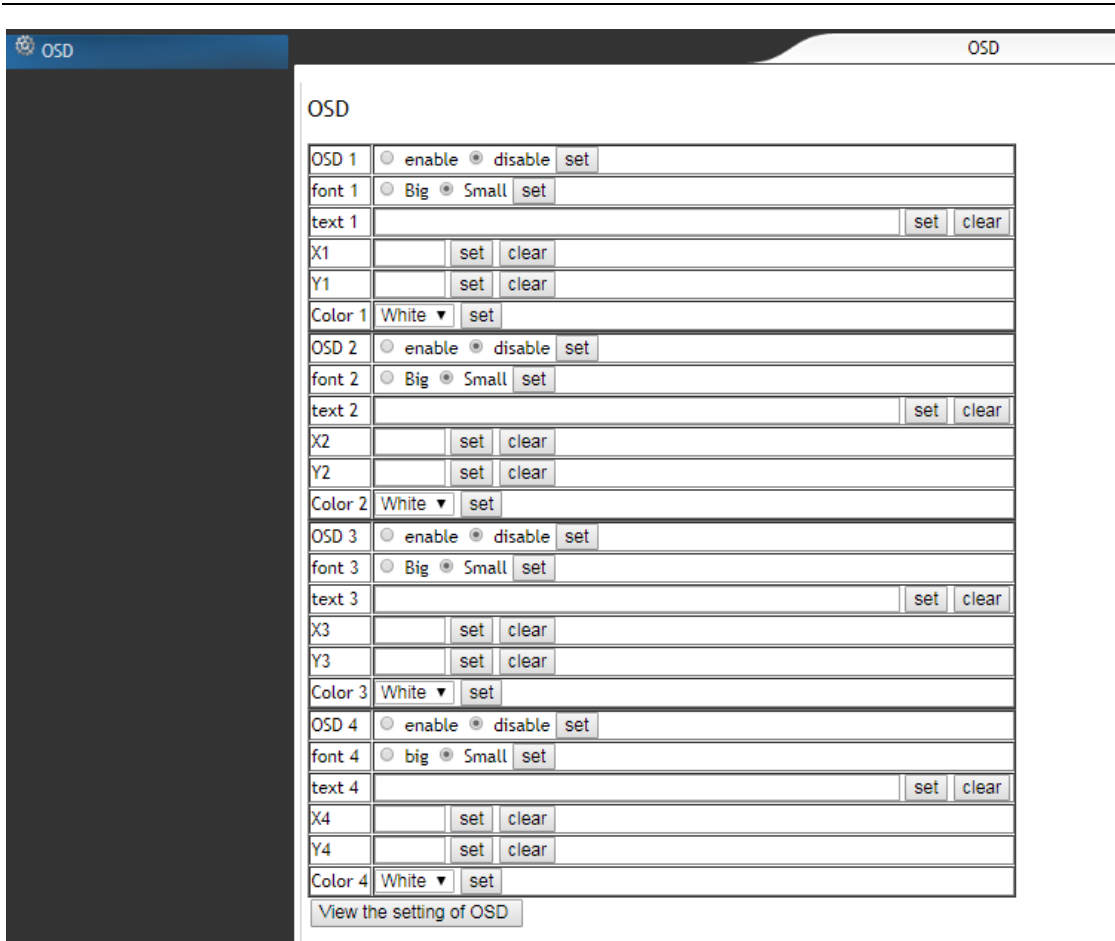
x1:300 y1:300 (X represents transverse coordinates, Y represents longitudinal coordinates)

(Four colours are preferable)

subtitle value:First line subtitles,lu=1 (The red caption represents the set caption information, which can be set arbitrarily.)

font1:big (The font size can be large or small. The large font size is 48x48 and the small font size is 32x32.)





### 3.3.4 logo

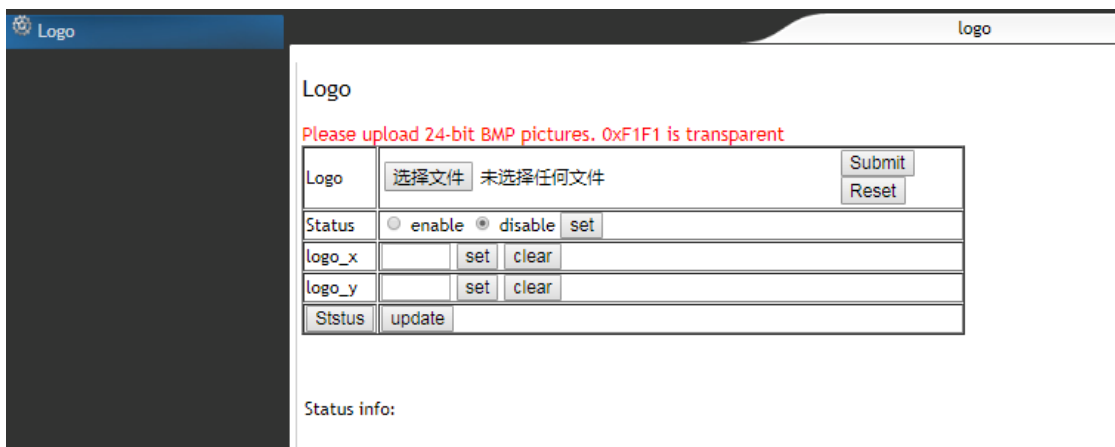
This feature superimposes uploaded logo files to the location specified by the video  
 Select Files: Select the logo you need to display. (Note: Upload 24-bit BMP image, 0xF1F1 is transparent color) No transparent logo can be made. Please contact our company to provide technical support.

Whether to open logo: To display logo, select enable

Logo\_x/logo\_y: Displayed horizontal and vertical coordinates

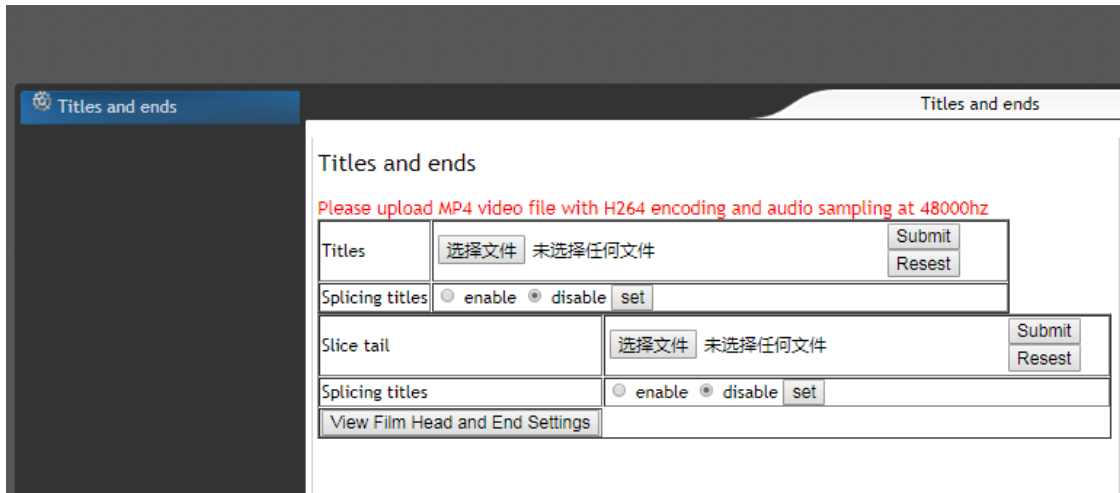
View logo settings: View the current logo status

Update: Update display logo immediately



### 3.3.5 Titles and ends

Choose the file you need to upload, and upload it. (Note: the MP4 format of uploaded video needs to be the same as the MP4 encoding format of recorded video. This function is only available in the broadcast mode.)



When this function is turned on, the directors will automatically synthesize the first and last files after recording the recorded files.

## 4 Touch screen usage

Record status, update once in 5 seconds.

Forget ip, click on the touch screen system settings to restore the factory.

Switching in broadcast mode can also be controlled by touch screen.

## 5 SDK interface

### 1) Access interface TCP

First way: Main stream 8888 Auxiliary stream 8887

Second way: Main stream 8886 Auxiliary stream 8885

Third way: Main stream 8884 Auxiliary stream 8883

Fourth way: Main stream 8882 Auxiliary stream 8881

Audio: 9999

Support multiple client reception.

Each frame has four ints (32 bytes) added to the data header. The first is the flag header 0x98765431.

Second, three are timestamps, seconds and microseconds, and fourth is frame length (excluding headers).

(Download SDK with a VC example of fetching streams. There is a package for receiving bare streamband protocol.)

Vlc Broadcast use:

```
vlc tcp://192.168.18.33:8888 :demux=h264 :h264-fps=25
```

---

2) Start recording and stop recording

tcp 8764 port

After connecting, send

mp4=1

When the transmission is successful, the device will return ok.

mp4=1 Start recording

mp4=0 Stop recording

Boot default is not recorded

Recorded files are accessible through FTP or http:

ftp://admin:999999@ip:2121

http://Device IP:8090

Broadcasting mode

Control switching:

tcp 8765 (Or UDP 8768) port

When connected, send sel = 1 r n (\ r n as long as there is one)

When the transmission is successful, the device will return ok.

Cut to N-way 1,2,3,4

sel=5 Cut to Paint

3) Network Remote Switching Local Display Mode

tcp 8764 Port, send:

sel=2 First Full Screen

sel=3 Second Full Screen

sel=4 Third Full Screen

sel=5 Fourth Full Screen

sel=6 Picture in picture

4) Three Transparent Serial Ports in Network

TCP connection 3000,3001,3002 ports

Baud rate 9600

Debugging method: You can download a TCP network debugging assistant, connect the device IP and the corresponding ports to test the receiving and receiving data and the effect.

You can also use the TCP command port VC routine in SDK

