IQVideo

Lecture Capture System

LCS910

──User Manual──

IQBoard Australia

Catalogue

System Introduction

1. Introduction to the use of the system

IQVideo LCS910 portable lecture capture system is embedded with Linux operating system. The video station is integrated with wifi module and remote interactive functions according to actual needs. The operating environment of the system:

In addition to directly using the built-in touch screen for local real-time directing management, the video station can also use Windows system computer for remote WEB interface directing management.

2. System precautions

IQVideo LCS910 is a sophisticated system equipment. In order to avoid failure or damage caused by human factors such as installation, debugging, use, etc., the following important tips are specially made, please read carefully by the relevant personnel who install and use this product:

1. Before installation and use, you must read the product manual carefully;

2. The input of the matching power adapter used by this product is AC100-240V; 50-60Hz; before connecting the power supply, be sure to check whether the local power supply matches it;

3. Please do not disassemble the product without authorization, the damage caused by unauthorized disassembly is not covered by the warranty;

4. When the liquid falls on the body of the product, immediately turn off the power and stop using it, and use it again after air-drying or wiping it clean;

5. Please do not use it under conditions that exceed the temperature and power specifications of this product.

## 3. System hardware interface description
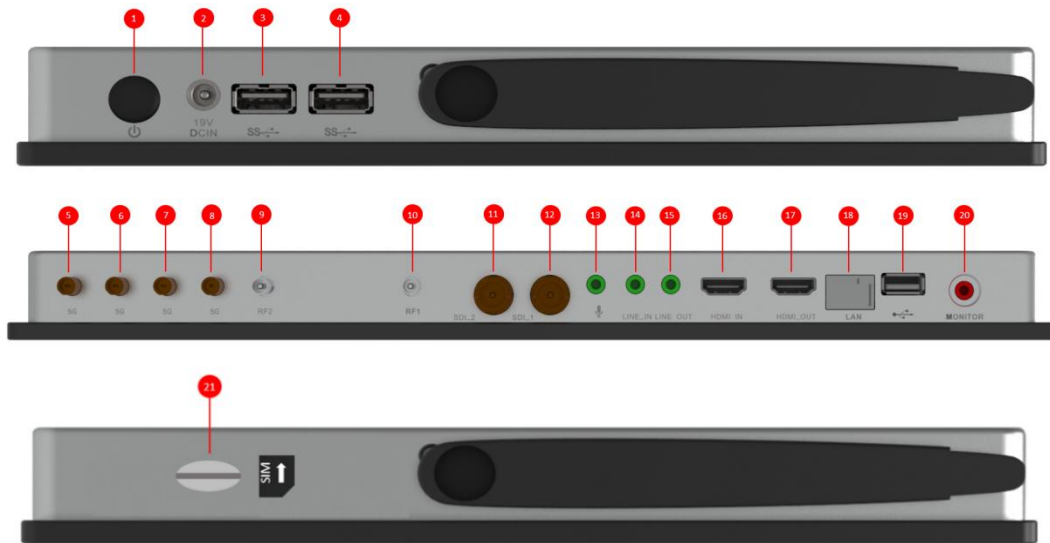
Hardware Interface Description:

1. Power button -------------- Power switch button

2. DC_19v ------------- DC19V power input interface

3. USB interface -------------USB interface*1

4. USB interface -------------USB interface*1

5-8. Antenna -------------- 5G network antenna*4

9. RF2 Antenna ------------ 5G RF image transmission signal transmission antenna*1

10. RF1 Antenna-------------5G RF image transmission signal transmission antenna*1

11. SDI_2 ------------- SDI signal input interface*

12. SDI_1 ------------- SDI signal input interface*

13. LINE_IN1 ----------- 3.5mm audio input interface

14. LINE_IN2 ----------- 3.5mm audio input interface

15. LINE_OUT ---------- 3.5mm audio output interface (interactive sound and local playback sound)

16. HDMI IN ------------- HDMI signal input interface

17. HDMI OUT ------------ HDMI signal output interface (movie picture)

18. LAN ----------------- Gigabit RJ45 network interface

19. USB ---------------- USB interface

20. MONITOR ------------   monitor audio output

21. SIM card slot ------------ Full netcom nano-SIM card   （optional）

Chapter 1 Local Interface

1. Requirements for use

Connect the HDMI-OUT1 of the video station to the monitor, and connect the mouse and keyboard to the USB on the front of the video station; (Note: The video station with a touch screen can also be operated directly on the touch screen)

2. Interface and function introduction
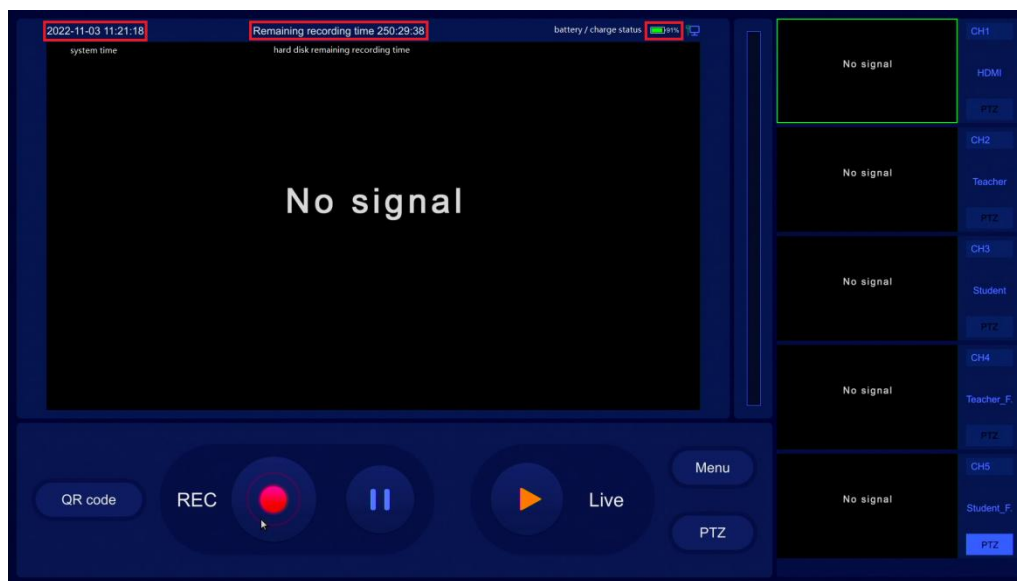
2.1 The main playback screen

The largest screen in the director interface is the main playback screen, which is also the live broadcast screen. The main playback screen is the video screen recorded during automatic directing. In manual mode, the main playback screen can also be switched by double-clicking the alternative playback screen (video preview small window) on the side.

2.2 The alternative playback screen

The five small-window video preview screens on the side of the main playback screen are the alternative playback screens. The five alternative playback screens are channel 1, channel 2, channel 3, channel 4, and channel 5. These five channels of videos can be manually switched to the main playback screen as the screen for recording and live broadcast.

2.3 The main playback function keys

 ：Recording start/stop button; click this button to start recording, click again to stop recording

 ：Recording pause/resume button; click this button to pause recording, click again to resume recording

 ： Start/stop button of live broadcast; click this button to start live broadcast, click again to stop live broadcast
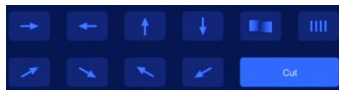
 ： Screen layout setting button in manual mode;

They represent single-screen, dual-screen picture-in-picture, dual-screen dual-split screen, three-screen, quad-screen, and all screens. The following will take the dual-screen dual-split screen as an example to illustrate how to set the screen:
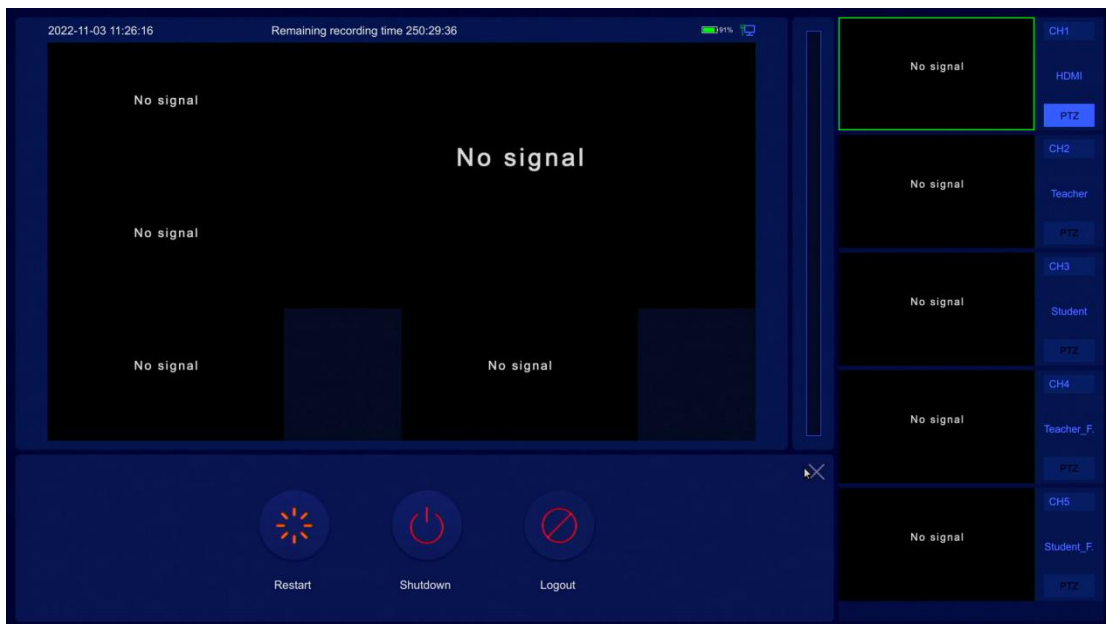
 ： PTZ control key area of PTZ camera (only used in manual mode).

 ：Screen transition effect settings.（Only takes effect under one single screen mode）

2.4 Power setting interface

On this interface, you can restart / shutdown / logout the video station, and logout will exit to the video station login interface.

2.5 Language setting interface

The video station system language can be configured on this interface, which supports three languages: Simplified Chinese(简体中文) / Traditional Chinese(繁體中文) / English. The language setting will take effect immediately.
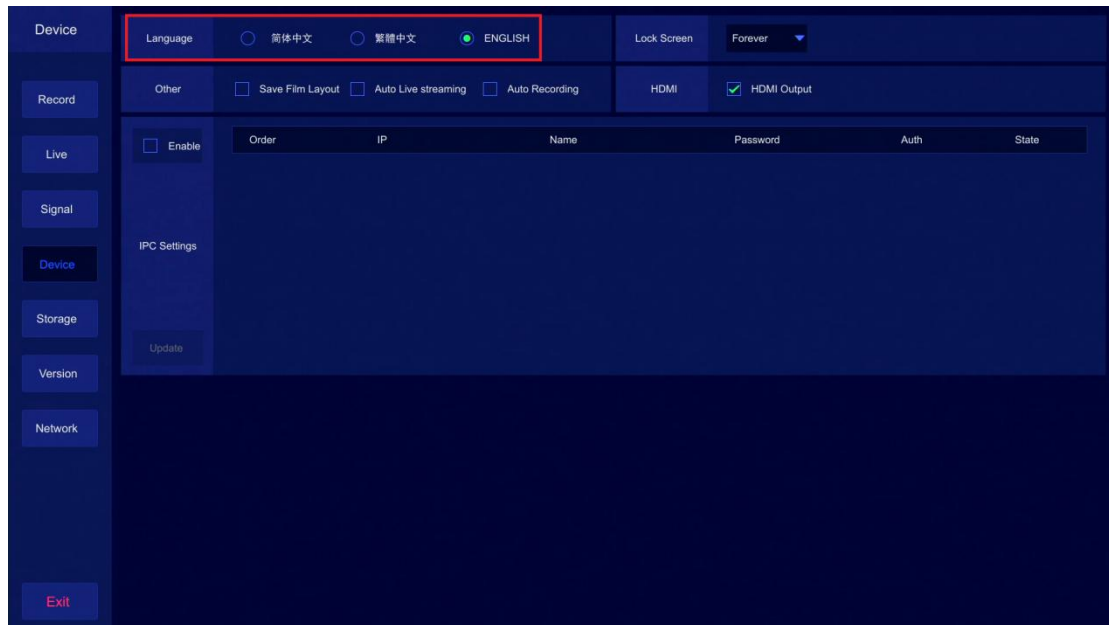
2.6 File management

On this interface, a variety of operations such as playback viewing/file deletion/USB disk copy can be performed on the recording files of the video station. File playback supports progress bar fast-forward/fast-rewind, next/previous video playback, and full-screen video playback. If the monitor supports HDMI audio output function, the sound will be output at the same time during playback, otherwise you need to connect the speaker to the LINE-OUT of the video station;
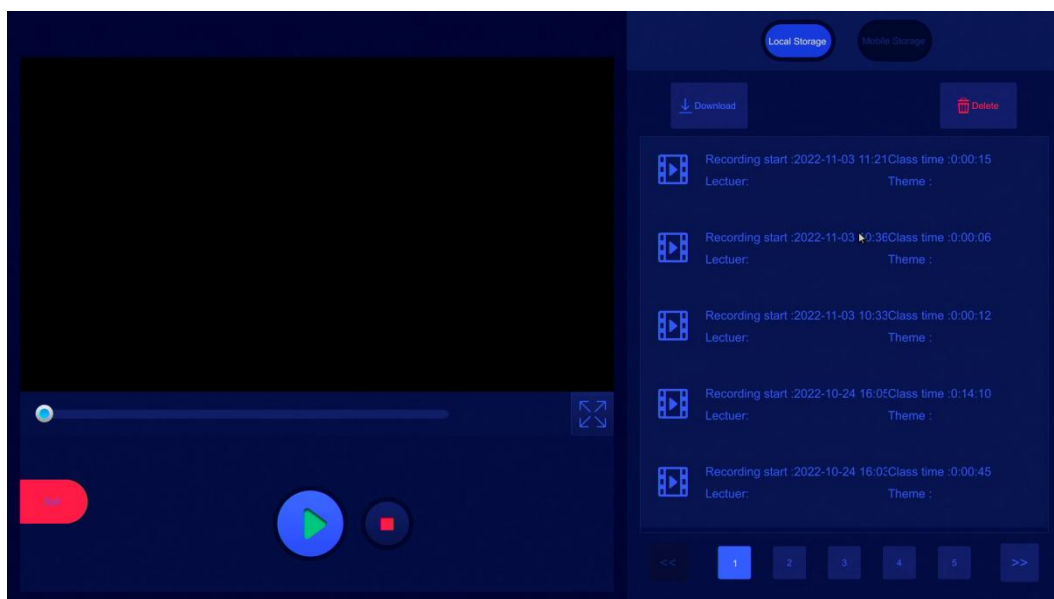
## 2.7 Additional information setting for recorded video

You can add extra information to the video, such as intro and end credits, subtitle logo, etc.

2.8 Advanced settings

1)   Record management

In this interface, you can modify parameters such as whether to record, file name, encoding method, etc. for the main playback channel and all alternative playback channels. After modification, click "**OK**" to complete the setting.
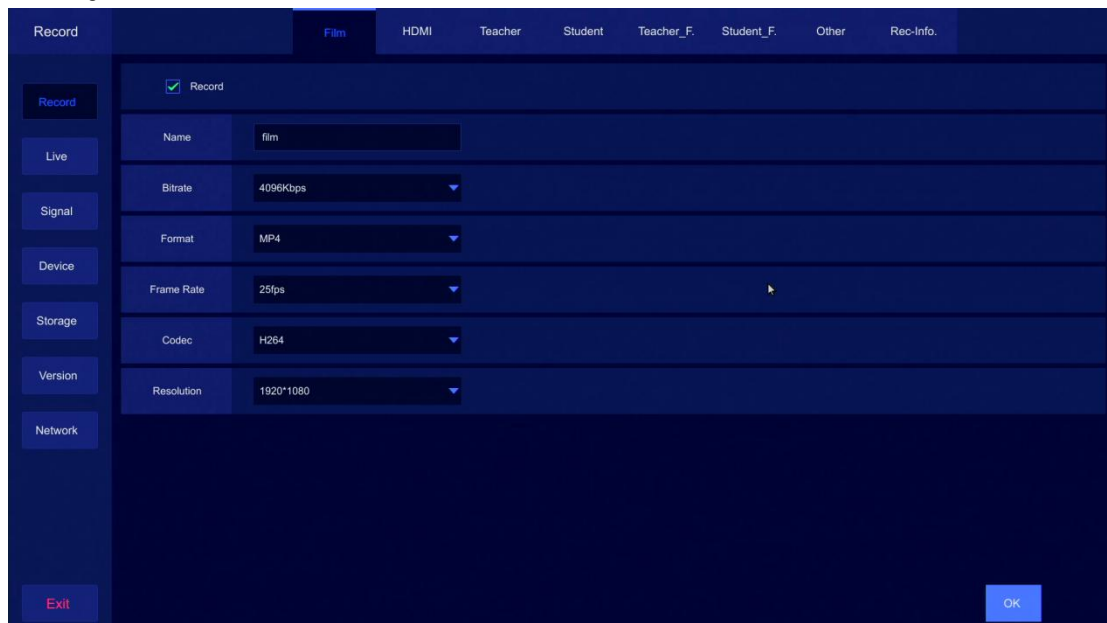
2)   Automatic segment recording and maximum single recording duration setting

Note: If the maximum duration of the file is set to be longer than 6 hours, the recorded file will be forced to use the TS format
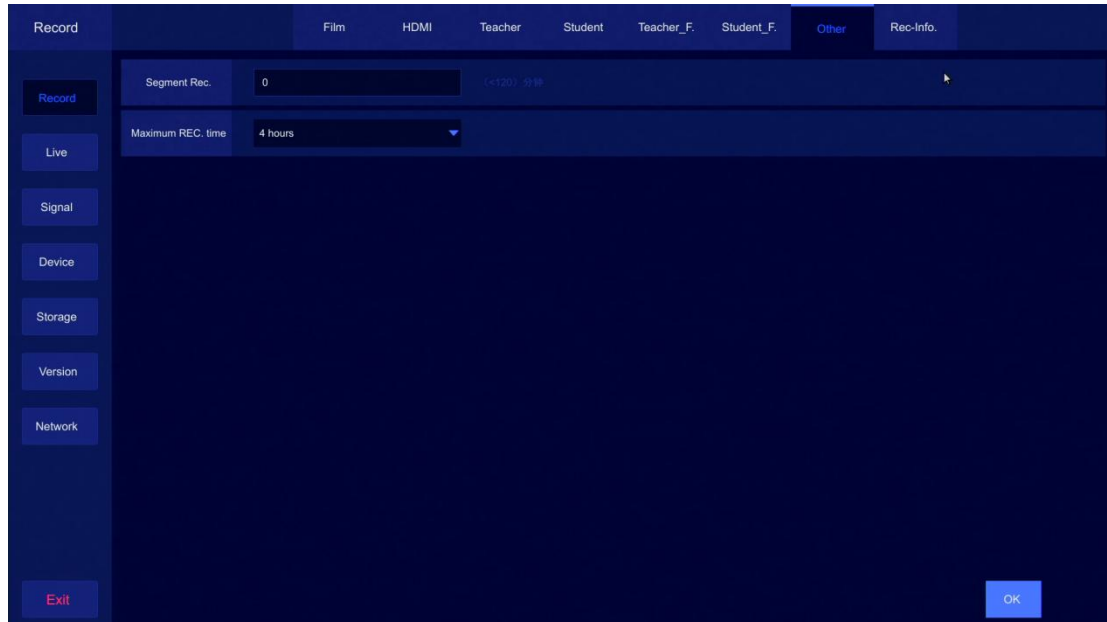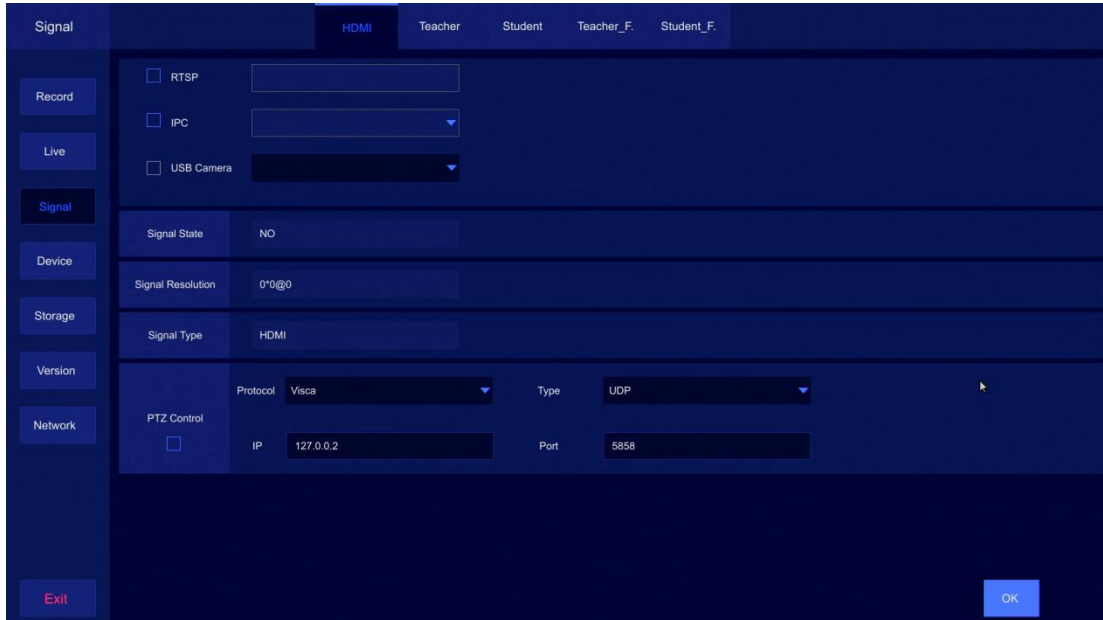

3)   Live broadcast parameter settings

In this interface the user can set the live broadcast parameters of the main playback channel and all alternative playback channels, including live broadcast mode (rtmp, rtsp or rtmp_push), whether to enable live broadcast, whether to enable audio, live broadcast format, bit rate, resolution and other parameters;
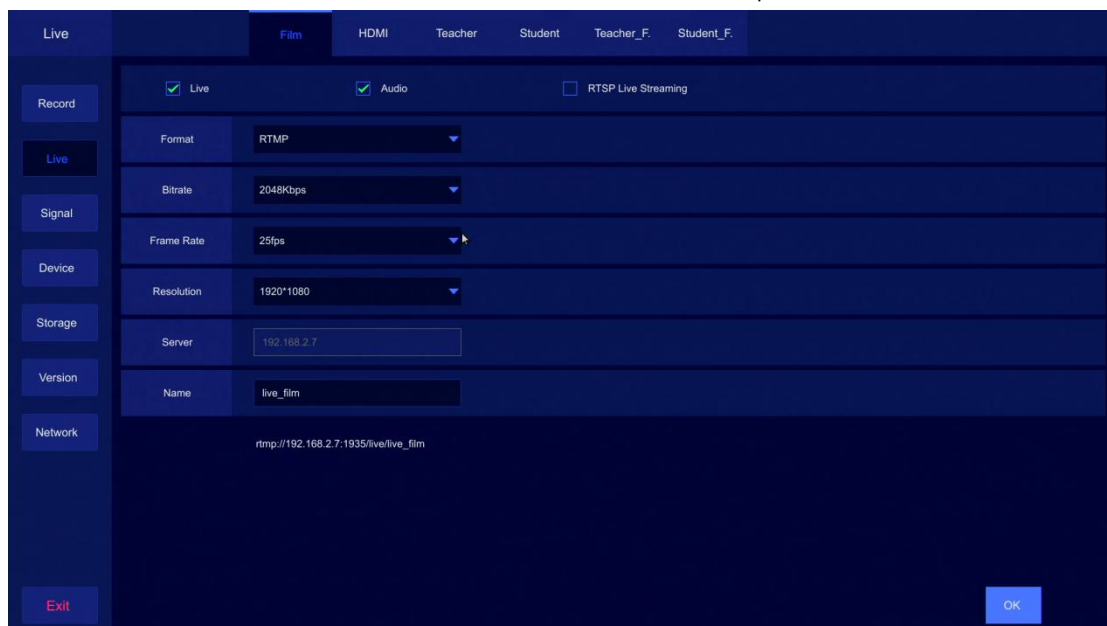
4) **Signal management**

In this interface the user can set the access mode of the signal source screen of all alternative playback channels. The signal source mode supports SDI dual-stream PTZ camera, RTSP, IPC and other camera types. When using the corresponding signal source, you need to open the corresponding mode first.

5) **Device management**

- **Others:**
  Save film layout: Save the set director layout;
  Auto live streaming: After setting, the video station will automatically start live broadcast when it is powered on;
 Auto recording: After setting, the video station will automatically start recording when it is powered on;
- **HDMI:**Check to enable HDMI-OUT director movie screen, otherwise there will be no screen output (default enabled)
- **IPC settings**:After checking to enable, the video station will automatically search for the IPC signal source in the local area network. After using the IPC account and password authentication, it can be used as the signal source screen to access the video station.
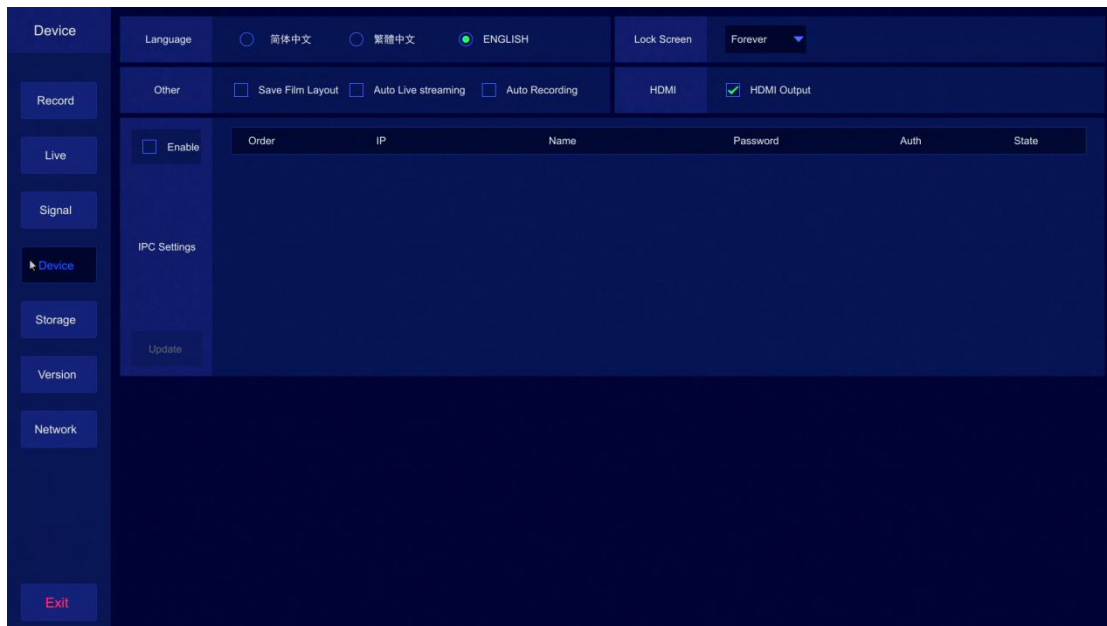
6) **Storage management**
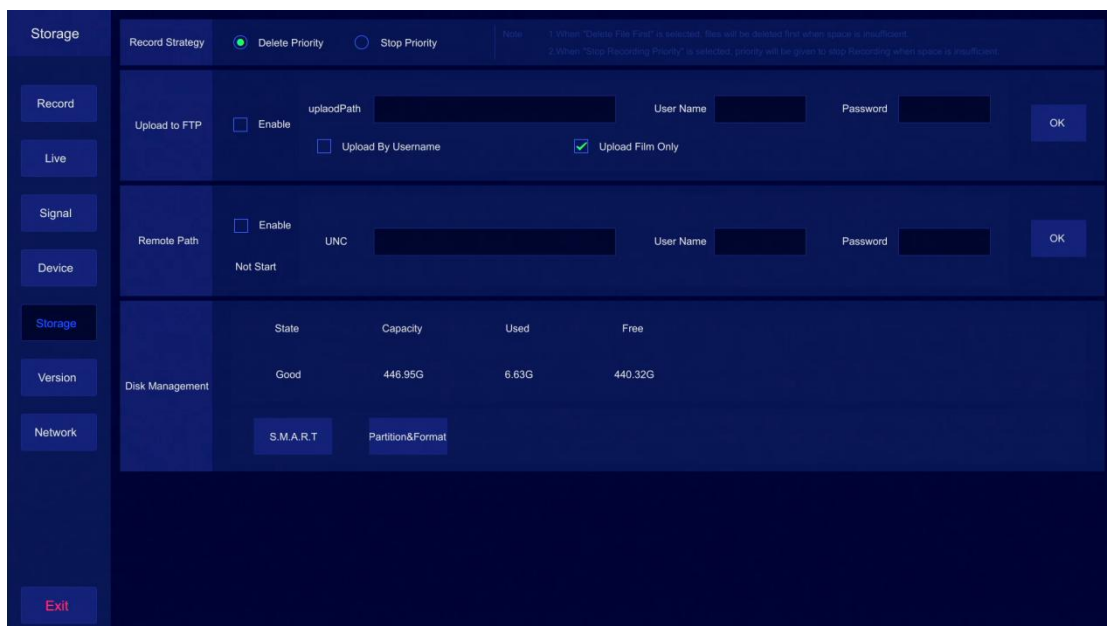
Record strategy:

Delete priority: when the hard disk is full, delete the file with the earliest date and repeat the recording;

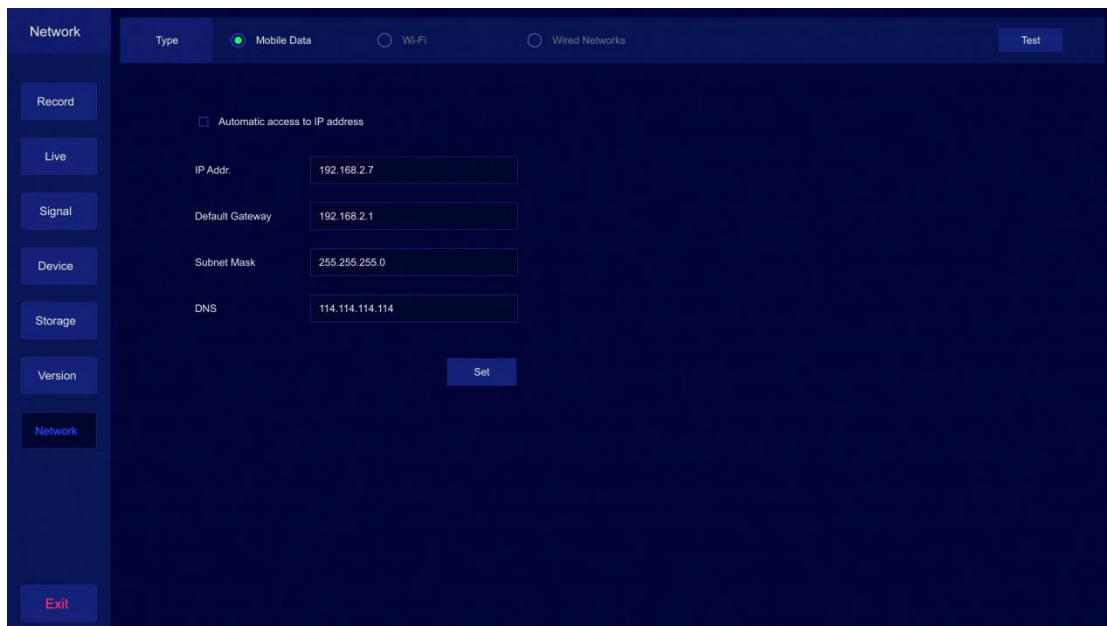Stop priority: when the hard disk is full, stop recording;

Disk management: display the basic information of the hard disk or format the hard disk;

7) **Version information**

This interface can display the basic information of the system, including system software version, IP address, MAC address and other information.

8)   Network management

Wired networks: use the video station's RJ45 network port to network;

Wi-Fi: Use an external USB wireless network card to connect to the Internet;

Chapter 2 Remote Web Interface

1. Login management

The system is compatible with login management through Microsoft Edge, Google, Firefox, 360 browser, etc., enter the IP address of the recording video station (default 192.168.1.55) in the browser, and enter the following page (username and password are both admin)

After entering the username and password, click "Sign in" to enter the WEB management interface.

The video station will directly enter the interface of the recording and broadcasting management system.

2. Recording and broadcasting management system

2.1 The main playback screen

The largest screen in the director interface is the main playback screen, which is also the live broadcast screen. The main playback screen is the video screen recorded during automatic directing. In manual mode, the main playback screen can also be switched by double-clicking the alternative playback screen (video preview small window) below.

2.2 The alternative playback screen

The five small-window video preview screens below the main playback screen are the alternative playback screens. The five alternative playback screens are channel 1, channel 2, channel 3, channel 4, and channel 5. These five channels of videos can be manually switched to the main screen. As the screen for recording and live broadcasting, click the alternate channel setting button to set the access mode corresponding to the source screen of the alternate channel. The signal source mode supports dual-stream PTZ cameras, SDI, IPC, RTSP and other types. When using the corresponding signal source, you need to open the corresponding mode first.

2.3 Director management

1) **Hard disk information display**

2)   Recording course information display

Topic:
Presenter:
    Video: 1920*1080@30
    Audio: 48000Hz Stereo
Bit Rate: 4096 Kbps

3)   Volume setting

Volume   ⚙

1. Turn on HDMI1 sound: turn on OUT1 sound;

2. Turn on HDMI2 sound: turn on OUT2 sound (requires local video playback);

3. Monitor mixed-in interactive sound: whether the interactive remote sound is output from the monitor

4. HDMI1 (2nd screen) mixed with interactive sound: whether the interactive remote sound is output from OUT1

5. Live recording mixed with interactive sound: whether the interactive remote sound is input into the recording/live broadcast

4)   The main playback function key

DEVICE   Nov. 07, 2022 11:36:17 AM
                                Restart Shutdown Logout

The functions of the buttons shown above are the restart / shutdown / logout of the video station.

Record   Start   Pause   Stop   ⚙

The functions of the buttons shown above are recording start / pause / stop respectively; recording parameter setting buttons
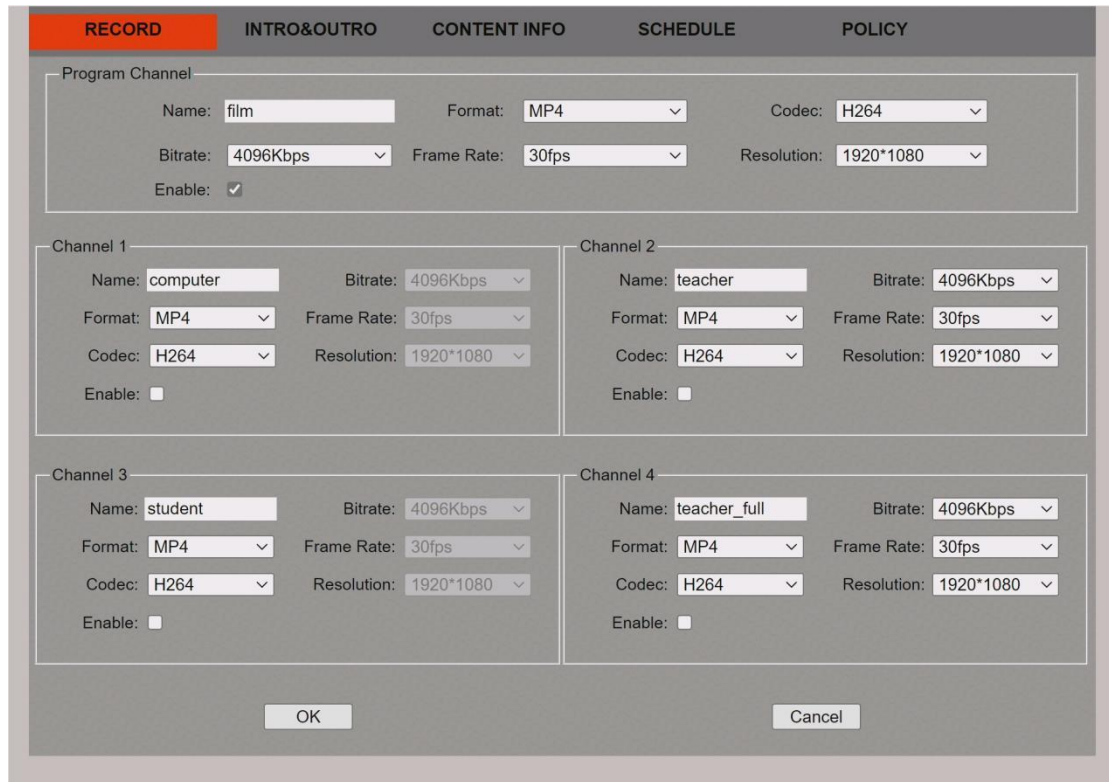
The functions of the buttons shown above are the start / stop of the live broadcast; the button for setting the parameters of the live broadcast

Live format description：

RTMP----Other devices or platforms pull the live stream of the recording video station

Pull stream address：

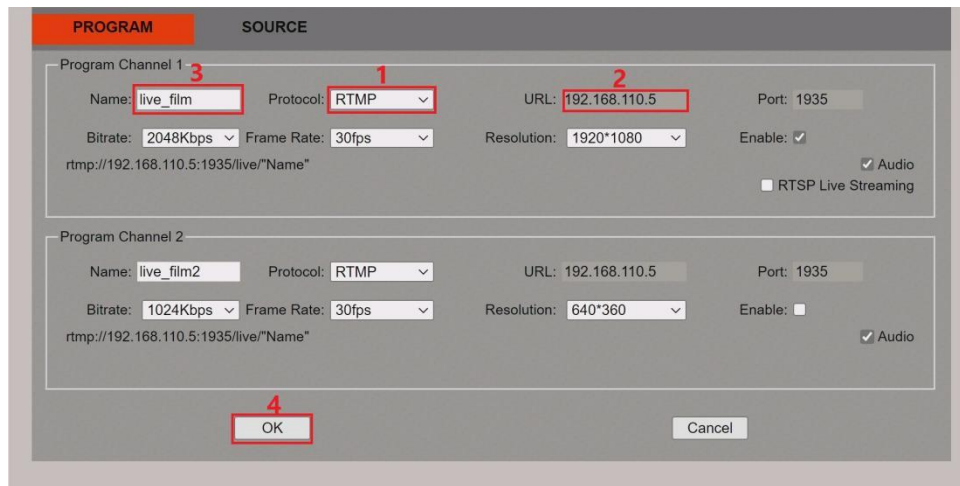rtmp://192.168.110.5:1935/live_film (need to be turned on manually)

RTMP_Push----The recording video station pushes streams to other live servers

Example: The push stream address of the server is

rtmp://10.139.10.20/live/1869436=7ed01c04aa15f9872a72ba&txTime=6328315B

URL : 10.139.10.20

Name: live/1869436=7ed01c04aa15f9872a72ba&txTime=6328315B

The functions of the buttons shown above are to open /close subtitles; open /close the station logo; subtitle and station logo setting buttons

The button function shown above is the screen transition effect, with eleven screen transition effects and can set the speed of the transition
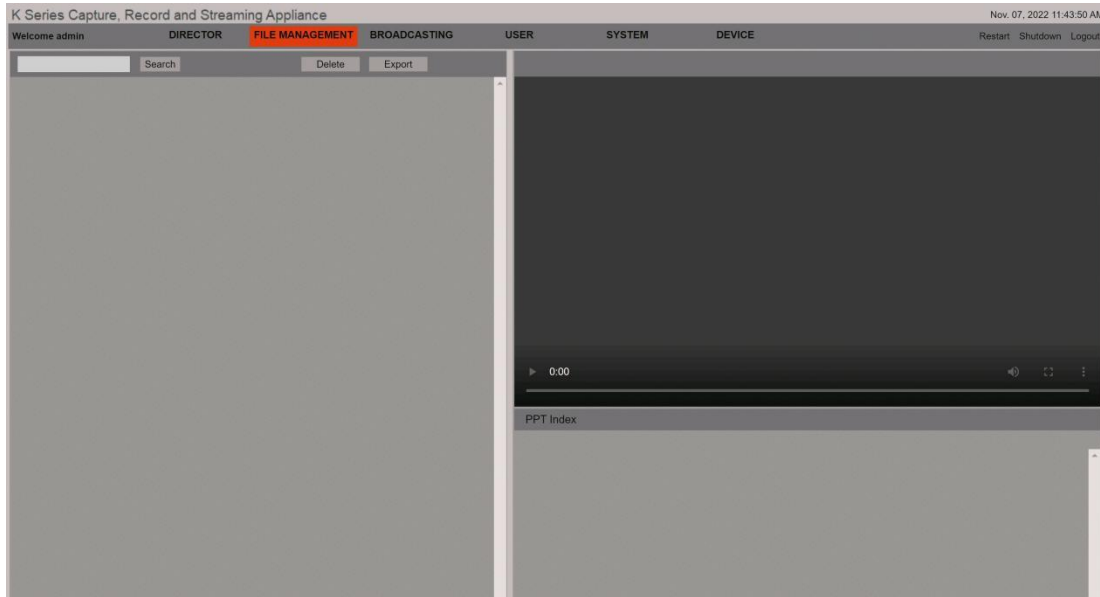

The button functions shown above are for multi-screen layout and multi-screen background settings

The button function in the picture above is the PTZ control area of the PTZ camera

2.4 File management

This page can manage recording files, including playback, deletion, export, etc.

2.5 Broadcasting management

A Windows computer is needed for the live broadcast settings.

and the supporting broadcast plug-in should be installed already(the plug-in can be downloaded on the video station). When the live broadcast starts, the screen will automatically pop up on the client.
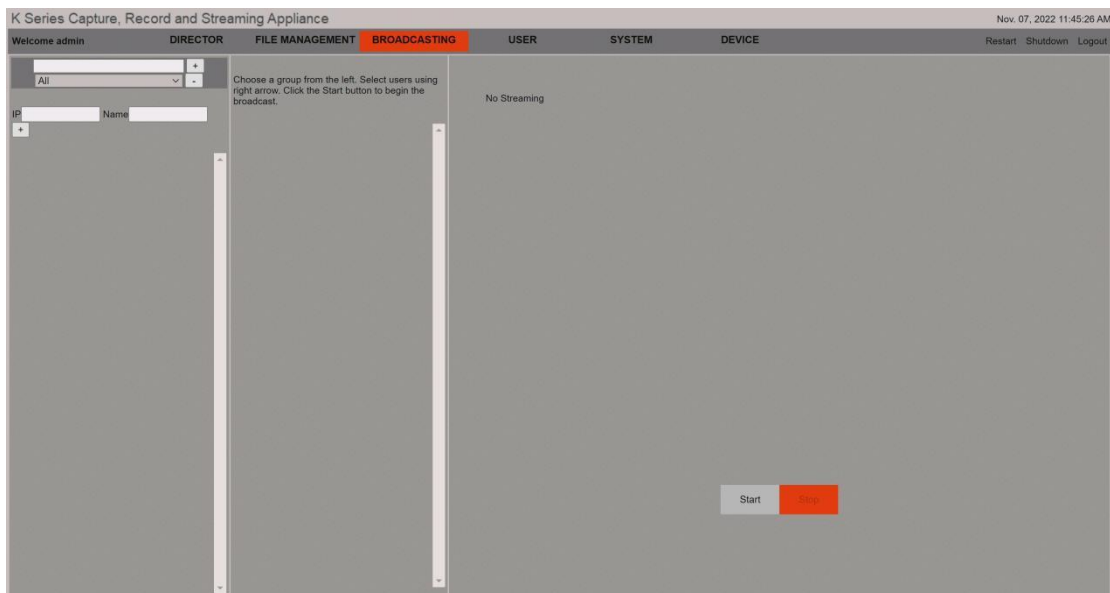

2.6 User management

Different users can be added on this interface to log in to the recording and broadcasting management system. Users can be classified with different authorities, including administrator, ordinary user, and guest.
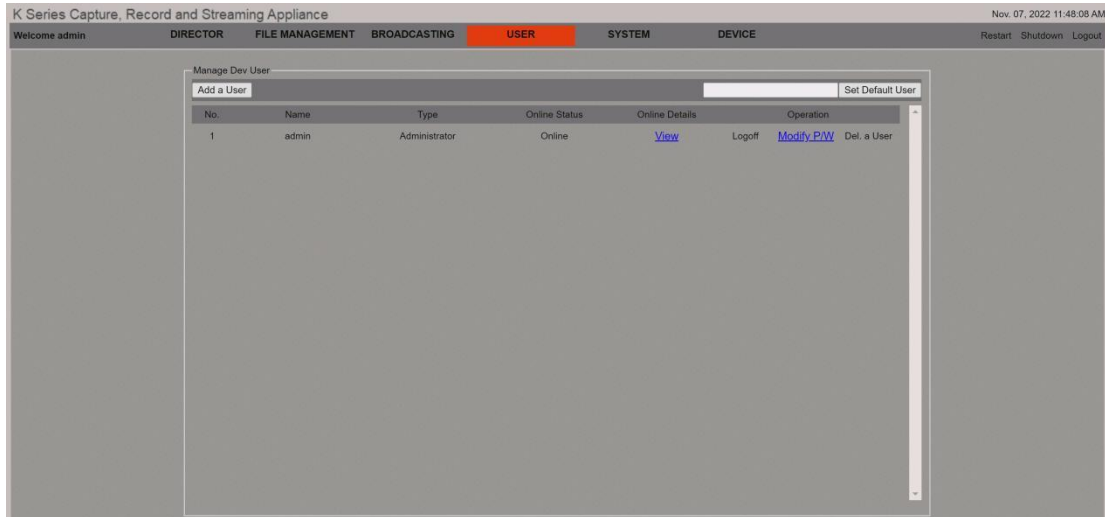
2.7 System management

1)   Version information

Display video station model, version information, IP address, physical address, authorization information, etc.
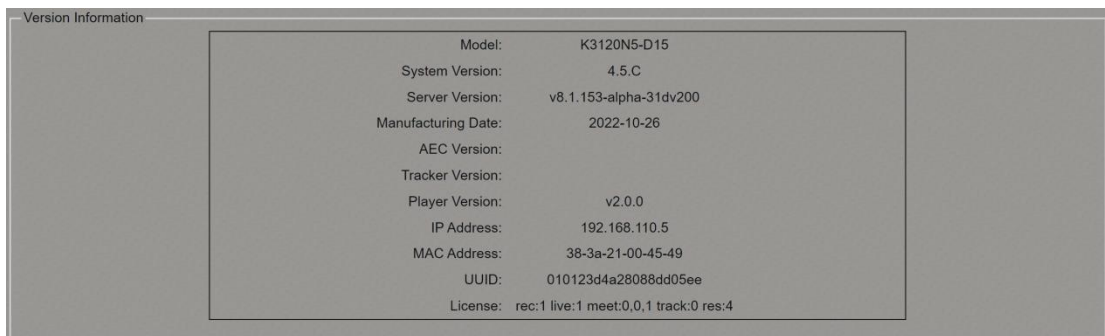
2)   Software upgrade management

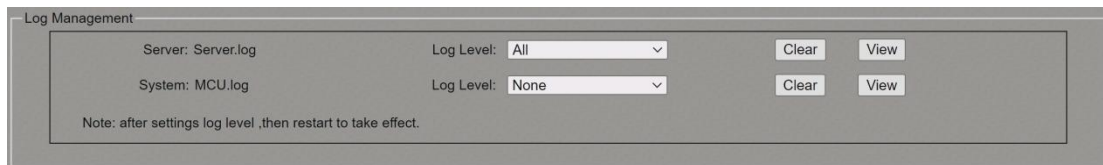The server version of the video station can be upgraded.
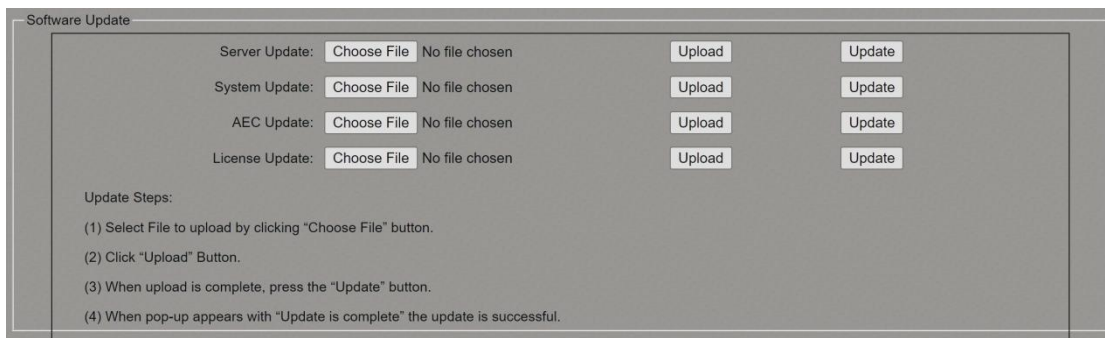
3)   Version check

Click to check the current server version of the video station.

4)   Log management

When the video station is abnormal, you can analyze the cause of the problem through the recorded log file.

5)   Software download management

For browsers such as IE, you can download and install the playback plug-in when you need a plug-in; when the broadcast plug-in is used for the broadcast live function, it can be installed on the Windows client.
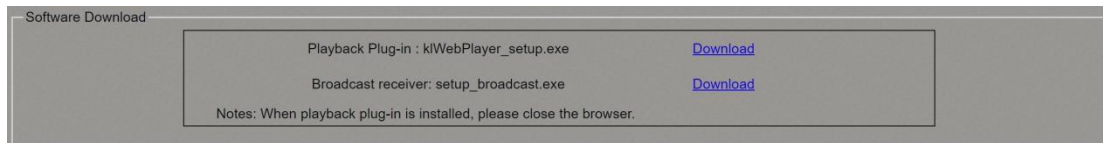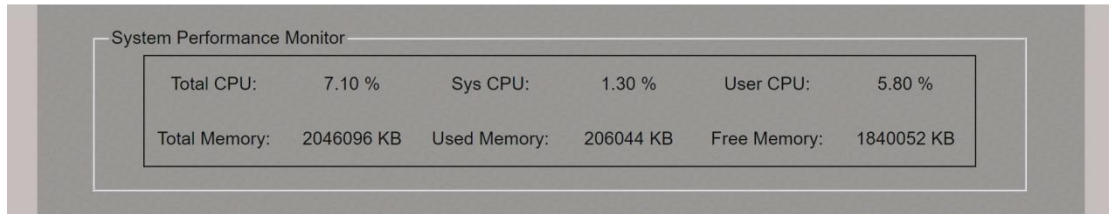
6)   Configuration files management

You can download and export the debugged video station configuration file for import and use when restoring the configuration later.
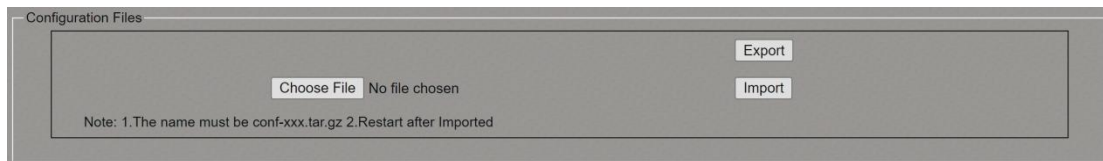
7)   Performance monitoring capabilities

After clicking OPEN to open, you can see the usage information of the video station's CPU/memory in real time. When the video station's system operation response is slow, you can first check whether the host's CPU/memory information is saturated.
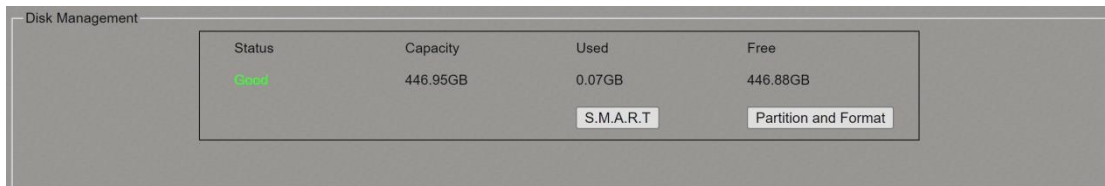
System Performance Monitor

| Total CPU: | 7.10 % | Sys CPU: | 1.30 % | User CPU: | 5.80 % |

Total Memory: 2046096 KB   Used Memory: 206044 KB   Free Memory: 1840052 KB

2.8 Device management

1) Disk management

You can view the health information and remaining capacity of the disk; you can format the disk.

Disk Management

| Status | Capacity | Used | Free |
| Good | 446.95GB | 0.07GB | 446.88GB |

S.M.A.R.T   Partition and Format

2) Time setting

It is used to synchronize the local time between the video station and the PC. When the video station is not powered on for a long time, the video station time may be inaccurate. At this time, you can click the "Syn" button, and the video station time will be synchronized with the computer's local time.

Time Setting

2022 11 07 11:52:57   OK   Syn

3) NTP setting

After setting the NTP server, it is used to synchronize the time between the video station and the network; the video station needs to be connected to the external network and set the correct NTP server.

NTP Setting

OK   Syn   ☑ Sync On Startup
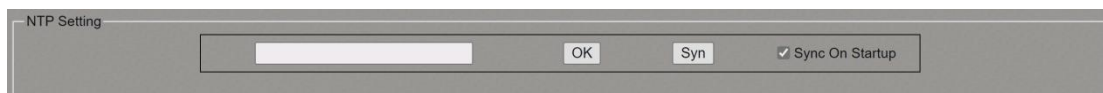
4) Time zone settings

It can be used to set the time zone of the video station according to the usage environment of the video station.

Time Zone Settings

(GMT+08:00) Beijing, Chongqing, Hong Kong, Urumqi
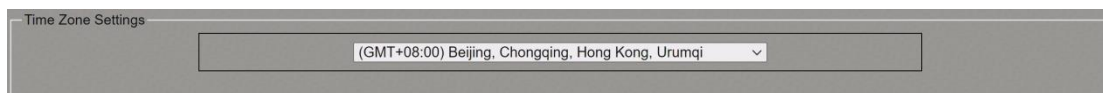
5) IP address setting

It is used to set the network parameters of the video station. After the network configuration, the video station needs to be restarted to take effect.

6) IPC setting

After opening, search for available IPCs in the local area network, and use the IPC's username/password to verify that it can be used as a video source input.

7) HDMI output settings

Check to enable the output of HDMI-OUT1, if unchecked, OUT1 has no output.

8) Live port settings

Live Port Settings

RTMP: 1935   HLS: 8080   Set

9) Audio bit rate

Set the audio bit rate of the recording file, the video station provides six kinds of audio recording bit rate configurable, the default is 192Kbps.

Audio Bitate

192 ∨ Kbps

10) Keyboard settings

The external guide keyboard used for the video station to connect to a third party is limited to the third-party keyboard that has been docked. For details, please consult the manufacturer's technical personnel.

Keyboard Settings

None ∨ Keyboard Type   /dev/ttyAMA3 ∨ (valid)   Device Type   Set

11) Save the director layout setting

When enabled, the video station can save the currently set director layout.

Other

☐ Save Film Layout   ☐ Auto Live Streaming after reboot   ☐ Auto Recording after reboot   R3C ∨ 4K Camera

12) Automatic live/record at boot

When enabled, the video station will automatically start live broadcasting or recording.

Other

☐ Save Film Layout   ☐ Auto Live Streaming after reboot   ☐ Auto Recording after reboot   R3C ∨ 4K Camera

13) 4K camera type

When using the SDI cable to transmit dual-stream camera images, you need to configure the camera type first. Currently, the video station only supports docked cameras. For details, please consult the manufacturer's technical personnel.

Other
☐ Save Film Layout   ☐ Auto Live Streaming after reboot   ☐ Auto Recording after reboot   R3C ∨ 4K Camera

2.9 Tracking setting

On this page, you can set the video station tracking function. For details, please refer to the tracking and debugging documentation.

Chapter 3 FAQs

1. Press the power button of the video station and cannot turn it on

a. Confirm that the power supply of the video station or the supporting power adapter is working normally

b. After connecting to the power supply, confirm that the video station would self-check and there will be a beep sound

c. The power button of the video station needs to be pressed for about 2 seconds to turn on

2. The video station's local director interface has no output

a. Confirm the HDMI-OUT2 port connected to the output of the video station

b. Confirm that the HDMI cable is functioning properly

3. The video station's WEB interface cannot be opened

a. Confirm that the wired network of the computer is in the same network segment as the video station

b. Click Start - Run - enter cmd (OK), enter ping 192.168.1.55, and confirm that the IP addresses of the computer and the video station can be pinged successfully

c. Confirm that the video station is turned on (if the power button light is blue, it is on)

4. The video station's HDMI-OUT1 movie screen has no output

a. Confirm that the OUT1 output is turned on on the local interface; Settings - Advanced Settings - Device Management - HDMI - Turn on HDMI output

b. Confirm that the OUT1 output is turned on on the web; log in to the web-Device Management-whether to turn on the HDMI second screen output

5. The video station's green 3.5 audio port no input

This audio output port will output sound only in the following situation:
When the video is played back on the local interface

6. The screen of the recording and broadcasting video station channel cannot be displayed normally

a. The camera needs to set the IP address on the same network segment as the recording video station

b. The camera can also set the IP address of the fixed network segment (192.167.32.xx)

7. Computer channel has no picture

a. Whether the HDMI signal of the computer is correctly connected to the HDMI IN input port of the video station

b. Whether the picture is displayed normally when the HDMI signal of the computer is connected to the input of other monitors

c. Use a 1 meter HDMI cable to connect to the HDMI IN input port of the recording and broadcasting video station to check whether the channel can produce a picture, and use the elimination method to confirm the problem

8. The recording video station has no sound input

a. Check whether the connection between the sound input source and the recording video station is connected

b. Whether the Mic wiring sequence is correct, and whether the wireless microphone receiver is turned on

9. The video station's web page displays abnormally

a. Do not use IE browser, please use mainstream browsers such as Google, Edge, Firefox, 360 Express, etc.

b. First try to clear the browser's cache or use Ctrl+F5 to force the page to refresh