HD Decoder

User Manual

Please read this instruction carefully before operating the unit and keep it for further reference

Notes

- Please read this user manual carefully to ensure that you can use the device correctly and safely.
- There may be several technically incorrect places or printing errors in this manual. The updates will be added into the new version of this manual. The contents of this manual are subject to change without notice.
- This device should be operated only from the type of power source indicated on the marking label. The voltage of the power must be verified before using the same. Kindly remove the cables from the power source if the device is not to be used for a long period of time.
- Do not install this device near any heat sources such as radiators, heat registers, stoves or other devices that produce heat.
- Do not install this device near water. Clean only with a dry cloth.
- Do not block any ventilation openings and ensure proper ventilation around the machine.
- This machine is for indoor use only. Do not expose the machine in rain or moist environment. In case any solid or liquid get inside the machine's case, please turn off the device immediately and get it checked by a qualified technician.
- Do not try to repair the device by yourself without technical aid or approval.
- This manual is suitable for many models. All examples and pictures used in the manual are from one of the models for reference.

Contents

1 Introduction

1.1 Summary

The decoder is a 4-channel professional decoder, which adopts high-performance SOC decoding chip. It not only supports multi-channel standard-definition and high-definition network videos decoded on TV wall independently (in device running mode), but also it can be managed in an integrated way by video surveillance management platform (in platform running mode). Therefore, this decoder can be widely used in banks, schools, intelligent buildings, transportation, environmental protection, supermarkets, gasoline stations, housing estates, factories, etc.

1.2 Features

Decoding & Display

- 4*HDMI@1080P; HDMI1 and HDMI3 support 4K
- 4*VGA output, 4*BNC output
- Support PS, RTP,TS,ES package format(in platform running mode)
- Support NTSC&PAL video format
- H.265 HP/MP/BP and H.264 HP/MP/BP
- 8CH 8MP/5MP@30fps or 16CH 4MP/3MP or 32CH 1080P@30fps or 64CH 720P@30fps or 128 CH D1 or lower @30fps
- G.711A/G.711U
- 1 CH audio input; 4 CH audio output
- 1 CH talkback

Decoding Control

- Support live view and playback decoding
- 1/4/9/16/25/36 screen display mode
- Splicing, picture-in-picture, roaming
- View cameras or camera groups in sequence
- A&V streams can be acquired actively and passively
- A&V streams can be directly acquired from TVT IPC/DVR/NVR by SDK private protocol
- A&V streams can be acquired from NVMS platform or encoding devices by RTSP/RTP protocol
- A&V streams can be acquired from IPC by ONVIF protocol

Device Management

- Superior-subordinate management
- A maximum of 64 decoders can be manageable
- Access

- Provide HTTP API protocol to third-party platform
- Support platform running mode and device running mode

Operation and Maintenance

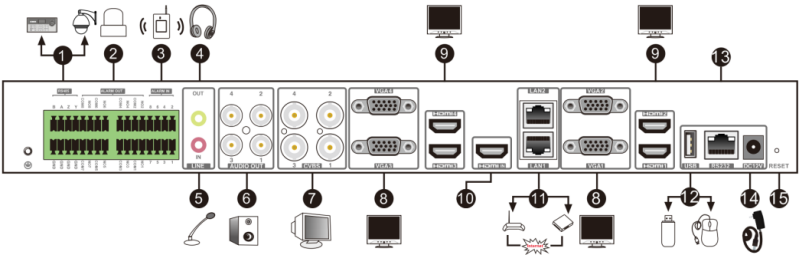
- Support device search
- Support WEB client access, configuration and management
- Support time zone, time and date settings
- Support IP address, subnet mask and gateway settings
- Support data port and HTTP port settings
- Support data backup and restoration
- Support remote reboot and one-button reset
- Support online and U-disk upgrade
- Support dual gigabit Ethernet ports, load balancing

1.3 Front-panel Descriptions

Front panel

Name	Description
REC	Record indicator (unavailable)
NET	Network indicator. The light will go on when it is connected to network.
PWR	Power indicator. The light will go on when it is powered.
	USB interface

1.4 Real-panel Descriptions



Rear panel

Number	Description
1	RS485 interfaces (currently no function)
2	8CH alarm output (currently no function); Relay output. Connect to external alarms.
3	8CH alarm input (currently no function)
4	Connector for audio output (used for two-way talk)
5	Connector for audio input (used for two-way talk)
6	Audio output ×4
7	CVBS output ×4
8	VGA output ×4 (1920×1080,1280×1024)
9	HDMI output × 4 (HDIM1/HDMI3：3840×2160，1920×1080,1280×1024；HDMI2/HDMI4：1920×1080,1280×1024)
10	HDMI input×1
11	Gigabit Ethernet port×2
12	Connector for external USB devices (like USB mouse)
13	RS232 serial port
14	DC12V power input
15	Reset

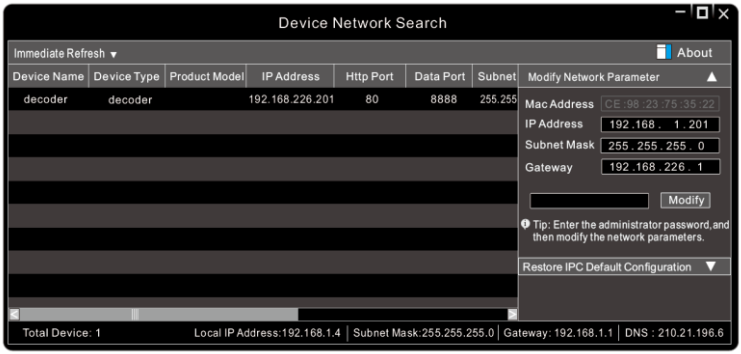
2 Login

The login settings are as follows.

① Make sure the PC and decoder are connected to the LAN.

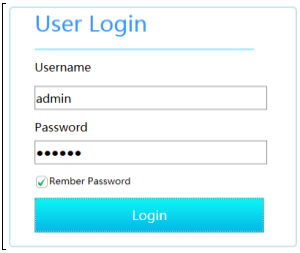
② Get the IP-Tool from the supplier and then install it on your computer.

③ Run the IP-Tool. Then the decoder can be searched. If the decoder can't be searched, please check whether the PC and the device are connected to the network or not. Click the device to check its detail information as shown below.



④ Modify the IP address. Click the information of the decoder listed in the above table to show the network information. Modify the IP address and gateway of the decoder and make sure its network address is in the same local network segment as the computer's. Please modify the IP address of your device according to the practical situation.

Double click the decoder information in IP-Tool or directly enter IP address in the web browser to access. Here we take IE client for example.



Username: The default username is admin.

Password: The default password is 123456.

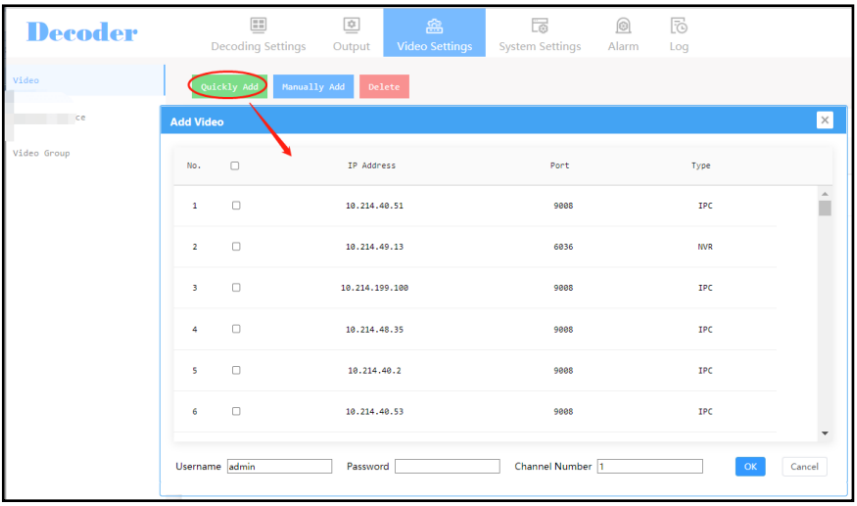
Enter the default username and password and then click [Login].

3 Device Configuration via Web

3.1 Video Settings

3.1.1 Video Management

Go to Video Settings→Video. There is a local video output by default.

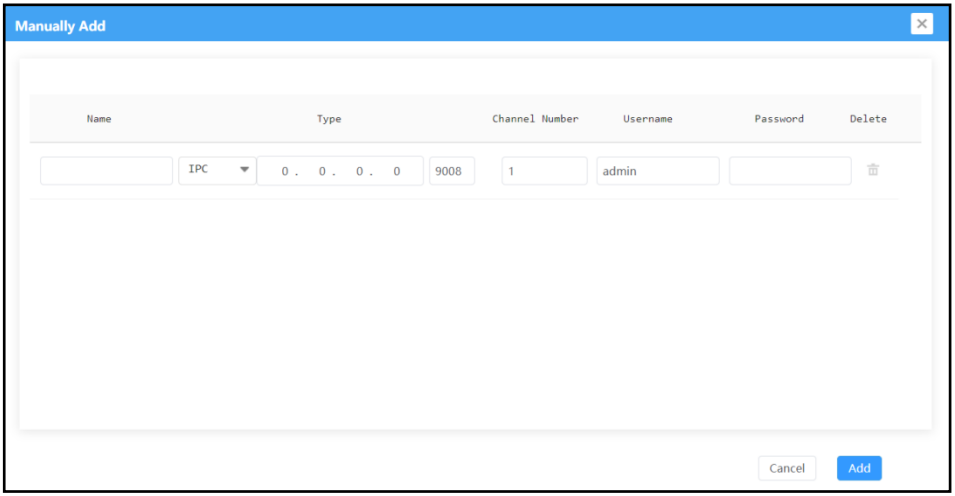


Videos can be quickly add or manually add through the above interface.

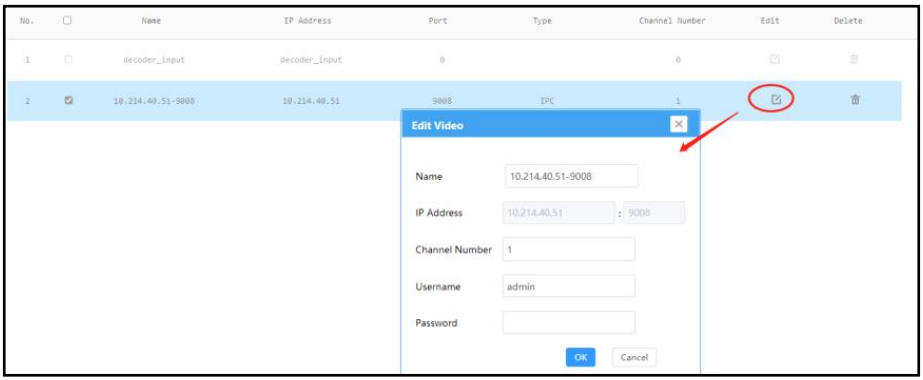
Quickly Add: Click [Quickly Add] to search video devices (like IPC, DVR, NVR, etc.) in the same local network. Select the desired video devices and then enter username, password and channel number of the devices. Then click [OK] to save the settings.

Manually Add: Click the "Manually Add" tab to add the video devices manually.

You can add IPC, NVR and DVR of our company or the video devices supporting ONVIF or RTSP protocol. Please select as needed. Then enter the corresponding IP address, port, channel number, username and password. After that, click [Add] to add.



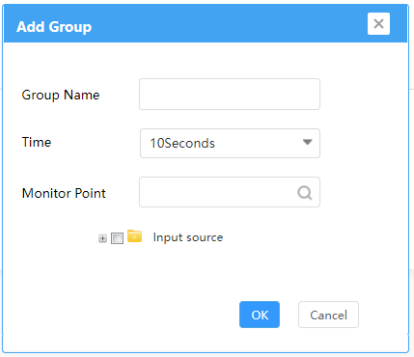
Modify the information of a video device: Click behind the channel number to change the IP address, channel number, username and password.



Delete videos: Click to delete the added videos.

3.1.2 Video Group Settings

Go to Video Settings→Video Group. Then click to assign channels for the desired group.



Enter the group name, select the dwell time and then check videos. After that, click [OK] to save the settings.

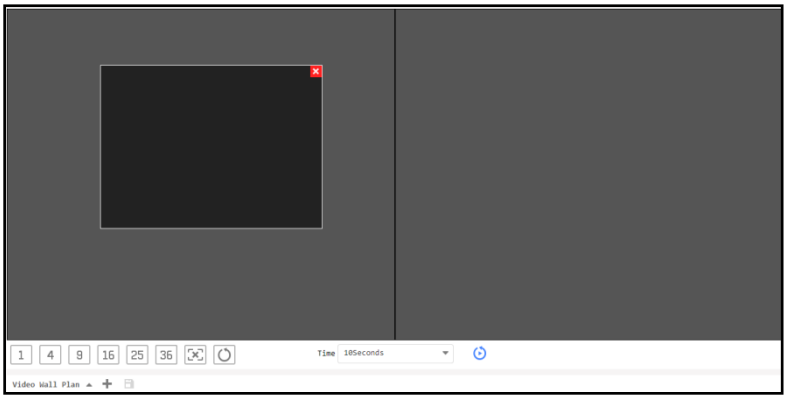
Click to modify the added group; click to delete the added group.

3.2 Decoding Settings

Please refer to Basic Settings for user permission setting.

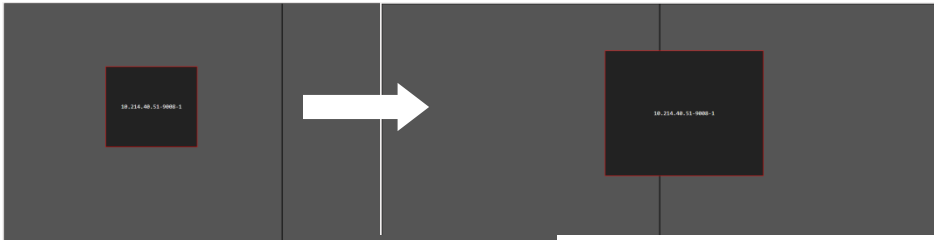
3.2.1 Open Window

Go to the decoding settings interface. Press the right mouse button and drag on the output window to open a window.

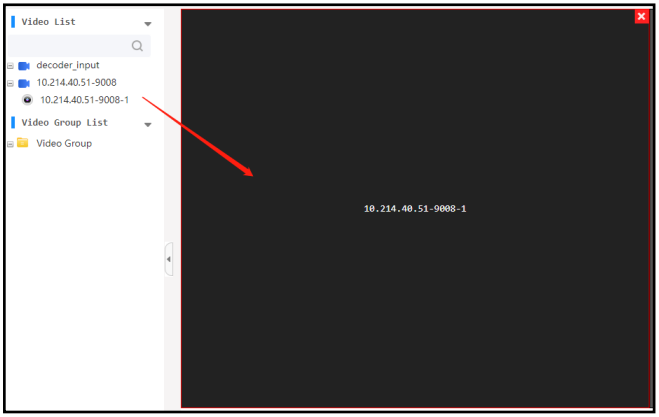


Drag a video to the drawn window to decode the video.

For the drawn window, you can drag it to anywhere and zoom in/out it as needed by dragging the four sides of the window.



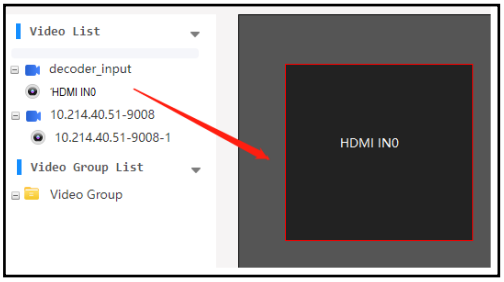
Directly drag a video to the output window to create a window that fits to the output window by default.



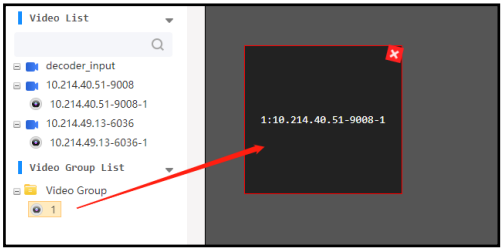
Click “ ” on the top right corner of the drawn window to delete it.

3.2.2 Decoding Operation

Decoder Input: Input the video source through HDMI IN interface in the real panel and then drag HDMI-IN0 to a window to bind the HDMI-IN0 and the monitor in the decoder settings interface as shown below.



Video group view: Drag a video group to a window and then videos in this group will be decoded in this window one by one according to the preset dwell time. (See Video Group Settings for details).



Button Description：

1/4/9/16/25/36 screen display mode


：Clear all video display

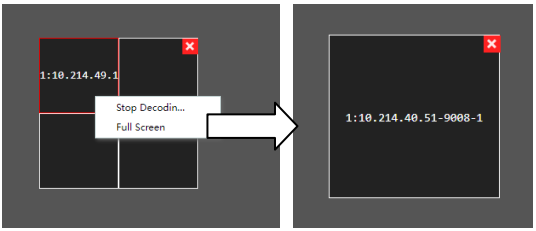

：Save a plan


：Create a plan


：Refresh

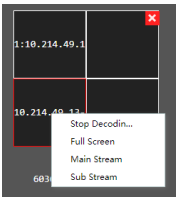

：Start auto-switch

Full Screen: In multi-display mode, select a window which is decoding video and then right click on it to pop up a menu as shown below. Select “Full Screen” and then this window will display in full screen.



Exit Full Screen: Right click on the full screen window to select “Exit Full Screen” and then the window will restore to its original status.

Main Stream/Sub Stream: The main/sub stream can be switched by right clicking on the window which is decoding video.



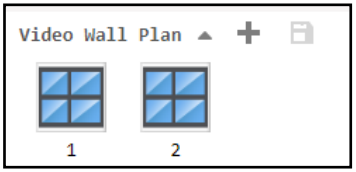
3.2.3 Plan Settings

Plan settings: There are two ways to set a plan.

① Drag videos to the left windows separately and then click to save the plan.

② Click to enter the plan name and then drag videos to the left windows separately. After that, click to save the plan.

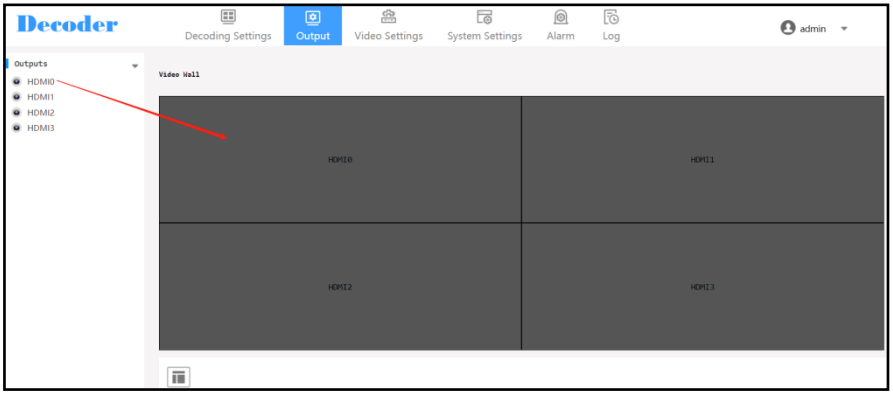
These saved plans will be listed on the plan list as shown below.



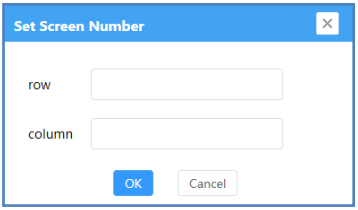
Click a plan to quickly call up this plan. Choose the time and then click to view these plans in sequence.

3.3 Output Settings

Go to Output Settings→Output interface as shown below.



Drag the output in the right output list to the window so as to bind the output to the window.
If the decoder is set as “Master” in the basic setting interface and many general decoders are added to this decoder, the output list will appear two or more than two outputs. Thus, users need to click “ ” to customize output layout as shown below.



Please enter the number of row and column displayed on the screen. The number ranges from 1 to 10.

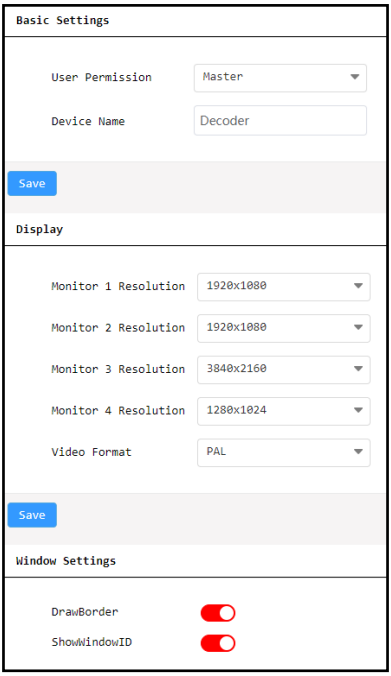
3.4 System Settings

3.4.1 Device Information

Go to System Settings→Device Information interface. In this interface, device information can be viewed here, like MAC address, device type, software version and so on.

3.4.2 Basic Information

In the basic settings interface, the user permission, device name, display and window settings can be set up.



User Permission: “Master” or “General” can be selected.

Monitor 1/2/3/4 Resolution: Please select it as needed.

Video Format: Choose “PAL” or “NTSC” as needed.

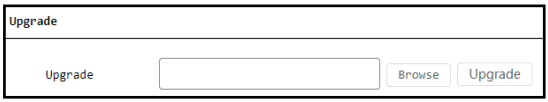
Draw Border: If “ON” is selected, a red box will flash on the decoding window once triggering alarms.

Show Window ID: If “ON” is selected, the window ID will appear on the decoding window.

3.4.3 System Maintenance

- **System Upgrade**

To upgrade the decoder, please go to System Settings→System Maintenance interface.



Click [Browse] to select the path of the upgrade files and then click [Upgrade] to upgrade the decoder. Please do not disconnect the device when upgrading. And the device will reboot automatically after finishing upgrading.

- **Reboot Settings**

The device can be restarted manually by clicking Device Settings→Reboot.

- **Reset Settings**

The system can be restored to the default settings by clicking [Reset] in the following interface (Device Settings→Reset).

- **Backup Settings**

Backup Settings: Click [Backup] to export the configuration file.

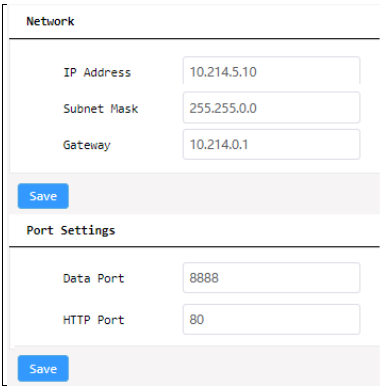
Import Settings: Click [Browse] to select the path of the files you want to import and then click [Recover].

3.4.4 Time Settings

Go to System Settings→ Time. In this interface, time zone and the system time can be set up.

3.4.5 Network Settings

Click System Settings→Network to go to the network settings interface as shown below.



IP Address: It must be in the same local network segment as the IP address of the computer used to log in the web client.

Subnet Mask: The default value is 255.255.255.0.

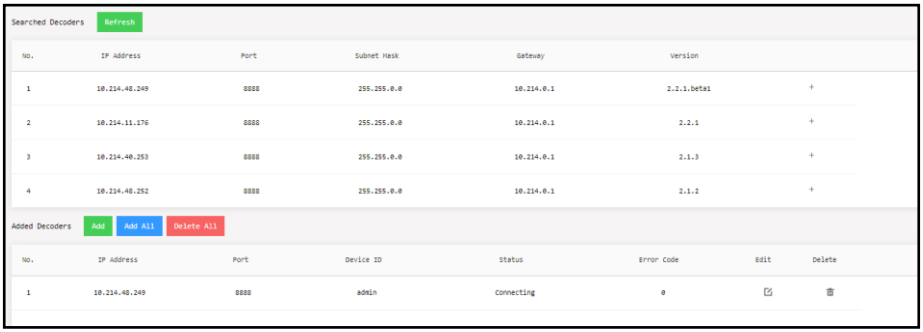
Gateway: It must be the same with the gateway of the computer used to log in the web client.

Data Port: The default number is 8888. This port shall be used when you want to add this device to a surveillance platform (like NVMS).

HTTP Port: The default number is 80. It is recommended to change (for example: 81). This port is used to log in the Web client (for example: http://192.168.1.201:81).

3.4.6 Affiliation Settings

Go to Device Settings→Affiliation.



Click [Refresh] to automatically search the decoders in the same local network. When the decoder is set as "Master", other searched decoders set as general decoders can be added into this master decoder and governed by it.

Click "+" to add the decoder. Click "Add All" to add all searched decoders. Click " 🗑 " to delete

the added decoder.
In this interface, you can view the status of the added decoder, including “online”, “offline”, etc.

Note: ①The added general decoders cannot add other general decoders.

② The master decoder cannot be added to other master decoders.

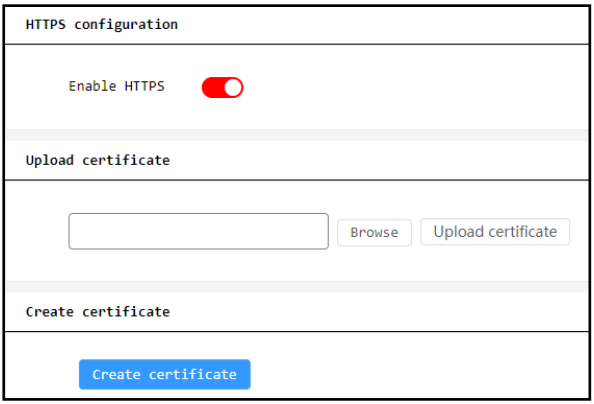
③ The added general decoder which is working cannot be added to other master decoders.

④ A maximum of 63 general decoders can be added and controlled by a master decoder.

3.4.7 HTTPS Configuration

HTTPs provides authentication of the web site and protects user privacy. There are two ways to enable HTTPs service.

Go to System Settings→HTTPS configuration interface as shown below.



A. Install a signed certificate

Enable HTTPS，click “Browse” to select the certificate you want to import and then click “Upload certificate” to upload the signed certificate.

B. **Create a private certificate.**

① Click “Create certificate”.

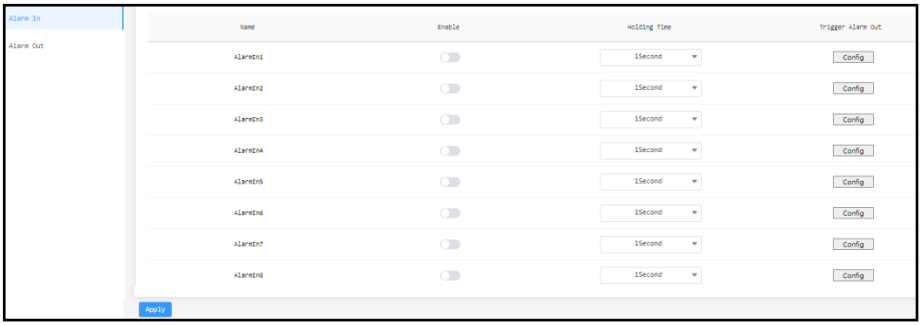
② Fill out the corresponding information in the creation box. Enter the country (only two letters available), state name, locality name, validity date, password and so on.

③ Click “OK”.

④ Click “Apply” to save the setting.

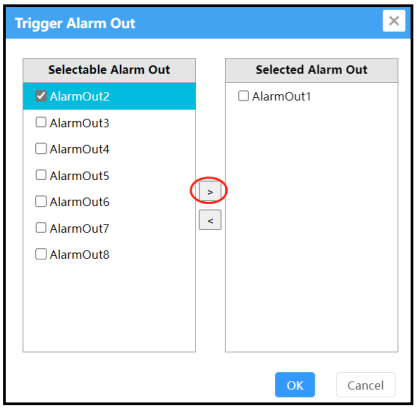
3.5 Alarm Settings

Go to System Settings→Alarm.



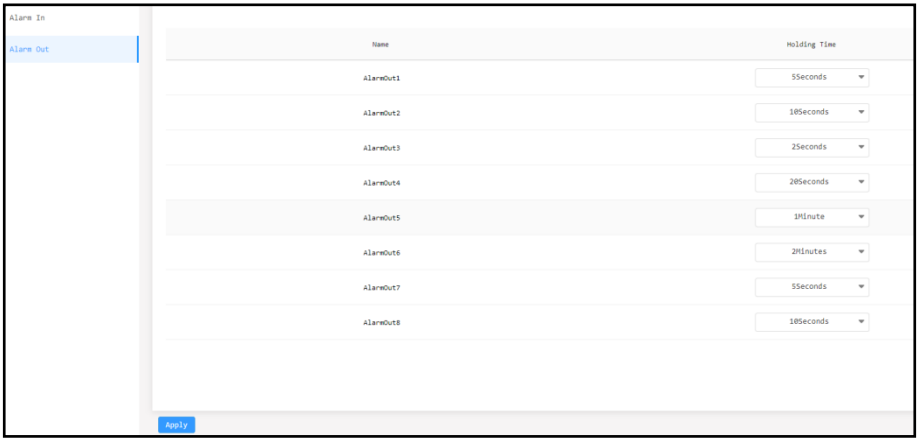
Alarm Input Setting:

① Enable an alarm input, set holding time and check “Config” to select the linkage output.



② Check the desired output and click > to add. Then click “OK” to save the settings.
③ Click “Apply” to save the settings.

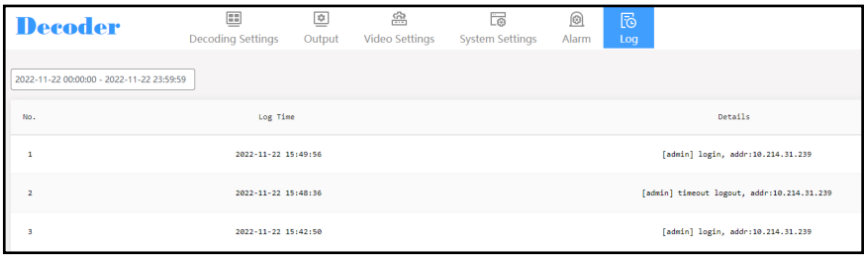
Alarm Output Setting: Select the holding time of the alarm output. Then click “Apply” to save the settings.



Alarm Test: After setting sensor input and the corresponding output, use one end of the wire contact the GND interface of the decoder and use the other end of the wire to contact the alarm in interface of the decoder, the sensor output of the decoder will trigger alarms.

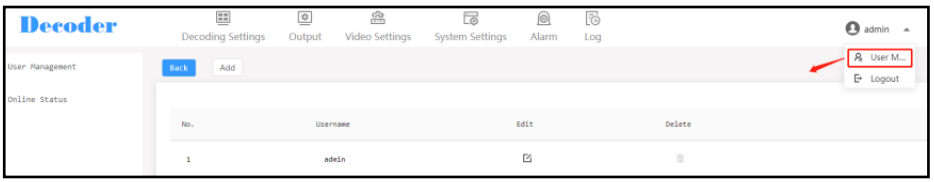
3.6 Log

In the log interface, you can check the log information of decoder in the set time, including record time and detailed information (username, operation type, IP address, etc.)



3.7 User Settings

On the top right corner of the interface, click ▼ beside “admin” and then a dropdown list will appear. Click “User Management” to enter the user management interface.



Username: The default username is “admin”.
Current Password: The default password is “123456”.
It is necessary for you to set your new password here if this is your first login. Click  to change the password. Next time, you can use your new password to log in.
Click [Add] to add a new user as needed.

Online Status: You can view the online user of the decoder and its IP address.

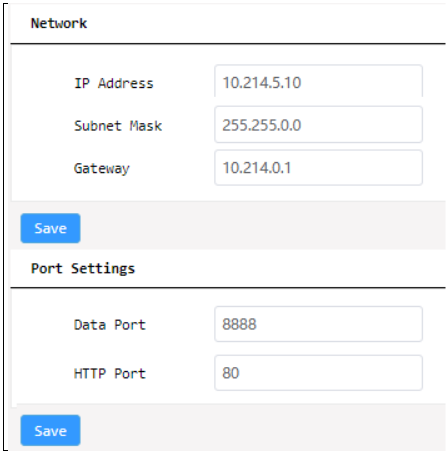
Logout: Click “Logout” to return to the login interface.

4 Connect to Platform

Only when the decoder is set to master user permission, can it be connected by a surveillance platform. Here we will introduce how to connect to NVMS as an example.

① Switch the decoder user permission to "Master" and then add the general decoders as needed (See Affiliation Settings for details).

② Network configuration. Go to System Settings→Network interface.



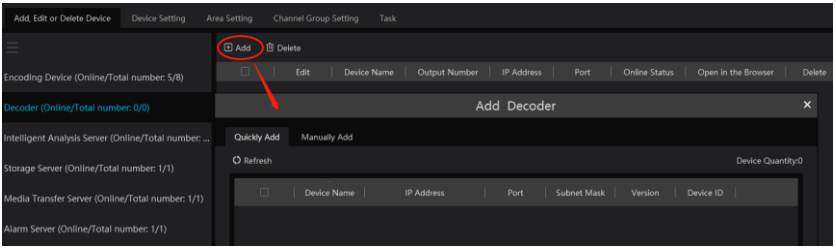
IP Address: It must be in the same local network segment as the IP address of the authentication/management server.

Subnet Mask: The default value is 255.255.255.0.

Gateway: It must be the same with the gateway of the authentication/management server.

Data Port: The default number is 8888. This port shall be used when you want to add this device to a surveillance platform (like NVMS).

③ Log in the monitor client of the NVMS platform system and then go to the "Add, Edit or Delete Device" interface to add decoders as shown below.



④ In the above interface, select “Decoder” and then click [Add] to add decoders.

⑤ Go to TV Wall Management interface. Add a TV wall and then bind the decoder to it. Then check the connection status of the decoder. If the decoder is added successfully, the online status will appear. (See NVMS user manual for more details).