User Manual of Network Camera

Version V1.2

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1. Overview

1.1 Product Summary

Our network cameras are easy-to-use for security applications in offices and residential areas, specifically designed with a compact exterior. Despite its ultra-compact size, the camera incorporates many advanced features to meet many kinds of security requirements.

The embedded SoC enables the camera to simultaneously deliver dual streams in H.264 or H.265 with different video resolution and quality upon different devices, such as digital video recorders AHD DVR/NVR, PC or 3G cell phones. It is applied to all kinds of occasions which need network remote monitoring, such as:

- ATM, Bank counter, supermarket, factory, etc;
- Foster care center, kindergarten, school, etc;
- Intelligent gate control system;
- Intelligent building and residential manage system;
- Unattended system like: Generating plant, telecom base station;
- Outdoor device to monitor bridge, tunnel, block transportation status;
- Production line and warehouse control;
- 24-hour monitor for road transportation;
- Remote monitor for forest, water source and river;
- Airport, train station, bus stop, etc.

1.2 Product Features

Please refer to the products you buy to confirm the functions. It is subject to change without prior notice.

- Advanced H.264&H.265 High profile compression.
- High-resolution image.
- Support device access via IP address, DDNS, cloud.
- Support dual stream.
- Alarm link to snapshot, email sending, etc.
- Support multi-browsers, like IE, Chrome, Firefox, opera, etc.

- Support vCMS software and mobile APP surveillance.
- With Ethernet port for remote access function, remote upgrade & maintenance function.
- Support to connect with AHD DVR/NVR.
- Support ONVIF.

Note:

- *For detail features, please refer to the product model description.*

1.3 Attentions

Please read this product user manual carefully before the installation of the product. Check the content of the gift box and confirm that all the components are included.

The product is powered by 12V/2A; do not connect the device to any adapter unauthorized. Do not remove the case of the Camera and try to mend the device by yourself. Please contact our company post-sale service team for the consulting and repairing. The manufacturer is not responsible for any damage due to improper operation.

!!! The product function described in this set of user manual is determined by the specific model, Please base on the actual device.

2. Network Connection

Connect the IPC to your network, network topology map please refer to **figure 2-1.**

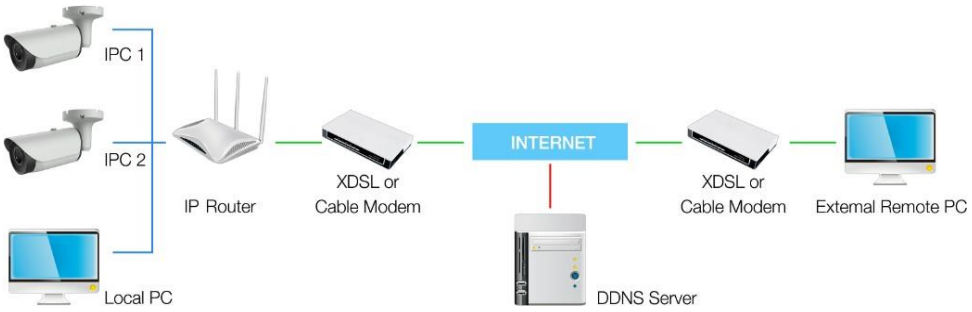


Figure 2-1 Network Connection

Configuring the network settings of the local PC connected to an IP router, follow the instructions below.

- **Select**: **Network Neighborhood→ Attribute → Local Area → Connection → Attribute→ General →Internet Protocol → TCP/IP →Attribute → Obtain an IP address automatically or Use the following IP address**

Follow the instructions below if you select (Use the following IP address): If the address (LAN IP) of the IP router is 192.168.xxx.1, input

- **IP address**: 192.168.xxx.100
- **Subnet Mask**: 255.255.255.0
- **Default Gateway**: 192.168.xxx.1

To view and configure the camera via a LAN, make sure the network camera in the same subnet with your local computer, and install the Device Manager software to search and modify the IP address of the network camera.

***Note**:*

- *Please refer to chapter 3 on how to modify the IP address of the network camera.*

3.Login the Network Camera

3.1 Direct Connect

The default IP address is 192.168.1.10. The user can modify it by Device Manager. For details please refer to **Quick Guide of Network Camera**.

Accessing by Web Browsers:

1. Open the web browser.
2. Input the IP address of the network camera, and press the Enter button to enter the login interface.
3. If it is the first time to login, it will remind you to install the plug-in, as shown in **figure 3-1.**

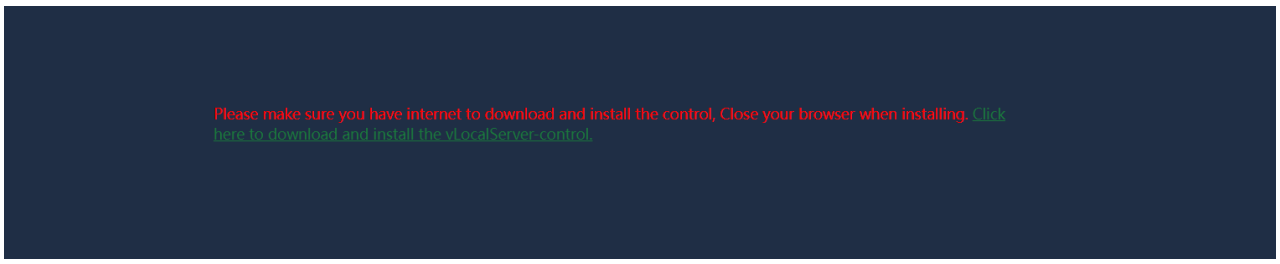


Figure 3-1 Install the Plug-in

4. Install the plug-in installation package from CD or download from web site.
5. After the installation, input the user name and password (default username is admin and the password is empty), as shown in figure 3-2.

Figure 3-2 Login Interface

Note:

- *You may have to close the web browser to install the plug-in. Please reopen the web browser and log in again after installing the plug-in.*

3.2 P2P Connect

3.2.1 Login by User

1. Open the web browser and input the , and press the Enter key to enter the login interface.

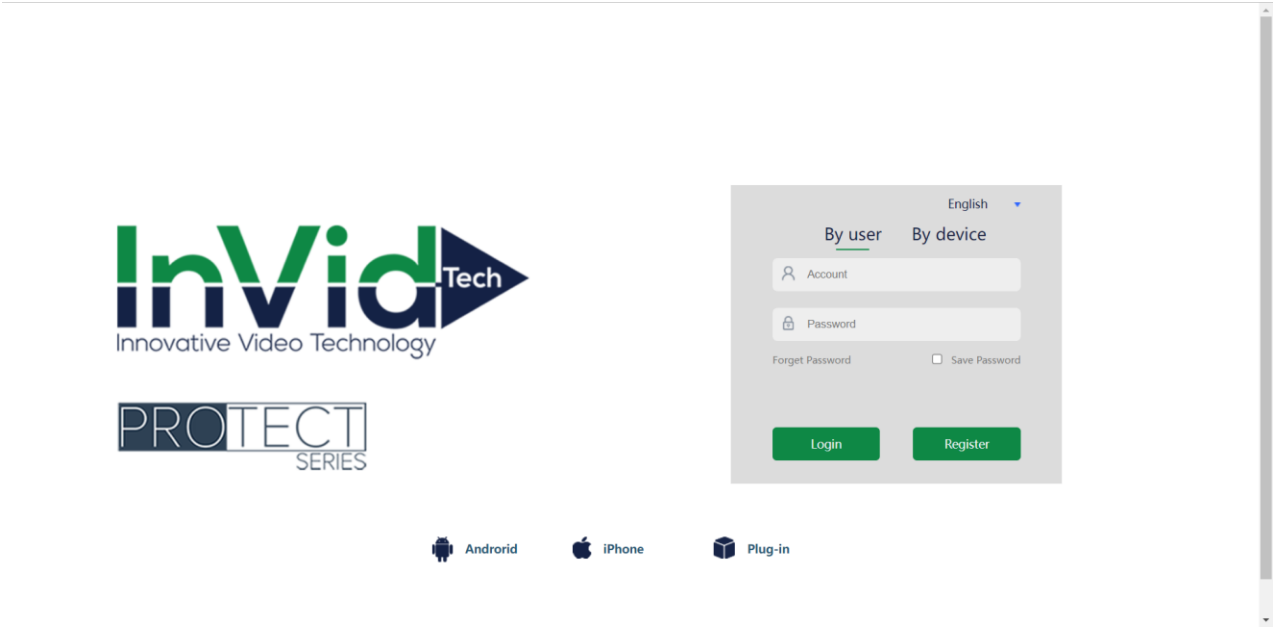


Figure 3-3 Cloud Login

2. Click **Register** to enter the register interface, follow the prompts to enter your registration information.

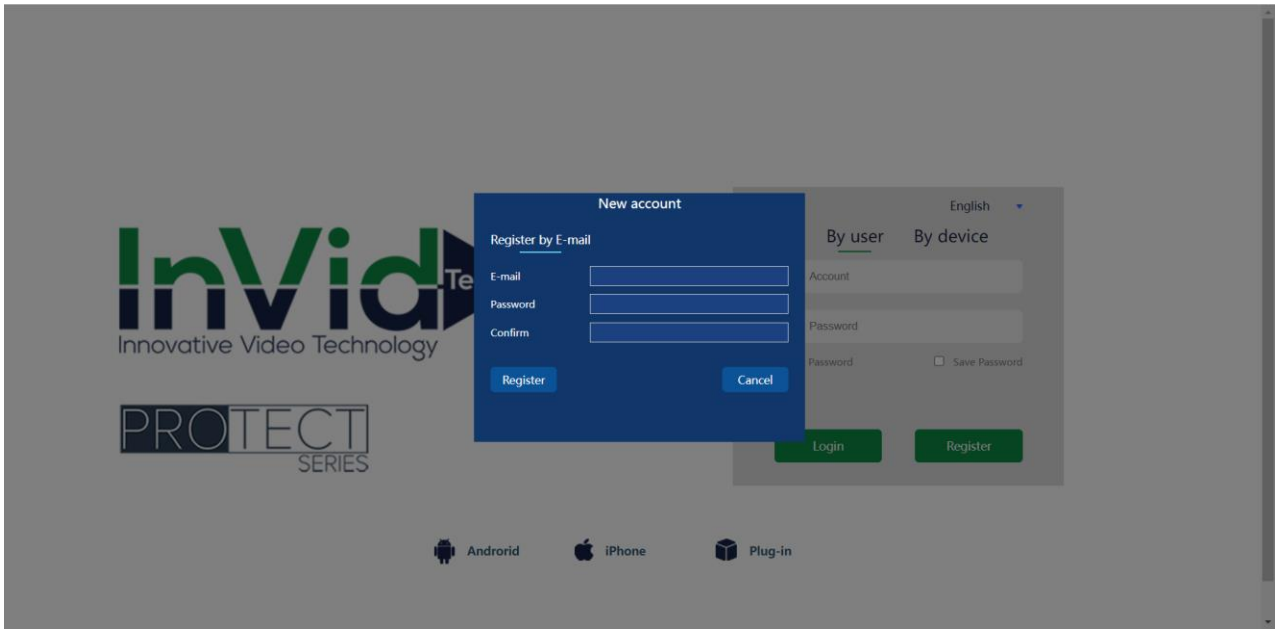


Figure 3-4 Register

3. After a successful registration, at the login screen, enter your user name and password, click on login to enter the graphic interface.

3.2.2 Login by Cloud ID

1. Open http://www.protectseriesp2p.com/ and select login by device
2. Input the Cloud ID, Username, Password.
3. Click **Login** to login the device.

Figure 3-5 Login by Device

Note:

- *Default username is admin and the password is empty.*

4.Preview

4.1 Preview Page

The preview page allows you to view the real-time video, capture images, and configure video parameters. The preview page is shown as **figure 4-1:**

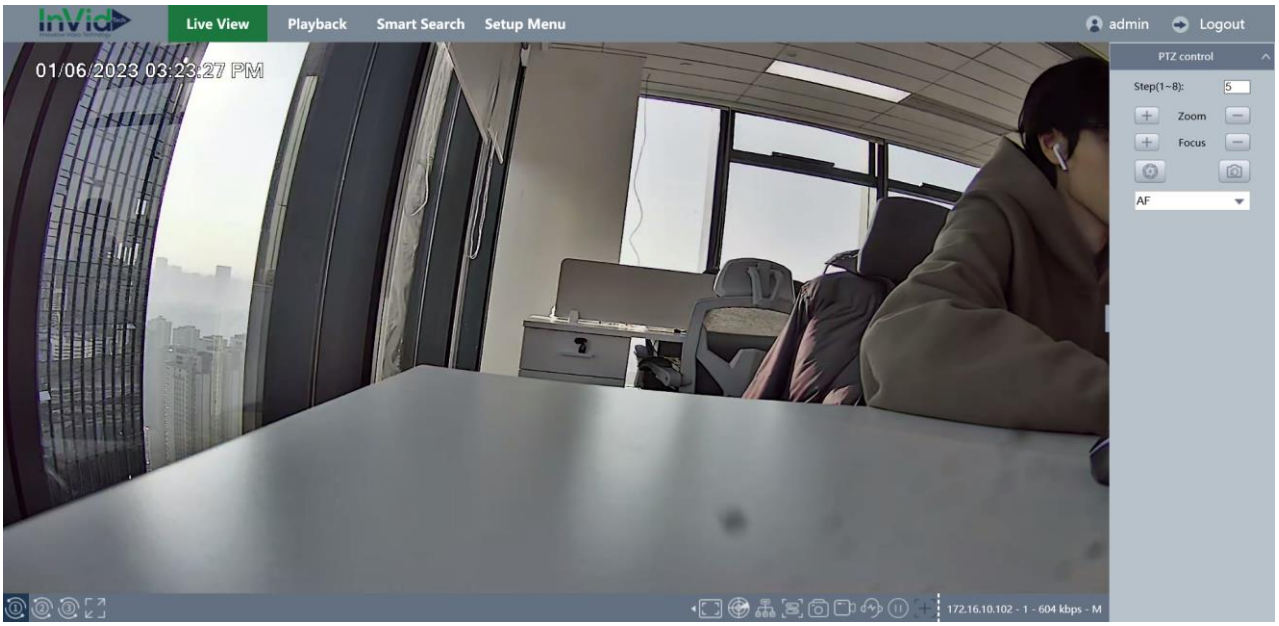


Figure 4-1 Preview Page

4.2 Start Preview

On the preview page, click channel on the left of the preview page to view the real-time video. Select main stream or sub stream to view the real-time video.

Items	Description
	Full Screen
	All Open(Main stream)
	All Open(Sub stream)
	All Open(Mobile stream)
	Original size→4:3 16:9 1×
	Focus Zoom / Stop Focus Zoom
	Dynamic Tracking Open / Dynamic Tracking Close
	Multicast / Stop Multicast
	Local Snapshot
	Local Record / Stop Local Record
	Audio / Stop Audio
	Start live view / Stop live view

Table 4-1 Descriptions of the Toolbar

4.3 Record and Capture Manually

In the preview interface, click to capture the live pictures or click to record the live view.

The saving paths of the captured pictures can be set on the **Setup Menu → Set→ LocalSet → Snapshot → Picture Path**. The saving paths of the recording video can be set on the **Set →Set→ LocalSet → Recorded video → Record Path.**

Select the packed size of the manually recorded video file, which ranging from 200MB to 1024MB. After the selection, the maximum record file size is the value you selected.

4.4 PTZ Control

In the right panel, there is PTZ panel for controlling motorized cameras or high speed dome cameras.

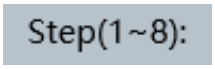
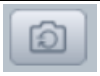
Items	Description
	To set the step of high speed dome
	Zoom in / out
	Focus in / out
	One click_Focus
	Lens_Initialization

Table 4-2 Descriptions of the PTZ panel

4.5 Reboot the camera

Click **Setup Menu → Maintenance →Auto Reboot → Reboot** to enter the reboot interface, click **OK** to reboot the network camera.

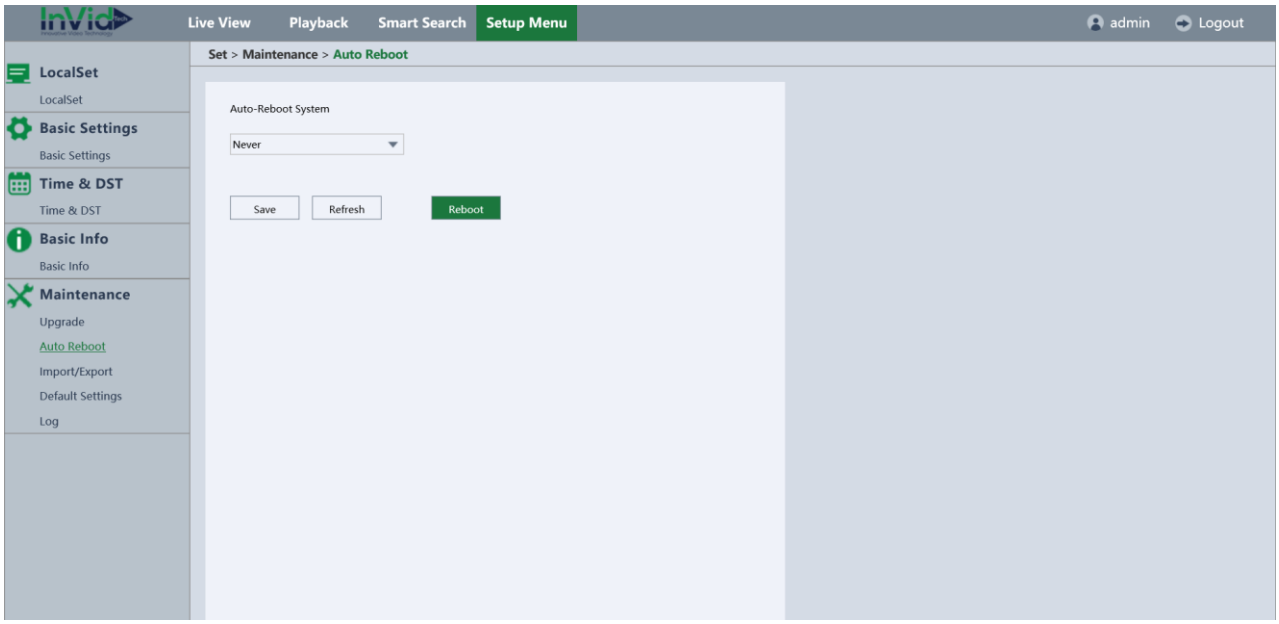
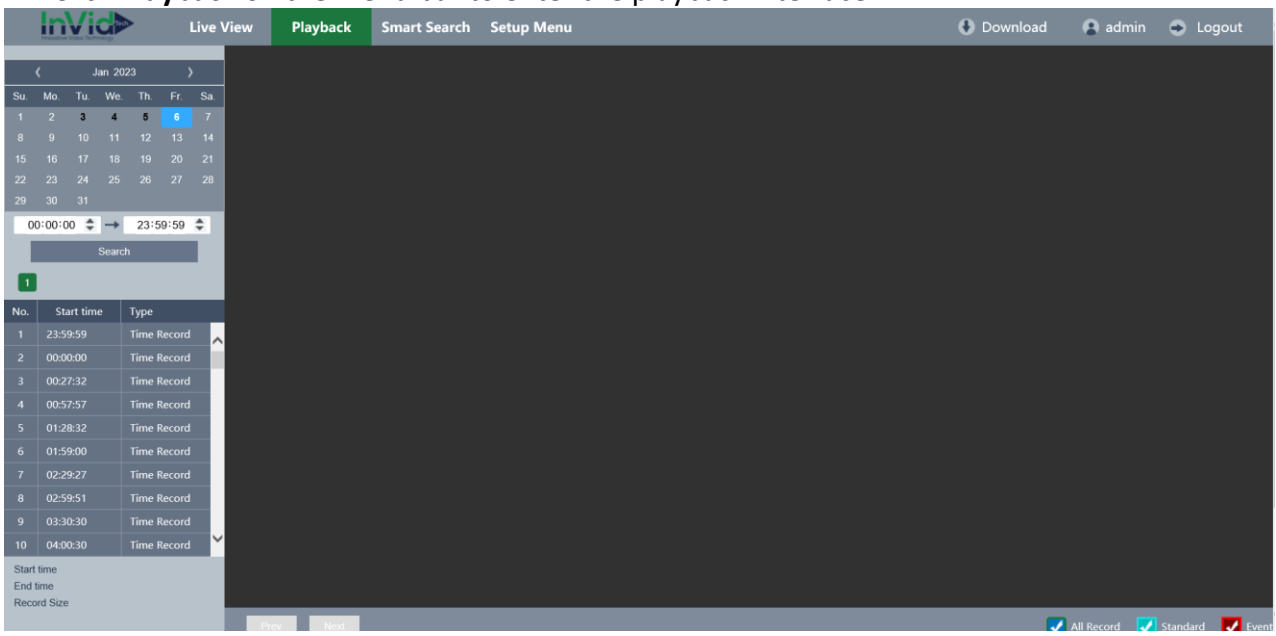


Figure 4-2 Reboot Interface

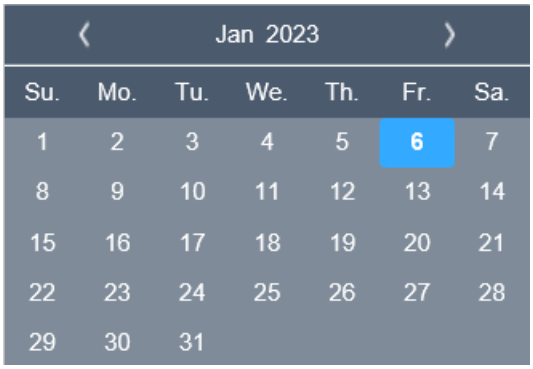
5. Playback

This section explains how to view the remote video files stored in the network storage server (NAS) or Micro SD card.

1. Click **Playback** on the menu bar to enter the playback interface.

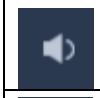


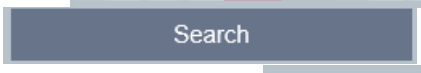
2. Select the date.



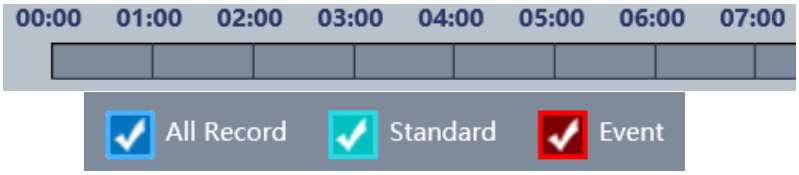
3. Click to play the video files which found on this date.

The toolbar on the bottom of Playback interface is used for controlling playing process.

Icon	Description
	Play
	Pause
	Stop-(right click on video to Stop All)
	Slow
	Fast
	NextFrame
	Local Snapshot
	Sound on
	Mute
	Edit

4. Click or enter numbers to set start and end time. Click  to search the video files.

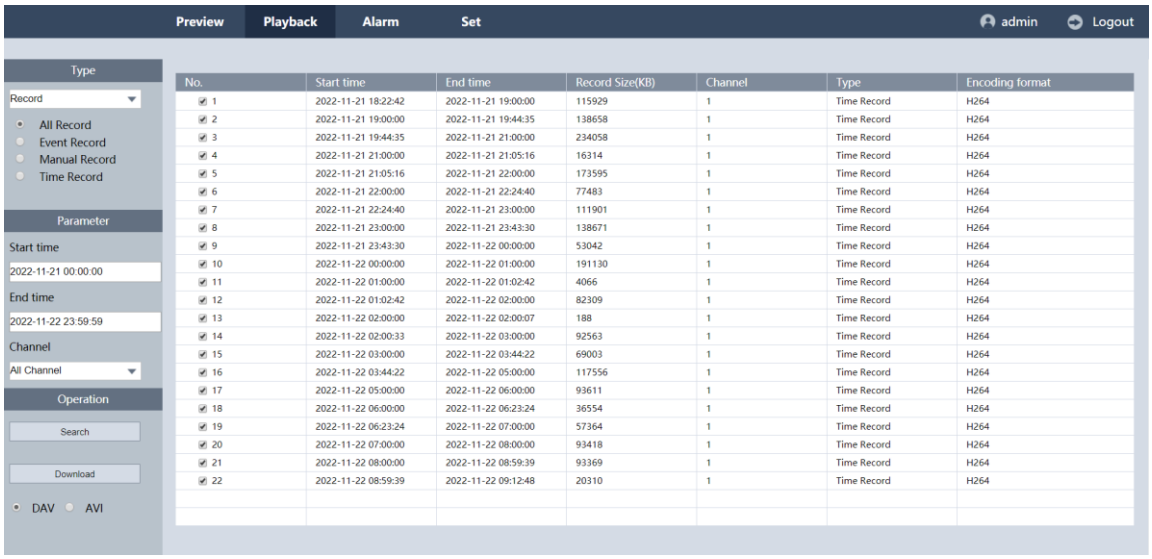
5. Double click a file to play it.
6. The different colors of the video on the progress bar stand for the different video types.



6.Smart Search

This function support to download the recording/picture file from device.

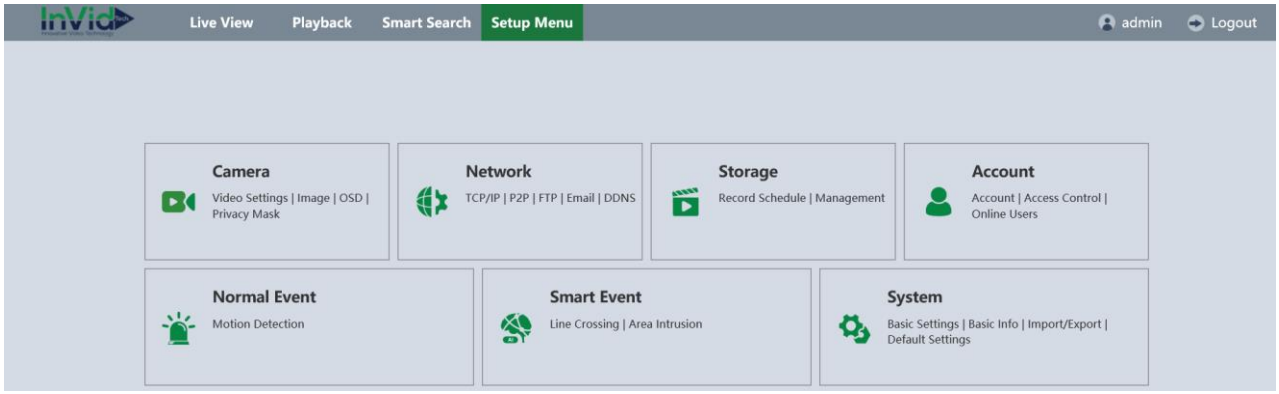
1. Click **Smart Search** ,select the Record/Picture, type.
2. Select the start/end time you want to search.
3. Click Search
4. Select the files you want to download.
5. Click Download.



Note:

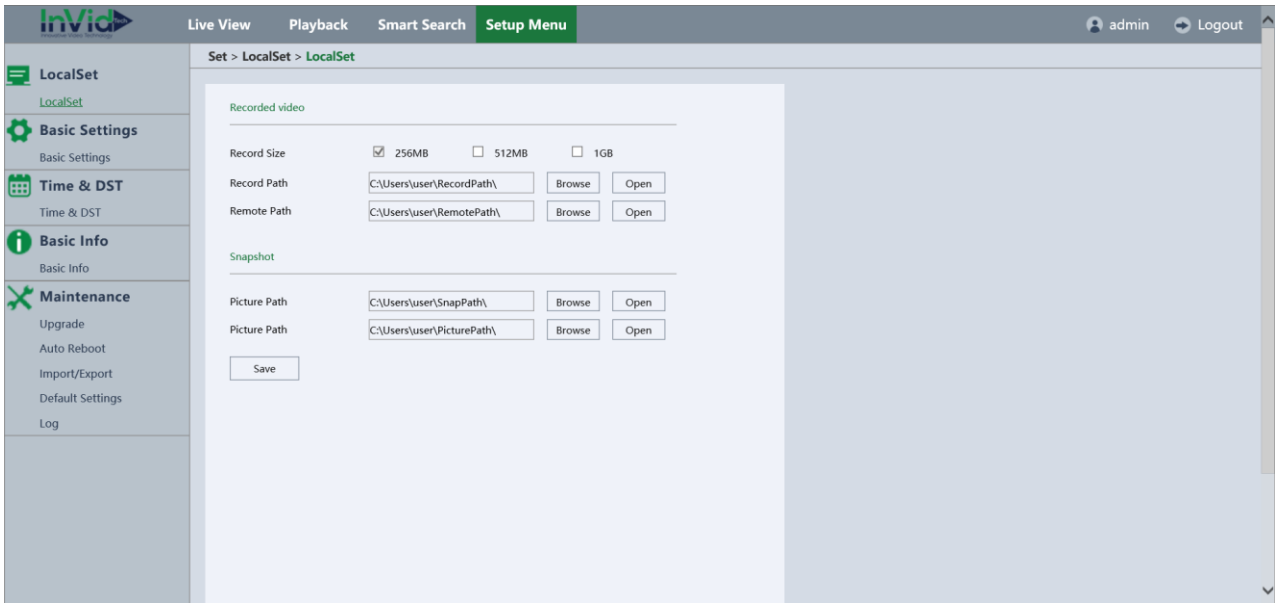
- *You can choose **DAV** or **AVI** type to download files. The files will be saved in the **Record Path,**which set in Preview interface.*

7.Setup Menu



7.1 Local Set

Click **Setup Menu → LocalSet** to enter Local Set interface. As shown in **Figure 6-1.**



The saving paths of the captured pictures can be set on the **Setup Menu → LocalSet → Snapshot → Picture Path**. The saving paths of the recording video can be set on the **Setup Menu → LocalSet → Recorded video → Record Path.**

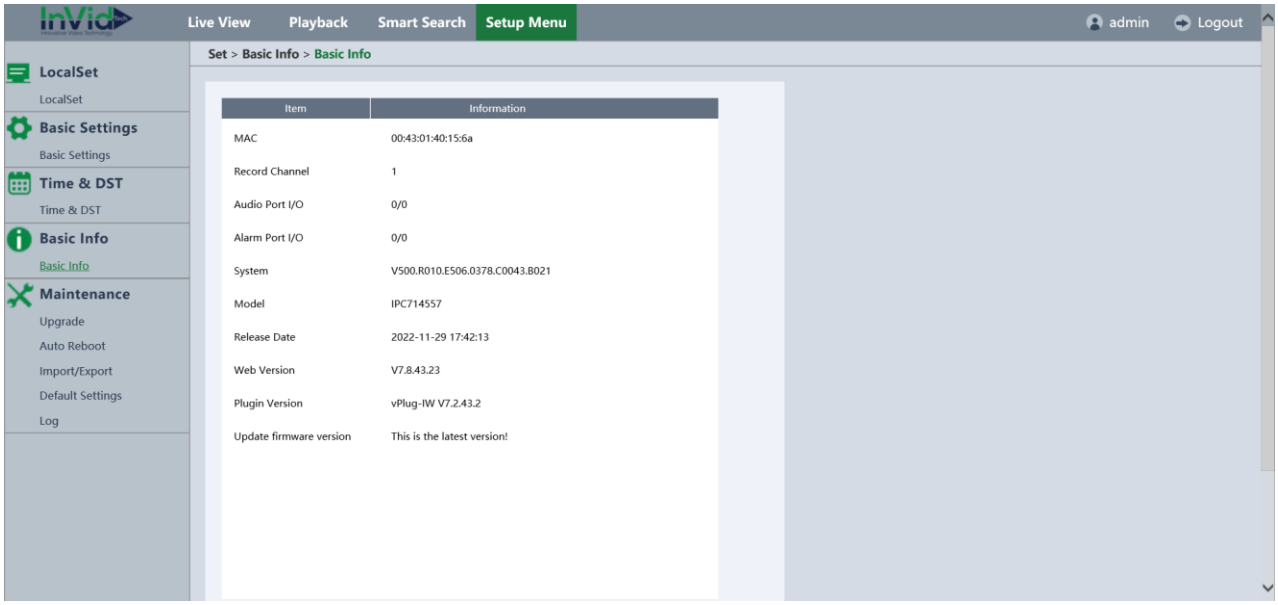
- **Recorded Video:** This config to set the local manual record. Chose Record size to set different size of record package; and Record path means the path user saved manually; Remote path means download the recording files and pictures from device side remotely.

- **Snapshot:** The first Picture path is for set the snapshot pictures path from web local when preview; The other picture path is for set the picture path from web local when do playback

7.2 System

7.2.1 Setting

Click **Setup Menu → Basic info → Basic info** to enter Version information interface. As shown in **following picture**



Note:

- *Some products shows "**Audio Port I/O 0/0**", which means they do not support audio.*
- *Updated version: Cloud upgrade. To query the new version, when there is new version in the server, device will upgrade by cloud. To use cloud upgrade, device must connect to internet.*

7.2.2 Base

Click **Setup Menu → Basic Settings → Basic Settings** to enter into the base interface. Please follow the instructions in this section to configure the video standard.

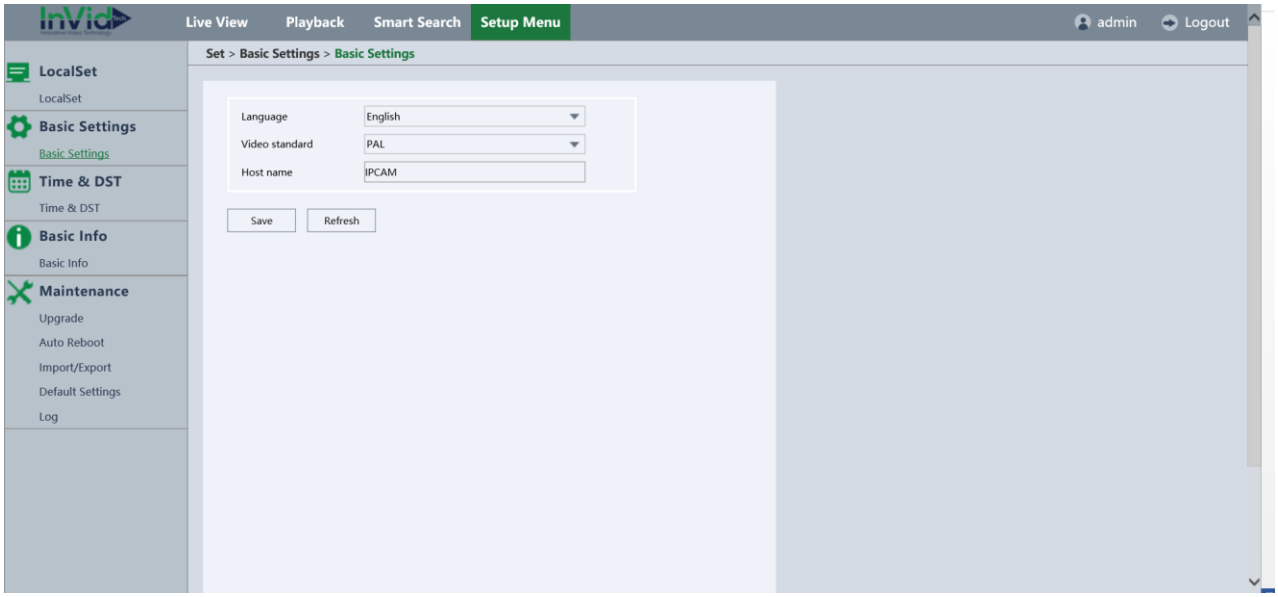


Figure 6-3 System Base Setting

- **Language:** There are English, Chinese, Italian, Polska, Russian, Portugues and Farsi for choice.
- **Video Standard:** PAL or NTSC.
- **Host name:** IPC's name.

7.2.3 Time & Date

Click **Setup Menu →Time & DST → Time & Date** to enter into the Time & Date interface.

Please follow the instructions in this section to configure the time synchronization and DST settings and NTP settings.

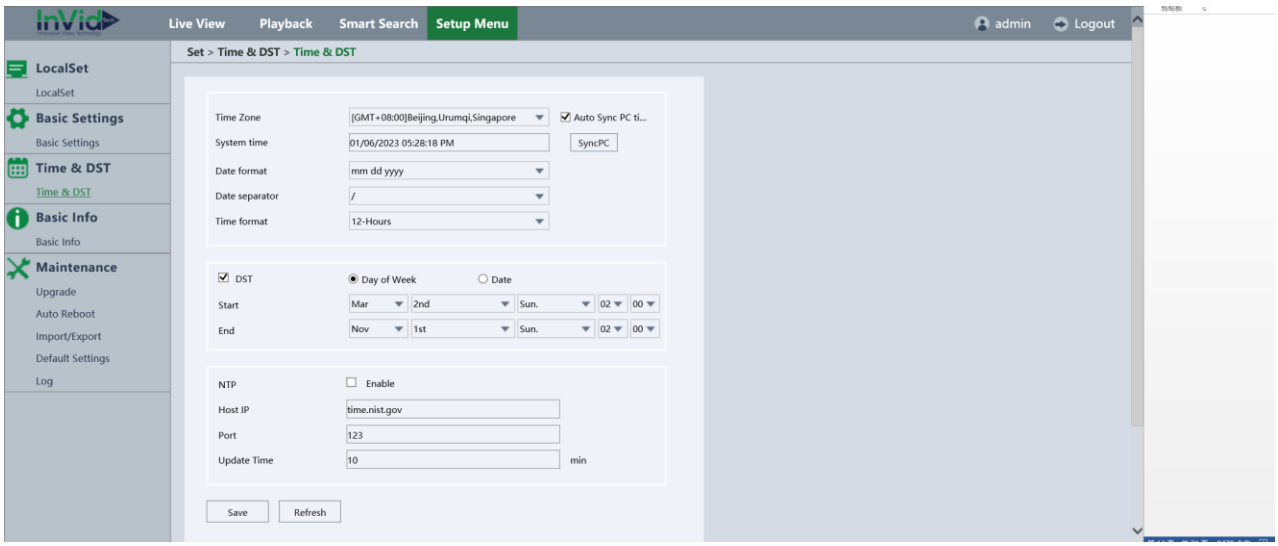


Figure 6-4 System Time&Date Setting

- **Time Zone:** Support all world time zone.
- **System Time:** IPC time, can be synced from PC automatic or manual.
- **Date Format:** year-month-day, month-day-year, day-month-year are selectable.
- **Date Separator:** ".", "-", "/" are selectable.
- **Time Format:** 24-Hours and 12-Hours are selectable.
- **DST:** Enable the DST function and set the date or week of the DST period.

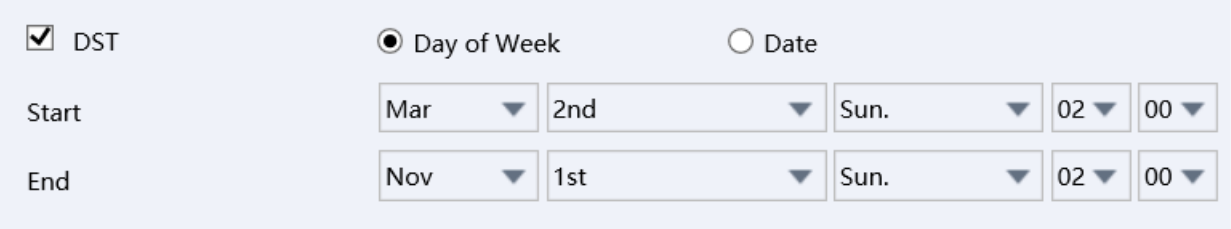


Figure 6-5 Time Setting for DST

- **NTP:** Set the time server based on Network Time Protocol.

Figure 6-6 Time Sync by NTP Server

Configure the following settings:

- **Host IP:** IP address of NTP server.
- **Port:** Port of NTP server.
- **Update Time:** The time interval between the two synchronizing actions with NTP server.

7.2.4 Security Manage

Click **Setup Menu ->Account ->Account** to enter the interface**.** There are Account settings/Access Control/Online User manage.

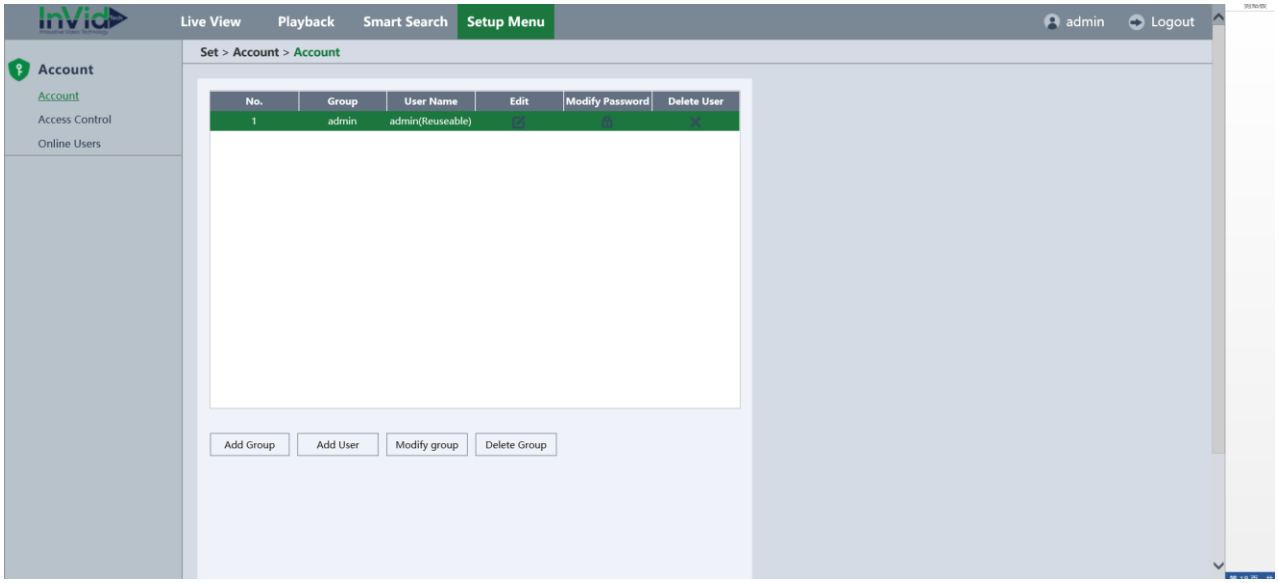


Figure 6-7 Security Manage interface

Account

Click **Setup Menu ->Account ->Account** to enter the Account interface, Shown as **figure 6-8.**

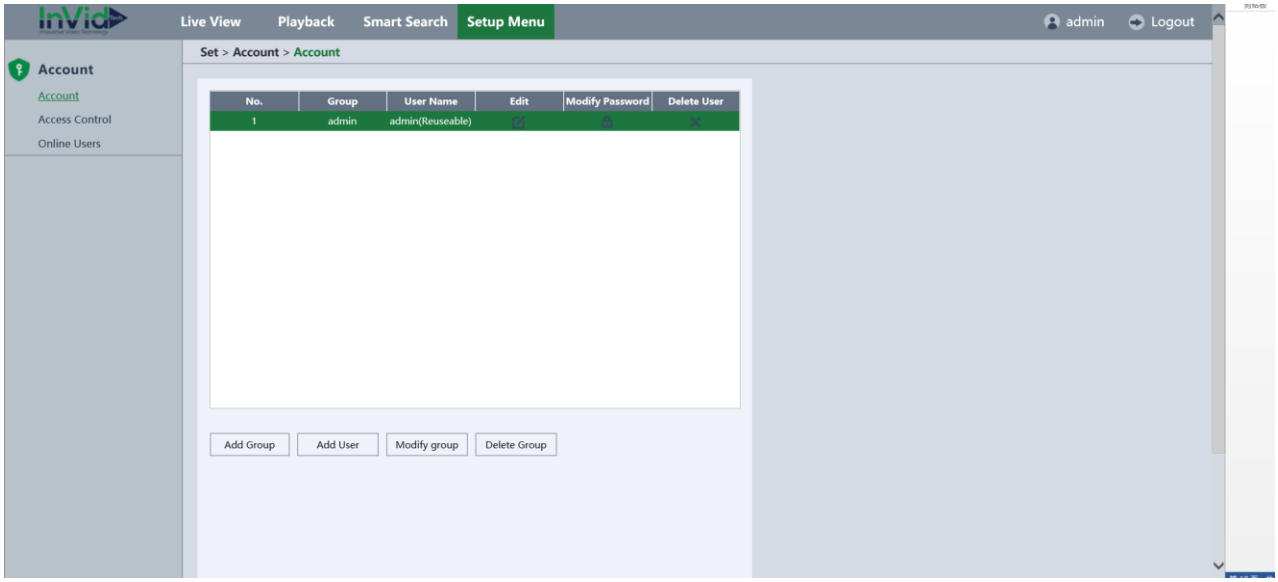


Figure 6-8 Account Manage interface

Group Manage

The admin group has all permissions by default which cannot be deleted and modified.

- **Add Group**
  1) Click **Add Group** to add a group.
  2) Input the Group Name, and memo, set authority of the group. Shown as **figure 6-9.**

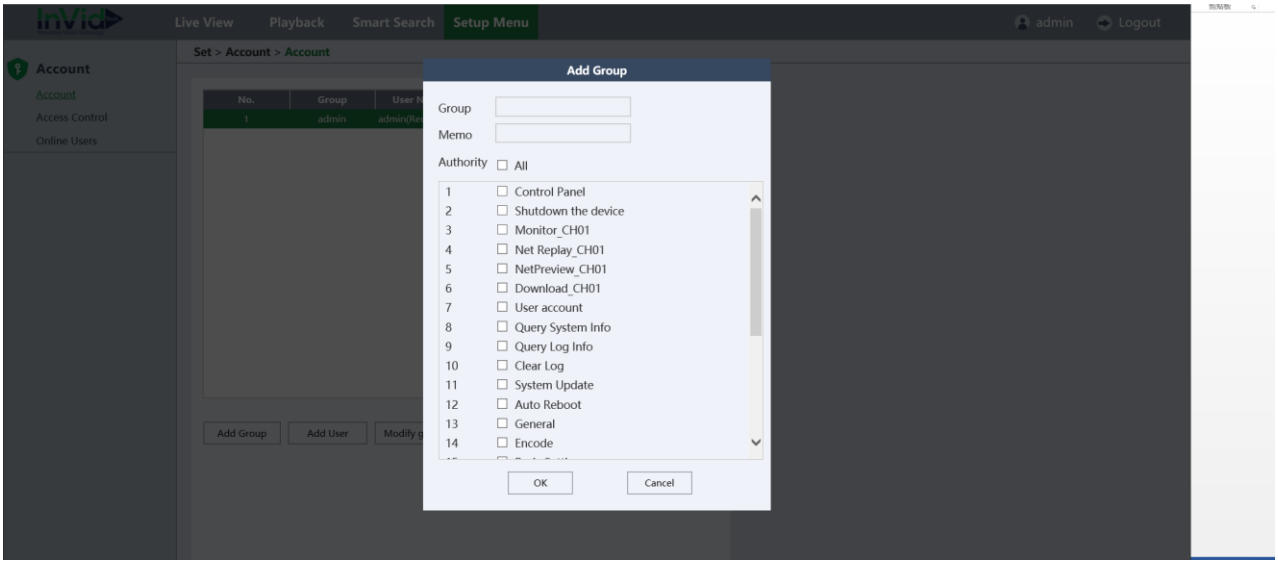


Figure 6-9 Add a group

- **Modify group**
  1) Left-click to select the group from the list and click Modify Group.
  2) Modify the group Name, memo or Authority.
  3) Click Save to finish the group modification.
- **Delete group**
  1) Before delete a group, you have to delete all the users in this group.
  2) Click to select the group you want to delete and click Delete Group.
  3) Click on the pop-up dialogue box to confirm.

Note:

- *The group name should be something of your own choosing, using a maximum of 64 characters, including upper case letters, lower case letters, and numbers.*

User Manage

The user has all permissions by default and can create / modify / delete other accounts. The user cannot be deleted and you can only change the password.

- **Add user**
  1) Click to select the group from the list
  2) Click Add user to add a user.
  3) Input the User Name, password and memo, select the group you want to put the user in, set the authority of the user. Shown as **figure 6-10.**

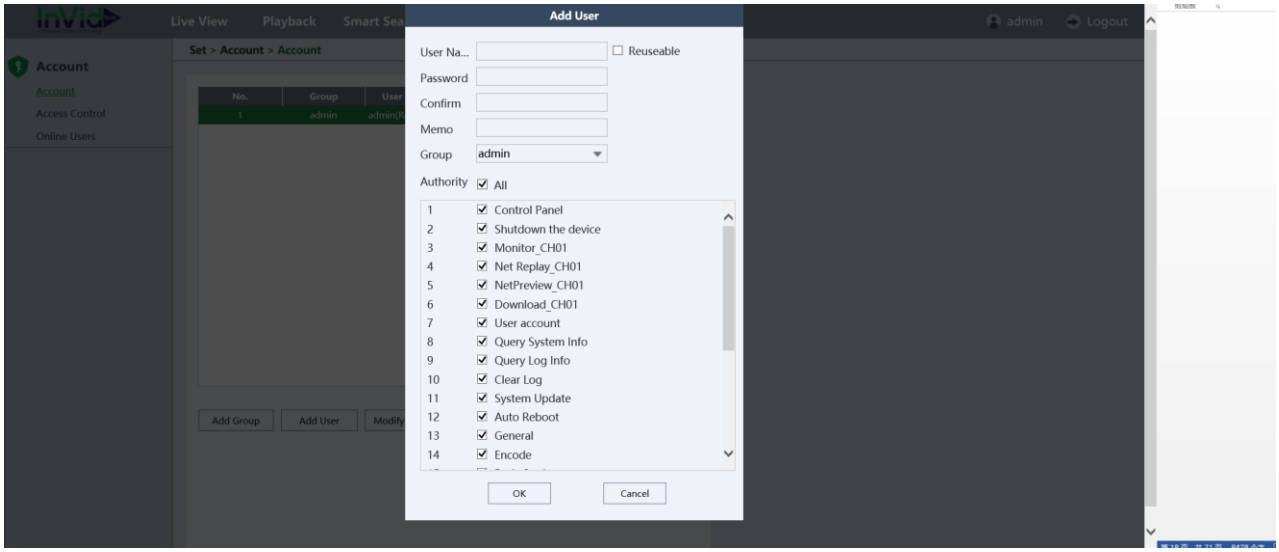


Figure 6-10 Add a user

- **Add user**
  1) Click to select the user from the list and click Modify User.
  2) Modify the User Name, Password, Group, Memo and Authority.
  3) Click Save to finish the user modification.
- **Delete user**
  1) Click to select the user you want to delete and click Delete User.
  2) Click on the pop-up dialogue box to confirm.

Note:

The User Name and Password should be something of your own choosing (using a maximum of 64 characters, including upper case letters, lower case letters, numbers) in order to increase the security of your product.

Access Control

Click **Setup Menu → Account → Access control** to enter the access control interface.

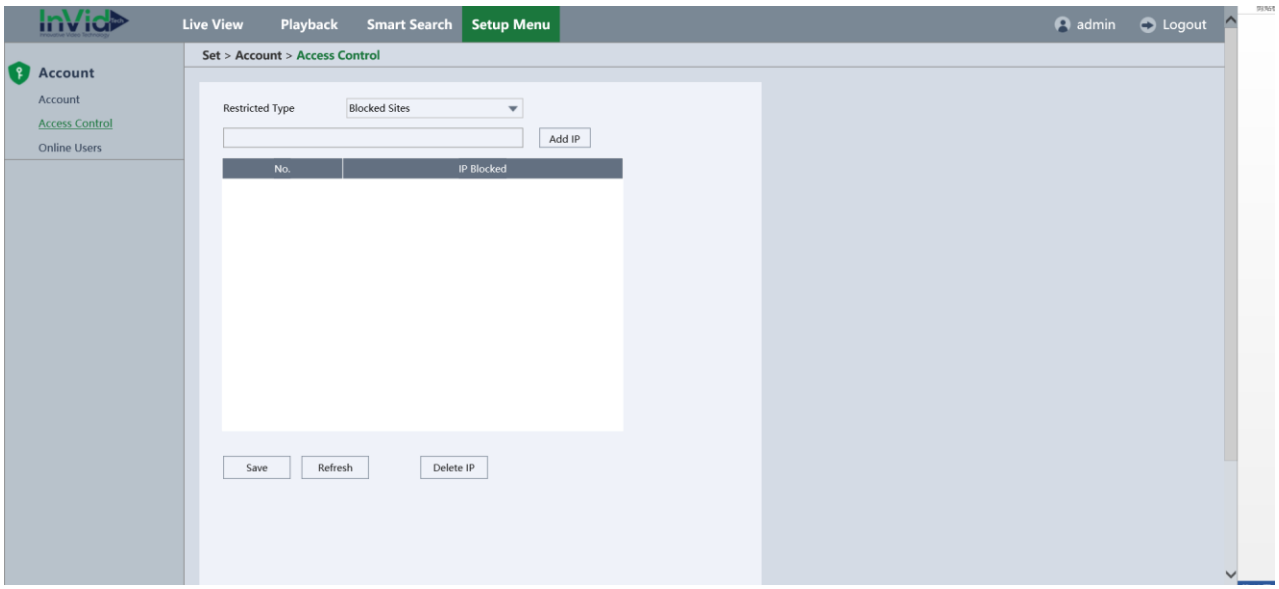


Figure 6-11 Add IP for Blocked List

1. Select the type of restricted list, Blocked Sites and Trusted Sites are selectable.
2. Set the IP Blocked list for example as follow, set the IP Trusted list is in the same way.

   Steps:
   1) Input the IP Address manually.
   2) Click **Add IP** on the right.
   3) Delete IP: Left-click an IP address from the IP Blocked list and click Delete IP.
3. Click **Save** to save the settings.

Online User

Click **Setup Menu → Account → Online Users** to enter the online user interface.

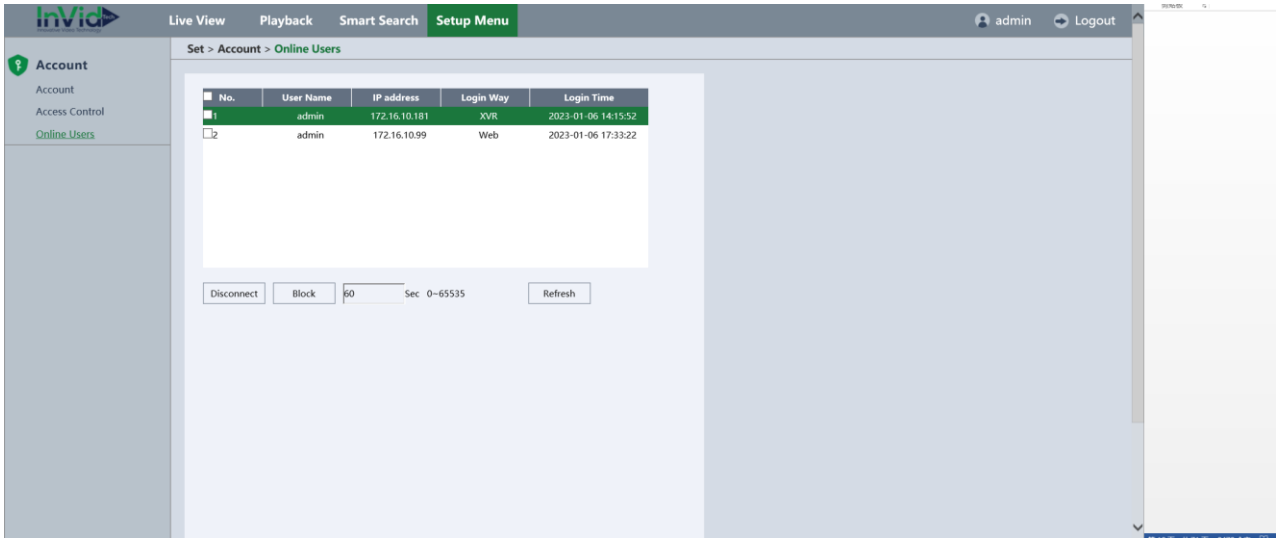


Figure 6-12 Online User Interface

- **User Name:** Remote device login this NVR device account.
- **IP:** User remote access devices IP Address.
- **Login Type:** Remote connection type.
- **Disconnect:** Disconnect the connected user, and disconnected users will reconnect automatically in a while.
- **Block:** Shielding the connected user in a time that you set, and remote user will reconnect in that time.

7.3 Network

7.3.1 General

Click "**Setup Menu ->Basic Settings** " to enter the interface, as shown in the **Figure 6-13**.

There are TCP/IP, Multicast, Https, UPNP-TM on this interface.

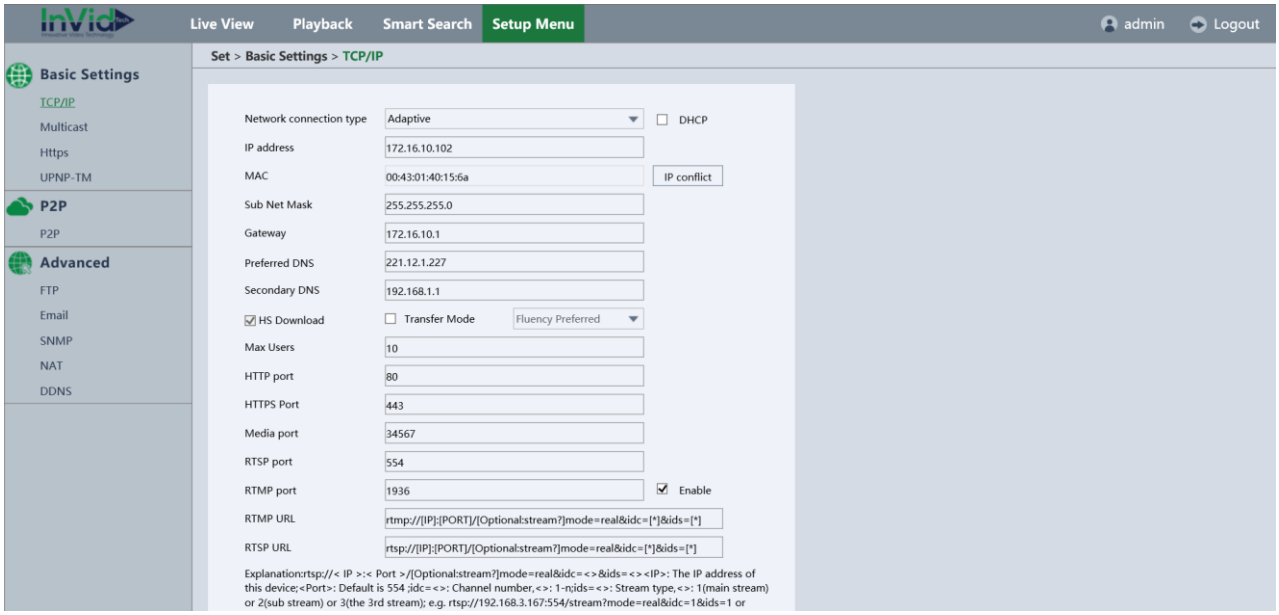


Figure 6-13 Online User Interface

TCP/IP

Click **Setup Menu → Basic Settings →TCP/IP** to enter network configuration interface.

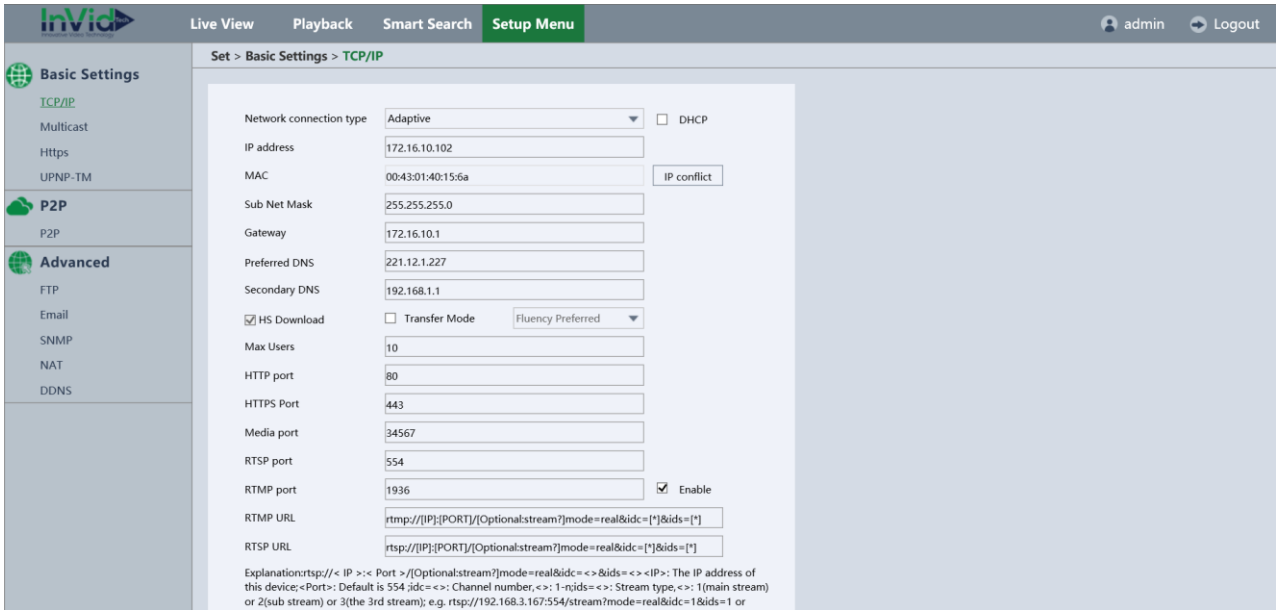


Figure 6-14 TCP/IP Setting

- **IP address**: Support DHCP and static IP.
- **Transfer Mode**: There are Fluency, Latency, Self-adaptive for choice.
- **Max Users**: The maximum users can be 10, it means the max number of users can login to the same network camera at the same time.
- **HTTP Port**: The default port number is 80, and it can be changed to any port No. which is not occupied.
- **Media Port**: The default server port number is 34567, and it can be changed to any port No. ranges from 0 to 65535.

- **RTSP Port**: The default port number is 554, and it can be changed to any port No. ranges from 0 to 65535.

Note:

- The system will reboot to make the settings effect.

DDNS

Click **Setup Menu → Advanced → DDNS** to enter the DDNS configuration interface, shown as **Figure 6-15.**

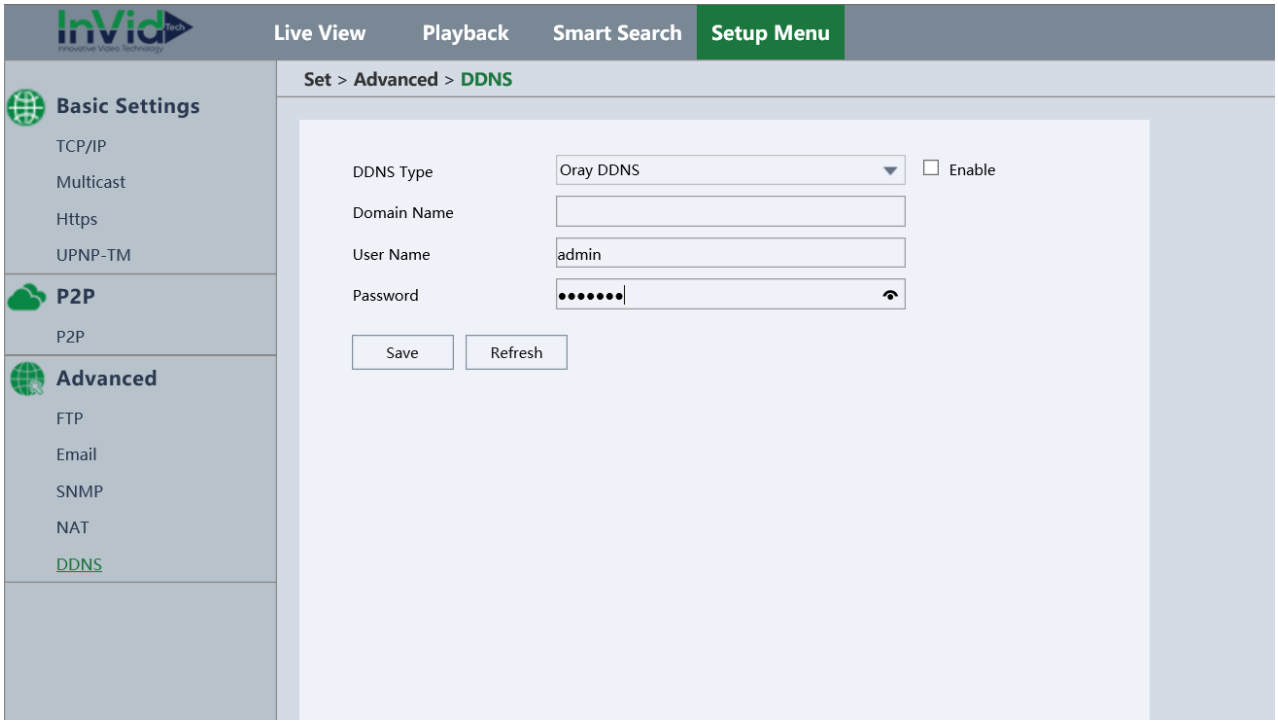


Figure 6-15 DDNS Settings

It supports multi type of DDNS such as Oray DDNS, CN99 DDNS, DynDNS DDNS, and NO-IP DDNS. You need register an account before using. Here is the website URL for your reference.

DDNS type	Website
Oray	http://www.oray.com/
DynDNS	http://dyn.com/dns/
NOIP	https://www.noip.com/
CN99	http://www.pubyun.com/

Table 6-1 DDNS

NAT

Click **Setup Menu → Advanced → NAT** to enter the NAT configuration interface , shown as **Figure 6-16.**

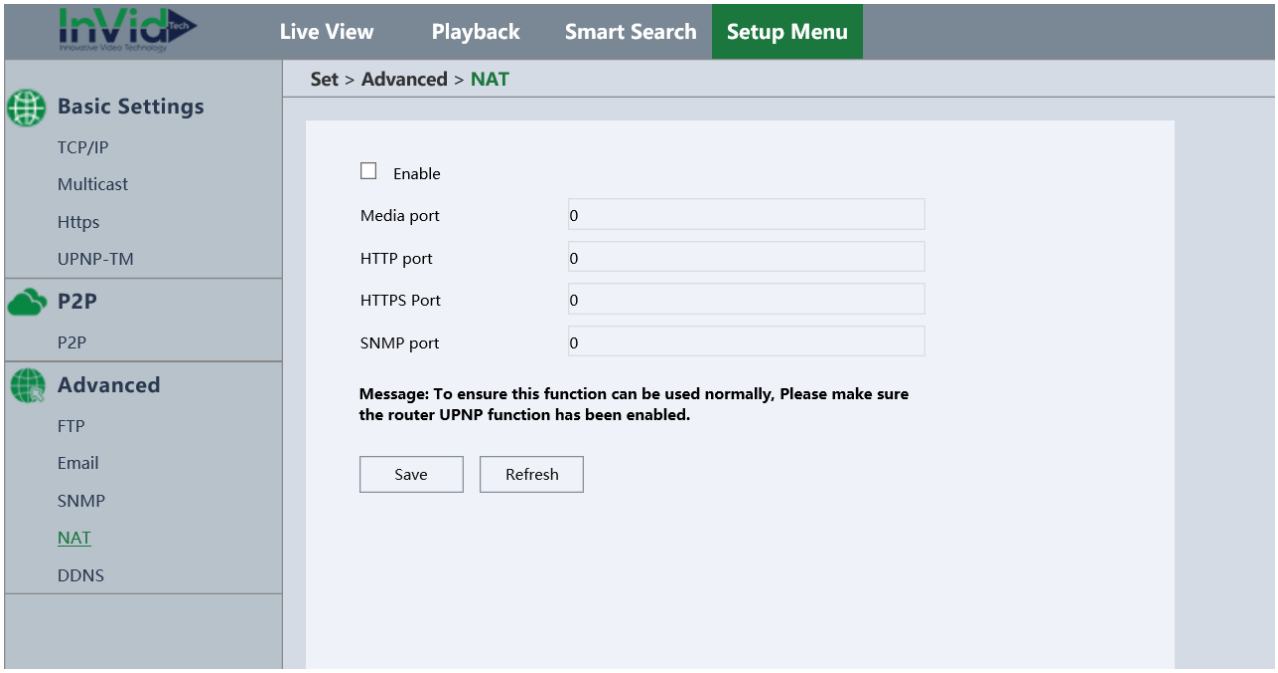


Figure 6-16 NAT Settings

1. Click on the **Enable** to enable the function of NAT, if the router UPNP function has been enabled, Media Port, HTTP Port, Handset Port will generate automatically.
2. Click **Save** to save the setting

Note:

- *To ensure this function can be used normally, please make sure the router UPNP function has been enabled.*

UPNP-TM

Click **Setup Menu → Basic Settings → UPNP-TM** to enter the UNNP-TM configuration interface, shown as **Figure 6-17.**

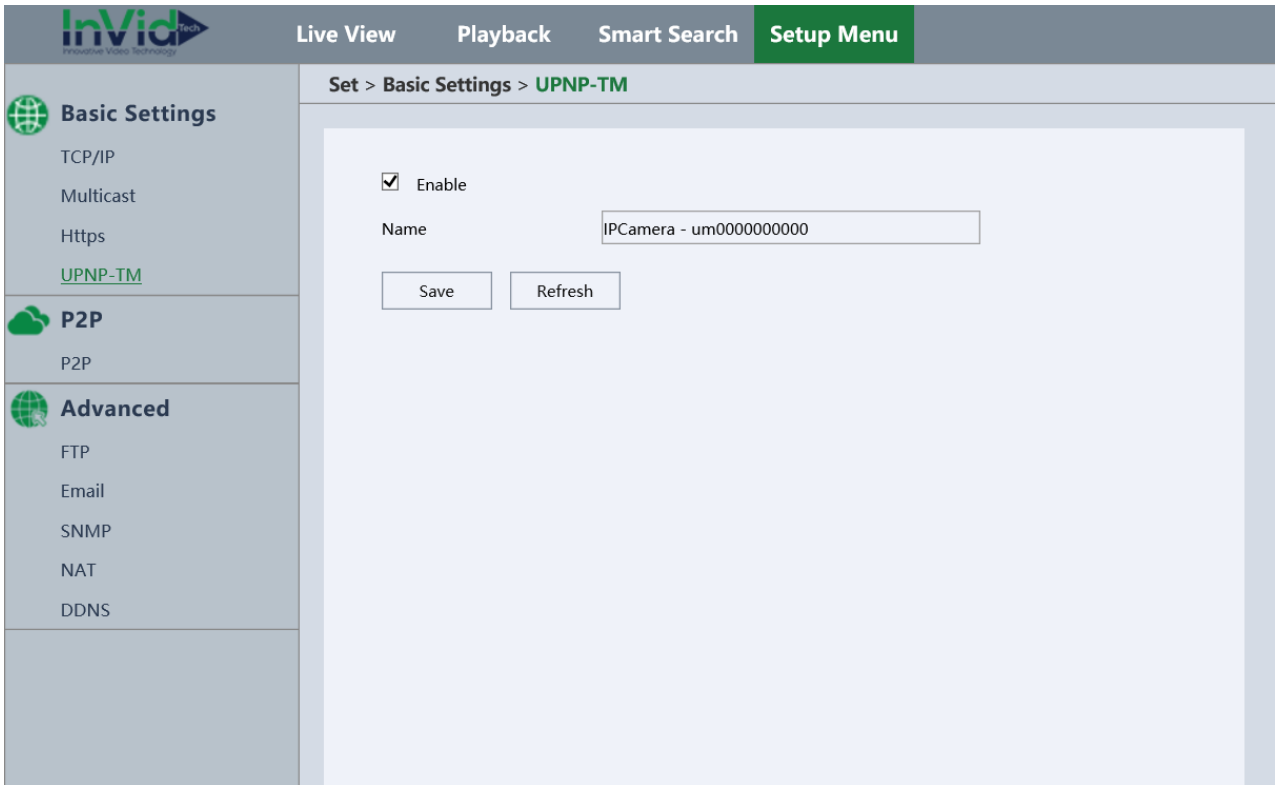


Figure 6-17 UPNP-TM Settings

Enable UPNP-TM setting, we can find the Network Camera as a network device on the computer. The name of the device would be the Cloud ID of the Network Camera.

Bonjour

The same as UPNP-TM which is used in iMAC.
Click **Set > Network > General > Bonjour** to enter the Bonjour Settings interface:

Cloud

Click **Setup Menu → P2P → P2P**to enter the Cloud Settings interface.
Click on **Enable** checkbox to enable the function of cloud. When the Status is

connected, you can access the device via Cloud Service.

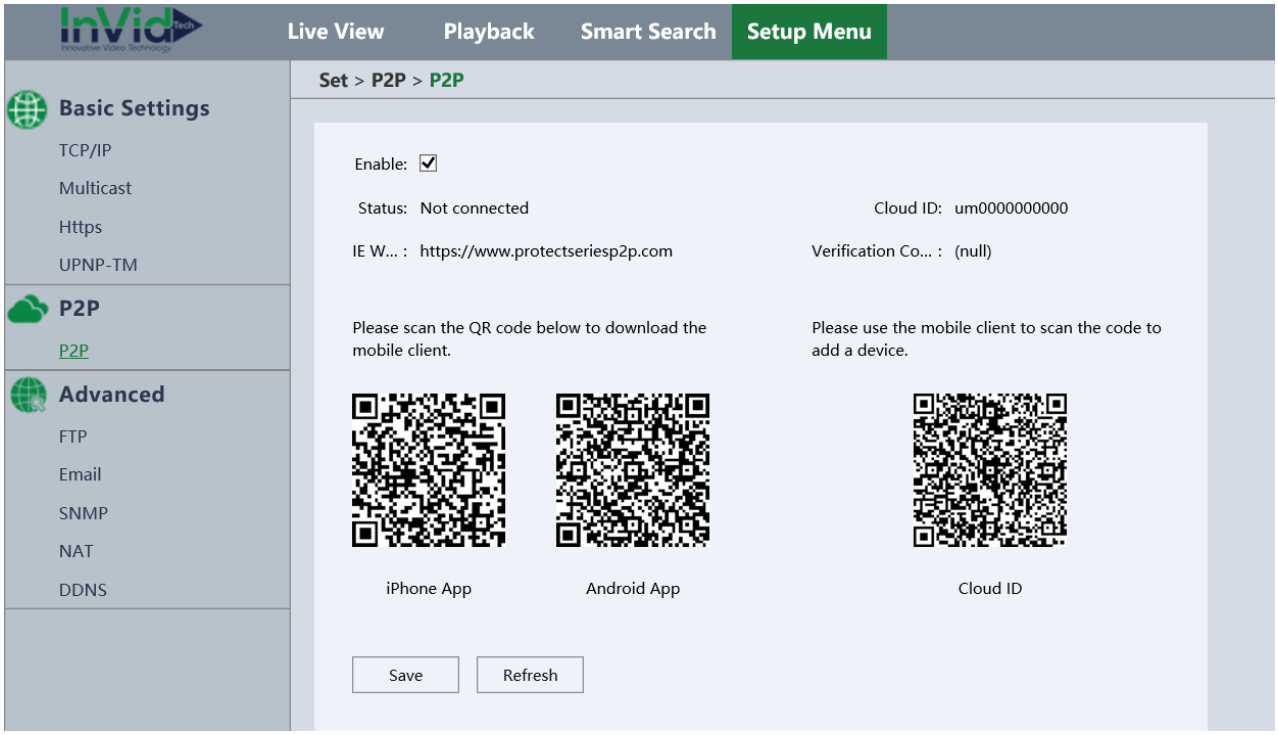


Figure 6-19 Cloud Setting Interface

The InVid Protect App can be downloaded (for iPhone/Android) by scanning QR code.

7.3.2 Advance Option

FTP

Click **Setup Menu > Advanced > FTP** to enter the FTP Settings interface:

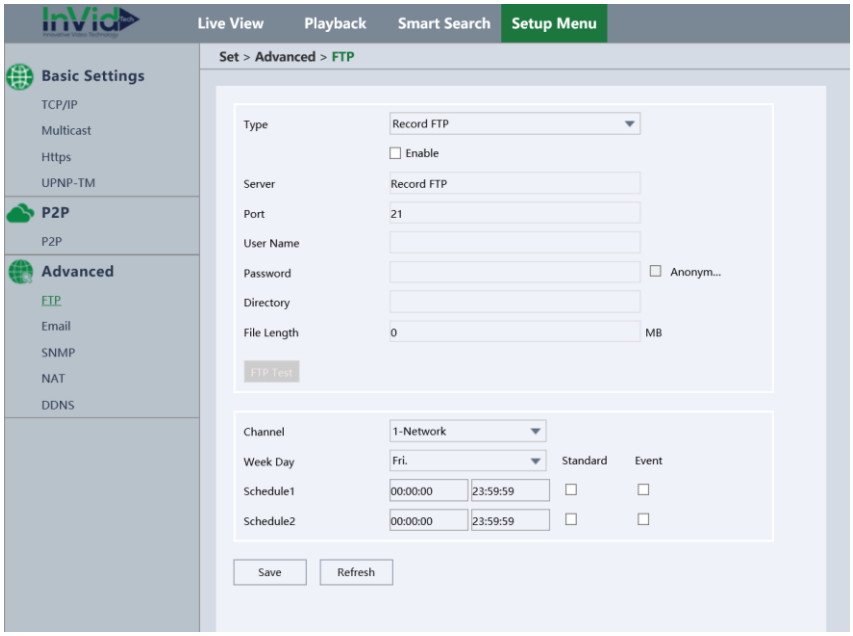


Figure 6-21 FTP Settings

1. Configure the FTP Server, port and remote directory. When the directory is empty, system will automatically (according to the IP, time, and channel) establish different folders.
2. The username and password is used to login to the FTP server.
3. Set up file length, channel, time and type.
   - **File Length:** The size of upload files. If it is less than the settings, then upload the entire file. If it is more than the set value, it will upload the part which from the beginning to setting value and abort others. If the value is 0, then upload the entire file.
   - You can also to set up two different time periods, three types of video for different channels.
4. **FTP Test:** Click the test button pop-up prompts as follows. Show the FTP connection is successful or failed.

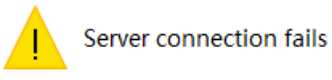


Figure 6-22 FTP server is unavailable

5. Click **Save** to save the settings.

Email

Click **Setup Menu → Advanced → Email** to enter the Email Settings interface.

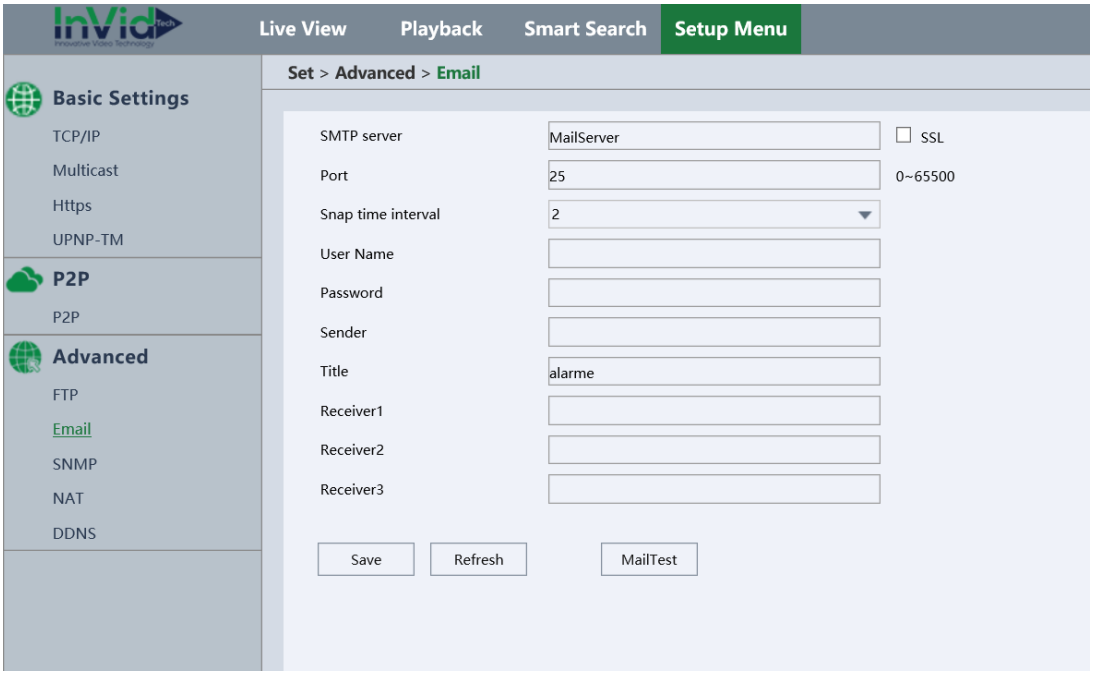


Figure 6-23 Email Settings

- **SMTP Server:** The SMTP Server IP addresses or host name.
- **Port:** The SMTP port. The default TCP/IP port for SMTP is 25 (not secured). And the SSL SMTP port is 465.
- **SSL:** Click on SSL to enable it if it is required by the SMTP server.
- **Snap time Interval:** The time interval of snapshot.
- **User Name:** The email address of the sender, and it should match with the SMTP Server.
- **Password:** The password of the User Name.
- **Sender:** The name of the Email sender or you can leave it blank.
- **Title:** Describe the main information of the email.
- **Receiver:** The email address of user to be notified.
- **Mail Test**: Click Mail Test to verify whether the email configuration is successful or not.

SNMP

Simple Network Management Protocol (SNMP) is an Internet-standard protocol for collecting and organizing information about managed devices on IP networks and for modifying that information to change device behavior.

Click on the **Setup Menu → Advanced → SNMP** into the SNMP configuration interface. There are 3 versions in SNMP, V1/V2 and V3 are shown in **figure 6-24.**

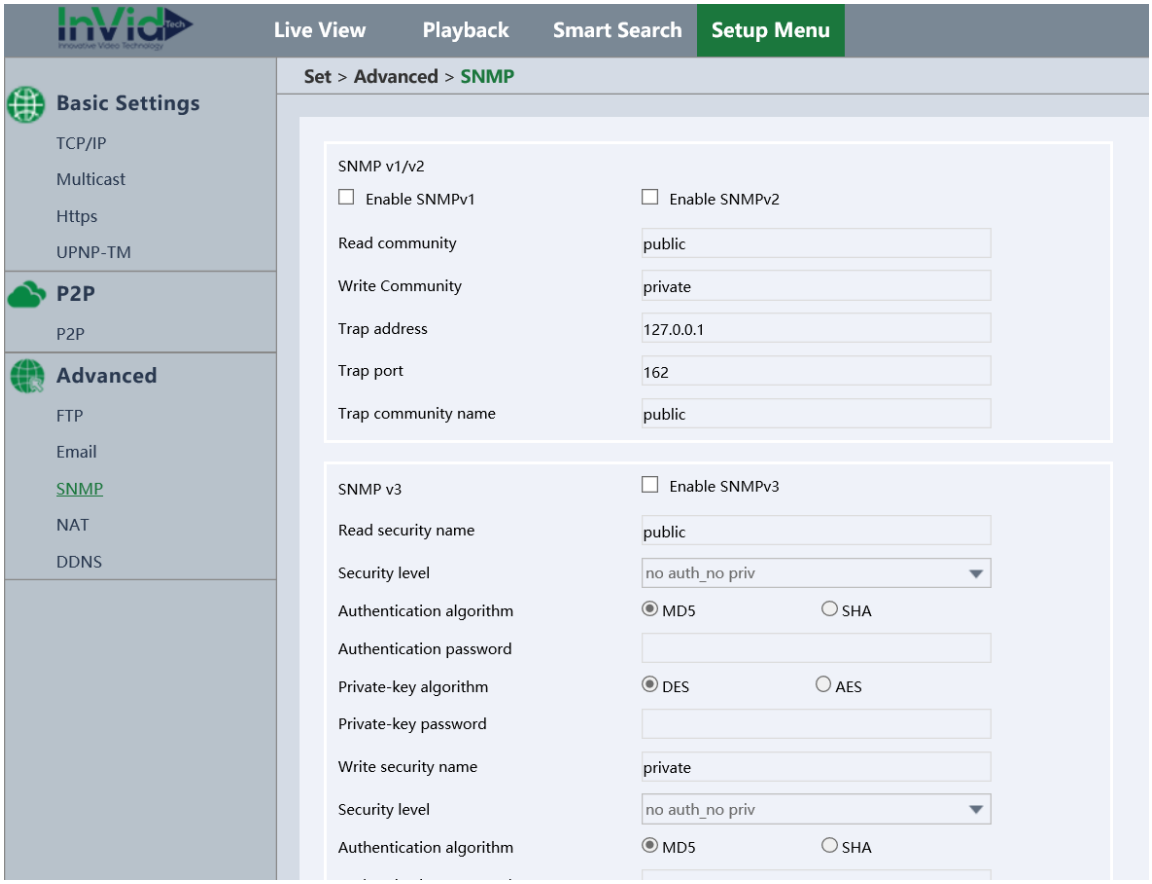


Figure 6-24 SNMP Setting

Https

The HTTP with SSL. It's a encrypted function.

Click **Setup Menu →Advanced → HTTPS** to enter the HTTPS interface.

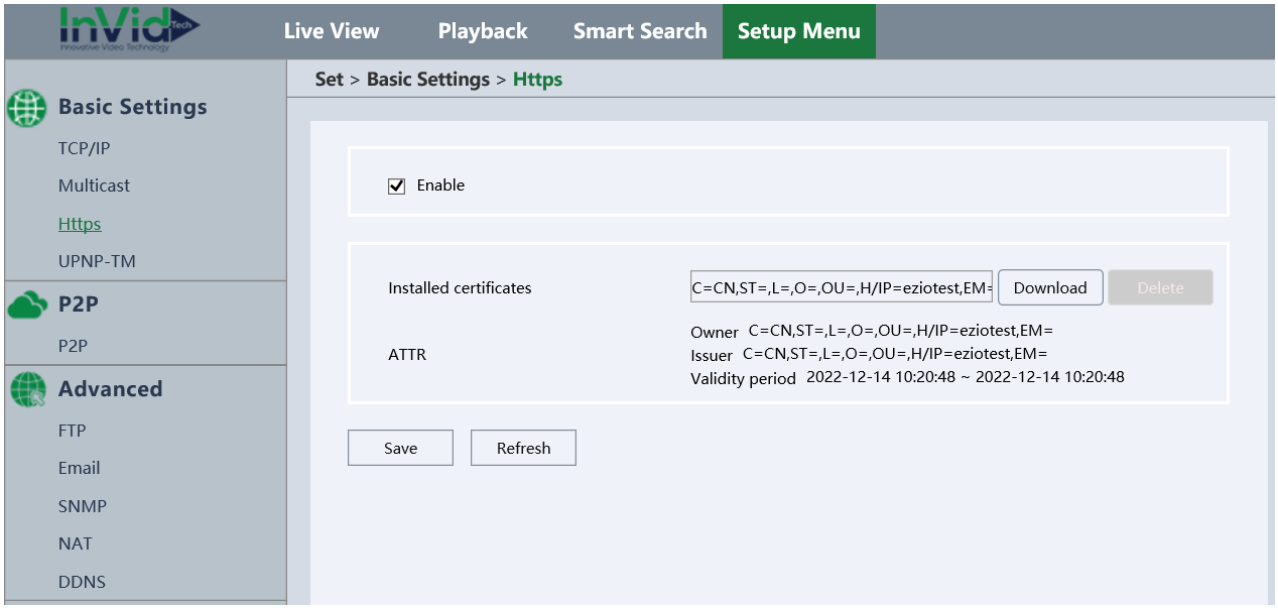


Figure 6-25 HTTPS setting

Multicast

In computer networking, multicast (one-to-many or many-to-many distribution) is group communication where information is addressed to a group of destination computers simultaneously.

Click on the **Setup Menu > Basic Settings > Multicast** into the Multicast configuration interface, set the Multicast IP and Multicast port within the required range. If different source devices want to apply the multicast, the multicast IP should be DIFFERENT. In the last, enable the function and apply. As shown in **figure 6-26.**

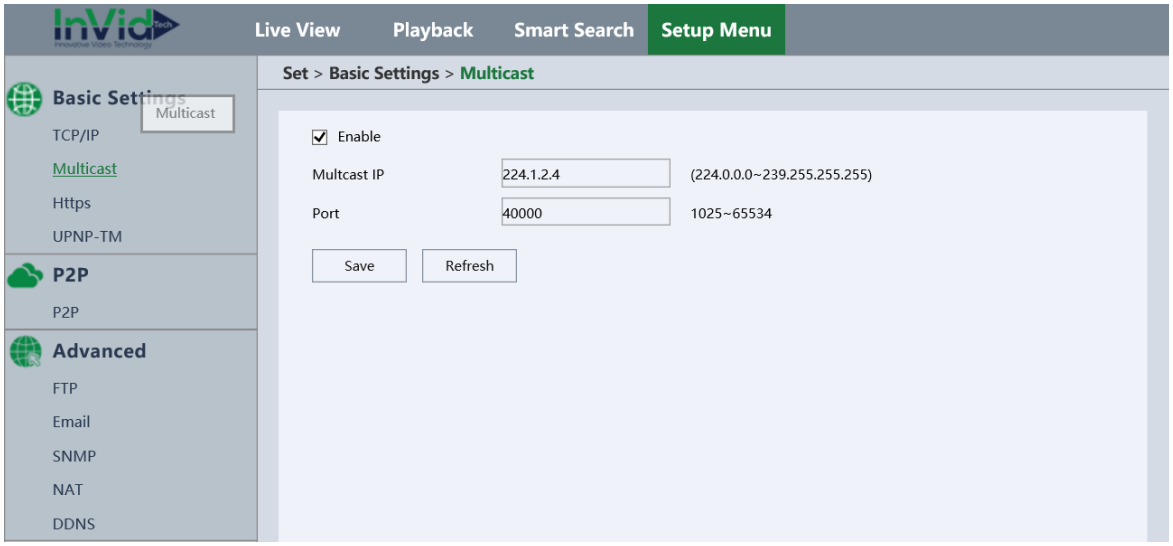


Figure 6-26 Multicast Setting

7.4 Camera Image settings

7.4.1 Schedule image setting

You can set image parameters with Auto, schedule and universal mode. In auto and schedule mode, you can choose day time (others are night time) and set parameters for both day and night.

7.4.2 Image Configuration

- **Brightness** describes the bright of the image, which ranges from 0~ 100 and the default value is 50.
- **Contrast** describes the contrast of the image, which ranges from 0~ 100 and the default value is 50.
- **Saturation** describes the colorfulness of the image color, which ranges from 0~ 100 and the default value is 50.
- **Hue** defines the quality of the color by its dominant wavelength, which ranges from 0~ 100 and the default value is 50.
- **Sharpness** describes the edge contrast of the image, which ranges from 0~ 100 and the default value is 50.

7.4.3 Exposure

- **Anti-flash** support to set **Outdoor /50HZ/60HZ** according the surroundings.
- **Exposure mode** If the camera is equipped with the fixed lens, only Manual is selectable, the exposure time refers to the electronic shutter: 1/3, 1/4, 1/5, 1/6, 1/8, 1/10, 1/12, 1/15, 1/25, 1/30, 1/50, 1/60, 1/100, 1/120, 1/250, 1/500, 1/1000, 1/2000, 1/4000, 1/10000 are selectable .

  If Auto is selected, according to the actual luminance condition, the camera will adjust the exposure time automatically.
- **Gain**: to compensate the sensitivity of the sensor, default value is 50.

7.4.4 Back Light Comp

If you focus on an object against strong backlight, the object will be too dark to be seen clearly.

- **Light inhibition**: Can be used for when there is a bright light in the view.
- **Back light Comp**: The function of Back Light Comp compensates light to the object in the front to make it clear. Open and close are selectable.
- **WDR:** Wide Dynamic Range can be used when there is a high contrast of the bright area and

the dark area of the scene. Open and close are selectable.

7.4.5 White balance

To choose the white balance mode, auto and manual. In manual mode, you can set white balance by hand, to set R(red) gain and B(blue) gain.

7.4.6 Day and night mode

- **Color_ON**: the camera stays with day mode.
- **Color_OFF**: the camera stays with night mode.
- **Auto**: the camera can switch between the day mode and the night mode according to the illumination automatically. The Day/Night Switch Threshold ranges from 10 to 50, the higher the value is, the harder the mode switches. The filtering time refers to the interval time between the day/night switch range from 1-120s.
- **Day/Night**
- **Day begin/end time** choose day time, and others are night time.
- **Day/Night** click to choose day or night and set parameters in day or night.
- **Smart IR:** Adjustable IR brightness feature, it can adjust the IR automatically according to the image brightness. When the object is very close to the camera, the IR will be too bright for the object and it will be totally white to see the details. So Smart IR will adjust the output of IR brightness so that the object would not be so white and missing details. There are three options: Close, Manual and Auto. Close option is to close the IR, Manual is to adjust the IR brightness manually, Auto is to adjust the IR brightness automatically.

7.4.7 Video Adjust

Image: It is mirrors function. The image so you can see it with inversed. Which includes Left &Right, Up &Down, Centre and Close. They are selectable.

- **Rotate：** Corridor pattern. You can select the angle 90°,180°,270°.

7.4.8 Enhancement

- **NR level** ranges from 0 to 6, the higher value, the less noisy.
- **Defog:** Equipment in the fog, haze environment image quality will decline, the automatic mode image automatic correction. Can also according to the concentration of fog, manual selection of different strength, in order to adjust the sharpness of the image. The default is

off.

- **Smart Light:** When user needs to light up the scene in order to check the details, the LED light can be turned on. There are three options for the configuration: Close, Manual and Auto. Close option is to close the Light, Manual is to adjust the Light brightness manually, Auto is to adjust the Light brightness automatically.

Note:

- *Some models don't support Smart Light function, Smart IR, or IR Sensitivity features, the related configuration would be hidden.*

7.4.9 OSD Setting

Click **Setup Menu → Image → OSD** Settings to enter the OSD settings interface

Time Title: Set the time title place on the preview.

Channel Title: Set the channel title place on the preview

7.4.10 Privacy Mask

How to set region splice:

1. Click **Set → Image → Region Splice** (cover) checkbox to enable the function of setting regional block.
2. Left-click the mouse, drag to draw a shelter area, click **OK** and **Save**.

3. Click **Preview** to see the real time video, the area of video you have set sheltered will be blocked

7.4.11 Image Superposition

This function support to upload a picture show on view image.

Steps

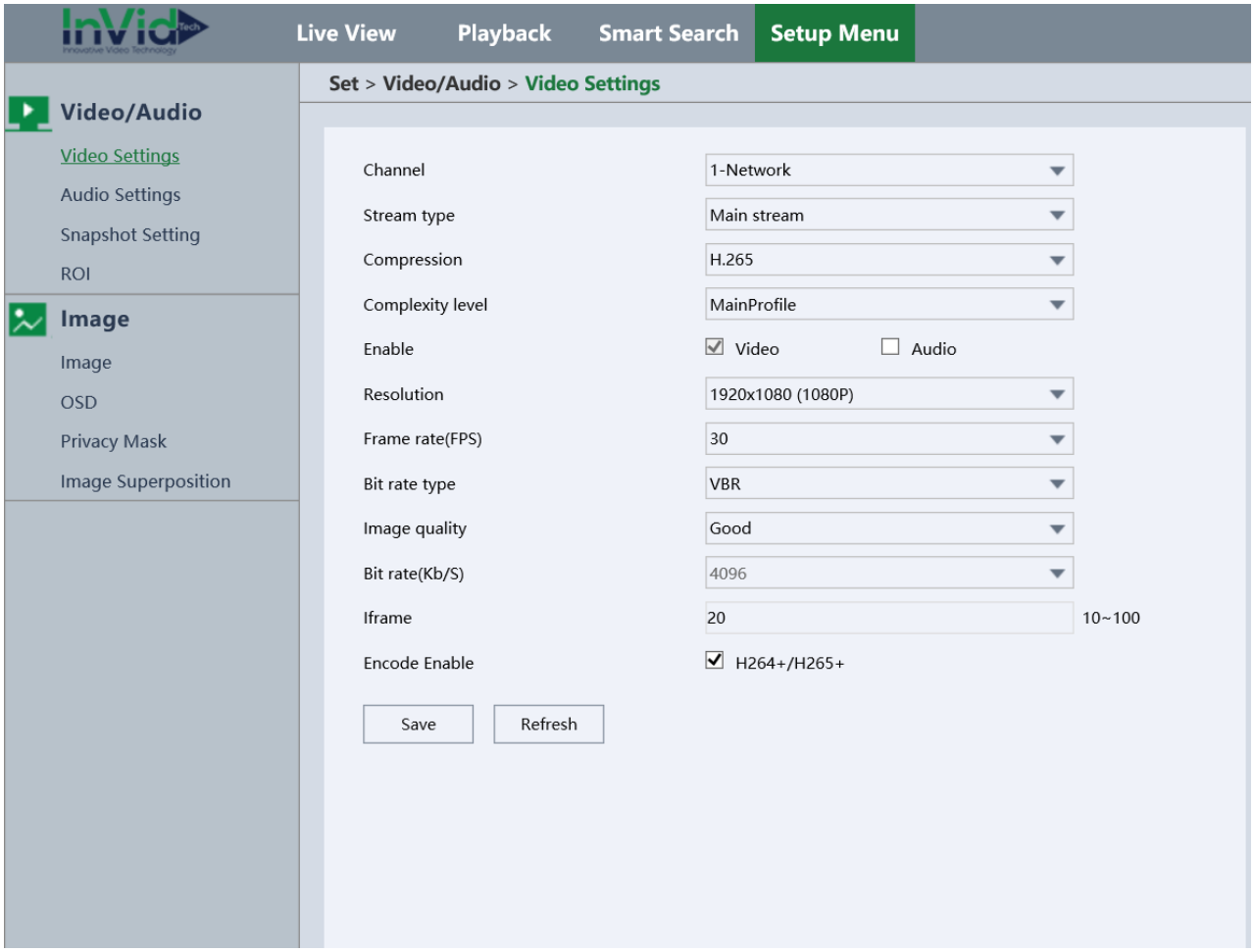
1. Click Browse to select the picture you want to upload
2. Click Upload
3. You can set the transparency part color is the background color
4. Click Save

Note the picture must in bmp format, with 24-bit pixels, and the length and width should not exceed 128*128.

7.5 Video/Audio Settings

7.5.1 Video Settings

Click **Setup Menu → Video/audio → Video Settings** to enter the video settings interface. As shown in following picture



- **Compression:** H.264 or H.265. Some model support both compression type, some model only support H.264.

- **Stream Type:** Main stream, substream and Mobile Stream.

- **Resolution:** video output, D1, 720p, 1080p are selectable in mainstream, QCIF, CIF, D1 are selectable in sub stream. (it depend on the IPC model)

- **Frame Rate(FPS):** Set the frame rate from 1 to 25 fps. The frame rate is to describe the frequency at which the video stream is updated and it is measured by frames per second (fps). The higher frame rate is advantageous when there is movement in the video stream, as it as it will keep image quality with smooth.

- **Bit Rate Type:** CBR (Constant Bit Rate) and VBR（Variable Bit Rate）are selectable.

- **Image quality:** When Bit Rate Type is selected as VBR, 6 levels of video quality are selectable such as Lowest, General, Normal, good, Very Good, Best.

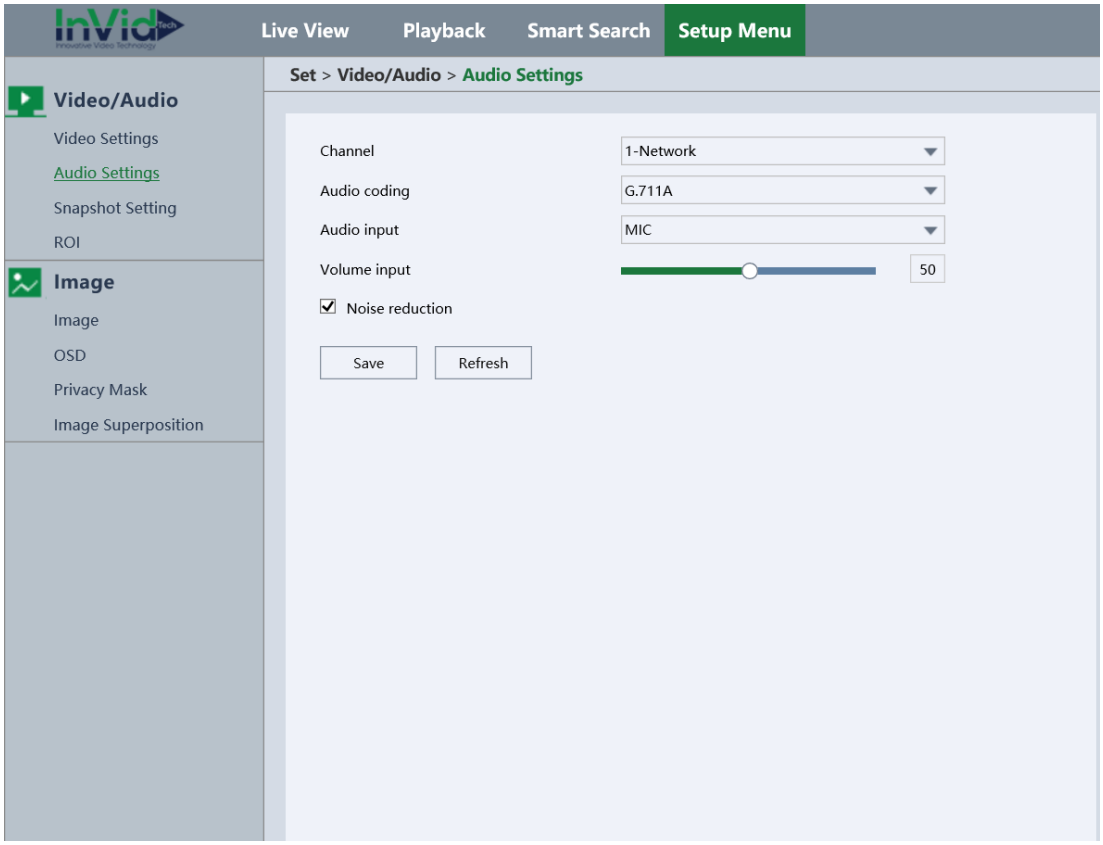
- **Bit Rate (kb/s):** The higher value corresponds to the higher video quality, but the higher bandwidth is required. The limit of the bit rate value varies according to different resolution and image quality.

- **IFrame :** Set the I-Frame interval from 10 to 100ms.

- **H264+/H265+:** Click to enable H264+/H265+. Use this function record file will take less space and do not have effect on image quality. Some devices only support H264 and they only support H264+. Some devices support both H264 and H265, they support both H264+ and H265+.

7.5.2 Audio Settings

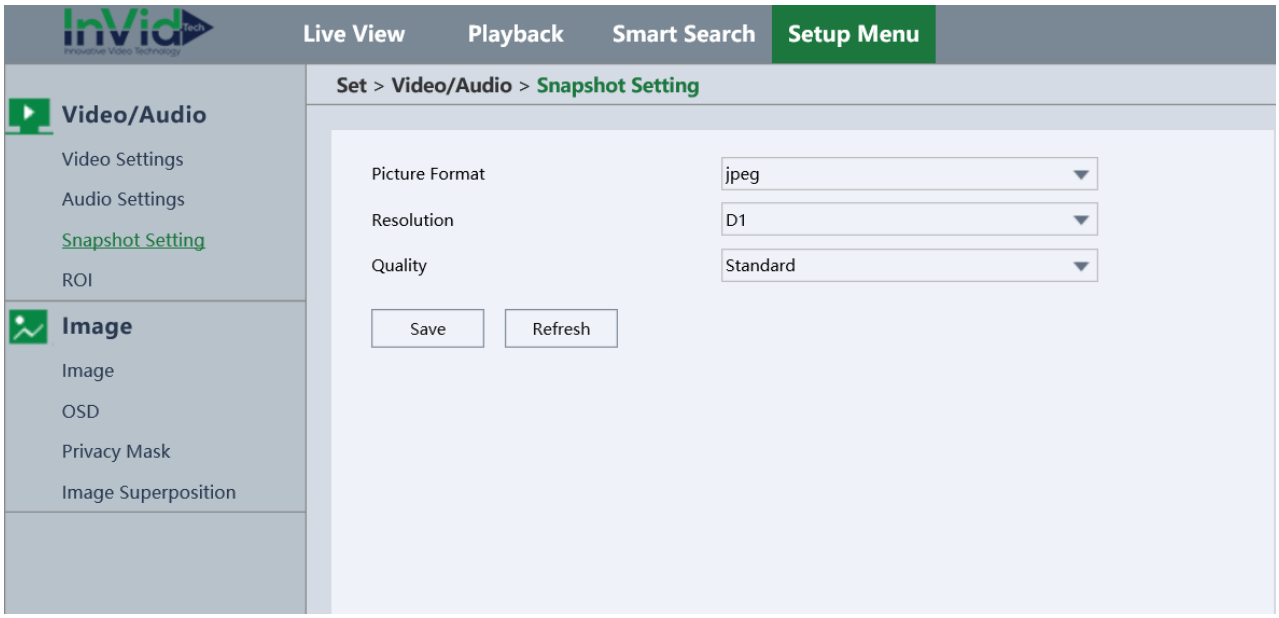
Click **Setup Menu > → Video/audio → Audio Settings** to enter the Audio Setting interface:



- **Audio coding** is the protocol of the compression. Here user can adjust the strength of the audio, value from [0-100]. Default value is 50.
- **Noise reduction**: resist the noise from the scene.

7.5.3 Snapshot settings

Click **Setup Menu-> ->Video/Audio-> Snapshot/Setting** to enter snapshot setting interface.



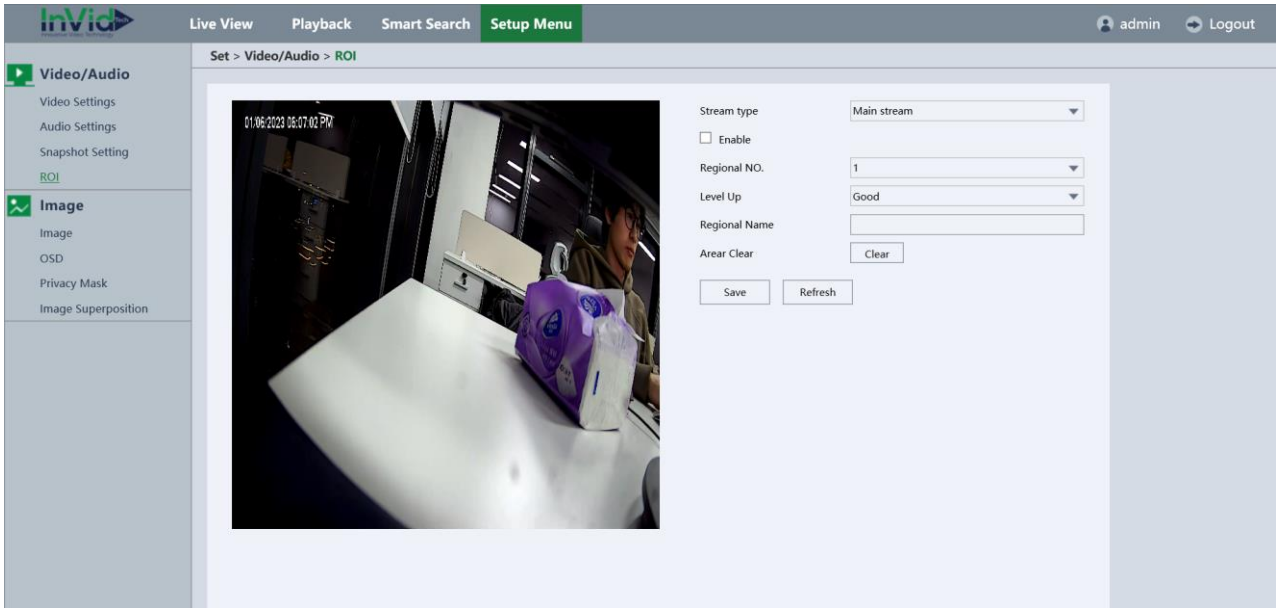
1. Check the Enable checkbox to enable snapshot.
2. Select the quality of the snapshot.
3. Set the time interval between two snapshots.
4. Click **Save** to save settings.

Note:

- *Alarm Snapshot you should open the Alarm In function.Event-Triggered Snapshot you should open the Motion Detct,Video Shelter and Smart Alarm funtion.*

7.5.4 ROI

Click **Setup Menu > → Video/audio → ROI** to enter the ROI Setting interface:



- **Stream:** the main stream record or sub stream record.
- **Regional No.:** the number of the region, maximum number is 4.
- **Level up:** the quality of the improvement.
- **Regional Name:** Set the name of the region.

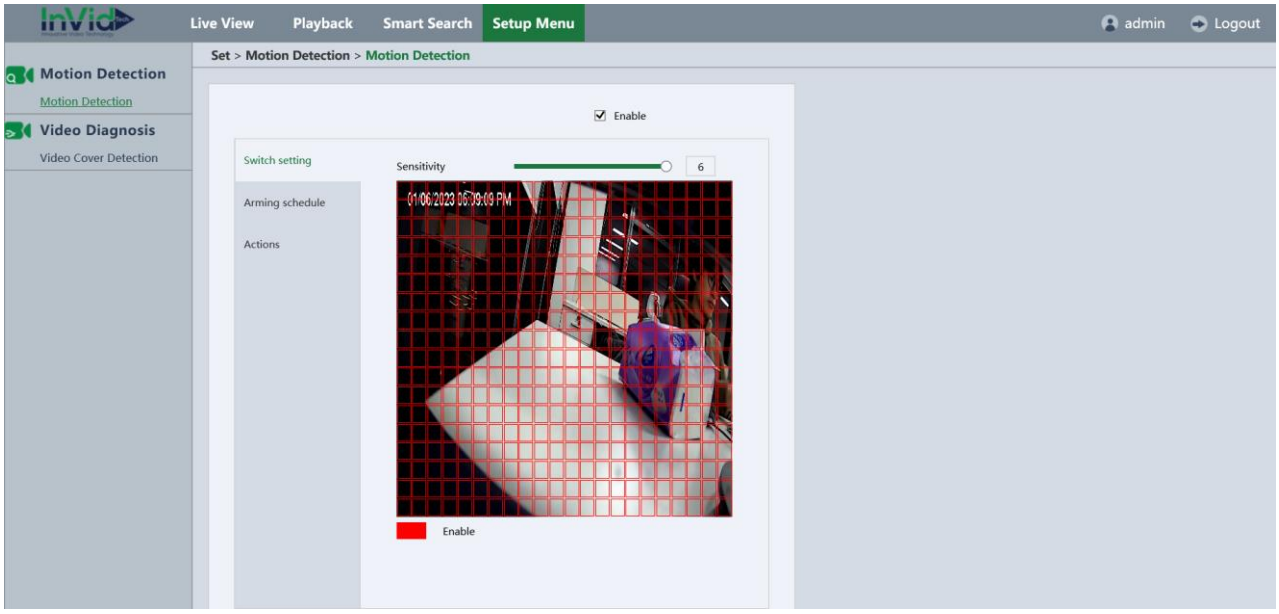
7.6 Event Settings

7.6.1 Normal Event

Motion detection

Click **Setup Menu → Motion detection → Motion Detection** to Enter the Motion Detect interface, as shown in **following picture**

Motion detection detects the moving objects in the configured surveillance area, and a series of actions can be taken when the alarm is triggered.



- **Sensitivity:** Lowest, Lower, Middle, High, Higher, Highest are selectable, the higher sensitivity, the more sensitive for detecting moving objects.
- **Set the Arming Schedule for Motion Detection.**
  1) Click **Set → Event → Basic Event → Motion Detection → Arming Schedule** to edit the arming schedule. The **following picture** shows the editing interface of the arming schedule.

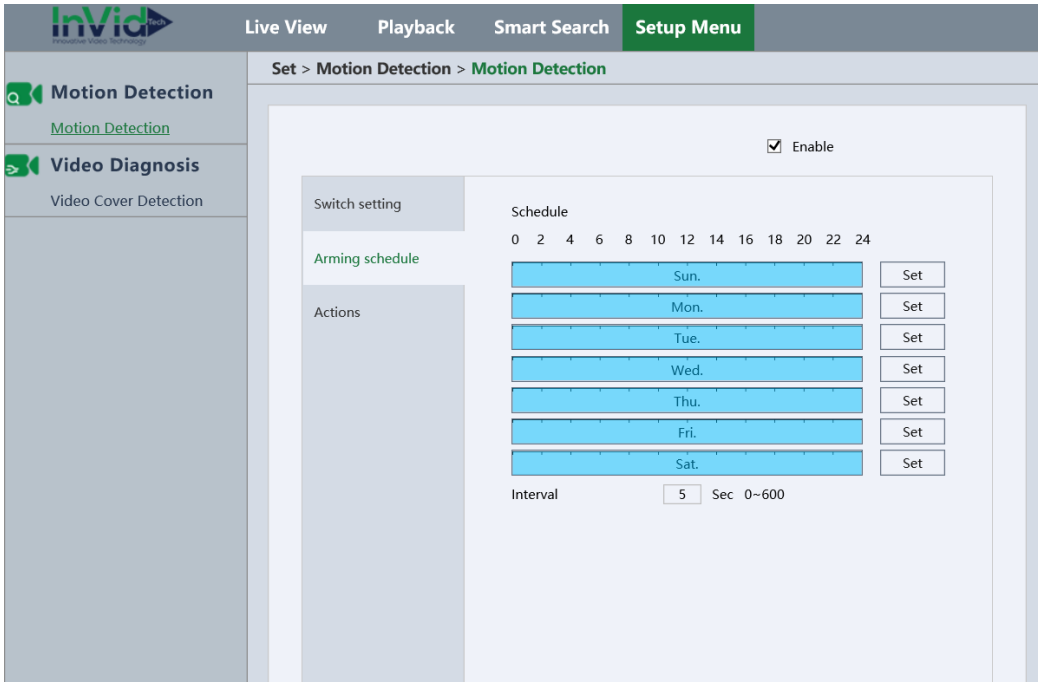
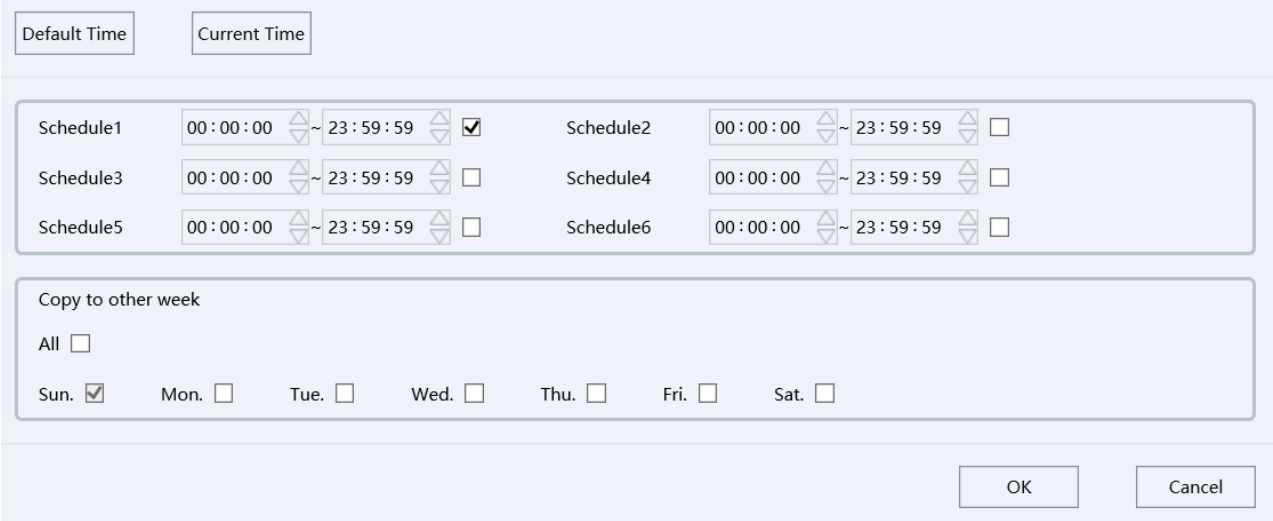


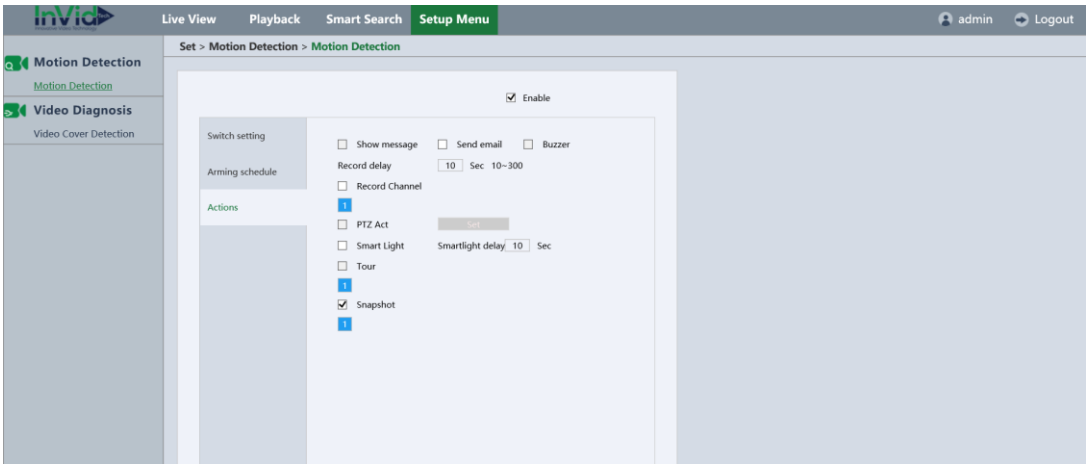
Figure 6-46 Alarm Schedule Setting

2) Choose the day you want to set the arming schedule.
3) Click **Set** to set the time period for the arming schedule, Shown as **following picture**



4) (Optional) After you set the arming schedule, you can copy the schedule to other days.
5) Click **OK** to save the settings.

- **Interval**: Set the interval time ranging from 0-600s.
- **Send Email**: Send an email with alarm information to a user or users when an event occurs.
- **Snapshot**: Click on the Snapshot to enable the function of taking a picture when an alarm event occurs.

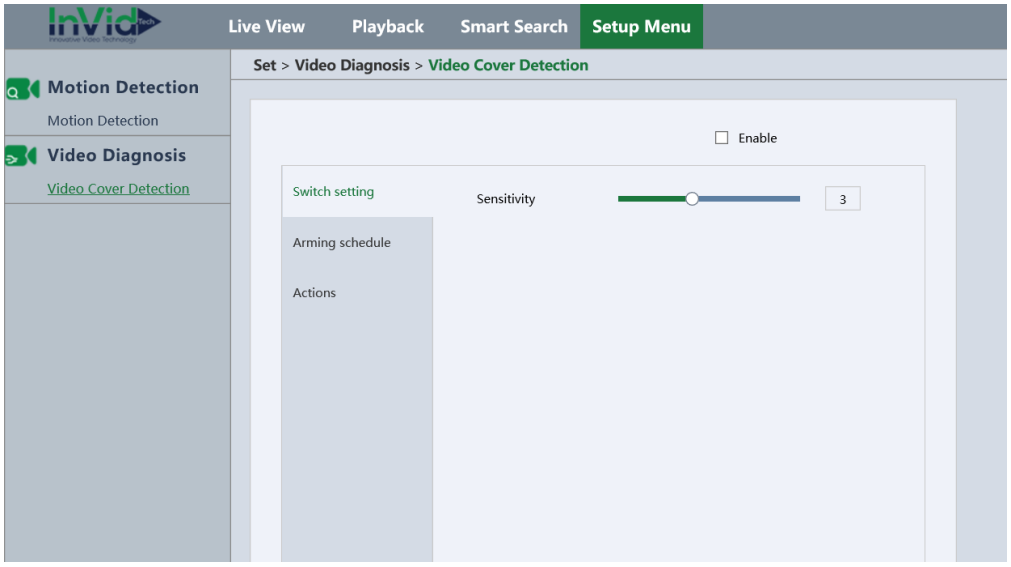


Note:

- *The time of each period can't be overlapped. Up to six periods can be configured for each day.*

Video Cover Detection

Click **Setup Menu → Video Diagnosis → Video Cover Detection** to enter the Video Cover Detection interface. You can configure the camera to trigger the alarm when the lens is covered and take some certain alarm response actions. Shown as **following picture**



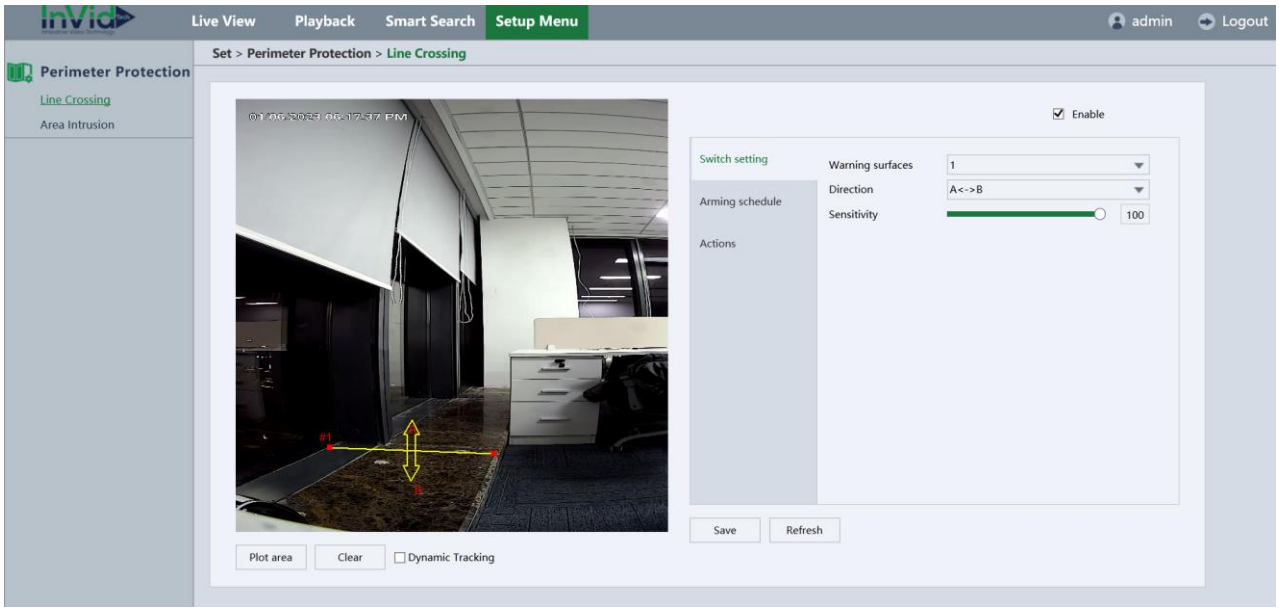
1. Select the Event Type as Video Cover Detection.
2. Click **Enable** to enable the video cover detection.
3. Set the **Sensitivity** level, Lowest, Lower, Middle, High, Higher, Highest are selectable, the higher sensitivity, the more sensitive for detecting video tampering;
4. Click **Arming schedule** to edit the arming schedule.
5. Choose the day you want to set the arming schedule.
6. Click **Set** to set the time period for the arming schedule.
7. (Optional) After you set the arming schedule, you can copy the schedule to other days.
8. Click **OK** to save the settings.

7.6.2 Smart Event

Line Crossing

This function can be used for detecting people, vehicles and objects cross a set virtual line. The line crossing direction can be set as bidirectional, from left to right or from right to left. And you can set the duration for the alarm response actions, such as full screen monitoring, audible warning, etc.

Click **Setup Menu > Perimeter Protection > Line Crossing** to Enter the Line Cross Detection settings interface:



1. Check the checkbox of **Enable** to enable the function.
2. Select the line from the drop-down list for detection settings.
3. Click the **Plot Area** button, and a virtual line is displayed on the live image.
4. Click-and-drag the line, and you can locate it on the live image as desired.
5. Click on the line, two red squares are displayed on each end, and you can Click-and-drag one of the red squares to define the shape and length of the line.
6. Select the direction for line cross detection. And you can select the directions

as A<->B, A ->B, and B->A.

- **A<->B**: Only the arrow on the B side shows; when an object goes across the plane With both direction can be detected and alarms are triggered.
- **A->B**: Only the object crossing the configured line from the A side to the B side can be detected.
- **B->A**: Only the object crossing the configured line from the B side to the A side can be detected.

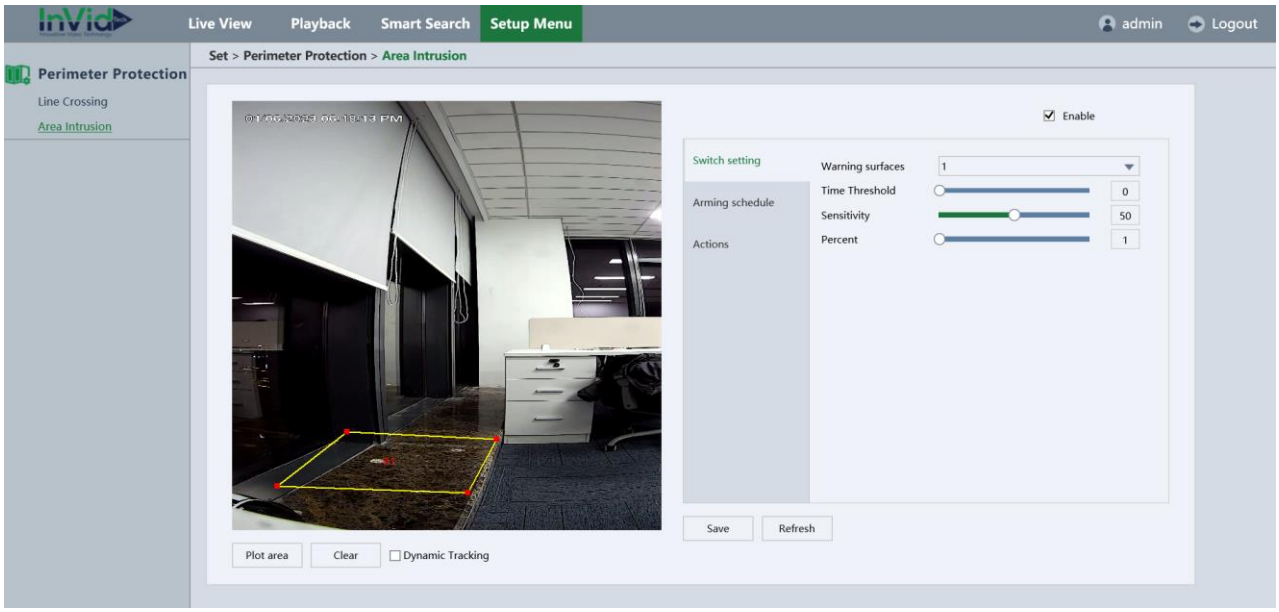
7. Click-and-drag the slider to set the detection sensitivity.
   - **Sensitivity:**

   Range [1-100]. The higher is, the more easily the line crossing action can be detected.
8. Repeat the above steps to configure other lines. Up to 4 lines can be set. You can click the **Clear** button to clear all pre-defined lines.
9. Click the **Time Periods** button to set the arming schedule.
10. Select the linkage methods for line cross detection, including Alarm out, Send Email, Record and Snapshot.
11. Click **Save** to save the settings.

Area Intrusion

Intrusion detection function detects people, vehicle or other objects which enter and loiter in a pre-defined virtual region, and some certain actions can be taken when the alarm is triggered.

Click **Setup Menu > Perimeter Protection > Area Intrusion** to enter the Intrusion Detection settings interface.



1. Check the checkbox of Enable Intrusion Detection to enable the function.
2. Select the region from the drop-down list for detection settings.
3. Click the Plot Area button to start the region drawing.
4. Click on the live video to specify the four vertexes of the detection region.
5. Set the detection sensitivity for intrusion detection.
   - **Sensitivity**: Range [1-100]. The value of the sensitivity defines the size of the Object which can trigger the alarm. When the sensitivity is high, a very small object can trigger the alarm.
   - **Time Threshold**: Range [0-10]. The value of the time that objects enter inside the defined area.
   - **Percent**: Range [1-100]. The values of the percentage that object intrude the area.
6. Repeat the above steps to configure other regions. Up to 4 regions can be set.
7. You can click the Clear button to clear all pre-defined regions.
8. Click the Time Periods button to set the arming schedule.
9. Select the linkage methods for intrusion detection, Alarm out, Send Email, Record and Snapshot.

10. Click **Save** to save the settings.

Unattended Object

Unattended object detection function detects the objects left over in the pre-defined region such as the bagg
age, purse, dangerous materials, etc., and a series of actions can be taken when the alarm is triggered.

Click **Setup Menu > Smart Event > Unattended Object** to enter the unattended object settings interface.

1. Check the checkbox of Enable to enable the Unattended Object function.
2. Select the region from the drop-down list for detection settings.
3. Click the Plot Area button to start the region drawing.
4. Click on the live video to specify the four vertexes of the detection region.
5. Set the detection sensitivity for Unattended Object detection.
   - **Sensitivity**: Range [1-100]. The value of the sensitivity defines the size of the Object which can trigger the alarm. When the sensitivity is high, a very small object can trigger the alarm.
   - **Time Thresholds**: Range [5-3600]. The value of the time that objects unattended inside the defined area.
6. Repeat the above steps to configure other regions. Up to 4 regions can be set.
7. You can click the Clear button to clear all pre-defined regions.
8. Click the Time Periods button to set the arming schedule.
9. Select the linkage methods for unattended object, Alarm out, Send Email, Record and Snapshot.
10. Click **Save** to save the settings.

Object Missing

Object missing detection function detects the objects removed from the pre-defined region, such as the exhibits on display, and a series of actions can be taken when the alarm is triggered.

Click **Set > Event > Smart Event > Object Missing** to enter the object missing settings interface.
Note:

- *Please refer to the chapter 6.6.2.3 unattended object for operating steps to configure the Object missing detection.*
- *The threshold [5-3600] in the Rule Settings defines the time of the objects left over in the region. If you set the value as 10, alarm is triggered after the object is left and stay in the region for 10s. And the Sensitivity defines the similarity degree of the background image. Usually, when the sensitivity is high, a very small object left in the region can trigger the alarm.*
- *Up to 4 rules can be configured*

Region Entrance

Region Entrance detection function detects people, vehicle or other objects which enter a pre-defined virtual region from the outside place, and some certain actions can be taken when the alarm is triggered.

Click **Set > Event > Smart Event > Region Entrance** to enter the Region Entrance settings interface.

1. Check the checkbox of Enable to enable the Region Entrance detection function.
2. Select the region from the drop-down list for detection settings.
3. Click the Plot Area button to start the region drawing.
4. Click on the live video to specify the four vertexes of the detection region.
5. Set the detection sensitivity for Region Entrance detection.
   - **Sensitivity**: Range [1-100]. The value of the sensitivity defines the size of the Object which can trigger the alarm. When the sensitivity is high, a very small object can trigger the alarm.
6. Repeat the above steps to configure other regions. Up to 4 regions can be set.
7. You can click the Clear button to clear all pre-defined regions.
8. Click the Time Periods button to set the arming schedule.
9. Select the linkage methods for Region Entrance, Alarm out, Send Email, Record and Snapshot.
10. Click **Save** to save the settings.

Region Exiting

Region exiting detection function detects people, vehicle or other objects which exit from a pre-defined virtual region, and some certain actions can be taken when the

alarm is triggered.

Click **Set > Event > Smart Event > Region Exiting** to enter the Region Exiting settings interface.

Note:

- *Please refer to the chapter 6.6.2.5 Region Entrance for operating steps to configure the Region Exiting detection.*
- *Up to 4 rules can be configured.*

Fast Moving

Fast moving detection alarm is triggered when people, vehicle or other objects move fast in a pre-defined virtual region, and a series of actions can be taken when the alarm is triggered.

Click **Set > Event > Smart Event > Fast Moving** to enter the Fast Moving settings interface.

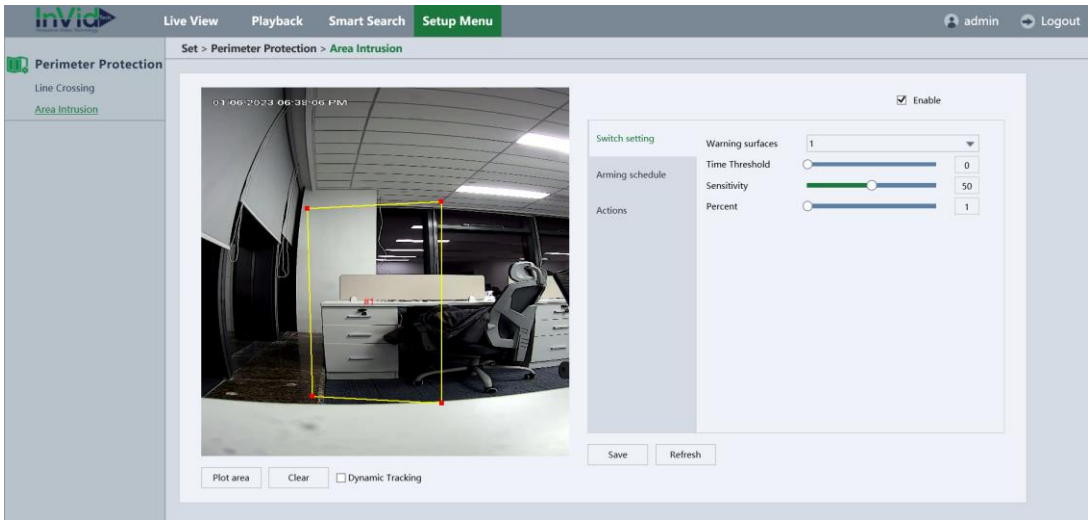


Figure 6-56 Fast Moving

Note:

- *Please refer to the chapter 6.6.2.5 Region Entrance for operating steps to configure the Fast moving detection.*
- *The Sensitivity in the Rule Settings defines the moving speed of the object that can trigger the alarm. The higher the value is, the more easily a moving object can trigger the alarm.*

- *Up to 4 rules can be configured.*

Loitering Detection

Loitering Detection alarm is triggered when people, go straight and back at least 3 times, or go not in a straight line in a pre-defined virtual region, and some certain actions can be taken when the alarm is triggered.

Click **Set > Event > Smart Event > Loitering Detection** to enter the Loitering Detection setting interface.

1. Check the checkbox of Enable Loitering Detection to enable the function.
2. Select the region from the drop-down list for detection settings.
3. Click the Plot Area button to start the region drawing.
4. Click on the live video to specify the four vertexes of the detection region.
5. Set the detection sensitivity for loitering detection.
   - **Sensitivity**: Range [1-100]. The higher sensitivity is, the easier Loitering Detection can be trigerred.
   - **Time Thresholds**: Range [0-10]. The value of the time that people get into the defined area.
   - **Mode**: 3 modes can be chosen in Loitering Detection, Offset, Weight and Journey. You can choose one, two or all of them.
6. Repeat the above steps to configure other regions. Up to 4 regions can be set.
7. You can click the Clear button to clear pre-defined region you view now.
8. Click the Time Periods button to set the arming schedule.
9. Select the linkage methods for loitering detection, Alarm out, Send Email, Record and Snapshot.
10. Click **Save** to save the settings.

People Gathering Detection

People Gathering Detection alarm is triggered when there are many people in a pre-defined virtual region, and some certain actions can be taken when the alarm is triggered.

Click **Set > Event > Smart Event > People Gathering Detection** to enter the Loitering Detection setting interface.

1. Check the checkbox of Enable People Gathering Detection to enable the function.
2. Select the region from the drop-down list for detection settings.
3. Click the Plot Area button to start the region drawing.
4. Click on the live video to specify the four vertexes of the detection region.
5. Set the detection sensitivity for people gathering detection.
   - **Sensitivity**: Range [1-100]. The higher sensitivity is, the easier People Gathering Detection can be triggered.
   - **Percent**: Range [1-100]. The values of the percentage that people intrude the area.
6. Repeat the above steps to configure other regions. Up to 4 regions can be set.
7. You can click the Clear button to clear pre-defined region you view now.
8. Click the Time Periods button to set the arming schedule.
9. Select the linkage methods for people gathering detection, Alarm out, Send Email, Record and Snapshot.
10. Click **Save** to save the settings.

Parking Detection

Parking Detection alarm is triggered when park in a pre-defined virtual region, and some certain actions can be taken when the alarm is triggered.

Click **Set > Event > Smart Event > Parking Detection** to enter the Parking Detection setting interface.

1. Check the checkbox of Enable Parking Detection to enable the function.
2. Select the region from the drop-down list for detection settings.
3. Click the Plot Area button to start the region drawing.
4. Click on the live video to specify the four vertexes of the detection region.
5. Set the detection sensitivity for parking detection.
   - **Sensitivity**: Range [1-100]. The higher sensitivity is, the easier Parking Detection can be triggered.
   - **Time Thresholds**: Range [5-20]. The value of the time that car stops in the defined area.
6. Repeat the above steps to configure other regions. Up to 4 regions can be set.

7. You can click the Clear button to clear pre-defined region you view now.
8. Click the Time Periods button to set the arming schedule.
9. Select the linkage methods for parking detection, Alarm out, Send Email, Record and Snapshot.
10. Click **Save** to save the settings.

7.7 Face Detection

Face detection alarm is to detect face, when someone get into the pre-defined virtual region, and a series of actions can be taken when the alarm is triggered.

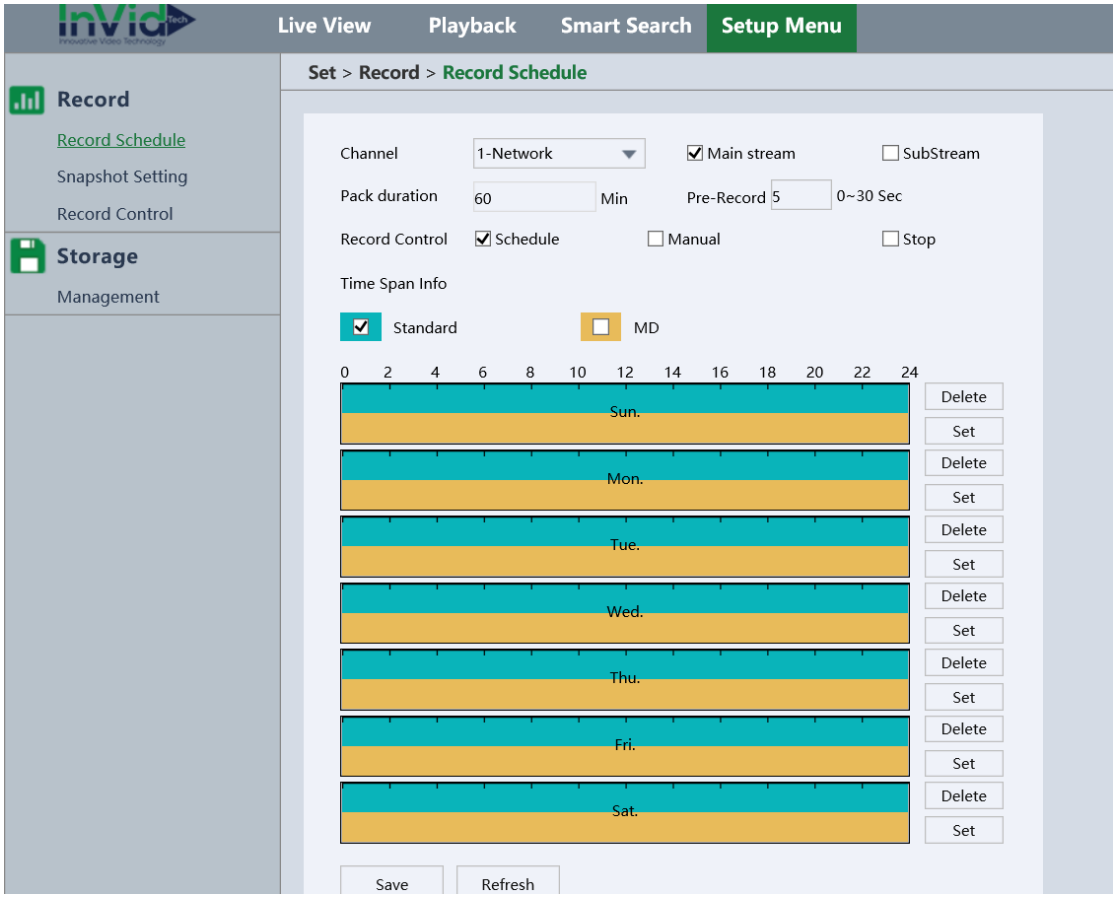
Click **Set > Face Detection > Base** to enter the Face Detection setting interface.

1. Check the checkbox of Enable Face Detection to enable the function.
2. Select the region from the drop-down list for detection settings.
3. Click the Plot Area button to start the region drawing.
4. Click on the live video to specify the vertexe of the detection region.
5. Set the detection sensitivity for face detection.
   - **Sensitivity**: Range [1-5].The higher sensitivity is, the easier face can be detected.
6. Only 1 regions can be set.
7. You can click the Clear button to clear pre-defined region.
8. Click the Time Periods button to set the arming schedule.
9. Select the linkage methods for face detection, Alarm out, Send Email, Record and Snapshot.
10. Click **Save** to save the settings.

7.8 Recording Settings

7.8.1 Record and snap

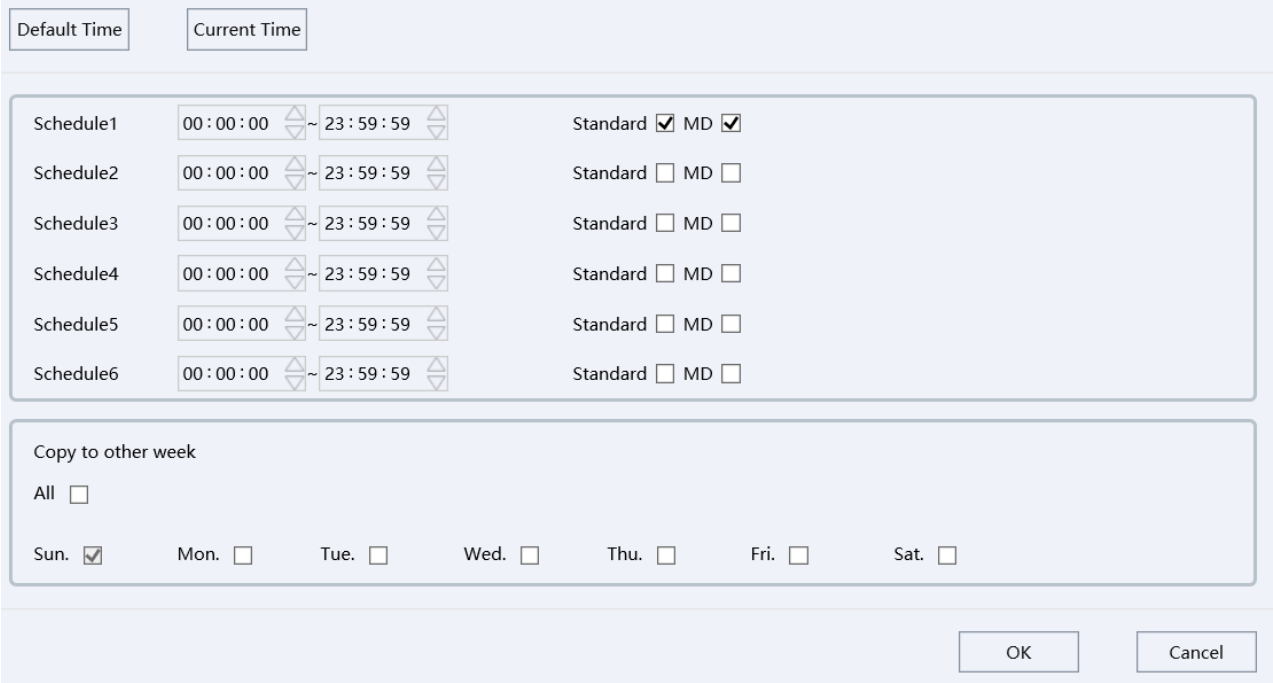
Click **Setup Menu > Recording >Record Schedule** to enter the Record Settings interface:



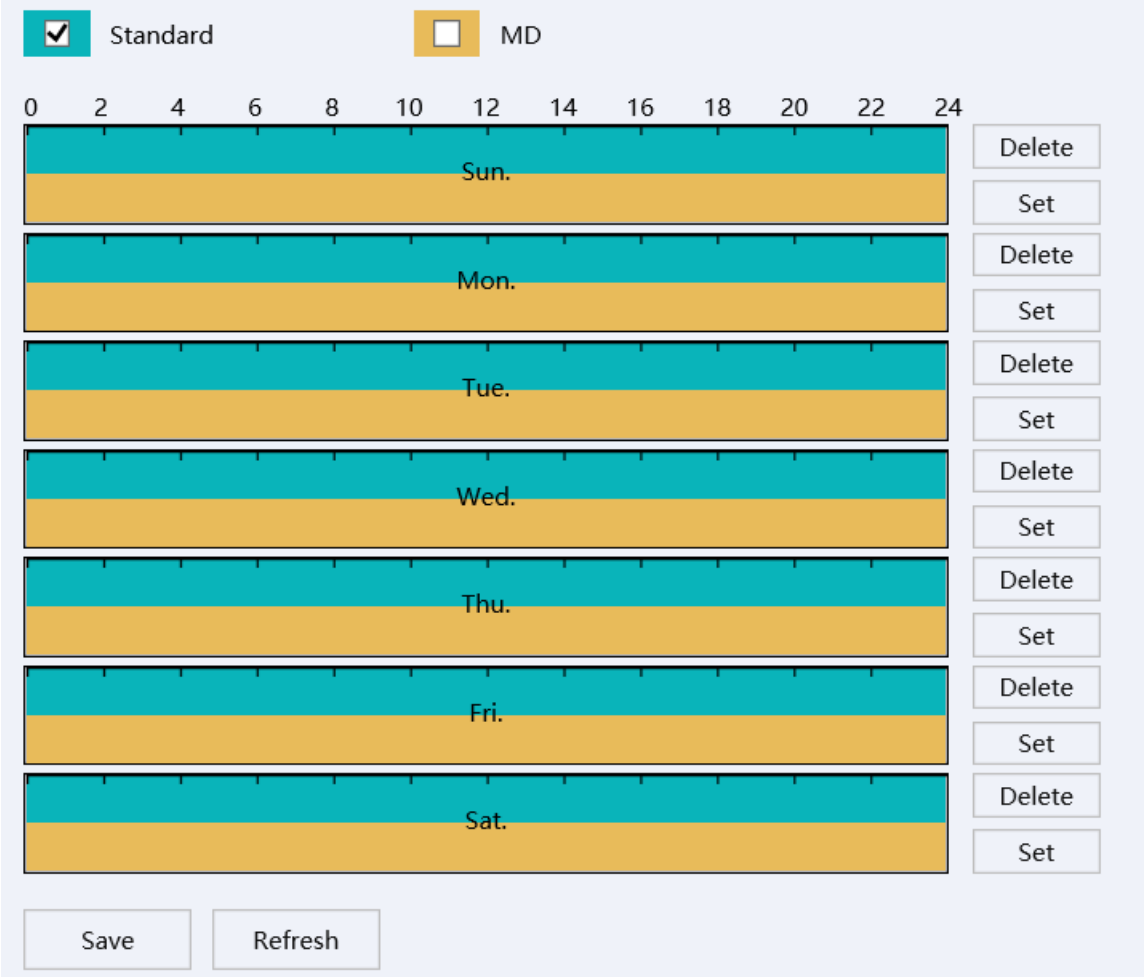
This interface includes information: channel, main stream, sub stream, pack duration, pre-record (0~30s), record control (schedule\manual\stop), time span information.

How to set record plan:

1. In the time span information, Please choose what time to start recording (Monday ~ Sunday), then click **set**, enter the following interface:
2. According to the interface, 6 schedules are supported for daily record.



3. Select the control box to add or delete the three types of video record: normal, motion detection, alarm.
   - **Default Time:** Set to the default value: 00:00:00 or 23:59:59.
   - **Current Time:** Put the time into the current time.
4. Once the video program is set, and you would like to apply the configuration to other days, you can check the "All" to select all the days or check specific day.
5. Click **OK** to complete the setting. For now, the color chart area is a visual representation of the time zone has been set.

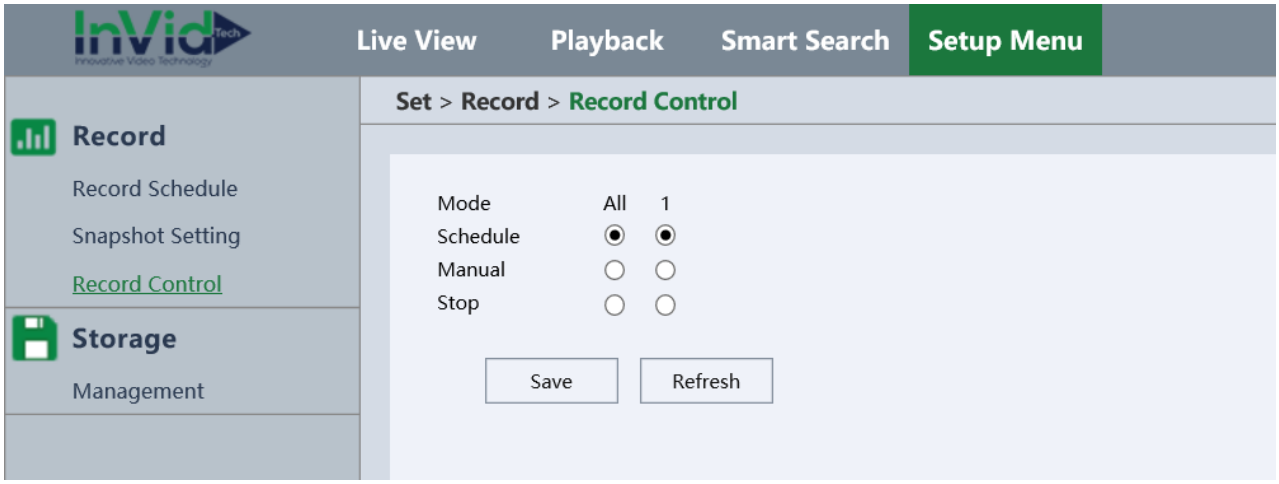


Icon	Description
	Represents a Normal Record
	Represents a Motion Detect Record

- **Channel:** the record channel
- **Stream:** the main stream record or sub stream record
- **Pack Duration:** The default time is 60 minutes
- **Pre-Record (0~30s):** The video is scheduled to start before the pre recording time node
- **Record Control:** Schedule/Manual/Stop

Record Control setting is to define the record mode. It has three options: Schedule, Manual, Stop.

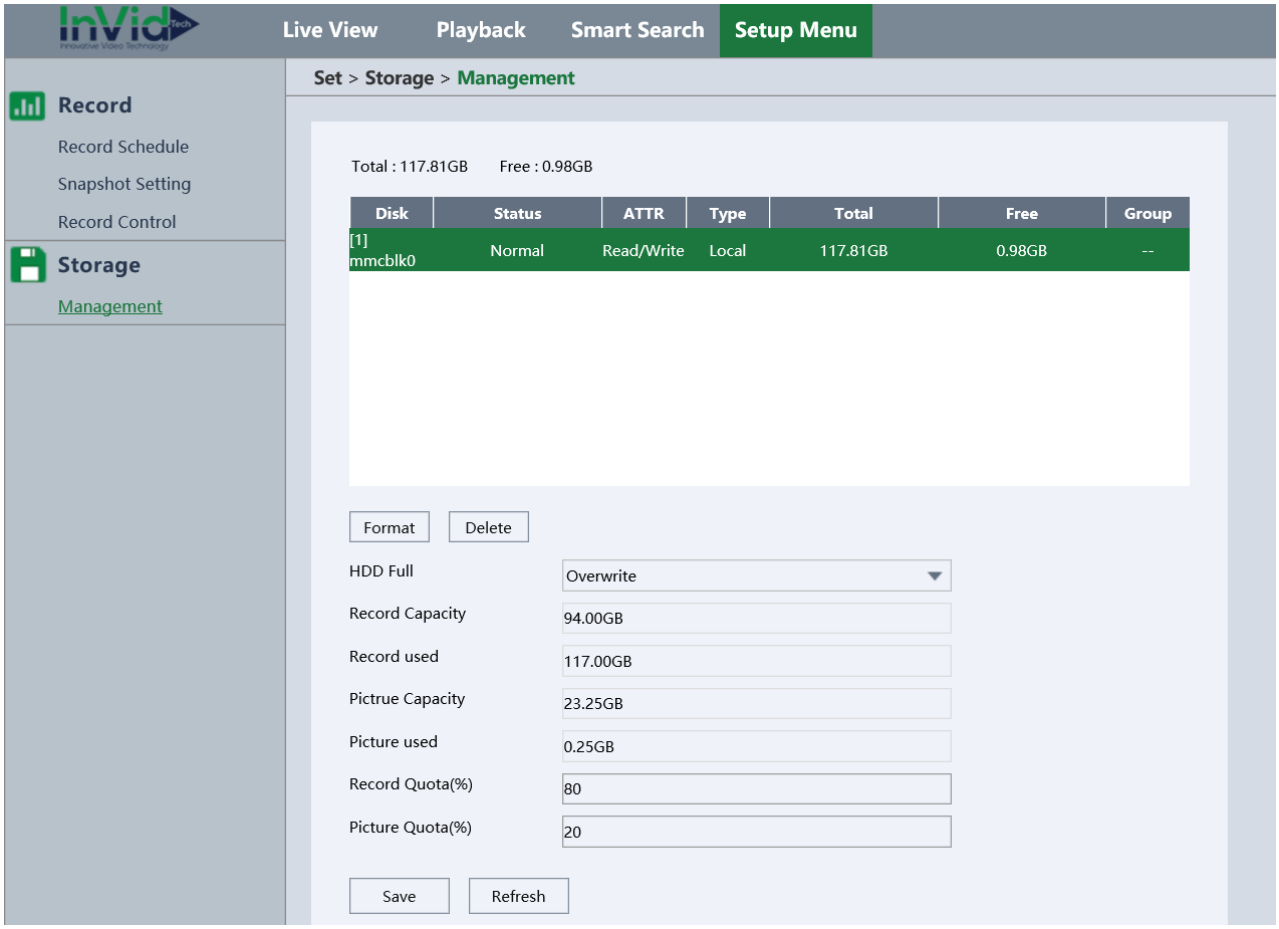
- **Schedule**: Record by the schedule setting;
- **Manual**: Always record the video;
- **Stop**: Stop the record.



7.8.2 Storage Manager

Base(Micro SD card)

Click **Setup Menu → Storage → Management** to enter the Base settings interface.



1. Format the card and set the quota.
2. Click **save** to save settings.

Note:

- *You need to open recording setting, snapshot setting. Please refer to chapter 6.5.4.*

NAS

Click **Set → Recording Settings → Storage Manager → NAS** to enter the NAS Settings interface:

1. Double click the table to enter the NAS settings interface.
2. Input the Server address, File path and Space and select mount type.
   - **Server address:** IP of NAS Server.
   - **File path:** The directory is made in NAS Server.
   - **Mount type:** Support NFS and CIFS

   After completing you can click **Test** to test the availability of NAS.
3. Click **Save** to add the network disk.

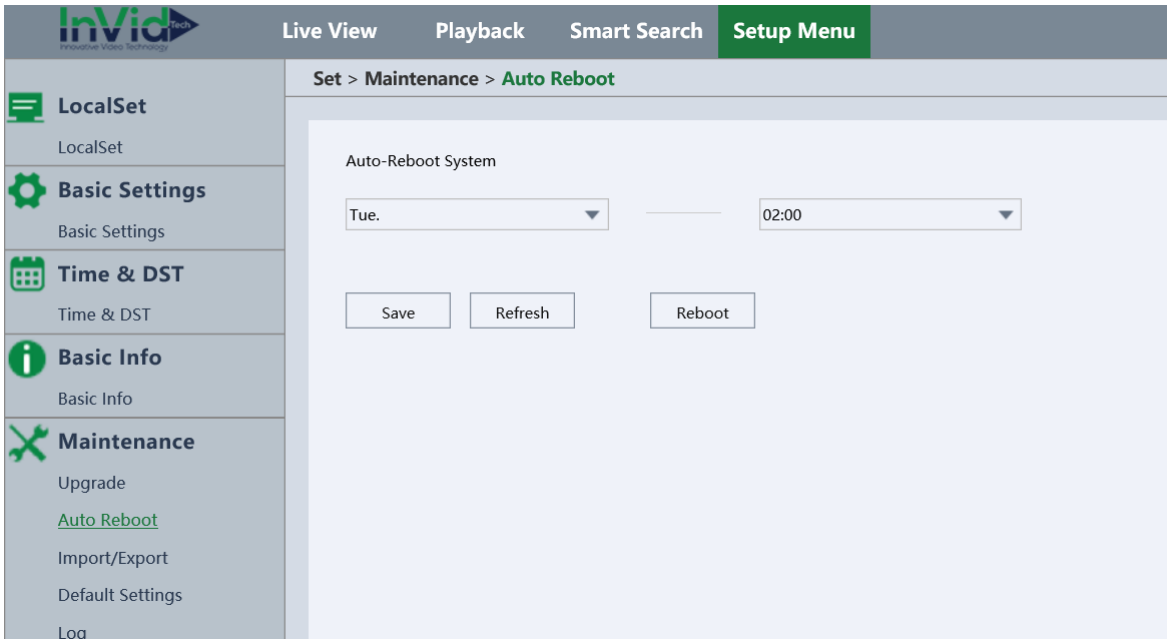
Note:

- *NAS store need to set record setting, snapshot setting enable firstly. Please refer to chapter 6.5.4.*

7.9 Maintain

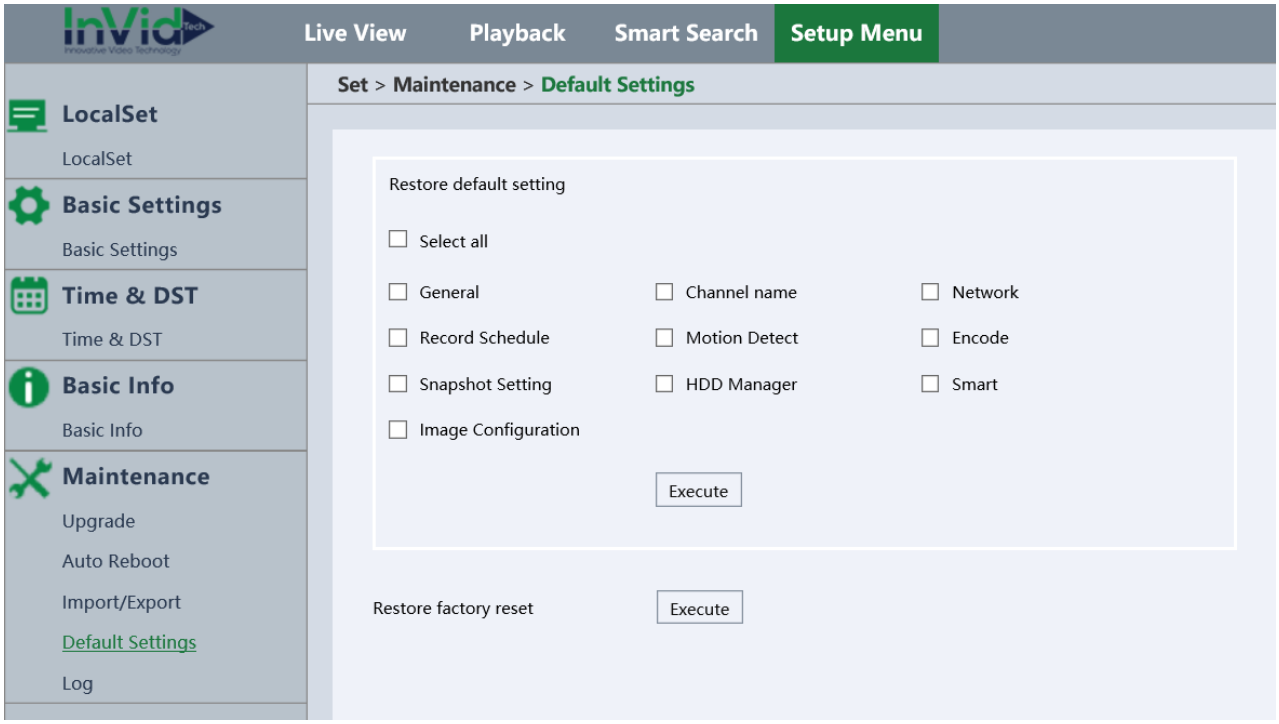
7.9.1 Auto Reboot

Click **Setup Menu → Maintenance → Auto Reboot** to enter the Auto Reboot interface. You can set auto boot schedule in this page.



7.9.2 Default Settings

Click **Setup Menu → Maintenance → Default Settings** to enter the default settings interface:



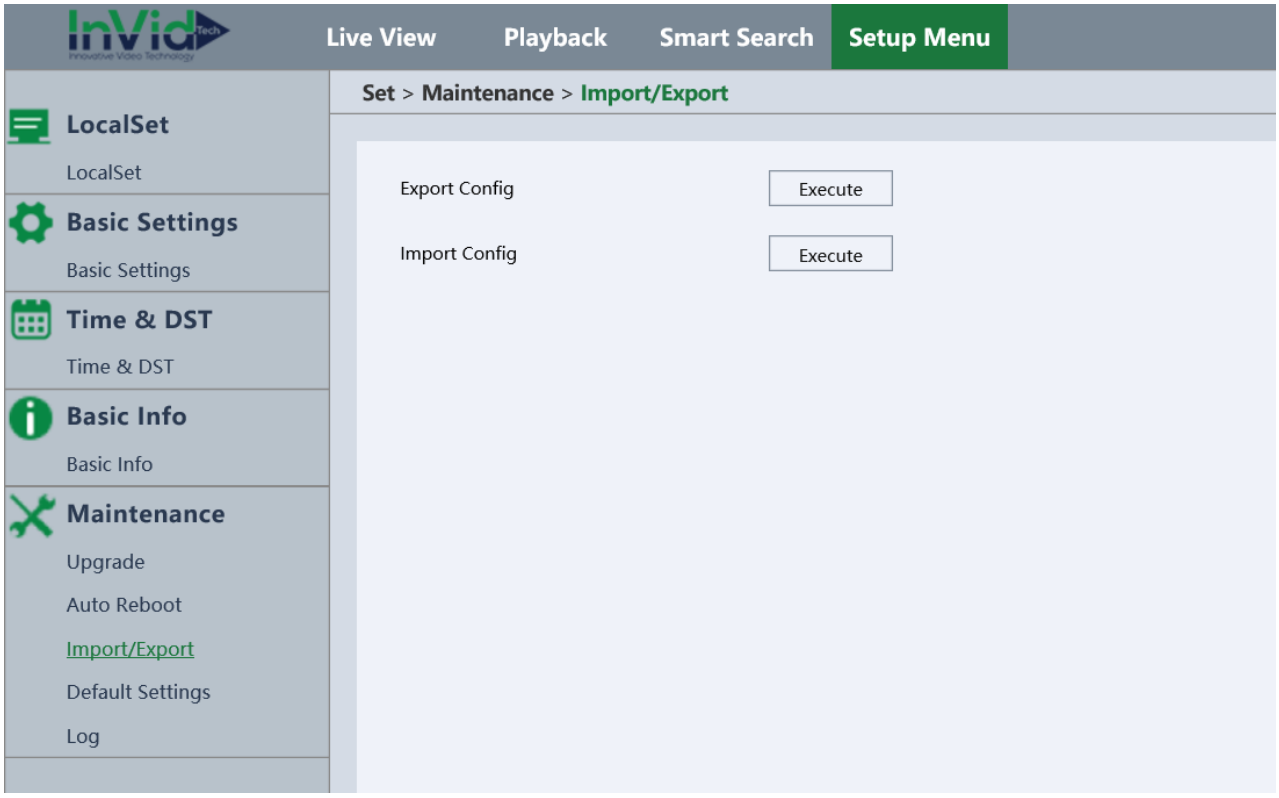
Click on the checkbox of those item you want to restore, and click the Default button, then all the configurations of the selected item will restore to the default value.

Note:

- *If Network has been chosen in the list, the IP address is also restored to the default IP address, please be careful for this action.*

7.9.3 Export Import

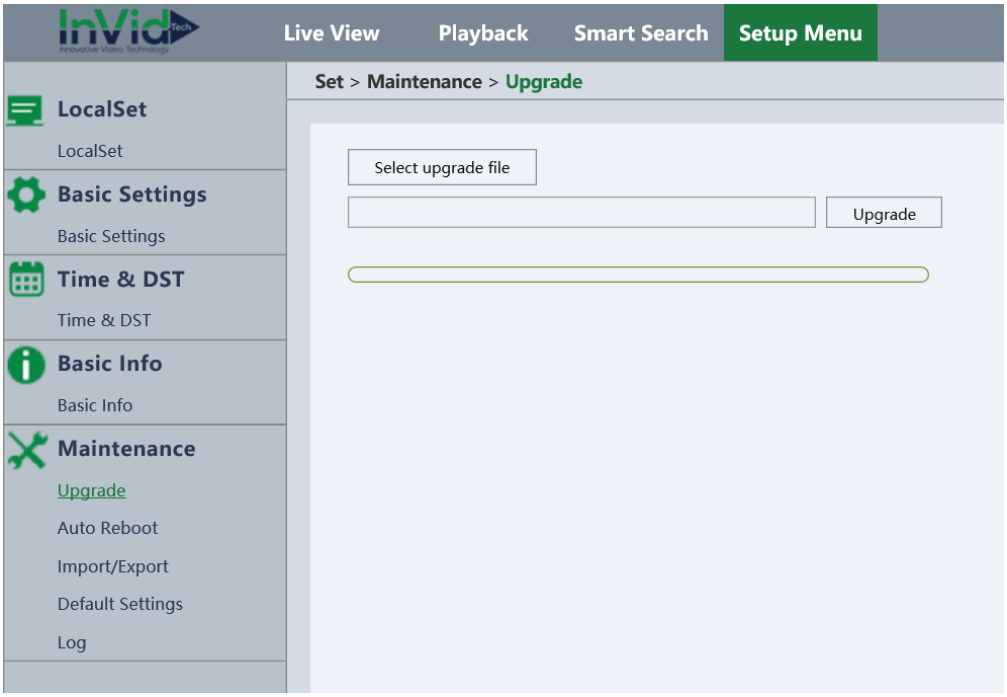
Click “Setup Menu ->Maintenance -> Import/ Export” to enter the interface, as shown in **figure 6-72.** In this interface you can export or import device’s setting.



1. Click on the checkbox of those item you want to restore, and click the Default button, then all the configurations of the selected item will restore to the default.
2. Click Export button to export all the configurations of the network camera in a .coi file.
3. Click Import button to import in a .coi file .

7.9.4 Upgrade

Click **Setup Menu → Maintenance → Upgrade** to Enter the Upgrade interface:



1. Click **Select upgrade file**.
2. Click **Browse** to select the local upgrade file and then click **Upgrade** to start.

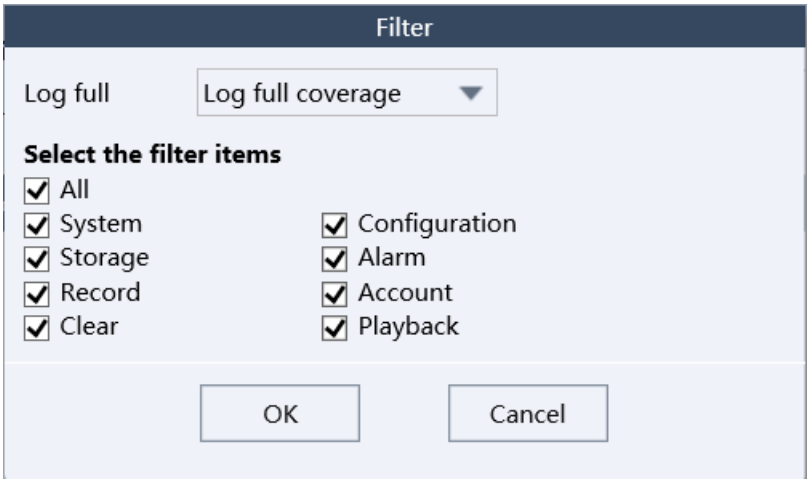
***Note**:*

- *The upgrade process will take 1~2 minutes. Please don't disconnect power of the camera during the process, and the camera reboots automatically after upgrade.*

7.9.5 Log

Click **Set → Maintain → Log** to enter log interface.

1. Click **Filter**, select the filter items, as shown in **follwoing picture.** Select “Stop” or “Log full coverage” when the log is full (max 1024pcs log).



2. Set the search conditions to specify the log, including the Type, Start Time and End Time.
3. Click **Search** to search log files. The matched log files will be displayed on the Log list, Click the < and > to see more log files. As shown in **Figure 6-75.**

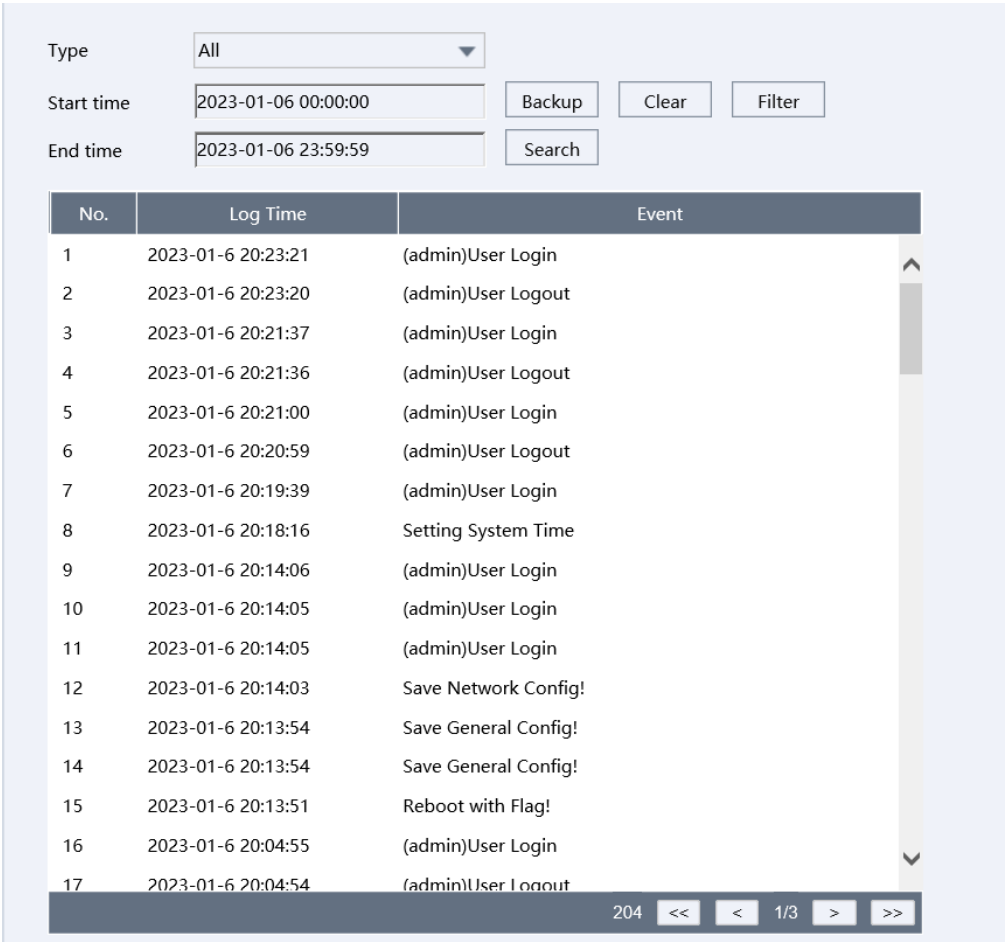


Figure 6-75 Log Search

4. Click **Backup** to save the log files in your computer.
5. Click **Clear** to clean up all the logs.

7 Alarm In/out

After checking Alarm box, and select the alarm type below, when the device trigger the corresponding alarm, it will display an alarm message to notify you. And link operation will be active.

- **Local snapshot:** When an alarm is triggered, the camera will capture an image.
- **Start live view:** When an alarm is triggered, the camera will open the video.
- **Play Alarm Audio**: when an alarm is triggered, you will hear the voice.

8 Logout

Click the Logout button in the main menu, it will appear a pop-up dialogue, click OK to confirm exit. It is shown as **Figure 8-1**.

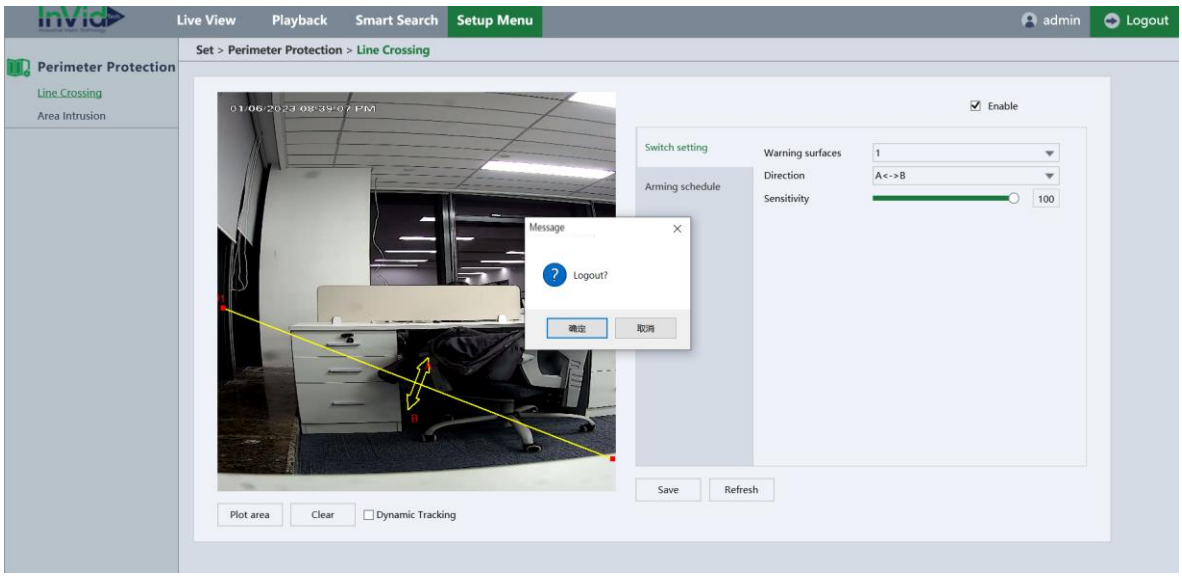


Figure 8-1 Logout Interface