

Advance IPPTZ



Please read this manual thoroughly before use and keep it for future reference

www.comelitgroup.com



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Disclaimer

- ▶ This manual is provided for user reference only.
- ▶ This manual is available for many models. Some functions introduced in the manual may be not available for some models.
- ▶ The content of this manual is subject to change without prior notice, the updates will be added into the new version of this manual.
- ▶ This manual may contain several technically incorrect places or printing errors, please feel free to let us know. We will readily improve or update the procedures described in the manual.

Notes on Safety

- Please use the specified power supply to connect.
- Do not attempt to disassemble the camera; in order to prevent electric shock, do not remove screws or covers.
- There are no user-serviceable parts inside. Please contact the nearest service center as soon as possible if there is any failure.
- Avoid from incorrect operation, shock vibration, heavy pressing which can cause damage to product.
- Do not use corrosive detergent to clean main body of the camera. If necessary, please use soft dry cloth to wipe dirt; for hard contamination, use neutral detergent. Any cleanser for high grade furniture is applicable.
- Avoid aiming the camera directly towards extremely bright objects, such as sun, as this may damage the image sensor.
- Please follow the instructions to install the camera. Do not reverse the camera.
- Do not operate it in case temperature, humidity and power supply are beyond the limited stipulations.
- Keep away from heat sources such as radiators, heat registers, stove, etc.
- Do not expose the product to the direct airflow from an air conditioner. Otherwise, it may cause moisture condensation inside the bubble due to temperature difference between internal and external of the dome camera.

Table of Contents

| | | |
|----------|--|-----------|
| 1 | Network Connection | 1 |
| 1.1 | LAN | 1 |
| 1.1.1 | Access through Comelit Advance IP Tool | 1 |
| 1.1.2 | Access through Internet Explorer | 3 |
| 1.2 | WAN | 4 |
| 2 | Live View | 8 |
| 3 | Menu Setup | 10 |
| 3.1 | System Information | 10 |
| 3.2 | System Setup | 11 |
| 3.2.1 | Auto PT Flip | 11 |
| 3.2.2 | Language Setup | 11 |
| 3.2.3 | RS485 Setup | 11 |
| 3.2.4 | Date Setup | 11 |
| 3.2.5 | Title Setup | 12 |
| 3.2.6 | North Setup | 12 |
| 3.2.7 | New Password and Change Password | 13 |
| 3.2.8 | Auto Exit Time | 13 |
| 3.3 | Camera Setup | 13 |
| 3.3.1 | Camera Control | 14 |
| 3.3.2 | Image Setup | 15 |
| 3.3.3 | Lens Setup | 16 |
| 3.3.4 | Day & Night Setup | 17 |
| 3.3.5 | Infrared Control | 18 |
| 3.3.6 | Video Format | 18 |
| 3.4 | Dome Function | 18 |
| 3.4.1 | Preset Setup | 18 |
| 3.4.2 | Cruise (Tour) Setup | 19 |
| 3.4.3 | Group Setup | 19 |
| 3.4.4 | Task Setup | 20 |
| 3.4.5 | Trace (Pattern) Setup | 21 |
| 3.4.6 | Alarm Setup | 21 |
| 3.4.7 | Home Position | 22 |
| 3.4.8 | Wiper Setup | 23 |
| 3.5 | Display Setup | 23 |
| 3.6 | Load Default | 23 |
| 4 | Remote Configuration | 24 |
| 4.1 | System Configuration | 24 |
| 4.1.1 | Basic Information | 24 |
| 4.1.2 | Date and Time Configuration | 24 |
| 4.1.3 | Local Configuration | 25 |

| | | |
|--------|----------------------------------|----|
| 4.1.4 | Storage..... | 25 |
| 4.2 | Image Configuration | 27 |
| 4.2.1 | Video / Audio Configuration..... | 27 |
| 4.2.2 | OSD Configuration | 29 |
| 4.2.3 | Video Mask (Privacy) | 29 |
| 4.2.4 | Camera Setup | 30 |
| 4.3 | PTZ Configuration | 31 |
| 4.3.1 | PTZ and Password Setting..... | 31 |
| 4.3.2 | Restore..... | 32 |
| 4.3.3 | PTZ Function..... | 32 |
| 4.4 | Alarm Configuration..... | 32 |
| 4.4.1 | Motion Detection | 32 |
| 4.4.2 | Other Alarms | 33 |
| 4.4.3 | Alarm Input..... | 35 |
| 4.4.4 | Alarm Out | 36 |
| 4.4.5 | Alarm Server | 37 |
| 4.5 | Event Configuration | 38 |
| 4.5.1 | Object Removal..... | 38 |
| 4.5.2 | Exception | 40 |
| 4.5.3 | Line Crossing | 42 |
| 4.5.4 | Intrusion | 43 |
| 4.5.5 | Crowd Density Detection..... | 45 |
| 4.5.6 | People Intrusion | 47 |
| 4.5.7 | People Counting..... | 48 |
| 4.6 | Network Configuration | 50 |
| 4.6.1 | TCP/IPv4..... | 50 |
| 4.6.2 | Port..... | 52 |
| 4.6.3 | Server..... | 52 |
| 4.6.4 | DDNS | 52 |
| 4.6.5 | SNMP..... | 53 |
| 4.6.6 | 802.1X..... | 54 |
| 4.6.7 | RTSP..... | 55 |
| 4.6.8 | UPnP..... | 56 |
| 4.6.9 | E-mail..... | 56 |
| 4.6.10 | FTP | 57 |
| 4.6.11 | HTTPS | 58 |
| 4.6.12 | P2P (optional)..... | 59 |
| 4.6.13 | QoS..... | 60 |
| 4.7 | Security Configuration | 60 |
| 4.7.1 | User Configuration | 60 |
| 4.7.2 | Online user..... | 62 |
| 4.7.3 | Block and Allow Lists..... | 62 |
| 4.7.4 | Security Management | 62 |
| 4.8 | Maintenance..... | 63 |

- 4.8.1 Backup & Restore63
- 4.8.2 Reboot Device.....63
- 4.8.3 Upgrade64
- 4.8.4 Log64
- 5 Playback65**
- 5.1 Image Search.....65
- 5.2 Video Search.....66
- 5.2.1 Local Video Search67
- 5.2.2 Micro-SD Card Video Search68
- Appendix70**
- Appendix 1 - Troubleshooting.....70
- Appendix 2 – Preset description.....72

1 Network Connection

Connect the IP Camera (IPC) via LAN or WAN through Internet Explorer browser.

1.1 LAN

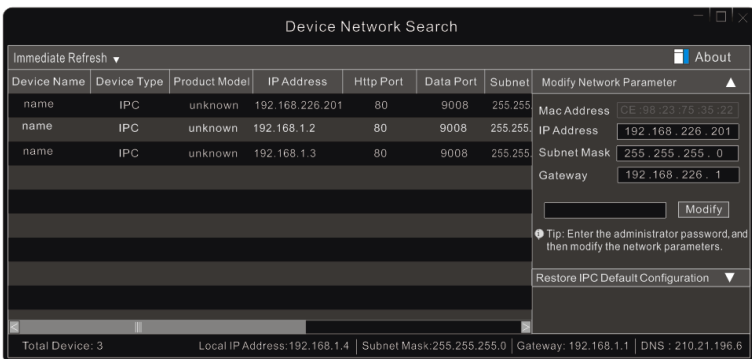
In LAN, there are two ways to access IPC: 1. through the software Comelit Advance IP Tool; 2. through Internet Explorer browser.

1.1.1 Access through Comelit Advance IP Tool

Network connection:



- ① Make sure the PC and IPC are connected to the LAN and the Comelit Advance IP Tool is installed in the PC.
- ② Double click the Comelit Advance IP Tool icon on the desktop to run this software as shown below:



- ③ Modify the IP address. The default **IP address** of the camera is **192.168.1.150**. Click the information of the camera listed in the above table to show the network information on the right hand. Modify the IP address and gateway of the camera and make sure that its network address is in the same local network segment as the computer's.

Modify Network Parameter ▲

Mac Address

IP Address

Subnet Mask

Gateway

For example, the IP address of your computer is 192.168.1.4. Therefore, the IP address of the camera shall be changed to 192.168.1.X. After modification, please enter the password of the administrator and click the “Modify” button to modify the setting.

The **default Password** of the administrator is **admin**.

④ Double click on the IP address and the system will pop up the IE browser to connect the IPC. Follow instructions to download, install and run the ActiveX control.

Comellif

Name:

Password:

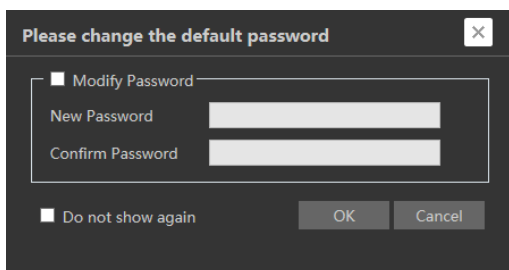
Stream Type: ▼

Language: ▼

Remember me

Enter the username and password in the login window.

The **default Username** is **admin**; the **default Password** is **admin**.



The system will pop up the above textbox to ask you to change the default password. It is strongly recommended to change the default password for account security. If “Do not show again” is checked, the textbox will not appear the next time.

1.1.2 Access through Internet Explorer

The **default** network settings are shown below:

IP address: **192.168.1.150**

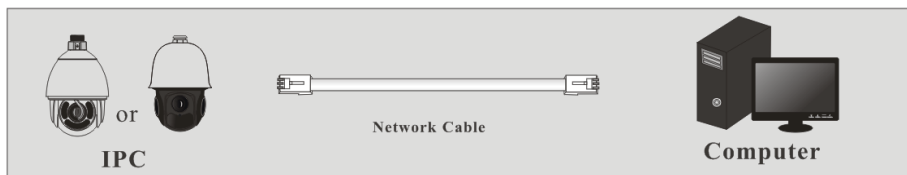
Subnet Mask: **255.255.255.0**

Gateway: **192.168.1.1**

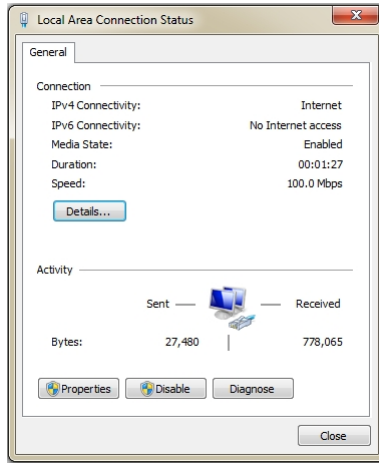
HTTP: **80**

Data port: **9008**

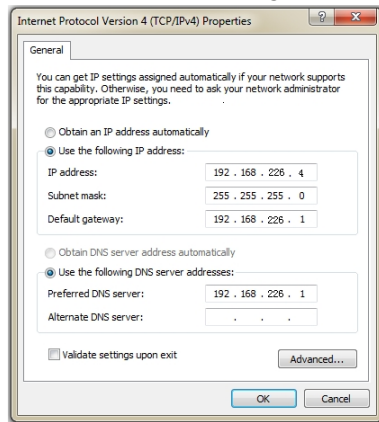
Use the above default settings when logging in the camera for the first time. Connect the camera to the computer directly through network cable.



① Manually set the IP address of the PC, the network segment should be the same as the default settings of the IP camera. Open the network and share center. Click “Local Area Connection” to pop up the following window:.



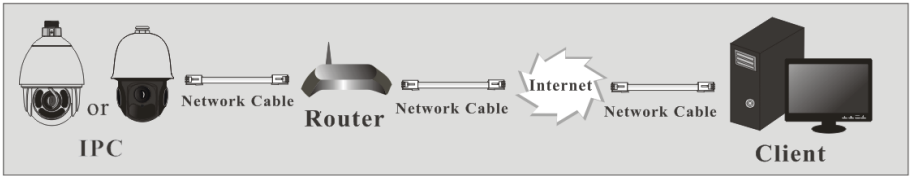
Select “Properties” and then select internet protocol (for example: IPv4). Next, click the “Properties” button to set the network of the PC.



- ② Open the Internet Explorer browser, enter the default address of the IPC and confirm.
- ③ Follow instructions to download and install the ActiveX control.
- ④ Enter the default username and password in the login window and then enter to Live view.

1.2 WAN

- **Access through the router or virtual server**



① Make sure the camera is connected to the local network and then log in the camera via LAN and go to Config→Network→Port menu to set the port number.

| | |
|------------|------|
| HTTP Port | 80 |
| HTTPS Port | 443 |
| Data Port | 9008 |
| RTSP Port | 554 |

Port Setup

② Go to Config →Network→TCP/IP menu to modify the IP address.

| | | | |
|---|---------------|--------------|-------------------------------|
| IPv4 | IPv6 | PPPoE Config | IP Change Notification Config |
| <input type="radio"/> Obtain an IP address automatically <input checked="" type="radio"/> Use the following IP address | | | |
| IP Address | 192.168.1.150 | Test | |
| Subnet Mask | 255.255.255.0 | | |
| Gateway | 192.168.1.1 | | |
| Preferred DNS Server | 8.8.8.8 | | |
| Alternate DNS Server | 8.8.8.8 | | |

IP Setup

③ Go to the router’s management interface through Internet Explorer browser to forward the IP address and port of the camera in the “Virtual Server”.

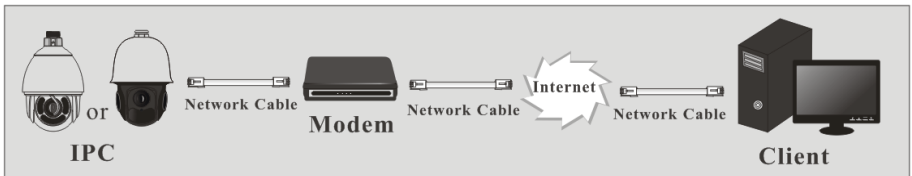
| Port Range | | | | | |
|-------------|-------|----------|----------|---------------|-------------------------------------|
| Application | Start | End | Protocol | IP Address | Enable |
| 1 | 9007 | to 9008 | Both | 192.168.1.201 | <input checked="" type="checkbox"/> |
| 2 | 80 | to 81 | Both | 192.168.1.201 | <input checked="" type="checkbox"/> |
| 3 | 10000 | to 10001 | Both | 192.168.1.166 | <input type="checkbox"/> |
| 4 | 21000 | to 21001 | Both | 192.168.1.166 | <input type="checkbox"/> |

Router Setup

④ Open the Internet Explorer browser and enter its WAN IP and http port to access. (for example, if the http port is changed to 81, please enter “192.198.1.150:81” in the address bar of web browser to access).

➤ Access through PPPoE dial-up

Network connection



Access the camera through PPPoE auto dial-up. The setup steps are as follow:

- ① Go to Config→Network→Port menu to set the port number.
- ② Go to Config →Network→TCP/IP→PPPoE Config menu. Enable PPPoE and then enter the user name and password from your internet service provider.

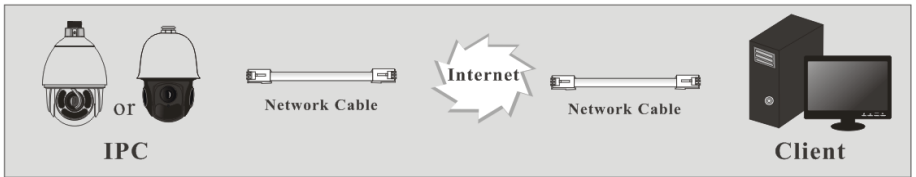
The screenshot shows the 'PPPoE Config' menu. It has tabs for 'IPv4', 'IPv6', 'PPPoE Config', and 'IP Change Notification Config'. The 'PPPoE Config' tab is active. There is a checked 'Enable' checkbox. Below it are input fields for 'User Name' (containing 'xxxxxxxx') and 'Password' (containing six dots). A 'Save' button is located at the bottom right.

③ Go to Config →Network→DDNS menu. Before configuring the DDNS, please apply for a domain name first. Please refer to DDNS configuration for detail information.

④ Open the Internet Explorer browser and enter the domain name and http port to access.

Access through static IP

Network connection

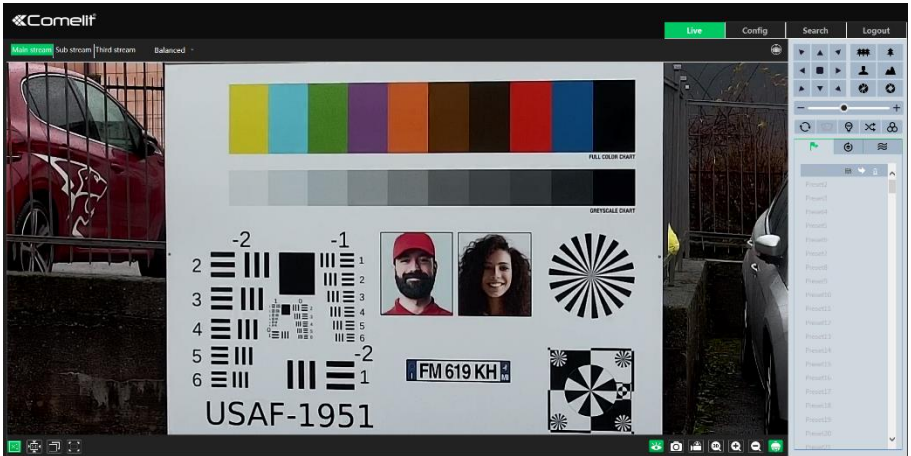


The setting steps are as follow:

- ① Go to Config→Network→Port menu to set the port number.
- ② Go to Config →Network→TCP/IP menu to set the IP address. Check “Use the following IP address” and then enter the static IP address and other parameters.
- ③ Open the Internet Explorer browser and enter its WAN IP and http port to access.

2 Live View

After logging in, the following window will be shown.



The descriptions of the icon on the remote preview interface are as follows:

























| Icon | Description | Icon | Description |
|------|--|------|-----------------------------|
| | Original size | | SD card recording indicator |
| | Fit correct scale | | Color abnormal indicator |
| | Auto (fill the window) | | Abnormal clarity indicator |
| | Full screen | | Scene change indicator |
| | Start/stop live view | | Line crossing indicator |
| | Start/stop two-way audio | | Crowd density indicator |
| | Enable/disable audio | | People counting indicator |
| | Snapshot | | Object removal indicator |
| | Start/stop local recording | | Intrusion indicator |
| | Zoom in | | People intrusion indicator |
| | Zoom out | | Sensor alarm indicator |
| | PTZ control | | Motion alarm indicator |
| | Move the cursor to view the live image in all directions after you click this button. Additionally, hold and drag the left mouse button to zoom in the live image. | | |





Those smart alarm indicators will flash only if the camera supports those functions and the corresponding events are enabled.

In full screen mode, double click with the mouse to exit or press the ESC key on the keyboard.


Click PTZ extended button to unfold the control panel. In remote preview interface, you can view the image from every direction using the PTZ panel.

The descriptions of the control panel are as follows:

| Icon | Description | Icon | Description |
|---|--|---|---|
|  | Click it to rotate the dome diagonally up-left |  | Click it to rotate the dome diagonally up-right. |
|  | Click it to rotate the dome upwards. |  | Click it to stop rotating the dome. |
|  | Click it to rotate the dome towards left |  | Click it to rotate the dome towards right. |
|  | Click it to rotate the dome diagonally down-left |  | Click it to rotate the dome diagonally down-right. |
|  | Click it to rotate the dome downwards. |  | Drag the scroll bar to adjust rotating speed of the dome. |
|  | Click it to zoom out the live image. |  | Click it to zoom in the live image. |
|  | Focus - |  | Focus + |
|  | Iris - |  | Iris + |
|  | Auto scan |  | Wiper |
|  | Light |  | Radom scan |
|  | Group scan |  | Preset |
|  | Cruise |  | Track |





Select preset and click  to call the preset. Select and set the preset and then click  to save the position of the preset. Select the set preset and click  to delete it. Select cruise and click  to start cruise.



3 Menu Setup


On the PTZ control panel of Internet Explorer remote preview interface, call Preset 95 and click . This will take you to see the following main menu setup.


- 1 SYSTEM INFORMATION
- 2 SYSTEM SETUP
- 3 CAMERA SETUP
- 4 DOME FUNCTION
- 5 DISPLAY SETUP
- 6 LOAD DEFAULT
- 0 EXIT

 **The menu setup can be displayed when the resolution of the live is set to 1920x1080.**

After you go to the main menu interface, you can select the menu by clicking the direction button (   ).


  : moving up and down into the menu.

 : to return to the menu.

 : to confirm, to enter sub-menu or to select the menu on the right.

Note: dash (-) before the menu means that the menu is not available. Different models may have different menus. The menus in this manual are for reference only.




3.1 System Information

Select System Information by clicking  or  button, then click  button to enter into the menu as shown below:

- SOFTWARE: 4.2.1.0
- FIRMWARE: V1.6.10
- CAMERA: xxxx
- DATE: 2018-07-02
- TEMP: 35°C
- 1 RETURN
- 0 EXIT

You can view the software and firmware version, camera, system temperature, date, dome ID, dome protocol and baud rate here.






3.2 System Setup

Select System Setup by clicking  or  button, then click  button to enter into the menu as shown below:

```
1 AUTO PT FLIP:      ON
2 LANGUAGE SETUP:
3 RS485 SETUP:
4 DATE SETUP:
5 TITLE SETUP:
6 NEXT PAGE
7 RETURN
0 EXIT
```

```
1 NORTH SETUP
2 NEW PASSWORD
- CHANGE PASSWORD
3 AUTO EXIT TIME:   OFF
4 RETURN
0 EXIT
```

3.2.1 Auto PT Flip

Select Auto PT Flip and then click  to set up the menu on the right. Click  or  button to select ON/OFF. After, click  button to return to the menu on the left and click  button to select Exit or Return (Exit the setup or Return to the main menu).

3.2.2 Language Setup

English or Chinese.

3.2.3 RS485 Setup (not available for some models)

Select RS485 Setup menu as shown below:

```
1 ID TYPE:          SW
2 DOME ID:          001
3 PROTOCOL:         PELCO-P
4 BAUD RATE:        2400
5 RETURN
0 EXIT
```

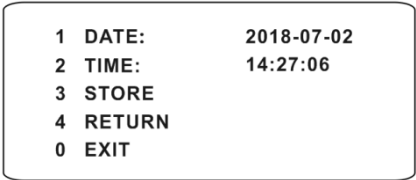
Dome ID: from 001 to 255.

Protocol: PELCO-D or PELCO-P.

Baud Rate: from 1200 to 9600bps.

3.2.4 Date Setup

Select Date Setup menu as shown below:



- ① Set the date and time by clicking the arrow buttons.
- ② Select STORE to save the setting.

3.2.5 Title Setup

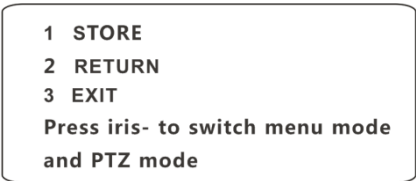
Select Title Setup menu as shown below:



Click the arrow buttons to set the title and then save the setting by selecting STORE.

3.2.6 North Setup

Select Next page and then North Setup menu as shown below:



- ① Choose a location by clicking the arrow buttons.
- ② Select STORE to save the setting.
- ③ The horizontal angle will treat the north position as a reference, otherwise it will treat the horizontal origin as a reference to display the clockwise rotation angle of camera.
- ④ The vertical PTZ will treat its highest point as a reference (when the camera is parallel with the horizontal ground) to show the angle included between the camera and horizontal ground.

3.2.7 New Password and Change Password

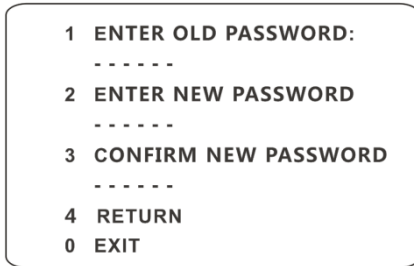
Select New Password menu as shown below:



Enter the password by clicking  or  button.

- Numbers from 0 to 9 are available. The password should be 6 characters.
- Empty password is invalid when you set the new password.
- Password needs to be entered when you login next time.

Select Change Password menu as shown below:






- Enter the current password and then enter the new password twice.
- Entering empty new password to delete the current password.

3.2.8 Auto Exit Time

Select Auto Exit Time to set the time to exit the menu automatically.

3.3 Camera Setup

Select Camera Setup by clicking  or  button, then click  button to enter into the menu as shown below.

```

1 CAMERA CONTROL
2 IMAGE SETUP
3 LENS SETUP
4 DAY NIGHT SETUP
- SMART IR SETUP
5 NEXT PAGE
6 RETURN
0 EXIT

```

```

1 INFRARED CONTROL: AUTO
2 PAL/NTSC: PAL
3 RETURN
0 EXIT

```

3.3.1 Camera Control

Select Camera Control menu as shown below:

```

1 BRIGHTNESS: 2018-07-02
2 SHARPNESS: 14:27:06
- CONTRAST: 050
- HUE 050
- ANTIFLICKER: OFF
3 NEXT PAGE
4 RETURN
0 EXIT

```

```

1 WDR SETUP
2 HLC SETUP
3 BLC: OFF
4 3D NR: AUTO
5 COLOR LEVEL: 4
6 NEXT PAGE
7 RETURN
0 EXIT

```

```

1 DEFOG SETUP
- GAMMA: DEFAU
- VE: OFF
- HIGH SENSI: OFF
2 RETURN
0 EXIT

```

Brightness: set the brightness level of the image.

Sharpness: set the sharpness level of the image.

Contrast: set the contrast of the image (not available for some models).

Hue: set the hue of the image (not available for some models).

Antiflicker (not available for some models):

- OFF: disables the anti-flicker function. This is used mostly in outdoor installations.
- 50Hz: reduces flicker in 50Hz lighting conditions.
- 60Hz: reduces flicker in 60Hz lighting conditions.

WDR setup: WDR can adjust the camera to provide a better image when there are both very bright and very dark areas simultaneously in the field of the view.

Note: recording will be stopped for a few seconds while the mode is changing from non-WDR to WDR mode.

HLC setup: if ON, lowers the brightness of the entire image by suppressing the brightness of the image's bright area and reducing the size of the halo area.

- HLC Level: from 00 to 20.

BLC: If ON, the auto exposure is activate according to the scene so the object in the image in the darkest area will be seen clearly.

3D-NR: (Auto, Low, Middle, High). Reduce the noise of the brightness and chroma of the image in low illumination condition.

Color Level: adjust the saturation of the image (from 0 to 7).

Defog Setup: (Auto, Manual). Activate and set an appropriate value as needed in foggy, dusty, smoggy or rainy environment to get clear images.

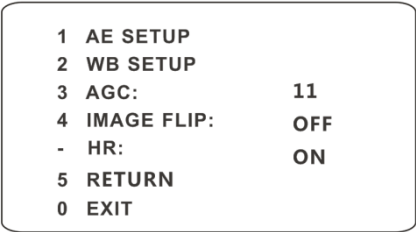
Gamma: measurement of the contrast of an image (not available for some models).

VE: visibility enhancement (not available for some models).

High Sensitivity: set it as needed (not available for some models).

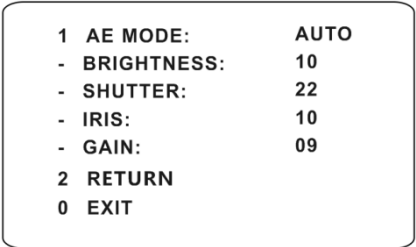
3.3.2 Image Setup

Select Image Setup menu as shown below:



AE Setup

Select AE Setup menu as shown below:



AE MODE: Auto, Bright, Shutter, IRIS or Manual.

Brightness: from 0 (darkest) to 20 (brightness). Available only when bright mode is selected.

Shutter: lower the value is, brighter the image is. Available only when the shutter or manual mode are selected.

IRIS: higher the value is, more the light gets. Available only when IRIS or Manual mode are selected.

Gain: set up the value. Available only when Manual mode is selected.

WB Setup

Select WB Setup menu as shown below:

```
1 WB MODE:          AUTO
- MWB RED GAIN:     10
- MWB BLUE GAIN:    10
2 RETURN
0 EXIT
```

WB Mode: White Balance Mode. Auto or manual.

MWB Red Gain: set the red gain value. Available only when Manual mode is selected

MWB Blue Gain: set the blue gain value. Available only when Manual mode is selected.

AGC

Automatic Gain Control. From 0 to 15

Image Flip

- ❖ **MIRR:** mirror. Turn the image horizontally.
- ❖ **FLIP:** turn the image vertically.
- ❖ **ROTA:** rotation. Turn the image horizontally and vertically.

3.3.3 Lens Setup

Select Lens Setup menu as shown below:

```
1 FOCUS LIMIT:      1M
2 ZOOM MAG DISP:    OFF
3 ZOOM SPEED:       3
4 SCAN SPEED:       10
- DZOOM:            OFF
5 LEN INITIALIZE
6 RETURN
0 EXIT
```

- **Focus Limit**

Set the nearest distance of focus.

- **Zoom MAG DISP**

If “ON” is selected, you will see the zoom magnification in the live image

- **Zoom Speed**

Adjust zoom speed. The range is from 1 to 3.

- **Scan Speed**

Adjust scan speed. The range is from 1 to 20.

- **DZoom**

Digital zoom mode (not available for some models).

- **Len Initialize**

Select to restore the lens parameters to the factory default settings.

3.3.4 Day & Night Setup

Select Day & Night Mode menu as shown below:

| | | |
|---|-----------------|-------|
| 1 | DAY NIGHT MODE: | AUTO |
| - | DAY TIME: | 07:00 |
| - | NIGHT TIME: | 19:00 |
| 2 | IR SENSITIVITY: | MIDD |
| 3 | RETURN | |
| 0 | EXIT | |

Auto: the camera automatically switch between day and night mode depending on the environment illumination.

Night: the camera will be in night mode (black & white) at all time.

Day: the camera will be day mode (color) at all time.

Time: the camera will switch the mode between day and night according to the set day and night time.

IR Sensitivity

Set the level of the IR sensitivity (Low, Middle, High, Custom).

3.3.5 Infrared Control

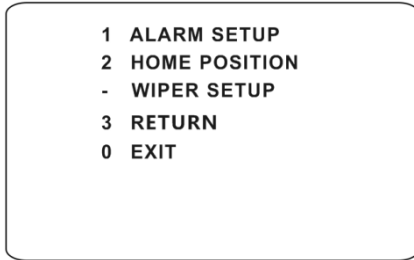
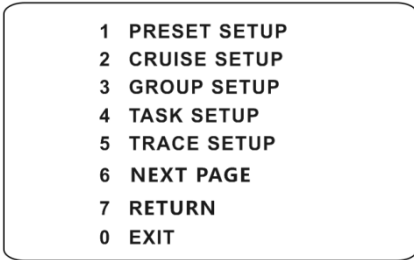
Auto, ON or OFF.

3.3.6 Video Format

PAL or NTSC.

3.4 Dome Function

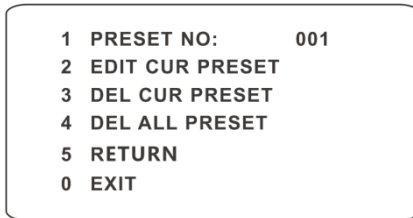
Select Dome Function menu as shown below:



3.4.1 Preset Setup

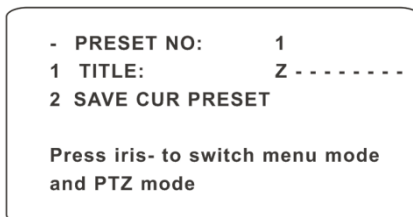
This function is used to memorize the specific position of pan, tilt, zoom and focus for quick return to this position by calling a Preset.



① Select Preset Setup menu as shown below.



② Select the Preset number.

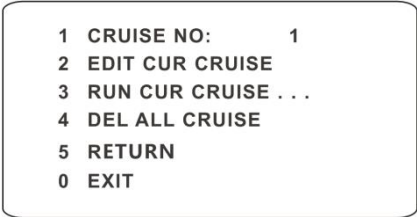
③ Select Edit CUR Preset menu as shown below:



- ④ Press Iris- to switch from menu mode and PTZ mode and vice-versa. Select the Preset position by clicking the arrow buttons.
- ⑤ Set the title by clicking  or  button.
- ⑥ Save the setting.

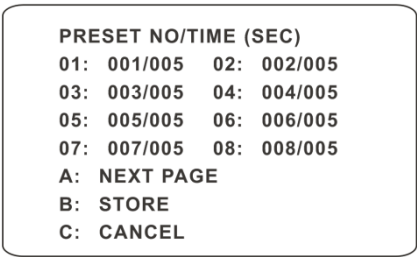
3.4.2 Cruise (Tour) Setup

Select Cruise Setup menu as shown below:



By storing the presets in a Cruise list, the system can recall those presets at the set time in sequence when executing the Cruise command.

- ① Select the Cruise number.
- ② Select Edit CUR Cruise menu as shown below. This camera supports 8 Cruises with 16 Presets for each cruise.



Select the Preset number (from 1 to 360) and the dwell time (from 5 to 240 seconds).

- ③ Run CUR Cruise. The camera will automatically start the Cruise.
- ④ Select STORE to save the setting.

3.4.3 Group Setup

Select Grouping Setup menu as shown below:


```
1 EDIT GROUP
2 RUN GROUP . . .
3 DEL GROUP
4 RETURN
0 EXIT
```

Select Edit Group menu as shown below:

```
01: CRU1    02: CRU2
03: CRU3    04: CRU4
05: CRU5    06: CRU6
07: CRU7    08: CRU8
A:  STORE
B:  CANCEL
```

8 Cruises can be set in a group. CRU 1 stands for Cruise 1, CRU 2 stands for Cruise 2 and so on. "Run Group" means to run the cruises in order.

3.4.4 Task Setup

Select Task Setup menu as shown below:

```
1 TASK:      OFF
2 TASK SETTING
3 DELETE TASK
4 RETURN
0 EXIT
```

By dividing 24 hours into several periods and appointing different commands for each period, the camera system will automatically execute the commands according to the set time if there is no operation.

- ① Enable the task.
- ② Set the task.

```

FORMAT: TIME/FUNC/NO
1 00:00 - - 00:00 NON: 00
2 00:00 - - 00:00 NON: 00
3 00:00 - - 00:00 NON: 00
4 00:00 - - 00:00 NON: 00
A: NEXT PAGE
B: STORE
C: CANCEL

```

Time Format: Start Time – End Time. The tasks will be automatically executed in chronological order.

Task Type: NON (none), RSC (random scan), ASC (automatic scan), PRE (preset), CRU (cruise), TRA (track).



Note: The home position function will be disabled if enabling task setting.

3.4.5 Trace (Pattern) Setup

Select Trace Setup menu as shown below:

```

1 TRACK NO:      1
2 TRACK SETTING
3 RUN CUR TRACK . . .
4 DEL CUR TRACK
5 RETURN
0 EXIT

```

This function is used to store the operation of pan, tilt, zoom and focus to be repeated by running the Trace.

- ① Choose the Trace number.
- ② Select Track Setting menu. Click “Iris–” to start recording the track (180 seconds max). Control the dome movement by arrow buttons and then save the setting. If the time exceeds 180 seconds, the system will automatically save the operation data and return to the previous menu. In addition, 360 commands can be stored for each track. If exceeding 360 commands, the system will automatically save the first 360 commands and return to the previous menu.
- ③ Select “RUN CUR TRACE...” to perform the command.

3.4.6 Alarm Setup (not available for some models)

Select Alarm Setup manu as shown below:

```
1 ALARM IN NO:      1
2 EDIT CUR ALARM IN
4 RETURN
0 EXIT
```

- ① Select Alarm In No.
- ② Select EDIT CUR ALARM IN menu as shown below:

```
1 ALARM IN CON:     N.O
2 ALARM IN MODE:    ON
3 ALARM CALL:       PRE50
4 ALARM OVER:       NONE
5 OUTPUT ENABLE:    OFF
6 RETURN
0 EXIT
```

ALARM IN CON: Normally Open (NO) or Normally Closed (NC).

ALARM IN MODE: ON, OFF or Time.

ALARM CALL: call the Preset/Cruise/Track/Scan. When the alarm input happens, the camera will automatically start the function set.

ALARM OVER: call the Preset/Cruise/Track/Scan. When the alarm trigger stop, the camera will automatically start the function set.

OUTPUT ENABLE: if ON, when alarm input occurs, the camera will output alarm information.



Note: If the dome is on alarm cannot perform any command.

3.4.7 Home Position

Select Home Position menu as shown below:

```
1 HOME:             OFF
2 HOME SET:         PRE 70
3 DELAY TIME (SEC): 007
4 RETURN
0 EXIT
```

- ① Enable the Home function (ON) and select the Preset (in Home set).
- ② Select the delay time (from 7 to 180 seconds) and exit the menu.

When the stand-by time exceeds the delay time, the camera automatically execute the Preset set.

3.4.8 Wiper Setup (not available for some models)

Select Wiper Setup menu as shown below:

| | | |
|---|--------------|-------|
| 1 | SPEED LEVEL: | MIDD |
| 2 | RUN TIME: | 15SEC |
| 3 | START: | |
| 4 | STOP: | |
| 5 | RETURN | |
| 0 | EXIT | |

- ① Set the speed level and run time.
- ② Call "START" to enable wiper function.

3.5 Display Setup

You can enable title display and time display.

| | | |
|---|---------------|-----|
| 1 | TITLE DISP: | ON |
| 2 | TIME DISPLAY: | ON |
| - | TEMP DISPLAY: | OFF |
| - | DIRECTION: | OFF |
| - | PRE TITLE: | OFF |
| - | SYSTEM: | ON |
| 3 | RETURN | |
| 0 | EXIT | |

3.6 Load Default

There are three menus: master reset, master clear and master reboot.

Master Reset: restore the camera factory default settings but do not clear the parameters such Preset, Cruise.

Master Clear: restore the camera factory default settings.

System Reboot: reboot the camera.

4 Network Camera Configuration

In the Webcam client, choose “Config” to go to the configuration interface.


Note: wherever applicable, click the “Save” button to save the settings.

4.1 System Configuration

4.1.1 Basic Information

In the Basic Information interface, you can check the relative information of the device.

| | |
|---------------------|-------------------|
| Device Name | IPC |
| Product Model | IPPTZA0Z20A |
| Brand | Comelit |
| Software Version | 4.2.1.0(25406) |
| Software Build Date | 2019-11-12 |
| Kernel Version | 20190826 |
| Hardware Version | 1.0-1612300 |
| Onvif Version | 18.06 |
| OCX Version | 2.0.3.6 |
| MAC | 00:18:ae:ae:18:38 |
| PTZ Version | V1.4.11 |
| Camera Type | M220IM |
| Device ID | I183804AOE6E |



Some versions may support device ID and QR code. If P2P is enabled (see Network Configuration-P2P), the network camera can be quickly added to mobile surveillance client, by scanning the QR code or entering device ID.

4.1.2 Date and Time Configuration

Go to Config→System→Date and Time. Please refer to the following interface.

Zone Date and Time

Zone

DST

Auto DST

Manual DST

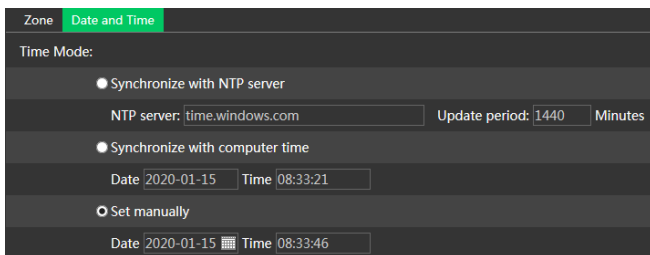
Start Time

End Time

Time Offset

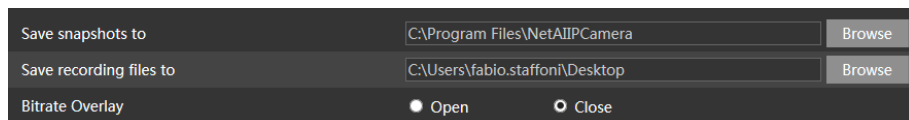
Select the time zone and DST as required.

Click the “Date and Time” tab to set the time mode.



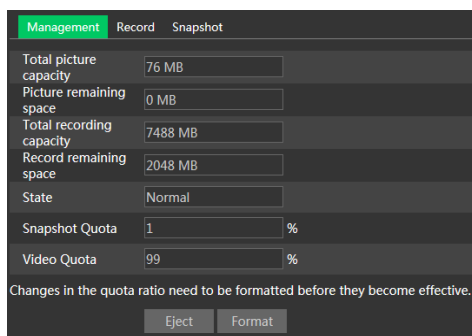
4.1.3 Local configuration

Go to Config→System→Local Config to set up the storage path of captured pictures and recorded videos on the local PC. There is also an option to enable or disable the bitrate display in the recorded files.



4.1.4 Storage

Go to Config→System→Storage to go to the interface as shown below.



● Micro-SD Card Management

Click the “Format” button to format the micro-SD card. All data will be erased by clicking this button.

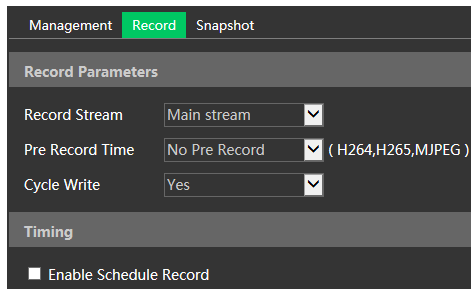
Click the “Eject” button to stop writing data to micro-SD card. Then the micro-SD card can be removed safely.

Snapshot Quota: set the capacity of captured pictures on the micro-SD card.

Video Quota: set the capacity of record files on the micro-SD card.

● Schedule Recording Settings

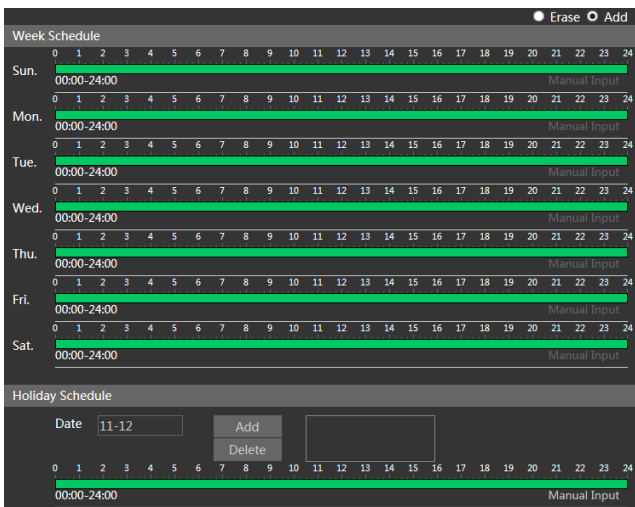
1. Go to Config→System→Storage→Record to go to the interface as shown below.



2. Set record stream, pre-record time, cycle writing.

Pre Record Time: Set the time to record before the actual recording begins.

3. Set schedule recording. Check “Enable Schedule Record” and set the schedule.



Weekly schedule

Set the alarm record time from Monday to Sunday for a single week. Each day is divided in one hour. Green means scheduled. Blank means unscheduled.

“Add”: add the schedule for a specific day. Drag the mouse to set the time on the timeline.

“Erase”: delete the schedule. Drag the mouse to delete the time on the timeline.

Manual Input: click it on a specific day to enter specific start and end time.

Day schedule

Set the alarm time for alarm a special day, such as a holiday.

Note: Holiday schedule takes priority over weekly schedule.

● Snapshot Settings

Go to Config→System→Storage→Snapshot to go to the interface as shown below.

| Management | Record | Snapshot |
|---|---------|----------|
| Snapshot Parameters | | |
| Image Format | JPEG | ▼ |
| Resolution | 704x576 | ▼ |
| Image Quality | Low | ▼ |
| Event Trigger | | |
| Snapshot Interval | 1 | Second |
| Snapshot Quantity | 5 | |
| Timing | | |
| <input type="checkbox"/> Enable Timing Snapshot | | |
| Snapshot Interval | 5 | Second |

Set the format, resolution and quality of the image saved on the micro-SD card, the snapshot interval and quantity and the timing snapshot here.

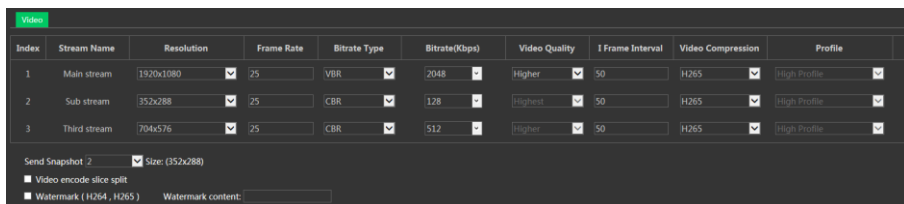
Snapshot Quantity: is the maximum quantity of snapshots. The actual quantity of snapshots may be less than this number. Supposing the occurrence time of an alarm event is less than the time of capturing pictures, the actual quantity of snapshots is less than the set quantity of snapshots.

Enable Timing Snapshot: enable timing snapshot first and then set the snapshot interval and schedule. The setup steps of schedule are the same as the schedule recording.

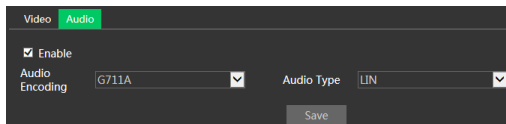
4.2 Image Configuration

4.2.1 Video / Audio Configuration

Go to Image→Video/Audio interface as shown below. Set the resolution, frame rate, bitrate type, video quality and so on here.



Click the "Audio" tab to go to the interface as shown below.



Three video streams can be adjustable.

Resolution: image resolution.

Frame rate: the higher the frame rate, the video is smoother.

Bitrate type: CBR or VBR. Bitrate is related to image quality. CBR means that no matter how much change is seen in the video scene, the bitrate will be kept constant. VBR means that the bitrate will be adjusted according to scene changes.

Bitrate: it can be adjusted when the mode is set to CBR. The higher the bitrate, the better the image quality will be.

Video Quality: it can be adjusted when the mode is set to VBR. The higher the image quality, more bitrate will be required.

I Frame interval: it determines how many frames are allowed between a "group of pictures". When a new scene begins in a video, until that scene ends, the entire group of frames (or pictures) can be considered as a group of pictures. If there is not much movement in the scene, setting the value higher than the frame rate is fine, potentially resulting in less bandwidth usage. However, if the value is set too high, and there is a high frequency of movement in the video, there is a risk of frame skipping.

Video Compression: H264, or H265. If H.265 is chosen, make sure the client system is able to decode H.265.

Profile: for H.264, Baseline, Main and High profiles are selectable.

Send Snapshot: set how many snapshots to generate for an event.

Video encode slice split: if this function is enabled, smooth image can be gotten even though using the low-performance PC.

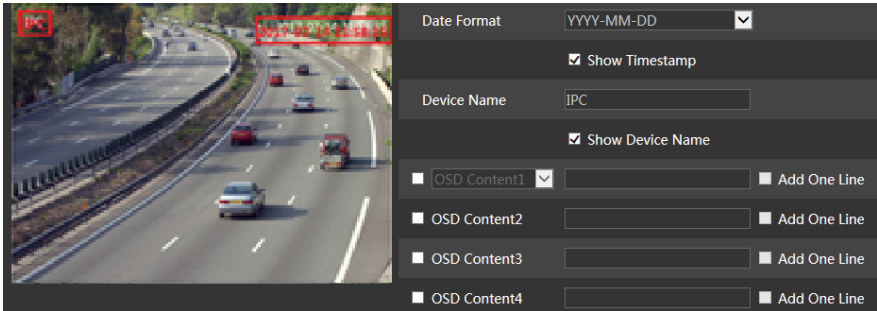
Watermark: when playing back the local recorded video in the search interface, the watermark can be displayed. To enable it, check the watermark box and enter the watermark text.

Audio Encoding: G711A or G711U.

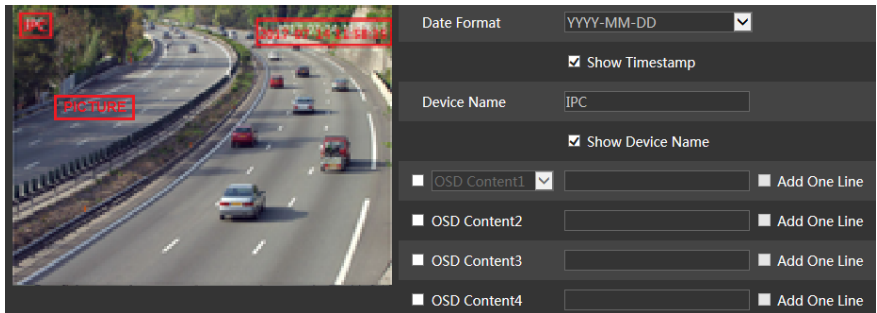
Audio Type: LIN or MIC.

4.2.2 OSD Configuration

Go to Image→OSD interface as shown below.



Set timestamp, device name, OSD content and picture overlap here. After enabling, entering the content and drag them to change their position. Then click the “Save” button to save the settings.



Picture Overlap settings (some models only):

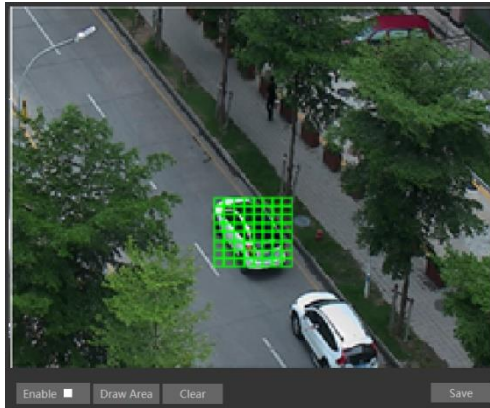
Check “OSD Content1”, choose “Picture Overlay” and click “Browse” to select the overlap picture. Then click “Upload” to upload the overlap picture. The size of the image shall not exceed 200x200 pixels or it cannot be uploaded.

4.2.3 Video Mask (Privacy)

Go to Image→Video Mask interface as shown below. A maximum of 4 zones can be set up.

To set up video mask:

1. Enable video mask.
2. Click direction buttons to change the area you want to mask.
3. Click “Draw Area” and then drag the mouse to draw the video mask area.
4. Click “Add” to add the mask area.

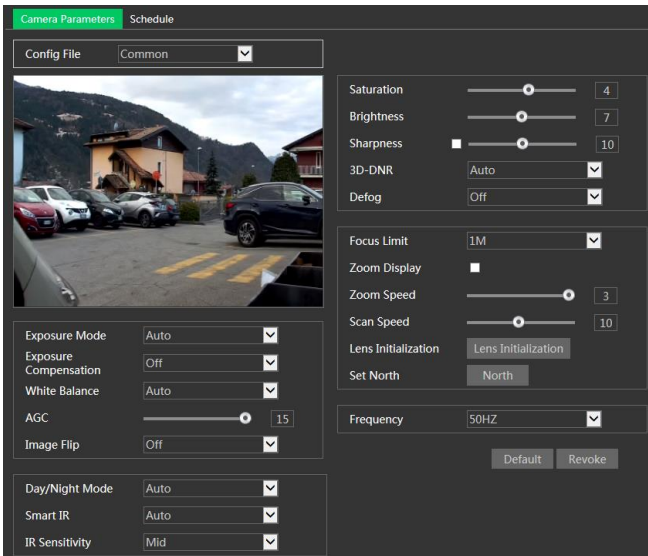


To delete mask area:

1. Select the mask area in the mask area list.
2. Click "Delete" to delete this mask area.

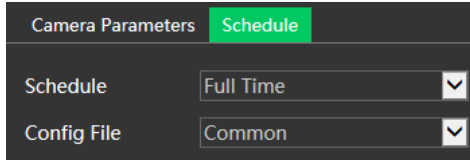
4.2.4 Camera Setup

Go to Config→Image→Camera Setup.

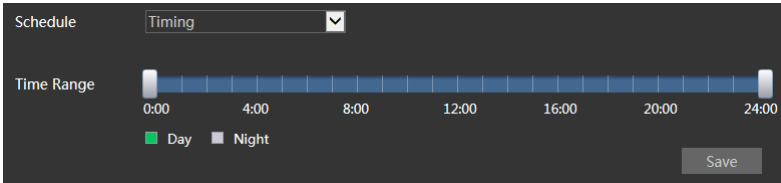


Many parameters of the camera can be set in above sub-menu, such as Color, Brightness, Sharpness, 3D DNR, Fog, Day Night Mode and so on. Schedule Settings of Image Parameters.

Click the “Schedule” tab as shown below.



Set full time schedule for common, day, night mode and specific time schedule for day and night mode. Choose “Schedule” in the drop-down box as shown below.



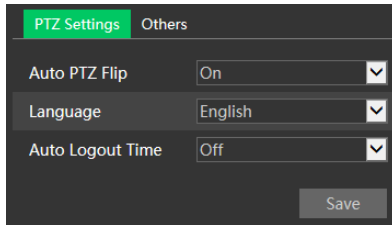
Drag “🕒” icons to set the time of day and night. Blue means day time and blank means night time. If the current mode of camera parameters is set to schedule, the image configuration mode will automatically switch between day and night according to the schedule.

4.3 PTZ configuration

4.3.1 PTZ and Password setting

- PTZ Setting

Go to Config→PTZ→Setting.



In this submenu, PTZ flip, language, auto logout time can be set.

If your model support RS485 interface, you may configure the communication setting for keyboard control.

- Password setting

If the password is set, you must enter the password every time you go to the menu of the PTZ by calling preset NO. 95. Go to Config→PTZ→Setting→Others. You can set the password of the PTZ menu.

PTZ Settings Others

Password

Confirm Password

Save

4.3.2 Restore

It includes the function of Reset and Clear.

4.3.3 PTZ function

PTZ function includes preset setup, cruise setup, group setup, track setup, task setup, alarm setup, home position setup and wiper setup.

4.4 Alarm configuration

4.4.1 Motion Detection

Go to Alarm→Motion Detection to set motion detection alarm.

Alarm Config Area and Sensitivity Schedule

Enable

Alarm Holding Time 20 Seconds

Trigger Snap

Trigger SD Recording

Trigger Email

Trigger FTP

Save

1. Check “Enable” check box to activate motion based alarms..

Alarm Out: if selected, this would trigger an external relay output that is connected to the camera on detecting a motion based alarm.

Trigger Snap: if selected, the system will capture images on motion detection and

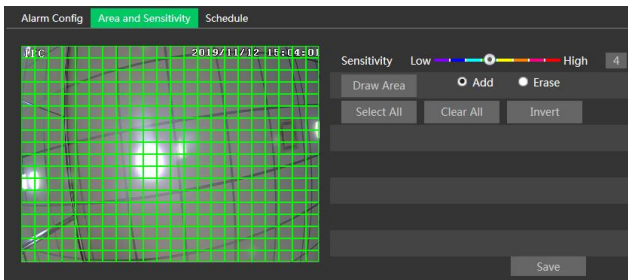
save the images on the micro-SD card.

Trigger SD Recording: if selected, video will be recorded on the micro-SD card on motion detection.

Trigger Email: if “Trigger Email” and “Attach Picture” are checked (email address must be set first in the Email configuration interface), the captured pictures and triggered event will be sent via e-mail.

Trigger FTP: if “Trigger FTP” and “Attach Picture” are checked, the captured pictures will be sent into FTP server address. Please refer to FTP configuration chapter for more details.

2. Set motion detection area and sensitivity. Click the “Area and Sensitivity” tab to go to the interface as shown below.



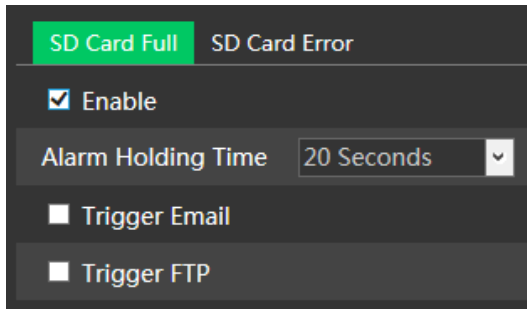
Move the “Sensitivity” scroll bar to set the sensitivity. Higher sensitivity value means that motion alarm will be triggered more easily. Select “Add” and click “Draw Area”. Drag the mouse to draw the motion detection area; Select “Erase” and drag the mouse to clear motion detection area. After that, click the “Save” to save the settings.

3. Set the "Schedule" for motion detection. The schedule setup steps of the motion detection are the same as the schedule recording setup.

4.4.2 Other Alarms

- **Micro-SD card full**

1. Go to Config→Alarm→Anomaly→SD Card Full.

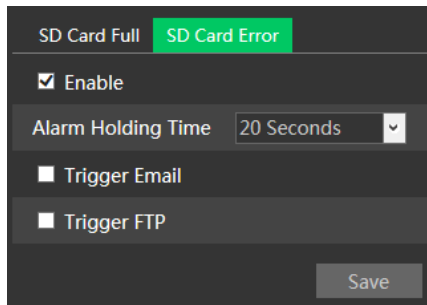


2. Click “Enable” and set the alarm holding time.
3. Set alarm trigger options. The setup steps are the same as motion detection. Please refer to motion detection chapter for details.

● Micro-SD card error

When there are some errors in writing micro-SD card, the corresponding alarms will be triggered.

1. Go to Config→Alarm→Anomaly→SD Card Error as shown below.

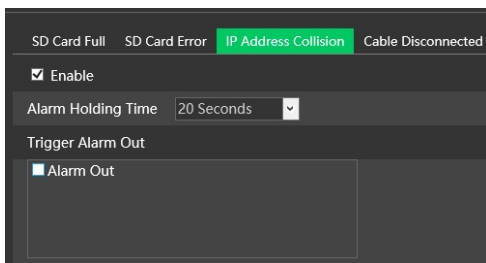


2. Click “Enable alarm” and set the alarm holding time.
3. Set alarm trigger options. Trigger alarm out, Email and FTP. The setup steps are the same as motion detection. Please refer to motion detection chapter for details.

● IP address conflict

This function is only available for some models

1. Go to Config→Alarm→Anomaly→IP Address Collision as shown below.

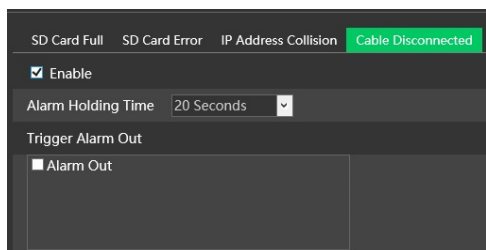


2. Click “Enable” and set the alarm holding time.
3. Trigger alarm out. When the IP address of the camera is in conflict with the IP address of other devices, the system will trigger the alarm out.

● Cable disconnection

This function is only available for some models

1. Go to Config→Alarm→Anomaly→Cable Disconnected as shown below.



2. Click “Enable alarm” and set the alarm holding time.
3. Trigger alarm out. When the camera is disconnected, the system will trigger the alarm out.

4.4.3 Alarm input

This function is only available for some models.

To set sensor alarm (Alarm In): go to Config→Alarm→Alarm In interface as shown below.

Alarm Config Schedule

Enable

Alarm Type NO

Alarm Holding Time 20 Seconds

Sensor Name

Trigger Alarm Out

Alarm Out

Trigger Snap

Trigger SD Recording

Trigger Email

Trigger FTP

1. Click “Enable” and set the Alarm Type, Alarm Holding Time and Sensor Name.
2. Set alarm trigger options. The setup steps are the same as motion detection. Please refer to motion detection chapter for details.
3. Click “Save” button to save the settings.
4. Set the Schedule of the sensor alarm. The setup steps of the schedule are the same as the schedule recording setup.

4.4.4 Alarm Out

This function is only available for some models.

Go to Config→Alarm→Alarm Out.

Alarm Out Mode Alarm Linkage

Alarm Out Name alarmOut1

Alarm Holding Time 20 Seconds

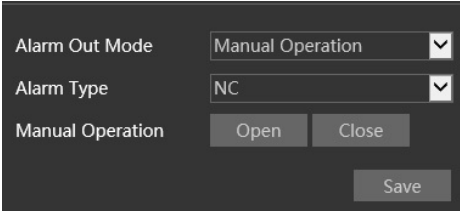
Alarm Type NC

Save

Alarm Out Mode: Alarm linkage, Manual Operation, Day/Night Switch Linkage or Timing.

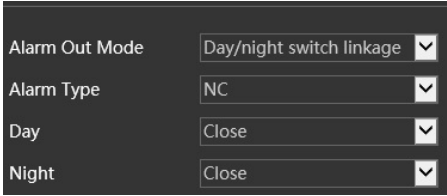
Alarm Linkage: after selecting this mode, set the Alarm Out Name, the Alarm Holding Time in the “Alarm Holding Time” pull down list box and the Alarm Type.

Manual Operation: after selecting this mode, set the Alarm Type and click “Open” to trigger the alarm out immediately. Click “Close” to stop alarm output.




The screenshot shows a configuration window with a dark background. It contains three rows of controls: 'Alarm Out Mode' with a dropdown menu set to 'Manual Operation', 'Alarm Type' with a dropdown menu set to 'NC', and 'Manual Operation' with two buttons labeled 'Open' and 'Close'. At the bottom right, there is a 'Save' button.

Day/Night Switch Linkage: after selecting this mode, set the Alarm Type and then choose to Open or Close the alarm output when the camera switches to day mode or night mode.



The screenshot shows a configuration window with a dark background. It contains four rows of controls: 'Alarm Out Mode' with a dropdown menu set to 'Day/night switch linkage', 'Alarm Type' with a dropdown menu set to 'NC', 'Day' with a dropdown menu set to 'Close', and 'Night' with a dropdown menu set to 'Close'. There are no buttons visible in this screenshot.

Timing: select the alarm type. Select “Add” and drag the mouse on the timeline to set the schedule of alarm out. Select “Erase” and drag the mouse on the timeline to delete the set time schedule. After the schedule is saved, the alarm out will be triggered in the specified time.



The screenshot shows a configuration window with a dark background. It contains two rows of controls: 'Alarm Out Mode' with a dropdown menu set to 'Timing' and 'Alarm Type' with a dropdown menu set to 'NC'. Below these is a 'Time Range' section with a horizontal timeline from 0 to 24. There are radio buttons for 'Erase' (selected) and 'Add'. A 'Manual Input' field is located below the timeline. At the bottom right, there is a 'Save' button.

4.4.5 Alarm Server

Go to Alarm→Alarm Server interface as shown below. Set the server address, port, heartbeat and heartbeat interval. When an alarm occurs, the camera will transfer the alarm event to the alarm server. If an alarm server is not needed, there is no need to configure this section.

| | |
|--------------------|--|
| Server Address | <input type="text"/> |
| Port | <input type="text" value="0"/> |
| Heartbeat | <input type="text" value="Disable"/> ▾ |
| Heartbeat interval | <input type="text" value="30"/> Second |

4.5 Event configuration

This function is only available for some models.

For more accuracy, here there are some recommendations for installation.

- Camera should be installed on stable surface, the vibrations can affect the accuracy of detection.
- Avoid pointing the camera at the reflective surfaces (like shiny floors, mirrors, glass, lake surfaces and so on).
- Avoid places that are narrow or have too much shadowing.
- Avoid scenario where the object's color is similar to the background color.
- At any time of day or night, please make sure the image of the camera is clear and with adequate light, avoiding overexposure or too much darkness on both sides.

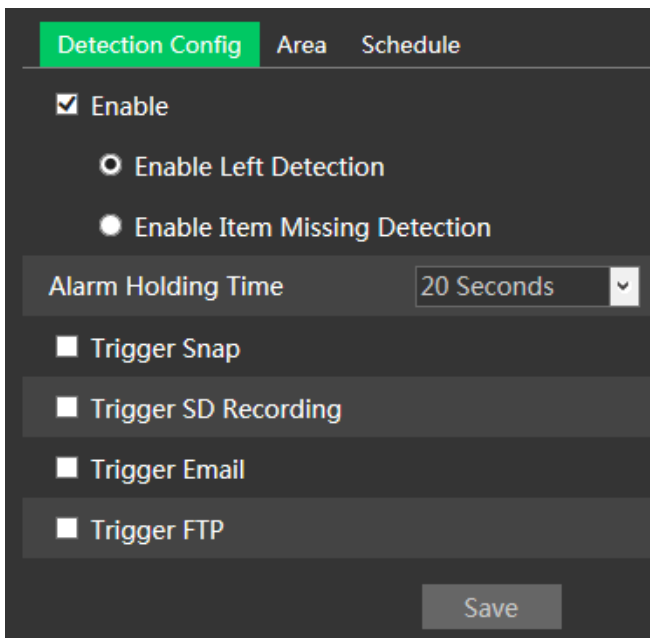
Note: the following functions are only available when the speed dome stops rotating.

4.5.1 Object removal

Alarms will be triggered when the objects removed from or left in the pre-defined area.

To set object removal:

Go to Config→Event→Object Removal interface as shown below.



1. Enable object removal detection and then select the detection type.

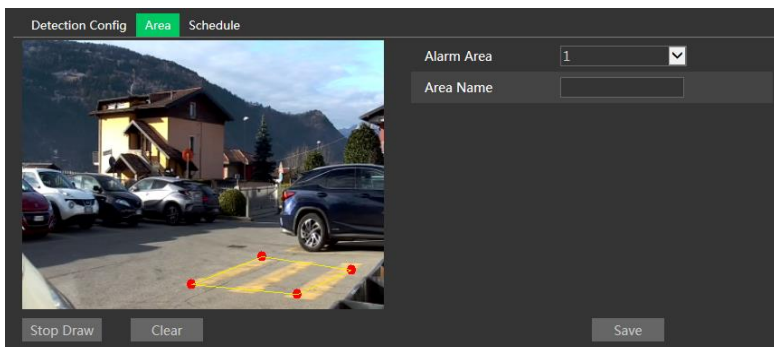
Enable Left Detection: alarm will be triggered if there are items left in the pre-defined area.

Enable Item Missing Detection: alarm will be triggered if there are items missing in the pre-defined area.

2. Set the alarm holding time and alarm trigger options. The setup steps are the same as motion detection.

3. Click “Save” to save the settings.

4. Set the alarm area of the object removal detection. Click the “Area” tab to go to the interface as shown below.



Set the alarm area number and then enter the desired alarm area name. Up to 4 alarm areas can be added. Click “Draw Area” and then select the area where you want to set as the alarm area in the image (the alarm area should be a closed area). Click “Stop Draw” to stop drawing. Click “Clear” to delete the alarm area. Click “Save” to save the settings.

5. Set the schedule of the object removal detection. The setup steps of the schedule are the same as the schedule recording setup.

※ Camera configuration and surrounding area

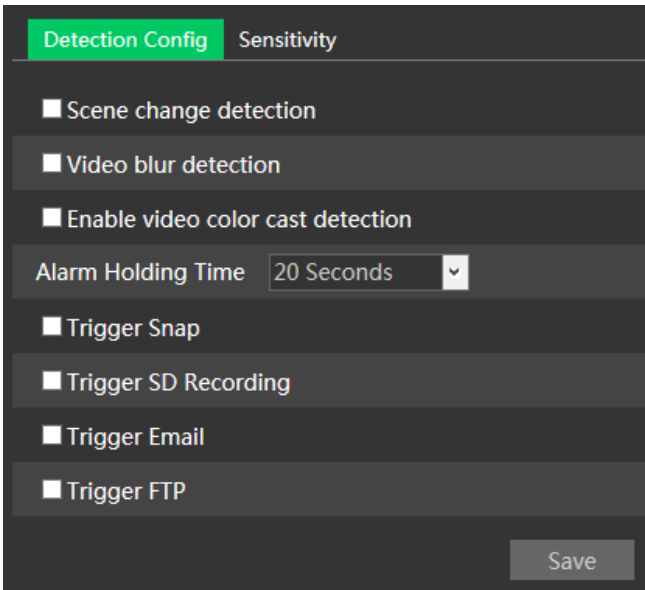
1. The detected objects should not be less than 1/50 to 1/3 of the entire image.
2. Make sure cameras can view objects for at least from 3 to 5 seconds.
3. The defined area cannot be covered frequently and continuously (i.e. people and traffic).
4. The drawn frame must be very close to the margin of the object to enhancing the sensitivity and accuracy of the detection.
5. Not enable object removal detection with scenes with various light changes.
6. Not enable object removal detection if there are complex and dynamic environments in the scene.
8. Adequate light and clear scenery are crucial for object removal detection.

4.5.2 Exception

This function can detect changes in the surveillance environment affected by the external factors.

To set exception detection:

Go to Config→Event→Exception interface as shown below.



1. Enable the detection desired.

Scene Change Detection: alarm will be triggered if the scene change.

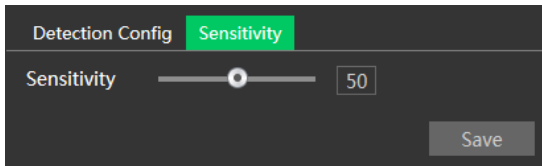
Video Blur Detection: alarm will be triggered if the video becomes blurry.

Enable Video Color Cast Detection: alarm will be triggered if the video becomes obscured.

2. Set the alarm holding time and alarm trigger options. The setup steps are the same as motion detection. Please refer to motion detection chapter for details.

3. Click “Save” button to save the settings.

4. Set the sensitivity of the exception detection. Click “Sensitivity” tab to go to the interface as shown below.



Drag the slider to set the sensitivity value or directly enter the sensitivity value in the textbox. Click “Save” button to save the settings.

✘ Camera configuration and surrounding area

1. Auto-focus function should not be enabled for exception detection.

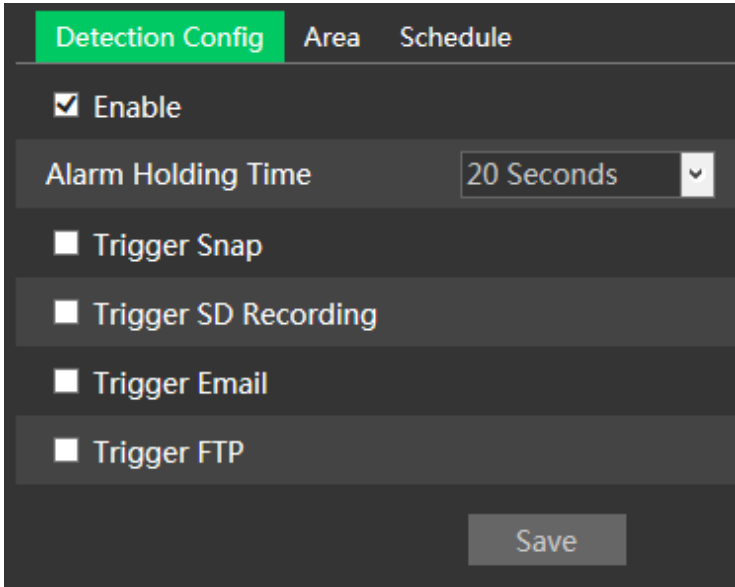
2. Not enable exception detection when light changes greatly in the scene.

4.5.3 Line Crossing

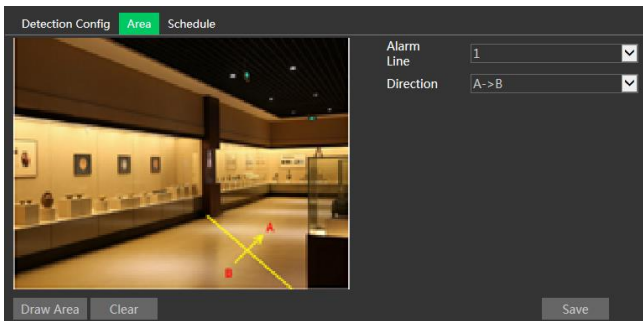
This function is only available for some models.

Line Crossing: alarm will be triggered if the target crosses the pre-defined alarm lines.

Go to Config→Event→Line Crossing interface as shown below.



1. Enable line crossing alarm and set the alarm holding time.
2. Set alarm trigger options. The setup steps are the same as motion detection.
3. Click “Save” to save the settings.
4. Set the area and the sensitivity of the line crossing alarm. Click the “Area” tab to go to the interface as shown below.



Set the alarm line number and direction. Up to 4 lines can be added.

Direction: $A \leftarrow B$, $A \rightarrow B$ or $A \leftrightarrow B$. This indicates the direction of the intruder/vehicle that crossover the alarm line.

$A \leftrightarrow B$: the alarm will be triggered when the intruder/vehicle crossover the alarm line from B to A or from A to B.

$A \rightarrow B$: the alarm will be triggered when the intruder/vehicle crossover the alarm line from A to B.

$A \leftarrow B$: the alarm will be triggered when the intruder/vehicle crossover the alarm line from B to A.

Click the "Draw Area" button and then drag the mouse to draw a line in the image.

Click the "Stop Draw" button to stop drawing. Click the "Clear" button to delete the lines. Click the "Save" button to save the settings.

5. Set the schedule of the line crossing alarm. The setup steps of the schedule are the same as the schedule recording setup.

✳ Camera configuration and surrounding area

1. Auto-focus function should not be enabled for line crossing detection.

2. Avoid the scenes with many trees or the scenes with various light changes (like many flashing headlights). The environment brightness of the scenes shouldn't be too low.

3. Cameras should be mounted at a height of 2.8 meters or above.

4. Keep the mounting angle of the camera at about 45°.

5. The detected objects should not be less than 1% of the entire image and the largest sizes of the detected objects should not be more than 1/8 of the entire image.

6. Make sure cameras can view objects for at least 2 seconds in the detected area for accurate detection.

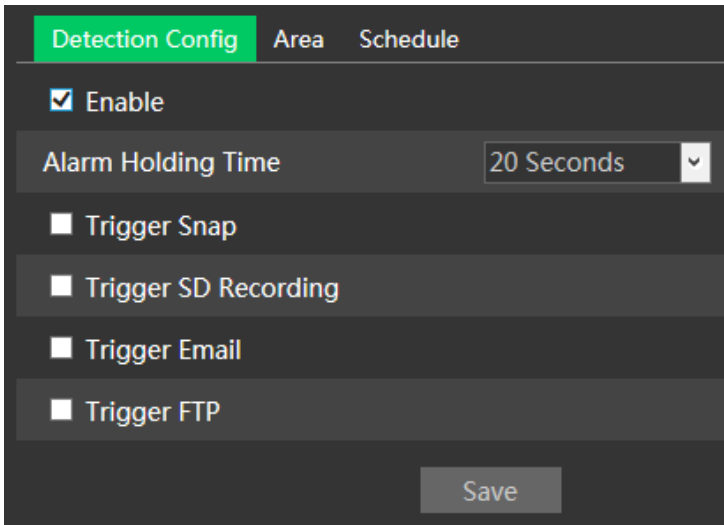
7. Adequate light and clear scenery are crucial for line crossing detection.

4.5.4 Intrusion

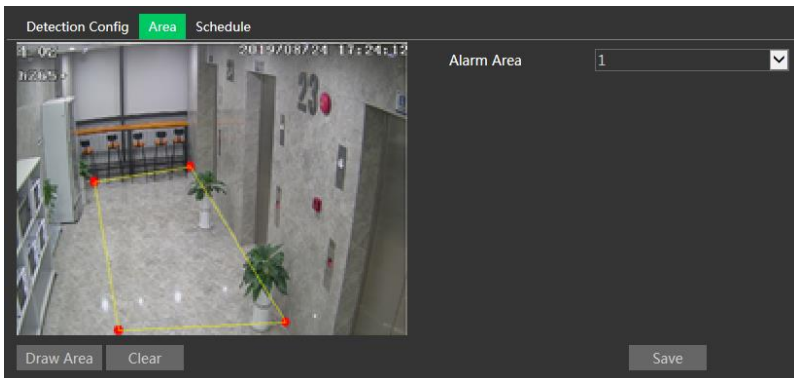
This function is only available for some models.

Intrusion: alarms will be triggered if the target enters into the pre-defined areas.

Go to Config→Event→Intrusion interface as shown below.



1. Enable region intrusion detection alarm and set the alarm holding time.
2. Set alarm trigger options. The setup steps are the same as motion detection.
3. Click “Save” to save the settings.
4. Set the alarm area of the intrusion detection. Click the “Area” tab to go to the interface as shown below.



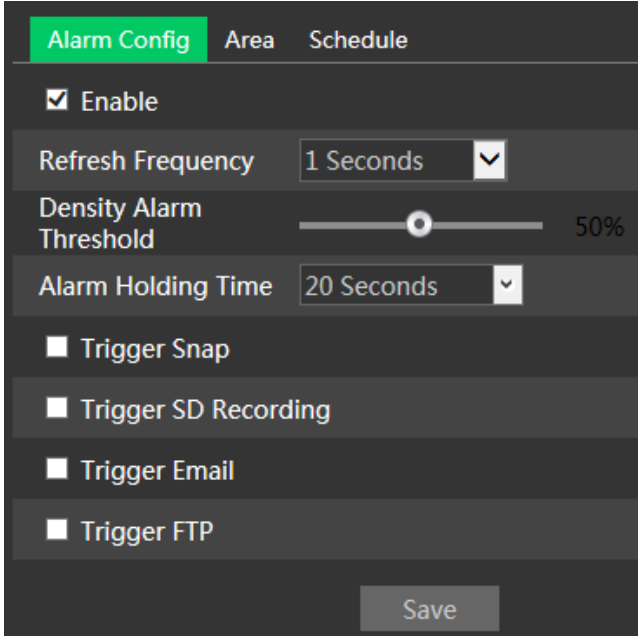
- Set the alarm area number on the right side. Up to 4 alarm areas can be added. Click the “Draw Area” button and then click around the area where you want to set as the alarm area in the image on the left side (the alarm area should be a closed area). Click the “Stop Draw” button to stop drawing. Click the “Clear” button to delete the alarm area. Click the “Save” button to save the settings.
5. Set the schedule of the intrusion detection. The setup steps of the schedule are the same as schedule recording setup.

※ Camera configuration and surrounding area

1. Auto-focus function should not be enabled for intrusion detection.
2. Avoid the scenes with many trees or the scenes with various light changes (like many flashing headlights). The environment brightness of the scenes shouldn't be too low.
3. Cameras should be mounted at a height of 2.8 meters or above.
4. Keep the mounting angle of the camera at about 45°.
5. The detected objects should not be less than 1% of the entire image and the largest sizes of the detected objects should not be more than 1/8 of the entire image.
6. Make sure cameras can view objects for at least 2 seconds in the detected area for accurate detection.
7. Adequate light and clear scenery are crucial for intrusion detection.

4.5.5 Crowd density detection

This function can detect the density of the people in a specified area.
Go to Config→Event→Crowd Density as shown below.



The screenshot shows a configuration window for Crowd Density detection. It has three tabs: 'Alarm Config' (selected), 'Area', and 'Schedule'. The 'Alarm Config' tab contains the following settings:

- Enable
- Refresh Frequency: 1 Seconds (dropdown menu)
- Density Alarm Threshold: 50% (slider)
- Alarm Holding Time: 20 Seconds (dropdown menu)
- Trigger Snap
- Trigger SD Recording
- Trigger Email
- Trigger FTP

A 'Save' button is located at the bottom right of the configuration panel.

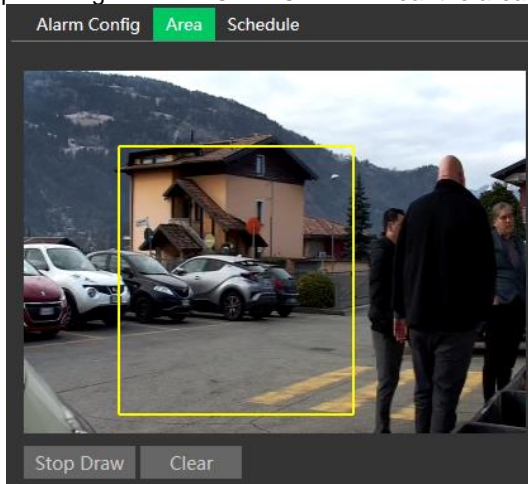
1. Enable the crowd density detection.
2. Set "Refresh Frequency", "Density Alarm Threshold" and "Alarm Holding Time".

Refresh Frequency: refresh frequency of the detection result.

Density Alarm Threshold: alarm will be triggered once the percentage of the crowd density in a specified area exceeds the pre-defined threshold value.

3. Set alarm trigger options. The setup steps are the same as motion detection.
4. Set the area for the crowd density detection. Click the "Area" tab as shown below.

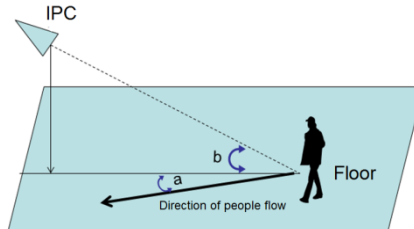
Click "Draw Area" and drag the mouse to draw a rectangle area. Drag the border lines of the rectangle to modify its size and move the rectangle to change its position. Click "Stop Draw" to stop drawing the area. Click "Clear" to clear the area.



5. Set the schedule of the crowd density detection. The setup steps of the schedule are the same as schedule recording setup.

※ Camera configuration and surrounding area

1. The camera lens should face to the people flow. The direction of the people flow is allowed to deviate slightly from the direction of the camera lens, the angle (a) shall be less than 45° . It is recommended that the angle between the lens of the camera and the floor (b) is from 30° to 60° .

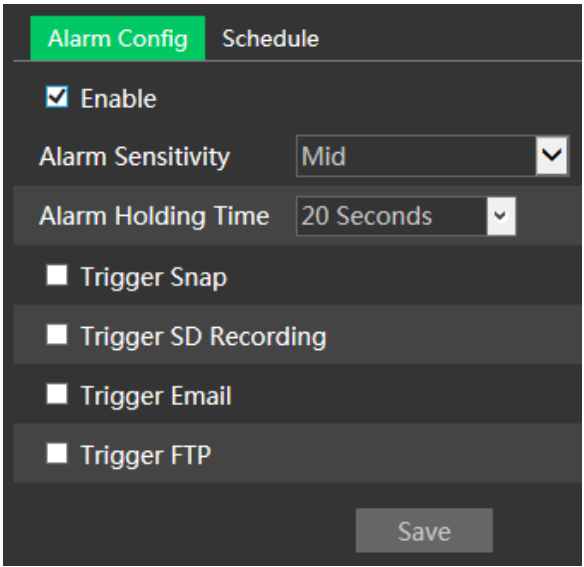


2. The size range of a single person image should be from 1% to 5% of the entire image and the height range of a single person image should occupy from 1/5 to 1/2 of the entire image.
3. This function is inapplicable to the scene where there are many moving objects except human (eg. moving cars).
4. A lot of trees and billboards will affect the detection results in the detected area.

4.5.6 People intrusion

This function is specially designed for indoor scenes. Alarm will be triggered if someone enters into the detection area in 3~5s. The setup steps are as follows.

1. Go to Config→Event→People Intrusion.
2. Enable the people intrusion detection.
3. Set “Alarm Sensitivity” and “Alarm Holding Time”.
4. Set alarm trigger options. The setup steps are the same as motion detection.
5. Set the schedule of the people intrusion detection. The setup steps of the schedule are the same as schedule recording.



※ Camera configuration and surrounding area

1. The detection area should have stable and adequate light.
2. In order to detect all moving people in the detection area, the height range of the camera installation should be from 1 meter to 3 meters.
3. To make sure that the camera can capture all indoor objects, the camera lens should be pointed at the detected direction and the camera had better be installed in the corner of the room.

4. The range of the captured people image should occupy from 1/5 to 1/2 of the whole picture.
5. The false alarm will be triggered if the indoor scene has cluttered and frequently changing lights.
6. This function is inapplicable to outdoors.

4.5.7 People counting

This function is to calculate the number of the people entering or exiting from the detected area through detecting, tracking and counting the head shapes of the people. The setup steps are as follows.

1. Go to Config→Event→People Counting.
2. Enable the people counting detection.
3. Set “Detection Sensitivity”, “Entrancing Threshold”, “Departing Threshold”, “Staying Threshold”, “Counting Period”, “Alarm Holding Time” and so on.

Counting Period: all, daily, weekly or monthly.

Counting Reset: the number of people counting will be cleared and the counting period will restart by clicking “Reset” button.

If the number of people exceeds the pre-defined threshold value (the default value is 500; the maximum value is 655350), alarm will be triggered.

When someone passes the detected area, it will take 1 ~5 seconds to complete the detection of people counting according to different scenes.

4. Set alarm trigger options. The setup steps are the same as motion detection.

Alarm Config Area

Enable

Detection Sensitivity Mid ▼

Entrancing Threshold 1000

Departing Threshold 1000

Staying Threshold 500

Counting Period Always ▼

Counting Reset Reset

Alarm Holding Time 20 Seconds ▼

Trigger Snap

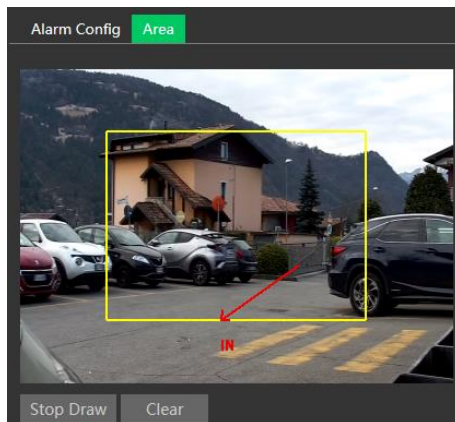
Trigger SD Recording

Trigger Email

Trigger FTP

Save

5. Set the area of the people counting. Click the "Area" tab to go to the area setting interface.



Click “Draw Area” and drag the mouse to draw a rectangle area. Drag the four border lines or the four corners of the rectangle to modify its size. Click “Stop Draw” to stop drawing the area. Click “Clear” to clear the area. Click and drag the arrow or the other end of the arrow line to change the people entrance direction.

The size range of the image (width or height) shall occupy from 1/5 to 1/2 of the drawn detection area. The direction of the red arrow is entrance.

After the people counting detection is set successfully, go back to the live view interface to view the counting results. Please refer to the following picture.

※ Camera configuration and surrounding area

1. Cameras must be installed in the area with stable and adequate light sources.
2. The background color (i.e. floor color) should be light color.
3. The lens of the camera should be adjusted straight down to ensure that the whole head of the people can be captured.
4. The installation height of the camera depends of the focal length of the lens. The entrance/exit in the image should take up over a half of the width of the entire image and the head of a single person should occupy about 1/5 of the height of the entire image. Remember keeping a certain space on both sides to let the entrance/exit lie in the center of the entire image.

The recommending height of installation as shown below:

| Lens | Mounting height |
|-------|-----------------|
| 2.8mm | 2.6 ~ 3.2m |
| 3.3mm | 3.0 ~ 4.0m |
| 3.6mm | 3.3 ~ 5.0m |

5. Various changeable lights will disturb the people counting and the dark scenes will reduce the accuracy of counting.
6. If someone is moving at a high speed (passing the detected area within 2 seconds), it may result in detection failure. However, if someone is moving at a low speed, staying more than 15 seconds in the detected area, the camera will give up tracing.
7. If the cloth colors of people are similar with the color of the background, it may cause detection failure.
8. More headwear which probably conceal the head features will lead to detection failure.

4.6 Network configuration

4.6.1 TCP/IPv4

Go to Config→Network→TCP/IP interface as shown below.

Use IP address (IPv4 for example). There are two options for IP setup: "Obtain an IP address automatically" (by DHCP) and "Use the following IP address".

Test: test the effectiveness of the IP address by clicking the button.

Use PPPoE. Click the "PPPoE Config" tab to go to the interface as shown below. Enable PPPoE and then enter the user name and password from your ISP.

Either methods of network connection can be used. If PPPoE is used to connect internet, the camera will get a dynamic WAN IP address. This IP address will change frequently. To be notified, the IP change notification function can be used.

Click "IP Change Notification Config" to go to the interface as shown below.

Trigger Email: when the IP address of the device change, the new IP address will be sent to the email address that has been set up.

Trigger FTP: when the IP address of the device change, the new IP address will be sent to FTP server that has been set up.

4.6.2 Port

Go to Config→Network→Port interface as shown below. HTTP port, Data port and RTSP port can be set.

| | |
|------------|------|
| HTTP Port | 80 |
| HTTPS Port | 443 |
| Data Port | 9008 |
| RTSP Port | 554 |

HTTP Port: default is 80.

HTTPS Port: default is 443.

Data Port: default is 9008.

RTSP Port: default is 554.

4.6.3 Server

This function is used for connecting the Comelit Advance VMS.

| | |
|-------------------------------------|------|
| <input type="checkbox"/> Enable | |
| Server Port | 2009 |
| Server Address | |
| Device ID | 1 |
| <input type="button" value="Save"/> | |

1. Check "Enable".
2. Check the IP address and port of the transfer media server in the Comelit Advance VMS. Then enable the auto report in the Comelit Advance VMS when adding a new device. Next, enter the remaining information of the device in the Comelit Advance VMS. After that, the system will automatically allot a device ID. Please check it in the Comelit Advance VMS.
3. Enter the above-mentioned server address, server port and device ID in the corresponding boxes. Click the "Save" button to save the settings.

4.6.4 DDNS

If the camera is set up with a DHCP connection, DDNS should be set.

1. Go to Config→Network→ DDNS.

| | | | | | | | | | | | |
|--|--------|--------------------------|------|--------|------|------|-------|-----|-------|-----|-----|
| Port | Server | DDNS | SNMP | 802.1X | RTSP | UPnP | Email | FTP | HTTPS | P2P | QoS |
| <input checked="" type="checkbox"/> Enable | | | | | | | | | | | |
| Server Type | | www.comelitdns.com ▼ | | | | | | | | | |
| User Name | | <input type="text"/> | | | | | | | | | |
| Password | | <input type="password"/> | | | | | | | | | |
| Domain | | <input type="text"/> | | | | | | | | | |
| <input type="button" value="Save"/> | | | | | | | | | | | |

2. Apply for a domain name. Take www.comelitdns.com for example. Enter www.comelitdns.com in the IE address bar to visit its website. Choose your language and then click the “Register product” button.

4.6.5 SNMP

This function is only available for some models.

To get camera status, parameters and alarm information and remotely manage the camera, the SNMP function can be used. Before using SNMP, please install an SNMP management tool and set the parameters of the SNMP, such as SNMP port, trap address.

1. Go to Config→Network→SNMP.

| SNMP v1/v2 | |
|--|---|
| <input type="checkbox"/> Enable SNMPv1 | |
| <input type="checkbox"/> Enable SNMPv2 | |
| Read SNMP Community | public |
| Write SNMP Community | private |
| Trap Address | 192.168.226.201 |
| Trap Port | 162 |
| Trap community | public |
| SNMP v3 | |
| <input type="checkbox"/> Enable SNMPv3 | |
| Read User Name | public |
| Security Level | auth, priv |
| Authentication Algorithm | <input type="radio"/> MD5 <input type="radio"/> SHA |
| Authentication Password | ●●●●●● |
| Private-key Algorithm | <input type="radio"/> DES <input type="radio"/> AES |
| Private-key Algorithm | ●●●●●● |
| Write User Name | private |
| Security Level | auth, priv |
| Authentication Algorithm | <input type="radio"/> MD5 <input type="radio"/> SHA |
| Authentication Password | ●●●●●● |
| Private-key Algorithm | <input type="radio"/> DES <input type="radio"/> AES |
| Private-key Algorithm | ●●●●●● |
| Other Settings | |
| SNMP Port | 161 |

2. Check the corresponding version checkbox (Enable SNMPv1, Enable SNMPv2, Enable SNMPv3) according to the version of the SNMP software that will be used.
3. Set the values for “Read SNMP Community”, “Write SNMP Community”, “Trap Address”, “Trap Port” and so on. Please make sure the settings are the same as that of the SNMP software.

Note: please use the different version in accordance with the security level you required. The higher the version is, the higher the level of the security is.

4.6.6 802.1X

If it is enabled, the camera’s data can be protected. When the camera is connected to the network protected by the IEEE802.1x, user authentication is needed.

| | |
|--|---------|
| <input checked="" type="checkbox"/> Enable | |
| Protocol Type | EAP_MD5 |
| EAPOL Version | 1 |
| User Name | |
| Password | ••••• |
| Confirm Password | ••••• |

To use this function, the camera shall be connected to a switch supporting 802.1x protocol. The switch can be reckoned as an authentication system to identify the device in a local network. If the camera connected to the network interface of the switch has passed the authentication of the switch, it can be accessed via the local network.

Protocol Type and EAPOL Version: please use the default settings.

Username and Password: the Username and the Password must be the same with the username and password applied for and registered in the authentication server.

4.6.7 RTSP

Go to Config→Network→RTSP.

| | |
|---|--|
| <input checked="" type="checkbox"/> Enable | |
| Port | 554 |
| Address | rtsp://IP or domain name:port/profile1 |
| | rtsp://IP or domain name:port/profile2 |
| | rtsp://IP or domain name:port/profile3 |
| Multicast address | |
| Main stream | 239.0.0.0 50554 <input type="checkbox"/> Automatic start |
| Sub stream | 239.0.0.1 51554 <input type="checkbox"/> Automatic start |
| Third stream | 239.0.0.2 52554 <input type="checkbox"/> Automatic start |
| Audio | 239.0.0.3 53554 <input type="checkbox"/> Automatic start |
| <input type="checkbox"/> Allow anonymous login (No username or password required) | |
| Save | |

Select “Enable” to enable the RTSP function.

Port: access port of the streaming media (default is 554).

Address: the RTSP address (unicast) format that can be used to play the stream in a media player.

Multicast Address

Main stream: the address format is

rtsp://IP address: rtsp port/profile1?transportmode=mcast

Sub stream: the address format is

rtsp://IP address: rtsp port/profile2?transportmode=mcast

Third stream: the address format is

rtsp://IP address: rtsp port/profile3?transportmode=mcast

Audio: by entering the main/sub stream address in the VLC player, the video and audio will play automatically.

If “Allow anonymous login...” is checked, there is no need to enter the username and password to view the video.

If “auto start” is enabled, the multicast received data should be added into a VLC player to play the video.

- Note:**
1. This camera support local play through a VLC player. Enter the RTSP address (unicast or multicast, eg. rtsp://192.168.226.201:554/profile1?transportmode=mcast) in the VLC player to realize the simultaneous play with the web client.
 2. The IP address mentioned above cannot be IPv6.
 3. Avoid the use of the same multicast address in the same local network.
 4. When playing the video through the multicast streams in a VLC player, please pay attention to the mode of the VLC player. If it is set to TCP mode, the video cannot be played.
 5. If the coding format of the video of the main stream is MJPEG, the video may be disordered at some resolutions.

4.6.8 UPnP

If this function is enabled, the camera can be quickly accessed through the LAN. Go to Config→Network→UPnP. Enable UPnP and then enter UPnP name.



4.6.9 E-mail

If you need to trigger Email when an alarm happens or IP address is changed, please set the Email here first.

Go to Config→Network →Email.

The screenshot shows a configuration window with two main sections: "Sender" and "Recipient".

Sender Section:

- Sender Address: [Text Input]
- User Name: [Text Input]
- Password: [Text Input]
- Server Address: [Text Input]
- Secure Connection: [Unnecessary] (Dropdown menu)
- SMTP Port: [25] [Default] (Buttons)
- Send Interval(S): [60] (10-3600) (Text Input with range)
- [Clear] [Test] (Buttons)

Recipient Section:

- [Large Empty Text Area]
- Recipient Address: [Text Input]
- [Add] [Delete] (Buttons)
- [Save] (Button)

Sender Address: sender's e-mail address.

Username and Password: sender's username and password.

Server Address: SMTP IP address or hostname.

Select the secure connection type at the "Secure Connection" pull-down list according to what's required.

SMTP Port: SMTP port.

Send Interval(S): time interval of sending email. For example, if it is set to 60 seconds and multiple motion detection alarms are triggered within 60 seconds, they will be considered as only one alarm event and only one email will be sent. If one motion alarm event is triggered and then another motion detection alarm event is triggered after 60 seconds, two emails will be sent. When different alarms are triggered at the same time, multiple emails will be sent separately.

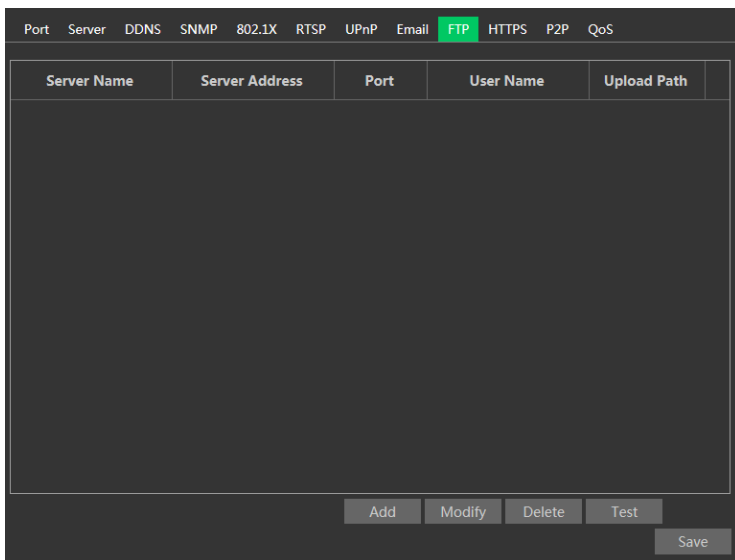
Click the "Test" button to test the connection of the account.

Recipient Address: receiver's e-mail address.

4.6.10 FTP

After an FTP server is set up, captured pictures from events will be uploaded to the FTP server.

Go to Config→Network →FTP.



Server Name: name of the FTP server.

Server Address: IP address or domain name of the FTP server.

Upload Path: directory where files will be uploaded.

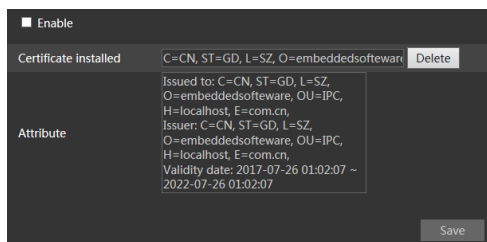
Port: port of the FTP server.

Use Name and Password: Username and Password that are used to login into the FTP server.

4.6.11 HTTPS

HTTPS provides authentication of the web site and protects user privacy.

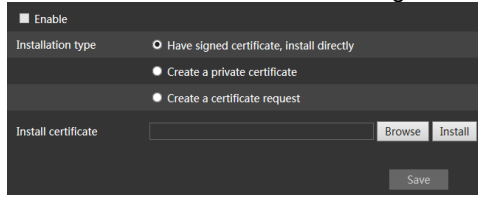
Go to Config Config→Network→HTTPS as shown below.



There is a certificate installed by default as shown above. Enable this function and save it. Then the camera can be accessed by entering <https://IP address:https port> via the web browser (eg. <https://192.168.1.150:443>).

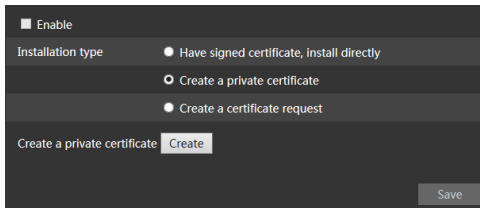
A private certificate can be created if users don't want to use the default one. Click

“Delete” to erase the default certificate. Then the following interface will be displayed.



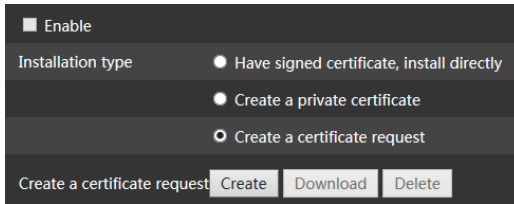
* If there is a signed certificate, click “Browse” to select it and then click “Install” to install it.

* Click “Create a private certificate” to enter into the following creation interface.



Click the “Create” button to create a private certificate. Enter the country (only two letters available), domain (camera’s IP address/domain), validity date, password, province/state, region and so on. Then click “OK” to save the settings.

* Click “Create a certificate request” to enter into the following interface.



Click “Create” to create the certificate request. Then download the certificate request and submit it to the trusted certificate authority for signature. After receiving the signed certificate, import the certificate to the device.

4.6.12 P2P (optional)

If this function is enabled, the network camera can be quickly accessed by adding the device ID in mobile surveillance client or Comelit Advance VMS client via WAN. Enable this function by going to Config→Network→P2P interface.

Enable

Save

4.6.13 QoS

QoS (Quality of Service) function is used to provide different quality of services for different network applications. With insufficient bandwidth, the router or switch will sort the data streams and transfer them according to their priority to solve the network delay and network congestion by using this function.

Go to Config→Network→QoS.

| | |
|------------------|---|
| Video/Audio DSCP | 0 |
| Alarm DSCP | 0 |
| Manager DSCP | 0 |

Video/Audio DSCP: the range is from 0 to 63.

Alarm DSCP: the range is from 0 to 63.

Manager DSCP: the range is from 0 to 63.

The higher the number is, the higher the priority is.

4.7 Security configuration

4.7.1 User Configuration

Go to Config→Security→User interface as shown below.

| Add Modify Delete | | | |
|-------------------------|-----------|---------------|----------|
| Index | User Name | User Type | Bind MAC |
| 1 | admin | Administrator | |

Add user:

1. Click the “Add” button to pop up the following textbox.

2. Enter user name in “User Name” textbox.
3. Enter letters or numbers in “Password” and “Confirm Password” textbox.
4. Choose the user type. Administrator has all permissions. Normal user can only view the live video. Advanced user has the same permissions as an Administrator except for user management, backup settings, factory reset, and upgrading the firmware.
5. Enter the MAC address of the PC in “Bind MAC” textbox.
If this option is enabled, only the PC with the specified MAC address can access the camera for that user.
6. Click the “OK” button and then the new added user will be displayed in the user list.

Modify user:

1. Select a user to modify password and MAC address if necessary in the user configuration list box.
2. The “Edit user” dialog box pops up by clicking the “Modify” button.

3. Enter the old password of the user in the “Old Password” text box.
4. Enter the new password in the “New password” and “Confirm Password” text box.
5. Enter computer’s MAC address as necessary.
6. Click the “OK” button to save the settings.

Note: to change the access level of a user, the user must be deleted and added again with the new access level.

Delete user:

1. Select the user to be deleted in the user configuration list box.
2. Click the “Delete” button to delete the user.

Note: the default administrator account cannot be deleted.

4.7.2 Online user

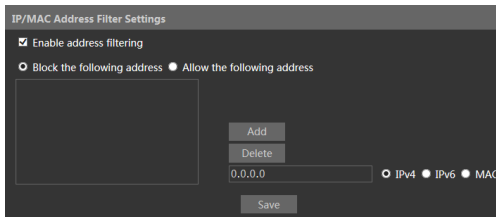
Go to Config→Security→Online User to view the user who is viewing the live video.

| Index | Client Address | Port | User Name | User Type | |
|-------|----------------|-------|-----------|---------------|---------------------------|
| 1 | 172.25.150.98 | 18158 | admin | Administrator | <button>Kick-off</button> |

An administrator user can kick out all the other users (including other administrators).

4.7.3 Block and Allow lists

Go to Config→Security→Block and Allow Lists as shown below.



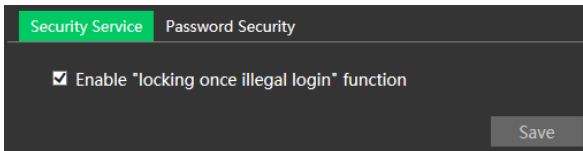
The setup steps are as follows:

Check the “Enable address filtering” check box.

Select “Block/Allow the following address”, IPv4/IPv6/MAC and then enter IP address or MAC address in the address box and click the “Add” button.

4.7.4 Security management

Go to Config→Security→Security Management as shown below.



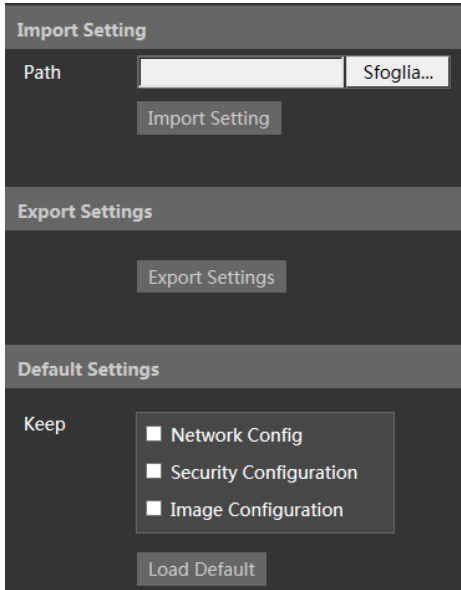
In order to prevent malicious password unlocking, “locking once illegal login” function can be enabled. If this function is enabled, login failure after trying six times will make the login interface locked. The camera can be logged in again after a half hour or after the camera reboots.

For some specified versions, anonymous login with a private protocol can be enabled here. If this function is enabled, enter [http://host:port/Anonymous/1\[2/3\]](http://host:port/Anonymous/1[2/3]) (eg. <http://192.168.1.150:80/Anonymous/1>) via web browser to access the camera. 1 indicates main stream; 2 indicates sub stream; 3 indicates third stream. Only video can be viewed, no other operations can be done.

4.8 Maintenance

4.8.1 Backup & Restore

Go to Config→Maintenance→Backup & Restore.



- **Import & Export Settings**

Configuration settings of the camera can be exported from a camera into another camera.

1. Click “Browse” to select the save path for import or export information on the PC.
2. Click the “Import Setting” or “Export Setting” button.

- **Default Settings**

Click the “Load Default” button to restore all system settings to the default factory settings except those you want to keep.

4.8.2 Reboot

Go to Config→Maintenance→Reboot.

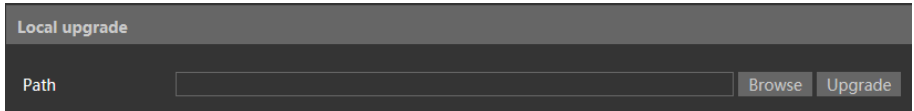
Click the “Reboot” button to reboot the device.

Timed Reboot setting

If necessary, the camera can be set up to reboot on a time interval. Enable “Time Settings”, set the date and time and then click the “Save” button to save the settings.

4.8.3 Upgrade

Go to Config→Maintenance→Upgrade. In this interface, the camera firmware can be updated.



1. Click the “Browse” button to select the path of the upgrade file
2. Click the “Upgrade” button to start upgrading the firmware.
3. The device will restart automatically

Caution! Do not close the browser or disconnect the camera from the network during the upgrade.

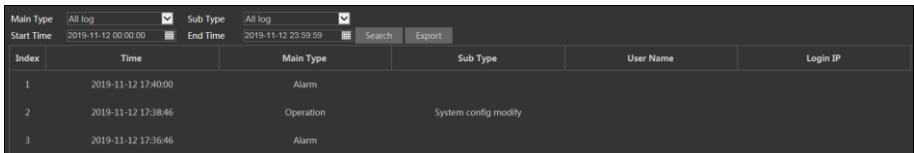
For some specified models, online upgrade is available. The setting steps are as follows.

1. Create the upgrade file location and save it.
2. Check the latest version by clicking “Check version”.
3. Click “Upgrade” to update the firmware online.

4.8.4 Log

To query and export log:

1. Go to Config→Maintenance→Operation Log.



The screenshot shows a web interface for viewing logs. At the top, there are dropdown menus for "Main Type" and "Sub Type", both set to "All log". Below these are "Start Time" (2019-11-12 00:00:00) and "End Time" (2019-11-12 23:59:59) fields, along with "Search" and "Export" buttons. The main part of the interface is a table with the following data:

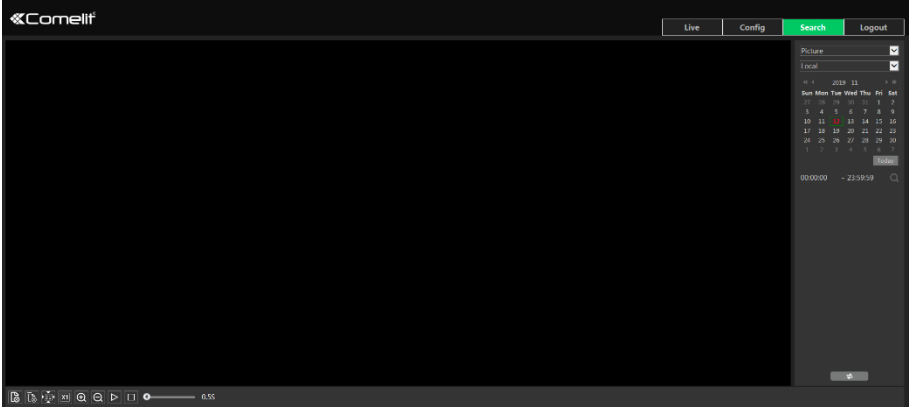
| Index | Time | Main Type | Sub Type | User Name | Login IP |
|-------|---------------------|-----------|----------------------|-----------|----------|
| 1 | 2019-11-12 17:40:00 | Alarm | | | |
| 2 | 2019-11-12 17:38:46 | Operation | System config modify | | |
| 3 | 2019-11-12 17:36:46 | Alarm | | | |

2. Select the main type, sub type, start and end time.
3. Click “Search” to view the operation log.
4. Click “Export” to export the operation log.


5 Playback

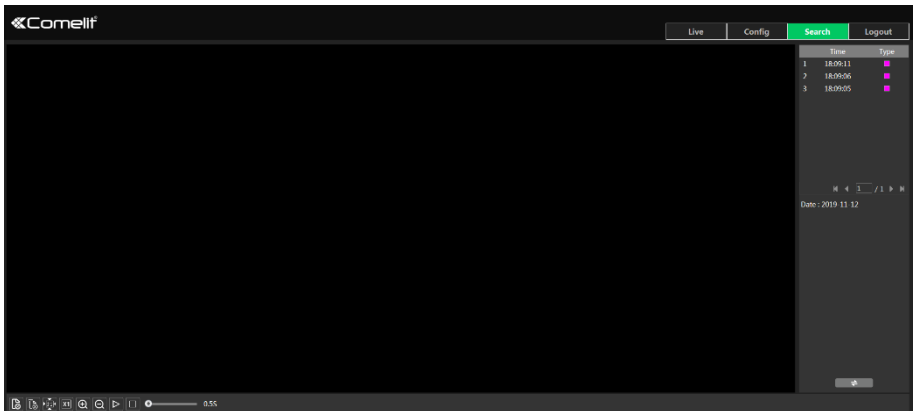
5.1 Image search


Click Search to go to the interface as shown below. The images saved on the micro-SD card can be found here.



● Local image search

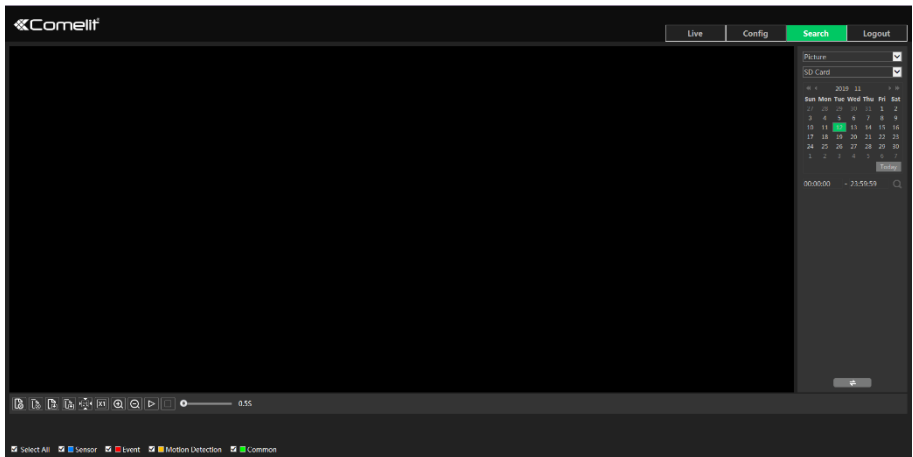
1. Choose “Picture”—“Local”.
2. Set time: select the date and choose the start and end time.
3. Click  to search the images.
4. Double click on the file name in the list to view the snapshots as shown above.





Click  to return to the previous interface.












● Micro-SD card image search

1. Choose “Picture”—“SD Card”.



2. Set time: select the date and choose the start and end time.
 3. Choose the alarm events at the bottom of the interface.
 4. Click  to search the images.
 5. Double click on the file name in the list to view the snapshots.
- Click  to return to the previous interface.

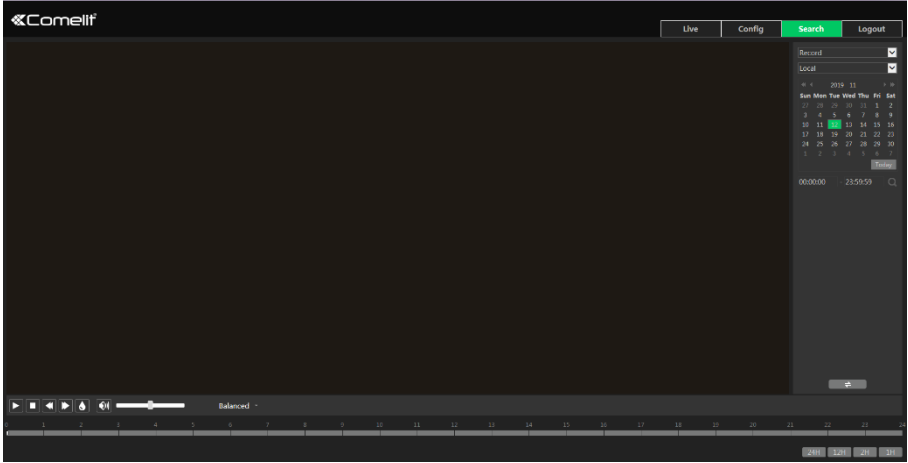
The descriptions of the buttons are shown as follows:


| Icon | Description | Icon | Description |
|---|--|---|---|
|  | Close: select an image and click this button to close the image. |  | Close all: click this button to close all images. |
|  | Save: click this button to select the path for saving the image on the PC. |  | Save all: click this button to select the path for saving all images on the PC. |
|  | Fit size: click to fit the image on the screen. |  | Actual size: click this button to display the normal size of the image. |
|  | Zoom in: click this button to digitally zoom in. |  | Zoom out: click this button to digitally zoom out. |
|  | Slide show play: click this button to start the slide show mode. |  | Stop: click this button to stop the slide show. |
|  | Play speed: play speed of the slide show. | | |

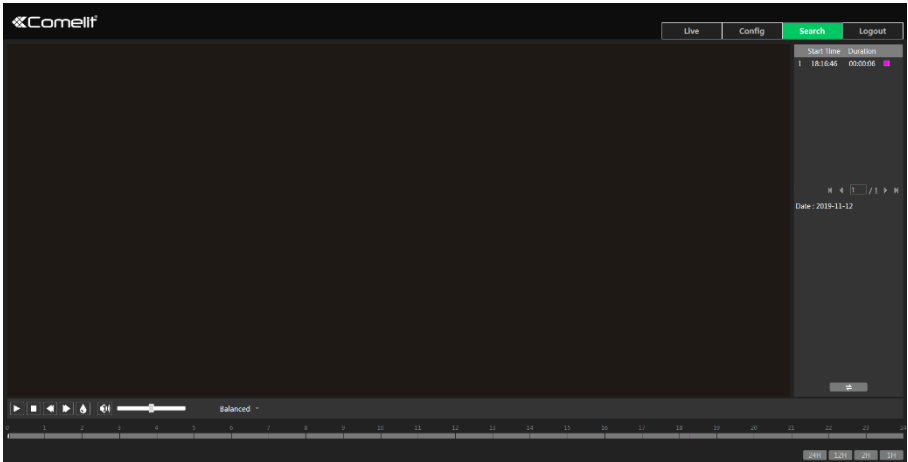
5.2 Video search








5.2.1 Local Video Search

Click Search to go to the interface as shown below. Videos were recorded locally to the PC can be played in this interface.




1. Choose “Record”—“Local”.
2. Set search time: select the date and choose the start and end time.
3. Click  to search the images.
4. Double click on a file name in the list to start playback.

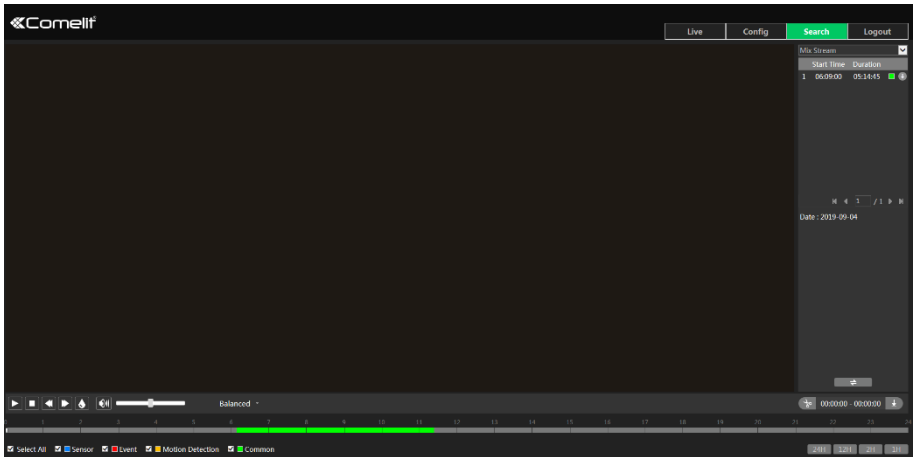


| Icon | Description | Icon | Description |
|---|--|--|-------------------|
|  | Play button. After pausing the video, click this button to continue playing. |  | Pause button |
|  | Stop button |  | Speed down |
|  | Speed up |  | Watermark display |
|  | | Enable / disable audio; drag the slider to adjust the volume after enabling audio. | |

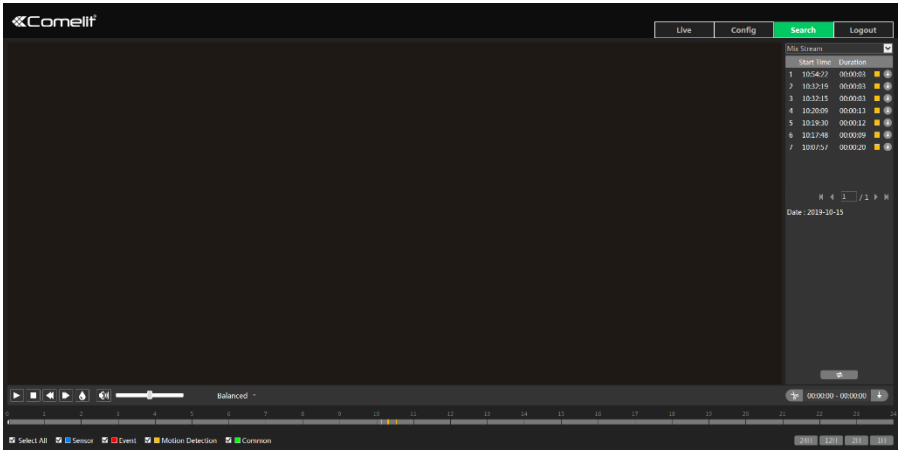
5.2.2 Micro-SD Card Video Search

Click Search to go to the interface as shown below. Videos that were recorded on the micro-SD card can be played in this interface.

1. Choose “Record”—“SD Card”.
2. Set search time: select the date and choose the start and end time.
3. Click  to search the images.



4. Select the alarm events at the bottom of the interface.
5. Select mix stream (video and audio stream) or video stream as needed.
6. Double click on a file name in the list to start playback.



The timetable can be shown in 24h/12h/2h/1h format by clicking the corresponding buttons.

Video clip and downloading operations:

1. Search the video files according to the above mentioned steps.
2. Select the start time by clicking on the timetable.
3. Click to set the start time and then this button turns green ().
4. Select the end time by clicking on the timetable. Then click to set the end time.
5. Click to download the video file in the PC.

| Index | Process | Record | Start Time | End Time | Path | Operate |
|-------|---------|--------|---------------------|---------------------|---------|---------|
| 1 | 100% | Cut | 2019-10-15 11:28:55 | 2019-10-15 11:30:24 | Desktop | Cancel |

Set up C:\Users\... \Desktop Clear List Close

- Click "Set up" to set the storage directory of the video files.
- Click "Open" to play the video.
- Click "Clear List" to clear the downloading list.
- Click "Close" to close the downloading window.

Appendix

Appendix 1 - Troubleshooting

Password forgot

A: Reset the device to the default factory settings.

Default IP: 192.168.1.150; Username: admin; Password: admin

Fail to connect devices through Internet Explorer browser.

A: Network is not well connected. Check the connection.

B: IP address is not available. Change the IP address.

C: Web port number has been changed: contact administrator to get the correct port number.

D: Exclude the above reasons. Restore to default setting by Comelit Advance IP Tool.

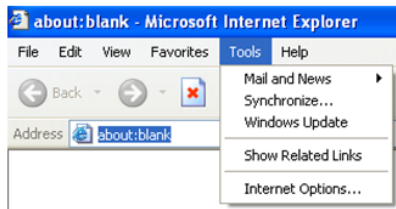
Comelit Advance IP tool cannot search devices.

The anti-virus software in your computer may cause it. Please stop it and try to search device again.

Internet Explorer cannot download ActiveX control.

A. Internet Explorer browser may be setup to block ActiveX. Follow the steps below.

① Open the browser and then click Tools → Internet Options.

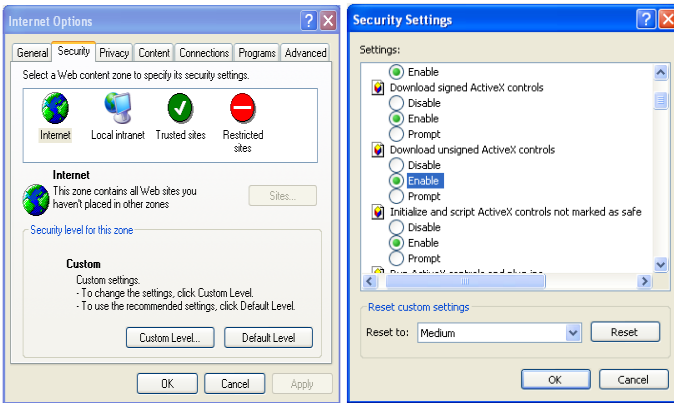


② Select Security → Custom Level....

③ Enable all the options under "ActiveX controls and plug-ins".

④ Click OK to finish setup.

B. Other plug-ins or anti-virus blocks ActiveX. Please uninstall or close them.



No sound can be heard.

A: Audio input device is not connected. Please connect and try again.

B: Audio function is not enabled at the corresponding channel. Please enable this function.

The device is unable to start normally when upgrading

If the device is unable to start normally when upgrading, please rename the files suffixed with .tar as updatepack.tar and copy it to the root directory of SD card.

Restart the device and then the device will upgrade automatically from the SD card.

After finishing upgrading, the user can search the IP address of IP Cam in the IP Tool.

Appendix 2 - Preset description

| | | |
|-------------|------------------|---|
| Call Preset | 90 | Run track 1 |
| | 91 | Run cruise 1 |
| | 92 | Run cruise 2 |
| | 93 | Run cruise 3 |
| | 94 | Run cruise 4 |
| | 95 | Recall OSD menu |
| | 97 | Enable random scan |
| | 99 | Enable Point to Point SCAN |
| | | |
| | | |
| Set Preset | 91 | Set random scan |
| | 92 | Set left border of Point to Point SCAN |
| | 93 | Set right border of Point to Point SCAN |
| | 94 (three times) | Set the value of the near and middle infrared light |
| | 95 (three times) | Set the value of the middle and far infrared light |

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