



IP Speed Dome Camera User Manual

Regulatory Information

FCC Marking



The products have been tested and found in compliance with the council FCC rules and regulations part 15 subpart B. Operation of this product is subject to the following two conditions: (1) this device may not cause harmful interference, and (2) this device must accept any interference received, including interference that may cause undesired operation.

CE Marking



The products have been manufactured to comply with the following directives.
EMC Directive 2014/30/EU

RoHS Marking

The products have been designed and manufactured in accordance with Directive EU RoHS Directive 2011/65/EU and its amendment Directive EU 2015/863 on the restriction of the use of certain hazardous substances in electrical and electronic equipment.

Disclaimer

- ▶ This manual is provided for user reference only, without legal restraint.
- ▶ This manual is available for many models. Some functions introduced in the manual may be not available for some models.
- ▶ This content of this manual is subject to change without prior notice, and 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 in correct 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, or the reversing image will be received.
- 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 clear dome due to temperature difference between internal and external of the dome camera.

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Chapter 1 Introduction

This IP speed dome camera is used for video capturing. Its digital flip technology makes omnidirectional and non-blind-spot monitoring into reality. It adopts state of the art video processing chips, integrated with the most advanced technologies (like video encoding and decoding technology) to make the image transmission more stable and smooth. Moreover, the built-in WEB server of this series improves the performance of the traditional surveillance system so that users can be easy to operate and monitor.

This product is widely used in banks, telecommunication systems, electricity power departments, law systems, factories, storehouses, uptowns, etc. In addition, it is also an ideal choice for surveillance sites with middle or high risks.

- HD network video output
- H.264/H.265 image compression format
- TCP/IP, DHCP, DDNS, NTP, RTSP, SMTP, FTP, PPPoE
- SD card local storage, network remote storage
- Web GUI menu
- Support selected area magnification and PTZ function
- Provide standard SDK, easy to integrate with other digital system
- IP66 ingress protection; TVS 6KV lightning protection, surge protection

Chapter 2 Network Connection

You may connect IP-CAM via LAN or WAN. Here only take IE browser (6.0) for example. The details are as follows:

1. LAN

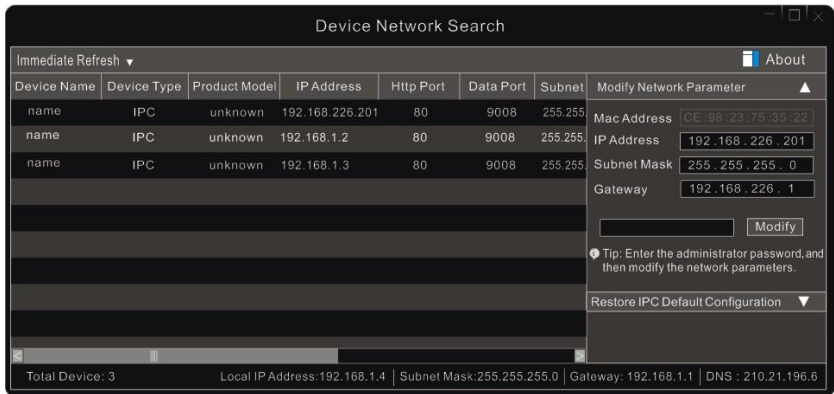
In LAN, there are two ways to access IP- CAM: 1. access through IP-Tool; 2. direct access through IE browser.

1. Access through IP-Tool

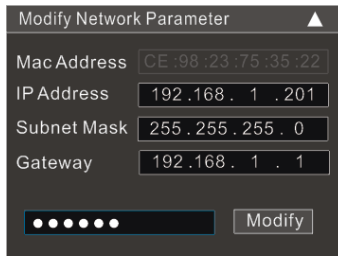
Network connection:



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



- ③ Modify the IP address. The default IP address of this camera is 192.168.226.201. 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 its network address is in the same local network segment as the computer's. Please modify the IP address of your device according to the practical situation.



Modify Network Parameter ▲

Mac Address CE:98:23:75:35:22

IP Address 192.168.1.201

Subnet Mask 255.255.255.0

Gateway 192.168.1.1

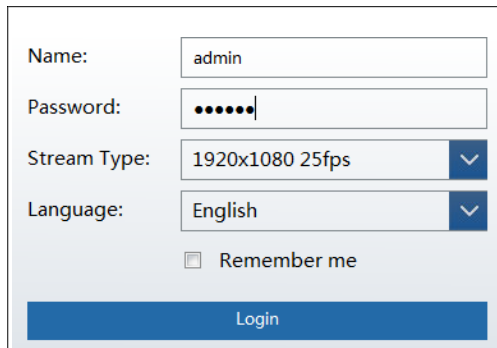
••••• Modify

For example, the IP address of your computer is 192.168.1.4. So 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 —Modify— to modify the setting.



The default password of the administrator is —**123456**—.

④ Double click the IP address and then the system will pop up the IE browser to connect IP-CAM. Follow the directions to download and install the applicable plugin. After that, go to the login interface as shown below.



Name: admin

Password: •••••

Stream Type: 1920x1080 25fps ▼

Language: English ▼

Remember me

Login

Enter the username and password to log in.



The default username is —**admin**—; the default password is —**123456**—.

Please change the default password

Modify Password

New Password

Confirm Password

Do not show again

OK Cancel

The system will prompt the above-mentioned 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 be prompted next time.

2.1.2 Directly Access through IE

The default network settings are as shown below:

IP address: **192.168.226.201**

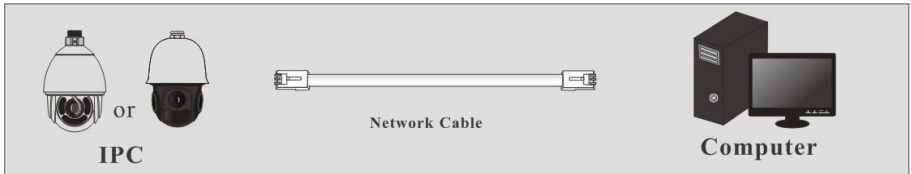
Subnet Mask: **255.255.255.0**

Gateway: **192.168.226.1**

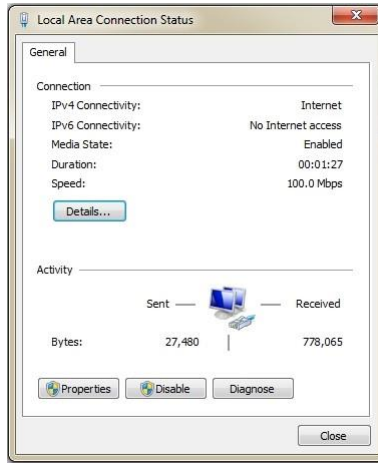
HTTP: **80**

Data port: **9008**

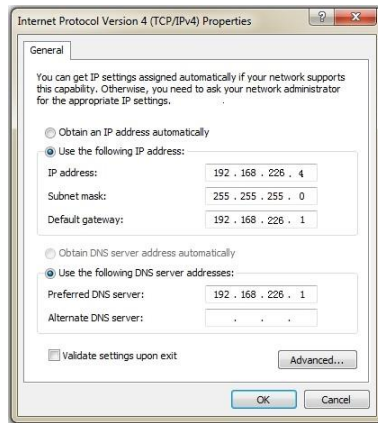
You may use the above default settings when you log in the camera for the first time. You may directly connect the camera to the computer through network cable.



① Set the IP address of the PC and make sure the network segment should be as 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 according to the actual situation (for example: IPv4). Next, click **Properties** to set the network of the PC.

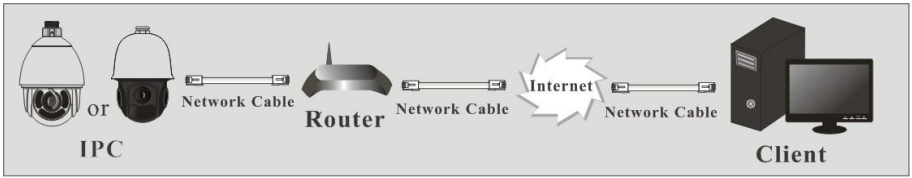


- ② Open the IE browser and enter the default address of IP-CAM and confirm.
- ③ Follow directions to download and install the plugin.
- ④ Enter the default username and password and then enter to view.

2.2 WAN

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

Chapter 2 Network Connection



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

HTTP Port	<input type="text" value="80"/>
HTTPS Port	<input type="text" value="443"/>
Data Port	<input type="text" value="9008"/>
RTSP Port	<input type="text" value="554"/>

② Go to Config →Network → TCP/IPv4 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	<input type="text" value="192.168.226.201"/>	<input type="button" value="Test"/>	
Subnet Mask	<input type="text" value="255.255.255.0"/>		
Gateway	<input type="text" value="192.168.226.1"/>		
Preferred DNS Server	<input type="text" value="210.21.196.6"/>		
Alternate DNS Server	<input type="text" value="8.8.8.8"/>		

③ Go to the router’s management interface through IE browser to forward the IP address and port of the camera in the —Virtual Server!.

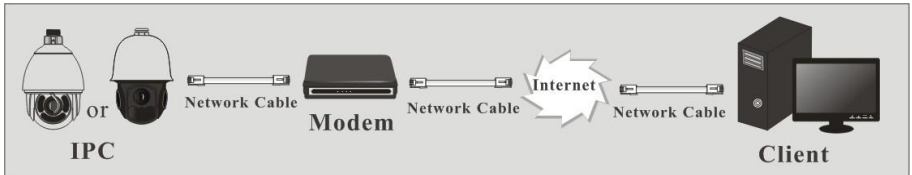
Port Range					
Application	Start	End	Protocol	IP Address	Enable
1	9007	to 9008	Both	192.168.1.201	<input checked="" type="checkbox"/>
2	80	to 81	Both	192.168.1.201	<input checked="" type="checkbox"/>
3	10000	to 10001	Both	192.168.1.166	<input type="checkbox"/>
4	21000	to 21001	Both	192.168.1.166	<input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

Router Setup

④ Open the IE browser and enter its WAN IP and http port to access.

➤ Access through PPPoE dial-up

Network connection



You may access the camera through PPPoE auto dial-up. The setting steps are as follow:

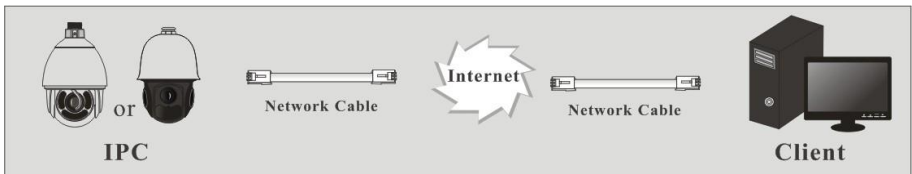
- ① Go to Config→Network →Port menu to set the port number.
- ② Go to Config→Network →TCP/IPv4 menu. Check —PPPoEConfig1 and then enter the user name and password which you can get from your internet service provider.

IP Config	PPPoE Config	IP change notification Config
<input type="checkbox"/> Enable		
User Name	<input type="text"/>	
Password	<input type="text"/>	

- ③ Go to Config →Network →DDNS menu. Before you configure the DDNS, please apply for a domain name first. Please refer to 5.6.4 DDNS Configuration for detail information.
- ④ Open the IE browser and enter the domain name and http port to access.

Access through static IP

Network connection

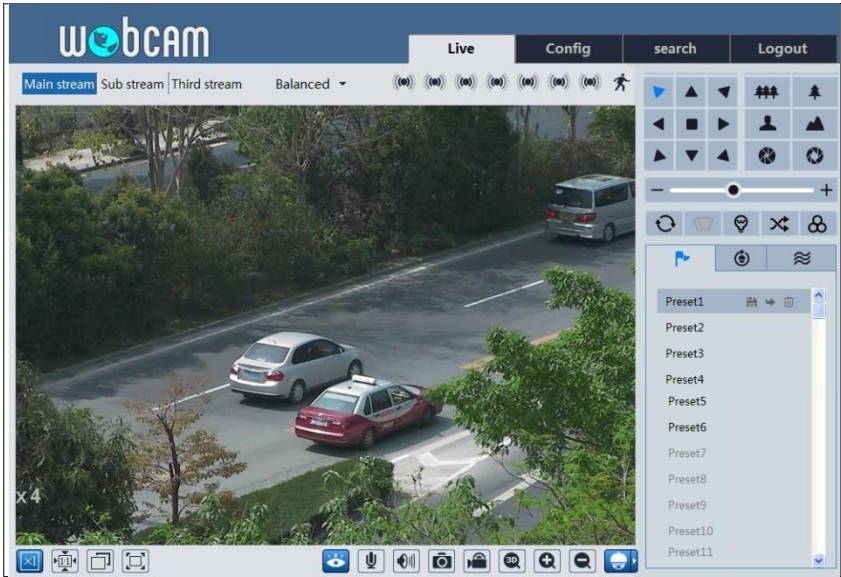


The setting steps are as follow:

- ① Go to Config→Network →Port menu to set the port number.
- ② Go to Config→Network →TCP/IPv4 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 IE browser and enter its WAN IP and http port to access.

Chapter 3 Live View




After you log in, you will see the following window.



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





Chapter 3 Live View

Icon	Description	Icon	Description
	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 when the camera supports those functions and the corresponding events are enabled.
- In full screen mode, double click on the mouse to exit or press the ESC key on the keyboard. Click PTZ extended button to unfold PTZ control panel. In remote preview interface, you can view the image from every direction by controlling 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.


Chapter 4 Menu Setup


On the PTZ control panel of IE 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 1920×1080. After you go to the main menu interface, you can select the menu by clicking the direction button (   ).

  : To select menu by moving up and down.

 : To return to the menu on the left.

 : 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.

4.1 System Information

Select System Setup by clicking  or  button and then click  button to go to System Information 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.

4.2 System Setup






Select System Setup by clicking  or  button and then click  button to enter

System Setup 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
```

4.2.1 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. If **On** is selected, please click  button to return to the menu on the left and click  button to select Exit. (The ways to go to sub-menu, return or exit to the main menu in the following settings are similar to the above-mentioned steps. The following contents will not introduce it in details).

After you exit the main menu, press and hold  button to let the speed dome move to the bottom. Then the dome will automatically flip.

2. Language Setup

English or Chinese menu can be selected.

3. RS485 Setup

Go to System Setup→RS485 Setup as below:

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

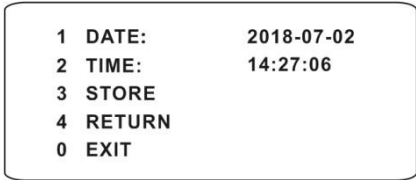
【Dome ID】 : The available range is from 001 to 255.

【Protocol】 : PELCO-D or PELCO-P is selectable.

【Baud Rate】 : The baud rate is selectable from 1200 to 9600bps.

4.2.4 Date Setup

Go to System Setup→Date Setup menu as shown below:



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

4.2.5 Title Setup

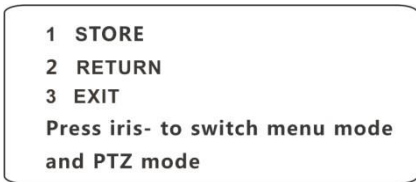
Go to System Setup→Title Setup as below:



Click direction buttons to set the title and then save the setting.

4.2.6 North Setup

Go to System Setup→North Setup as below:





- ① Choose a location by clicking the direction button.
- 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 included angel between the camera and horizontal ground.

4.2.7 New Password and Change Password

- New Password

```
1 ENTER PASSWORD:
  - - - - -
2 CONFIRM PASSWORD
  - - - - -
3 CONFIRM
4 RETURN
0 EXIT
```

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 log in next time.

● Change Password

```
1 ENTER OLD PASSWORD:
  - - - - -
2 ENTER NEW PASSWORD
  - - - - -
3 CONFIRM NEW PASSWORD
  - - - - -
4 RETURN
0 EXIT
```

- Enter the current password and then enter the new password twice. (Please refer to —NewPasswordI for details.)
- Entering empty new password means to delete the current password.

4.2.8 Auto Exit Time

Go to System Setup→Next Page→Auto Exit Time. You may set the time to exit the menu automatically as needed.

4.3 Camera Setup

After you go to camera setup menu, you will see the following menu.

```
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
```

4.3.1 Camera Control

After you select Camera Control, you will see the following menu.

```
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 camera's image.

【Sharpness】: Set the resolution level of the image plane and the sharpness level of the image edge.

【Contrast】 : Set the color difference between the brightest and darkest parts.

【Hue】 : Set the total color degree of the image.

【Antiflicker】 :

- 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 】 : 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 by lowering the brightness of the bright area and increasing the brightness of the dark area.

◆Recording will be stopped for a few seconds while the mode is changing from non-WDR to WDR mode.

【 HLC 】 : 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】 :Range from 00~20.

【 BLC 】 :If enabled, the auto exposure will activate according to the scene so that the object of the image in the darkest area will be seen clearly.

【 3D-NR 】 :Reduce the noise of the brightness and chroma of the image in low illumination condition.

【Color Level】 :Adjust the saturation of the image.

【Defog Setup】 : Activating this function and setting an appropriate value as needed in foggy, dusty, smoggy or rainy environment to get clear images.

【Gamma】 :Measurement of the contrast of an image.

【VE】 : Visibility enhancement.

【High Sensitivity】 : Set it as needed.

4.3.2 Image Setup

Select Image Setup to go to the following sub-menu.

1	AE SETUP	
2	WB SETUP	
3	AGC:	11
4	IMAGE FLIP:	OFF
-	HR:	ON
5	RETURN	
0	EXIT	

● AE Setup

Go to AE Setup menu as shown below:

1	AE MODE:	AUTO
-	BRIGHTNESS:	10
-	SHUTTER:	22
-	IRIS:	10
-	GAIN:	09
2	RETURN	
0	EXIT	

【AE MODE】 : Auto, Bright, Shutter, IRIS and Manual are optional.

【Brightness】 : Range from 0 (darkest) ~20 (brightness). It is available only when bright mode is selected.

【Shutter】 .The lower the value of camera shutter is, the brighter the image is. It is available only when the shutter or manual mode is selected.

【IRIS】 .The higher the value of the camera IRIS is, the more the light gets. It is available only when the camera is IRIS or Manual mode.

【Gain】 : When AE mode is set to Manual, GAIN value can be set up.

● WB Setup

Go to 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. There are two options you can choose, including auto and manual. You can select the mode according to different lighting condition.

【MWB Red Gain】 .The operation is effective in manual mode.

【MWB Blue Gain】 .The operation is effective in manual mode.

● AGC

The larger the number is, the higher the brightness and the more the noises of the image are.

● Image Flip

- ❖ MIRR: Turn over the image left or right.
- ❖ FLIP: Turn over the image up or down.
- ❖ ROTA: Turn over the image up, down, left or right.

4.3.3 Lens Setup

Go to Camera Setup→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**

After enabling digital zoom mode, digital zoom will be increased on the basis of optical zoom.

- **Len Initialize**

After enabling **—LenInitialize**, the camera lens will restore to the factory default settings.

4.3.4 Day & Night Setup

Day & Night Mode includes three modes: Auto, Night, Day and Time.

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

❖ Auto : Camera will automatically switch the mode between day and night as the ambient illumination.

❖ Night : The camera will be night mode at all time. You'd better use this mode at night.

❖ Day: The camera will be day mode at all time. You'd better use this mode in daytime.

❖ Time: Camera will regularly switch the mode between day and night according to the set day and night time. Day & Night Mode will be disabled if enabling this function.

● IR Sensitivity

Set the level of the IR sensitivity.

5. Infrared Control

Auto, ON or OFF is optional.

6. Video Format

PAL or NTSC is optional.

4.4 Dome Function

Go to Dome Function menu as shown below:

```
1 PRESET SETUP
2 CRUISE SETUP
3 GROUP SETUP
4 TASK SETUP
5 TRACE SETUP
6 NEXT PAGE
7 RETURN
0 EXIT
```

```
1 ALARM SETUP
2 HOME POSITION
- WIPER SETUP
3 RETURN
0 EXIT
```

4.4.1 Preset Setup

This function is used to memorize the specific position of pan, tilt, zoom and focus, giving much convenience for quick return to this position by calling preset.



① Selecting the preset setup menu brings the following menu.


```
1 PRESET NO:      001
2 EDIT CUR PRESET
3 DEL CUR PRESET
4 DEL ALL PRESET
5 RETURN
0 EXIT
```

- ② Select the preset number.
- ③ Go to Edit CUR Preset interface as below:

```
- PRESET NO:      1
1 TITLE:          Z - - - - -
2 SAVE CUR PRESET

Press iris- to switch menu mode
and PTZ mode
```

- ④ Press iris – to switch menu mode and PTZ mode. And then set the position of the preset by clicking the direction buttons.
- ⑤ Set the title by clicking  or  button.
- ⑥ Save the setting.

4.4.2 Cruise Setup

Go to Dome Function → Cruise Setup menu as below:

```
1 CRUISE NO:      1
2 EDIT CUR CRUISE
3 RUN CUR CRUISE . . .
4 DEL ALL CRUISE
5 RETURN
0 EXIT
```

In this interface, by programming presets in cruise list in advance, the system will keep calling those presets at the set time in sequence when executing cruise command so that non-stop monitoring between multiple important positions can be achieved.

Setting steps are as follows:

- ① Select the cruise number.
- ② Edit the current cruise. This camera supports 8 cruises and 16 presets for each cruise. Go to —EditCur Cruise menu as shown below:

PRESET NO/TIME (SEC)
01: 001/005 02: 002/005
03: 003/005 04: 004/005
05: 005/005 06: 006/005
07: 007/005 08: 008/005
A: NEXT PAGE
B: STORE
C: CANCEL

Set the preset and time. The preset ranges from 001 to 360 and the dwell time is from 05s to 240s.

- ③ Run the current cruise. The camera will automatically keep running according to the cruise you set until new command is received. The corresponding operating information will display on the screen when the camera is running.
- ④ Select STORE to save the setting.

4.4.3 Group Setup

Go to Dome Function → Grouping Setup as below:

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

Go to —EditGroup| 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. —RunGroup| means to run the cruises in order.

4.4.4 Task Setup

Go to Dome Function → 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.

Setting Steps:

- 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: RSC, ASC, PRE, CRU, TRA.



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

4.4.5 Track Setup

Go to Dome Function→Track 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 memorize the operation to PTZ, zoom and focus so that repeating

operation progress can be realized by running track.

Setting Steps:

- ① Choose the track number.
- ② Edit the track. Enter the track setting menu. Click **←|rs|l** to start recording track. Control the dome movement by direction buttons and then save the setting. Each track can record up to 180s. If the time exceeds 180s, the system will automatically save the operation data and return to the previous menu. In addition, 360 commands can be recorded for each track at most. If exceeding 360 commands, the system will automatically save the first 360 commands and then exit the current menu. The recording time is related to the operating frequency. The more frequent the operation is, the shorter the memory time is.
- ③ Select **←RUNCUR TRACK...|** to perform the command.

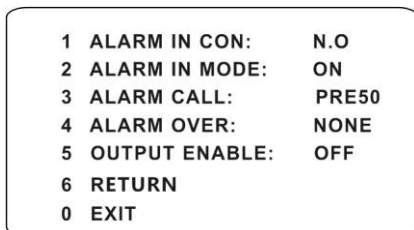
4.4.6 Alarm Setup

Go to Dome Function → Alarm Setup as shown below:



Setting Steps:

- ① Select Alarm In No.
- ② Go to **←EDIT CUR ALARM IN|** menu as shown below.



【 ALARM IN CON 】 :Set the alarm enter type to be Normally Opened (N.O.) or Normally Closed (N.C.) according to the sensor type.

【ALARM IN MODE】 :ON, OFF and TIME are optional.

【 ALARM CALL 】 : Call the preset/cruise/track/scan you need. When the first alarm input happens, the camera will automatically switch to this preset/cruise/track/scan to monitor.

【 ALARM OVER 】 : Call the preset/cruise/track/scan you need. When the alarm trigger is over, the camera will automatically switch to this preset/cruise/track/scan to monitor.

【OUTPUT ENABLE】: Select it ON. When alarm input occurs, the camera will output alarm

information.



Note: If the dome is on the menu state on an alarm, any command is negative.

4.4.7 Home Position

Go to System Setup→Home Position menu as shown below:

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

The setting steps:

- ① Enable the home position function and select the preset which should be set in advance.
- ② Then select delay time (range from 007s to 180s) and exit the menu.

When the stand-by time of the dome camera exceeds the delay time, the camera will automatically execute the command to monitor the selected preset.

4.4.8 Wiper Setup

Some models may not support this function. Go to Main Menu→Wiper Setup 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 —STARTI to enable wiper function.

4.5 Display Setup

You can enable title display and time display as needed.

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

4.6 Load Default

There are three menus, including master reset, master clear and system reboot.

【Master Reset】 : Restore the camera state and active menu to the factory default settings but do not clear those parameters such as preset, cruise.

【Master Clear】 Restore the camera to the factory default settings.

【System Reboot】 Reboot the camera.

Chapter 5 Remote Configuration

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

Note: Wherever applicable, click —Save to save the settings.

1. System Configuration

The —System configuration includes four sub-menus: Basic Information, Date and Time, Local Config and SD Card.

1. Basic Information

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

Device Name	IPC
Product Model	TD-9622M2
Brand	Customer
Software Version	4.2.1.0(17225)
Software Build Date	2018-06-12
Kernel Version	20180120
Hardware Version	1.0-1612207
Onvif Version	16.12(#2)
OCX Version	2.0.3.7
MAC	00:18:ae:7f:19:03
PTZ Version	V1.6.10
Camera Type	M330IM

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

5.1.2 Date and Time Configuration

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

Zone		Date and Time	
Time Zone:	GMT+08 (Beijing, Hong Kong, Shanghai, Taipei)		
<input type="checkbox"/> DST			
<input checked="" type="radio"/> Auto DST			
<input type="radio"/> Manual DST			
Start Time	May	First	Tuesday 15 Hour
End Time	August	First	Tuesday 15 Hour
Time Offset	30 Minutes		

Select the time zone and DST as required.

Click the **Date and Time** tab to set the time mode.

Zone	Date and Time
Time Mode:	
<input type="radio"/> Synchronize with NTP server	
NTP server:	time.windows.com
Update period:	1440 Minutes
<input type="radio"/> Synchronize with computer time	
Date	2018-01-08
Time	14:58:21
<input checked="" type="radio"/> Set manually	
Date	2018-01-09
Time	15:03:28

5.1.3 Local Config

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.

Save snapshots to	C:\Program Files\NetIPCamera	Browse
Save recording files to	C:\Program Files\NetIPCamera	Browse
Audio Recording	<input type="radio"/> Open	<input checked="" type="radio"/> Close
Bitrate Overlay	<input type="radio"/> Open	<input checked="" type="radio"/> Close

5.1.4 Storage

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

Management	Record	Snapshot
Total picture capacity	14829 MB	
Picture remaining space	5068 MB	
Total recording capacity	14784 MB	
Record remaining space	0 MB	
State	Normal	
Snapshot Quota	50	%
Video Quota	50	%

Changes in the quota ratio need to be formatted before they become effective.

Eject Format

● SD Card Management

Click **Format** to format the SD card. All data will be cleared by clicking this button. Click **Eject** to stop writing data to SD card. Then the SD card can be ejected safely.

Snapshot Quota: Set the capacity proportion of captured pictures on the SD card.

Video Quota: Set the capacity proportion of record files on the SD card.

● Schedule Recording Settings

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

The screenshot shows the 'Record' tab in a configuration interface. It has three sub-tabs: 'Management', 'Record', and 'Snapshot'. Under 'Record Parameters', there are three dropdown menus: 'Record Stream' set to 'Main', 'Pre Record Time' set to '3 Seconds', and 'Cycle Write' set to 'Yes'. Below this is a 'Schedule' section with a checked checkbox labeled 'Enable Schedule Record'.

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 **—EnableSchedule Record** and set the schedule.

The screenshot shows the 'Week Schedule' and 'Holiday Schedule' configuration interface. The 'Week Schedule' section has radio buttons for 'Erase' and 'Add', with 'Add' selected. It displays a 24-hour timeline for each day of the week (Sun. to Sat.), with a green bar indicating the scheduled recording time from 00:00 to 24:00. A 'Manual Input' button is located at the end of each day's timeline. The 'Holiday Schedule' section has a 'Date' input field with '07-12', 'Add' and 'Delete' buttons, and another empty 'Date' input field. Below it is a 24-hour timeline with a green bar from 00:00 to 24:00 and a 'Manual Input' button.

Weekly schedule

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

—Add: Add the schedule for a special day. Drag the mouse to set the time on the timeline.

—Erase: Delete the schedule. Drag the mouse to erase the time on the timeline.

Manual Input: Click it for a specific day to enter specific start and end times. This adds more granularities (minutes).

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	2592x1520	
Image Quality	High	
Event Trigger		
Snapshot Interval	1	Second
Snapshot Quantity	5	
Schedule		
<input checked="" type="checkbox"/> Enable Timing Snapshot		
Snapshot Interval	1	Second

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

Snapshot Quantity: The number you set here 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.

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 (See [Schedule Recording](#)).

2. Image Configuration

1. Video / Audio Configuration

Go to Image→Video / Audio interface as shown below. In this interface, set the resolution, frame rate, bitrate type, video quality and so on subject to the actual network condition.

Chapter 5 Remote Configuration

Index	Stream	Resolution	Frame	Bitrate Type	Bitrate(Kbps)	Video	I Frame	Video	Profile
1	Main stream	1920x1080	25	CBR	3072	Highest	100	H264	High Profile
2	Sub stream	704x576	25	CBR	768	Highest	100	H264	High Profile
3	Third stream	352x288	25	CBR	512	Higher	100	H264	High Profile

Send Snapshot: 2 Size: (704x576)

Video encode slice split

Watermark (H264, H265) Watermark content: _____

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

Video Audio

Audio Encoding: G711A Audio Type: MIC

Save

Three video streams can be adjustable.

Resolution: The size of image.

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

Bitrate type: CBR and VBR are optional. Bitrate is related to image quality. CBR means that no matter how much change is seen in the video scene, the compression bitrate will be kept constant. VBR means that the compression bitrate will be adjusted according to scene changes. For example, for scenes that do not have much movement, the bitrate will be kept at a lower value. This can help optimize the network bandwidth usage.

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, the 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 and H265 are optional. 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: 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 and G711U are selectable.

Audio Type: LIN or MIC is optional.

5.2.2 OSD Configuration

Go to Image→OSD interface as shown below.



Set time stamp, device name, OSD content and picture overlap here. After enabling the corresponding display and entering the content, drag them to change their position. Then click —Save to save the settings.



Picture Overlay Settings:

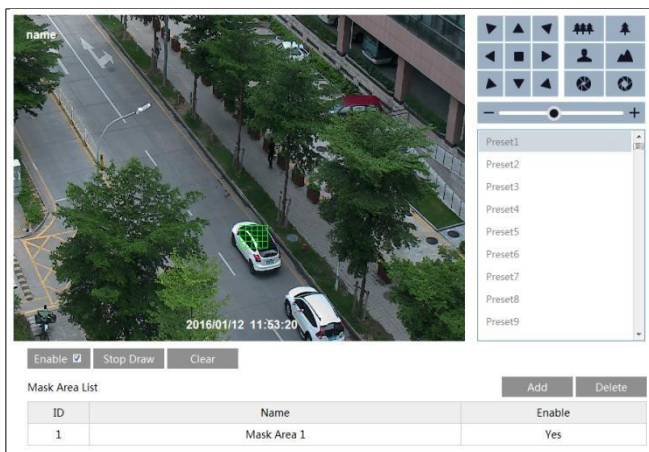
Check —OSD Content1, choose —Picture Overlay and click —Browse to select the overlap picture. Then click —Upload to upload the overlap picture. The pixel of the image shall not exceed 200*200, or it cannot be uploaded.

5.2.3 Video Mask

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.

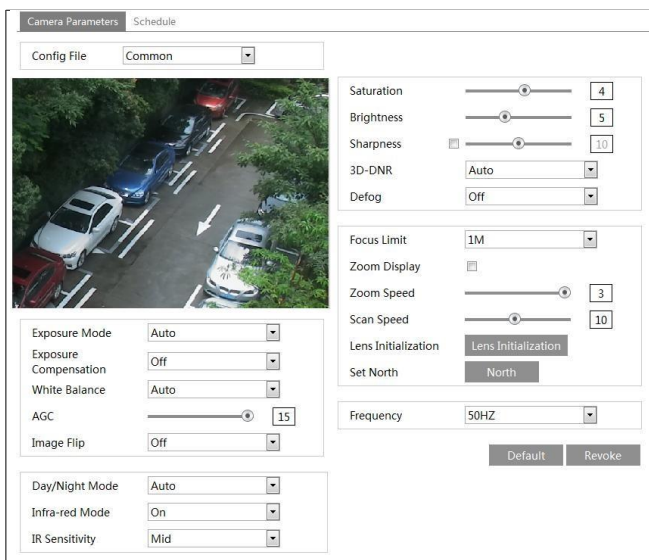


To delete mask area:

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

5.2.4 Camera Setup

Go to Config→Image→Camera Setup.

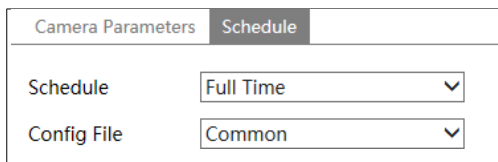


Many parameters of the camera can be set in above sub-menu, such as Color, Brightness, Sharpness, 3D DNR, Fog, Day Night Mode and so on. Please refer to Chapter 4.3 for more

detail.

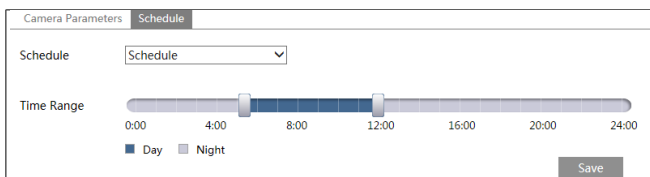
Schedule Settings of Image Parameters:

Click the —Schedule tab as shown below.



Camera Parameters	Schedule
Schedule	Full Time
Config File	Common

Set full time schedule for common, day, night mode and specified time schedule for day and night. Choose —Schedule in the drop-down box of schedule as shown below.



Camera Parameters	Schedule
Schedule	Schedule
Time Range	0:00 4:00 8:00 12:00 16:00 20:00 24:00
	Day Night
	Save

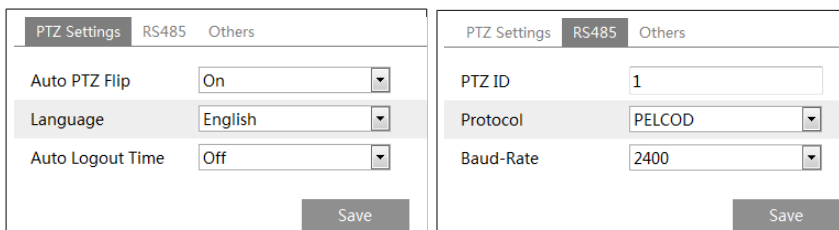
Drag — icons to set the time of day and night. Blue means day time and blank means night time. If the current mode of camera parameters is set to schedule, the image configuration mode will automatically switch between day and night according to the schedule.

3. PTZ Configuration

1. PTZ and Password Setting

● PTZ Setting

Go to Config→PTZ→Setting. This will let you see the following submenu.



PTZ Settings	RS485	Others
Auto PTZ Flip	On	
Language	English	
Auto Logout Time	Off	
	Save	

PTZ Settings	RS485	Others
PTZ ID	1	
Protocol	PELCOD	
Baud-Rate	2400	
	Save	

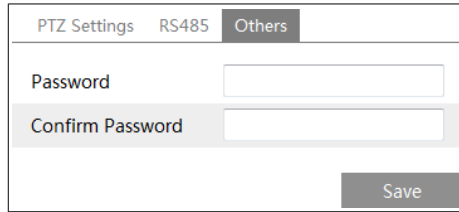
In this submenu, PTZ flip, PTZ flip, language, auto logout time can be set.

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.



The screenshot shows a web interface for PTZ Settings. At the top, there are three tabs: "PTZ Settings", "RS485", and "Others" (which is selected). Below the tabs, there are two input fields: "Password" and "Confirm Password". A "Save" button is located at the bottom right of the form.

2. Restore

It includes the function of reset and clear. Please refer to Chapter 4.6 for more details.

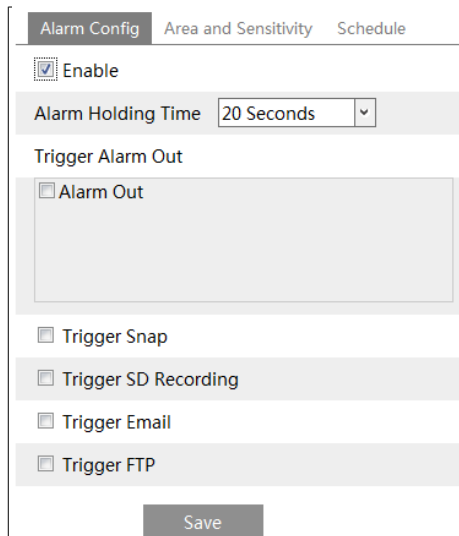
3. PTZ Function

PTZ function includes preset setup, cruise setup, group setup, track setup, task setup, alarm setup, home position setup and wiper setup. Please refer to Chapter 4.4 Dome Function for more details.

4. Alarm Configuration

1. Motion Detection

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



The screenshot shows a web interface for Alarm Configuration. At the top, there are three tabs: "Alarm Config" (selected), "Area and Sensitivity", and "Schedule". Below the tabs, there is a checked "Enable" checkbox. The "Alarm Holding Time" is set to "20 Seconds" with a dropdown arrow. Under "Trigger Alarm Out", there is a list of checkboxes: "Alarm Out", "Trigger Snap", "Trigger SD Recording", "Trigger Email", and "Trigger FTP". A "Save" button is located at the bottom center of the form.

1. Check —Enable— check box to activate motion based alarms. If unchecked, the camera will

not send out any signals to trigger motion-based recording to the NVR or CMS, even if there is motion in the video.

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

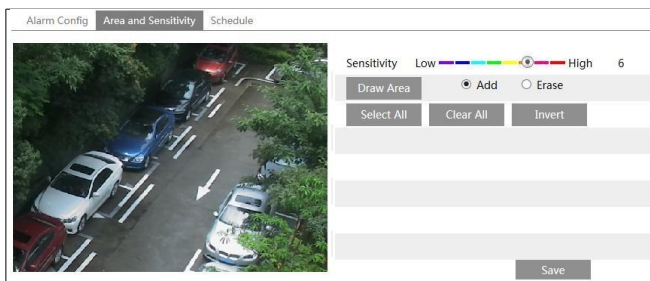
Trigger Snap: If selected, the system will capture images on motion detection and save the images on an SD card.

Trigger SD Recording: If selected, video will be recorded on an 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 into those addresses.

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 will be triggered more easily.

Select Add and click Draw. Drag the mouse to draw the motion detection area; Select Erase and drag the mouse to clear motion detection area.

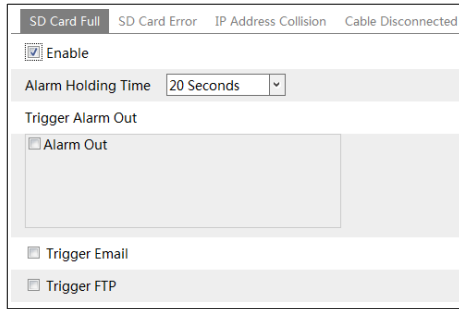
After that, click the Save to save the settings.

3. Set the schedule for motion detection. The schedule setup steps of the motion detection are the same as the schedule recording setup (See [Schedule Recording](#)).

5.4.2 Other Alarms

● SD Card Full

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



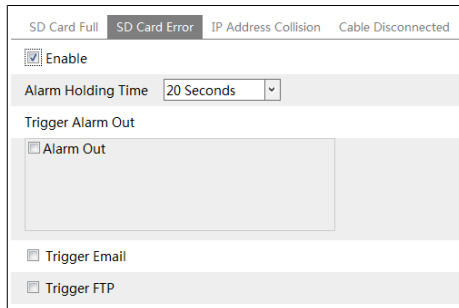
2. Click —Enable and set the alarm holding time.

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

● SD Card Error

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

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

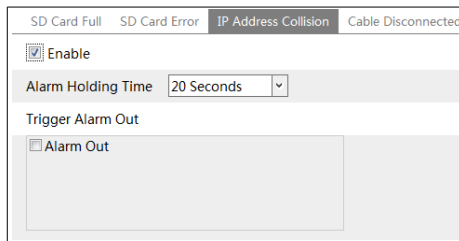


2. Click —Enable and set the alarm holding time.

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

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.

Note: This function is only available for some models.

● Cable Disconnection

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

The screenshot shows the 'Cable Disconnected' configuration page. At the top, there are tabs for 'SD Card Full', 'SD Card Error', 'IP Address Collision', and 'Cable Disconnected'. The 'Cable Disconnected' tab is active. Below the tabs, there is a section for 'Enable' with a checked checkbox. Underneath, there is a field for 'Alarm Holding Time' set to '20 Seconds'. Below that is a section for 'Trigger Alarm Out' with a checked checkbox and a large empty text area.

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

Note: This function is only available for some models.

5.4.3 Alarm Input

To set sensor alarm (alarm in):

Go to Config→Alarm→Alarm In interface as shown below.

The screenshot shows the 'Alarm Input' configuration page. At the top, there are tabs for 'Alarm Config' and 'Schedule'. The 'Alarm Config' tab is active. Below the tabs, there is a field for 'Sensor ID' set to 'Alarm In1' and a button 'Apply settings to' with a dropdown menu set to 'Alarm In2'. Below that is a section for 'Enable' with a checked checkbox. Underneath, there is a field for 'Alarm Type' set to 'NO'. Below that is a field for 'Alarm Holding Time' set to '20 Seconds'. Below that is a field for 'Sensor Name'. Below that is a section for 'Trigger Alarm Out' with a checked checkbox and a large empty text area. At the bottom, there are several unchecked checkboxes: 'Trigger Snap', 'Trigger SD Recording', 'Trigger Email', and 'Trigger FTP'.

1. Set Sensor ID.
2. Click —Enable and set the alarm type, alarm holding time and sensor name.
3. Set alarm trigger options. The setup steps are the same as motion detection. Please refer to [motion detection](#) chapter for details.
4. Apply settings to other sensors (if applicable).
5. Click —Save to save the settings.

6. Set the schedule of the sensor alarm. The setup steps of the schedule are the same as the schedule recording setup. (See [Schedule Recording](#)).

5.4.4 Alarm Out

Go to Config→Alarm→Alarm Out.

Alarm Out Mode	Alarm Linkage	▼
Alarm Out Name	alarmOut1	
Alarm Holding Time	30 Seconds	▼

Alarm Out Mode: Alarm linkage, manual operation, day/night switch linkage and schedule are optional.

Alarm Linkage: Having selected this mode, select alarm out name and alarm holding time at the —AlarmHolding Time! pull down list box.

Manual Operation: Having selected this mode, click —Open! to trigger the alarm out immediately; click —Close! to stop alarm.

Alarm Out Mode	Manual Operation	▼
Manual Operation	Open	Close

Day/Night Switch Linkage: Having selected this mode, choose to open or close alarm out when the camera switches to day mode or night mode.

Alarm Out Mode	Day/night switch linkage	▼
Day	Open	
Night	Close	

Schedule: Click —Add! and drag the mouse on the timeline to set the schedule of alarm out; click —Erase! and drag the mouse on the timeline to erase the set time schedule. After this schedule is saved, the alarm out will be triggered in the specified time.

Alarm Out Mode	Schedule	▼
Time Range		0 1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18 19 20 21 22 23 24
05:00-08:00		Manual Input
		<input type="radio"/> Erase <input checked="" type="radio"/> Add

5.4.5 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

5.5 Event Configuration

(Only some specified versions support the following functions).

For more accuracy, here are some recommendations for installation.

- Cameras should be installed on stable surfaces, as 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 and even light, avoiding overexposure or too much darkness on both sides.

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

5.5.1 Object Removal

Alarms will be triggered when the objects removed from or left at the pre-defined area. This function can be used in such scenarios like object security, debris flow, illegal parking detection, illegal pasting, illegal doodle, etc.

To set object removal:

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

Detection Config Area Schedule

Enable

Enable Left Detection

Enable Item Missing Detection

Alarm Holding Time 20 Seconds

Trigger Alarm Out

Alarm Out

Trigger Snap

Trigger SD Recording

Trigger Email

Trigger FTP

Save

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

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

Enable Item Missing Detection: Alarms 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. Please refer to [motion detection](#) chapter for details.

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.

Detection Config Area Schedule

Alarm Area 1

Area Name XXX

Draw Area Clear Save

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 click around 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 (See [Schedule Recording](#)).

※ The configuration requirements of camera and surrounding areas

1. The range of the detection object should occupy from 1/50 to 1/3 of the entire image.
 2. The detection time of objects in the camera shall be from 3 to 5 seconds.
 3. The defined area cannot be covered frequently and continuously (like people and traffic flow).
 4. It is necessary for object removal detection that the drawn frame must be very close to the margin of the object in enhancing the sensitivity and accuracy of the detection.
 5. Object removal detection cannot determine the objects' ownership. For instance, there is an unattended package in the station. Object removal detection can detect the package itself but it cannot determine to whom it belongs to.
 6. Try not to enable object removal detection when light changes greatly in the scene.
 7. Try not to enable object removal detection if there are complex and dynamic environments in the scene.
 8. Adequate light and clear scenery are very important to object removal detection.
 9. Please contact us for more detailed application scenarios.
- Here we take some improper application scenarios for instance.



There are so many trees near the road and cars running on the road, which make the scene too complex to detect the removal objects.

5.5.2 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.

The screenshot shows a web interface for configuring detection settings. At the top, there are two tabs: "Detection Config" (selected) and "Sensitivity". Below the tabs, there are several sections with checkboxes and a dropdown menu:

- Scene change detection
- Video blur detection
- Enable video color cast detection
- Alarm Holding Time: 20 Seconds (dropdown menu)
- Trigger Alarm Out
 - Alarm Out
- Trigger Snap
- Trigger SD Recording
- Trigger Email
- Trigger FTP

A "Save" button is located at the bottom right of the form.

1. Enable the applicable detection that's desired.

Scene Change Detection: Alarms will be triggered if the scene of the monitor video has changed.

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

Enable Video Color Cast Detection: Alarms 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 to save the settings.

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

The screenshot shows a web interface for setting sensitivity. At the top, there are two tabs: "Detection Configuration" and "Sensitivity" (selected). Below the tabs, there is a "Sensitivity" label, a slider control, and a text box containing the value "28". A "Save" button is located at the bottom right of the form.

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

The sensitivity value of Scene Change Detection: The higher the value is, the more sensitive the system responds to the amplitude of the scene change.

The sensitivity value of Video Blur Detection: The higher the value is, the more sensitive the system responds to the blurriness of the image.

The sensitivity value of Video Color Cast Detection: The higher the value is, the more sensitive the system responds to the obscuring of the image.

※ **The requirements of camera and surrounding area**

1. Auto-focusing function should not be enabled for exception detection.
2. Try not to enable exception detection when light changes greatly in the scene.
3. Please contact us for more detailed application scenarios.

5.5.3 Line Crossing

Line Crossing: Alarms will be triggered if someone or something crosses the pre-defined alarm lines. It can replace the electronic fence, warning line of flood prevention, etc.

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

Detection Config | Area | Schedule

Enable

Alarm Holding Time: 20 Seconds

Trigger Alarm Out

Alarm Out

Trigger Snap

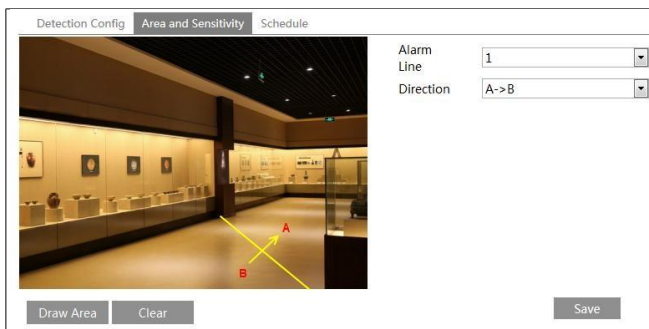
Trigger SD Recording

Trigger Email

Trigger FTP

Save

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. Please refer to [motion detection](#) chapter for details.
3. Click —Save—to save the settings.
4. Set area and sensitivity of the line crossing alarm. Click the —Area and Sensitivity| tab to go to the interface as shown below.



Set the alarm line number and direction. Up to 4 lines can be added. Multiple lines cannot be added simultaneously.

Direction: A<->B, A->B and A<-B optional. This indicates the direction of the intruder who crosses over the alarm line that would trigger the alarm.

A<->B: The alarm will be triggered when the intruder crosses over the alarm line from B to A or from A to B.

A->B: The alarm will be triggered when the intruder crosses over the alarm line from A to B.

A<-B: The alarm will be triggered when the intruder crosses over the alarm line from B to A.

Click **Draw Area** and then drag the mouse to draw a line in the image. Click **Stop Draw** to stop drawing. Click **Clear** to delete the lines. Click **Save** 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 (See [Schedule Recording](#)).

※ Configuration of camera and surrounding area

1. Auto-focusing 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 ambient 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.
8. Please contact us for more detailed application scenarios.

Here we take some improper application scenarios for instance.



There are so many trees near the road and cars running on the road, which make the scene too complex to detect the crossing objects.

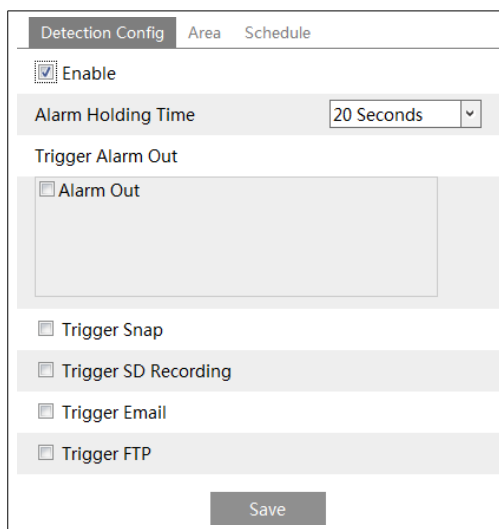


The ground is covered with vegetation; at the right of the fence is a gym where people pass by frequently. The above mentioned environment is too complex to detect the crossing objects.

5.5.4 Intrusion

Intrusion: Alarms will be triggered if someone or something intrudes into the pre-defined areas. This function can be applicable to important supervision places, danger areas and prohibited areas, like military administrative zones, house breaking, scenic high danger areas, no man's areas, etc.

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. Please refer to motion detection chapter for details.
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 —Draw Area 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 —Stop Draw to stop drawing. Click —Clear to delete the alarm area. Click —Save 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 (See [Schedule Recording](#)).

※ Configuration requirements of camera and surrounding area

1. Auto-focusing 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 ambient 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 to line crossing detection.
8. Please contact us for more detailed application scenarios.

Here we take some improper application scenarios for instance.



→ The camera's angle of depression is not wide enough; there are so many trees in the scene. The above mentioned environment is too complex to detect the intrusion.



→ The camera's angle of depression is not wide enough; the street lamps at night lead to light interference; the swaying trees in a windy day lead to random interference. All the above mentioned factors make the scene improper for intrusion detection.

5.5.5 Crowd Density Detection

This function can detect the density of the people in a specified area (like square, supermarket). Go to Config→Event→Crowd Density as shown below.

The screenshot shows a configuration window titled "Alarm Config" with three tabs: "Alarm Config", "Area", and "Schedule". The "Alarm Config" tab is active. It contains the following settings:

- Enable
- Refresh Frequency: 1 Seconds (dropdown menu)
- Density Alarm Threshold: 50% (slider control)
- Alarm Holding Time: 20 Seconds (dropdown menu)
- Trigger Alarm Out section with the following options:
 - Alarm Out (checkbox)
 - Trigger Snap (checkbox)
 - Trigger SD Recording (checkbox)
 - Trigger Email (checkbox)
 - Trigger FTP (checkbox)

A "Save" button is located at the bottom center of the window.

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

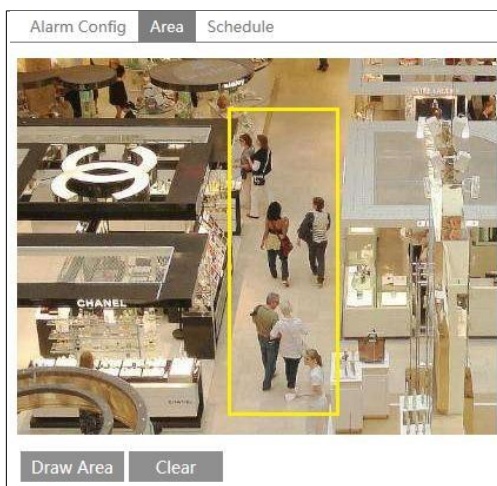
Refresh Frequency: The refresh frequency of the detection result.

Density Alarm Threshold: Alarms 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. Please refer to [motion detection](#) chapter for details.

4. Set an alarm area for the crowd density detection. Click the —Area| tab as shown below.

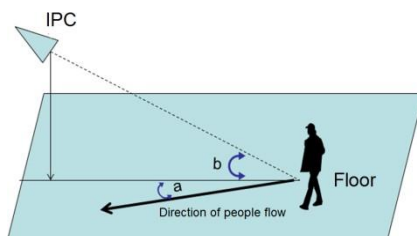
Click —Draw Area| and drag the mouse to draw a rectangle area. Drag the border lines of the rectangle to modify its size and move the rectangle to change its position. Click —Stop Draw| to stop drawing the area. Click —Clear| to clear the area.



5. Set the schedule of the crowd density detection. The setup steps of the schedule are the same as schedule recording setup (See [Schedule Recording](#)).

※ Configuration of camera 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) shall range from 30° to 60° .



2. The size range of a single person image should take up 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 shape. (eg. moving cars)
4. A lot of trees and billboards will affect the detection results in the detected area.

5.5.6 People Intrusion

This function is specially designed for indoor scenes. To prevent someone from intruding a house to endanger the family security, you can enable this function. Alarms 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. Please refer to the following picture.
2. Enable the people intrusion detection.
3. Set —AlarmSensitivity and —AlarmHoldingTime.
4. Set alarm trigger options. The setup steps are the same as motion detection setup. Please refer to [motion detection](#) chapter for details.
5. Set the schedule of the people intrusion detection. The setup steps of the schedule are the same as schedule recording setup (See [Schedule Recording](#)).

The screenshot shows the 'Alarm Config' tab for 'People Intrusion'. It includes the following settings:

- Enable
- Alarm Sensitivity: Mid (dropdown menu)
- Alarm Holding Time: 5 Seconds (dropdown menu)
- Trigger Alarm Out:
 - Alarm Out
- Trigger Snap
- Trigger SD Recording
- Trigger Email
- Trigger FTP

※ Configuration requirements of camera 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.

5.5.7 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. Please refer to the following picture.
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 and monthly are optional.

Counting Reset: The current number of people counting will be cleared and the current counting period will restart by clicking —Reset button.

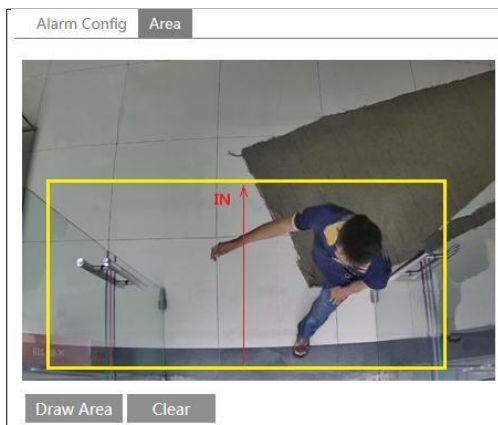
If the number of people exceeds the pre-defined threshold value (the default value is 500; the maximum value is 655350), alarms will be triggered.

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. Please refer to [motion detection](#) chapter for details.

Alarm Config	Area
<input checked="" type="checkbox"/> Enable	
Detection Sensitivity	Mid
Entrancing Threshold	5
Departing Threshold	4
Staying Threshold	500
Counting Period	Monthly
Counting Reset	Reset
Alarm Holding Time	5 Seconds
Trigger Alarm Out	
<input checked="" type="checkbox"/> Alarm Out	
<input checked="" type="checkbox"/> Trigger Snap	
<input checked="" type="checkbox"/> Trigger SD Recording	
<input type="checkbox"/> Trigger Email	
<input type="checkbox"/> Trigger FTP	

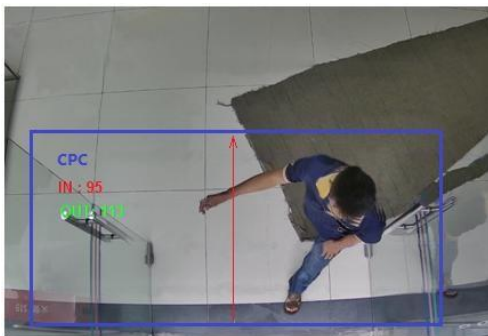
5. Set the area of the people counting. Click the —Area tab to go to the area setting interface.



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 area drawn yellow box is the detected area. The size range of the head 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.



※ Configuration requirements of camera and surrounding area

1. Cameras must be installed in the area with stable and adequate light sources.
2. The background color (like 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 person can be captured.
4. The installation height of the camera depends on the actual focal length of the lens. The entrance/exit in the image should make up over a half of the width of the entire image and the head of a single person should account for 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 headwears which probably conceal the head features will lead to detection failure.

6. Network Configuration

1. TCP/IPv4

Go to Config→Network→TCP/IP interface as shown below. There are two ways for network connection.

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	192.168.226.201	Test	
Subnet Mask	255.255.255.0		
Gateway	192.168.226.1		
Preferred DNS Server	210.21.196.6		
Alternate DNS Server	8.8.8.8		

Use IP address (take IPv4 for example)-There are two options for IP setup: obtain an IP address automatically by DHCP and use the following IP address. Please choose one of the options as needed.

Test: Test the effectiveness of the IP address by clicking this 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.

IPv4	IPv6	PPPoE Config	IP Change Notification Config
<input checked="" type="checkbox"/> Enable			
User Name	<input type="text" value="xxxxxxx"/>		
Password	<input type="password" value="•••••"/>		
<input type="button" value="Save"/>			

Either method 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.

IPv4	IPv6	PPPoE Config	IP Change Notification Config
<input type="checkbox"/> Trigger Email			
<input type="checkbox"/> Trigger FTP			
<input type="button" value="Save"/>			

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

5.6.2 Port

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

HTTP Port	<input type="text" value="80"/>
HTTPS Port	<input type="text" value="443"/>
Data Port	<input type="text" value="9008"/>
RTSP Port	<input type="text" value="554"/>

HTTP Port: The default HTTP port is 80. It can be changed to any port which is not occupied.

HTTPS Port: The default HTTPS port is 443. It can be changed to any port which is not occupied.

Data Port: The default data port is 9008. Please change it as necessary.

RTSP Port: The default port is 554. Please change it as necessary.

5.6.3 Central Server

This function is mainly used for connecting network video management system.

<input type="checkbox"/> Enable	
Server Port	<input type="text" value="0"/>
Server Address	<input type="text"/>
Device ID	<input type="text" value="1"/>

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

5.6.4 DDNS Configuration

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

1. Go to Config→Network→ DDNS.

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

2. Apply for a domain name. Take www.dvrdyndns.com for example. Enter www.dvrdyndns.com in the IE address bar to visit its website. Then click —Registrationl.

NEW USER REGISTRATION

USER NAME	<input type="text" value="XXXX"/>
PASSWORD	<input type="password" value="•••••"/>
PASSWORD CONFIRM	<input type="password" value="•••••"/>
FIRST NAME	<input type="text" value="xxx"/>
LAST NAME	<input type="text" value="xxx"/>
SECURITY QUESTION.	<input type="text" value="My first phone number."/>
ANSWER	<input type="text" value="xxxxxxx"/>
CONFIRM YOU'RE HUMAN	<div style="text-align: center;"> New Captcha <input type="text"/> Enter the text you see above</div>

Create domain name.

You must create a domain name to continue.

Domain name must start with (a-z, 0-9). Cannot end or start, but may contain a hyphen and is not case-sensitive.

After the domain name is successfully applied for, the domain name will be listed as below.

Search by Domain.

Click a name to edit your domain settings.

NAME	STATUS	DOMAIN
654321ABC	✔	654321abc.dvrddns.com

Last Update: *Not yet updated* IP Address: 210.21.229.130

[Create additional domain names](#)

3. Enter the username, password, domain you apply for in the DDNS configuration interface.
4. Click —Save—to save the settings.

5.6.5 SNMP

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	<input type="text"/>
Write SNMP Community	<input type="text"/>
Trap Address	<input type="text"/>
Trap Port	<input type="text" value="0"/>
Trap community	<input type="text"/>
SNMP v3	
<input type="checkbox"/> Enable SNMPv3	
Read User Name	<input type="text"/>
Security Level	<input type="text" value="auth, priv"/>
Authentication Algorithm	<input checked="" type="radio"/> MD5 <input type="radio"/> SHA
Authentication Password	<input type="text"/>
Private-key Algorithm	<input checked="" type="radio"/> DES <input type="radio"/> AES
Private-key Algorithm	<input type="text"/>
Write User Name	<input type="text"/>
Security Level	<input type="text" value="auth, priv"/>
Authentication Algorithm	<input checked="" type="radio"/> MD5 <input type="radio"/> SHA
Authentication Password	<input type="text"/>
Private-key Algorithm	<input checked="" type="radio"/> DES <input type="radio"/> AES
Private-key Algorithm	<input type="text"/>
Other Settings	
SNMP Port	<input type="text" value="0"/>

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 as the same as the settings 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.

5.6.6 802.1X

IEEE802.X which is an access control protocol manages the device in connection with the local network by authentication. The setup steps are as follows:

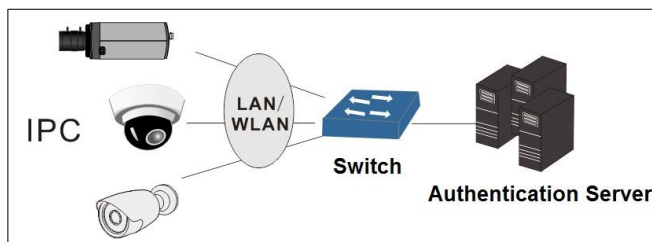
<input checked="" type="checkbox"/> Enable	
Protocol Type	EAP_MD5
EAPOL Version	1
User Name	test
Password	•••••
Confirm Password	•••••

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.

User name and password: The user name and password must be the same with the user name and password applied for and registered in the authentication server.

The structure of 802.1x



- ① The network camera initiates the authentication of 802.1x protocol via web client and then the authentication is received by the switch supporting 802.1x protocol.
 - ② The switch provides the camera with a physical or logic local network interface and verifies the camera.
 - ③ Authentication server provides the entity of authentication service for the switch, stored the relative information of web client, realizing the authentication of web client.
- Please refer to the user manual of the connected switch for more details.

5.6.7 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)	
<input type="button" value="Save"/>	

Select Enable to enable the RTSP function.

Port: Access port of the streaming media. The default number is 554.

RTSP 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=mcastl.

Sub stream: The address format is

—rtsp://IP address: rtsp port/profile2?transportmode=mcastl.

Third stream: The address format is

—rtsp://IP address: rtsp port/profile3?transportmode=mcastl.

Audio: Having entered the main/sub stream in a 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 Automatic 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 a VLC player to realize the simultaneous play with the web client.

2. The IP address mentioned above cannot be the address of 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.

5.6.8 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.

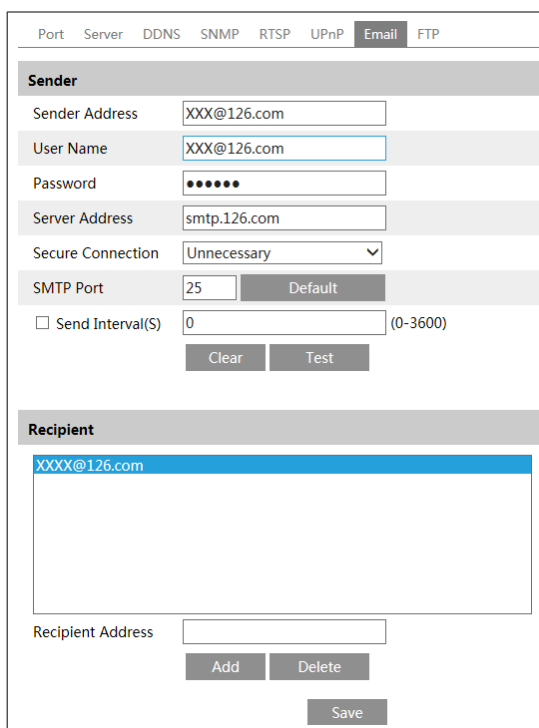


A configuration form for UPnP. It features a checkbox labeled "Enable" which is currently unchecked. Below the checkbox is a text input field labeled "UPnP Name" which is empty.

5.6.9 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 Email configuration form is displayed within a navigation menu that includes Port, Server, DDNS, SNMP, RTSP, UPnP, Email (selected), and FTP. The form is divided into two main sections: "Sender" and "Recipient".

Sender Section:

- Sender Address: XXX@126.com
- User Name: XXX@126.com
- Password: Masked with six dots
- Server Address: smtp.126.com
- Secure Connection: Unnecessary (dropdown menu)
- SMTP Port: 25 (Default)
- Send Interval(S): 0 (0-3600) (checkbox is unchecked)
- Buttons: Clear, Test

Recipient Section:

- Recipient list: XXX@126.com (highlighted in blue)
- Recipient Address: Empty input field
- Buttons: Add, Delete, Save

Sender Address: sender's e-mail address.

User name and password: sender's user name and password.

Server Address: The SMTP IP address or host name.

Select the secure connection type at the —SecureConnectionI pull-down list according to what's required.

SMTP Port: The SMTP port.

Send Interval(S): The 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 —Test! to test the connection of the account.

Recipient Address: receiver's e-mail address.

5.6.10 FTP

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

The screenshot displays a web-based configuration interface for FTP. At the top, there are navigation tabs: Port, Server, DDNS, SNMP, RTSP, UPnP, Email, and FTP (which is currently selected). Below the tabs is a table with columns: Server Name, Server Address, Port, User Name, and Upload Path. A modal dialog box titled 'Add FTP' is open in the center, containing the following fields and options:

- Server Name: [Text Input Field]
- Server Address: [Text Input Field]
- Upload Path: [Text Input Field] with the placeholder text 'Example:/Dir/folder'
- Port: [Text Input Field] with the value '21'
- User Name: [Text Input Field] with an unchecked checkbox labeled 'Anonymous' to its right.
- Password: [Text Input Field]

At the bottom of the dialog are 'OK' and 'Cancel' buttons. Below the dialog, in the main configuration area, are buttons for 'Add', 'Modify', 'Delete', and 'Test'. At the very bottom right of the interface is a 'Save' button.

Server Name: The name of the FTP server.

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

Upload Path: The directory where files will be uploaded to.

Port: The port of the FTP server.

Use Name and Password: The username and password that are used to login to the FTP server.

5.6.11 HTTPS

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

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

Chapter 5 Remote Configuration

The screenshot shows a configuration window with the following elements:

- Enable
- Certificate installed: C=CN, ST=GD, L=SZ, O=embeddedsoftware | Delete
- Attribute: Issued to: C=CN, ST=GD, L=SZ, O=embeddedsoftware, OU=IPC, H=localhost, E=com.cn, Issuer: C=CN, ST=GD, L=SZ, O=embeddedsoftware, OU=IPC, H=localhost, E=com.cn, Validity date: 2017-07-26 01:02:07 ~ 2022-07-26 01:02:07
- Save

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: https port` via the web browser (eg. `https://192.168.226.201:443`).

A private certificate can be created if users don't want to use the default one. Click **Delete** to cancel the default certificate. Then the following interface will be displayed.

The screenshot shows a configuration window with the following elements:

- Enable
- Installation type: Have signed certificate, install directly, Create a private certificate, Create a certificate request
- Install certificate: [Text Field] | Browse | Install
- Save

* 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 the following creation interface.

The screenshot shows a configuration window with the following elements:

- Enable
- Installation type: Have signed certificate, install directly, Create a private certificate, Create a certificate request
- Create a private certificate: Create
- Save

Click **Create** 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 the following interface.

The screenshot shows a configuration window with the following elements:

- Enable
- Installation type: Have signed certificate, install directly, Create a private certificate, Create a certificate request
- Create a certificate request: Create | Download | Delete

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.

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 CMS/NVMS client via WAN. Enable this function by going to **Config**→**Network**→**P2P** interface.

Note: This function is only available for some specified models.

13. QoS

QoS (Quality of Service) function is used to provide different quality of services for different network applications. With the deficient 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	<input type="text" value="13"/>
Alarm DSCP	<input type="text" value="35"/>
Manager DSCP	<input type="text" value="53"/>

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.

Generally speaking, the larger the number is, the higher the priority is.

7. Security Configuration

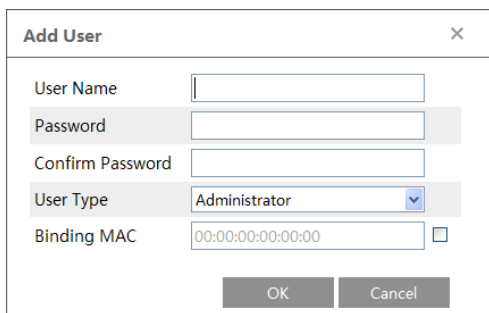
1. User Configuration

Go to **Config**→**Security**.

Add Modify Delete			
Index	User Name	User Type	Binding MAC
1	admin	Administrator	

Add user:

1. Click **—Add** to pop up the following textbox.

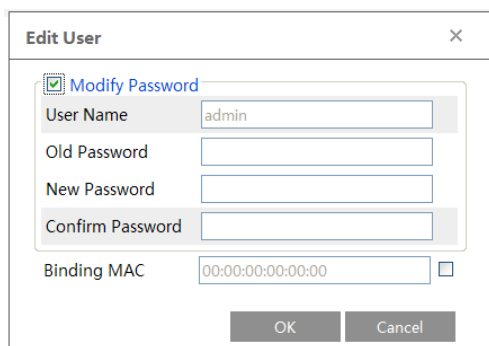


The 'Add User' dialog box features a title bar with a close button (X). The main area contains five input fields: 'User Name' (text box), 'Password' (text box), 'Confirm Password' (text box), 'User Type' (dropdown menu showing 'Administrator'), and 'Binding MAC' (text box with '00:00:00:00:00:00' and a checkbox). At the bottom are 'OK' and 'Cancel' buttons.

2. Enter user name in —User Name| text box.
3. Enter letters or numbers in —Password| and —Confirm Password| text box.
4. Choose the use 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, backup settings, factory reset, and upgrading the firmware.
5. Enter the MAC address of the PC in —Bind MAC| text box. If this option is enabled, only the PC with the specified MAC address can access the camera for that user.
6. Click —OK| and then the newly 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 —Modify|.



The 'Edit User' dialog box has a title bar with a close button (X). A 'Modify Password' checkbox is checked. Below it are four text boxes: 'User Name' (containing 'admin'), 'Old Password', 'New Password', and 'Confirm Password'. At the bottom is a 'Binding MAC' text box with '00:00:00:00:00:00' and a checkbox. 'OK' and 'Cancel' buttons are at the bottom.

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 —OK| 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 —Delete to delete the user.

Note: The default administrator account cannot be deleted.

5.7.2 Online Video 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	192.168.17.232	55760	admin	Administrator	<input type="button" value="Kick Out"/>

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

5.7.3 Block and Allow Lists

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

The screenshot shows a dialog box titled "IP/MAC Address Filter Settings". It has a checked checkbox for "Enable address filtering". Below it, there are two radio buttons: "Block the following address" (selected) and "Allow the following address". There is a large empty text area for input. To the right of this area are "Add" and "Delete" buttons. Below these is a text input field containing "0.0.0.0" and radio buttons for "IPv4" (selected), "IPv6", and "MAC". At the bottom right is a "Save" button.

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 —Add.

5.7.4 Security Management

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

The screenshot shows a dialog box titled "Security Service". It has two checked checkboxes: "Enable 'locking once illegal login' function" and "Enable anonymous login with a private protocol (http://host[:port]/AnonymousLive/1[2/3])". At the bottom right is a "Save" button.

In order to prevent against malicious password unlocking, —locking once illegal login function can be enabled here. 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]` (eg. <http://192.168.226.201:80/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 by this means and no other operations can be done. If no such function, please skip the instruction.

8. Maintenance

1. Backup & Restore

Go to Config→Maintenance→Backup & Restore.

The screenshot shows a web interface for configuration. It has three main sections, each with a grey header bar. The first section is 'Import Setting', containing a 'Path' label, a text input field, a 'Browse' button, and an 'Import Setting' button. The second section is 'Export Settings', containing an 'Export Settings' button. The third section is 'Default Settings', containing a 'Keep' label, three checkboxes for 'Network Config', 'Security Configuration', and 'Image Configuration', and a 'Load Default' button.

● 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 —ImportSetting| or —ExportSetting|.

● Default Settings

Click —LoadDefault| to restore all system settings to the default factory settings except those you want to keep.

5.8.2 Reboot Device

Go to Config→Maintenance→Reboot.

Click —Reboot| to reboot the device.

Timed Reboot Setting:

If necessary, the camera can be set up to reboot on a time interval. Enable **TimeSettings**, set the date and time and then click **Save** to save the settings.

5.8.3 Upgrade

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

Local upgrade		
Path	<input type="text"/>	<input type="button" value="Browse"/> <input type="button" value="Upgrade"/>
Online upgrade		
Upgrade file path	<input type="text"/>	<input type="button" value="Save"/>
Current version	Server version	Operate
4.2.1.0		<input type="button" value="Check version"/> <input type="button" value="Upgrade"/>

1. Click **Browse** to select the save path of the upgrade file
2. Click **Upgrade** 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. If no such function, please skip the instruction.

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.

5.8.4 Log

To query and export log

1. Go to **Config**→**Maintenance**→**Operation Log**.

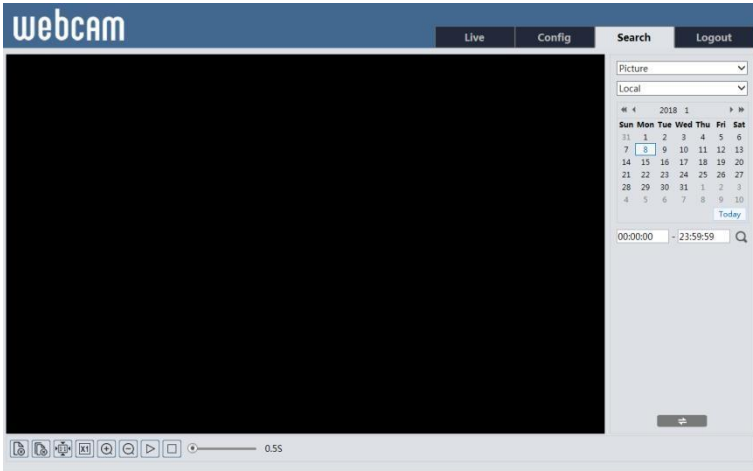
Main Type:		All log	Sub Type:		All log		
Start Time:		2015-07-14 00:00:00	End Time:		2015-07-14 23:59:59	Search	Export
Index	Time	Main Type	Sub Type	User Name	Login IP		
1	2015-07-14 11:15:18	Operation	Log in	admin	192.168.12.53		
2	2015-07-14 11:12:02	Exception	Disconnected		192.168.12.53		
3	2015-07-14 19:12:17	Exception	Disconnected		192.168.12.52		

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


Chapter 6 Playback

6.1 Image Search


Click Search to go to the interface as shown below. Images that are saved on the SD card can be found here.



● Local Image Search

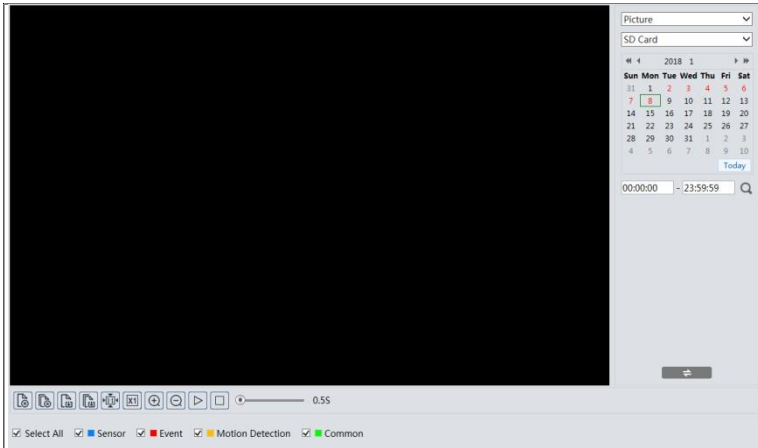
1. Choose —Picture—Locall.
2. Set time: Select date and choose the start and end time.
3. Click  to search the images.
4. Double click a file name in the list to view the captured photos as shown above.





Click  to return to the previous interface.

● SD Card Image Search












1. Choose **Picture** — **SD Card**.



2. Set time: Select 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 a file name in the list to view the captured photos.

Click  to return to the previous interface.

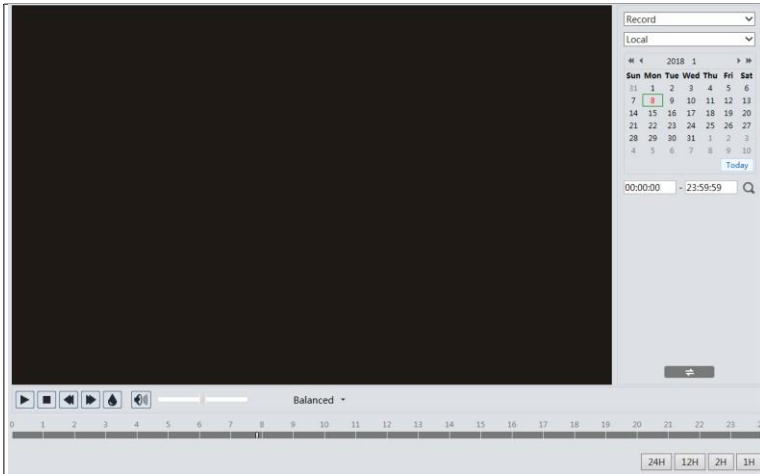
The descriptions of the buttons are shown as follows.


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 pictures on the PC.
	Fit size: Click to fit the image on the screen.		Actual size: Click this button to display the actual 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.		

2. Video Search








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—Locall.
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.

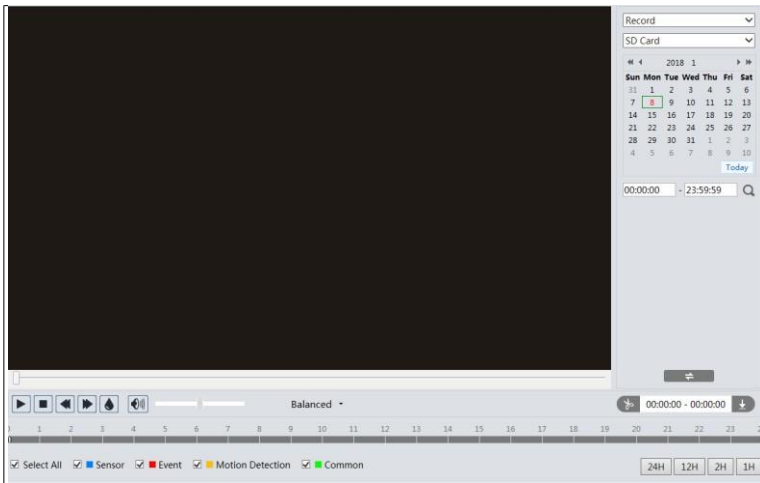


Icon	Description	Icon	Description
	Play button. After pausing the video, click this button to continue playing.		Pause button
	Stop button		Speed down
	Speed up		Watermark display
	Enable / disable audio; drag the slider to adjust the volume after enabling audio.		

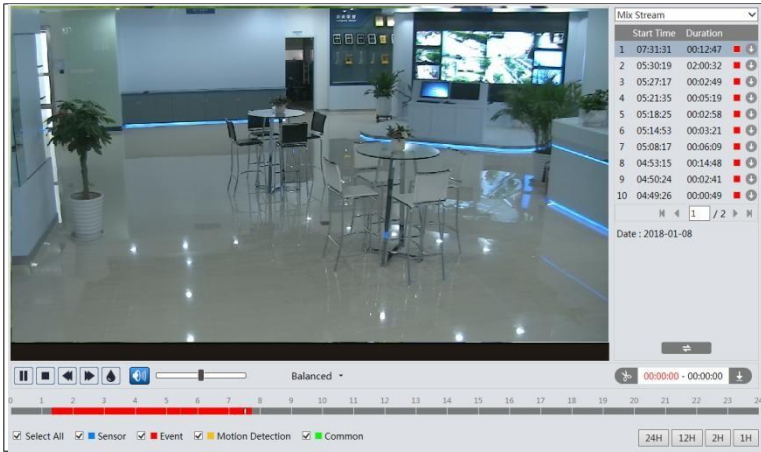
6.2.2 SD Card Video Search

Click Search to go to the interface as shown below. Videos that were recorded on the 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 time table can be shown in 24H/12H/2H/1H format by clicking the corresponding buttons.

Video clip and downloading

1. Search the video files according to the above mentioned steps.
2. Select the start time by clicking on the time table.
3. Click to set the start time and then this button turns blue ().
4. Select the end time by clicking on the time table. 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	2018-01-16 01:1...	2018-01-16 01:1...	Favorites	Open

Set up D:\Favorites Clear List Close

Click to set the storage directory of the video files.

Click to play the video.

Click to clear the downloading list.

Click to close the downloading window.

Chapter 7 Q & A

1. Q: I forget the password. How can I do?

Reset the system to the factory default setting or contact the dealer.

Default IP: 192.168.226.201

User name: admin

Password: 123456

2. Q : The devices can't connect through IE browser. Why?

- ① Network is not connected well. Please check the connection and make sure it is connected well.
- ② IP is not available. Reset the valid IP.
- ③ Web port number has been revised: contact administrator to get the correct port number.
- ④ Exclude the above reasons. Restore the default setting by IP-Tool.

Note: The default IP: 192.168.226.201 , mask number: 255.255.255.0

3. Q : IP tool cannot search devices. How can I do?

It may be caused by the anti-virus software in your computer. Please exit it and try to search device again.

4. Q : IE cannot download ActiveX control. How can I do?

IE browser blocks ActiveX. Please do setup following below.

- ① Open IE browser. Click Tools-----Internet Options....



- ② Select Security-----Custom Level....Refer to Fig 4-1.
- ③ Enable all the sub options under —ActiveX controls and plug-ins. Refer to Fig 4-2.

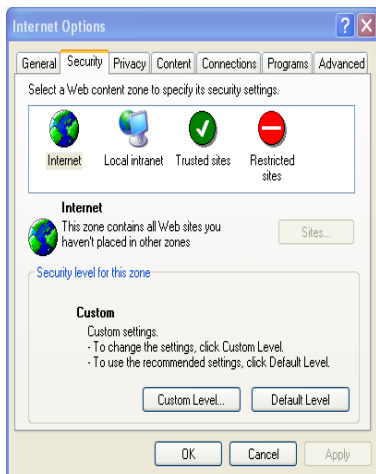


Fig 4-1

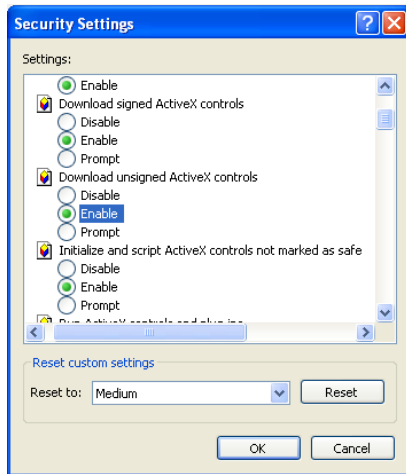


Fig 4-2

④ Then click OK to finish setup.

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

5. Q : Why does the device fail to sound?

The audio input device is not connected. Please connect and try again.

The audio function is not enabled at the corresponding channel. Please check AUDIO item to enable this function.

6. Q: How to do when 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 Preset Description

Call Preset	Call NO.90 Preset	Run track 1
	Call NO.91 Preset	Run cruise 1
	Call NO.92 Preset	Run cruise 2
	Call NO.93 Preset	Run cruise 3
	Call NO.94 Preset	Run cruise 4
	Call NO.95 Preset	OSD menu
	Call NO.97 Preset	Enable random scan
	Call NO.99 Preset	Enable P-P SCAN
	Call NO.100 Preset	Wiper ON
	Call No.101 Preset	Wiper OFF
Set Preset	Set NO. 91 Preset	Set random scan; task auto call the beginning point
	Set NO. 92 Preset	Set left border of P-PSCAN
	Set NO. 93 Preset	Set right border of P-PSCAN
	Set NO.94 Preset three times	Set the boundary value of the near and middle infrared light
	Set NO.95 Preset three times	Set the boundary value of the middle and far infrared light