

CE FC ONVIF

NETWORK CAMERA

User Manual

- ※ Install IP Scanner from a download URL below and run it after the camera installation.
<https://downloads.magicdvr.com/IPCamera/>
- ※ Please change the initial password to protect your information safely and prevent damage from information theft when logging in for the first time. Other issues caused by security and incorrect password management are the responsibility of the user.

Safety Precaution

This quick manual contains basic instructions on installing the cctv cameras. Safety warnings and precautions are intended to promote proper use of the product and thereby prevent accidents and property damage and must be followed at all times.

	<div style="background-color: black; color: white; padding: 5px;">CAUTION</div> <div style="border: 1px solid black; padding: 5px;">RISK OF ELECTRIC SHOCK. DO NOT OPEN THE COVER OF THE PRODUCT</div>	
<p>WARNING: Servicing of this product by unauthorized personnel is prohibited and will result in a void of warranty. In order to ensure the most stable conditions for power, the use of a UPS (Uninterrupted Power Supply) is recommended.</p> <p>CAUTION: Do not reduce the risk of electric shock, Do not remove cover. No user-serviceable parts inside. Refer servicing to qualified service personnel.</p>		



This symbol is intended to alert the user to the presence of noninsulated "dangerous voltage" within the product's enclosure that may be of sufficient magnitude to constitute a risk of electric shock to persons.



The exclamation point within an equilateral triangle is intended to alert the user to the presence of important operating and maintenance (servicing) instructions in the literature accompanying the product

- **Warning :**

This equipment has been tested and found to comply with the limits for a Class A digital device, pursuant to part 15 of the FCC Rules. These limits are designed to provide reasonable protection against harmful interference when the equipment is operated in a commercial environment. This equipment generates, uses, and can radiate radio frequency energy and, if not installed and used in accordance with the instruction manual, may cause harmful interference to radio communications.

Operation of this equipment in a residential area is likely to cause harmful interference in which case the user will be required to correct the interference at his own expense.

- **Caution :**

Any changes or modifications in construction of this device which are not expressly approved by the party responsible for compliance could void the user's authority to operate the equipment.

Mains power quality should be that of a typical commercial environment. If the user of the model requires continued operation during power mains interruptions, it is recommended that the model be powered from an uninterruptible power supply(UPS) or a battery.

Safety Precaution

NOTICE

1. Electrical safety

- All installation and operation here should conform to local electrical safety codes.
- Use a certified/listed 12VDC Class 2 power supply only.
- Please note: Do not connect two power supplying sources to the device at the same time; it may result in device damage! The product must be grounded to reduce the risk of electric shock.
- Improper handling and/or installation could run the risk of fire or electrical shock.

2. Environment

- Heavy stress, violent vibration or exposure to water is not allowed during transportation, storage and installation.
- This product should be installed in a cool, dry place away from direct sunlight and heat sources.
- Do not install the product in extreme temperature conditions.
- Do not expose the camera to electromagnetic radiation. Otherwise it may result in CMOS sensor failure.
- Do not block any ventilation openings.
- Do not allow water and liquid intrusion into the camera.

3. Operation and Daily Maintenance

- Please shut down the device and then unplug the power cable before you begin any maintenance work.
- Do not touch the CMOS sensor optic component. You can use a blower to clean the dust on the lens surface.
- Always use the dry soft cloth to clean the device. If there is too much dust, use a cloth dampened with a small quantity of neutral detergent. Finally use the dry cloth to clean the device. Please use a professional optical cleaning method to clean the enclosure. Improper enclosure cleaning (such as using cloth) may result in poor IR functionality and/or IR reflection. The grounding holes of the product are recommended to be grounded to further enhance the reliability of the camera.
- Dome cover is an optical device, please don't touch or wipe cover surface directly during installation and use, please refer to the following methods if dirt is found:
Stained with dirt: Use oil-free soft brush or hair dryer to remove it gently.
Stained with grease or fingerprint: Use oil-free cotton cloth or paper soaked with alcohol or detergent to wipe from the lens center outward. Change the cloth and wipe several times if it is not clean enough.

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Operating Instruction

1. SYSTEM REQUIREMENTS

- Operating System :
Windows 7,8 (32/64bit) Ultimate, Professional or higher
Windows XP, 2000 (32bit)
- Processor : Intel Core Duo II dual-core Processor or higher
- Memory : 1GB or more / Video memory 256MB or more
- Resolution : 1024x768, 1280x1024 pixels or higher (32bit color)
- Web Browser : Microsoft IE ver.10 or higher

2. DEVICE CONNECTION

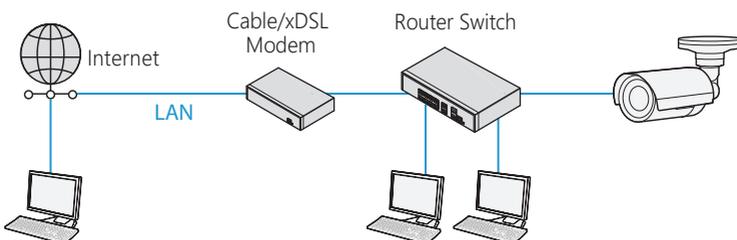
1 Connection to PC :

Connect IP camera to PC via straight-through network cable, with power input connected to a DC 12V adaptor, and set the IP addresses of the PC and IP camera in one network segment. The IP camera will communicate with PC within one minute after being powered on if the network operates normally.



2 Connection to Router/Switch :

This is more commonly used in connecting the IP camera to Internet, where the camera and PC are connected to LAN ports of a router/switch, with gateway of the camera set to the IP address of the router.

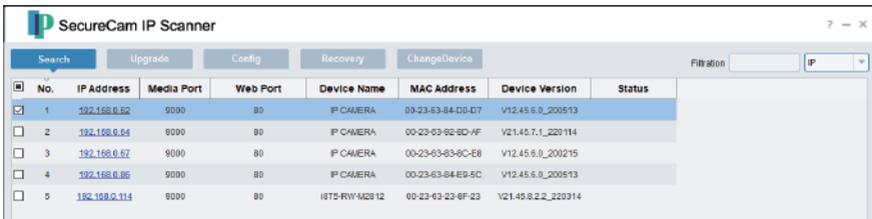


Operating Instruction

3. IP SCANNER

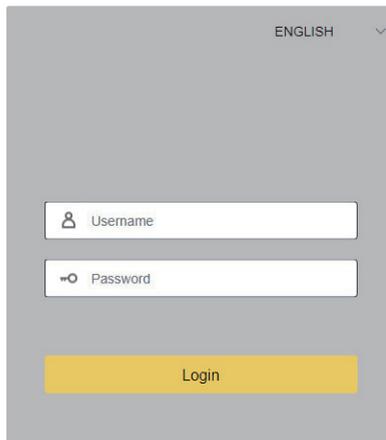
IP Scanner can search for the device on the local network.

- 1 Make sure that the camera and the PC are connected to the same local network. The camera is set to DHCP by default.
- 2 Install IP Scanner from a download URL below and run it after installation.
<http://gofile.me/3FH12/oMZG41gz9>
- 3 In the device list, you can view the IP address, model number, and MAC address of each device. Select the applicable device and double click to open up the video window. You can also manually enter the IP address in the address bar of the web browser.



No.	IP Address	Media Port	Web Port	Device Name	MAC Address	Device Version	Status
<input checked="" type="checkbox"/>	192.168.0.52	9000	80	IP CAMERA	00-23-63-84-DD-D7	V12.45.6.0_200513	
<input type="checkbox"/>	192.168.0.64	9000	80	IP CAMERA	00-23-63-82-8D-AF	V21.45.7.1_220114	
<input type="checkbox"/>	192.168.0.67	9000	80	IP CAMERA	00-23-63-83-8C-E8	V12.45.6.0_200215	
<input type="checkbox"/>	192.168.0.86	9000	80	IP CAMERA	00-23-63-84-E9-5C	V12.45.6.0_200513	
<input type="checkbox"/>	192.168.0.114	9000	80	1875-RW-M2012	00-23-63-23-8F-23	V21.45.8.2.2_220314	

Default user name is **admin**
and password is **1234567a**

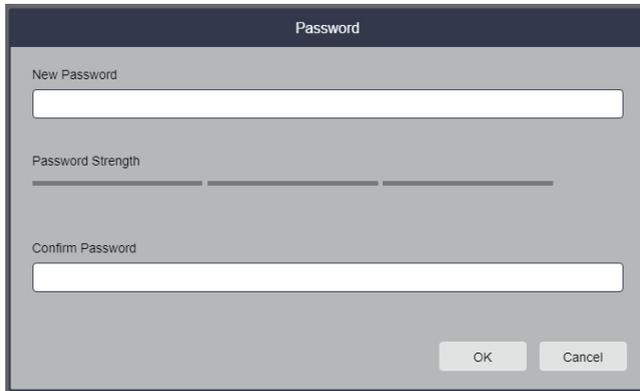
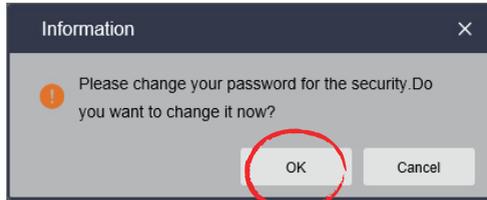


ENGLISH ▾

Login

Operating Instruction

- 4 In the first time accessing the web of the camera, the program will recommend you to change password for more secure the camera.

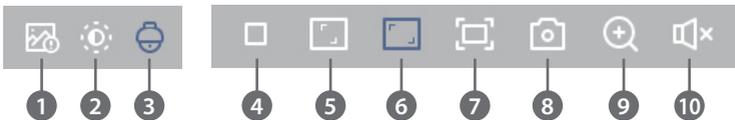
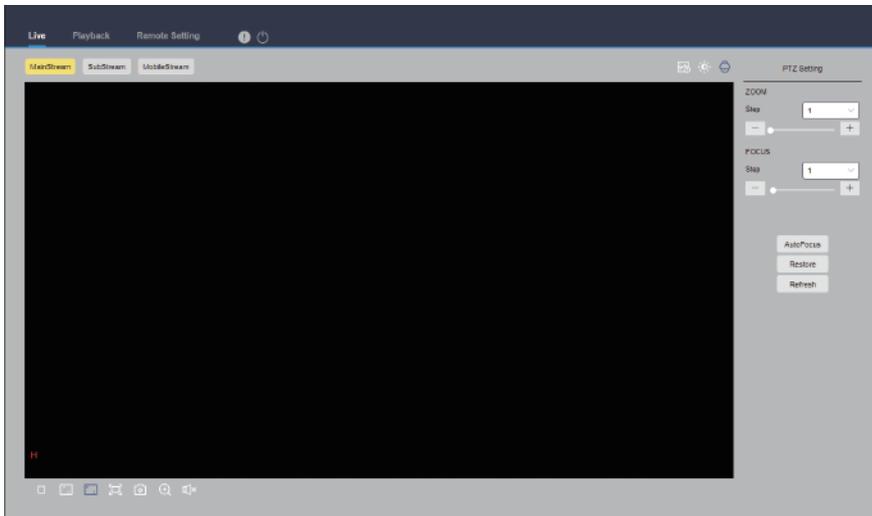


A "Password" change form with a dark blue header. The form has a light gray background and contains the following elements: a "New Password" label above a text input field; a "Password Strength" label above a progress bar; a "Confirm Password" label above another text input field; and "OK" and "Cancel" buttons at the bottom right.

PREVIEW

1. LIVE VIEW

The network camera's Live View page appears in your browser after login. Main Stream/ Sub Stream/ Mobile Stream: Specify the viewable video stream source to display in live view page.



- ① AI Alarm: Open the pan/tilt/zoom operation setting and re-adjust the focus of camera.
- ② Image: Adjust the current image settings, such as image saturation, sharpness, etc.
- ③ PTZ settings: The pan/tilt/zoom operation setting and re-adjust the focus of camera.
- ④ Stop/Play: Open and close the current stream preview.
- ⑤ Original Proportions: Display the current preview image in original proportions.
- ⑥ Stretch: Display the current preview image in a way that fills the display area.
- ⑦ Full Screen: Display the current preview screen in full screen, you can double-click the screen to turn on/off the function, and press Esc to exit the full screen when enabling the function.
- ⑧ Capture: Manually capture the picture of the current stream.
- ⑨ Digital Zoom: Electronically zoom in on certain area of the display screen.
- ⑩ Audio: turn on/off, adjust the sound in current preview.

PREVIEW

The recording status is a simple reminder from the web to the current alarm of the camera, which can show whether the recording is normal. There can be multiple alarms at the same time. Please refer to the following introduction:

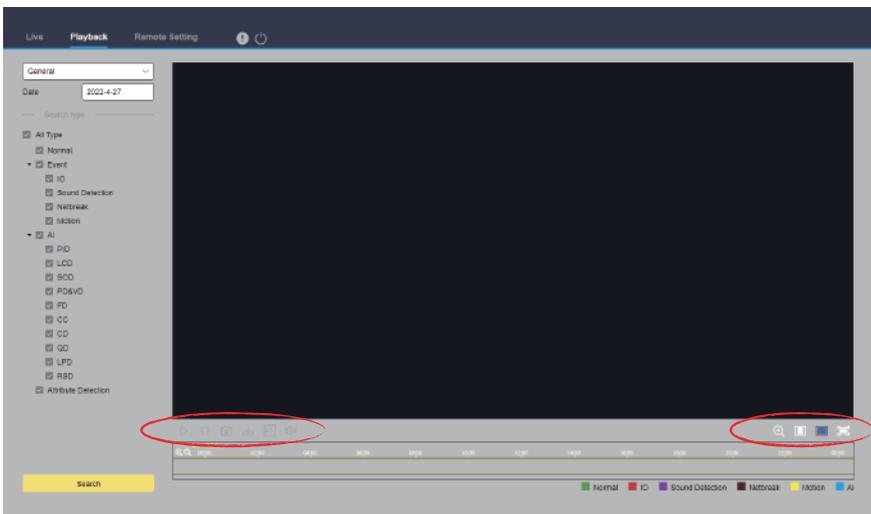
- No icon : The SD card of camera is normal, but no video is being recorded.
- **R** : The camera is performing general recording.
- **H** : The SD card is in an abnormal state, please check the SD card.
- **M** : The camera is in motion alarm, but motion alarm recording is not enabled.
- **M** : The camera is in motion alarm, and motion alarm recording is performing.
- **I** : The camera is in IO alarm, but IO alarm recording is not enabled.
- **I** : The camera is in IO alarm, and IO alarm recording is performing.
- **PIR** : The camera is in PIR alarm, but PIR alarm recording is not enabled.
- **PIR** : The camera is in PIR alarm, and PIR alarm recording is performing.
- **S** : The camera is in smart alarm, but the smart alarm recording is not performed.
- **S** : The camera is in smart alarm and smart alarm recording is performing.

2. PLAYBACK

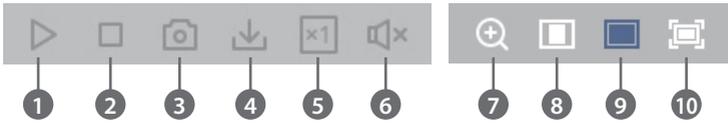
The camera not only needs to allow us to see the real-time image, but also needs to save the image information so that it can be retrieved and viewed when needed.

2-1. General Playback

The playback function is mainly composed of General video search and AI search functions.



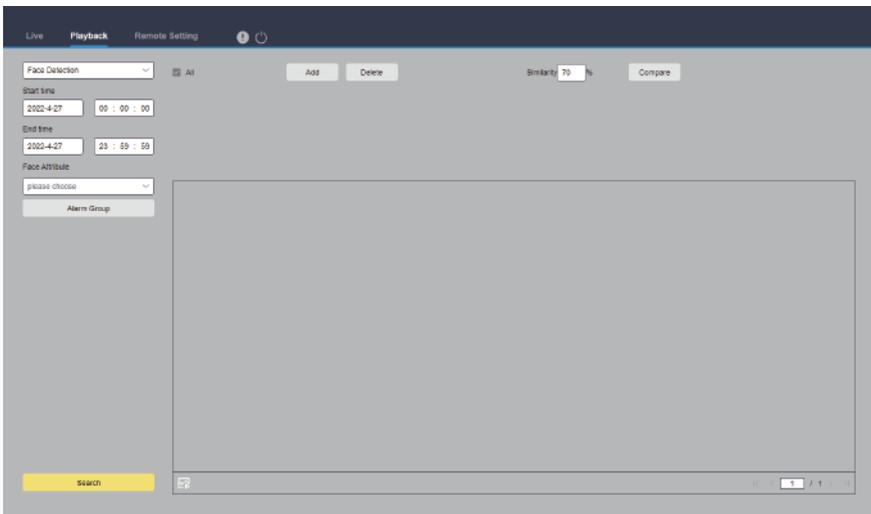
PREVIEW



- ① Pause/Play : Pause/Play playback stream.
- ② Stop : Close the playback stream.
- ③ Capture : Manually capture the picture of the current stream.
- ④ Download : Download the currently searched video.
- ⑤ Speed : Playing speed. Support speed adjustment like 1/8, 1/4, 1/2, 1, X2, X4, X8.
- ⑥ Audio : Turn on/off, adjust the sound of playback stream.
- ⑦ Digital Zoom : Electronically zoom in on certain area of the display stream.
- ⑧ Original Proportions : Display the current preview image in original proportions.
- ⑨ Stretch : Display the current preview image in a way that fills the display area.
- ⑩ Full Screen : Display the current preview image in full screen, you can double-click the screen to turn on/off the function, and press Esc to exit the full screen when enabling the function.

2-2. AI-Face Detection Playback

This function performs, stores the acquired face information to the TF card, and saves the image-related information at the same time. When searching, you can quickly retrieve the face capture according to your demand. The video can also be located based on the capture.



PREVIEW

- **Search mode** : Switch the search mode. Current search mode is AI-Face Detection.
- **Start, End time** : Set the start or end time of search.
- **Face Attribute** : The face attribute is not clicked by default. When enabled, it will only search for the face snapshot pictures when the facial attribute detection is started. The current firmware supports five types of facial attribute detection: Gender, Age, Mask, Glasses, and Expression.
- **Alarm Group** : When capturing face picture, the camera matches the picture to the corresponding combination according to the settings of the face database. With this setting, you can search for pictures of the desired group.
- **Search** : Search face data according to settings.
- **Add** : Add pictures to the picture display area for the Compare function. You can add local pictures and captured pictures.
- **Delete** : Delete the currently added picture.
- **Similarity** : Set the minimum similarity of the feature values matching faces when using Compare function.
- **Compare** : According to the set search time, the group of captured images, and the selected face, face capture search performs by making comparison with reference image.
- **Added image display area** : Display the pictures that have been added and can be used for Compare search.
- **Search result display area** : On the right side, the searched face captures will be displayed according to Search and Compare options. You can double-click the picture to see the playback for a short period before and after the detection.

2-3. AI-Human & Vehicle Detection Playback

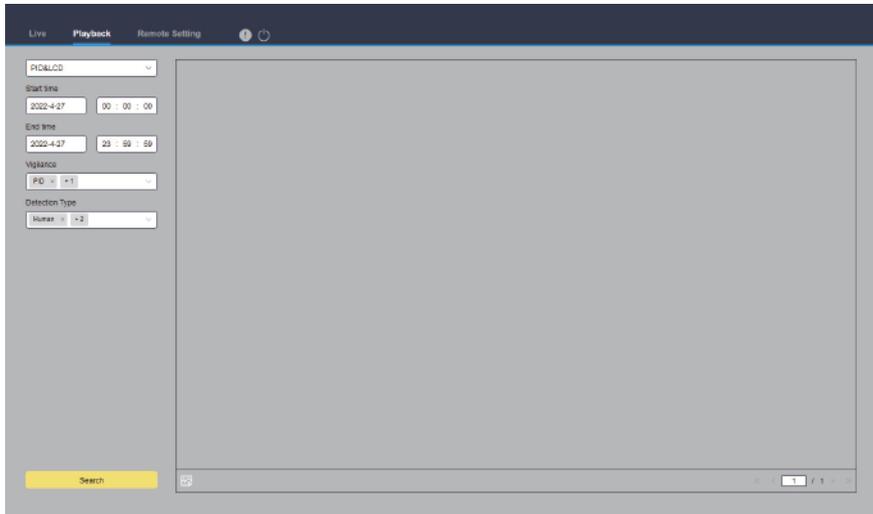
The camera can distinguish between people or cars, and record them, so as to search for the required records.

- **Search mode** : Switch the search mode. Current search mode is AI-Human & Vehicle detection.
- **Start, End time** : Set the start or end time of search.
- **Detection Type** : Set the captures of human or car to be searched, and you can also search both at the same time.
- **SEARCH** : Search for human&vehicle captures according to the search element settings.
- **Search result display area** : Display the search results. Double-click the picture to enter the playback for a short period of time before and after the detection.
- **Search result flip** : You can flip the search results in the lower right corner.

PREVIEW

2-4. AI-PID & LCD Playback

With the development of technology, AI-PID&LCD is added perimeter intrusion & line crossing detection function. It can be alarmed the target of human & vehicle only.

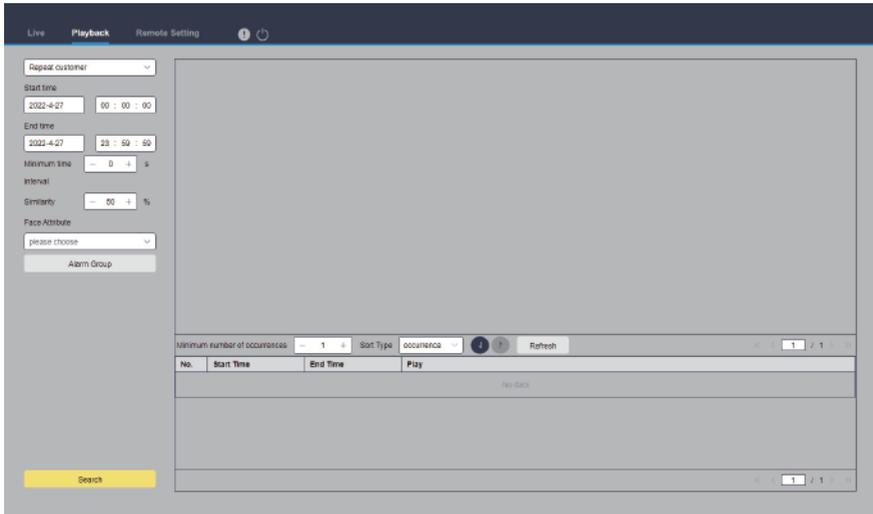


- **Search mode** : Switch the search mode. Current search mode is AI-PID&LCD.
- **Start, End time** : Set the start or end time of search.
- **Vigilance** : Set the capture mode of triggering the alarm to PID or LCD, and it can also be set at the same time.
- **Detection Type** : Set the captures of human or car to be searched, and you can also search both at the same time.
- **Search** : Search for human&vehicle captures according to the search element settings.
- **Search result display area** : Display the search results. Double-click the picture to enter the playback for a short period of time before and after the detection.
- **Search result flip** : You can flip the search results in the lower right corner.

2-5. AI-Repeat Customer Playback

When using the face recognition function, the camera not only can alarm in time, but also can dig out in-depth data to meet user's demand. For example, you can find out whether customers stay in specific area to see products. You can also monitor an area to see if there are suspicious targets often appearing in the area.

PREVIEW



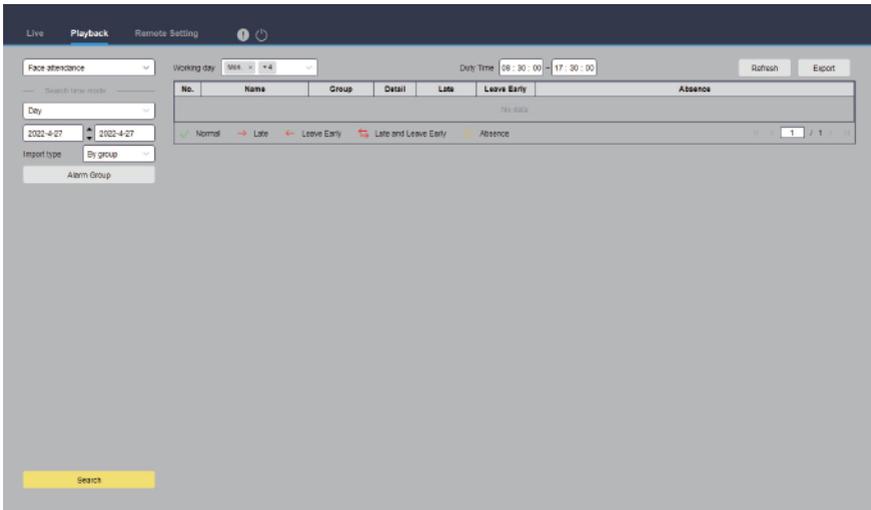
- **Search mode** : Switch the search mode. Current search mode is AI-Repeat Customer.
- **Start, End time** : Set the start or end time of search.
- **Minimum time interval** : Set the minimum interval between two captures of the same target to increase search accuracy.
- **Similarity** : The minimum similarity setting between other pictures and the reference picture when matching repeat customers.
Note - This setting only takes effect when grouping is not checked.
- **Face Attribute** : Filter and search pictures based on facial feature values.
Note - When this option is not set, all pictures can be searched.
- **Alarm Group** : Identify repeat customers based on database grouping.
Note - When the group limit is not set, all pictures are searched, and the Similarity takes effect. Stranger information will be ignored when setting group restrictions.
- **Search** : Search for face capture information.
- **Search result display area** : Display the search results in a stacked manner. Double-click the displayed picture information to list the stacked pictures in the lower area in detail, and click the corresponding picture again to jump to the corresponding quick playback.
- **Minimum number of occurrences** : Filter the search results according to the number of occurrences. You need to click Refresh to display.
- **Sort type** : Sort the search results by time or the number of captures. Ascending and descending order is available. You need to click Refresh to refresh.

PREVIEW

- **Refresh** : Refresh the IE sort according to Minimum number of occurrences and Sort Type.
- **Search result Secondary Display Area** : According to the information selected in the search result display area, the capture of the selected target is displayed in the form of an event list. Click Play button to switch to the corresponding quick playback.

2-6. AI-Face Attendance Playback

Face Attendance function is to retrieve different groups (excluding stranger groups) saved in the SD card that match the human face at a specified time, and generate attendance results based on the captured records.



- **Search mode** : Switch the search mode. Current search mode is AI-Face attendance.
- **Attendance Type** : There are day, week, month, customize and today. After selecting a type, the system will automatically change the start date and end date. Select day, it will automatically synchronize the end date and start date. Select week, it will automatically change the start date and end date to the Monday and Sunday of the week where the selected date is located. Select month, the start date and end date will be automatically changed to the first and last day of the month where the selected date is located. Select customize to customize the search date. Select today to automatically change the start date and end date to the current day.
- **Start, End time** : Set the start or end time of search.

PREVIEW

- **Import type** : Select the import type. There are by group and by face. The former is to take all persons in the existing group as the detection object and search for matching results. The latter is to select people in a certain group to search for matching results.
- **Alarm Group** : When selecting by group, search for face attendance results based on database grouping.
- **Select images** : Click to select the face to be detected. The window shown face image list. Click Alarm Group to select a group, and then click Search, all faces in the group will be searched out. Select the face you want to perform face attendance detection, then click OK to add the face to the Chosen queue. Window can be closed by Cancel.
- **Chosen** : The selected face queue. Click Delete to remove the selected face from the queue, or click All to select all faces. Click Cancel to close the window.
- **Search** : Search face attendance information.
- **Search result display area** : Display the search results in the form of a table on the upper side.
- **Search result secondary display area** : Click on a person, and detailed time information will be displayed at the bottom right. The due time that matches this person will be marked with a red bar. Click the red bar to jump to the corresponding quick playback. Click Detail icon to view detailed information. Click the playback icon to enter the corresponding quick playback.

REMOTE SETTING

• Menu Table

Main	Sub	Tab	Configuration
Channel	Live	Live	Name, Date/Time Format, Flicker Control, Show Name/Time
	Image Control	Image Control	IR-Cut mode, IR-Cut delay, IR-LED, Corridor mode, Angle Trad, Mirror, Backlight, AGC, White Balance, Shutter, Time Exposure, 3DNR
	Video Mask	Video Mask	Enable
	ROI	ROI	Bitrate, Region ID, Enable Region, ROI Level, Non-ROI Fps
Record	Encode	Main Stream, Sub Stream, Mobile Stream	
	Record	Record, Schedule	
	Capture	Capture, Capture Schedule	
Event	Setup	Motion, Sound Detection	
	Alarm	Motion, I/O, Sound Detection	
AI	Setup	FD, PD&VD, PID, LCD, SOD, CC, HM, CD, QD, LPD, RSD, AI Schedule	
	Recognition*	Database Management, Lisenase Plate Management	
	Alarm	FD, FR, AD, LPR, PD&VD, PID, SOD, CC, FA, CD, QD, LPD, RSD	
	Statistics	Face Detection, Pedestrian & Vehicle Detection, Cross Counting Statistics, Heat Map Statistics	
Network	General	General, PPPoE, SNMP, Port Configuration	
	Email	Email Configuration	
	RTSP		
	DDNS	DDNS	Enable, Server, Hostname, Username, Password
	HTTPS	HTTPS	Certificate Type
	IP Filter	IP Filter	Enable, Type, Restricted Type, Sigle Add, Network segment Add
Device	Disk	Disk	Overwrite (Auto, Off)
	Audio	Audio	Enable, Output Volume, Input Volume, Audio code Type

(*) Not Supported

REMOTE SETTING

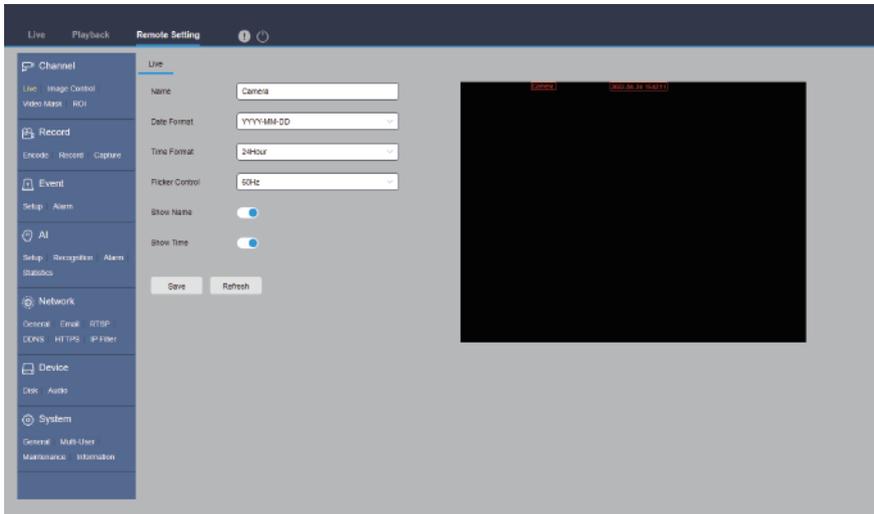
Main	Sub	Tab	Configuration
System	General	Date and Time, Daylight Saving Time	
	Multi-User	Multi-User	Username, Level, Status, Password
	Maintenance	Log, Load Default, Upgrade, Import/Export, Auto Reboot	
	Information	Information	Device Name, Device Type, H/W Version, S/W Version, Web Version, Mac Address

- Product function and manual may be modified without prior notice.

1. CHANNEL

1-1. Live

The Live is to set the location where the channel name, device time, CC and other intelligent function statistics data and the image are superimposed.



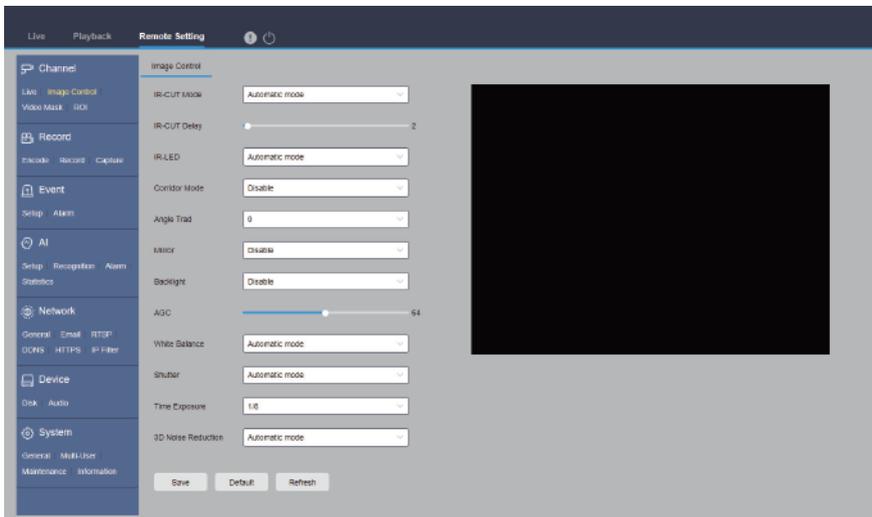
- **Name** : Set the channel name that camera shown on the OSD.
- **Date Format** : Set OSD date format displaying. There are three types: MM/DD/YYYY, YYYY-MM-DD, and DD/MM/YYYY.
- **Time Format** : Set OSD time format. There are 12 hours and 24 hours optional.

REMOTE SETTING

- **Flicker Control** : Set the refresh rate of the image. There are two options of 60Hz and 50Hz, corresponding to N standard and P standard.
- **Show Name** : Set whether to display the channel name in the image.
- **Show Time** : Set whether to show the channel time in the image.
- **Channel Name Display Position** : Set by dragging the channel name on the image.
- **Time Display Position** : Set by dragging the channel time on the image.
- **Alarm Statistics Display Position** : Set by dragging the position of the channel alarm statistics on the image. This setting will only be displayed when the function is enabled.
- **Save** : Save current modification.
- **Refresh** : Re-obtain the current interface parameters.

1-2. Image Control

Image control is to directly control and modify graphics parameters, such as color to black mode, wide dynamic, backlight supplement, etc.



- **IR-Cut mode** : Set the day/night switching mode of the camera, a total of 5 modes.
 - Automatic mode : Automatically control switching mode. Color switching to black white is controlled by image, black white switching to color is controlled by photo sensitive.
 - Color mode : Mandatory color mode, do not switch to black white mode.
 - B/W mode : Mandatory black white mode, do not switch to color mode.

REMOTE SETTING

- Image mode : Similar to the automatic mode, the color-to-black and the black-to-color modes are controlled through the image. (supported by some models)
- Schedule : Switch between black white and color through the schedule setting. To enable this function, you need to set the start and end time of night vision.
- **IR-Cut delay** : Automatic mode and Image Mode switch between day and night, the duration of IR-CUT need to be determined. For example, when switching at the night, it will only be performed when the camera is in the dark for the set time.
- **IR-LED** : Set the fill light effect of the camera's IR LED during night vision.
- Smart IR : Intelligently control the intensity of the IR LED's fill light, and dynamically control the IR LED's fill light according to the focal length and whether the picture is over-exploded.
- Manual : Manual mode, fill light with the set brightness of the IR LED.
- **Corridor mode** : If you set to enable, the image rotates 90°. It is useful when the dome camera was installed on the wall.
- **Angle Trad** : Image rotation setting. Selects 0° or 180°.
- **Mirror** : This function is useful when a camera is installed in upside down. Horizontal mode is reversed left and right. Vertical mode is reversed upside down. Select All mode is same as vertical and horizontal reverse at the same time, the effect is similar to 180° rotation, but the realization principle is different.
- **Backlight** : Set the performance of the firmware in backlight.
- WDR : Wide dynamic mode, according to the set value to make the overall picture in a balanced state, bright and dark areas can be seen clearly.
- HLC : Highlight Compensation. Make the objects in the highlighted area clearer in the image. (Supported by some models)
- Back Light : Make objects clearer in dark places.
- **AGC** : Set the value of Auto Gain Control.
- **White Balance** : Use three primary colors of red, green, and blue to generate white after mixing, which is an indicator of color adjustment.
- Automatic mode: Use the default parameters of the firmware to adjust the white light.
- Manual : The user actively sets the red, green, and blue gains to synthesize white light.
- **Shutter** : Set the shutter exposure time.
- Automatic mode: According to the set Time Exposure value, the firmware automatically selects an appropriate exposure time.
- Manual: Directly use the time set in Time Exposure.
- **Time Exposure** : Set the camera's exposure time, used in conjunction with Shutter. When the exposure time is long, the image will be overexposed, and when the exposure time is short, the picture will be dark.
- **3DNR** : Reduce the noise in the image and make the picture clearer.

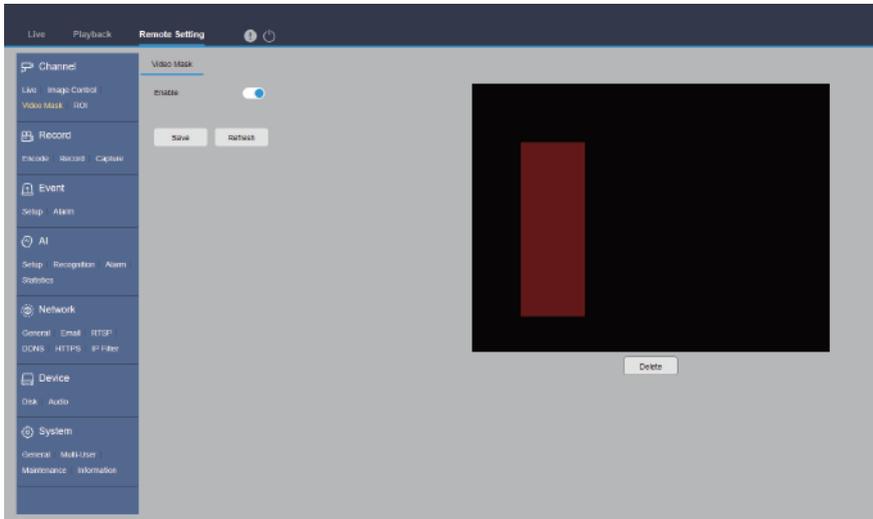
REMOTE SETTING

- **Save** : Save current settings.
- **Default** : Restore parameters to the default.
- **Refresh** : Re-obtain the current interface parameters.

1-3. Video Mask

This function conceals the areas you do not want to appear on the screen.

- Add mask area : Drag the cursor on the screen. It can be set 1~4 areas.
- Remove mask area : Select a mask area and click the delete button.



1-4. ROI

ROI allows that you can select an area as an important or sensitive area from the video. This area can be set to a different frame rate and resolution with the non-selected area. Set the region area to drag the cursor on the screen.

- **Bitrate** : Select the bitrate to be set.
- **Region ID** : Select the region ID, 1~8 regions can be set.
- **Enable Region** : Turn on the region area of selected region ID .
- **ROI Level** : Set the image quality in the area. The higher the quality is, the higher the resolution and frame rate are.
- **Non-ROI Fps** : Set the frame rate outside the region.

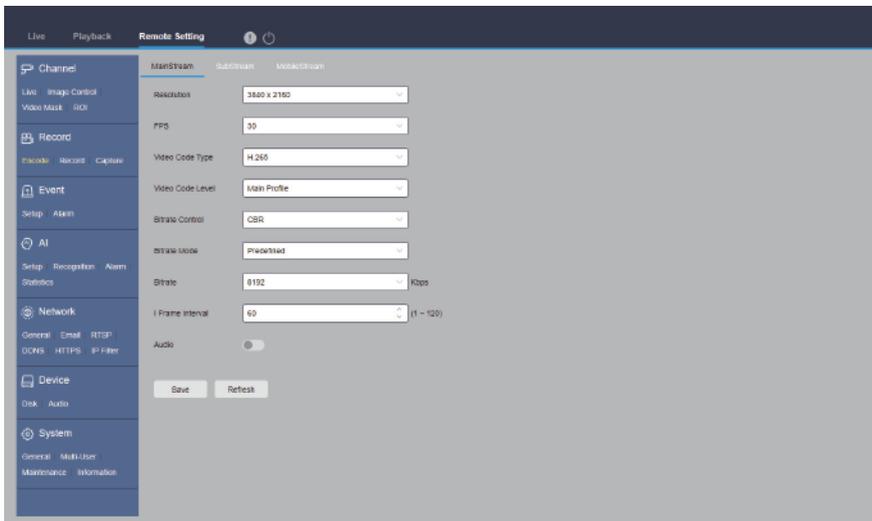
REMOTE SETTING

2. RECORD

This menu allows you to configure the preview and recording parameters.

2-1. Encord

This menu allows you to configure the image quality of recorded video or network transmission. Generally, the main stream is the quality of the recorded video that will be saved in the HDD; the sub stream is the preview video quality through remote access (such as web client and CMS). The mobile stream which can be disabled defines the preview quality of the mobile device through remote access.



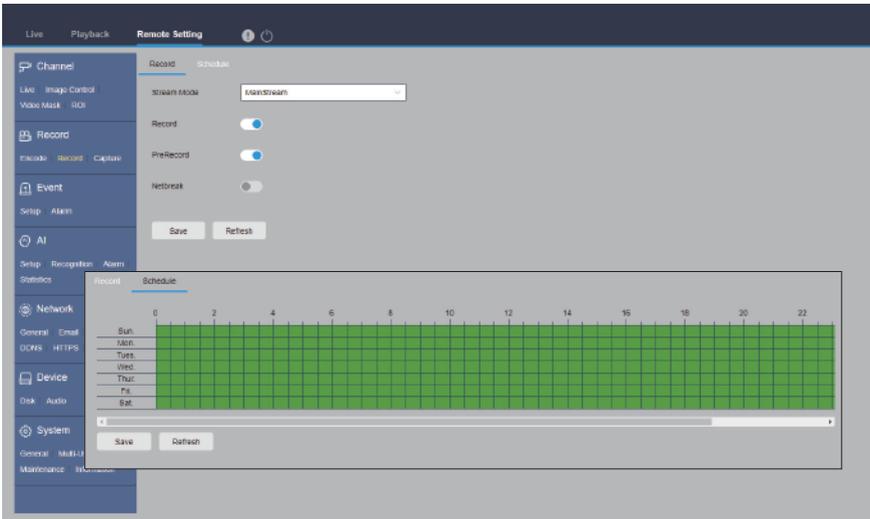
- **Resolution** : The resolution of the recorded image.
- **FPS** : The number of frames recorded by IPC.
- **Video Code Type** : Decoding type, there are H264, H265, and MJPEG. (MJPEG mode only exists in sub-stream mode)
- **Video Code Level** : Video quality level, including Bestline, Main Profile and High Profile (for H265, only Main Profile is available).
- **Bitrate Control** : Select the bitrate level. For simple scenes, such as gray walls, a constant bit rate (CBR) is suitable. For more complex scenes, such as busy streets, variable bit rate (VBR) is more suitable.
- **Bitrate Mode** : If you want to set the bitrate yourself, please select the "Custom" mode. If you want to select a preset bitrate, select "Preset Mode".

REMOTE SETTING

- **Bitrate** : The data transmission speed that IPC uses to record. Video with higher bitrate will have better quality.
- **I Frame Interval** : Set the I frame interval, only IPC can be set.
- **Audio** : If you want to record audio and video at the same time, and connect a mic to the IPC or use a camera with audio capabilities, turn to enable mode.

2-2. Record

Recording parameters can be set.



• Record

- **Stream Mode** : The video stream to be saved in the SD card in recording mode. The default is the main stream.
- **Record** : Check to enable recording.
- **PreRecord** : If this option is enabled, the IPC will start recording a few seconds before the alarm event occurs. If your camera's main recording type is based on motion detection or I/O alarm, it is recommended to use this option.
- **Netbreak** : Recording when the network is disconnected.

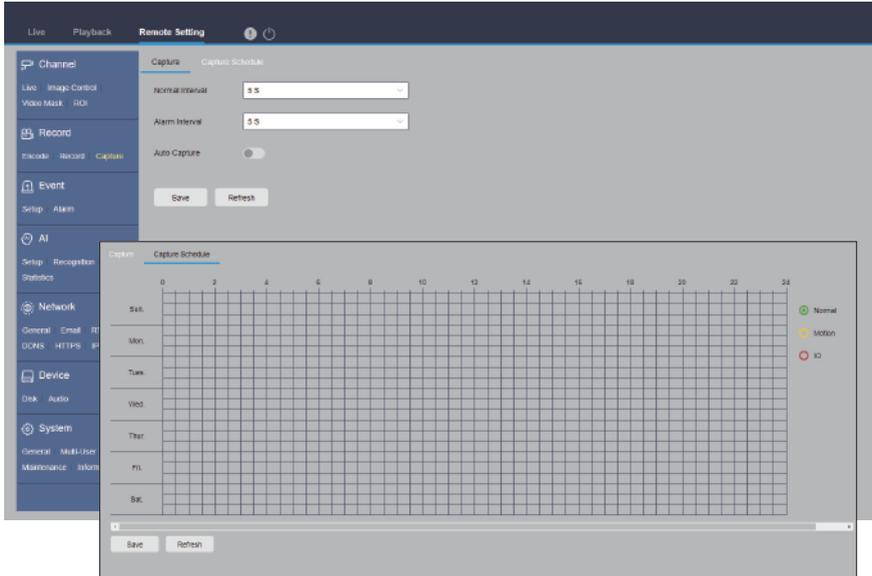
• Schedule

When the IPC will record video, which can be set in the recording schedule. Only during the selected time period will the recording be performed. Drag the cursor to mark the area.

REMOTE SETTING

2-3. Capture

Video capture parameters can be set.



• Capture

- **Normal Interval :** The video stream to be saved in the SD card in recording mode. The default is the main stream.
- **Alarm Interval :** Check to enable recording.
- **Auto Capture :** If this option is enabled, the IPC will start recording a few seconds before the alarm event occurs. If your camera's main recording type is based on motion detection or I/O alarm, it is recommended to use this option.

• Capture Schedule

When the IPC will capture video, which can be set in the capture schedule. Only during the selected time period will be performed. Drag the cursor to mark the area.

REMOTE SETTING

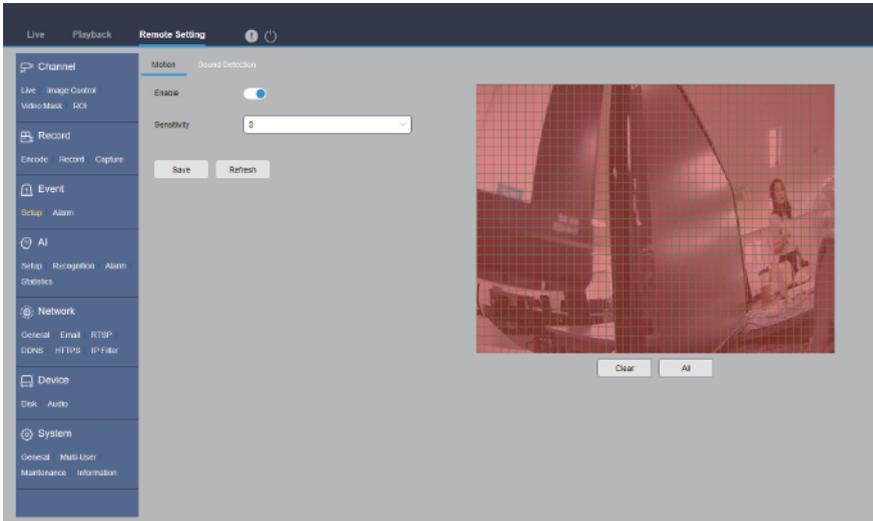
3. EVENT

This menu allows you to configure the preview and recording parameters.

3-1. Setup

• Motion Detection

This menu allows you to configure motion detection parameters. When motion is detected, a series of alarms are triggered, such as sending an email alert with additional images from the camera (if this option is enabled), pushing notifications via mobile APP. Drag the left mouse button to delimit the detection area in the right window. Only movement in the area will trigger an alarm.



- **Enable** : Enable or disable motion detection.
- **Sensitivity** : Set the sensitivity of motion detection. There is more large value, there is more sensitive.

• Sound Detection

When the camera detects a change in the connected audio and meets the requirements of the alarm detection setting, an alarm will be triggered.

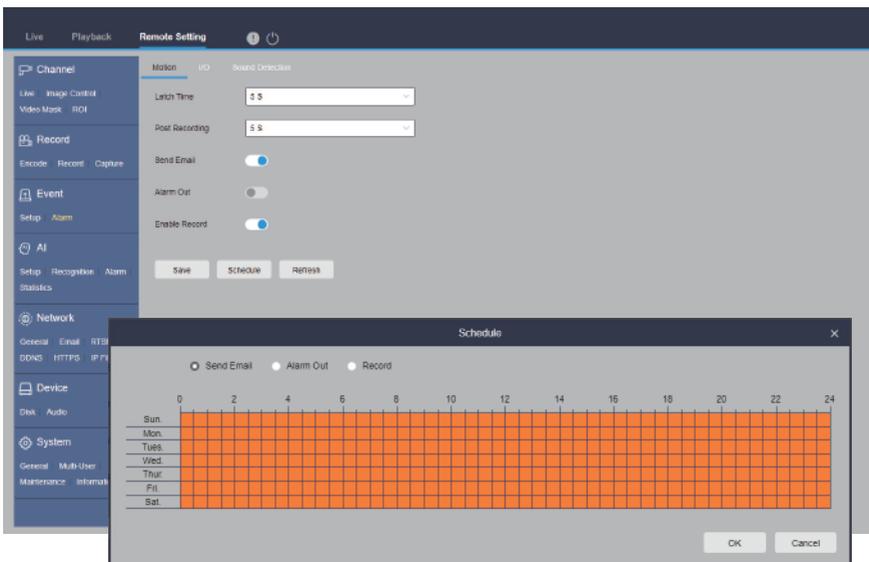
- **Enable** : Enable or disable sound detection.
- **Rise** : The alarm will be triggered only when the volume rises steeply.
- **Rise Sensitivity** : Fine-tuning sound rise sensitive detection, it can be set to 1-100.

REMOTE SETTING

- **Sound Intensity** : Coarse-tuning sound rise sensitive detection, it can be set to 1~100. The higher value is hard to trigger alarm.
- **Decline** : Turn on the sound drop detection, when the sound suddenly increases and decreases in a short period of time, trigger the sharp drop alarm.
- **Decline Intensity** : The decline sensitive can be set to 1-100. The higher value is easy to trigger alarm.
- **Schedule** : Set the time schedule of sound detection. It is fully enable by default. The user can customize the time period of touch sound alarm.

3-2. Alarm

This menu can set the actions to be executed when various alarms are triggered.



• Motion

- **Latch Time** : Set the external alarm triggering time when motion is detected.
- **Post Recording** : Set the duration of the device's recording after the event occurs.
- **Send Email** : Set the camera to send email to your mailbox when it detects motion.
- **Alarm Out** : Optional function. If your camera supports to connect an external alarm device, you can enable this function to activate the external alarm device.
- **Enable Record** : When the alarm is triggered, the video recording will be activated.

REMOTE SETTING

- **Schedule** : Set the scheduled time of each alarm action. A series of alarm actions will be executed within the scheduled time.

• I/O

This is an optional function. This function can be enabled only if the camera supports I/O sensors and meanwhile is connected an external I/O alarm device.

- **Alarm Type** : Select a type that matches your sensor type, or select "Off" to turn off the sensor trigger function.
- **Latch Time** : Set the time that I/O alarm continues to alarm after the alarm ends.
- **Post Recording** : Set the duration of the device's recording after the event occurs.
- **Send Email** : Set the camera to send email to your mailbox when it detects I/O.
- **Alarm Out** : Optional function. If your camera supports to connect an external alarm device, you can enable this function to activate the external alarm device.
- **Enable Record** : When the alarm is triggered, the video recording will be activated.
- **Schedule** : Set the scheduled time of each alarm action. A series of alarm actions will be executed within the scheduled time.

• Sound Detection

- **Latch Time** : Set the external alarm triggering time when motion is detected.
- **Post Recording** : Set the duration of the device's recording after the event occurs.
- **Send Email** : Set the camera to send email to your mailbox when it detects motion.
- **Alarm Out** : Optional function. If your camera supports to connect an external alarm device, you can enable this function to activate the external alarm device.
- **Enable Record** : When the alarm is triggered, the audio recording will be activated.
- **Schedule** : Set the scheduled time of each alarm action. A series of alarm actions will be executed within the scheduled time.

4. AI

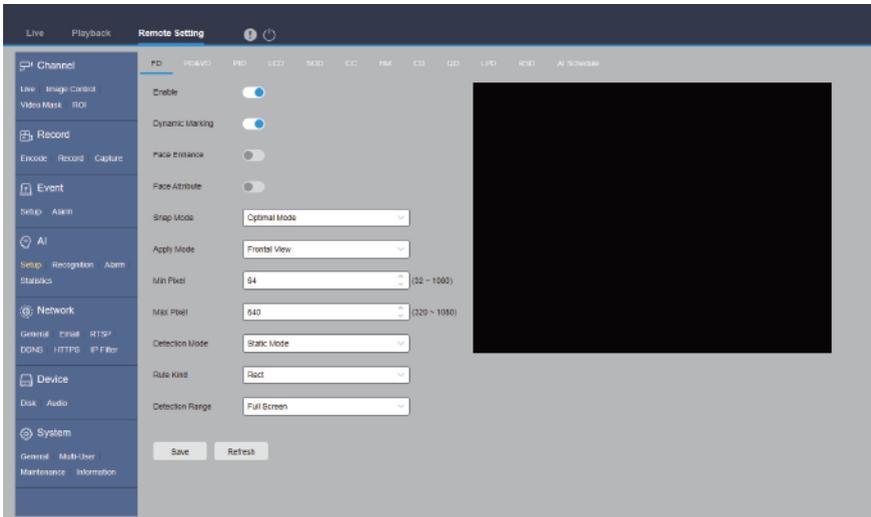
4-1. Setup

To use AI smart alarm, you need to enable the corresponding alarm function in the Setup menu first. This function requires the computing power of the camera. Due to the limitation of the camera's performance, HM and other functions can be enabled at the same time, whereas PID, LCD, SOD, FD, PD&VD, CC, CD, and QD cannot be enabled at the same time.

REMOTE SETTING

• FD (Face Detection)

The camera detects the face target to obtain captures that meet the requirements, then calculate the facial feature data of the captures through the face model algorithm, and compare it with the face database to trigger alarm.



- **Enable** : Select the enable or disable function.
- **Dynamic Marking** : Display the detection frame. Enable/disable the detection rule.
- **Face Enhance** : Increase the capture effect of moving targets. Meanwhile, it also adjusts the brightness of the face closest to the camera to optimize the snapshot effect.
- **Face Attribute** : Detect face capture by recognizing attributes, like age, gender, mask, glasses, expressions. (Note: This function needs to be enabled to use AD alarm.)
- **Snap Mode** : You can enable the push reception on the preview interface or connect to the NVR to view the push effect.
 - Optimal Mode: The camera detects the target until the target disappears, and only pushes an optimal picture when target disappears.
 - RealTime Mode: When camera detects the target, it immediately pushes a picture. When the target disappears, it will push the best picture.
 - Interval Mode: Set the number of snapshots and the interval between snapshots and pushes. Snap Num can be set as: 1, 2, 3 and unlimited

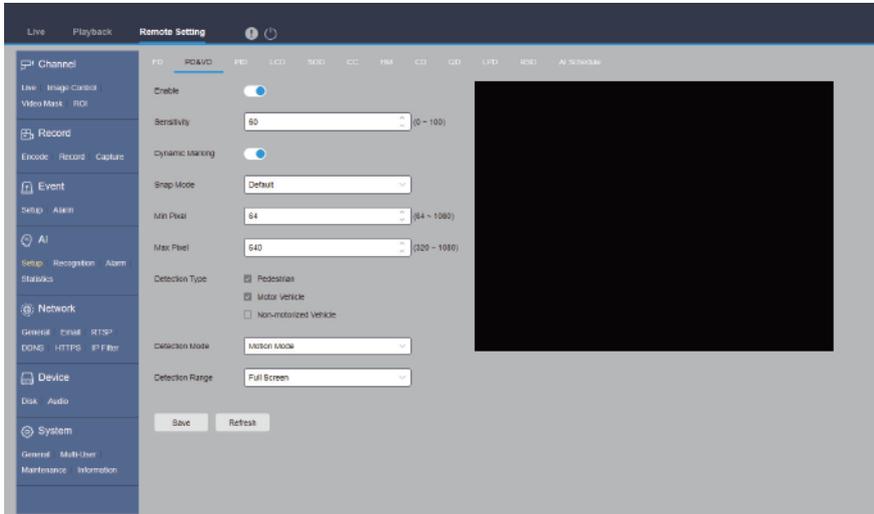
REMOTE SETTING

- **Apply Mode** : Filter the captures. Only captures that meet the set angle conditions can generate a push alarm.
 - Frontal View: Only push the frontal image of the target.
 - Multi Angle: It can push the image that only detects the side face.
 - Customize: Customize the angle of the target that can be pushed. Selecting this function, the settings items like Roll Range, Pitch Range, Yaw Range, Picture Quality, as well as Frontal Default and Multi Default buttons will be added.
- **Roll Range, Pitch Range** : This option is only available if 'Customize' is selected. Set the rotation angle of the capture in 3D model. When the angle does not meet the settings, face detection can be performed but not pushed.
- **Yaw Range** : This option is only available if 'Customize' is selected. Set the horizontal deflection angle of the capture in 3D model. When the angle does not meet the settings, face detection can be performed but not pushed.
- **Picture Quality** : This option is only available if 'Customize' is selected. It used to filter out non-face captures that are detected by mistake.
- **Min Pixel** : Based on the resolution of 1080P, face pictures that are less than min pixel will be filtered out. The default resolution is 64×64 pixels.
- **Max Pixel** : Based on the resolution of 1080P, face targets that are over max pixel will be filtered out. The default resolution is 640×640 pixels.
- **Detection Mode** : Filter the behavior of the target in camera.
 - Static Mode: Detect all faces.
 - Motion Mode: Filter out static faces, such as the face of portraits and statues.
- **Rule Kind** : Select the detection rule.
 - Rect: Only detect face targets in the set area.
 - Line: The face target is tracked after crossing the detection line according to the setting.
- **Detection Range** : This option is only available if 'Rule Kind' is selected as 'Rect'.
 - Full Screen: Detect all areas that can be monitored by camera
 - Customize: The Area box appears on the screen. You can drag or stretch this box for the detection area.
- **Rule Type** : This option is only available if 'Rule Kind' is selected as 'Line'. Sets the direction of the target movement.

REMOTE SETTING

• PD&VD (Pedestrian & Vehicle Detection)

Through this function, camera can recognize pedestrian or vehicle in the image, trigger an alarm, and record the corresponding screenshot.



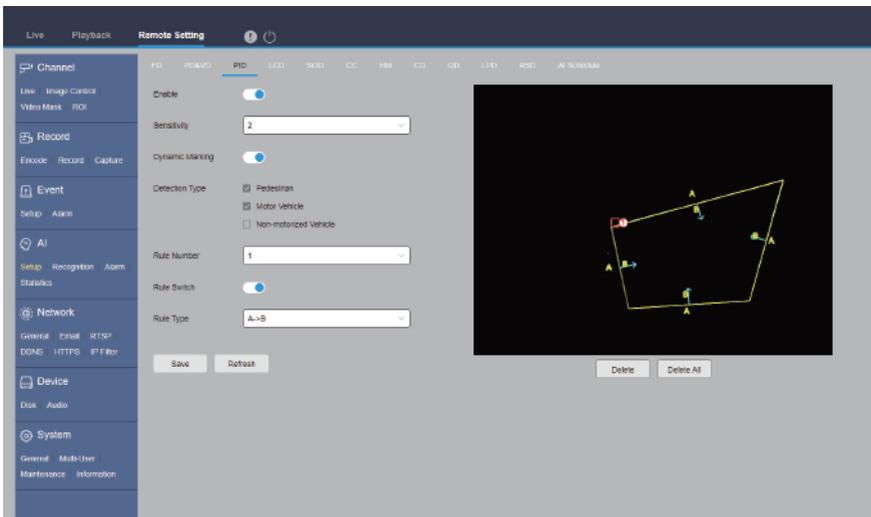
- **Enable** : Select the enable or disable function.
- **Sensitivity** : The larger the value is, the more accurate the detection is. But false alarm will also be more.
- **Dynamic Marking** : Display the detection frame. Enable/disable the detection rule.
- **Snap Mode** : You can enable the push reception on the preview interface or connect to the NVR to view the push effect.
 - Default: Camera detects until the target disappears. One picture relating human or vehicle will be pushed when the target disappears.
 - RealTime Mode: When camera detects the target, it immediately pushes a capture. When the target disappears, it will push a capture again.
 - Interval Mode: Set interval to push captures.
- **Min Pixel** : Based on the resolution of 1080P, person or vehicle pictures that are less than min pixel will be filtered out.
- **Max Pixel** : Based on the resolution of 1080P, person or vehicle pictures that are over max pixel will be filtered out.
- **Detection Type** : Select targets to detect. If nothing is selected, it means that it detects all objects on the area.
- **Detection Mode** : Filter the behavior of the target in camera.

REMOTE SETTING

- Static Mode: Detect all pedestrians or vehicles.
- Motion Mode: Filter out pedestrians or vehicles.
- **Detection Range** : This option is only available if 'Rule Kind' is selected as 'Rect'.
- Full Screen: Detect all areas that can be monitored by camera.
- Customize: The Area box appears on the screen. You can drag or stretch this box for the detection area.

• PID (Perimeter Intrusion Detection)

When target enters or leaves the alarming zone, the alarm will be triggered through Perimeter Intrusion Detection (PID) function.

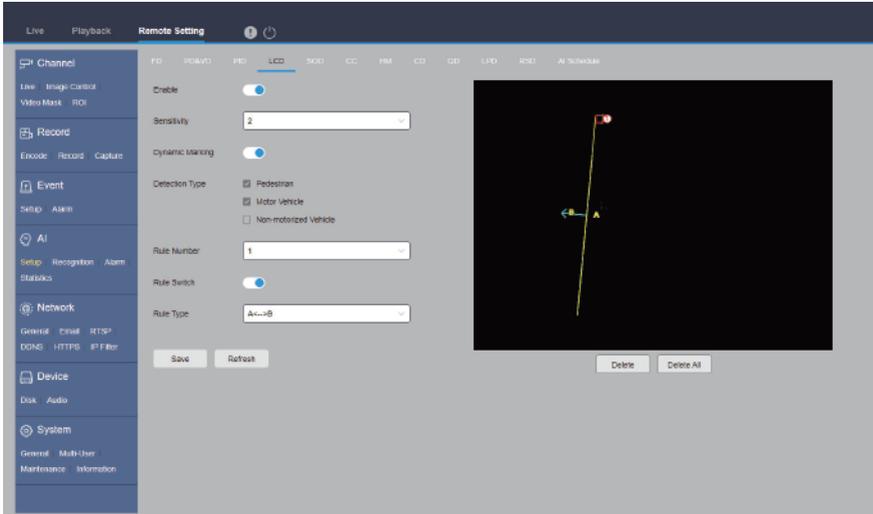


- **Enable** : Select the enable or disable function.
- **Sensitivity** : The higher value, the more accurate the detection. However, there may be more false alarms.
- **Dynamic Marking** : Enable/disable the detection rule. You can set the detection area to drag or stretch this box.
- **Detection Type** : Select targets to detect. If nothing is selected, it means that it detects all objects on the area.
- **Rule Number** : Select the rule number. It can be set up to 4.
- **Rule Switch** : The switch to enable/disable each rule.
- **Rule Type** : Sets the direction of the target movement.

REMOTE SETTING

• LCD (Line Crossing Detection)

When target cross the preset line, the alarm will be triggered through Line Cross Detection function.

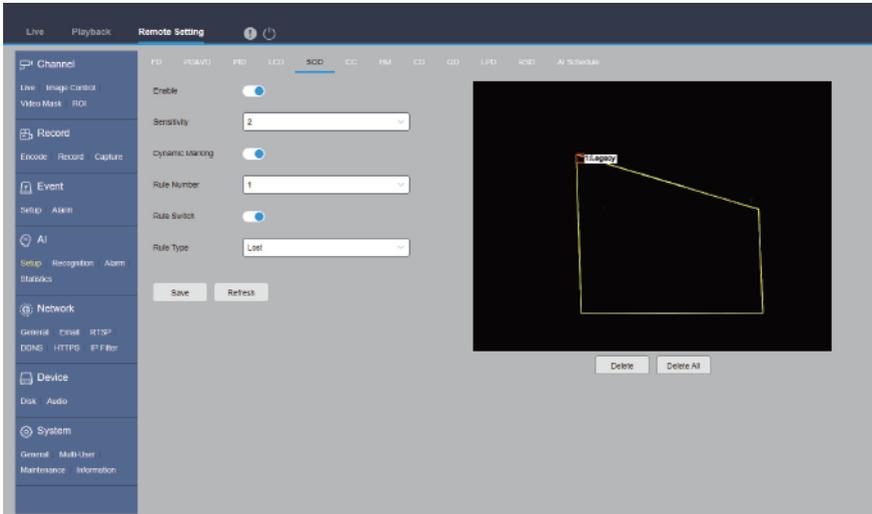


- **Enable** : Select the enable or disable function.
- **Sensitivity** : The higher the value, the more accurate the detection. However, there may be more false alarms.
- **Dynamic Marking** : Enable/disable the detection rule. You can set the detection rule to click or drag line on the screen.
- **Detection Type** : Select targets to detect. If nothing is selected, it means that it detects all objects crossing the line.
- **Rule Number** : Select the rule number. It can be set up to 4.
- **Rule Switch** : The switch to enable/disable each rule.
- **Rule Type** : Sets the direction of the target movement.

REMOTE SETTING

• SOD (Stationary Object Detection)

This function is that detects legacy or lost objects in monitoring area and triggers alarms.

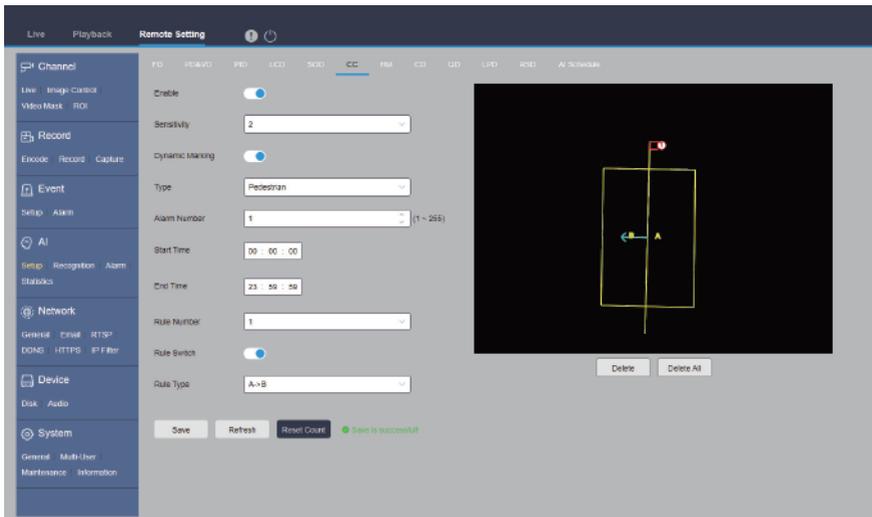


- **Enable** : Select the enable or disable function.
- **Sensitivity** : The higher the value, the more accurate the detection. However, there may be more false alarms.
- **Dynamic Marking** : Enable/disable the detection area. You can set the detection rule to click or drag area on the screen.
- **Rule Number** : Select the rule number. It can be set up to 4.
- **Rule Switch** : The switch to enable/disable each rule.
- **Rule Type** : Select one of the Legacy, Lost or Legacy&Lost detection rules.

• CC (Cross Counting)

Camera can record the specific objects crossing line in monitoring area by Cross Counting(CC) function. Set the crossing line, there are two areas (A and B) on two sides of line. When the rule is A→B. it means object crosses the line from area A to area B. The count in increases by one. When the object enters from area B and cross the line to area A, the count out increases by one. The alarm will only be triggered when the count in minus the count out is greater than or equal to the set Alarm Number count.

REMOTE SETTING

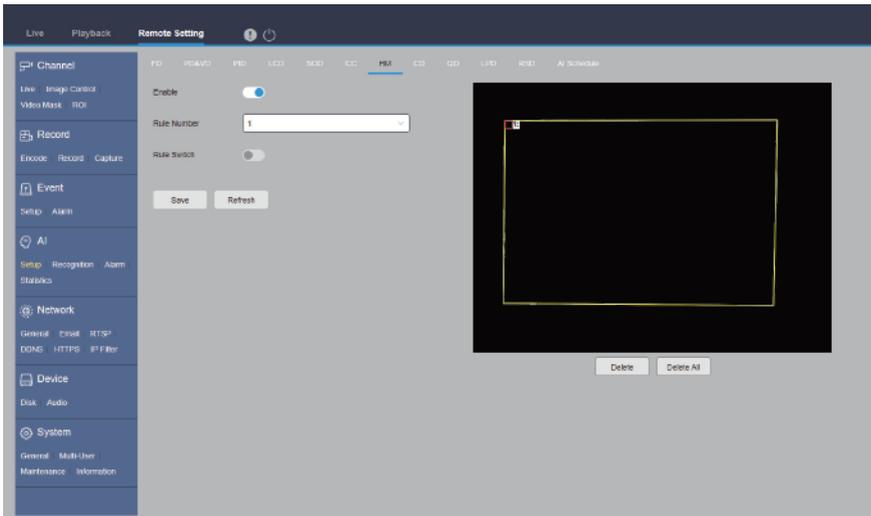


- **Enable** : Select the enable or disable function.
- **Sensitivity** : The higher the value, the more accurate the detection. However, there may be more false alarms.
- **Dynamic Marking** : Enable/disable the detection area. You can set the detection rule to click or drag area on the screen.
- **Type** : Select targets to detect. If motion is selected, it means that it detects all objects on the area.
- **Alarm Number** : Set the condition of alarm. Camera can update the account. When the count in minus the count out is greater than or equal to the set Alarm Number count, the alarm will be triggered.
- **Start/End Time** : Set the start and end time of activate a function.
- **Rule Number** : Select the rule number. It can be set up to 4.
- **Rule Switch** : The switch to enable/disable each rule.
- **Rule Type** : Sets the direction of the target movement. If set to A→B, it means objects enter from area A and leave from area B. The count in will increase.
- **Reset Count** : Clear the displayed count.

REMOTE SETTING

• HM (Heat Map)

The Heat Map statistics function uses a logic similar to motion to judge whether there is a change in transmission in each area of the monitoring area, and save and upload the change at 10 minute intervals. Through a large number of statistics, user can view the change in each area in the scene. This feature supports data logging, not alarm.



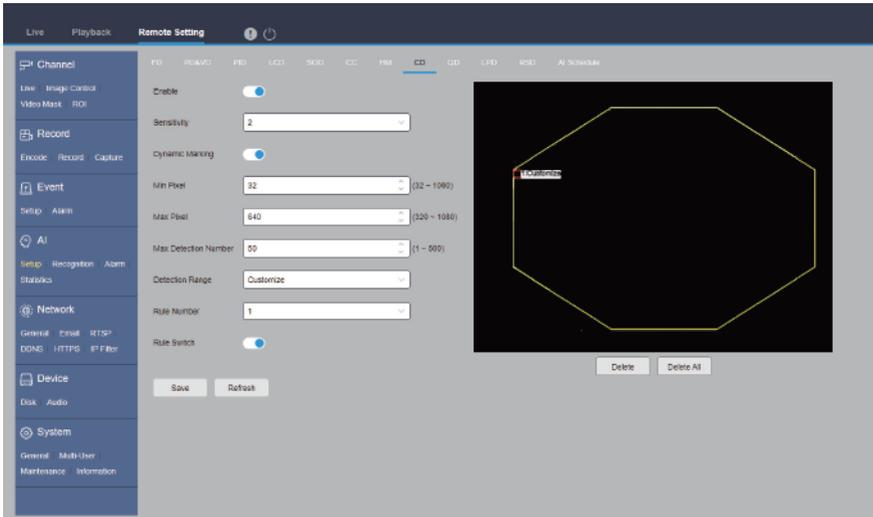
- **Enable** : Select the enable or disable function.
- **Rule Number** : Select the rule number. It can be set only one.
- **Rule Switch** : The switch to enable/disable a rule.
- **Monitoring Area Setting** : Full Screen box is default. You can edit the detection area to drag or stretch this box.

• CD (Crowd Density Detection)

This function is the way of identifying the human head through the human figure recognition function, recognizes the number of people in the monitoring area. The alarm will be triggered when the number of people exceeds the preset value.

- **Enable** : Select the enable or disable function.
- **Sensitivity** : The higher value, the more accurate the detection. However, there may be more false alarms.

REMOTE SETTING

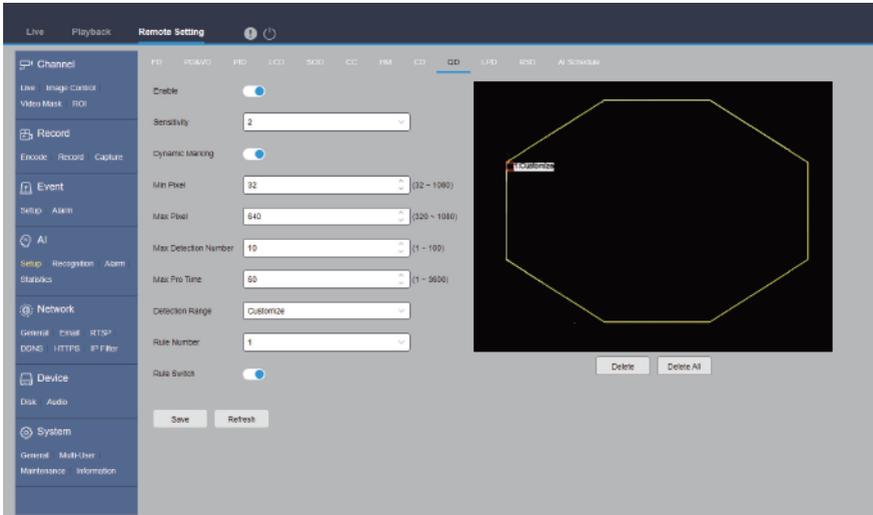


- **Dynamic Marking** : Enable/disable the detection rule.
- **Min Pixel** : Based on the resolution of 1080P, the picture of heads that are less than min pixel will be filtered out.
- **Max Pixel** : Based on the resolution of 1080P, the picture of heads that are over max pixel will be filtered out.
- **Max Detection Number** : The maximum number of heads allowed to be detected in the detection area. If this number is exceeded, an alarm will be triggered.
- **Detection Range** : Selects detection area type.
 - Full Screen: Detect all areas that can be monitored by camera.
 - Customize: The polygon area appears on the screen. You can set the detection area to drag or stretch of polygon.
- **Rule Number** : This option is only available if 'Detection Range' is selected as 'Customize'. The rule number can be set only one.
- **Rule Switch** : This option is only available if 'Detection Range' is selected as 'Customize'. The switch to enable/disable each rule.

REMOTE SETTING

• QD (Queue Length Detection)

When the queue or the waiting time is too long, an alarm will be triggered by Queuing Detection(QD) function.



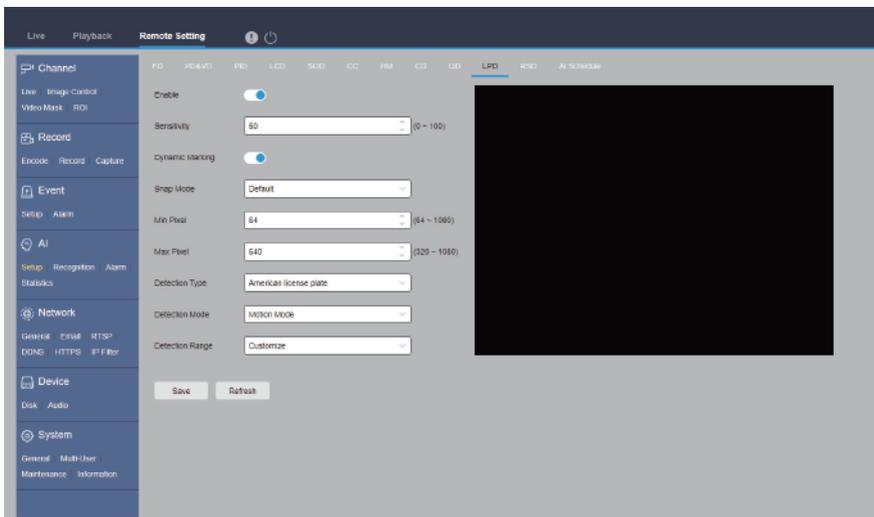
- **Enable** : Select the enable or disable function.
- **Sensitivity** : The higher the value, the more accurate the detection. However, there may be more false alarms.
- **Dynamic Marking** : Enable/disable the detection rule.
- **Min Pixel** : Based on the resolution of 1080P, the picture of heads that are less than min pixel will be filtered out.
- **Max Pixel** : Based on the resolution of 1080P, the picture of heads that are over max pixel will be filtered out.
- **Max Detection Number** : The maximum number of heads allowed to be detected in the detection area. If this number is exceeded, an alarm will be triggered.
- **Max Pro Time** : Set the time that allows target leave the detection area. An alarm will be triggered when no one has left the detection area for a long time. (Note: The counting is restarted only when target leaves the detection area. If the target suddenly disappeared in the area, it will be ignored.)
- **Detection Range** : Selects detection area type.
 - Full Screen: Detect all areas that can be monitored by camera.
 - Customize: The polygon area appears on the screen. You can set the detection area to drag or stretch of polygon.

REMOTE SETTING

- **Rule Number** : This option is only available if 'Detection Range' is selected as 'Customize'. The rule number can be set only one.
- **Rule Switch** : This option is only available if 'Detection Range' is selected as 'Customize'. The switch to enable/disable each rule.

• LPD (License Plate Detection)

This function recognizes the license plate of a passing vehicle and distinguishes whether the vehicle is registered in the database or not. Currently, license plate testing only supports license plates in Europe and the Americas.



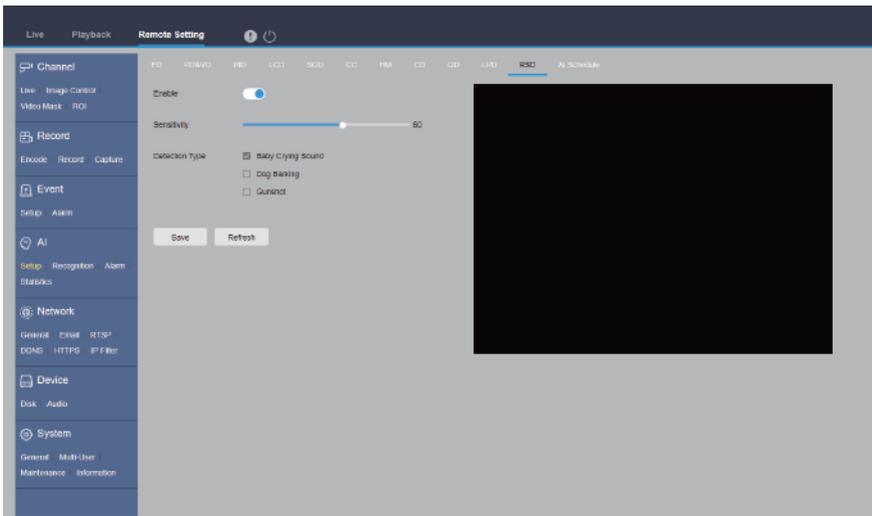
- **Enable** : Select the enable or disable function.
- **Sensitivity** : The higher the value, the more accurate the detection. However, there may be more false alarms.
- **Dynamic Marking** : Enable/disable the detection rule.
- **Snap Mode** : When push reception is enabled, set the snapshot mode to dock the NVR from the preview interface.
 - Default : Camera detects missing targets. Snapshot the license plate image only when the target disappears.
 - Real time mode : Snapshot as soon as the camera detects the target, and detect another target when the target disappears.
 - Interval Mode : Snapshot mode operation according to the set push notification interval.

REMOTE SETTING

- **Min Pixel** : Minimum recognition pixel box. License plate must be larger than the minimum set pixel to be recognized.
- **Max Pixel** : Maximum recognition pixel box. License plate must be less than the maximum set pixel to be recognized
- **Detection Type** : Select the type of license plate you want to detect. There are European license plates and American license plates.
- **Detection Mode** : Select license plate detection mode.
 - Static mode : Detect static license plates on the screen.
 - Motion Mode : Detects the license plate of a moving vehicle, except for the license plate of a stationary vehicle.
- **Detection Range** : Selects detection area type.
 - Full Screen: Detect all areas that can be monitored by camera.
 - Customize: The polygon area appears on the screen. You can set the detection area to drag or stretch of polygon.

• RSD (Rare Sound Detection)

Sound anomaly detection can be set up according to the needs of the scene, such as the crying of a child, the shooting of a gun, and the barking of a dog.



REMOTE SETTING

- **Enable** : Select the enable or disable function.
- **Sensitivity** : The higher the value, the more accurate the detection. However, there may be more false alarms.
- **Detection Type** : Choose the type of anomaly sound you want to detect.

• AI Schedule

The set AI functions may be individually scheduled for operation.

The screenshot displays the 'AI Schedule' configuration page. At the top, there are tabs for various AI functions: FD, PD&VD, PID, LCD, SOD, CC, HM, CD, QD, LPD, RSD, and 'AI Schedule' (which is selected). Below the tabs, there is an 'Enable' toggle switch that is currently turned on. Underneath, there are radio buttons for each function: FD, PD & VD, PID, LCD, SOD, CC, CD, QD, LPD, HM, and RSD. The 'PD & VD', 'PID', 'LCD', 'SOD', 'CC', 'CD', 'QD', and 'LPD' radio buttons are selected, while 'FD', 'HM', and 'RSD' are not. Below this is a 24-hour grid with rows for each day of the week (SUN, MON, TUES, WED, THUR, FRI, SAT). The grid is currently empty, indicating no specific time slots are scheduled. At the bottom right, there is a note: 'Functions are mutually exclusive'. At the bottom left, there are 'Save' and 'Refresh' buttons.

4-2. Recognition

The face recognition function focuses on identifying the detected object, which requires basic data as a comparison. The firmware establishes a database foundation for face matching through database management functions.

• Database Management

* This feature is not supported

• License Plate Management

* This feature is not supported

REMOTE SETTING

4-3. Alarm

The alarm can be realized by camera's AI function. It can be divided into 3 categories according to the implementation mode:

1) The first category includes FD, AD, PD&VD, PID, LCD, SOD, CC, CD, QD.

When the camera detects an alarm event, it directly triggers an alarm.

2) The second category is FR.

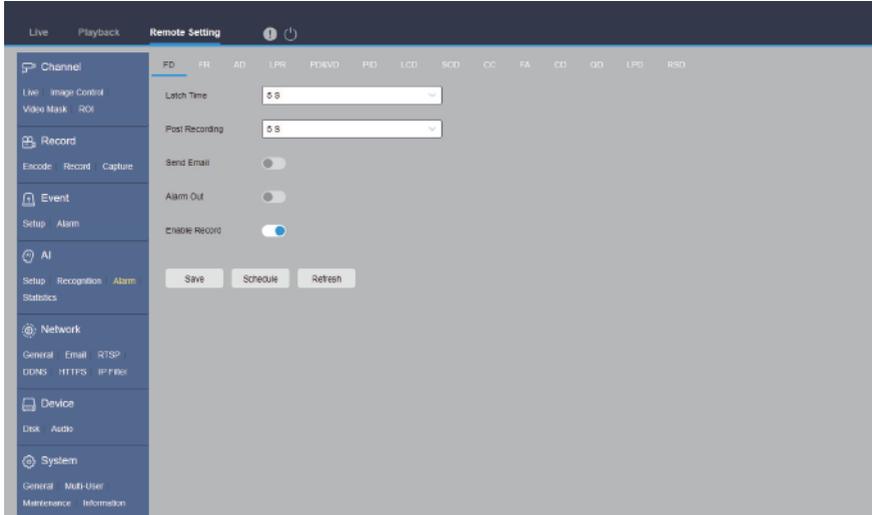
The camera obtains the alarm picture, recognizes the facial feature value of the picture and compares it with the data in the database, and then trigger the alarm according to the corresponding alarm grouping settings.

3) The third category is FA.

The camera automatically searches for data at a specific time and send a push alarm to email.

• FD, AD, PD&VD, PID, LCD, SOD, CC, CD, QD

When the camera detects an alarm event, it will directly trigger an alarm.



• **Alarm Type** : Special option for AD alarm. The camera can alarm by identifying whether the captured object is wearing a mask or not. There are 3 modes.

- Close : Disable AD alarm.

- NO Mask : Alarm when the target is not wearing a mask.

- Wear Mask : Alarm when the target is wearing a mask.

REMOTE SETTING

- **Latch Time** : The time that the camera IO alarm continues to alarm after the alarm ends. (Note: The camera needs to support the IO output function, and the working time is controlled by the corresponding schedule.)
- **Post Recording** : The duration of recording after the alarm ends.
(Note: At the same time, the effective time is controlled by the schedule.)
- **Send Email** : Whether the camera sends an email when it alarms.
(Note: At the same time, the effective time is controlled by the schedule.)
- **Alarm Out** : Select the enable or disable function.
- **Enable Record** : Select the enable or disable function.
- **Schedule** : Set the schedule of Send Email, Alarm Out, Record

• FR (Face Recognition Alarm)

The camera is monitoring and tracking the target to capture the face picture.

It needs to match the database first, then obtain the related group of the picture, and then directly alarm based on the alarm. When modify parameters, it takes a short period of time to reload.

- **Group Name** : Edit and modify the group name, and the specific group name will be prompted when the alarm is pushed.
- **Enable** : Select the enable or disable function.
- **Policy** : Alarm policy, the first 3 groups are not allowed to be modified. Other group can be customized as Allow, Deny.
- **Similarity** : During face matching, if the similarity is greater than the setting, an alarm will be triggered.
- **Alarm** : Switch on the group alarm setting.
- **Alarm Schedule** : Set the schedule of Send Email, Alarm Out, Record
- **Latch Time** : The time that the IO alarm cable continues to alarm when the camera acquires the picture and matching is successful.
(Note: The camera needs to support the IO output function, and the working time is controlled by the corresponding schedule.)
- **Alarm Out** : Select the enable or disable function.
- **Save Picture** : Switch to save face snapshot to SD card. It is not controlled by Enable.
- **Save the Background** : The switch to save the face snapshot to the SD card and save the background snapshot at the same time. It is not controlled by Enable.
- **Send Email** : Switch to send emails when group face recognition matches successfully. It is not controlled by Enable.

REMOTE SETTING

• FA (Face Attendance Alarm)

The camera can retrieve different groups saved in SD card (excluding stranger group) matching the situation of human faces at a specified time.

Attendance record can be generated based on the captured records, and can be sent to the associated mailbox

- **Enable** : Switch to generate the attendance record automatically by FA.
- **Send Email** : Send the time of FA check-in. The firmware retrieves once at a certain interval. When the retrieval time is longer than the set time, the attendance record is automatically generated and sent to email.
(Note: No email will be sent if there is no attendance record.)
- **ON/OFF DUTY** : Sets the reference time of on or off duty for generating the attendance record.
- **Mode** : Switch on the group alarm setting.
- **Working days** : Set the schedule of Send Email, Alarm Out, Record.
- **Group** : The time that the IO alarm cable continues to alarm when the camera acquires the picture and matching is successful.
(Note: The camera needs to support the IO output function, and the working time is controlled by the corresponding schedule.)

REMOTE SETTING

4-4. Statistics

This is AI data statistical analysis function.

• Face Detection

According to the search settings, camera searches the face data stored in the SD card by face detection.

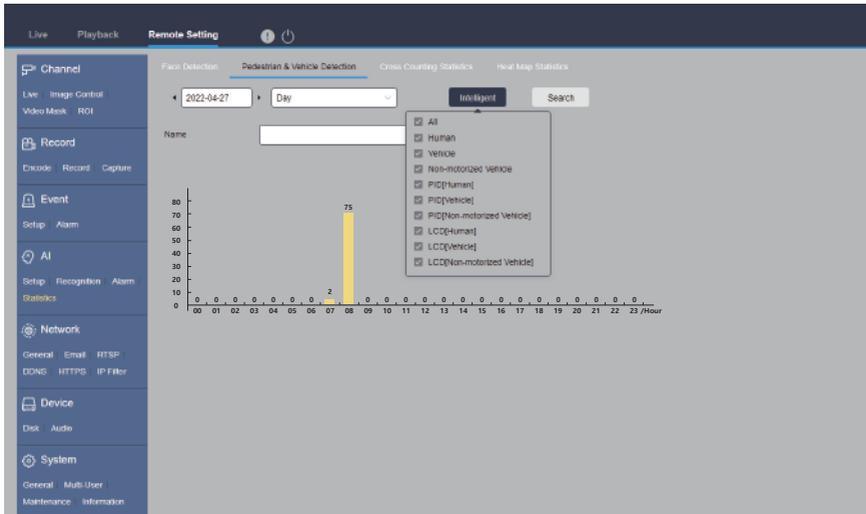


- **Time** : The reference time of the search mode.
- **Search Mode** : It supports 5 modes, such as Day, Week, Month, Quarter and Year.
- **Group** : The group to be retrieved when searching for statistics.
- **Search** : Search the data again according to the search settings.
- **Export** : Need to add the export file name, and export the search data by Excel file.
- **Display Area** : Displays the search results in graph according to the search criteria.

REMOTE SETTING

• Pedestrian & Vehicle Detection

Pedestrian & Vehicle data statistics includes PD&VD, PID, LCD alarms.



- **Time** : The reference time of the search mode.
- **Search Mode** : It supports 5 modes, such as Day, Week, Month, Quarter and Year.
- **Intelligent** : Search based on the type of mark when capturing the snapshot.
- **Search** : Search the data again according to the search settings.
- **Export** : Need to add the export file name, and export the search data by Excel file.
- **Display Area** : Displays the search results in graph according to the search criteria.

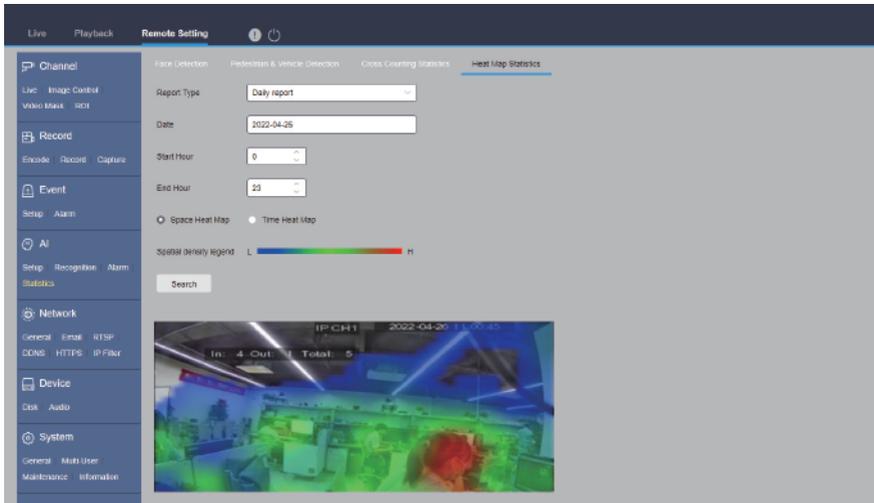
• Cross Counting Statistics

- **Report Type**: Data search supports 4 ranges: Daily, Weekly, Monthly, and Annual report.
- **Detection Type** : Set the corresponding alarm type. If Motion is selected, it cannot be searched by other alarm types like Person or Vehicle.
- **Cross Type** : Search data according to the statistical method of crossing the line.
- **Export** : Need to add the export file name, and export the search data by Excel file.
- **System time** : The reference time of the selected Report Type.
- **Mode** : Choose to display the data as a bar graph or a line graph.
- **Display Area** : Displays the search results in graph or tabular form according to the search criteria.
- **Search** : Search the data again according to the search settings.

REMOTE SETTING

• Heat Map Statistics

The heat map function is to record the changes in the monitoring area in a way similar to motion. Heat Map Statistics displays the data recorded in SD in an image format.



- **Report Type** : Data search supports 4 ranges: Daily report, Weekly report, Monthly report, and Annual report.
- **Date** : Date you want to search for the data.
- **Start/End Hours** : Only display when the Daily report is set. Set the specific hour when the search starts or ends
- **Mode** : Select the type of display of data when searching. Graphs and table types.
- **Display Area** : Displays the search results in graph or tabular form according to the search criteria.
- **Search** : Search data according to the settings.

REMOTE SETTING

5. NETWORK

Use this menu to configure network parameters such as PPPoE, DHCP, and SNMP. In most cases, the network type is DHCP unless you manually set up static IP. Select PPPoE, if you need to authenticate your user name and password to connect to the network.

5-1. General

• General

If connecting to a router that allows the use of DHCP, check the DHCP box. The router will automatically assign all network parameters to the camera unless you manually set the following parameters for the network:

The screenshot shows the 'Remote Setting' interface with the 'Network' tab selected. The 'General' sub-tab is active, displaying various network configuration options. The 'DHCP' toggle is turned on. The 'IP Address' field is set to '192.168.0.106' with a 'Test' button next to it. The 'Subnet Mask' is '255.255.0.0' and the 'Gateway' is '192.168.0.1'. The 'DHCP IPv6' toggle is turned off. The 'IPv6 address' is 'fe80::223:63ff:fe0a:901b' with a dropdown menu set to '64'. The 'IPv6 gateway' is 'fe80::223:63ff:fe0a:901b/64'. There are two 'DNS' fields: 'DNS 1' is '198.126.053.001' and 'DNS 2' is '208.208.008.008'. There are two 'IPv6 DNS' fields: 'IPv6 DNS 1' is '2001:4860:4860:8888' and 'IPv6 DNS 2' is '2001:4860:4860:8844'. A 'Multicast' section is visible with 'Main stream' turned on and 'Multicast Address' set to '239.255.255.255' (with a note '(224.0.0.0-239.255.255.255)'). At the bottom, 'Video Encryption Transmission' is turned on, and there are 'Save' and 'Refresh' buttons.

- **DHCP** : Select enable or disable according to your camera connecting.
- **IP Address** : IP address is the identification of IPC in the network.
- **Subnet Mask** : It is a network parameter that defines the range of IP addresses that can be used in the network. If the IP address is like the street where you live, then the subnet mask is like a community.
- **Gateway** : This address allows IPC to access the network.

REMOTE SETTING

- **DSN1/DSN2** : DNS1 is the primary DNS server, and DNS2 is the backup DNS server. It is usually sufficient to enter the DNS1 server address.
- **Main Stream** : After checking, you can use the main stream for multicast.
- **Multicast Address** : Set the multicast address.

• PPPoE

This is an advanced protocol that allows IPC to connect more directly to the network through DSL modems. Select the "Enable PPPOE" box and enter the PPPoE user name and password. Click Apply to save. The system then restarts to activate the PPPoE settings.

• SNMP

Simple Network Management Protocol (SNMP), a standard application layer protocol, is specifically designed to manage network nodes (servers, workstations, routers, switches, and HUBS, etc.) in IP network.

The screenshot shows the 'Remote Setting' page with the 'SNMP' tab selected. The interface includes a left sidebar with navigation options like Channel, Record, Event, AI, Network, Device, and System. The main content area displays the following configuration fields:

- Enable**: A toggle switch is turned on.
- SNMP Version**: A dropdown menu set to 'V1,V2'.
- SNMP Port**: A dropdown menu set to '161' (range 1-65535).
- Read Community**: A text input field containing 'public'.
- Write Community**: A text input field containing 'private'.
- Trap IP Address**: A text input field containing '127.0.0.1'.
- Trap Port**: A dropdown menu set to '162' (range 1-65535).

At the bottom of the configuration area, there are 'Save' and 'Refresh' buttons.

- **Enable** : Enable or disable SNMP.
- **SNMP Version** : Set the version of the SNMP server. V1, V2, and V3 are optional.
- **SNMP Port** : Set the port of the SNMP server.
- **Read Community** : Set the Read Community value of the SNMP server.
- **Write Community** : Set the Write Community value of the SNMP server.
- **Trap IP Address** : Set the Trap IP address of the SNMP server.
- **Trap Port** : Set the Trap port of the SNMP server.

REMOTE SETTING

• Port Configuration

Server	Internal Port	External Port	Protocol	UPnP Status	Mapping Strategy	UPnP
HTTP Port	80	80	TCP	Inactive	Auto	<input checked="" type="checkbox"/>
Client Port	9000	9000	TCP	Inactive	Auto	<input type="checkbox"/>
HTTPS Port	443	443	TCP	Inactive	Auto	<input type="checkbox"/>
RTSP Port	554	554	TCP	Inactive	Auto	<input type="checkbox"/>

Multicast Port: 10000 (1024-65535)

P2P Switch:

Save Refresh

- **Web Port** : Port used to log in to IPC remotely(using a web client).
If another application is already using port 80, please change it.
- **Client Port** : The port that IPC will use to send information.(using a mobile app.)
If other applications already use the default port 9000, please change it.
- **RTSP Port** : The default value is 554. If another application has already used the default port 554, please change it.
- **HTTPS** : HTTP channel for security. Based on HTTP, an encrypted transmission security process is guaranteed through identity authentication.
- **UPnP** : To log in to the device remotely using the Web Client, you need to complete port forwarding on the router. Use this option if your router supports UPnP. In this case, you do not need to manually configure port forwarding on the router.
- **Multicast Port** : Multicast port can be set.
- **P2P Switch** : Select the enable or disable P2P option.

REMOTE SETTING

5-2. Email

• Email Configuration

This menu allows you to configure email settings. If you want to receive notifications via email when an alarm is triggered or the hard drive is full, please complete these settings.

The screenshot shows the 'Remote Setting' menu with 'Email Configuration' selected. The interface includes a sidebar with various system settings and a main panel for configuring email. The 'Email' toggle is turned on. The 'Encryption' dropdown is set to 'OFF'. The 'SMTP Port' is set to '25'. The 'SMTP Server' field has a red error message: 'SMTP server cannot be made!'. The 'Username' field has a red error message: 'username operation failed'. The 'Password' field is empty. The 'Sender' field has a red error message: 'sender error'. There are three empty 'Receiver' fields (Receiver 1, Receiver 2, Receiver 3). The 'Interval' dropdown is set to '3Min'. At the bottom, there are 'Save', 'Test', and 'Refresh' buttons.

- **Enable** : Select the enable or disable function.
- **Encryption** : If your email server requires SSL or TLS authentication, please enable it. If you are not sure, please set to "Auto".
- **SMTP Port** : Enter the SMTP port of the email server.
- **SMTP Server** : Enter the SMTP server address of the e-mail.
- **User name** : Enter your email address.
- **Password** : Enter your email password.
- **Receiver 1~3** : Enter the email address you want to receive event notifications from IPC.
- **Interval** : Configure the time interval between IPC notification emails.
- **Test** : To make sure all settings are correct, click "Test". An email will be sent to your mailbox. If you receive a test email, it shows the configuration parameters are correct.

REMOTE SETTING

5-3. RTSP

• RTSP

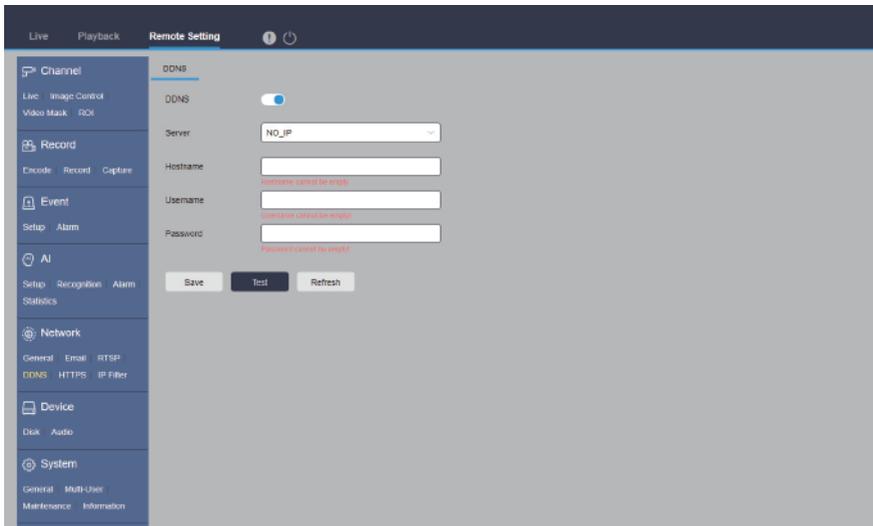
RTSP(Real Time Streaming Protocol), RFC2326, is an application layer protocol for TCP/IP protocol systems. This protocol defines how one-to-many applications can effectively transfer multimedia data over IP network. The video player lets you view real-time images.

- **Enable** : Select the enable or disable function.
- **Anonymous Login** : After you activate this option, you can use it without authentication.

5-4. DDNS

• DDNS

This menu allows you to set DDNS. DDNS provides a static address to simplify the remote connection with IPC. To use DDNS, you first need to create an account on the webpage of the DDNS service provider.



- **DDNS** : Select the enable or disable function.
- **Server** : Select the preferred DDNS server.
- **Host name** : Type the domain name that you created on the web page.
The address you enter in the URL box when you want to connect to IPC remotely through a PC.

REMOTE SETTING

- **User/Password** : Enter the user name and password of the account you created.
- **Test** : After entering all parameters, click "Test". If the test result is "Network unreachable or DNS error", please check the network is normal or the DDNS information is correct.

5-5. HTTPS

• HTTPS

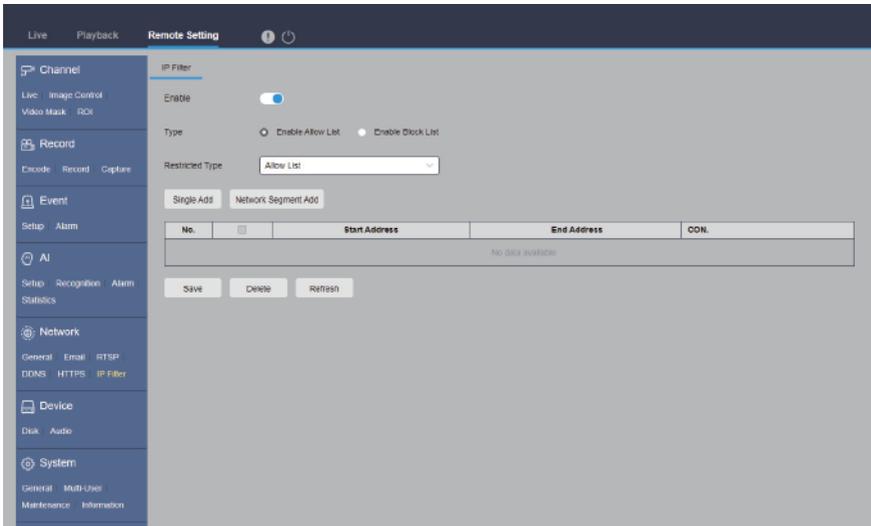
The camera can be connected via HTTPS protocol, which can be set in this menu.

- **Certificate Type** : Select the enable or disable function.

5-6. IP Filter

• IP Filter

This function can set the allow list and block list of camera.



- **Enable** : Select the enable or disable function.
- **Restricted Type** : Select the list (allow list and block list) to be set.
- **Start/End Address** : Enter the start and end address.

REMOTE SETTING

6. DEVICE

6-1. Disk

• Disk

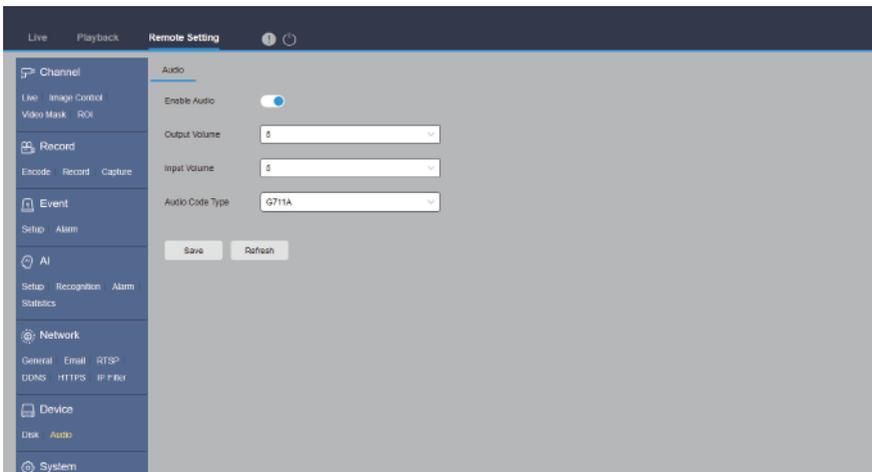
This menu allows you to check and configure the internal TF card.

Formatting is only required for the first access or when replacing a new TF card.

- **Overwrite** : When 'Auto' is selected, the TF card automatically overwrites the previous record of the TF card if the TF card is full. Select 'OFF' to avoid overwriting previous data. If this feature is disabled, check the TF card status regularly to ensure that the TF card is not full.
- **Format Hard Disk** : Select the TF card you want to format, and then click Format Hard Disk. You must enter a user name and password to begin formatting.

6-2. Audio

• Audio



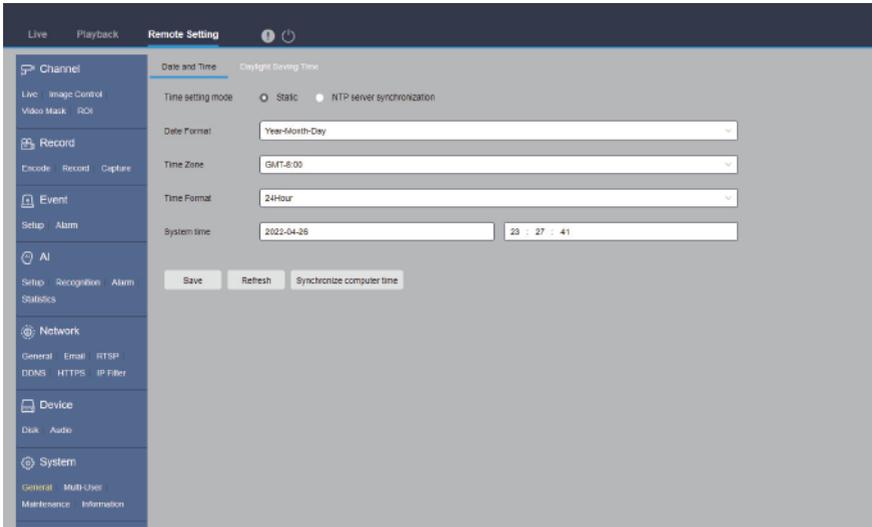
- **Enable Audio** : Enable or disable Audio.
- **Output/Input Volume** : Set the volume of output or input audio.
- **Audio Code Type** : Set the audio decoding type. G711A and G711U are supported.

REMOTE SETTING

7. SYSTEM

7-1. General

• Date and Time

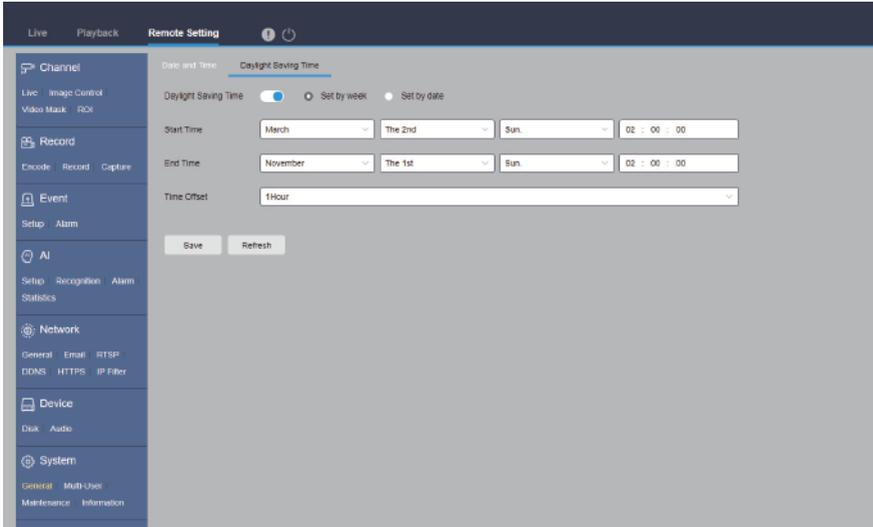


- **Time setting mode** : Time mode, there are static and NTP synchronization optional.
 - Static time needs to be set by yourself, while NTP synchronization will perform time calibration via network.
 - NTP synchronization is selected, the time cannot be set manually at this time.
- **Date Format** : Set the date format.
- **Time Zone** : Select the time zone related to your area or city.
- **Time Format** : Select the preferred time format.
- **System Time** : Click the box to change the date and time.
- **Synchronize computer time** : Synchronize the time to the computer time.
- **Server Address** : The automatic time calibration website can be chosen.

REMOTE SETTING

• Daylight Saving Time (DST)

This feature can be set to increase the DST in a specific region or time zone.



- **Daylight Saving Time** : If your time zone uses DST, please enable this option.
 - Set by week : Select the month, specific week and time for DST to start and end. For example, at 2 AM on the first Sunday of a month.
 - Set by date : Select the start and end date and time of DST.
- **Start/End Time** : Set the start time and end time of DST.
- **Time Offset** : Select the time that DST increases in your time zone.
 - This is the difference between Coordinated Universal Time (UTC) and local time.

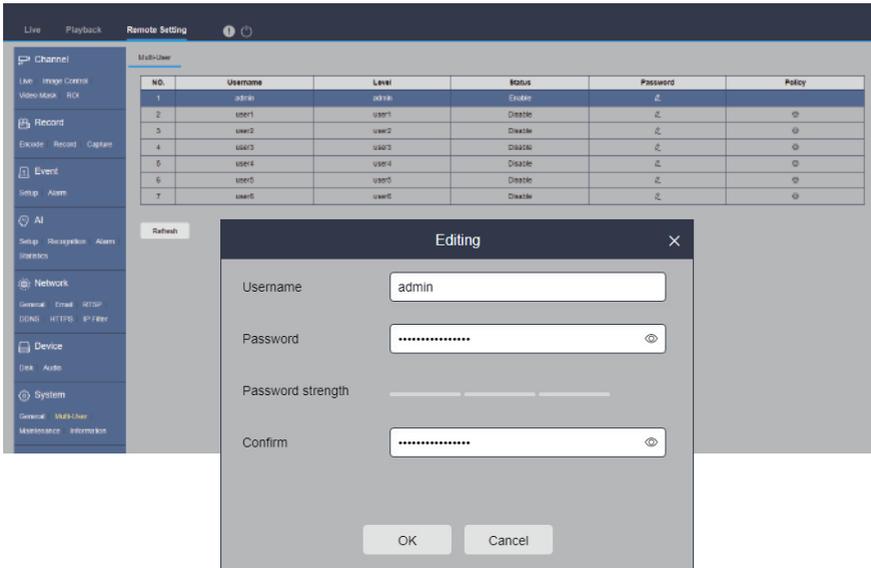
7-2. Multi-User

• Multi-User

This feature can be set to configure user name, password and user permissions.

- **Admin** : System Administrator. The administrator can fully configure the system, change all passwords, and enable/disable password protection.
- **User** : Ordinary user. The user has access to preview, search, playback and other functions. You can set up multiple users with different system access permission.

REMOTE SETTING



To change the administrator's or user's password, click the "Editing" icon. The password must be at least 8 characters and must be composed of numbers, letters and symbols. Enter the new password again to confirm. Save the new password, the system will ask you to enter the old password for authentication.

1. Select one of the disabled users and click "Editing" icon.
2. Check "Enable" to enable the user.
3. Click "UserName" to edit user name.
4. Click the area next to Password to enter the required password.
5. Click the area next to Confirm to re-enter the password.
6. Click Save. You need to enter the administrator password for authentication.

Set the user's permission and check the box corresponding to the function.

7-3. Maintenance

• Log

The system log shows important system events such as motion alarms and system warnings. You can easily import the system log backup file to the computer within a set period of time.

REMOTE SETTING

• Log search and backup :

- 1) Click the area next to Start Time and select the start date & time from the calendar.
- 2) Click the area next to End Time and select the end date & time from the calendar.
- 3) Select the event type you want to search from the drop-down list next to Log Type, or select All to view the entire system logs for the selected time period.
- 4) Select the type of event to search from the drop-down list next to Minor Type (If ALL is selected for Log Type, there will be no such menu), or select All to view the entire system logs for the selected time period.
 - System : System settings, reboot, automatic reboot, upgrade, time setting and NTP time adjustment.
 - Configuration : IPC preview control, privacy zone setting, recording mode setting, recording plan setting, main stream setting, network setting, sub-stream setting, e-mail setting, color setting, motion detection setting, hard disk setting, multi-user setting, NTP settings, image control, mobile stream settings, RTSP settings, IP filter settings, factory reset, audio settings, video occlusion alarm settings, export settings and import settings.
 - Alarm : Motion detection start, motion detection end, IO alarm start, IO alarm end, PID start, PID end, LCD start, LCD end, SOD start, SOD end, PD&VD start, PD&VD end , FD start, FD end, CC start, CC end, CD start, CD end, QD start, QD end, sound alarm start and sound alarm end.
 - Account : Login, logout and switch users.
 - Recording : Search, playback and backup.
 - Storage : Format hard disk, hard disk is full, and hard disk error.
 - Network : Offline, online, network error and network mode change.
- 5) Click Search to search.
- 6) Browse the system log from the selected time interval:
- 7) Switch the pages of system log events by buttons.

Enter the export file name in the field next to Name. Click Export to create a backup of system logs.

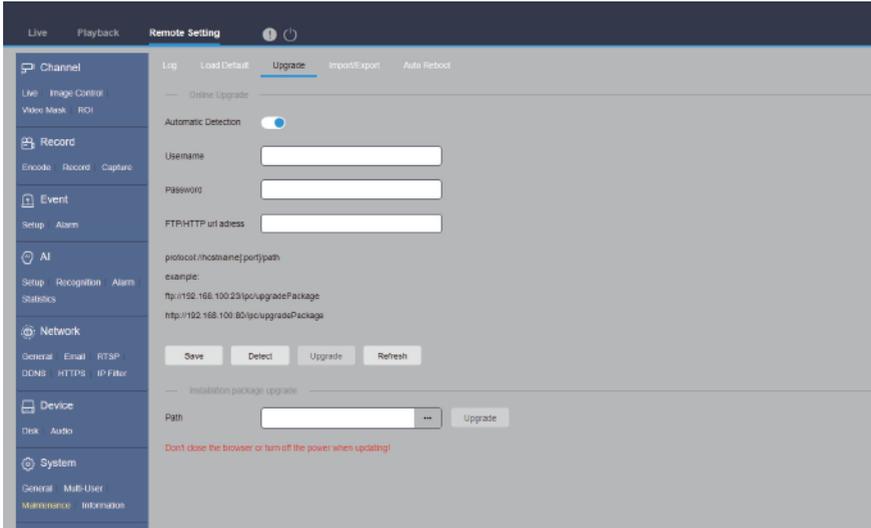
• Load Default

Reset camera to factory settings. You can choose to reset all settings at once or reset the specific settings only. (Note: Restoring the default settings will not delete the videos and snapshots saved in the SD card.)

Select items to be restored, or click All to select all items. Click "Save" to load the default settings.

REMOTE SETTING

• Upgrade



- **Online Upgrade** : Enable 'Automatic Detection' feature to activate.
Enter username, password and url address. (Refer to example in down below.)
- **Installation package Upgrade** :
Put the firmware file (.sw file) on the computer hard disk.
Click "..." beside the Path feature and select the firmware file in your computer.
Click Upgrade button to start. The upgrade will last about 5-10 minutes, please do not turn off the power of the camera or close IE during this period.

• Import/Export

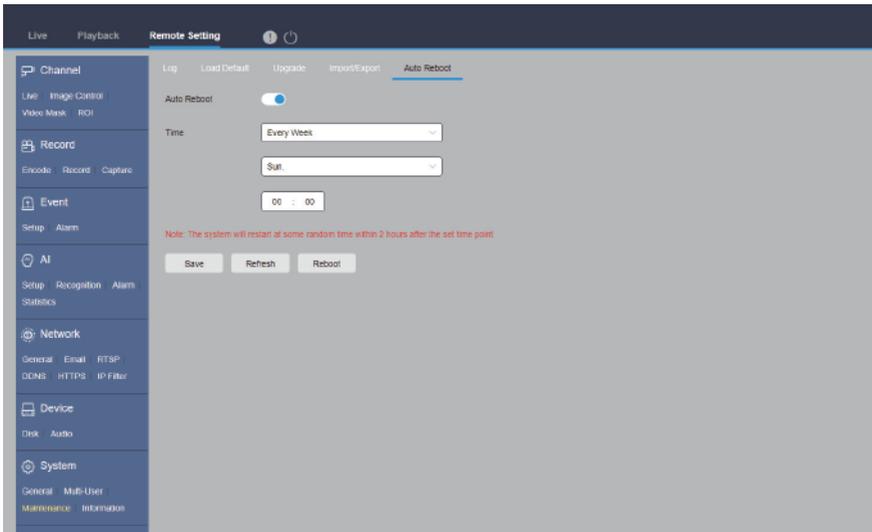
You can export the configured main menu parameters to the computer, or import the exported settings file from the computer to the camera.

- **Import File** : Click the box, and the path window will pop up.
After selecting the parameter file, click Import to start importing the parameters.
- **Export file name** : Click the box to enter the file name of the exported parameters.
Click 'Export' to export parameters.

• Auto Reboot

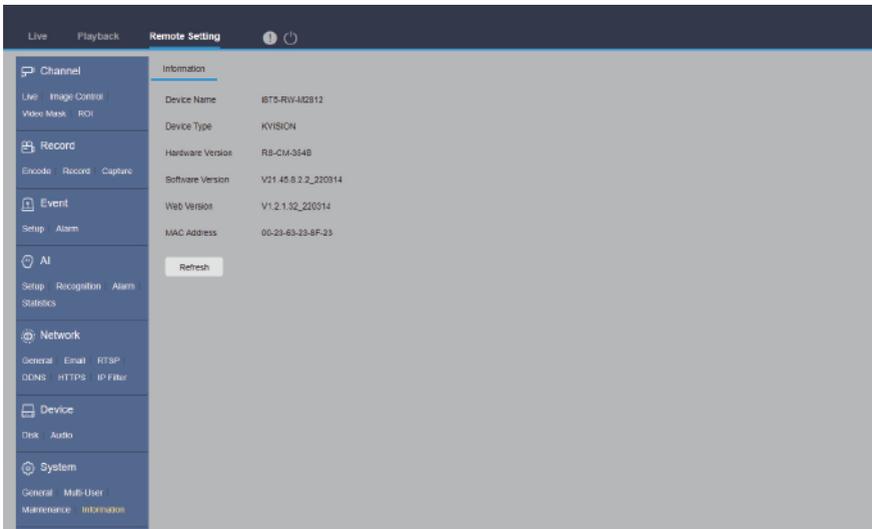
This menu allows the system to automatically reboot periodically. It is recommended to keep this function enabled, because it can maintain the operational stability of the camera.

REMOTE SETTING



7-4. Information

This menu allows you to view system information, such as device name, MAC address, F/W version, etc.



Trouble Shooting

Symptom	Checkpoint
The main unit won't turn on.	<ul style="list-style-type: none"> - Check the power cable connection. If using a PoE switch to supply power to the camera using an ethernet cable, check the ethernet cable connection. - Check the power outlet. If using a PoE switch to supply power to the camera using an ethernet cable, check the device's power supply.
PoE switch isn't being recognized.	<ul style="list-style-type: none"> - Check the grounding status of the I/O device connected to the camera and the PoE switch. If they are not grounded, ground them and try again.
I can't see Live videos.	<ul style="list-style-type: none"> - Check the camera's power status. - Ensure that cables are properly connected to the camera. - Check the network connection status of the computer and the camera.
Images are blurry.	<ul style="list-style-type: none"> - Make sure the lens is clean. If not, clean it using a soft piece of cloth or a brush. - Make sure the lens is in focus. Adjust the focus during daytime. - If there is too much light coming into the camera or the camera is picking up an overly bright light source, adjust the camera's position/ angle accordingly.
Video color appears incorrect.	<ul style="list-style-type: none"> - Check the white balance settings. If using the Auto option, it may take some time for the white balance to be adjusted.
Images are blinking.	<ul style="list-style-type: none"> - If the camera is pointed at the sun or a fluorescent lamp, adjust the camera's angle away.
Lost the admin ID and password and unable to connect to a camera.	<ul style="list-style-type: none"> - You must perform a factory reset. A factory reset will revert all settings, including network settings, to their factory defaults. After performing a factory reset, make a memo of the admin ID and password as a safety precaution.

NETWORK CAMERA

User Manual

This guide is for reference only.

Product, manuals and specifications may be modified without prior notice.