ZS-HM2
Thermal Imaging Binocular Machine

Product Manual

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Section 1 Product Introduction

ZS-HM2 is a series of infrared thermal imaging bolts for security. The equipment is suitable for various industries including: safety precautions, forest fire prevention, smart cities, road traffic, factory monitoring, smart grid, scenic spot monitoring, etc. Medical testing, industrial testing, rail transit, smart city, fire monitoring, etc.



Section 2 Product Features

1. Embedded high temperature alarm module, relying on the leading temperature alarm algorithm, can accurately make early warning of the fire source in the first time, and the warning level is adjustable in multiple levels, which is suitable for fire early warning needs in different scenarios

2. Powerful embedded intelligent analysis algorithm, realize intelligent analysis functions such as motion detection, area intrusion, boundary crossing, line mixing alarm, movement trajectory, target enhancement and so on the device side

3. IP67 protection, complete functions and interfaces, standardized security interface design, support ONVIF protocol, easy platform access

4. Adapt to extreme harsh environment, not afraid of night, rain, snow, smoke and other bad weather

5. Self-developed dual-light image fusion technology.

Section 3 Technical Parameters

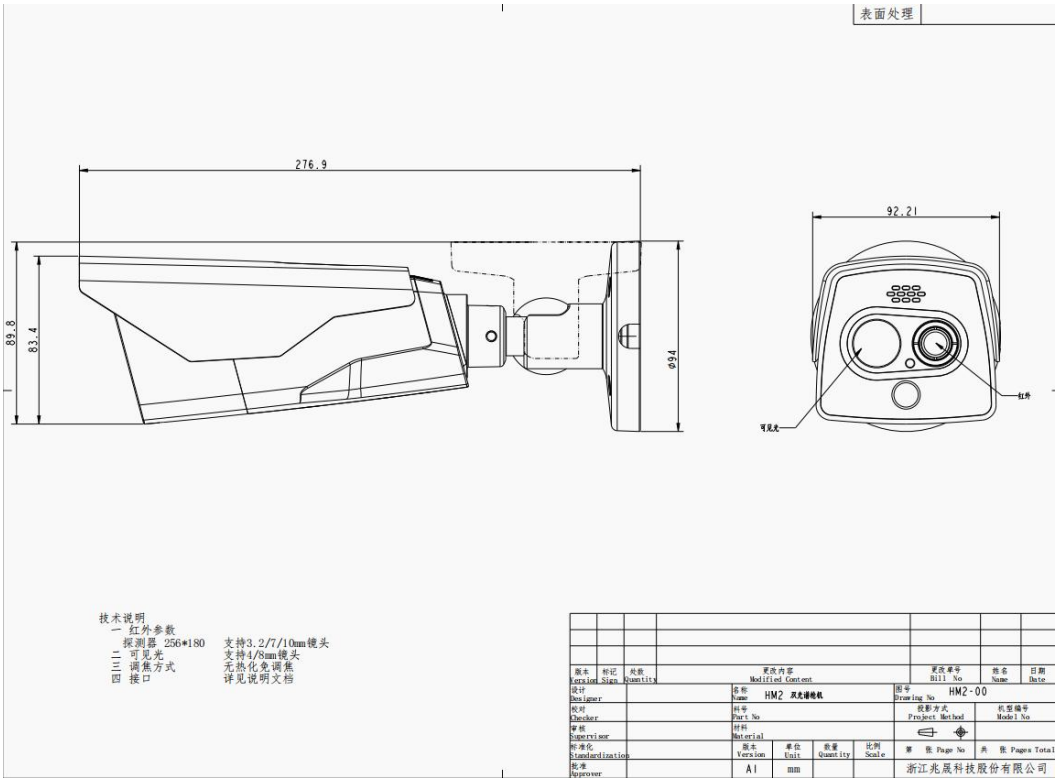
Main Parameters of The Product

	Parameters	ZS-HM2		
Infrared thermographic parameters	Probe type	Uncooled infrared microbolometer - VOx		
	resolution	256×192		
	Cell size	12μm		
	sensitivity	35mk@ 25℃		
	Response band	8～14um		
	Support lenses	Fixed lens (molded)		
	Thermal image lens focal length	3.2mm	7mm	10mm
	Protects against sun burns	Yes, but try to avoid using against sunlight or high temperature targets		
	Image adjustment	Automatic/manual adjustment of contrast, brightness		
	Uniformity correction	Automatic/manual file correction, background correction		
	Image noise reduction	3D digital noise reduction		
	Image effect gain	IDE image detail enhancement, HDR (Broad Dynamic Mode)		
	palette	9 color palettes to choose from (including iron red, rainbow, black and white, etc.), customizable color scale		
Visible light parameters	Imaging devices	1/2.8″ Progressive Scan CMOS		
	Pixel size	252(H)×192(V)		
	Lens focal length	4mm	6mm	8mm
	Fill light	Infrared fill light 20 m		
	Image fusion	Support		
Network capabilities	Video compression format	H.264、H.265		
	Multi-stream	Support simultaneous output of 3 bitstreams		
	Image output resolution	**Visible light channel** Master code stream：2560*1440,1920*1080,1280*720 Sub stream: 1280*720,768*576,640*480,352*288 **Thermal imaging channel** Master code stream：352*288，256*192		

	Network protocols	IPv4/IPv6,HTTP,HTTPS,,FTP,DNS,NTP,RTSP,RTCP,RTP,TCP,UDP,IGMP,ICMP,DHCP
	Platform Integration	Open APIs that support software integration, support standard protocols (ONVIF, CGI), support SDK and third-party management platform access
	Common functionality	Heartbeat function, password protection, multi-user access control (3 levels of user rights)
	Cybersecurity	Authorized username and password, MAC address binding; HTTPS encryption; IP address filtering.
	Video browsing and configuration	Support Google Chrome, up to 10 simultaneous video previews
	User access	Up to 6 users in 3 levels: Administrator, Operator, and Normal User
Featured features	.AI	VCA functions based on human and vehicle detection: such as cross-border intrusion alarm, smoke alarm, etc
	Fire alarm	Visible light smoke detection alarm, thermal imaging fire source alarm
	Audible and visual alarm	With built-in light alarm function, support external sound alarm
	Temperature measurement function	-20~+150°C, accuracy ±8°C; Support 10 points + 10 regions (no raw data)
External interface	Enter the power supply	DC12V、POE
	Voice interface	External pickup connector
	Network interface	10M/100MBase-TX adaptive Ethernet
	Serial communication	1 RS485 (tail output)
	Alarm I/O	Support 1 alarm input, 1 alarm output (with isolation)
	Local storage	Built-in emmc, 16GB as standard
General specifications	Operating temperature and humidity	-20°C~+60°C, less than 90%RH (-40°C can be customized, reserved heating scheme)
	Storage temperature	－45°C ~ +75°C
	power consumption	Less than 3W (without light)
	Hardware protection	TVS 6000V lightning protection, anti-surge, anti-surge, in line with GB/T17626.5 level 4 standard
	authentication	CE (EN 60950:2000) FCC (FCC Part 15 Sub part B)
	Degree of protection	IP67
	Housing material	Aluminum alloy
	size	Total length 267mm (without sun cover)
	weight	＜1.6kg

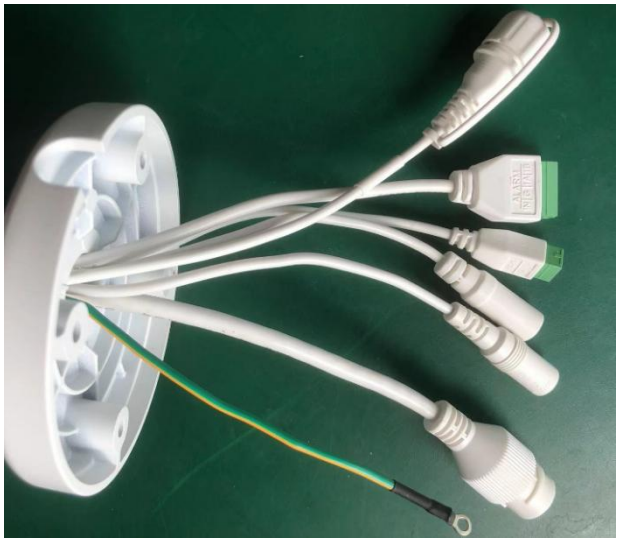
Section 4 Product Dimensions and Interface

4.1. Product Dimension



4.2. Product Interface Leads

The cable range is complete, from top to bottom include, 1. Reset button, 2. Alarm output, 3. RS485 interface, 4. Audio interface, 5 Power input interface, 6. Network cable terminal interface, 7. Grounding wire. Shown in the following figure:



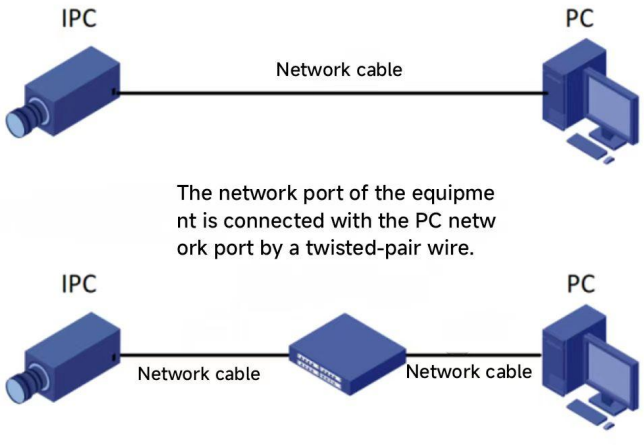
Section 5 Software Interface

5.1 Device Management

The first time the device is connected to the software, it needs to be managed and configured, and the operation mode is as follows:

After the device is installed, you need to configure the function and set the parameters, you can configure the relevant functions through the browser, please confirm that the device and the computer are connected and can access the product that needs to be set before configuration. There are two connection methods:

The upper side is a schematic diagram of a straight-through line connection, and the lower side is a schematic diagram of a switch or router connection.

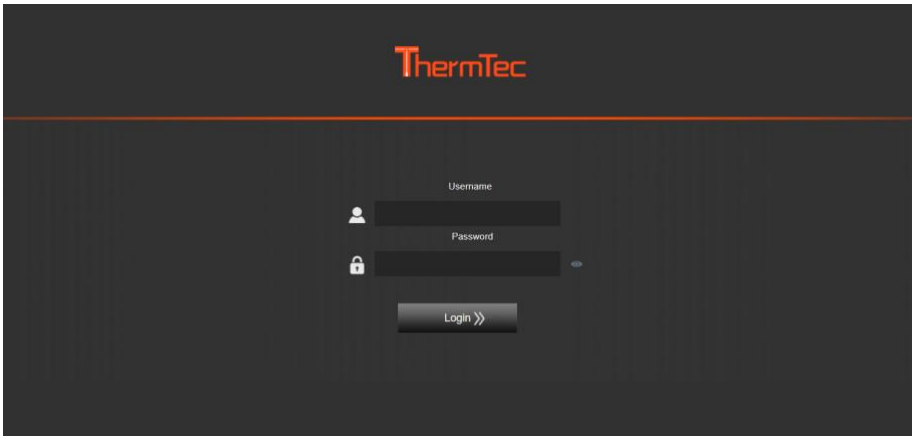


Connection diagram

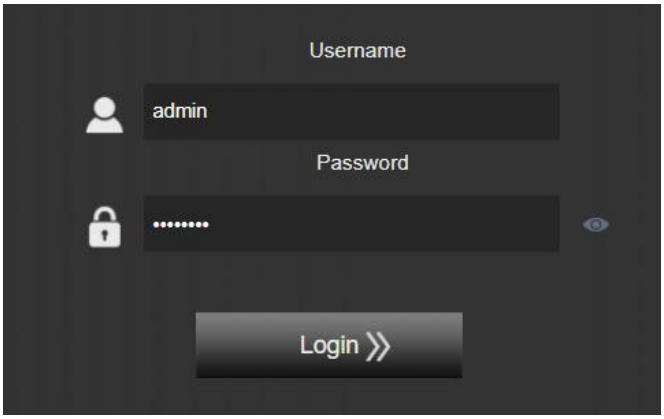
- Device default IP address：192.168.1.128
- Default account：admin
- Default password：admin123

5.2 Logging in to the WEB Interface

Step 1: Open the Internet Explorer browser, enter the IP address of the movement in the address bar and press the [Enter] key, after the connection is successful, the web will display the interface shown.



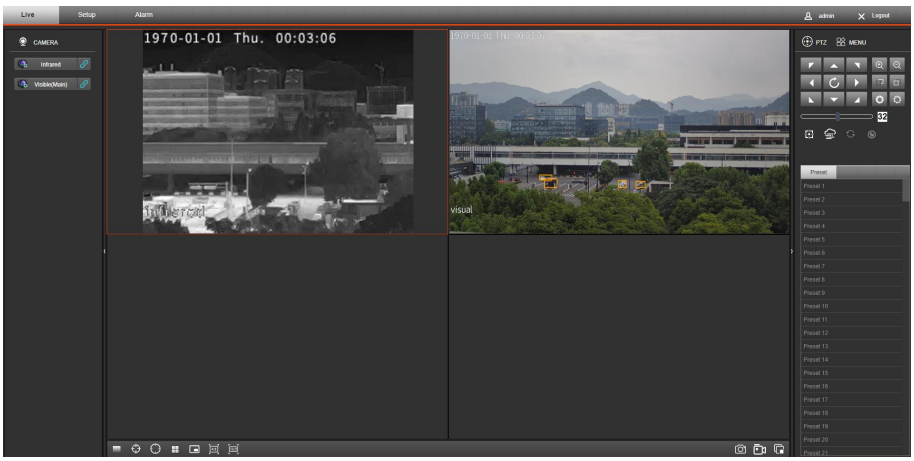
Step 2: Enter the user's name and password to enter the web operation interface (the factory default administrator username is admin, and the password is admin123).



Step 3: After entering the password to log in, it will jump to the video preview interface, when you enter the main interface of the device, you can click "Sign Out" in the upper right corner to safely exit the system.

5.3 Preview

The main interface of the device can perform preview, playback, log search, and parameter configuration.



5.3.1 Preview Operation

Click the Preview button to enter the device preview interface and do the following preview:

➢ Color palette change: You can switch between nine false color pictures, and the selected false color can be clicked to save the false color state.

➢ Zeroing: After clicking, the mechanical shield will move to calibrate the thermal imager. You can hear the sound of the calibration action of the mechanical shield.

➢ Screen segmentation: It can be divided into one picture and four pictures. Normally, it is only used to view three images, thermal image, white light and fusion image. One picture can be viewed by enlarging the selected image. Double click the image to view the selected image in full screen.

➢ PIP: It is used to open the picture in picture function of visible light image

➢ Capture: Grab a real-time preview image and keep it to the local path.

➢ Record: Record the video, click again to stop recording, and the video file will be saved in the set path.

➢ Preview Start Stop: Click the key to open all previews of the device, and click the key again to close all previews.

➢ Picture scale: It indicates that the preview screen size is 4:3 and 16:9 respectively.

5.3.2 Image Adjustment

➢ Visible light image adjustment function, which can adjust the brightness, contrast, saturation and sharpness of the visible light image browsed by the local Web terminal.



Parameter	Description
Contrast	Adjust the brightness of the browsing screen
Brightness	Adjust the contrast of the browsing screen
Saturation	Adjust the saturation of the browsing screen
Sharpness	Adjust the sharpness of the browsing screen
Default	Click the icon to restore brightness, contrast, saturation, sharpness to the default values

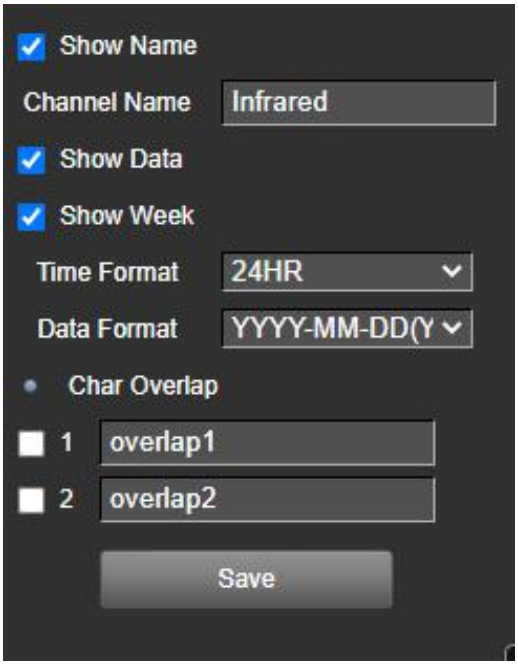
➢ Thermal imaging image adjustment function, which can adjust the brightness, contrast, saturation and sharpness of the local Web browsing thermal imaging image.



Parameter	Description
Contrast	Adjust the brightness of the browsing screen
Brightness	Adjust the contrast of the browsing screen
Saturation	Adjust the saturation of the browsing screen
Enhancement	Adjust the enhancement of the browsing screen
Default	Click the icon to restore brightness, contrast, saturation, sharpness to the default values

5.3.3 OSD Configuration

OSD refers to the character information superimposed on the screen with video images. The content of OSD includes time customization and other information.



➢ The channel name can be set according to the user's needs. The display name, display date and display week can be enabled or not according to the actual needs.

➢ Time format "24 hour system" and "12 hour system" are optional.

➢ Multiple OSD display date formats are available

➢ The device supports characters superimposed on the image screen, and the content of each line shall not exceed 15 characters.

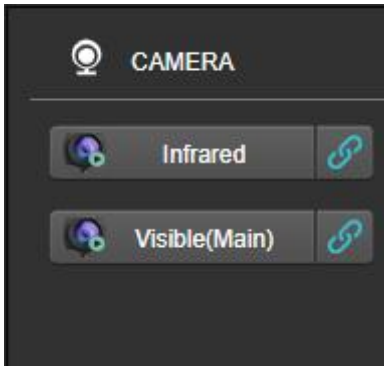
➢ Input the required characters in the character content column, and save it to preview the characters displayed in the image. Drag the mouse to select the display position of the characters, and click Save to display

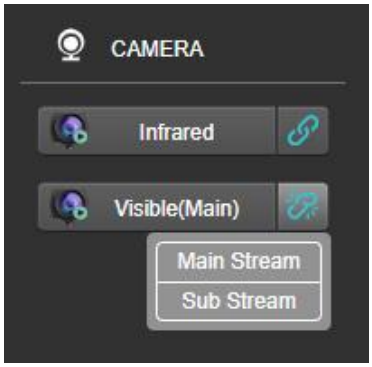
the corresponding characters in the screen.

5.3.4 Image Connection

It is divided into two image connection methods, thermal imaging, visible light, and visible light images can choose the main code stream and auxiliary code stream when connecting.

When you log in to the preview interface, two images are automatically connected, clicking the image connection shortcut will disconnect, and double-clicking the image shortcut will reconnect the selected image.

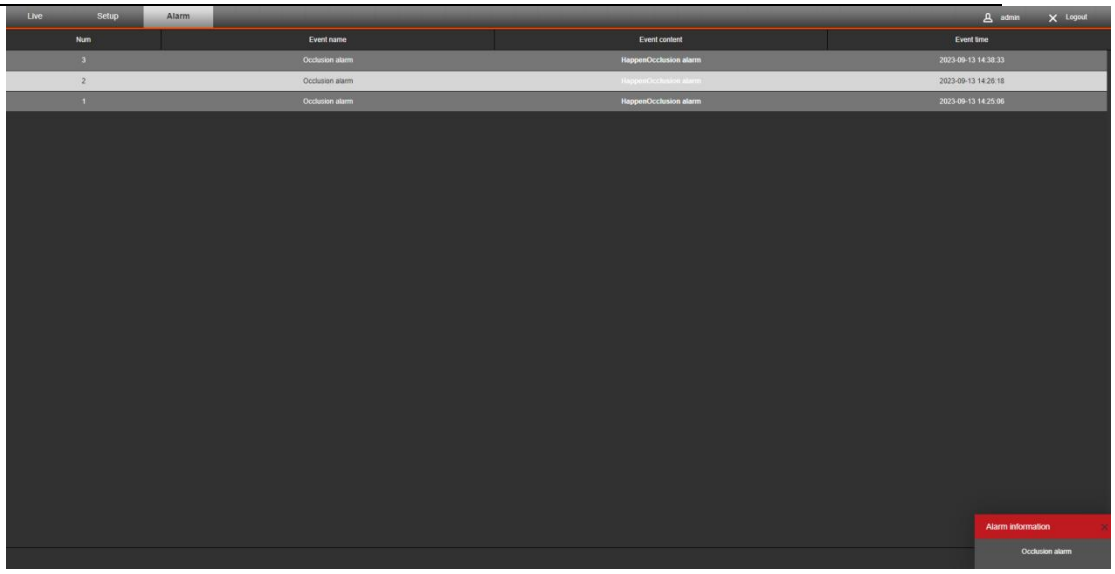




5.4. Alarm

5.4.1 Alarm Information

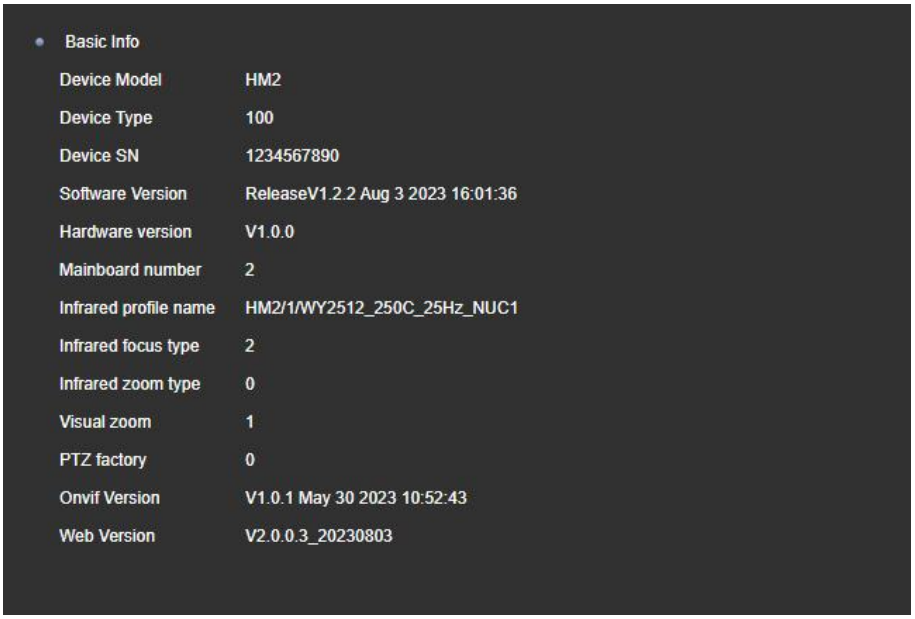
When the device triggers an alarm, you can view the alarm trigger items, event content, alarm time and other information.



5.5. Parameter Configuration

5.5.1 Device Information

In the device information configuration interface, you can view the camera's ‘device model’, ‘device serial number’, ‘software version’, ‘WEB version’ and other information.



5.5.2 RS485

Interface matching can be performed by configuring the parameters of the serial port.

Baud rate: "2400" - "115200" optional.

Data bits: "5", "6", "7", "8" a total of four options.

Check digit: None, Odd Rate, and Even Check are optional.

Stop bits: "1" and "2" are selectable.

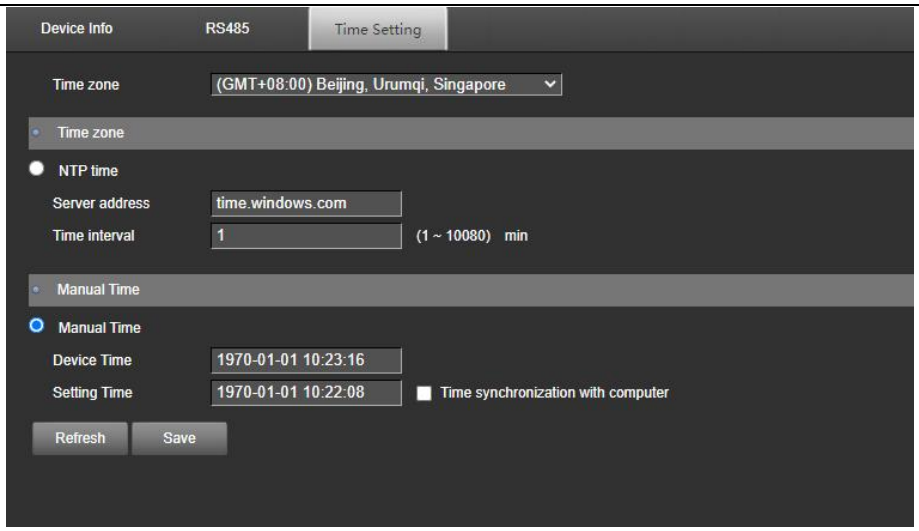
Decoder type and address: Set according to actual needs.

5.5.3 Time Setting

"Time Zone" displays the time zone of the current device and can be set according to the actual situation.

The calibration method is divided into: NTP calibration time and manual calibration time. NTP calibration time: set the NTP server address, NTP port number and calibration time interval, and the device can calibrate the time once in a while according to the setting; Manual time calibration: Set the time of the device manually, and when "Synchronize with local time" is checked, the time of the device and the local PC host can be kept consistent.

After the parameters are set, click Save.



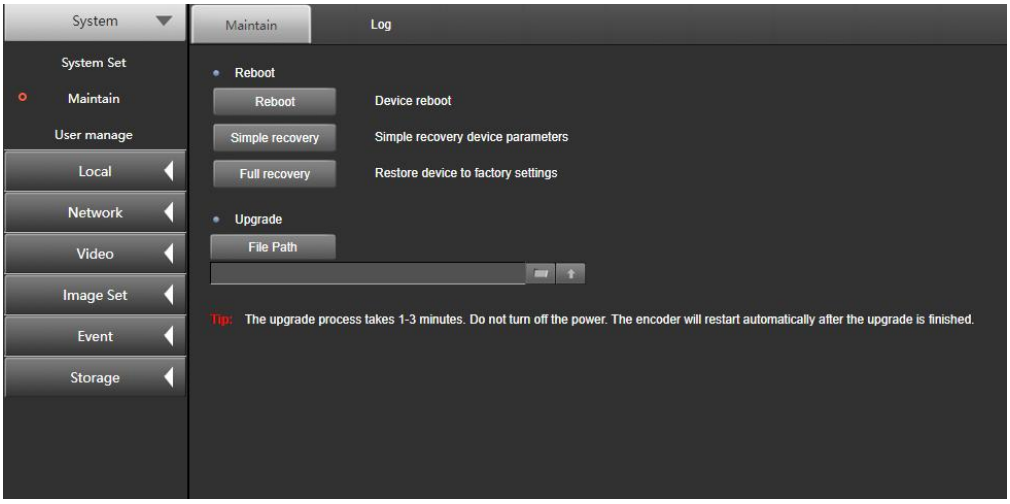
5.5.4 Maintenance

Device restart: Click "Restart Device" to restart the device.

Simple recovery: Simple recovery of device parameters means that other parameters except IP address, subnet mask, and gateway are restored to factory settings.

Full Restore: Fully restore device parameters to factory settings.

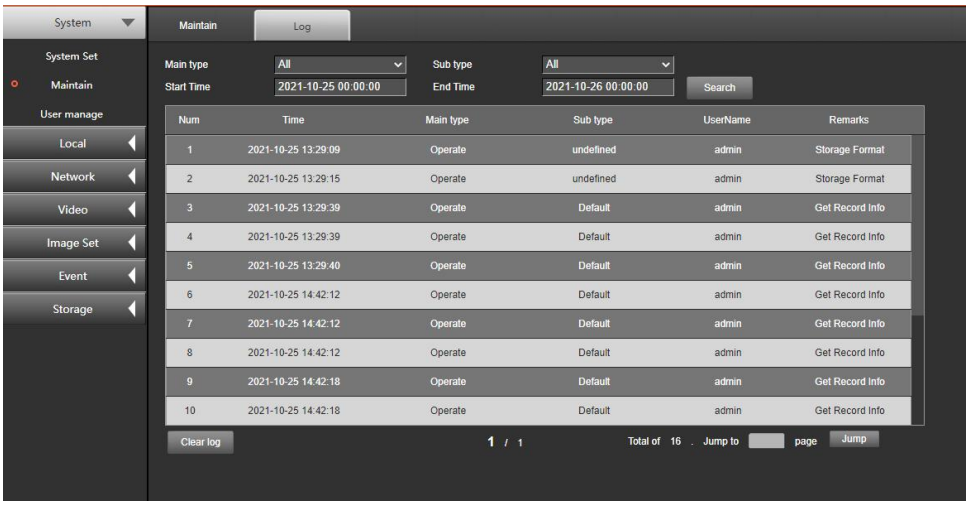
System upgrade: Click "Browse", select the directory where the local upgrade file is located, and then click "Upgrade" to start the upgrade. Do not power off during the upgrade process, the device will automatically restart after the upgrade is completed.



5.5.5 Logs

Log Search: Select the major and secondary types of logs to be queried, and the query time, and then click the Find button to search for eligible log records.

Log Information: The log list displays log information with Sequence Number, Time, Major Type, Minor Type, User, and Comment.



5.5.6 User Management

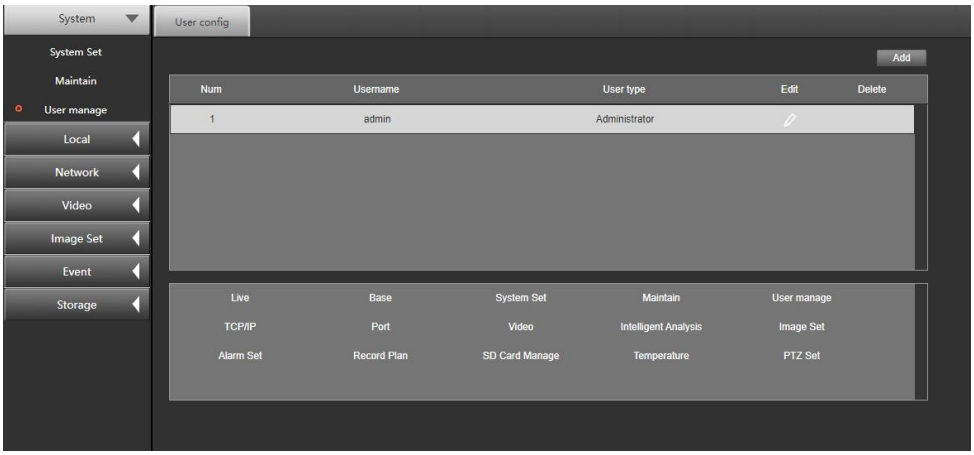
If the former user is the superuser "admin", you can create additional users as needed, up to a maximum of 9.

Add User: Click Add to display the Add user interface to set the user's name and password. User Permissions allows you to set the basic and channel permissions for the added user, and then click OK

Modify User: Select the user to be modified and click Modify to enter the modification user interface.

Users who add or modify can set permissions for Basic Permissions and Channel Permissions.

Delete User: Select the user to be deleted and click Delete to confirm the deletion of the user.



5.6. Local Storage

Preview capture path: Preview the local path where the image file is stored after the capture.

Image saving path: The local path where the image file is stored after previewing the image.



5.7 Network

5.7.1 TCP/IP

The NIC parameter configuration can set the NIC Type, Device IPv4 Address, IPv4 Subnet Mask, and IPv4 Default Gateway, and automatically obtain the IP address to ON, and the device can automatically obtain the network address and related network parameters.

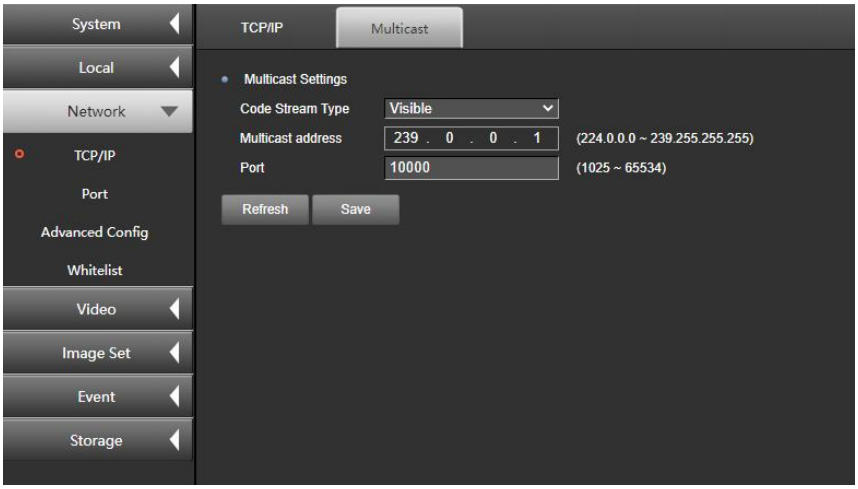
DNS server configuration can be set as "preferred DNS server" and "alternate DNS server", and domain name access can be used normally after the correct DNS address is set.

MAC Address: Displays the MAC address of the device.



5.7.2 Multicast

Access the device through the network to preview the video picture, if the upper limit of the device is exceeded, the phenomenon of not being able to preview the video picture will occur, at this time, you can set the multicast IP of the device, use multicast protocol access to solve, select "on", enable multicast, enter the multicast address and port, click "OK" to complete the configuration.

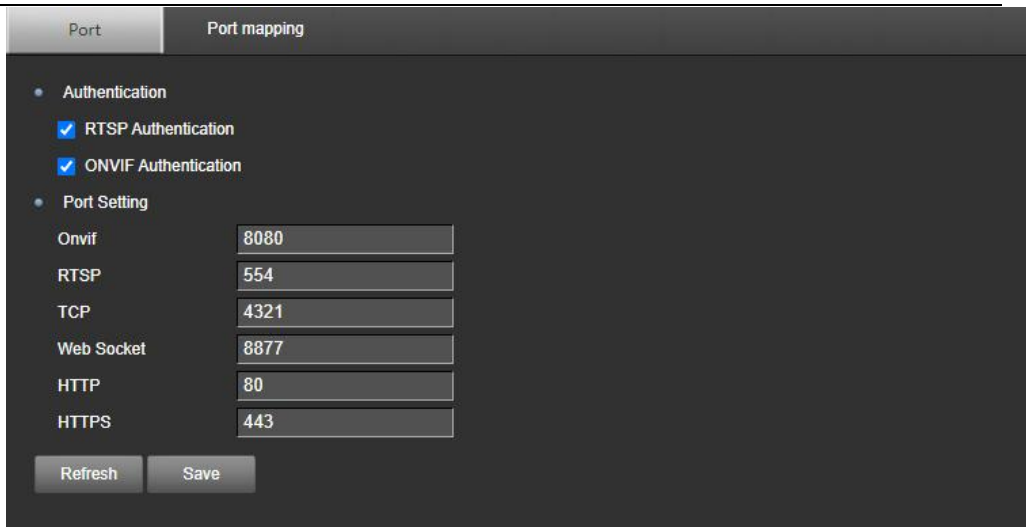


5.7.3 Port

Support RTSP, ONVIF and other network protocol access

You can set the port configuration parameters to ONVIF port (default 8080), HTTP port (default 80), HTTPS port (default 443), RTSP port (default 554), TPC port (default 4321), Web Socket port (default 8877)

When accessing the device over the network, you can set the appropriate port as needed.



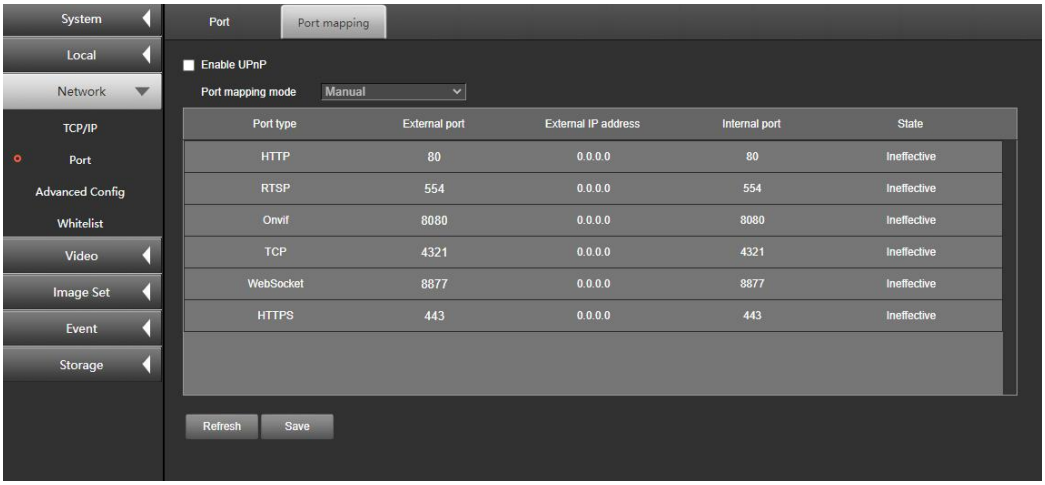
5.7.4 Port Mapping

"UPnP™ Enable" is set to ON to enable port mapping. The port mapping methods are Manual and Automatic.

In Auto mode, users do not need to modify the mapped ports, and the device can automatically map ports to the Internet.

In Manual mode, you can manually modify the external ports to be mapped under the specified public network, without modifying the port of the device itself to map the device port to the Internet.

On computer systems with UPnP protocol enabled in the same LAN broadcast domain, users can directly search for the camera in the system's network and display the model and serial number, double-click the icon, and the browser page will automatically pop up to access the current IP address of the device.



5.7.5 Email

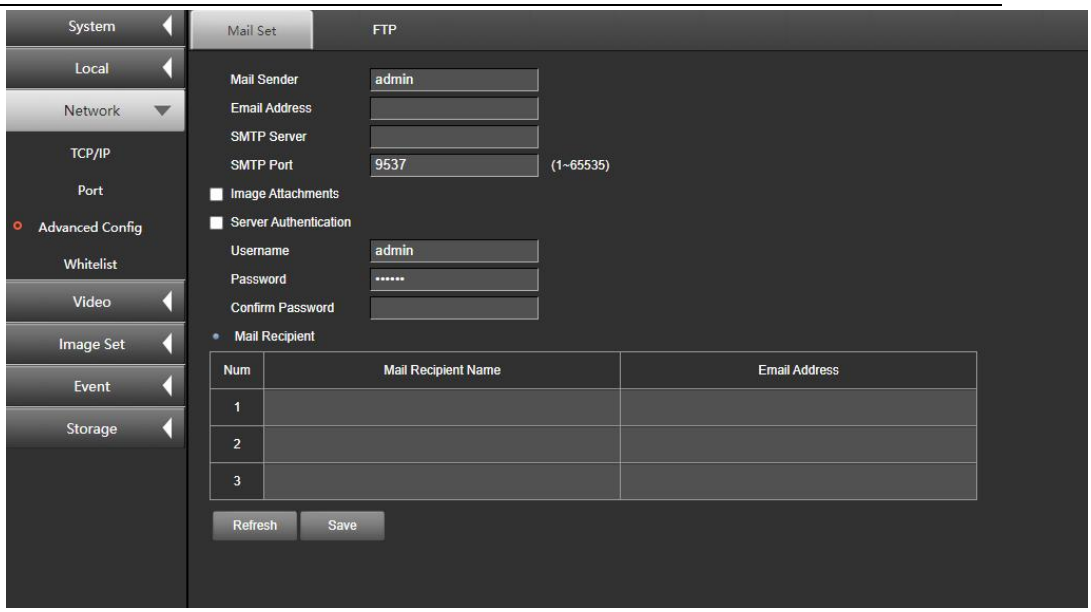
By setting email parameters, you can send an email to a specified mailbox when an alarm occurs.

Sender Information: Enter the email address of the sender, the address of the SMTP server, the SMTP port number (default 9537), user name, and password.

Email encryption: You can choose SSL, TLS, and no encryption.

Image attaching: If you select this check, an instant screenshot will be attached to the email.

Recipient information: Enter the recipient's email address and click the "Save" button to confirm the email address.

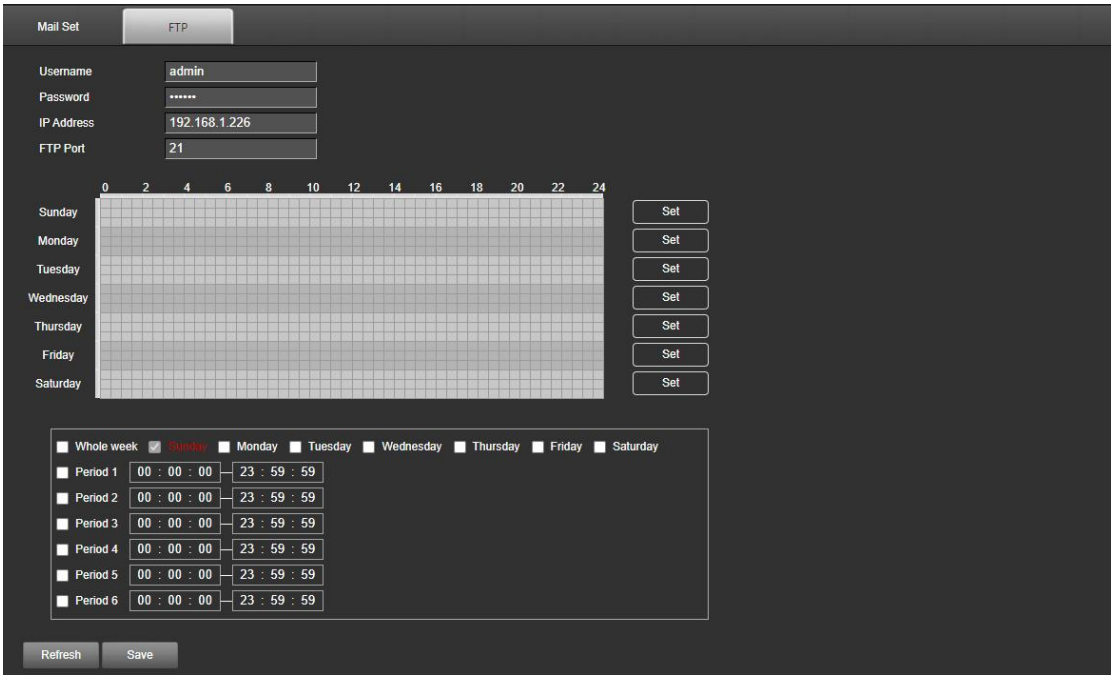


5.7.6 FTP

By configuring FTP parameters, two-way transfer of files can be achieved on a specific FTP server.

Set the address and port number of the FTP server, the user's name and password with upload permissions, and set the date and time.

After modifying the relevant parameters, click the Save button to save the relevant settings.

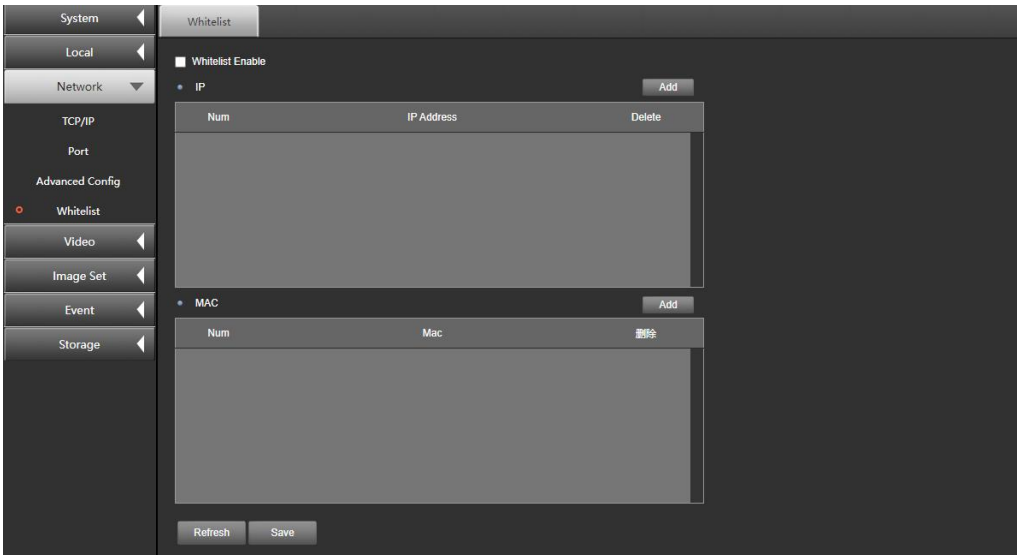


5.7.7 Whitelist

IP permissions allow users to set who is allowed to access the device

Whitelist: Add the IP/MAC of the user who can log in to the device. If the user selects the whitelist, only the user's IP/MAC can log in to the device. If no whitelist is selected, there are no restrictions on who can access this device

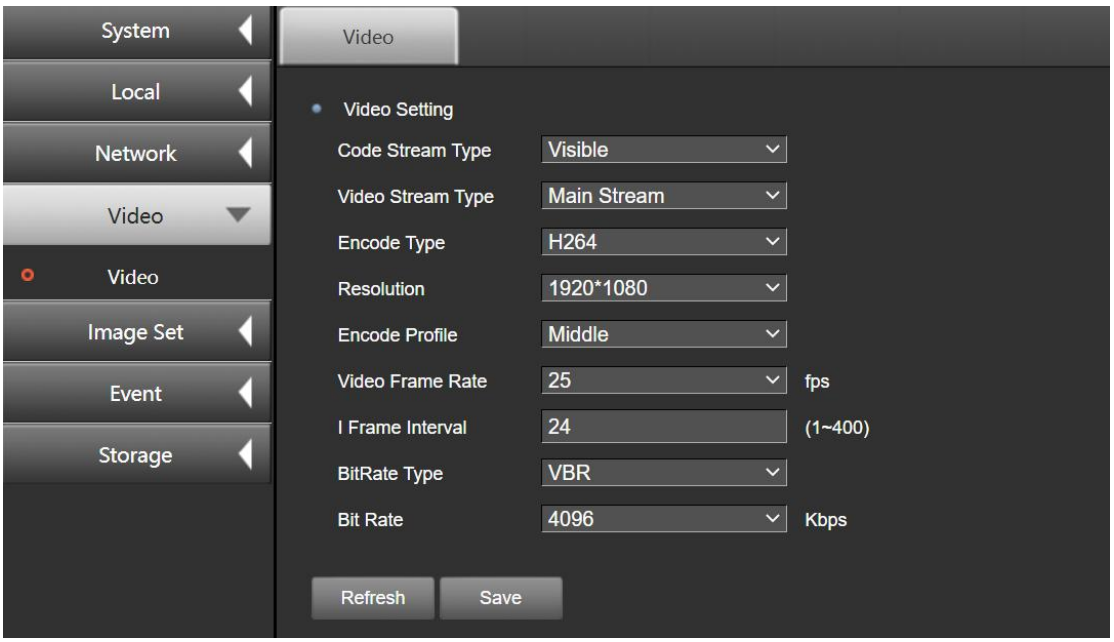
MAC verification takes effect only when the IP of the device and PC are on the same LAN.



5.8. Video Configuration

5.8.1 Video Streaming

According to the support of the device, you can set the image standard and the encoding parameters of each code stream, and choose to open the main code stream and auxiliary code stream according to actual needs.



➢ Video type: You can set to switch between visible and infrared image types

➢ Stream type: You can set the video parameters of the main stream and sub-stream.

➢ Video encoding: H.265, H.264 can be set. The specific encoding type is subject to the actual device.

➢ Resolution: The required resolution can be set according to actual needs, the higher the resolution, the higher the network bandwidth requirements.

➢ Coding level: The coding grade is divided into three levels: low, medium and high, the higher the level, the better the image quality

➢ Video frame rate: indicates the number of frames per second of the video, which can be set according to actual needs, the higher the frame rate, the higher the network bandwidth requirements and the higher the storage space required.

➢ I-frame interval: indicates the number of frames between two keyframes. The larger the I-frame interval, the smaller the bitrate fluctuation, but the lower the image quality, and vice versa, the higher the image quality.

➢ Bitrate type and bitrate size: You can set the bitrate type, variable bitrate, and average bitrate. The fixed bit rate indicates that the set bit rate size is transmitted and compressed, but it may cause food mosaic. The variable bit rate means that the compression speed is slower on the basis of changing without exceeding the size of the bitrate, but the image clarity in complex scenes is guaranteed.

5.9. Image Configuration

5.9.1 Image Parameter Settings

According to the preview screen currently playing live on the device, the image parameters of different scenes are set to meet the image effect needs of different scenes.

➢ Visible light image adjustment: the "brightness", "contrast", "saturation" and "sharpness" of the camera can be adjusted for the image picture effect

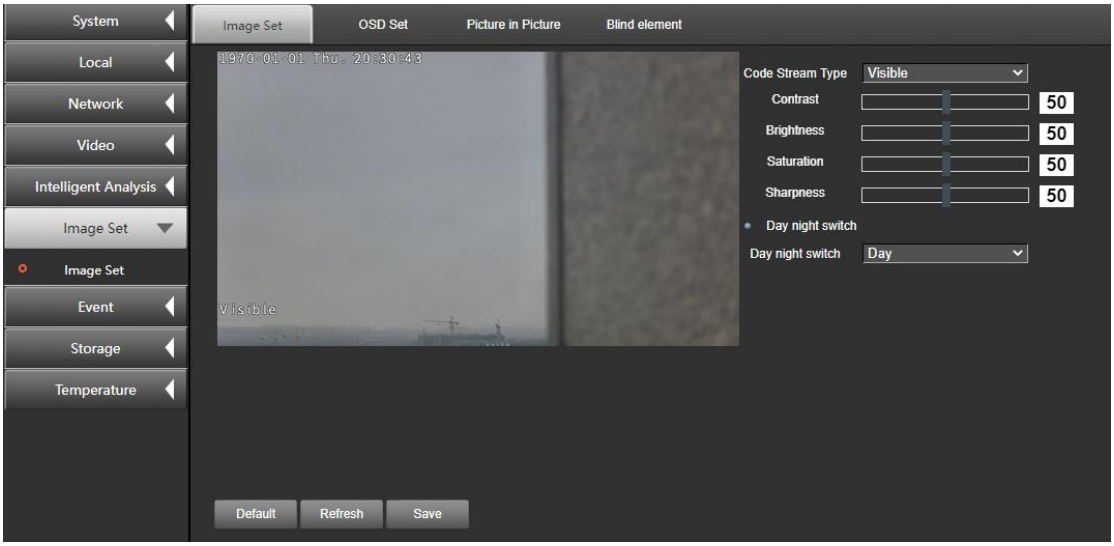
➢ Visible light day and night switching: "day", "night", "automatic", "timer switching" can be selected.

Daytime mode: The image is in color.

Night mode: The image is black and white.

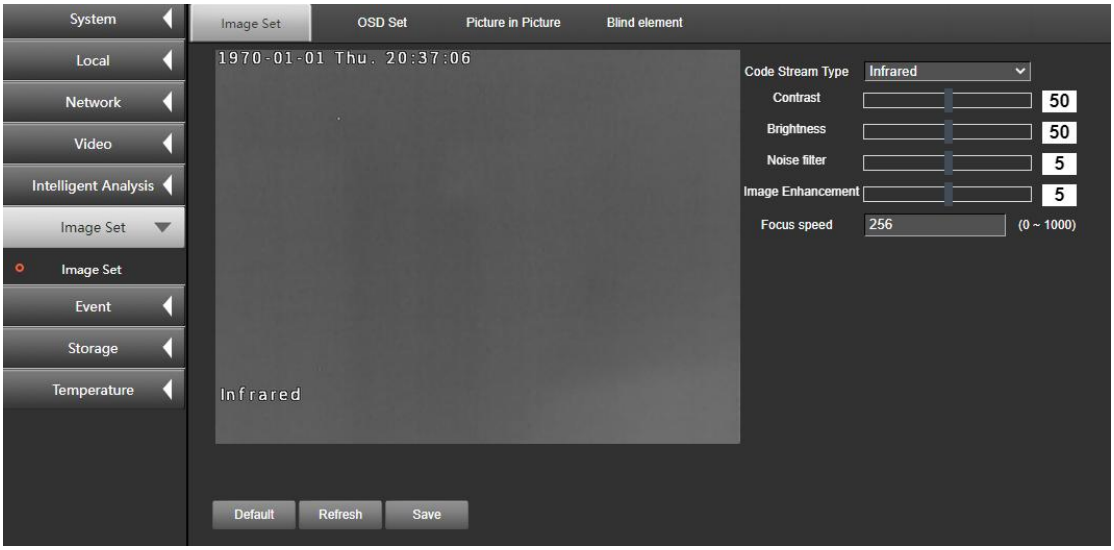
Auto mode: The device has built-in light sensitivity, which can automatically detect the change of external brightness, and will automatically switch to day mode during the day and night mode when it is dark at night.

Timer switching mode: The user needs to set the start time and end time of the day, during this time period, the device will automatically use the day mode, and outside this time period, the device will automatically use the night mode.



➢ Thermal image adjustment: "brightness", "contrast", "image noise reduction" and "image enhancement" of the camera can be adjusted for the image picture effect

➢ Focus speed: set the value (0-1000) for the focusing speed of the thermal image lens motor, the smaller the value, the slower the focusing speed, the larger the value, the faster the focusing speed.



5.9.2 OSD Settings

An OSD is character information that is superimposed on the screen at the same time as the video image. The OSD content includes a variety of

information such as time customization.

➢ Video type: You can set to switch between visible and infrared image types

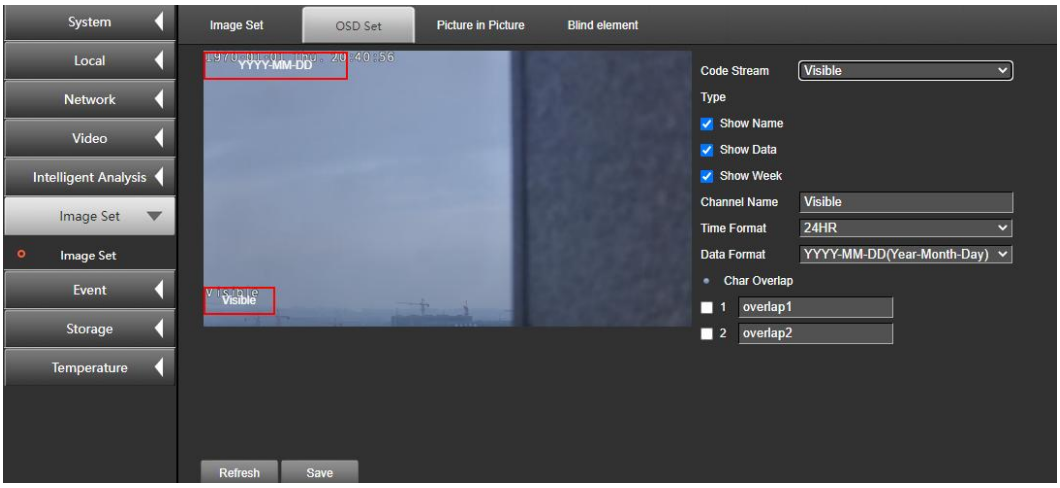
➢ The channel name can be set according to the needs of users, and the display name, display date, and display week can be selected according to actual needs.

➢ Time format "24-hour clock" and "12-hour clock" are optional.

➢ OSD display date format is available

➢ The device supports character overlay on the image screen, up to 3 lines of character overlay content, each line of content does not exceed 15 characters.

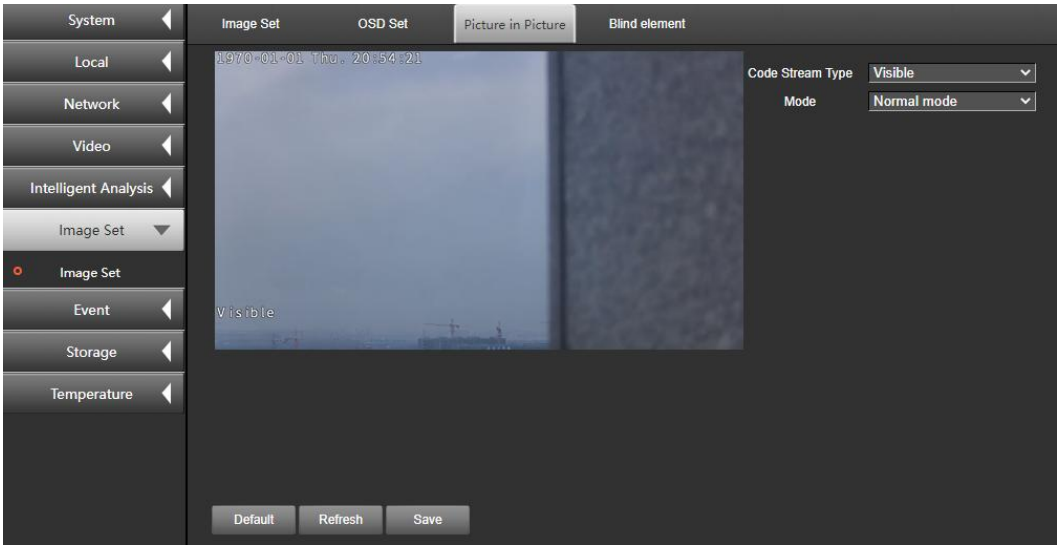
Enter the desired characters in the character content field, and after saving, you can preview the entered characters displayed in the image. Select the display position of the characters by dragging the mouse, and click Save to display the corresponding characters in the screen.



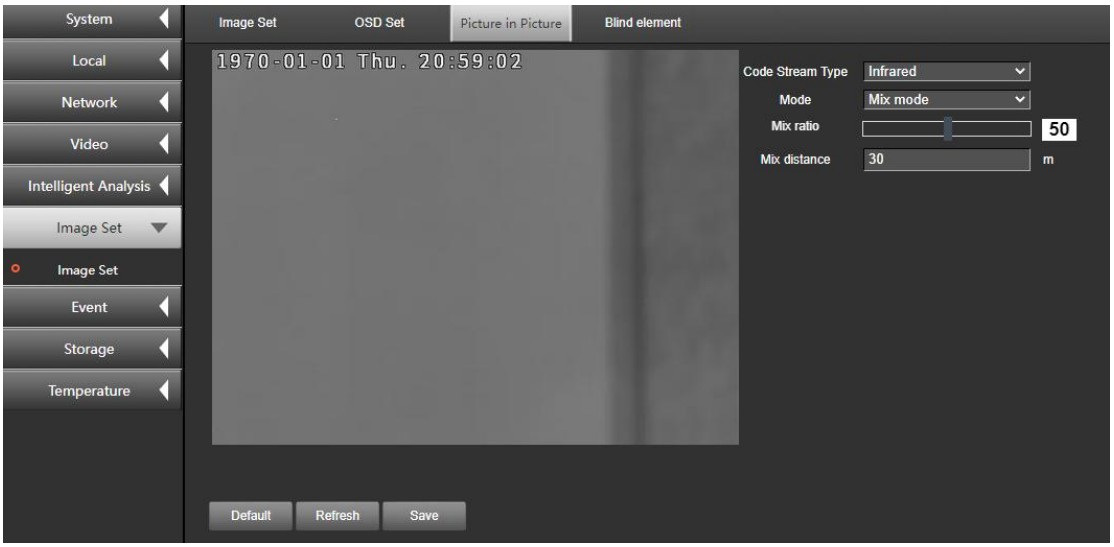
5.9.3 Picture-in-Picture and Fusion

➢ Image type Select visible light, visible light options will have normal mode and picture-in-picture mode, after selecting picture-in-picture mode, a small box of infrared image will appear in the visible light image, and the thermal image of visible light can be displayed normally after

successful opening.



➢ Select the thermal image of the image type, there will be normal mode and fusion mode under the thermal image option, after selecting the fusion mode, the thermal image will become a fusion image, and you can also select the fusion ratio and fusion distance, and the fusion image can be displayed normally after successful opening. (This feature is under development)



5.9.4 Blind Element Processing

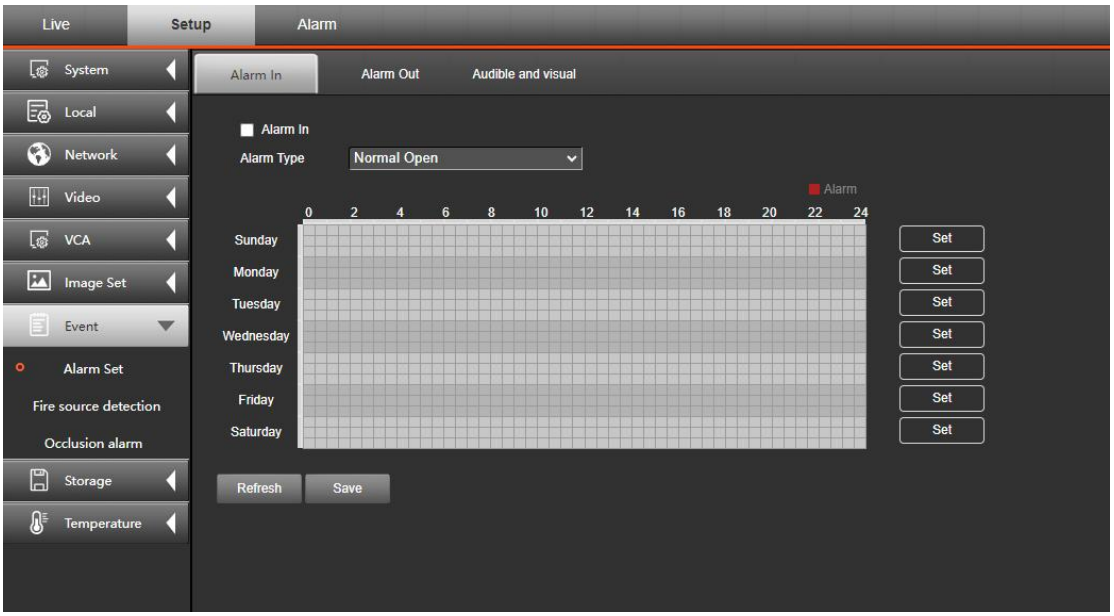
Turn on blind element processing through the menu, view the image display changes, if the image is a little, spot, linear blind element, you can use the arrow keys to control the place where blind element processing is needed, click blind element disposal to eliminate, if there are too many image spots, you can also choose automatic blind element processing, click the save button after the blind element processing operation is completed.



5.10. Alarm

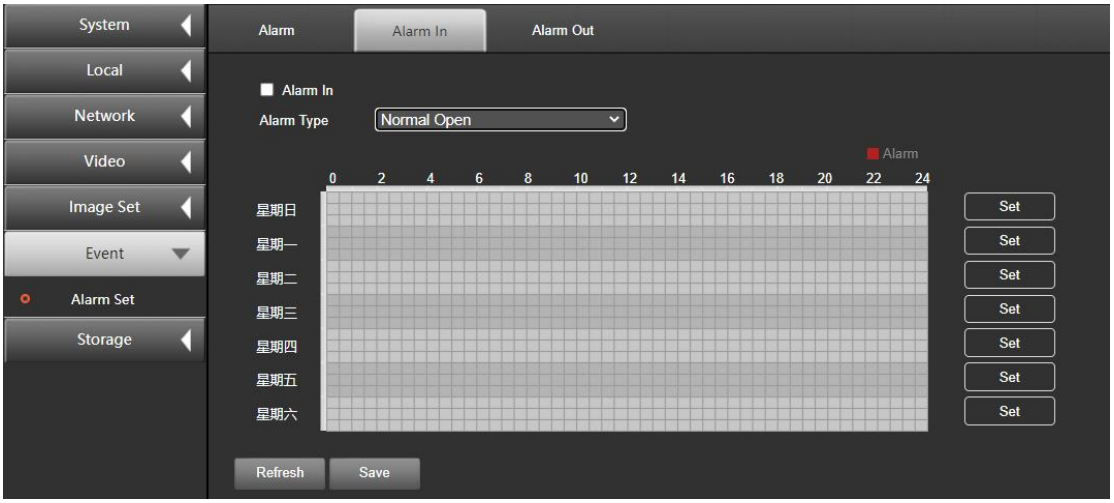
5.10.1 Alarm Settings

Alarm reporting can be achieved through alarm settings, and the alarm can be triggered by configuring the linkage action of other equipment to carry out a certain type or several types of action linkage, so that users can deal with the alarm and its corresponding linkage action in time, the linkage mode is divided into mail linkage, capture linkage, image linkage, FTP linkage, and the alarm interval and working time can be set.



5.10.2 Alarm Input

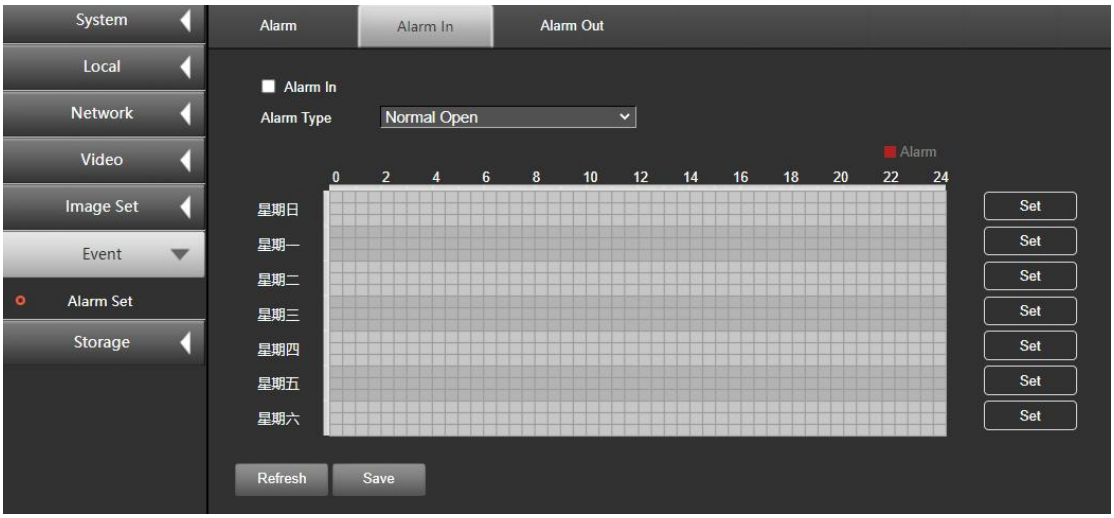
Check to enable the alarm input linkage function, the alarm type can be set to normally open and normally closed, and click Edit on the arming time to edit the arming time. You can set the arming of the entire week or a day of the week, and you can set the start time and end time of 6 time periods in detail for a day.



5.10.3 Alarm Output

Check to enable the alarm output linkage function, the alarm type can be set to normally open and normally closed, select the alarm delay time, the alarm delay time indicates the continuation time after the alarm is triggered, and can be set between 5 seconds and 10 minutes, or manual, indicating manual shutdown of the alarm. The alarm status cannot be set.

Click Edit to edit the arming time. You can set the arming of the entire week or a day of the week, and you can set the start time and end time of 6 time periods in detail for a day.



5.10.4 Audible and Visual Alarm

Configure the parameters of the device flash alarm light, when the event is triggered, the flash light on the device can be linked to warn, the flash alarm has two modes: flashing and always-on, the flashing mode can control the flashing time and flashing frequency, and the continuous light mode can control the flashing time.



Configure the parameters of the equipment sound alarm, when the event is triggered, you can be reminded by setting the warning sound, the sound alarm has three modes of behavior analysis, temperature measurement and smoking detection, the corresponding alarm sound is different, respectively, "warning area, leave as soon as possible", "temperature abnormality, please deal with it as soon as possible" and "no smoking in this area", can control the number of alarms and volume.



5.10.5 Fire Source Detection

When the device detects the fire source, it displays the screen, links the alarm and uploads the alarm information according to the configured policy. Fire source detection can be used by adjusting the sensitivity, which can improve the correctness of detection and linkage, and is suitable for indoors, scenic spots, forests, tunnels and other fire environments.

Fire source detection can be applied to outdoor and indoors, monitoring range according to the size of infrared lens, the current largest

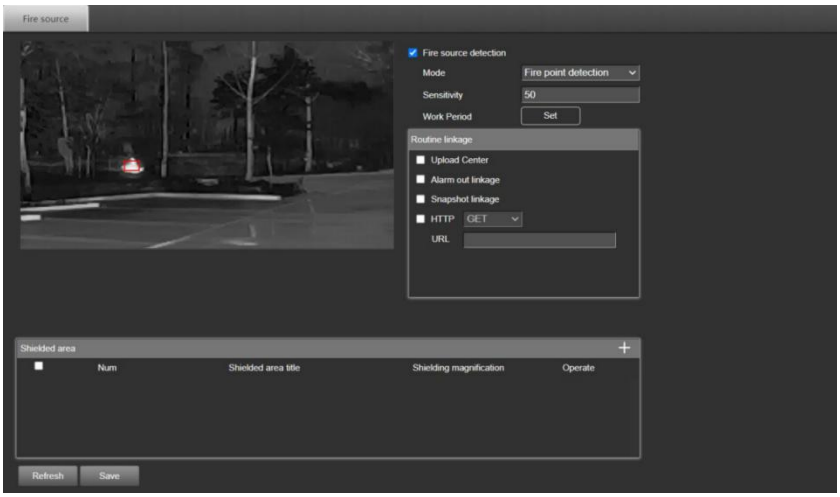
lens is 10mm infrared lens, the detection distance is up to 500 meters, in order to achieve the best detection effect, please select the following requirements.

• The mounting point selected should be the commanding point within the detection range.

•Choose the location as much as possible with convenient transportation and complete basic power supply network facilities, such as: communication towers, watchtowers, high-rise roofs, etc.

5.10.6 Configure Fire Point Detection

In order to reduce the safety hazards of ignition sources, the fire point detection function is set up in areas where ignition sources may exist. Used to detect if there is a fire point in the scene.



Step 1 Open the event interface "Fire Source Detection" to set the option to enable thermal imaging fire source detection.

Step 2 Check "Ignition Source Detection" to enable the ignition source detection function.

Step 3 Select "Enable fire detection" mode to turn on the device fire

detection function.

Step 4 Set the fire detection parameters

➢ Sensitivity: the value range is 0~100, the higher the sensitivity setting, the easier it is to detect suspicious fire points, but the false alarm rate is higher, and the default value is 50.

➢ Detection area: Check Enable detection area.

1. Click Add Drawing Area, click the mouse to draw the endpoints of the polygon area in the live screen, and then click the left mouse button to complete the drawing to form a closed area, and click Save after the drawing is completed.

2.Click Clear All to clear the drawn detection area.

3.Click the Drawn Area box to adjust the Detection Area parameter.

4.Click the area title to modify the title displayed in the detection area.

5. Detection magnification: The detection area can be adjusted according to the lens zoom, and the default is 1 cannot be modified (this device does not have the zoom function temporarily).

6. Optional operation: Multiple detection areas can be set by the above method, please set them according to your needs.

7.Click Save.

Step 5 Deploy the disarming time

➢ Set the alarm time period for disarming and disarming: the alarm event will be started within the set time range, there are six time periods for setting every day, select the check box in front of the time period, the set time period is valid, select the number of weeks, select the check box in front of the number of weeks, you can set a few days individually or seven days a week.

➢ Copy: Set the deployment on one day, check the need to set the same plan on other days, click Copy, click OK, and the setting is complete.

Step 6 Linkage mode

➢ Alarm linkage: Check the alarm input and set the name and type. The alarm type can be set to normally open and normally closed, switch from normally open to normally closed, and turn on the alarm; Switch from normally closed to normally open, turn off the alarm, and the alarm name can be customized. Select the corresponding alarm output channel of linkage, when the alarm is triggered, the device will trigger the corresponding switch alarm, set the alarm name and alarm duration. The alarm name can be set customizably, the alarm duration indicates the duration after the alarm is triggered, it can be set between 5 seconds and 10 minutes, or manual, indicating manual shutdown of the alarm.

➢ Image linkage: image time, image delay, code stream type, loop overlay, image mode and other image parameters can be set, and the image can be carried out after the alarm is triggered until the alarm stops, and the image can be saved to the default storage path or the image saving path can be selected.

➢ Capture linkage: you can set the capture parameters such as code stream type, picture format, resolution, picture quality, capture time interval, number of captures, etc., and capture images after the alarm is triggered until the alarm stops, and save the captured pictures to the default storage path You can also choose the path where the capture is saved.

➢ Email linkage: you can set the email address in the network settings, this function can also send the alarm image and alarm

capture information to the mailbox, you need to complete the capture and image setting before enabling this function, when the alarm is triggered, the device will send an email to notify the user.

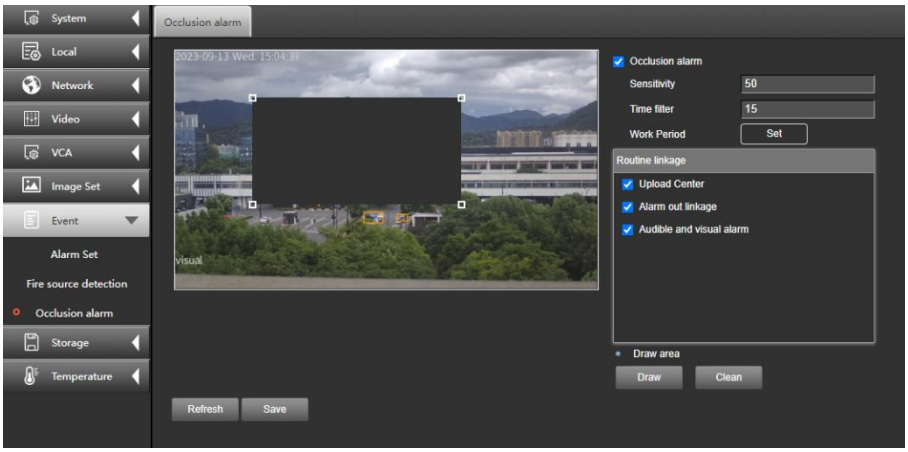
➢ Report Center: Before enabling this function, you need to complete the settings in the server interface. After the setting is completed, click Save, and the device will send alarm data information to the central server when the alarm is triggered.

➢ HTTP linkage: First, you need to deploy a local server, and then fill in the URL with GET or POST, and the server alarm information will be displayed after the device alarm.

Step 7 After the settings are complete, click Save.

5.10.7 Occlusion Alarm

When the pre-specified occlusion area of visible light is occluded, the area cannot be monitored normally, triggering the device to perform linkage alarm.



Step 1 Open the event interface "Occlusion Alarm" to set the option to enable the occlusion alarm function.

Step 2 Check "Occlusion alarm" to enable the occlusion alarm

function.

Step 3 Select "Enable occlusion alarm" mode to enable the device occlusion alarm function.

Step 4 Set occlusion alarm parameters

➢ Sensitivity: the value range is 0~100, the higher the sensitivity setting, the easier it is to detect the occluded area, but the false alarm rate is higher, the default value is 50.

➢ Detection area: Select Enable detection alarm area.

1. Click Add Drawing Area, click the mouse to draw the endpoints of the polygon area in the live screen, and then click the left mouse button to complete the drawing to form a closed area, and click Save after the drawing is completed.

2.Click Clear All to clear the drawn shielded area.

3.Click the Drawn Area box to adjust the shielded area parameters.

4.Click the area title to modify the title displayed by the shielded area.

5. Detection magnification: The shielding area can be adjusted according to the lens zoom, and the default is 1 cannot be modified (this device has no zoom function for the time being).

6. Optional operation: Multiple shielded areas can be set by the above method, please set them according to your needs.

7.Click Save.

Step 5 Deploy the disarming time

➢ Set the alarm time period for disarming and disarming: the alarm event will be started within the set time range, there are six time periods for setting every day, select the check box in front of the time period, the set time period is valid, select the number of weeks, select

the check box in front of the number of weeks, you can set a few days individually or seven days a week.

➢ Copy: Set the deployment on one day, check the need to set the same plan on other days, click Copy, click OK, and the setting is complete.

Step 6 Linkage mode

➢ Alarm linkage: Check the alarm input and set the name and type. The alarm type can be set to normally open and normally closed, switch from normally open to normally closed, and turn on the alarm; Switch from normally closed to normally open, turn off the alarm, and the alarm name can be customized. Select the corresponding alarm output channel of linkage, when the alarm is triggered, the device will trigger the corresponding switch alarm, set the alarm name and alarm duration. The alarm name can be set customizably, the alarm duration indicates the duration after the alarm is triggered, it can be set between 5 seconds and 10 minutes, or manual, indicating manual shutdown of the alarm.

➢ Image linkage: image time, image delay, code stream type, loop overlay, image mode and other image parameters can be set, and the image can be carried out after the alarm is triggered until the alarm stops, and the image can be saved to the default storage path or the image saving path can be selected.

➢ Capture linkage: you can set the capture parameters such as code stream type, picture format, resolution, picture quality, capture time interval, number of captures, etc., and capture images after the alarm is triggered until the alarm stops, and save the captured pictures to the default storage path You can also choose the path where the capture is saved.

➢ Email linkage: you can set the email address in the network settings, this function can also send the alarm image and alarm capture information to the mailbox, you need to complete the capture and image setting before enabling this function, when the alarm is triggered, the device will send an email to notify the user.

➢ Report Center: Before enabling this function, you need to complete the settings in the server interface. After the setting is completed, click Save, and the device will send alarm data information to the central server when the alarm is triggered.

➢ HTTP linkage: First, you need to deploy a local server, and then fill in the URL with GET or POST, and the server alarm information will be displayed after the device alarm.

Step 7 Once the setup is complete, click Save.

5.11. Storage

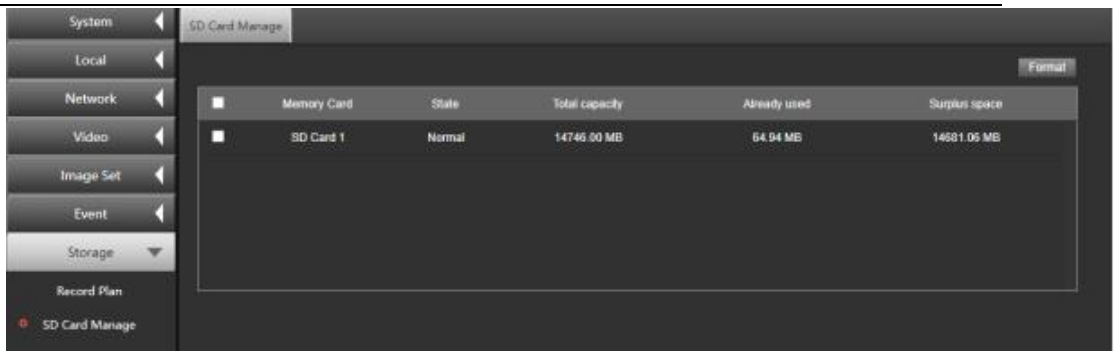
5.11.1 SD Card Management

SD card management is used to view the capacity and status of storage devices, and can format storage devices.

The SD card information displays the configured information, including total capacity, remaining space, used space, status.

Check the detected SD card, click "Format", and when the SD card status changes from "Unformatted" to "Normal", it can be used normally.

When you're done setting up, click Save.



5.12. VCA Function

Introduce the recommended and non-recommended scenarios when VCA can be configured, and select the appropriate scene to improve the accuracy of detection, the higher the sensitivity setting, the easier it is to generate alarms after the target touches the rule.

• Recommended scene: The scene has a flat ground, only one pedestrian target, and no other large interference, such as: branches, leaves shaking, occlusion, other vehicle targets, etc.

• Scenarios are not recommended

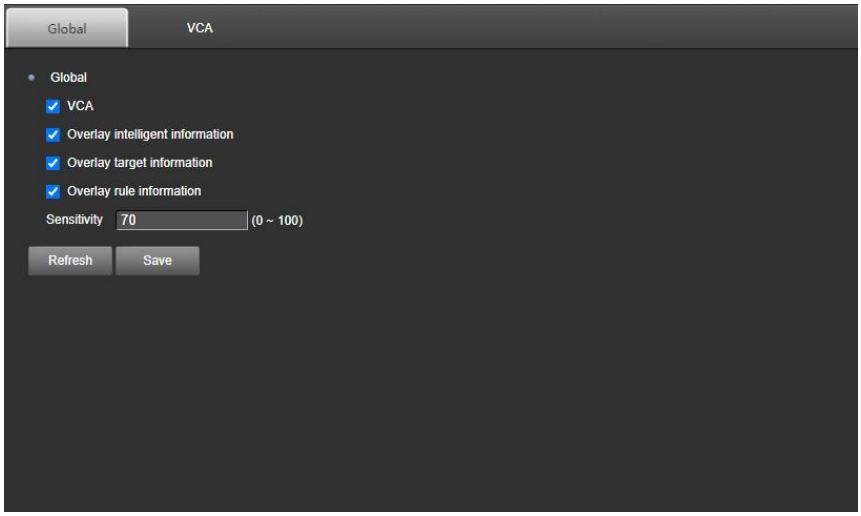
• Not recommended scenario 1: There are too many occlusions and the detection target information is incomplete.

• Not recommended scenario 2: There are too many interference targets such as pedestrians and vehicles in the scene.

• Not recommended scenario 3: The overall screen of the scene is too bright, and the target frame boundary is inaccurate.

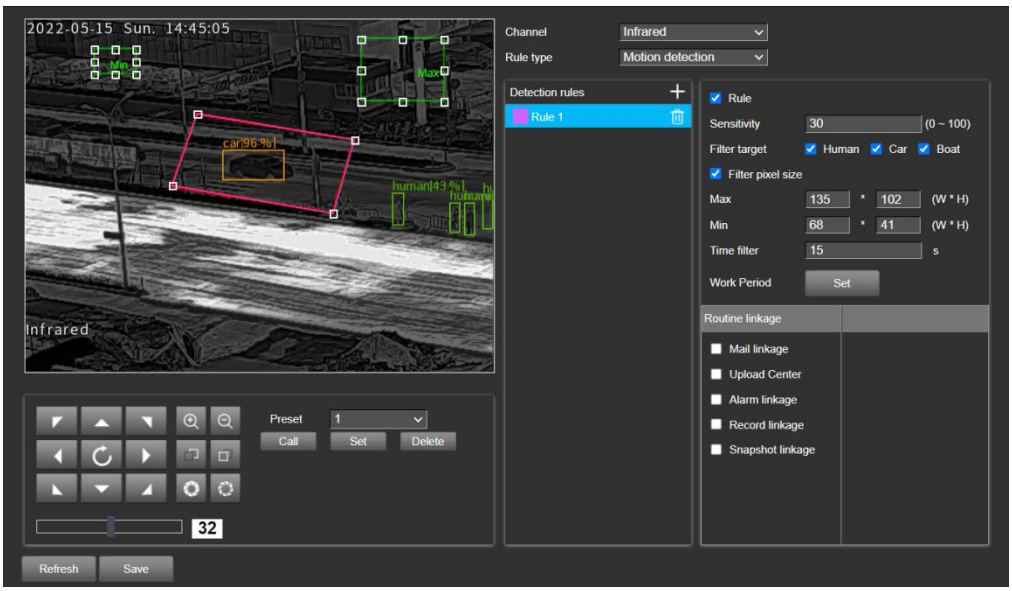
• Not recommended scenario 4: The detected target distance is too far and the target frame is inaccurate.

• Not recommended scenario 5: The motion trajectory of the detected target is not distributed on the same horizontal line.



5.12.1 Motion Detection

The motion detection function is used to detect whether there are moving objects in a certain area within a certain period of time, and when there are moving objects, an alarm event will be triggered. Capturing moving people, vehicles, and boat targets in the detection area will trigger an alarm, but the alarm will not be triggered after deleting the drawn detection area, and a single or multiple detection areas can be set for event detection.



Step 1 Select "VCA Alarm Channel" to set the VCA function option to turn on thermal imaging or visible light.

Step 2 Select "Target Recognition" to enable the selection of people, vehicles, and ship targets.

Step 3 Select "Enable motion detection" to enable the device motion detection alarm function.

Step 4 Regional feature settings

➢ Draw area: Click to start drawing the warning area, click the left mouse button in the screen to draw the end points of the polygon warning area, and complete the drawing of the area after connecting end to end.

➢ Delete area: Click the delete button to clear all drawn areas.

➢ Sensitivity: Each area can be set with different sensitivity, the value range is 0~100, the higher the level, the more sensitive the detection, the higher the sensitivity, the easier it is to generate dynamic detection events.

➢ Filter target: you can set the target alarm identification of people, vehicles, and boats, check the target will select the identified target, the target will be alarmed after triggering the alarm event, and the unchecked target will automatically filter the detection setting of the target will not trigger the alarm.

➢Filter pixel settings: You can set the pixel size value of the target to trigger the alarm, and the alarm will be reported when the proportion of the target area in the area exceeds the set pixel range.

➢ Audio alarm: enable sound alarm, configure alarm duration, alarm frequency, cycle alarm and other parameters as needed, alarm event triggering will play alarm tone on the computer, and there is a pop-up box prompt on the web, when the audio alarm is not needed to

cancel the enable.

Step 5 Deploy the disarming time

➢ Set alarm time period: alarm events will be started within the set time range, there are six time periods for setting every day, select the check box in front of the time period, the set time period is valid, select the number of weeks, select the check box in front of the number of weeks, you can set the days individually or seven days a week.

➢ Copy: Set the deployment on one day, check the need to set the same plan on other days, click Copy, click OK, and the setting is complete.

Step 6 Linkage mode

➢ Alarm linkage: Check the alarm input and set the name and type. The alarm type can be set to normally open and normally closed, switch from normally open to normally closed, and turn on the alarm; Switch from normally closed to normally open, turn off the alarm, and the alarm name can be customized. Select the corresponding alarm output channel of linkage, when the alarm is triggered, the device will trigger the corresponding switch alarm, set the alarm name and alarm duration. The alarm name can be set customizably, the alarm duration indicates the duration after the alarm is triggered, it can be set between 5 seconds and 10 minutes, or manual, indicating manual shutdown of the alarm.

➢ Image linkage: image time, image delay, code stream type, loop overlay, image mode and other image parameters can be set, and the image can be carried out after the alarm is triggered until the alarm stops, and the image can be saved to the default storage path or the image saving path can be selected.

➢ Capture linkage: you can set the capture parameters such as code stream type, picture format, resolution, picture quality, capture time interval, number of captures, etc., and capture images after the alarm is triggered until the alarm stops, and save the captured pictures to the default storage path You can also choose the path where the capture is saved.

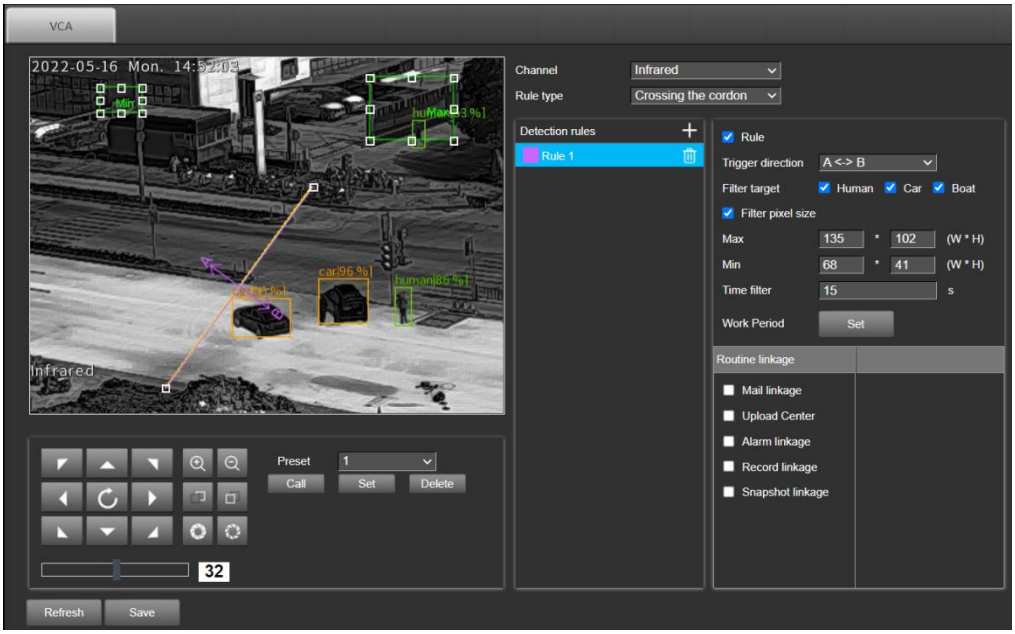
➢ Email linkage: you can set the email address in the network settings, this function can also send the alarm image and alarm capture information to the mailbox, you need to complete the capture and image setting before enabling this function, when the alarm is triggered, the device will send an email to notify the user.

➢ Report Center: Before enabling this function, you need to complete the settings in the server interface. After the setting is completed, click Save, and the device will send alarm data information to the central server when the alarm is triggered.

Step 7 Once the setup is complete, click Save.

5.12.2 Out-of-bounds alarm

The cross-border alarm function is used to detect whether an object crosses the warning surface of a certain period of time and trigger an alarm according to the result. Capturing people, vehicles, and boats in the detection area will trigger an alarm if they cross the warning surface, and the alarm will not be triggered after deleting the drawn detection area, and single or multiple detection areas can be set for event detection.



Step 1 Select "VCA Alarm Channel" to set the VCA function option to turn on thermal imaging or visible light.

Step 2 Check "Target Recognition" to turn on the selection of people, vehicles, and ship targets.

Step 3 Select "Enable out-of-bounds alarm" to enable the out-of-bounds alarm function.

Step 4 Regional function settings

➢ Draw area: Click to start drawing the warning area, a line segment with an arrow appears in the screen, select the line segment and drag it to the screen position, that is, the drawing of the area is completed.

➢ Delete area: Click the delete button to clear all drawn areas.

➢ Trigger direction: The direction can be set "A<->B", "A->B", "B->A" three alarm trigger directions, can be set A→B alarm or B→A alarm or A←→B full alarm.

➢ Filter target: you can set the target alarm identification of people, vehicles, and boats, check the target will select the identified

target, the target will be alarmed after triggering the alarm event, and the unchecked target will automatically filter the detection setting of the target will not trigger the alarm.

➢ Filter pixel settings: You can set the pixel size value of the target to trigger the alarm, and the alarm will be reported when the proportion of the target area in the area exceeds the set pixel range.

➢ Audio alarm: enable sound alarm, configure alarm duration, alarm frequency, cycle alarm and other parameters as needed, alarm event triggering will play alarm tone on the computer, and there is a pop-up box prompt on the web, when the audio alarm is not needed to cancel the enable.

Step 5 Deploy the disarming time

➢ Set alarm time period: alarm events will be started within the set time range, there are six time periods for setting every day, select the check box in front of the time period, the set time period is valid, select the number of weeks, select the check box in front of the number of weeks, you can set the days individually or seven days a week.

➢ Copy: Set the deployment on one day, check the need to set the same plan on other days, click Copy, click OK, and the setting is complete.

Step 6 Linkage mode

➢ Alarm linkage: Check the alarm input and set the name and type. The alarm type can be set to normally open and normally closed, switch from normally open to normally closed, and turn on the alarm; Switch from normally closed to normally open, turn off the alarm, and the alarm name can be customized. Select the corresponding alarm output channel of linkage, when the alarm is triggered, the device will

trigger the corresponding switch alarm, set the alarm name and alarm duration. The alarm name can be set customizably, the alarm duration indicates the duration after the alarm is triggered, it can be set between 5 seconds and 10 minutes, or manual, indicating manual shutdown of the alarm.

➢ Image linkage: image time, image delay, code stream type, loop overlay, image mode and other image parameters can be set, and the image can be carried out after the alarm is triggered until the alarm stops, and the image can be saved to the default storage path or the image saving path can be selected.

➢ Capture linkage: you can set the capture parameters such as code stream type, picture format, resolution, picture quality, capture time interval, number of captures, etc., and capture images after the alarm is triggered until the alarm stops, and save the captured pictures to the default storage path You can also choose the path where the capture is saved.

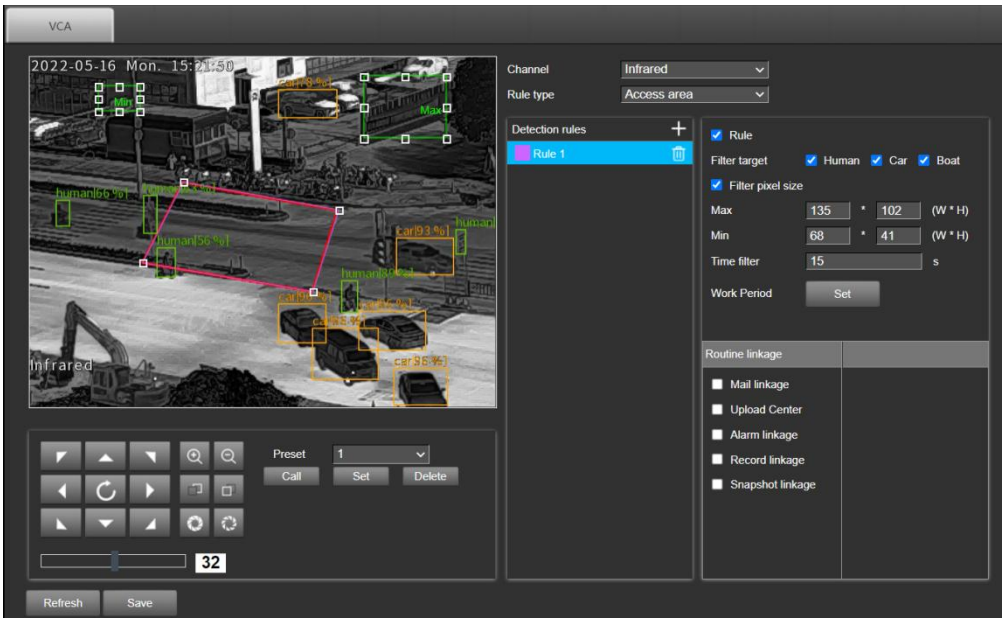
➢ Email linkage: you can set the email address in the network settings, this function can also send the alarm image and alarm capture information to the mailbox, you need to complete the capture and image setting before enabling this function, when the alarm is triggered, the device will send an email to notify the user.

➢ Report Center: Before enabling this function, you need to complete the settings in the server interface. After the setting is completed, click Save, and the device will send alarm data information to the central server when the alarm is triggered.

Step 7 After the settings are complete, click Save.

5.12.3 Entry Area Alarm

The alarm function of the entry area is used to detect whether there is an object entering the arming area within a certain period of time, and the alarm detection area will trigger an alarm according to the results of the people, vehicles, and boats captured by the target entering the area, and the alarm will not be triggered after deleting the drawn detection area, and single or multiple detection areas can be set for event detection.



Step 1 Select "VCA Alarm Channel" to set the VCA function option to turn on thermal imaging or visible light.

Step 2 Check "Target Recognition" to turn on the selection of people, vehicles, and ship targets.

Step 3 Select "Enable Entry Area Alarm" to enable the device out-of-boundary alarm function.

Step 4 Regional function settings

➢ Draw area: Click to start drawing the warning area, click the left mouse button in the screen to draw the end points of the polygon

warning area, and complete the drawing of the area after connecting end to end.

➢ Delete area: Click the delete button to clear all drawn areas.

➢ Filter target: you can set the target alarm identification of people, vehicles, and boats, check the target will select the identified target, the target will be alarmed after triggering the alarm event, and the unchecked target will automatically filter the detection setting of the target will not trigger the alarm.

➢ Filter pixel settings: You can set the pixel size value of the target to trigger the alarm, and the alarm will be reported when the proportion of the target area in the area exceeds the set pixel range.

➢ Audio alarm: enable sound alarm, configure alarm duration, alarm frequency, cycle alarm and other parameters as needed, alarm event triggering will play alarm tone on the computer, and there is a pop-up box prompt on the web, when the audio alarm is not needed to cancel the enable.

Step 5 Deploy the disarming time

➢ Set alarm time period: alarm events will be started within the set time range, there are six time periods for setting every day, select the check box in front of the time period, the set time period is valid, select the number of weeks, select the check box in front of the number of weeks, you can set the days individually or seven days a week.

➢ Copy: Set the deployment on one day, check the need to set the same plan on other days, click Copy, click OK, and the setting is complete.

Step 6 Linkage mode

➢ Alarm linkage: Check the alarm input and set the name and

type. The alarm type can be set to normally open and normally closed, switch from normally open to normally closed, and turn on the alarm; Switch from normally closed to normally open, turn off the alarm, and the alarm name can be customized. Select the corresponding alarm output channel of linkage, when the alarm is triggered, the device will trigger the corresponding switch alarm, set the alarm name and alarm duration. The alarm name can be set customizably, the alarm duration indicates the duration after the alarm is triggered, it can be set between 5 seconds and 10 minutes, or manual, indicating manual shutdown of the alarm.

➢ Image linkage: image time, image delay, code stream type, loop overlay, image mode and other image parameters can be set, and the image can be carried out after the alarm is triggered until the alarm stops, and the image can be saved to the default storage path or the image saving path can be selected.

➢ Capture linkage: you can set the capture parameters such as code stream type, picture format, resolution, picture quality, capture time interval, number of captures, etc., and capture images after the alarm is triggered until the alarm stops, and save the captured pictures to the default storage path You can also choose the path where the capture is saved.

➢ Email linkage: you can set the email address in the network settings, this function can also send the alarm image and alarm capture information to the mailbox, you need to complete the capture and image setting before enabling this function, when the alarm is triggered, the device will send an email to notify the user.

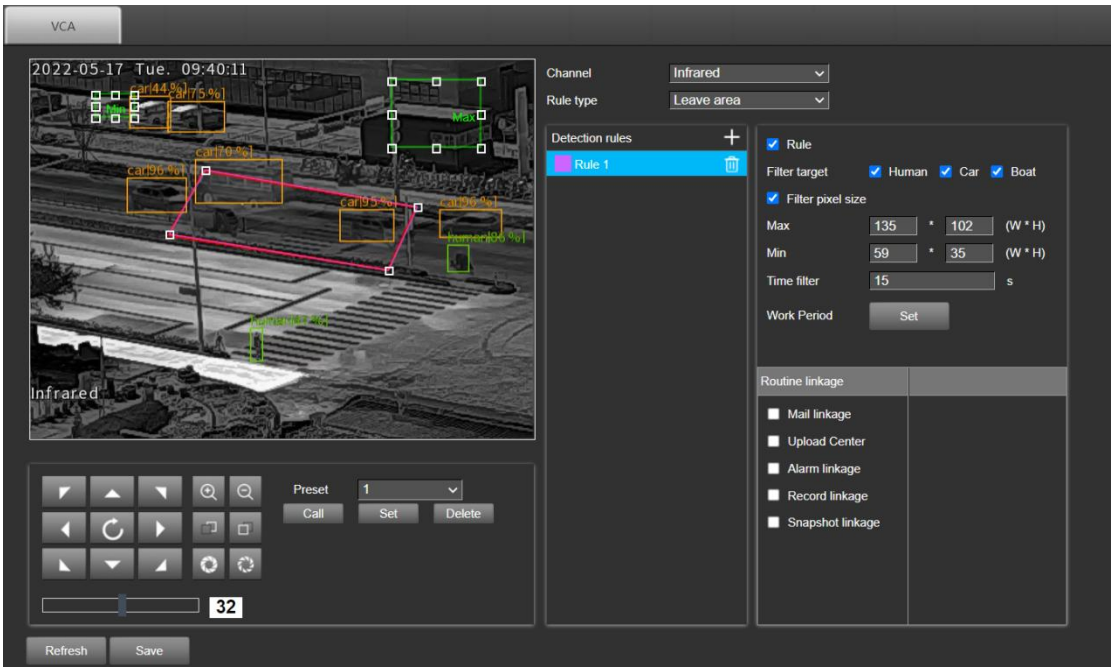
➢ Report Center: Before enabling this function, you need to complete the settings in the server interface. After the setting is

completed, click Save, and the device will send alarm data information to the central server when the alarm is triggered.

Step 7 After the settings are complete, click Save.

5.12.4 Exit Area Alarm

The departure area alarm function is used to detect whether there are objects leaving the arming area within a certain period of time, and trigger the alarm detection area according to the results of the people, cars, boats captured by the target leaving the area will trigger an alarm, delete the drawn detection area will not trigger the alarm, and can set a single or multiple detection areas for event detection.



Step 1 Select "VCA Alarm Channel" to set the VCA function option to turn on thermal imaging or visible light.

Step 2 Check "Target Recognition" to turn on the selection of people, vehicles, and ship targets.

Step 3 Select "Enable Departure Area Alarm" to enable the device out-of-bounds alarm function.

Step 4 Regional function settings

➢ Draw area: Click to start drawing the warning area, click the left mouse button in the screen to draw the end points of the polygon warning area, and complete the drawing of the area after connecting end to end.

➢ Delete area: Click the delete button to clear all drawn areas.

➢ Filter target: you can set the target alarm identification of people, vehicles, and boats, check the target will select the identified target, the target will be alarmed after triggering the alarm event, and the unchecked target will automatically filter the detection setting of the target will not trigger the alarm.

➢ Filter pixel settings: You can set the pixel size value of the target to trigger the alarm, and the alarm will be reported when the proportion of the target area in the area exceeds the set pixel range.

➢ Audio alarm: enable sound alarm, configure alarm duration, alarm frequency, cycle alarm and other parameters as needed, alarm event triggering will play alarm tone on the computer, and there is a pop-up box prompt on the web, when the audio alarm is not needed to cancel the enable.

Step 5 Deploy the disarming time

➢ Set alarm time period: alarm events will be started within the set time range, there are six time periods for setting every day, select the check box in front of the time period, the set time period is valid, select the number of weeks, select the check box in front of the number of weeks, you can set the days individually or seven days a week.

➢ Copy: Set the deployment on one day, check the need to set the same plan on other days, click Copy, click OK, and the setting is complete.

Step 6 Linkage mode

➢ Alarm linkage: Check the alarm input and set the name and type. The alarm type can be set to normally open and normally closed, switch from normally open to normally closed, and turn on the alarm; Switch from normally closed to normally open, turn off the alarm, and the alarm name can be customized. Select the corresponding alarm output channel of linkage, when the alarm is triggered, the device will trigger the corresponding switch alarm, set the alarm name and alarm duration. The alarm name can be set customizably, the alarm duration indicates the duration after the alarm is triggered, it can be set between 5 seconds and 10 minutes, or manual, indicating manual shutdown of the alarm.

➢ Image linkage: image time, image delay, code stream type, loop overlay, image mode and other image parameters can be set, and the image can be carried out after the alarm is triggered until the alarm stops, and the image can be saved to the default storage path or the image saving path can be selected.

➢ Capture linkage: you can set the capture parameters such as code stream type, picture format, resolution, picture quality, capture time interval, number of captures, etc., and capture images after the alarm is triggered until the alarm stops, and save the captured pictures to the default storage path You can also choose the path where the capture is saved.

➢ Email linkage: you can set the email address in the network settings, this function can also send the alarm image and alarm

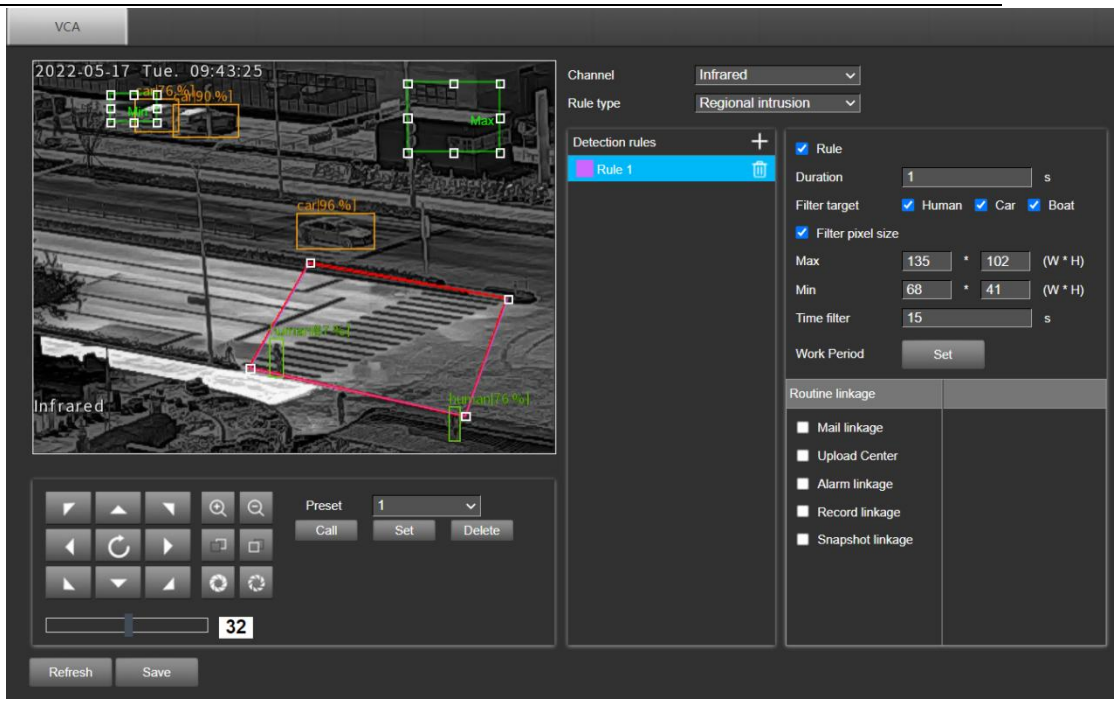
capture information to the mailbox, you need to complete the capture and image setting before enabling this function, when the alarm is triggered, the device will send an email to notify the user.

➢ Report Center: Before enabling this function, you need to complete the settings in the server interface. After the setting is completed, click Save, and the device will send alarm data information to the central server when the alarm is triggered.

Step 7 After the settings are complete, click Save.

5.12.5 Zone Intrusion

The area intrusion function is used to detect whether there is an object breaking into the arming area within a certain period of time, and trigger the alarm according to the results of the detection area, and the people, cars, and boats captured in the target intrusion area will trigger an alarm, and the alarm will not be triggered after deleting the drawn detection area, and a single or multiple detection areas can be set for event detection.



Step 1 Select "VCA Alarm Channel" to set the VCA function option to turn on thermal imaging or visible light.

Step 2 Check "Target Recognition" to turn on the selection of people, vehicles, and ship targets.

Step 3 Select "Enable zone intrusion" to enable the device out-of-bounds alarm function.

Step 4 Regional function settings

➢ Draw area: Click to start drawing the warning area, click the left mouse button in the screen to draw the end points of the polygon warning area, and complete the drawing of the area after connecting end to end.

➢ Delete area: Click the delete button to clear all drawn areas.

➢ Filter target: you can set the target alarm identification of people, vehicles, and boats, check the target will select the identified target, the target will be alarmed after triggering the alarm event, and the unchecked target will automatically filter the detection setting of the

target will not trigger the alarm.

➢ Filter pixel settings: You can set the pixel size value of the target to trigger the alarm, and the alarm will be reported when the proportion of the target area in the area exceeds the set pixel range.

➢ Audio alarm: enable sound alarm, configure alarm duration, alarm frequency, cycle alarm and other parameters as needed, alarm event triggering will play alarm tone on the computer, and there is a pop-up box prompt on the web, when the audio alarm is not needed to cancel the enable.

Step 5 Deploy the disarming time

➢ Set alarm time period: alarm events will be started within the set time range, there are six time periods for setting every day, select the check box in front of the time period, the set time period is valid, select the number of weeks, select the check box in front of the number of weeks, you can set the days individually or seven days a week.

➢ Copy: Set the deployment on one day, check the need to set the same plan on other days, click Copy, click OK, and the setting is complete.

Step 6 Linkage mode

➢ Alarm linkage: Check the alarm input and set the name and type. The alarm type can be set to normally open and normally closed, switch from normally open to normally closed, and turn on the alarm; Switch from normally closed to normally open, turn off the alarm, and the alarm name can be customized. Select the corresponding alarm output channel of linkage, when the alarm is triggered, the device will trigger the corresponding switch alarm, set the alarm name and alarm duration. The alarm name can be set customizably, the alarm duration

indicates the duration after the alarm is triggered, it can be set between 5 seconds and 10 minutes, or manual, indicating manual shutdown of the alarm.

➢ Image linkage: image time, image delay, code stream type, loop overlay, image mode and other image parameters can be set, and the image can be carried out after the alarm is triggered until the alarm stops, and the image can be saved to the default storage path or the image saving path can be selected.

➢ Capture linkage: you can set the capture parameters such as code stream type, picture format, resolution, picture quality, capture time interval, number of captures, etc., and capture images after the alarm is triggered until the alarm stops, and save the captured pictures to the default storage path You can also choose the path where the capture is saved.

➢ Email linkage: you can set the email address in the network settings, this function can also send the alarm image and alarm capture information to the mailbox, you need to complete the capture and image setting before enabling this function, when the alarm is triggered, the device will send an email to notify the user.

➢ Report Center: Before enabling this function, you need to complete the settings in the server interface. After the setting is completed, click Save, and the device will send alarm data information to the central server when the alarm is triggered.

Step 7 After the settings are complete, click Save.

5.13. Temperature Measurement Function

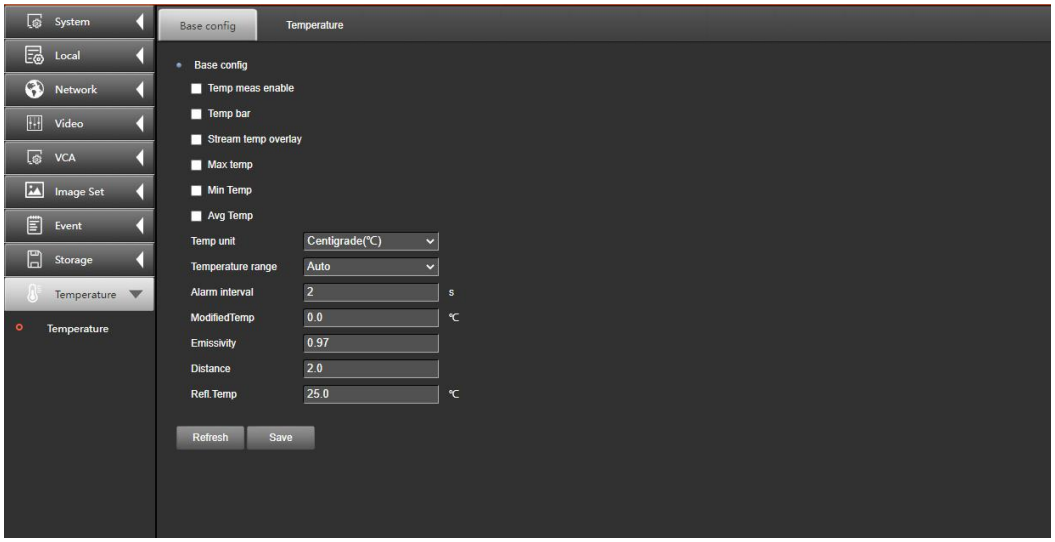
It is used for real-time temperature monitoring of the monitoring site, and when the temperature exceeds the alarm threshold, trigger the equipment to perform linkage actions.

Describes the precautions for configuring temperature measurement.

• The target surface should be perpendicular to the optical axis as much as possible, and it is recommended that the angle of the oblique image surface should not be greater than 45°.

• Target imaging pixels are not less than 3*3.

• When measuring the temperature of an area, use line or box measurement.



5.13.1 Basic Configuration

Temperature measurement function

After checking, the temperature measurement function can be turned on, and if it is not checked, the temperature measurement information will not be displayed

Displays a temperature bar

Check to indicate that the live screen will display information about the temperature bar.

Represents the time interval at which thermal temperature information is refreshed.

The code stream overlays the temperature information

Select the temperature and temperature measurement box information superimposed in the code stream.

Highest temperature, lowest temperature, average temperature

Check the box to display the temperature measurement data of the highest, lowest or average temperature superimposed on the thermal imaging channel in the live screen.

Temperature measurement unit

Set the unit for temperature measurement.

Temperature measurement range

Set the temperature range of the measured target.

Alarm interval

The interval at which alarm information is uploaded. In the interval, multiple alarms for the same event are uploaded only once.

The larger the alarm interval, the greater the possibility of false negatives, so set or adopt the device default value according to your actual needs.

Temperature compensation

It is used to effectively compensate for the defects of the equipment temperature measurement in the environment. Users can select the temperature to be compensated according to the actual scenario.

Emissivity

Set the emissivity of the temperature measurement target.

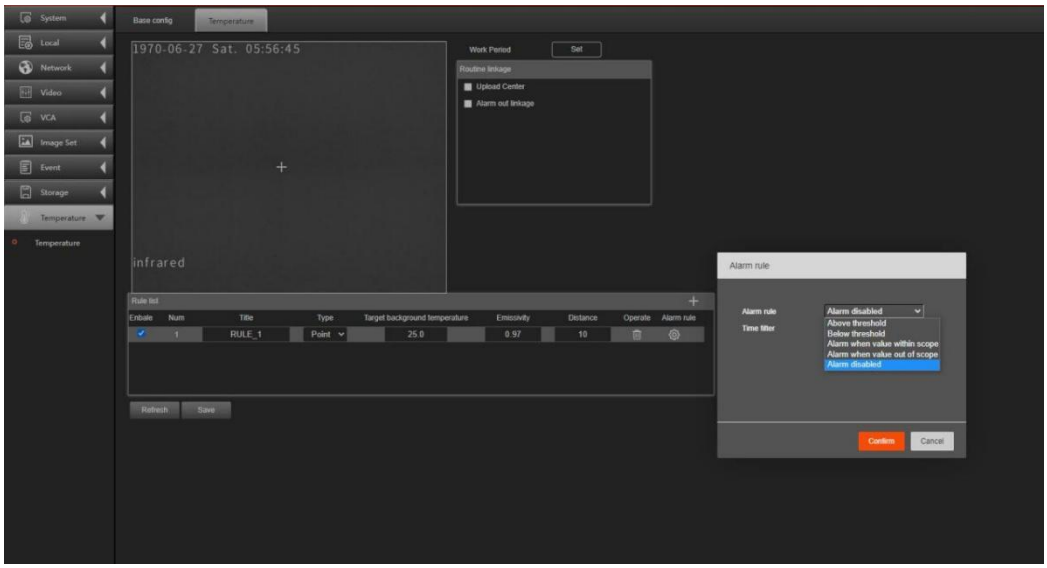
Distance

Indicates the straight-line distance between the temperature measurement scene and the device, and sets the distance according to the device and the temperature measurement target.

Background temperature

The background ambient temperature of the current device, which is set according to the current ambient temperature.

5.13.2 Configure the Temperature Measurement Function



Step 1 Open the temperature measurement interface "Temperature Measurement Configuration" to set the option to turn on thermal imaging temperature measurement.

Step 2 Click the "+" symbol mode on the right to set the temperature measurement function of the equipment area.

Step 3 Set the temperature measurement parameters

- ➢ Rule name: Name the temperature measurement area name
- ➢ Draw area: Add a temperature measurement area.

1. Point temperature measurement: It means that the temperature measurement point is specified in the scene, and the temperature is measured in the image of the point. Type selection point.

- Click Live Screen to display a temperature measurement point marked by a cross in the Live View.
- Click and drag the temperature measurement point to adjust to the temperature measurement point.
- Click Preview to open the thermal imaging channel image to view the temperature information and rule information of the point.

2. Line temperature measurement: It means drawing a regular line in the scene and measuring the temperature of the image of the line segment. Type Select Line, click Live Screen, drag the mouse to draw a regular line.

- Click the rule line to adjust the ends of the rule line, you can adjust the length of the rule line;
- Click and drag the rule line to adjust the position of the rule line.
- Click Preview to open the thermal channel image to view the highest moderate rule information for the rule line.

3. Area temperature measurement: means to draw an area in the scene and measure the temperature of the image of the area. Type: Select Region.

- Click the live screen, drag the mouse to draw a polygon, and right-click to finish drawing.
- Click the rule area to adjust the endpoints of the rule area, you can reshape the rule area or resize the rule area.

◆ Click and drag the rule area to adjust the position of the rule area. Click Preview to open the thermal channel image.

Step 4 Set the temperature measurement parameters

➢ Background temperature: You can view the maximum temperature rule information for the area. Background temperature: The background ambient temperature of the current device, set the value according to the current ambient temperature.

➢ Emissivity: Each target has a corresponding emissivity, set the emissivity of the temperature measurement target. The emissivity has a fixed value from rough to smooth, and you can also query the emissivity corresponding to the target according to the monitored target, and customize the emissivity value (the default is 0.97).

➢ Distance: indicates the straight-line distance between the temperature measurement scene and the device, and the distance is set according to the device and the temperature measurement target, and the distance unit is m.

➢ Alarm rules:

1. Above the threshold: When the temperature is detected to exceed the set alarm threshold, and after reaching the set filtering time, the device will alarm.

2. Below threshold: When the temperature is detected to be lower than the set alarm threshold, and the set filtering time is reached, the device will alarm.

3. Range alarm: Set the temperature range of the measured target, and after reaching the set filtering time, the target device in the minimum and maximum temperature range will alarm.

4. Out-of-range alarm: After setting the temperature range of

the measured target and reaching the set filtering time, the target device outside the minimum and maximum temperature range will alarm.

5. Disable alarm: turn off the alarm function, only display the temperature bar after turning off the alarm, but will not alarm.

6. Click Save, through the above methods, you can set multiple temperature measurement rules.

Step 5 Deploy the disarming time

➢ Set the alarm time period for disarming and disarming: the alarm event will be started within the set time range, there are six time periods for setting every day, select the check box in front of the time period, the set time period is valid, select the number of weeks, select the check box in front of the number of weeks, you can set a few days individually or seven days a week.

➢ Copy: Set the deployment on one day, check the need to set the same plan on other days, click Copy, click OK, and the setting is complete.

Step 6 Linkage mode

➢ Alarm linkage: Check the alarm input and set the name and type. The alarm type can be set to normally open and normally closed, switch from normally open to normally closed, and turn on the alarm; Switch from normally closed to normally open, turn off the alarm, and the alarm name can be customized. Select the corresponding alarm output channel of linkage, when the alarm is triggered, the device will trigger the corresponding switch alarm, set the alarm name and alarm duration. The alarm name can be set customizably, the alarm duration indicates the duration after the alarm is triggered, it can be set between 5 seconds and 10 minutes, or manual, indicating manual

shutdown of the alarm.

➢ Image linkage: image time, image delay, code stream type, loop overlay, image mode and other image parameters can be set, and the image can be carried out after the alarm is triggered until the alarm stops, and the image can be saved to the default storage path or the image saving path can be selected.

➢ Capture linkage: you can set the capture parameters such as code stream type, picture format, resolution, picture quality, capture time interval, number of captures, etc., and capture images after the alarm is triggered until the alarm stops, and save the captured pictures to the default storage path You can also choose the path where the capture is saved.

➢ Email linkage: you can set the email address in the network settings, this function can also send the alarm image and alarm capture information to the mailbox, you need to complete the capture and image setting before enabling this function, when the alarm is triggered, the device will send an email to notify the user.

➢ Report Center: Before enabling this function, you need to complete the settings in the server interface. After the setting is completed, click Save, and the device will send alarm data information to the central server when the alarm is triggered.

➢ HTTP linkage: First, you need to deploy a local server, and then fill in the URL with GET or POST, and the server alarm information will be displayed after the device alarm.

Step 7 After the settings are complete, click Save.