



## Quick Start Guide

GD-TI-AT30105K

EN

[grundig-security.com](http://grundig-security.com)

**GRUNDIG**

## **Quick Guide**

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## **Safety and Installation Instructions**

### **Introduction**

Please read these instructions carefully and keep them for future reference. You must heed all the warnings and cautions as well as follow all the safety and installation

instructions.

The appearance of the products, functions and firmware or software upgrade may differ from this manual.

GRUNDIG reserves the right to perform needed changes without prior notice.

### **Safety Instructions**

Make sure that you only use the power adapter that is specified in the specifications sheet of the product. If you use any other adapter or connect the power supply incorrectly, this may cause explosion, fire, electric shocks or damage the product. Do not connect several devices to one power adapter as this may cause an adapter overload and can lead to over-heating and fire. Make sure that the plug of the power adapter is firmly connected to the power socket.

Do not place containers with liquids on the product. Do not place conducting items like tools, screws, coins or other metal items on the product. These may fall from the product or can cause fire or electric shocks or other physical injuries.

Do not push or insert any sharp items or any objects into the device as this may cause damage to the product, fire, electric shocks and/or physical injuries.

Do not block any ventilation openings, if there are any. Ensure that the product is well ventilated to prevent any over-heating.

Do not subject the device to physical shock or drop the product.

If the product uses batteries, please use a battery type that is recommended by the manufacturer. Improper use or replacement of the battery may result in the hazard of explosion.

Do not use any accessories that are not recommended by GRUNDIG. Do not modify the product in any way.

If the product starts to smell or smoke comes out of the device, immediately stop using the product and disconnect it from the power supply to prevent fire or electric shocks. Then contact your dealer or the nearest service center.

If the product does not work correctly, contact your dealer or nearest service center. Never open, disassemble or alter the product yourself. GRUNDIG cannot accept any

liability or responsibility for problems caused by attempted and unauthorized repair and maintenance.

### **Installation Instructions**

It is necessary to fix the device firmly if the product is installed on a wall or ceiling. Do not install the product on surfaces or in places that are vibrating. Do not install the product near radiation sources.

Do not install the product near heat sources, like radiators or other equipment that produces some heat. If the product is not classified by any IP class, do not install the product in very cold or hot temperatures (please refer to the working temperature specified in the specification sheet of the product), dusty, dirty or damp environment.

If the product is classified by any IP class, never touch the product cover directly with your fingers, because the acidic sweat of the fingers may damage the surface coating of the product cover. To clean the inside and outside of the product cover, use a soft and dry cloth. In any case, do not use alkaline detergents. The correct configuration of all passwords and other security settings is the sole responsibility of the installer and/or end-user (this applies especially to IP Cameras and Recorders).

### **Special Installation Instructions for Cameras**

Do not touch the sensor module with your fingers. Do not aim the camera or camera lens at a strong light such as the sun or a bright lamp. Irreversible damage to the camera can be caused by a strong light.

Do not expose the sensor of the product to laser beams as this may damage the sensor.

If the product supports IR, you need to take some precautions to prevent IR reflection. Do not install the product close to reflective surfaces of objects as this may cause reflection. If the product has a dome cover, please remove the protection film only after installation to prevent dust or grease on the camera which can cause reflection. The foam ring around the lens must be seated flush against the inner

surface of the bubble to isolate the lens from the IR LEDS. Fasten the dome cover to the camera body so that the foam ring and the dome cover are attached seamlessly. For cleaning, use a clean cloth with a bit of ethanol and wipe it carefully and gently. In any case, do not use alkaline detergents.

If a glove is provided in the package, please use it to open the product cover. Never touch the product cover directly with fingers, because the acidic sweat of the fingers may damage the surface coating of the product cover.

### **Special Installation Instructions for IP Cameras**

Make sure that the latest firmware is installed on the IP Device. You may get the latest firmware from [techsupport@grundig-security.com](mailto:techsupport@grundig-security.com).

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# 1 Camera Introduction

## 1.1 Overview

The GD-TI-AT30105K Thermal Positioning System Camera is a series of camera specially designed for long range day and night surveillance. In the daytime, it uses a telephoto lens and high-definition camera imaging, which can take into account both short-range and large-range search and long-distance feature image collection; at night, the most the advanced uncooled thermal imaging detector has good imaging effect, is easy to conceal, and is not affected by external lighting; the whole machine adopts network video output to ensure the convenience of video monitoring. The whole machine is powered by a wide-width power supply, which is convenient for customers to install and use.

## 1.2 Appearance



Figure 1-1 Front & side view



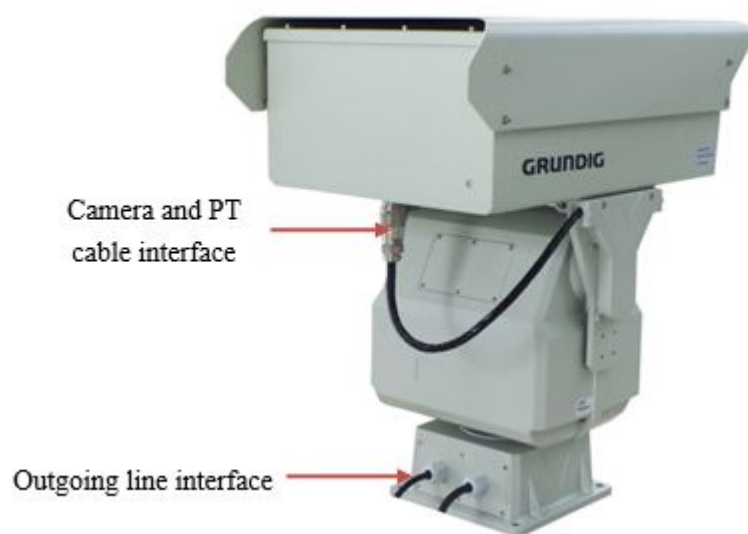


Figure 1-2 Rear side view

### 1.3 Dimensions (mm)

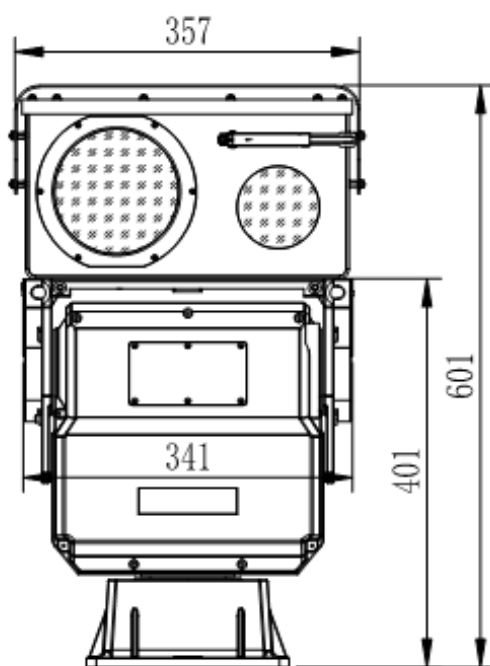


Figure 1-3 Front View

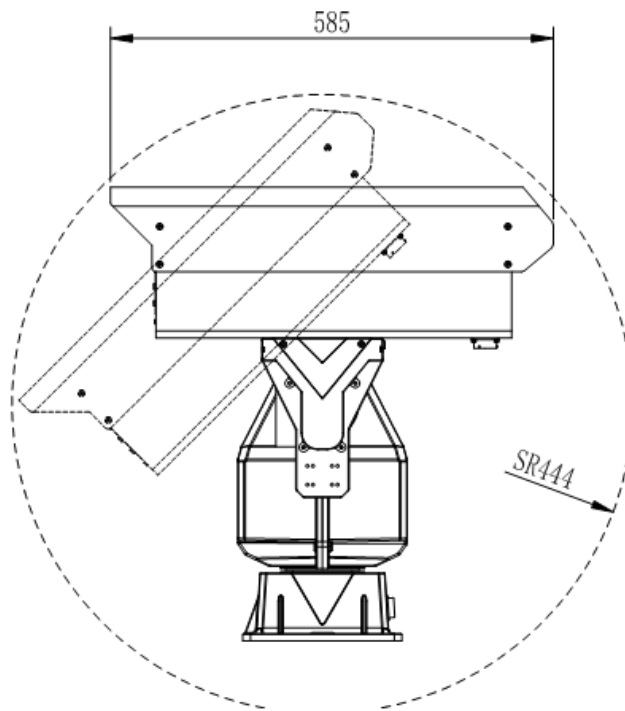


Figure 1-4 Sied vView

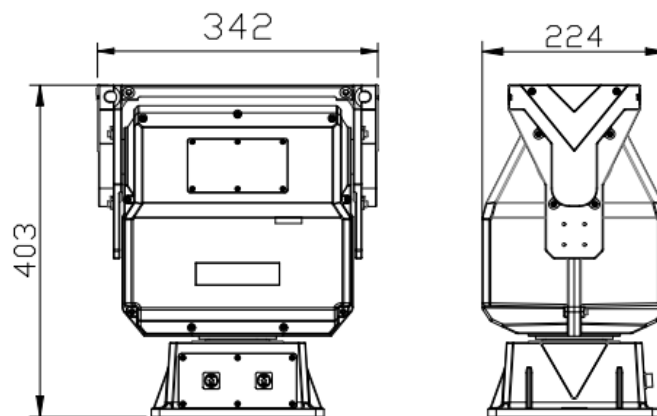


Figure 1-5 Front and side view of PTZ

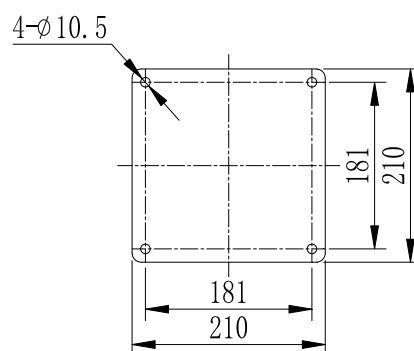


Figure 1-6 Mounting Hole at the base of PT

## 2 Operation

### 2.1 Installation and cable connection

#### 2.1.1 Installation

Mount the pinboard on the camera with M6 × 12 hexagonal screw (already done). Then mount the camera on PTZ with M6 × 20 hexagonal screw. Do not use screws too long in case of damaging the base plate of the camera; Do not use screws too short in case of unsecure installation.

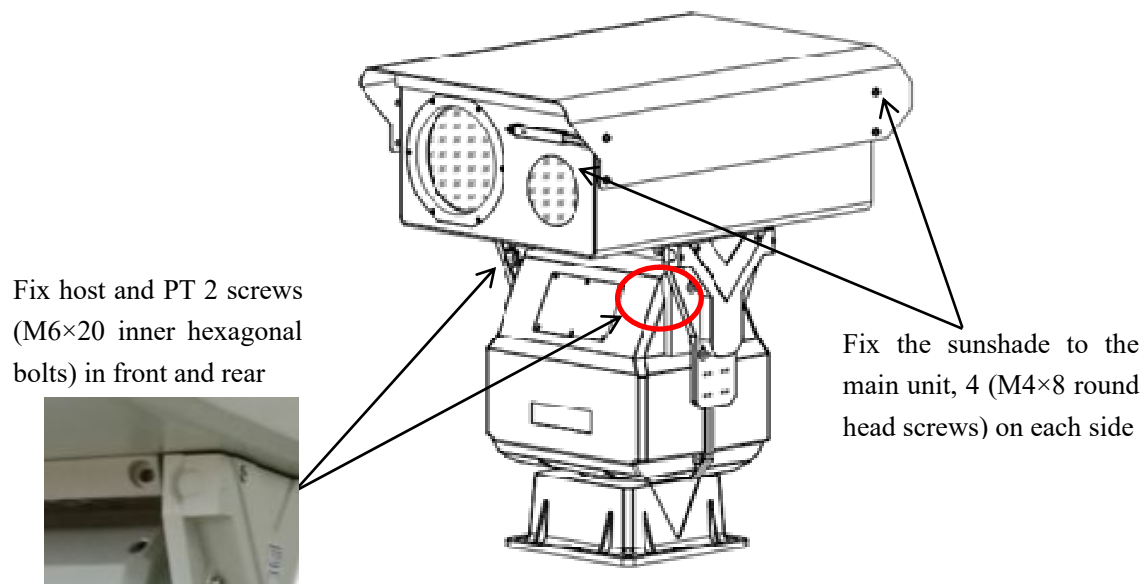


Figure 2-1 Camera Installation

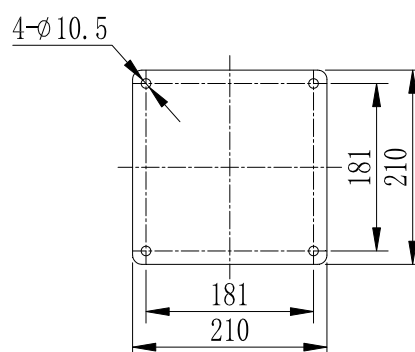


Figure 2-2 Mounting hole at the base of PT

Make a support according to the chart shown above. Then use suitable bolts and nuts to secure the camera on the support. The support should be able to bear more than 100kg.

### 2.1.2 Aviation Plug Installation



Figure 2-3 Aviation Plug Hole

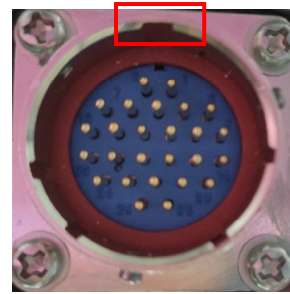


Figure 2-4 Aviation plug Pin

When installing, please insert the head hole into the socket, make sure that the pin is inserted into the socket, then twist the upper fixed ring upward and to the right, and then complete the docking after hearing "Click".

When removing the plug, please twist the plug to the left, the plug will be removed, with the pin plug separation.



Figure 2-5 Aviation Plug Finished Installation

### 2.1.3 Cable Connection

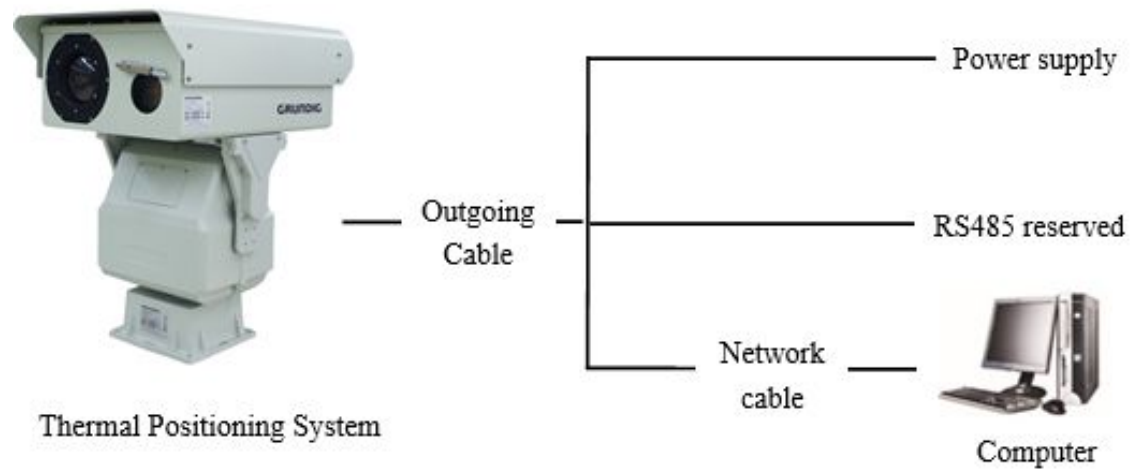


Figure 2-6 Connection

### 2.1.4 Connect

The interface between the host and PTZ uses a 26-core waterproof aviation connector. For details, please refer to the following:

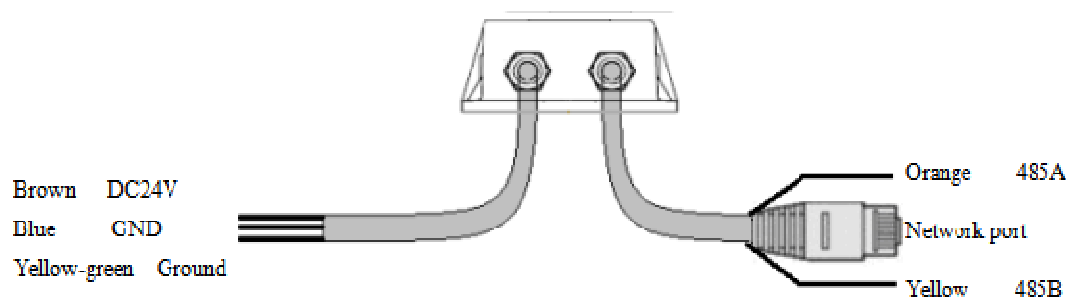
Table 2-1 cable description

Pin No.	1	2	3	4	5	6
definition	Red RS485A	Black RS485B	White TX+ (machine)	Purple TX- (machine)	NC	NC
Pin No.	7	8	9	10	11	12
definition	Core Video1+	Shield Video1-	Orange input	Orange input	Grey alarm out	Transpare nt alarm out
Pin No.	13	14	15	16	17	18
definition	Light blue RX+ (PT TX+)	Blue RX- (PT TX-)	Light green TX+ (PT RX+)	Green TX- (PT RX-)	Blue and white TX+ (RJ45-1)	Blue TX- (RJ45-2)
Pin No.	19	20	21	22	23	24
definition	Brown and white RX+ (RJ45-3)	Brown RX- (RJ45-6)	NC	Thick Red 12V+	Thick Black GND	Thick Yellow 24VAC
Pin No.	25	26				

<b>definition</b>	Thick Yellow 24VAC	NC				
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Note: NC is empty

PTZ bottom Output line definitions:



### 3. Common Faults

The table below includes the common faults during operation. Whenever these problems occur, you may refer to this table or contact us directly for proper solution.

Fault	Possible Cause	Solution
No movement and video after powering on	Power damage or under power	Replace the original power.
	Wrong connection of power line	Reconnect
	Circuit malfunction	Check circuit
Successful auto detection, but can't be controlled.	Not connect to the network	Check network connection and ensure its proper connection
	Incorrect parameter	Set the camera parameter according to the manual
	RS485 connected wrong	Reset the RS485 control protocol
Successful auto detection, but no image	Wrong power line connection or open circuit	Reconnect the power line
	Not connect to the network	Check network connection and ensure its proper connection
	Firewall blocked video transmission	Close the firewall
Image loss while PT is rotating	PT underpower	Replace the power
	The camera video line not connect proper	Check the video line and ensure its proper connection
Unclear image	focus	Refocus manually
	Lens covered by objects	Check if there is any cover
	Dirty lens	Clear lens
Non uniform image	Temperature excursion noise as a result of long time no correction	Access manual correction or background correction via menu, or restore default.
	Auto correction is not ON.	Select auto correction or restore

Super high or low brightness		default.
	Inappropriate brightness and contrast parameters setting	Adjust brightness, contrast to adapt to corresponding environment or restore default.



## 4 Network Set and Access

A number of parameters necessitates configuration before using. Parameters need to configured include: IP address, subnet mask and port number.

Default IP address for camera: **192.168.1.64**

User: **admin**

Password: **Abc.12345**

**Note:** The specific login interface is subject to the actual login.

### 4.1 Accessing by Web Browsers

#### 4.1.1 Product Overview

Network thermal imaging is mainly connected with PC through a switch or router.

Before accessing the network camera through the network, you first need to obtain its IP address. Users can search the IP address of the network camera through the quick configuration tool. The default IP address of the camera when it leaves the factory is 192.168.1.64.

#### 4.1.2 Web Login

It describes login and logout device through a browser WEB interface, this section IE introduces Explorer 11 as an example.

##### (1) Login web Interface

After logging in to the device WEB interface through a browser, you can preview, play back, and configure the device.

- The first time you log in to the system, you will be prompted to install the plugin.  
Please follow the prompts to download and install the plugin.
- When using a non-IE browser, please use the compatibility mode.

**Step 1,** Open the IE browser, enter the IP address of the camera in the address bar, and press the [Enter].

After the connection is successful, the system displays the Login screen.

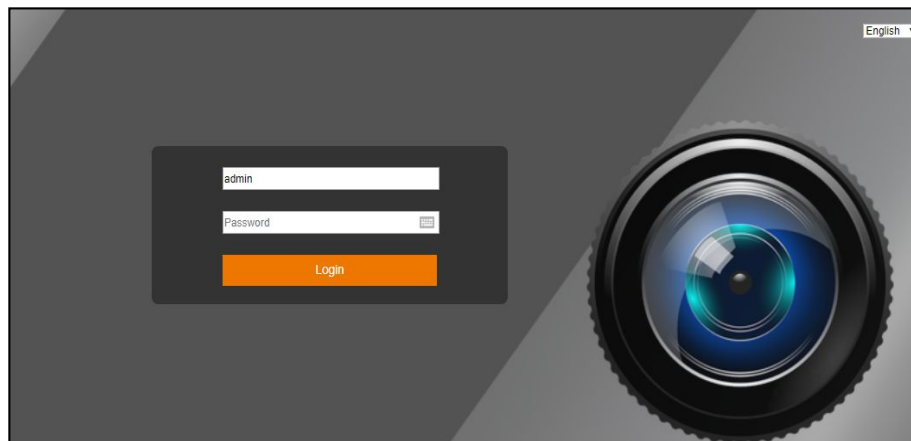


Figure 4-1 Login

**Step 2**, Enter the password of the admin user. The initial password is Abc.12345.

**Step 3**, Click Login. After the login is successful, the Preview screen is displayed, as shown in Figure 4-2.

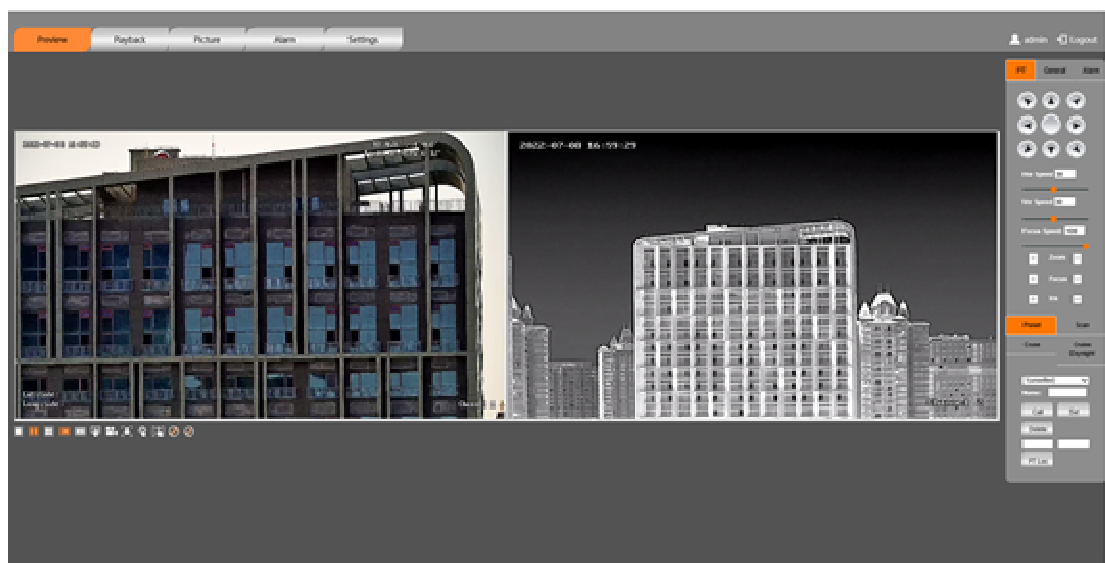


Figure 4-2 Preview

## (2) Logout

Click "Logout" to return to the WEB login interface. After logging in to the device WEB, if the device is not operated for a period of time, the system will automatically log out and you need to re-enter the password to log in.

### 4.1.3 Preview

#### 4.1.3.1 Preview interface introduction

The function bar of the preview interface is introduced, including the system menu bar, the video window adjustment bar, the pan-tilt control option bar, and the pan-tilt function option bar. After logging in to the web page, click the Preview tab. The system displays the Preview interface, as shown in Figure 4-3.

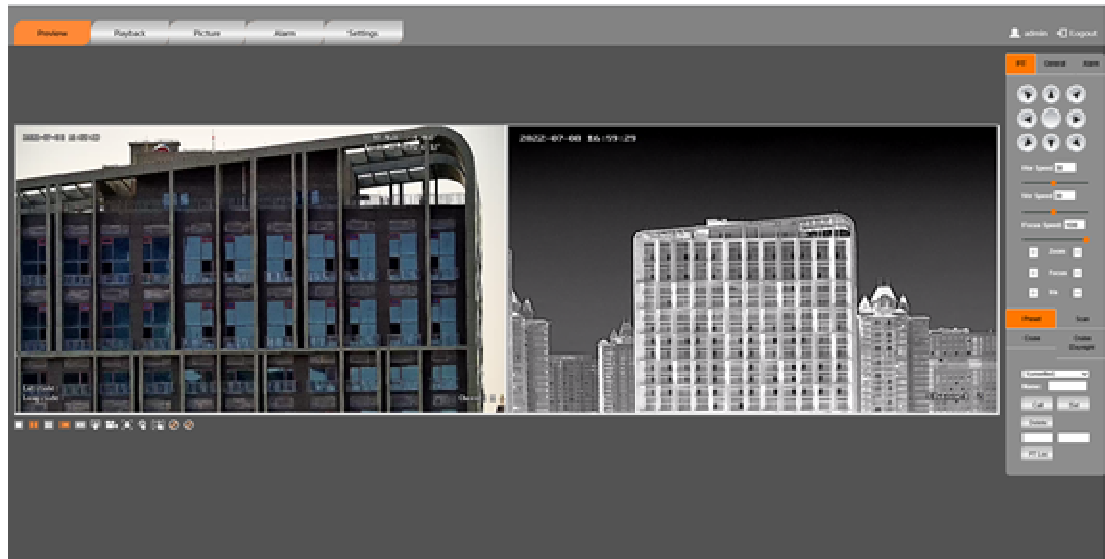


Figure 4-3 Preview interface

The preview interface of the WEB client contains four function bars:








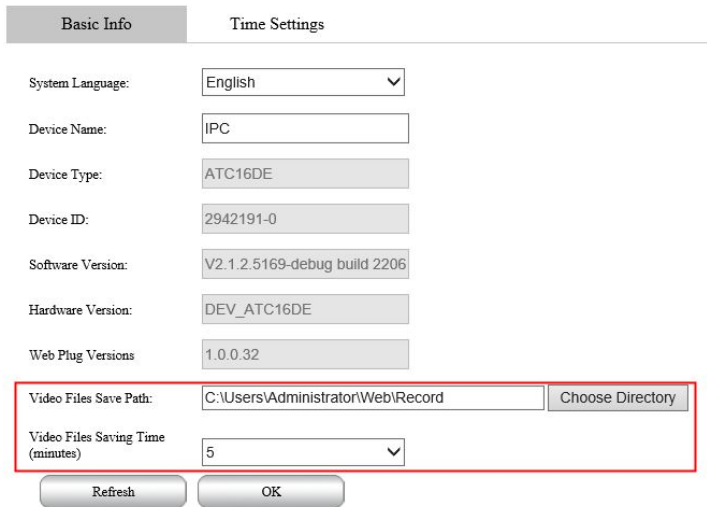




- (1) System menu bar, click the tab on the system menu bar to enter the corresponding function interface.
- (2) Video window adjustment bar, video window supports adjustment of local WEB video screen image, display mode and commonly used functions.
- (3) PTZ control option bar, pan/tilt and lens control functions.
- (4) PTZ function option bar, Preset Position, Cruise scan, Horizontal scan and other functions.

#### 4.1.3.2 Video window adjustment bar options

This section describes the functions supported when viewing live video, including primary and secondary code stream switching, full screen, original scale, capture, video, manual correction, background correction, and focus.



Figure 4-4 Video window adjustment function

Icon	Function	Instruction
	Single screen	Display a single screen
	Dual screen	Display dual picture
	Four pictures	Display four screens
	Main code stream	Play the main code stream with high definition
	Secondary code stream	Play the secondary code stream with low resolution
	Capture	Click this icon to grab a current video screen and save it in the set storage path.
	Record	<p>Click this icon to record the video and save it in the set storage path. When video recording is enabled, a red video recording icon will be displayed in the upper right corner of the.</p> <p>Select "Settings-System Settings-Basic Settings-Basic Info", you can view or change the video storage path on this interface.</p> <div data-bbox="628 1046 1337 1550">  </div>
	Focus once	Click this icon to trigger an auto focus
	Manual Calibration	Click this icon to trigger a manual calibration
	Background Calibration	Click this icon to trigger a background calibration
	3D Zoom	<p>Turn ON the 3D Position by click the button. And turn off the 3D Position when click the button again.</p> <p>When the 3D Position is turned on, you can operate the camera according to the followings:</p> <p>Click anywhere in the video screen by the left- mouse,</p>

		<p>and then the camera will suppress the corresponding point to the center of the video.</p> <p>Hold down the left- mouse button and pull out a rectangular area to the right (up) direction, and then camera will suppress the corresponding point to the center of the video to zoom in the view.</p> <p>Hold down the left- mouse button and pull out a rectangular area to the left(down) direction, and then camera will suppress the corresponding point to the center of the video to zoom out the view.</p>
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Note: • Before background correction can be used, the lens must be aimed at a scene with a single background. For example, aim at a cloudless sky or cover the lens with a lens cap to correct it.

#### 4.1.3.3 PTZ control option bar

Introduce the PTZ control function, including lens zoom and focus. The PTZ control allows you to rotate the device, zoom, focus and adjust the aperture.

- The PTZ rotation supports 8 directions, which are upper, lower, left, right, upper left, upper right, lower left, and lower right.
- PTZ speed is mainly used for PTZ control speed operation. The larger the value, the faster the PTZ control rotates.
- The focus speed is mainly used for the lens focus control speed, and the larger the value.

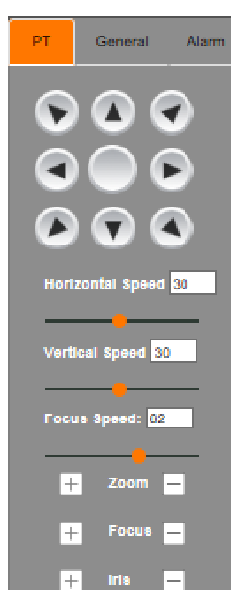

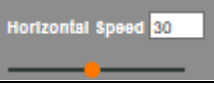

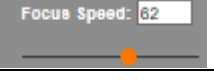
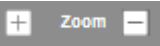
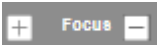


Figure 4-5 PTZ control

Icon	Instruction
	Long press the arrow keys to control the pan/tilt to rotate horizontally and vertically.
	Adjust the panning speed of the PTZ.
	Adjust the tilt rotation speed of the PTZ.
	Adjust the focus speed of the lens
	Indicates "Zoom+" and "Zoom-".  When you press and hold "+", the lens is zoomed in and the scene is enlarged; when you press and hold "Focus -", the lens is zoomed out and the scene is smaller.
	Indicates "Focus+" and "Focus-".  In manual focus mode, adjust the "+" and "-" keys to make the objects in the scene clear.

Common functions of the PTZ include preset, scan, cruise, day and night cruise.

#### 4.1.3.4 Preset

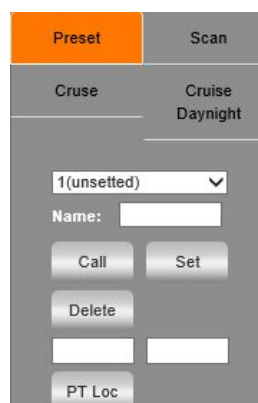


Figure 4-6 Preset



After setting the preset position, you can quickly locate the device to the corresponding position by checking the preset position. The preset position includes the position parameters such as the pan/tilt angle, tilt angle, and the focal length of the device lens.

Step 1 Click the "PT" tab and select "Preset";

Step 2 Select the preset number and enter the name;

Step 3 Control the lens and PTZ to the specified position;

Step 4 Click "Set" to complete the configuration. Click the "Call" icon to move the camera to the position corresponding to the preset, and click the "Delete" icon to delete the preset.

: Enter the azimuth and pitch angle of the PTZ, click "", the PTZ will be automatically positioned to the set position.

#### 4.1.3.5 Cruise

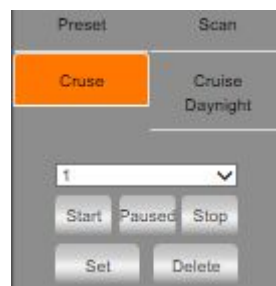


Figure 4-7 Cruise

After setting the cruise group, start the cruise, the device will automatically rotate back and forth according to the preset sequence.

Step 1 Click the "PT" tab and select "Cruise".

Step 2 Select the cruise route number.

Step 3 Click the "Set" button to add an existing preset and set the dwell time;

Step 4 Click the "Start" button to start the cruise; click the "Paused" button to pause the cruise; click the "Stop" button or directly control the direction of the PTZ to stop the cruise; click the "Delete" button to delete The cruise line.

#### 4.1.3.6 Scan



Figure 4-8 Scan

After setting the scan, turn on the scan, the device will automatically scan back and forth between the set left border and right border at a certain speed.

Step 1 Click the "PT" tab and select "Scan".

Step 2 Control the PTZ to a certain position, and click the "Left " button to complete the setting of the left border.

Step 3 Control the PTZ to another position, and click the "Right" button to complete the setting of the right border.

Step 4 Click the "Start" button to start scanning; click the "Paused" button to pause scanning; click the "Stop" button or control direction to stop scanning.

#### 4.1.3.7 General

General functions, including visible light, thermal imaging and auxiliary function settings, etc.

Under the auxiliary function, the control operation of the wiper, defrost and other functions can be carried out.





Figure 4-9 General settings

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**Note:**

Please refer to the actual operation interface. Some functions require device support. Please refer to the actual product.

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#### 4.1.3.8 Alarm

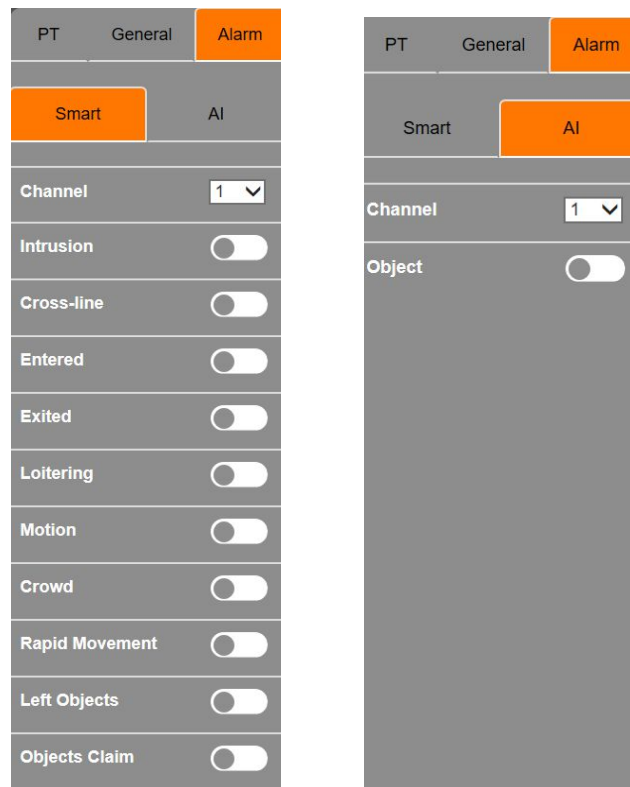
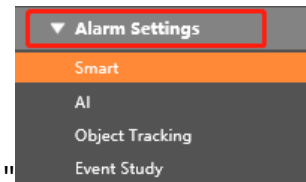


Figure 4-10 Alarm settings

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**Note:**

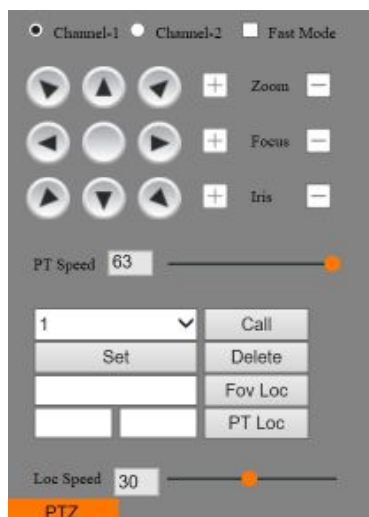
- Please refer to the actual operation interface. Some functions require device support. Please refer to the actual product.



- The corresponding detection must be configured under "PTZ", and it will be valid only if it is enabled in this interface, otherwise it will be invalid.
- 

#### 4.1.4 Image Settings

In the setting interface, click "PTZ" in the lower left corner to perform corresponding operations on the device in the corresponding interface.



PTZ:

Select "Settings→ Channels Settings→ Image Settings", the image settings include Image parameter settings, ODS settings, Thermal parameter settings, Bad point correction, Thermal status.

#### 4.1.4.1 Image parameter

Switch to Settings→ Channels Settings → Image Settings→ Image Parameter.

In channel 1, the visible light image parameter settings include Basic Parameter, Exposure, Focus Parameter, Day Night, Backlight, White Balance, Enhance, Video Adjust, Dual Video, ROI Zoom. Adjust the image parameters according to the actual environment.

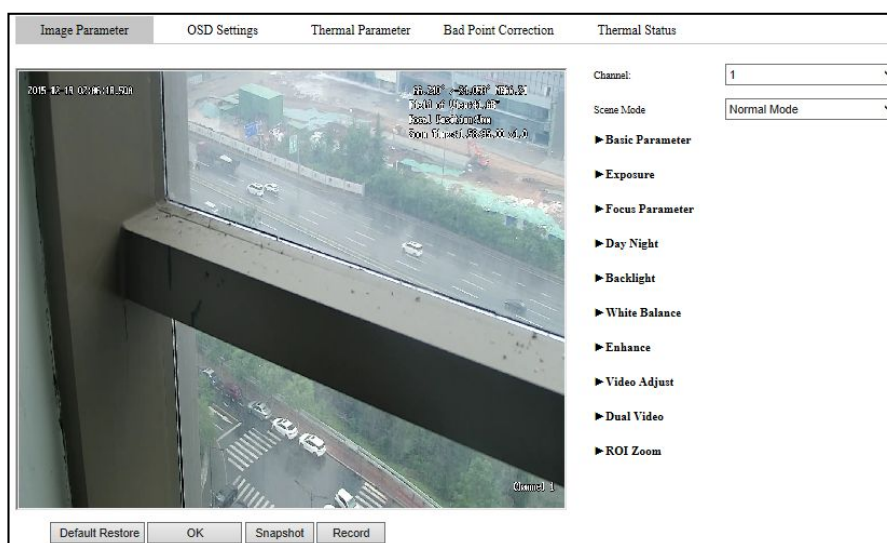


Figure 4-11 Image parameters (channel 1)

- Defog: When the device is in a foggy or hazy environment, the image quality will decrease. After enabling this function, the recognizable degree of objects in the water fog weather video screen can be improved to a certain extent.
- Stab: After this function is turned on, the stability of objects in the picture can be improved to a certain extent when the camera shakes.

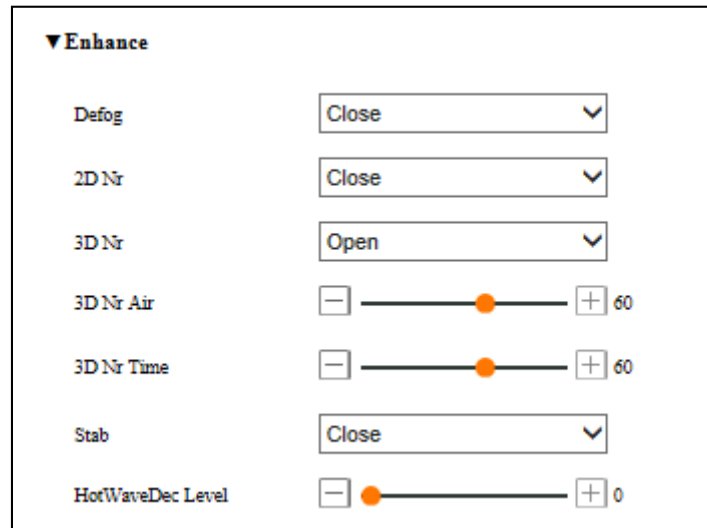


Figure 4-12 Image Enhancement

In channel 2, thermal imaging image parameter settings include Basic parameter, Digital zoom, 3D noise reduction, Dual Video, ROI Zoom. You can adjust the image parameters according to the actual environment.

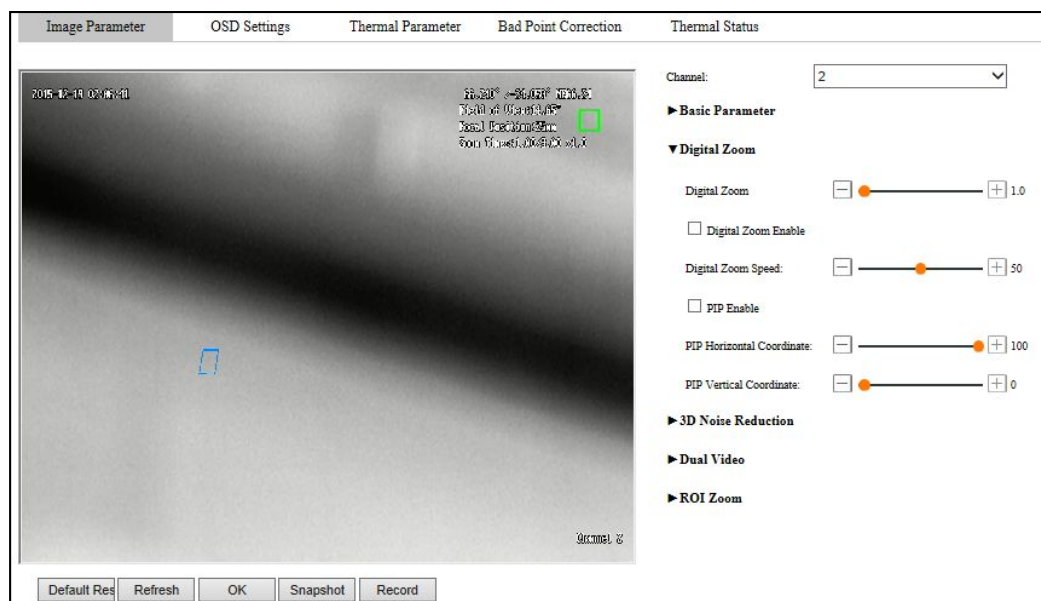


Figure 4-13 Image parameters (channel 2)

#### 4.1.4.2 Thermal Parameter



Figure 4-14 Thermal Parameter

##### ● Graphic Adjustment

Thermal imaging parameter image adjustment, adjust the image according to the actual environment needs, as shown in the figure.

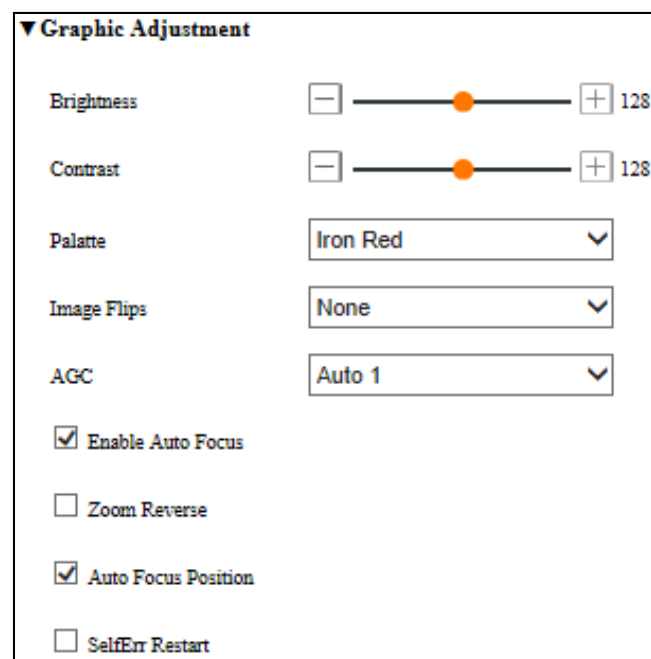


Figure 4-15 Graphic Adjustment

Please refer to the table below for some detailed function descriptions.

Function	Description
Brightness	Linearly adjusts the overall brightness of the image. The larger the value, the brighter the image, and vice versa.
Contrast	Adjust the contrast of the image. The larger the value, the larger the contrast of the image, and the smaller the contrast. When the value is set too large, the dark place of the image is too dark, and the bright place is easy to overexpose. If you set it too small, the image will be awkward.
Palette	Contains 18 color modes: Hot-white \Hot-black \Dawn\Iron Red\Rainbow1\Rainbow2\ Rainbow3\Red-hot\Dard green\Rainbow4\Colorful\Hot\Purple\Aurora\Warm\Azure\ Lava\Golden
Image Flips	None\Up-down\Left-right\Both
AGC	Focus mode, including: manual, auto 1, auto 2, auto 3. In manual mode, brightness and contrast are adjustable. In automatic mode, it cannot be adjusted.
Enable Auto Focus	After it is turned on, the auto focus will be triggered after manual control of zooming stops
Zoom Reverse	After opening, zoom + to wide angle, zoom-to telephoto
Auto Focus Position	After opening, the angle positioning will trigger auto focus
SelfErr Restart	When turned on, the thermal imaging self-check will automatically restart after an error

## ● Image Calibration

Including Manual Calibration, Background Calibration, Lens Check, etc., as shown in the figure.

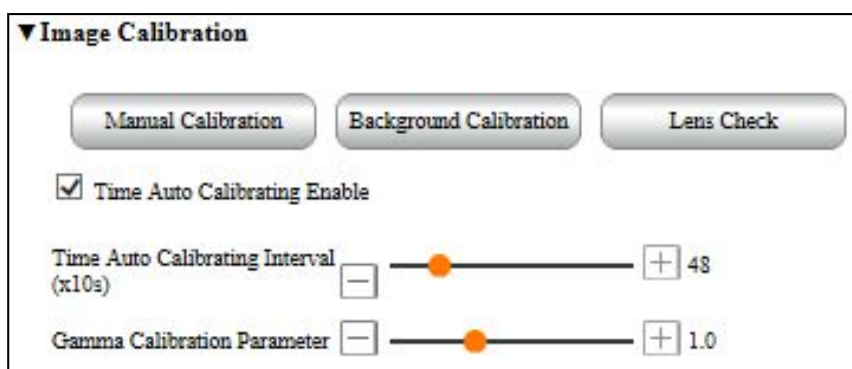


Figure 4-16 Image calibration

Please refer to the table below for some detailed function descriptions.

Function	Description
Manual Calibration	Click this button to manually calibrate once.
Background Calibration	Click this button to correct the background once. Before using this function, you must aim the camera at the scene with a single background. For example, it can be aimed at a cloudless sky, or it can be corrected after being covered by a lens cover.
Time Auto Calibrating Enable	After it is turned on, it will automatically calibrate according to the set time interval.
Time Auto Calibrating Interval (×10s)	
Gamma Calibration Parameter	
Lens Check	Click this button, the lens will perform self-check

### ● Image Enhancement

When turned on, it can improve the image details. The larger the value, the finer the details, as shown in the figure.

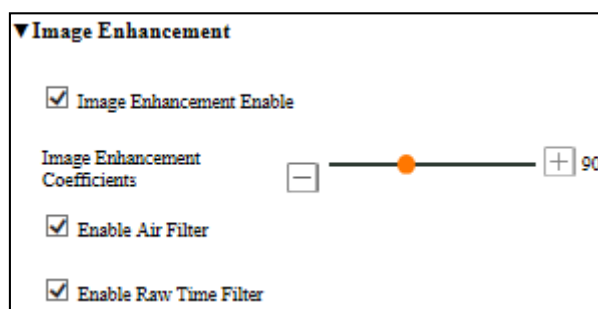


Figure 4-17 Image enhancement

Function	Description
• Image Enhancement Enable	When enabled, the image details are enhanced, and the enhancement factor can be adjusted according to the actual scene, the default is 90.
Enable Air Filter	Image enhancement using a space composed of pixels and neighborhoods
Enable Raw Time Filter	Image enhancement with before and after frames

### ● Anti sunburn

After opening, when strong light illuminates the lens, the shutter will automatically block the lens to protect the lens, as shown in the figure.

▼ Anti Sunburn

☐ Enable

Mode:

Auto Baffle

Image Pixel Threshold

–

+

237

Baffled Time (x5s)

–

+

24

Figure 4-18 Anti sunburn

Please refer to the table below for some detailed function descriptions.

Function	Description
Enable	After ticking, enable and enable the function
Mode	Auto Baffle: trigger the rear shutter to block the photosensitive film Auto Elude: after triggering, the PTZ rotates one field of view to the right
Image Pixel Threshold	The smaller the value, the more sensitive.
Baffle Time(x5s)	The retention time after the block film is blocked. After this time has elapsed, the baffle is removed.



- Other

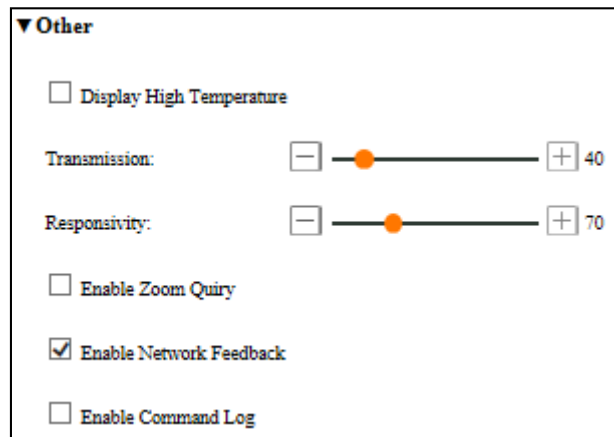


Figure 4-19 Other

Please refer to the table below for some detailed function descriptions.

Function	Description
Display High Temperature	The video screen will superimpose the reference temperature and the maximum temperature. After closing, it is not displayed. The temperature value can be adjusted by adjusting the transmittance and response rate.
Enable Zoom Quiry	After it is turned on, the lens position is queried at a fixed frequency. If it is not turned on, it will only be queried after zooming.
Enable Network Feedback	After opening, the client software transparently transmits to the thermal imaging core to return the core data, and it does not return after closing.
Enable Command Log	After opening, the operation code of the program can be viewed in the log

#### 4.1.5 Alarm settings

##### 4.1.5.1 Smart

##### 4.1.5.1.1 Intrusion

The regional intrusion detection function can detect whether there is an object in the video entering the set area, and link the alarm according to the judgment result.

Select "Settings→Alarm Settings→Smart→Intrusion" to enter the regional intrusion detection configuration interface, as shown in the figure.

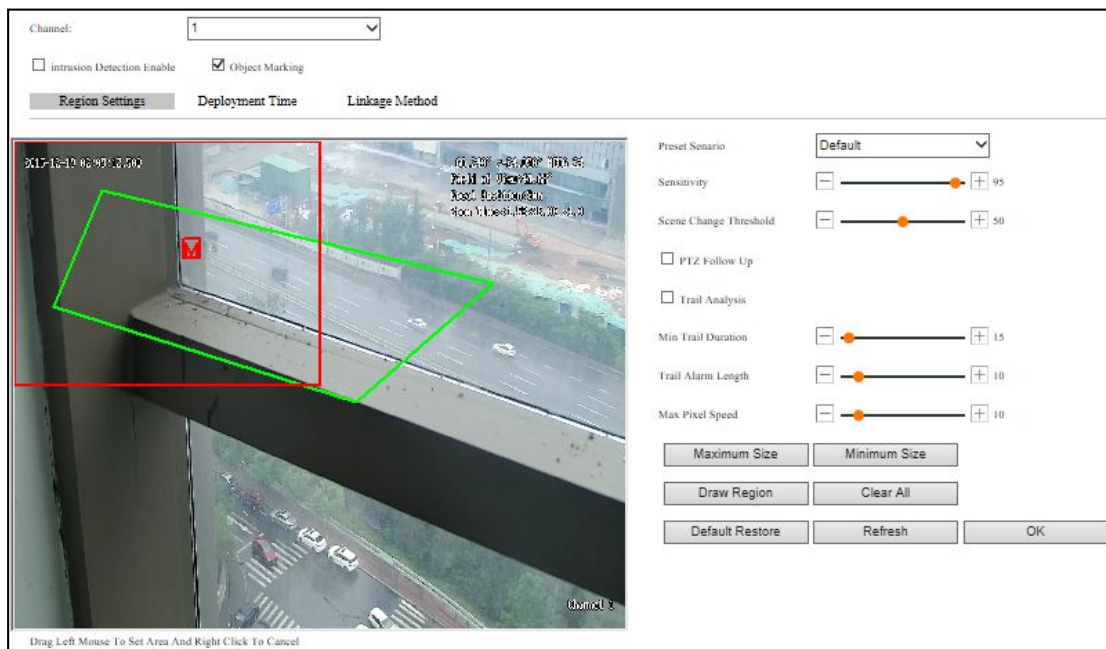


Figure 4-20 Intrusion setting

Please refer to the table below for detailed function descriptions.

Function	Description
Channel	Channel 1 sets visible light intelligent analysis rules; Channel 2 sets thermal imaging intelligent analysis rules
Intrusion Detection Enable	After opening, after the target enters the area, an alarm will be triggered
Object Marking	After opening, the detected target will be marked on the video screen
Preset Scenario	Can be associated with presets
Sensitivity	The higher the sensitivity, the easier it is to detect moving objects, but at the same time the higher the false alarm

Function	Description
PTZ Follow Up	After enabling this function, the drawn area will move synchronously with the PTZ, and the virtual area will always be consistent with the actual area.
Trail analysis	After this function is enabled, the target recognition frame will be drawn when the system continues to detect a target for more than the "minimum track duration"
Maximum Size	Maximum size of detected target
Minimum Size	Minimum size of detected target
Draw region	After clicking, the detection area starts to be drawn, and the left mouse button clicks to draw the rectangular area to end. A single scene can draw up to 8 areas.
Clear all	After clicking, you can clear all the drawn areas

"Deployment time" and "Linkage method" can be set and operated on the corresponding interface according to your needs.

#### 4.1.5.1.2 Cross-line

The Cross-line detection function can detect whether there is an object crossing the set warning surface in the video, and link the alarm according to the judgment result. Select "Settings → Alarm Settings → Smart → Cross-line" to enter the Cross-line detection configuration interface, as shown in the figure.

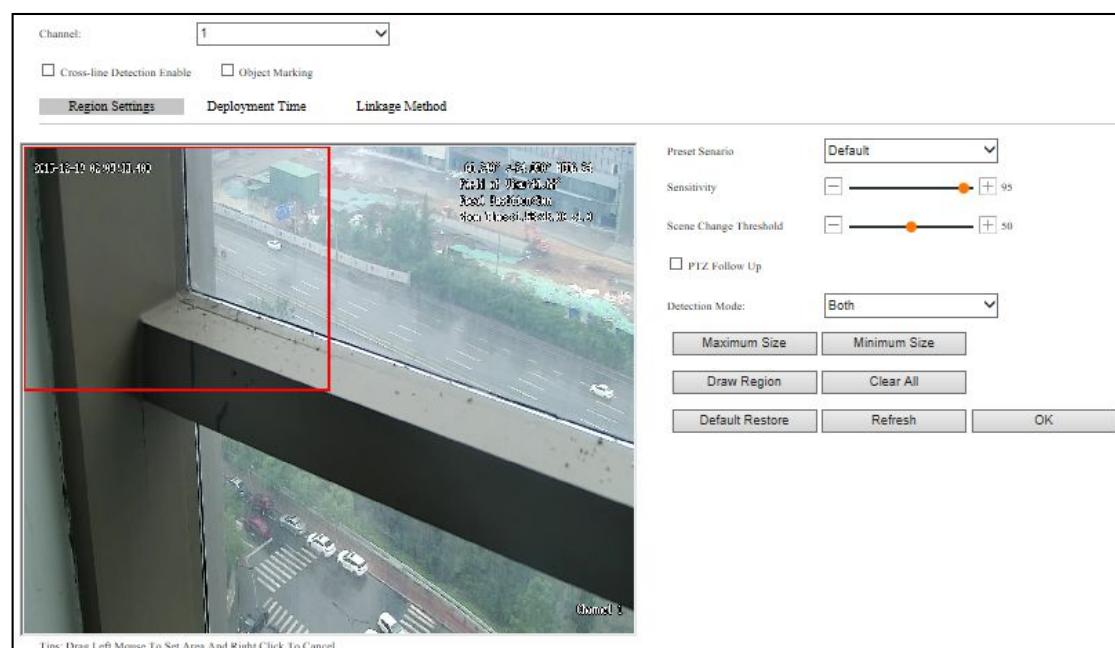


Figure 4-21 Cross-line setting

Please refer to the table below for detailed function descriptions.

Function	Description
Channel	Channel 1 sets visible light intelligent analysis rules; Channel 2 sets thermal imaging intelligent analysis rules
Cross-line Detection Enable	After opening, when the target crosses the mixing line, an alarm will be triggered
Object Marking	After it is turned on, the detected target will be marked with a red frame on the video screen.

Function	Description
Preset Senario	Can be associated with presets
Sensitivity	The higher the sensitivity, the easier it is to detect moving objects, but at the same time the higher the false alarm
Detection Mode	Support Both, A to B direction, B to A direction
Maximum Size	Maximum size of detected target
Minimum Size	Minimum size of detected target
Draw region	After clicking, the detection area starts to be drawn, and the left mouse button clicks to draw the rectangular area to end. A single scene can draw up to 8 areas.
Clear all	After clicking, you can clear all the drawn areas

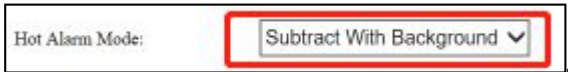
"Deployment time" and "Linkage method" can be set and operated on the corresponding interface according to your needs.

For other intelligent analysis functions, select "Settings → Alarm Settings → Smart", enter the intelligent analysis interface, and perform corresponding setting operations.

#### 4.1.6 Hot alarm

When the thermal camera detects the hot target, it will make an alarm identification and frame the alarm target.

Switch to Settings → Alarm Settings → Hot alarm → Hot alarm → Region Settings.

You need to select this mode  and then perform the corresponding operation.

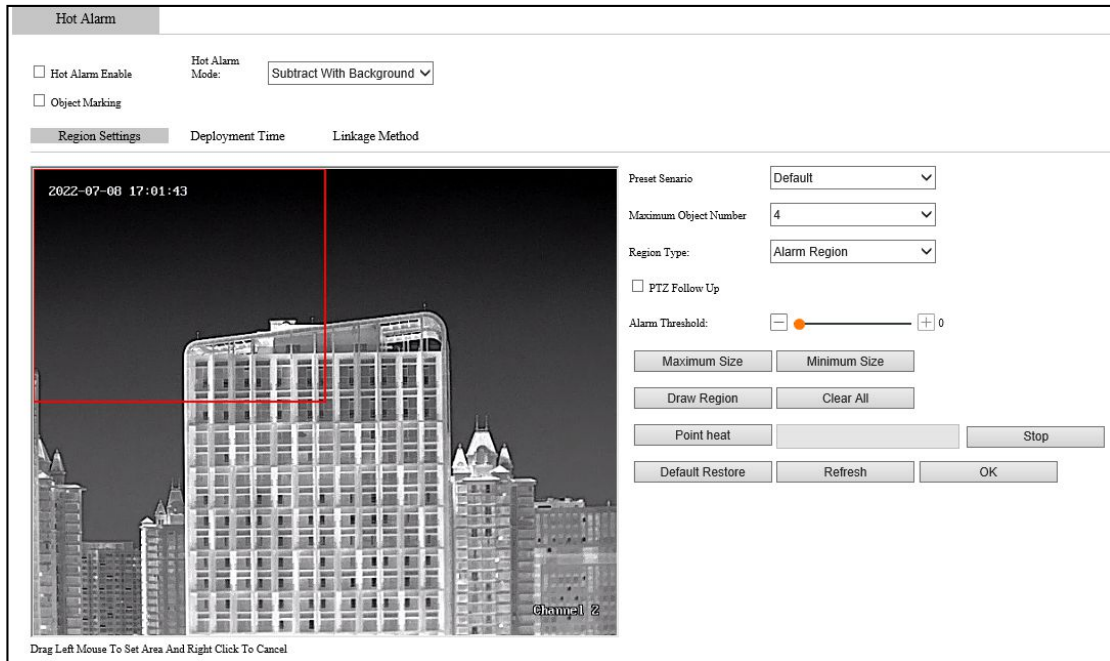


Figure 4-22 Hot alarm

Please refer to the table below for detailed function descriptions.

Function	Description
Hot Alarm Enable	After it is turned on, it will alarm when a hot target is detected
Object Marking	When turned on, hot targets can be seen in the video
Preset Scenario	Linkable presets
Region type	The hot target in the alarm zone will trigger the alarm, and the hot target will turn red; the hot target in the false alarm zone will not trigger the alarm, and the hot target will still be yellow
PTZ follow Up	After checking, the drawn area rule box will no longer follow the rotation of the PTZ and remain in the center of the field of view, but will be fixed at the actual scene position
Maximum Size	Maximum size of detected target
Minimum Size	Minimum size of detected target
Point heat	Click "Point heat", then click the target in the video to view the heat value, click "Stop" to exit the point heat state

"Deployment time" and "Linkage method" can be set and operated on the corresponding interface according to your needs.

## 4.1.7 PTZ

### ● PTZ Settings

Switch to Settings → PTZ→ Normal Settings → PTZ Settings.

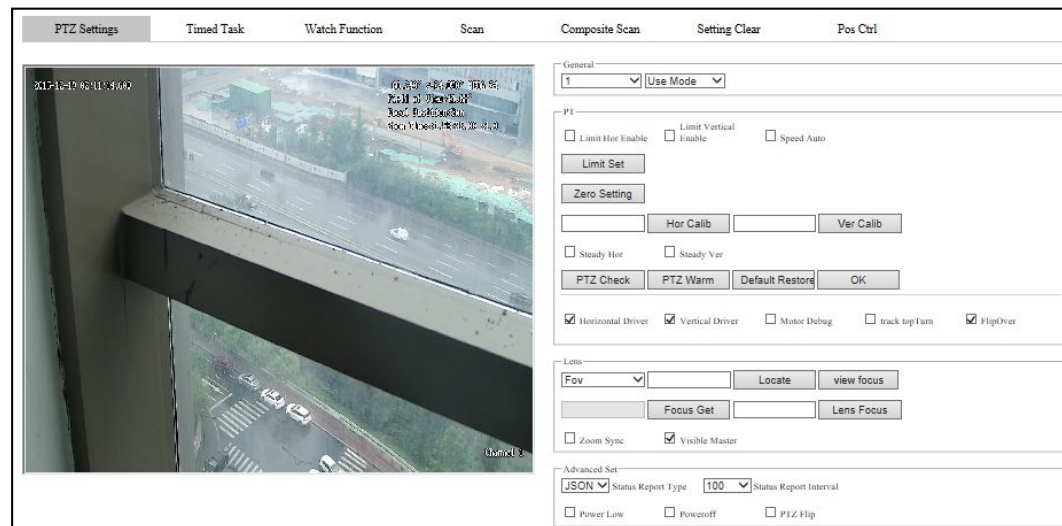


Figure 4-23 PTZ Settings

Please refer to the table below for some detailed function descriptions.

Function	Description
General (channel)	Channel 1 sets visible light, channel 2 sets thermal imaging
Lens Focus	Input the lens focus value, click the focus position, the lens focus will be automatically positioned to the set position
Limit Set	Set the horizontal and pitch limit position, enable the horizontal and pitch limit, which can limit the rotation range of the PTZ
Speed Auto	After turning on, when the visible light is at the telephoto position, the PTZ-control will automatically adjust the speed according to the size of the field of view
Zero setting	The current horizontal and pitch position can be set to 0, means the horizontal & pitch positions are 0 degrees.
Angle calibration	After inputting the horizontal angle and vertical angle, click the horizontal and vertical calibration respectively to calibrate the current horizontal and vertical angle to the set value.
PTZ Check	After clicking, PTZ self-check

Function	Description
PTZ Warm	After clicking, the PTA warms up and is used when the device is frozen
Horizontal\Vertical Drive	After it is turned off, the pan and tilt motors cannot be driven to rotate. After it is turned on, the pan and tilt motors can be driven to rotate.
Motor Debug	Used to maintain motor parameters
Track top Turn	During the tracking process, the device automatically flips 180 degrees horizontally after reaching the upper soft limit
flip over	The keying device does not lift its head, flips 180 degrees horizontally after reaching the upper soft limit, and then bows its head
Lens	Field angle, focal length, and magnification can be positioned through drop-down options; focus query and positioning, and simultaneous positioning of field angle and focus, focal length and focus
Zoom sync	After turning on, the thermal imaging will be zoomed, and the visible light will automatically zoom to the same field of view; when the visible light is turned on, the visible light will be zoomed, and the thermal image will follow.
Power Low	After turning on, when the device performs angle positioning, the pan and tilt are performed separately, thereby reducing the power
Power off	After it is turned on, if the device stays for more than 30 seconds, it will remember the position and stay there after power off and restart. After shutting down, the device stays at the preset position 0 after power off and restart.
PTZ flip	After opening, control PTZ up, down, left and right logic inversion



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