Quick Start Guide

GD-TI-AT30105K

EN

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GRUNDIG

Quick Guide

About this guide

The guide includes instructions for using and managing the product. Pictures, charts, images and all other information hereinafter are for description and explanation only. The information contained in the guide is subject to change, without notice, due to firmware updates or other reasons.

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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 www.grundig-security.com website or from techsupport@grundig-security.com.

Table of Contents

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

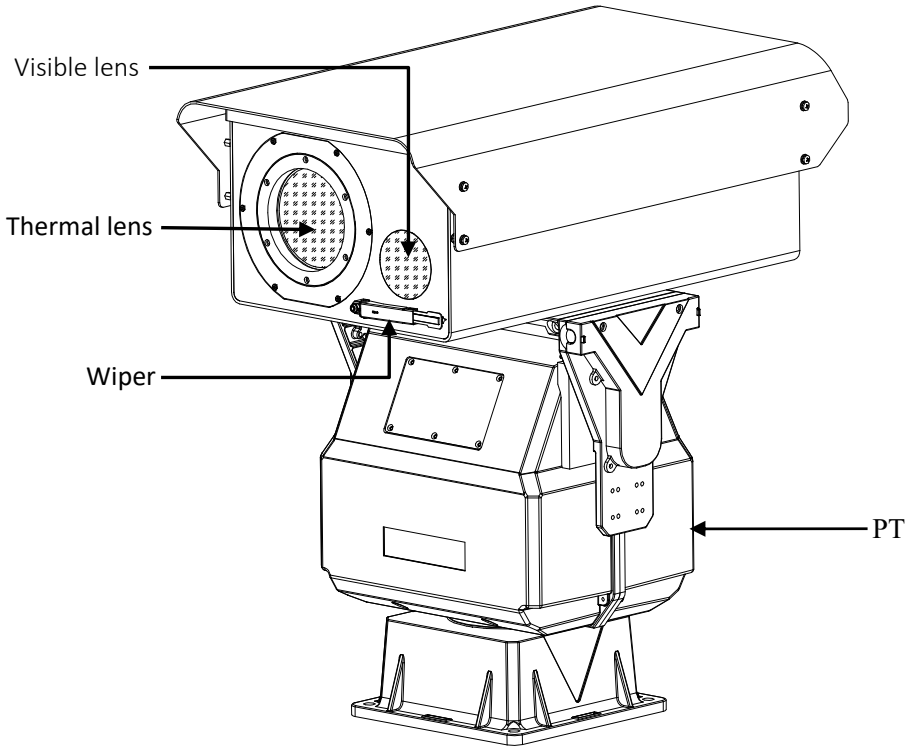


Figure 1-1 Front Lateral View

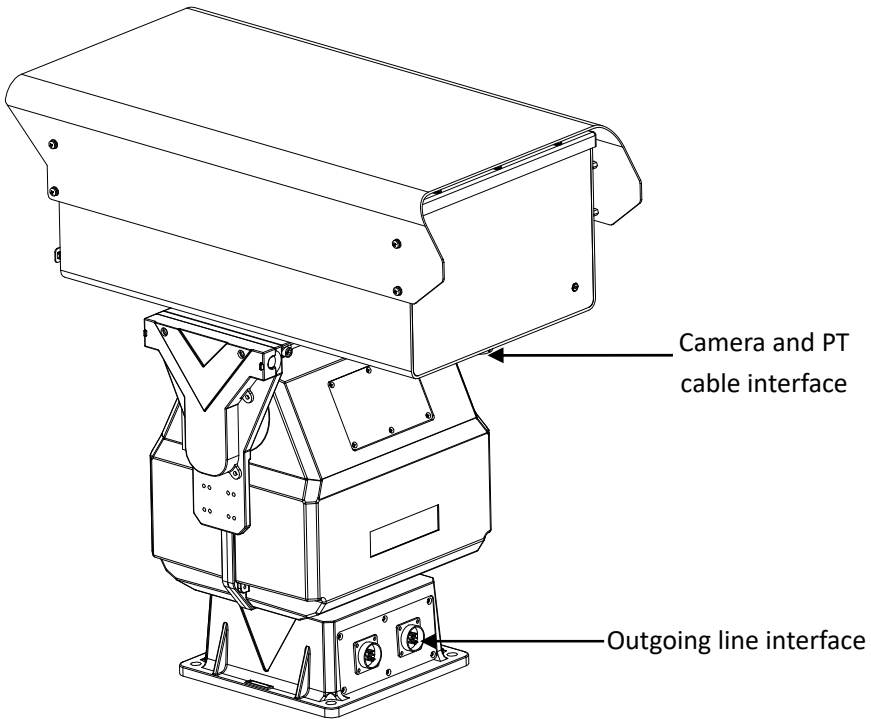


Figure 1-2 Back Lateral View

1.3 Dimensions (mm)

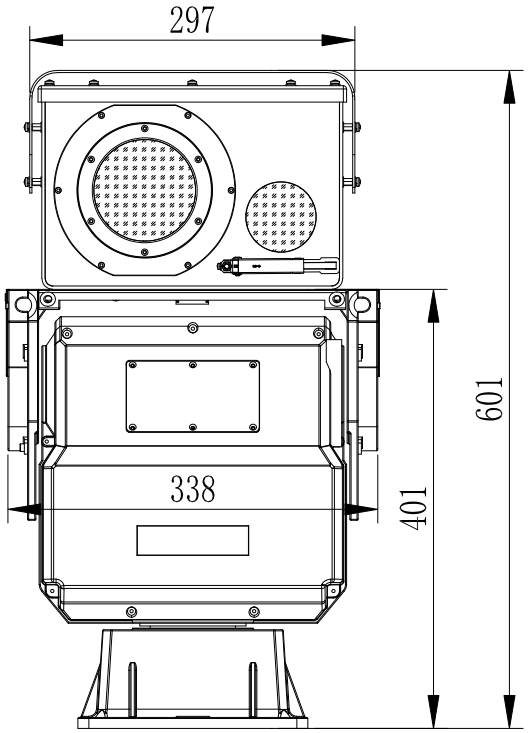


Figure 1-3 Front View

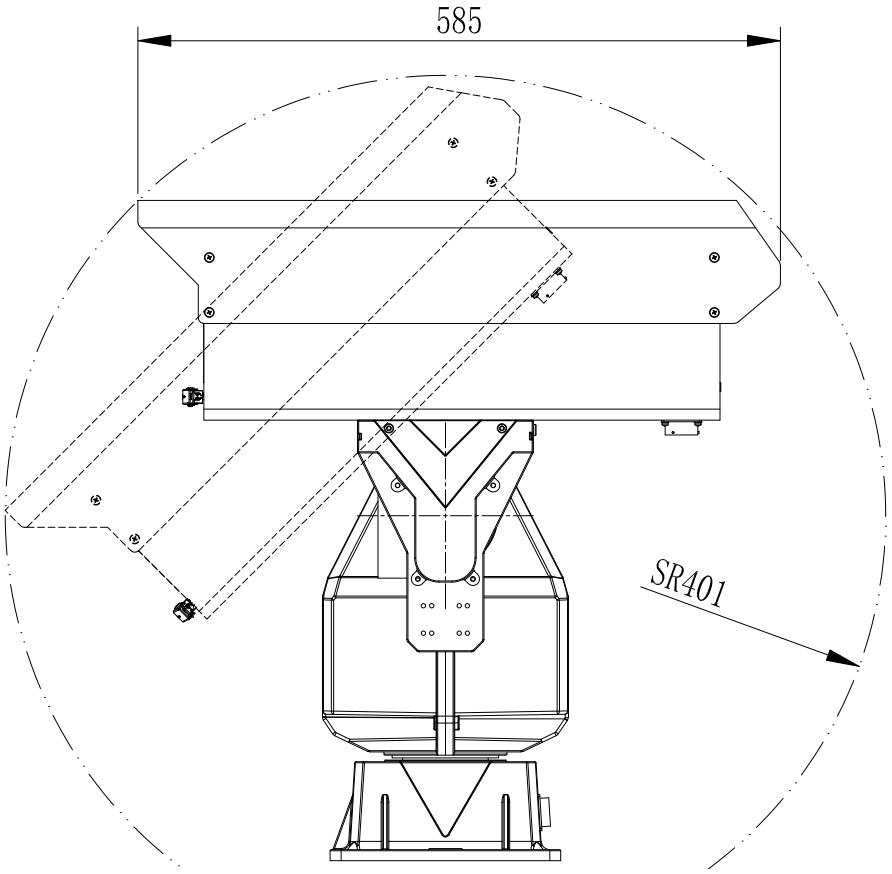


Figure 1-4 Lateral View

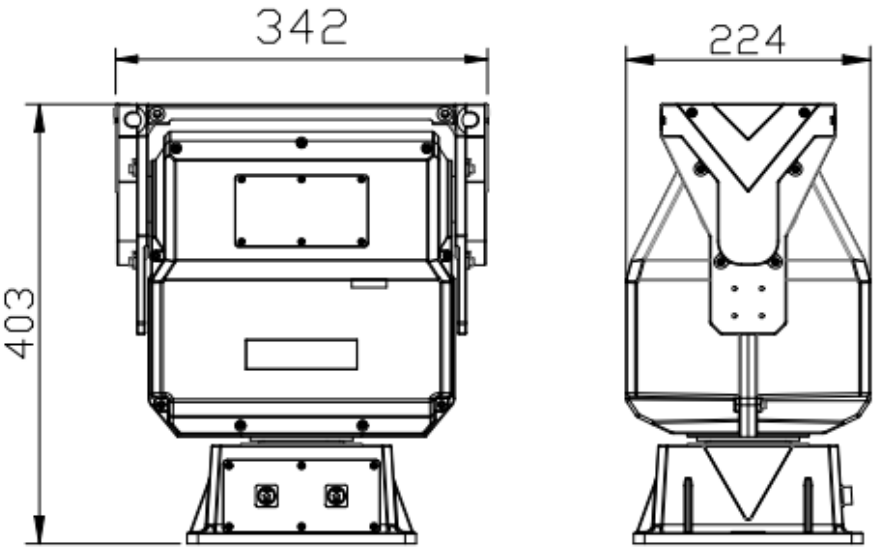


Figure 1-5 Front and side view of PTZ

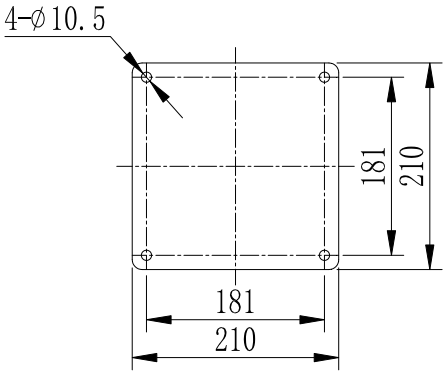


Figure 1-6 Mounting Hole at the base of PT

1.4 Connect

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

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	Transparent 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**				
definition	Thick Yellow 24VAC	NC				

Note: NC is empty

PTZ bottom Output line definitions:

Outline definition	Power		Lightning protection	LAN	RS485	
Color	Brown (DC24V)	Blue (GND)	Yellow-green (Earth)	-	Orange RS485A	Yellow RS485B

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.

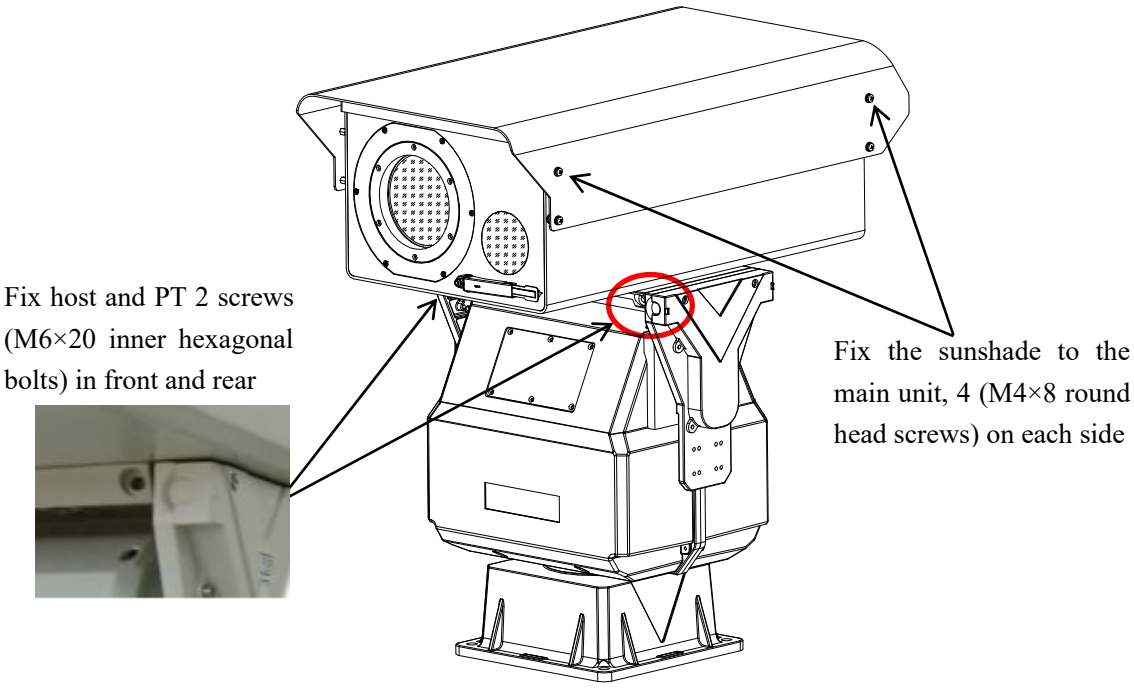


Figure 2-1 Camera Installation

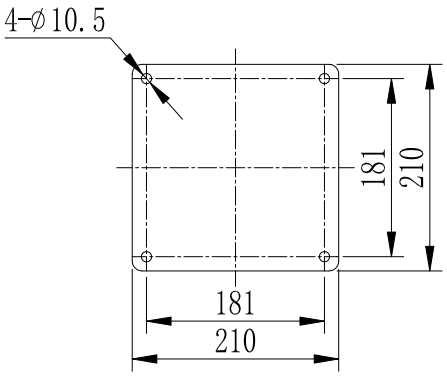


Figure 2-2 Mounting hole at the base of PT

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

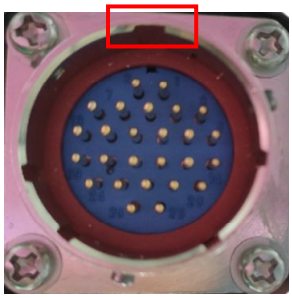


Figure 2-4 Aviation plug Pin

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.

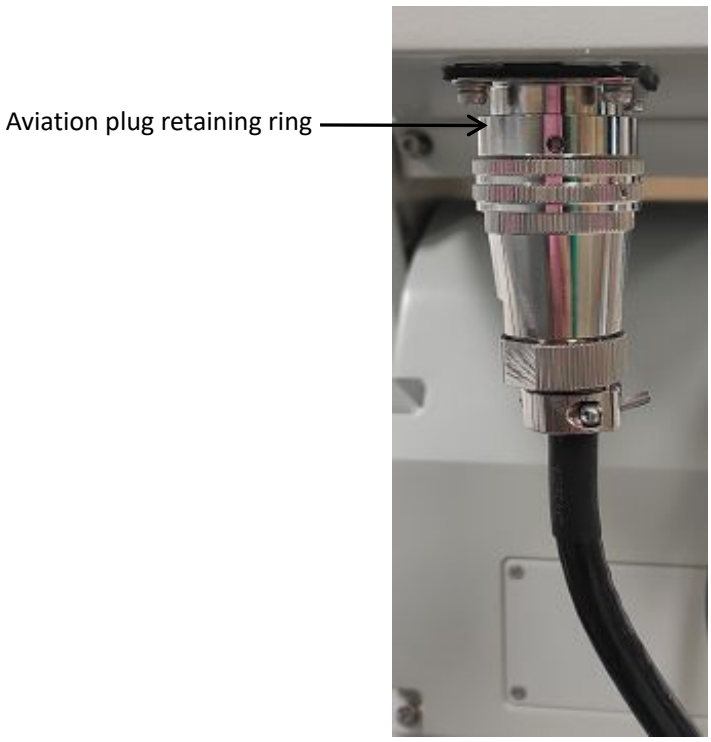
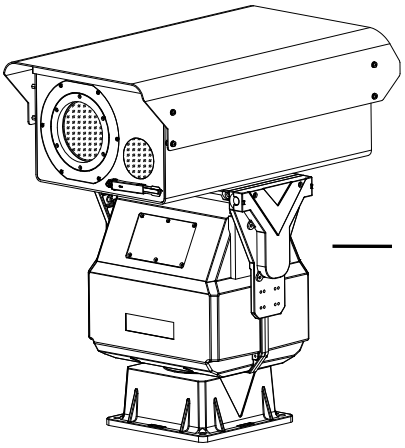


Figure 2-5 Aviation Plug Finished Installation

2.1.3 Cable Connection



Thermal Positioning System

Outgoing Cable

Power supply

RS485 reserved

Network cable

Computer

Figure 2-6 Connection

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.

Super high or low brightness	Auto correction is not ON.	Select auto correction or restore 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.

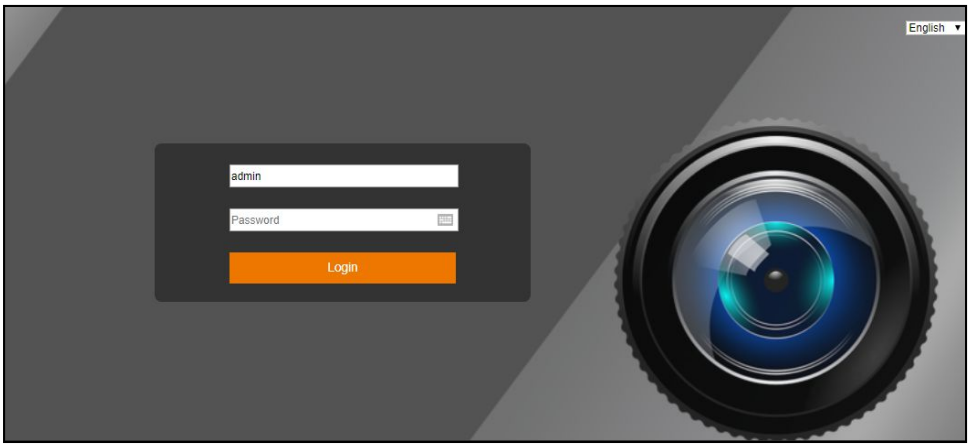


Figure 4-1 Login

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.

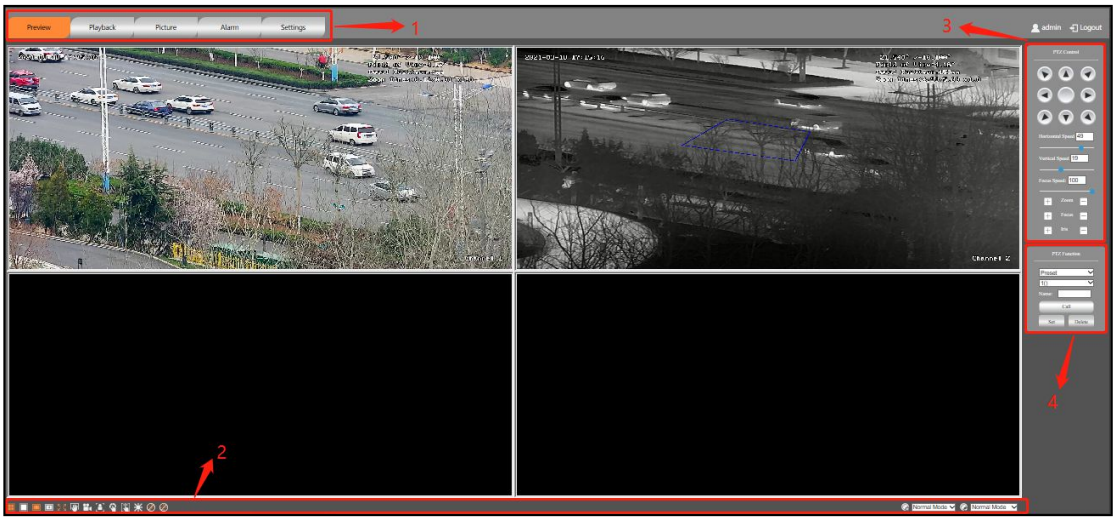


Figure 4-3 Preview interface

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
	Four screens	Display four screens
	Single screen	Display single screen

	Main code stream	Play the main code stream with high definition
	Secondary code stream	Play the secondary code stream with low resolution
	Full screen	Display video screen in full screen
	Capture	Click this icon to grab a current video screen and save it in the set storage path.
	Record	Click this icon to record the video and save it in the set storage path.
	Focus	Click this icon to trigger an auto focus
	Manual correction	Click this icon to trigger a manual correction
	Background correction	Click this icon to trigger a background correction
	3D positioning	Turn ON the 3D Position by click the button. And turn off the 3D Position when click the button again. When the 3D Position is turned on, you can operate the camera according to the followings: Click anywhere in the video screen by the left-mouse, and then the camera will suppress the corresponding point to the center of the video. 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. 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.

Note: The realization of some functions requires equipment support.

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.

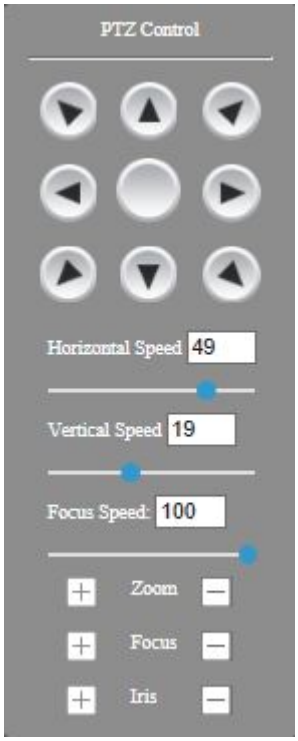


Figure 4-5 PTZ control

4.1.3.4 PTZ function option bar

Introduce PTZ functions, including cruise, preset points, horizontal scan, and more.

Figure 4-6 PTZ function

Preset Position

After the preset position is set, the device can be quickly positioned to the corresponding position by viewing the preset position. The preset position includes position parameter information such as the horizontal angle, the pitch angle and the focal length of the camera lens.

Step 1, Click the PTZ tab and select Preset in the drop-down box.

Step 2, Select the preset number and enter the name;

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

Step 4, Click the “Settings” to complete the configuration. Click the “Call” icon to turn the camera to the position corresponding to the preset position, and click the “Delete” icon to delete the preset.

Cruise scan

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

Step 1, Click the PTZ tab and select Cruise scan from the drop-down list, as shown in Figure 4-7.

Step 2, Select the cruise path number.

Step 3, Click the “Settings” button to add the existing presets and set the dwell time.

Step 4, Click the "Start" button and the device starts cruising. Click the "Stop" button or directly control the PTZ side

To stop, you can stop cruising. Click the "Delete" button to delete the cruise.

Figure 4-7 Cruise scan

Horizontal scan

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

Step 1, Click the PTZ tab and select Horizontal scan from the drop-down list.

Step 2, Control the pan/tilt to a certain location and click the “Left” button to complete the setting of the left border.

Step 3, Control the pan/tilt to another location and click the “Right” button to complete the setting of the right border.

Step 4, Click the Start button and the device starts a horizontal scan. Click the Stop button or control the direction to stop the horizontal scan.

Figure 4-8 Horizontal scan

Auxiliary Function

Figure 4-9 Auxiliary Function

The auxiliary function can be turned on through the auxiliary switch, the specific function description is as follows:

Auxiliary Function	**Description**
Wiper	After selecting “Open”, the wiper will continue to wipe. When “Close” is selected, the wiper will stop.
Defog	Select "Open" to turn on the defrost function, select "Close" to turn off the defrost function

Note: The auxiliary functions are subject to the actual product, and some functions require equipment support.

4.1.4 Image setting

Image settings include Image parameter settings, OSD settings, Thermal parameter settings, Bad point correction, Thermal status.

4.1.4.1 Image Parameter

Switch to Setting-Channels Settings-Image settings-Image parameter.

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

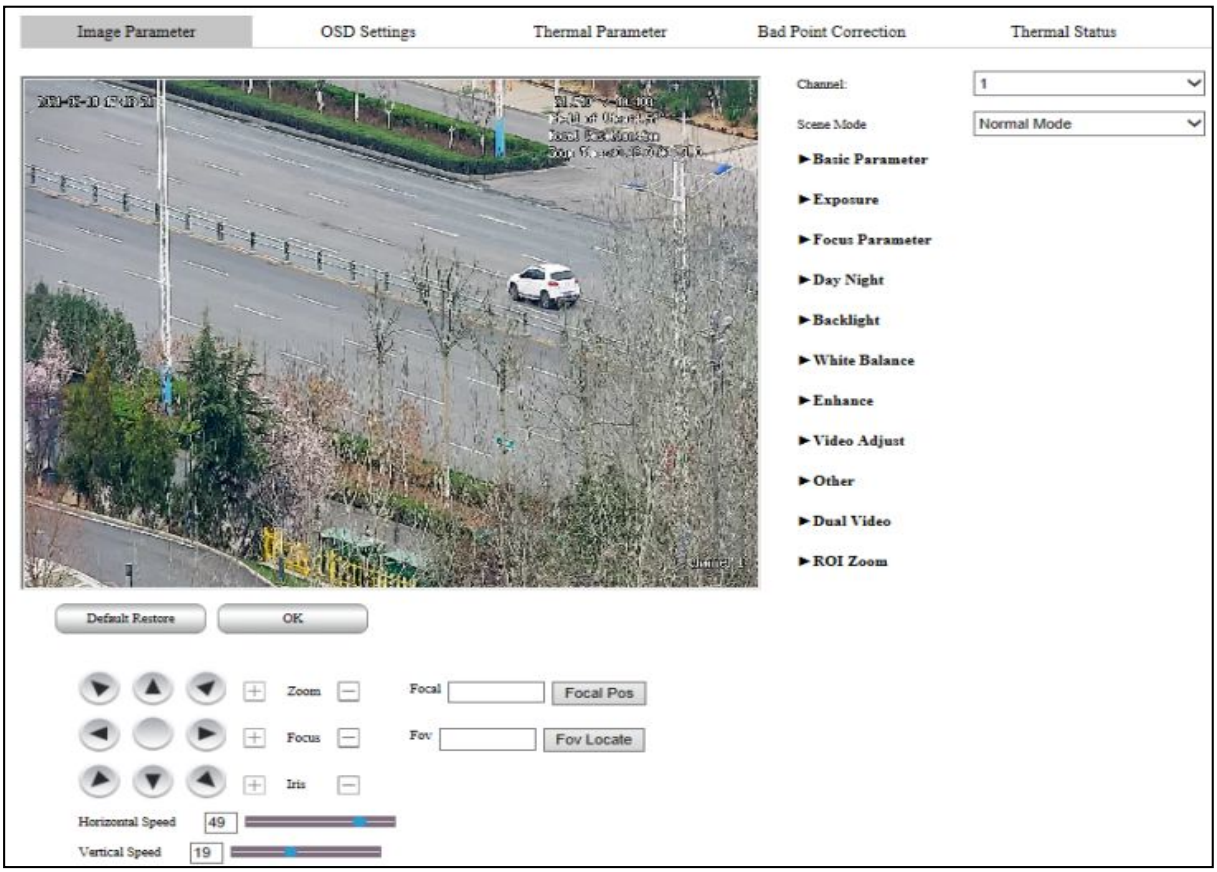


Figure 4-10 Image parameter setting (channel 1)

- Enhance-Defog

When the device is in a foggy or haze environment, the image quality will decrease. After turning on this function, the recognizability of objects in the video screen of water fog weather can be improved to a certain extent.

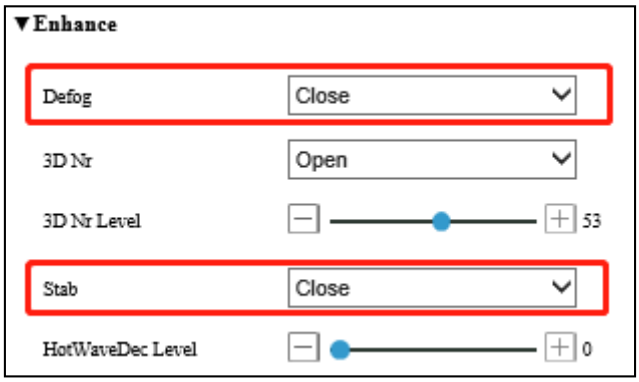


Figure 4-11 Defog

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

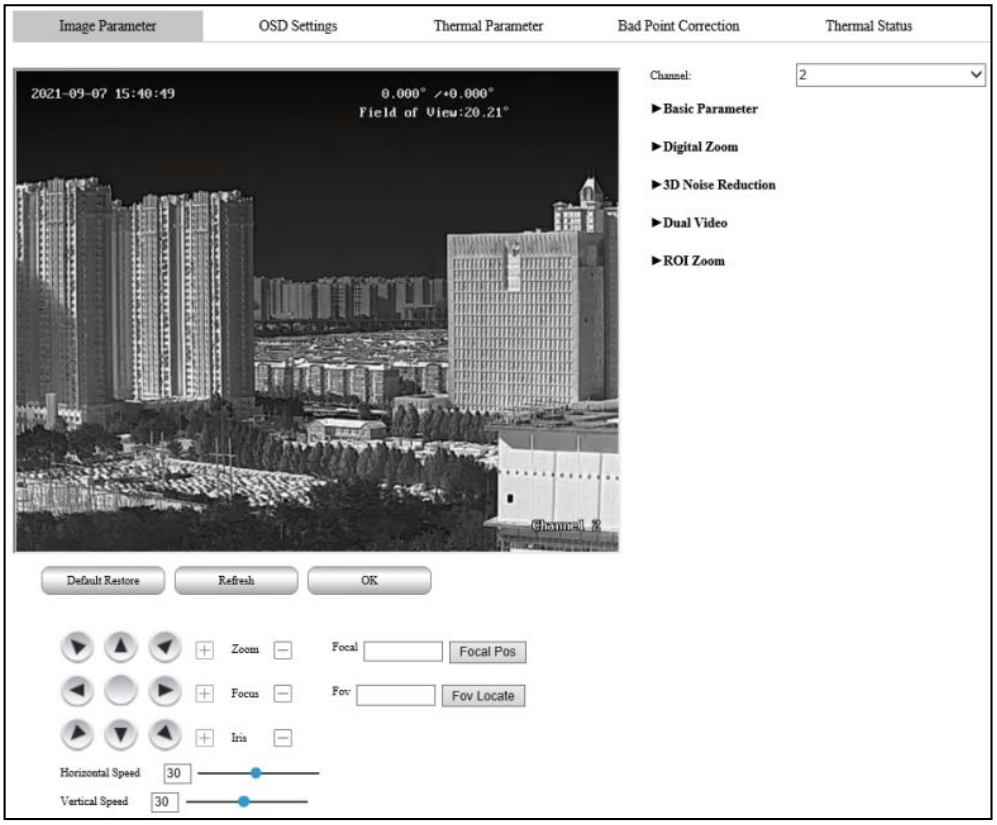


Figure 4-12 Image parameter setting (channel 2)

4.1.4.2 Thermal Parameter

Switch to Setting-Channels Settings-Image settings-Thermal parameter.

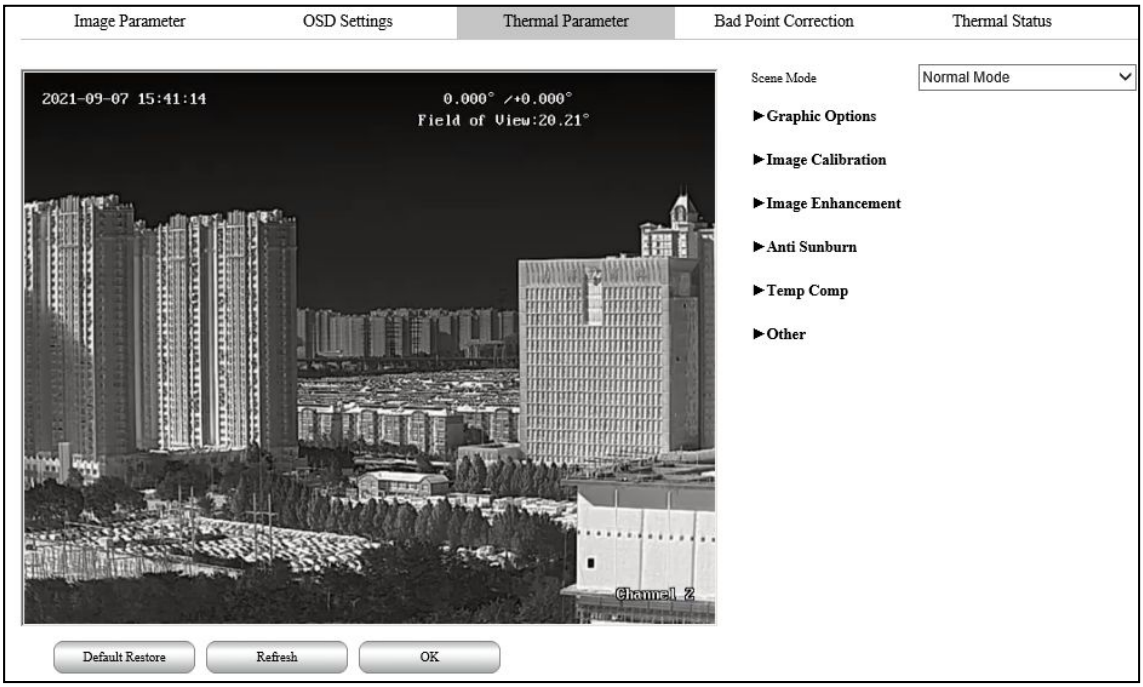


Figure 4-13 Thermal parameters

- Graphic adjustment

Adjust the image according to the actual environment. As shown in Figure 3-14.

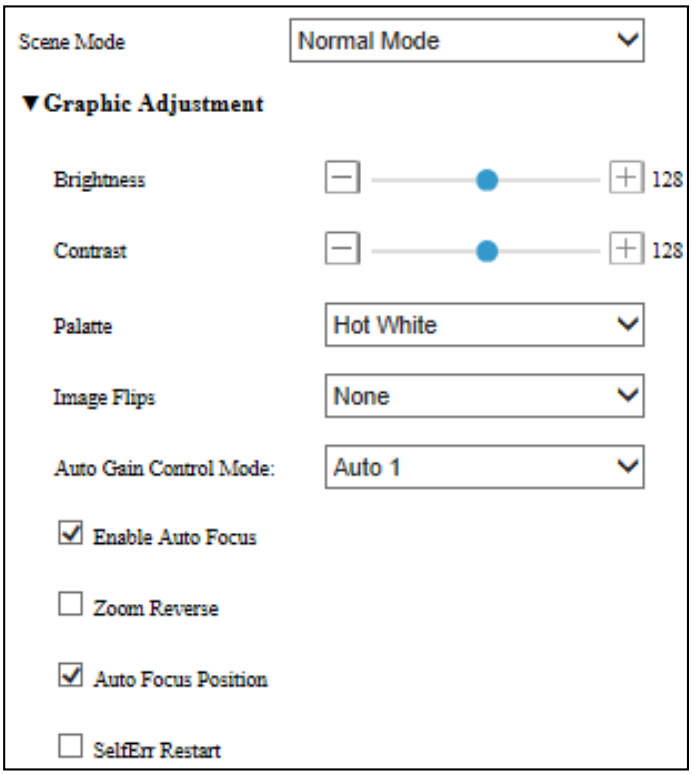


Figure 4-14 Graphic adjustment

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 flip	None\Up-down\Left-right\Both
Auto Gain Control Mode	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.
Whether to turn on 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
Whether to position auto focus	After opening, the angle positioning will trigger auto focus

- **Image calibration**

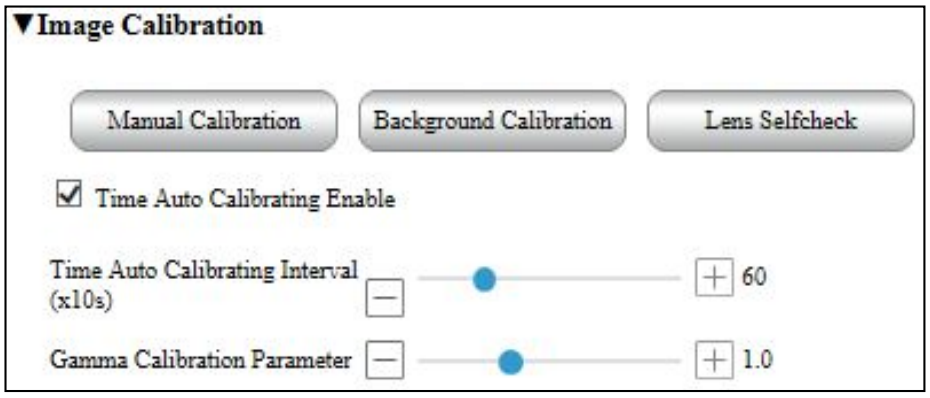


Figure 4-15 Image calibration

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.
Whether to turn on automatic time calibration	After it is turned on, it will automatically calibrate according to the set time interval.
Time automatic calibrating interval	
Gamma calibration parameter	
Lens selfCheck	Click this button, the lens will perform self-check

- **Image enhancement**

Can improve image details after opening.

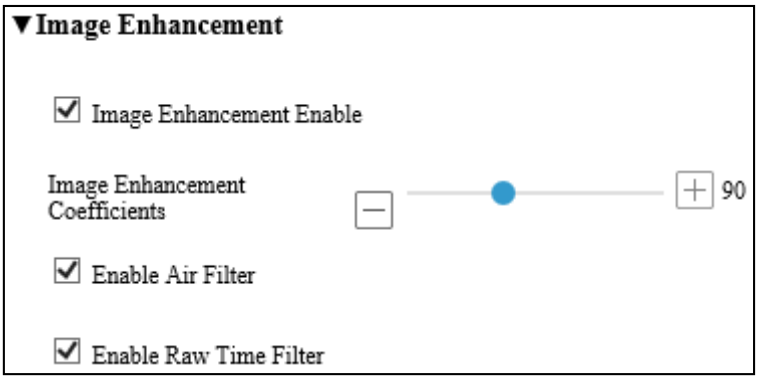


Figure 4-16 Image enhancement

- **Anti sunburn**

After opening, when there is strong light on the lens, the shutter will automatically block the lens to protect the lens. After opening, there will be a prompt in the upper left corner of the video.

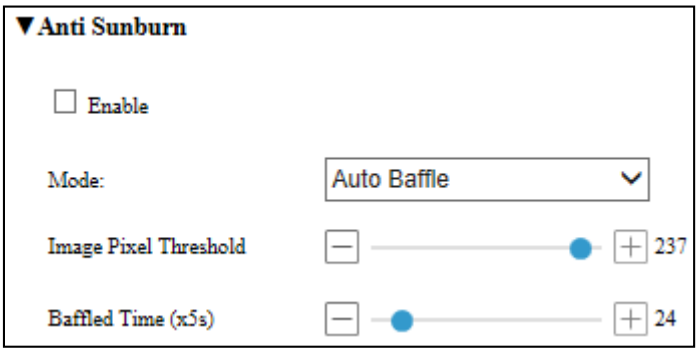


Figure 4-17 Anti sunburn

Detailed function descriptions:

Function	Description
Whether to enable	After ticking, enable and enable the function
Image pixel threshold	The smaller the value, the more sensitive.
Baffle block time	The retention time after the block film is blocked. After this time has elapsed, the baffle is removed.

- **Other**

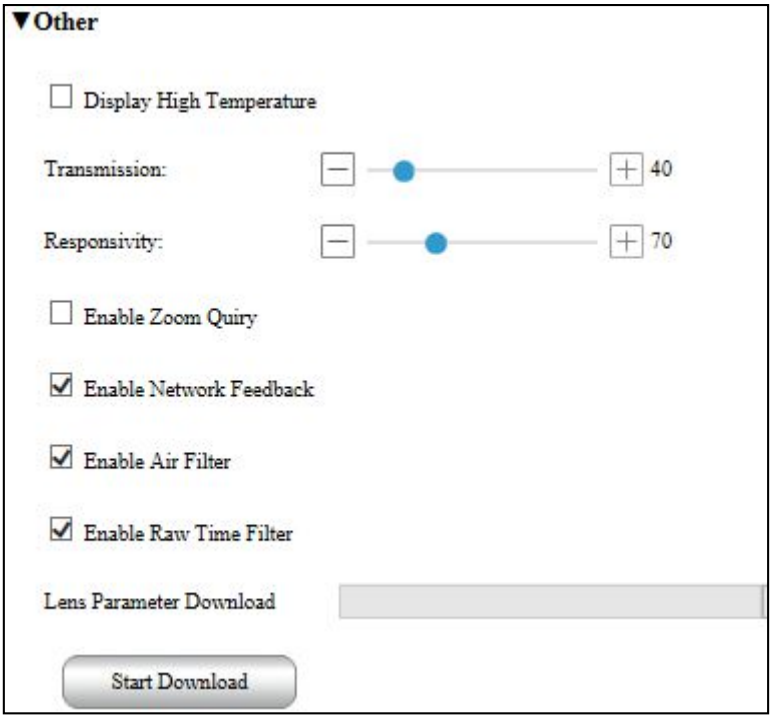


Figure 4-18 Other

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 network feedback	After it is turned on, the client software transparently transmits to the thermal imaging movement to return movement data, and does not return after it is turned off.
Download lens parameters	Used to download thermal imaging lens data to the thermal imaging movement.

4.1.5 Intelligent analysis

4.1.5.1 Intrusion detection settings

The area 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.

Figure 4-19 Intrusion detection settings

Switch to Setting-Alarm Settings-Intelligent Analysis-Intrusion detection settings. Regional intrusion detection settings as shown.

Region Settings:

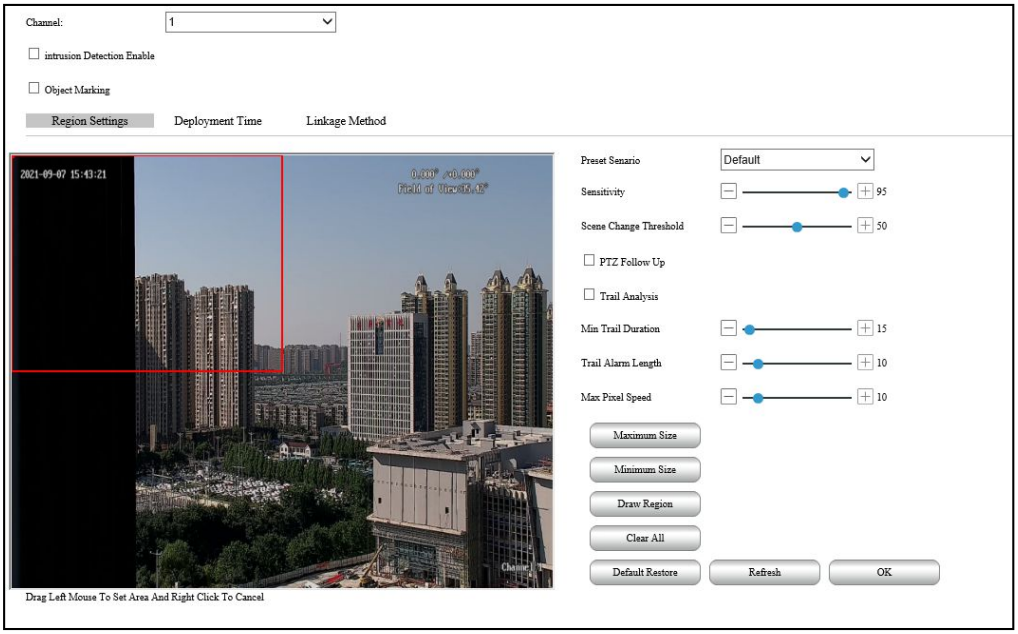


Figure 4-20 Intrusion detection settings-Region settings

Please refer to the following table for detailed function description

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 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
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.
Trajectory 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.

Other intelligent analysis functions can be selected and set according to their own needs under the "Settings-Alarm Settings-Intelligent analysis" interface.

Note: Some functions require equipment support, please refer to the actual product.

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 Setting-Alarm Settings-Hot Alarm-Hot Alarm-Region Settings. You need to select this mode 

, and then perform the corresponding operation.

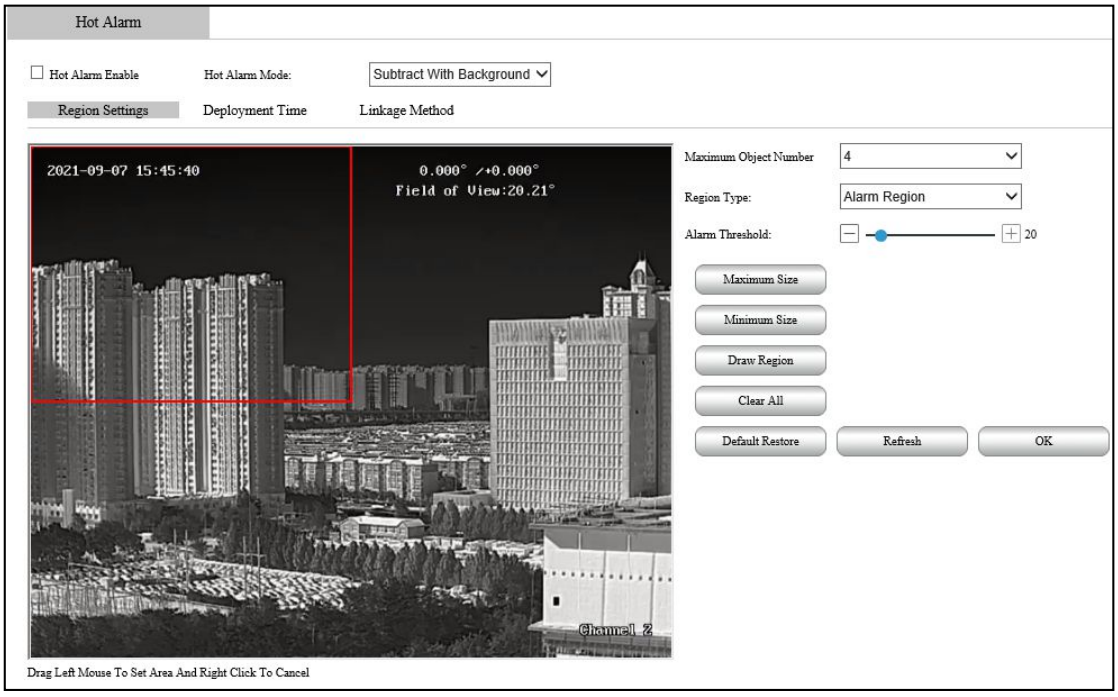


Figure 4-21 Hot Alarm-Region settings

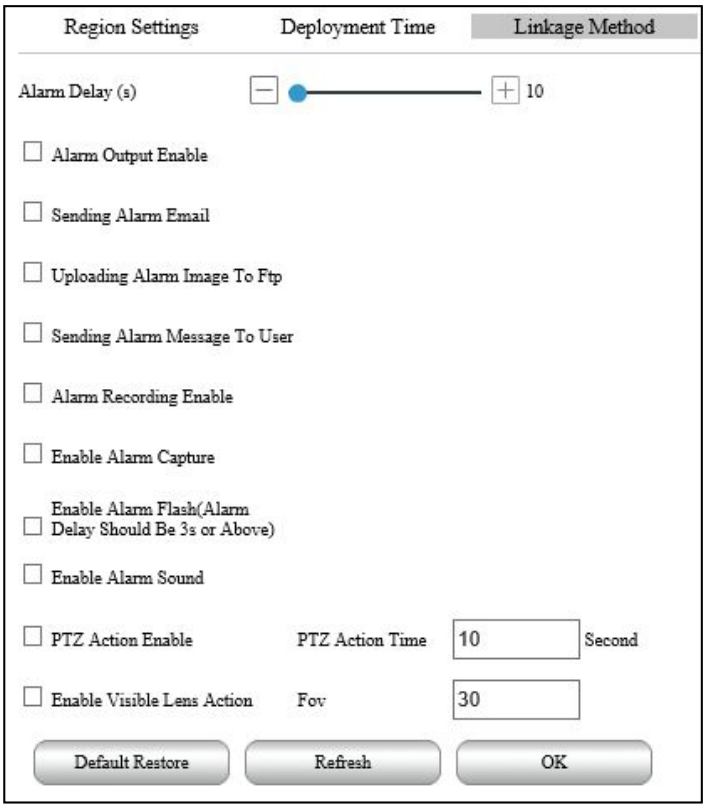


Figure 4-22 Hot Alarm-Linkage method

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

Function	**Description**
Hot Alarm Enable	After it is turned on, it will alarm when a hot target is detected
Maximum Size	Maximum size of detected target
Minimum Size	Minimum size of detected target
Maximum Targets Number	The maximum number of detected targets, up to 16 can be configured
Alarm Threshold	The lower the threshold, the easier it is to trigger an alarm, but the easier it is to falsely report

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

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