GRUNDIG

User Guide

GD-TI-AT3119T

GD-TI-AT3135T

www.grundig-security.com

Content

1 Product Description

Thank you for purchasing a **GRUNDIG** product. Before installing or connecting the product, please read first the following documents which you can find in the product package:

- Legal Disclaimer
- Safety Instructions
- Installation Manual for the respective product model

Further information about the product like Data Sheets, CE Documents, etc. can also be found on our homepage www.grundig-security.com.
This User Guide is a user manual for IP-cameras (IPC). Please see in the table of 1.1 Model Overview the applicable models.
Please read this User Guide carefully and retain it for future use.

1.1 Applicable Model

This User Guide is for the following products:

- GD-TI-AT3119T
- GD-TI-AT3135T

2 Product Overview

2.1 Overview

GD-TI-AT31xxT Thermal (640 x 512) 19mm & Optical IP-Camera is a series of camera specially designed for long range all day and night surveillance. In daytime, it adopts HD low illumination color to B/W, can do a widely search at short range and collect image from a long distance; at night, its' adopt the latest uncooled imaging detector, with good imaging effect and good stealthiness, avoiding the interference of outside lighting, the camera is capable of conducting 24 hours real-time monitoring. Using network video output, easy to connection and operation.

2.2 Appearance description

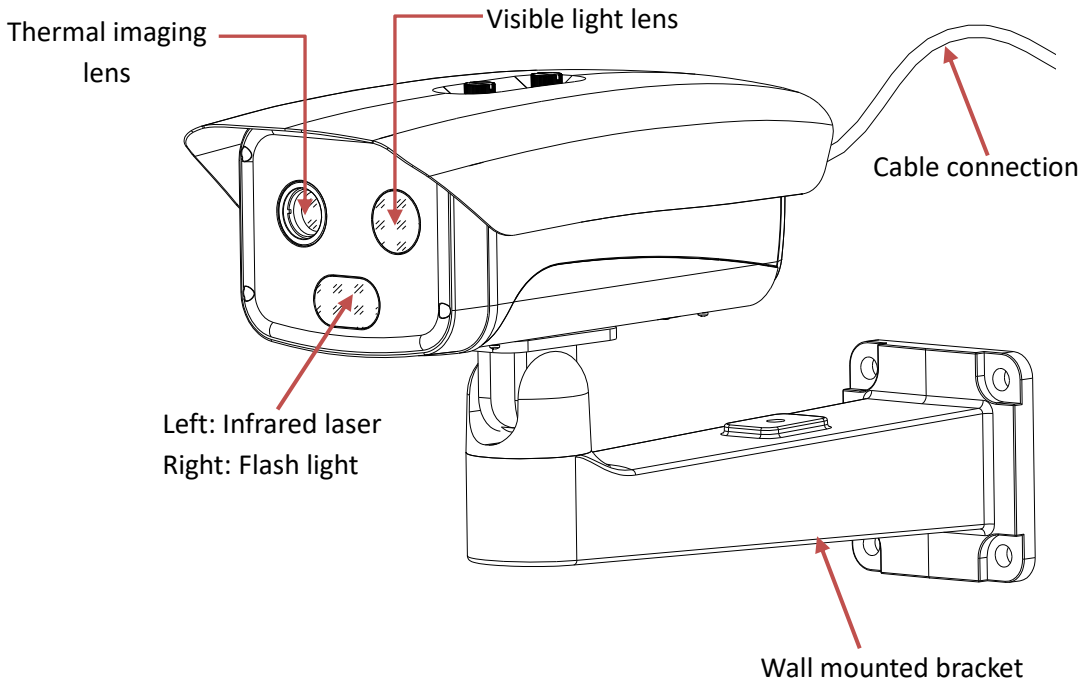


Figure 2-1 Front and side view

2.3 Dimensions

Note：

Units not marked below are in millimeters

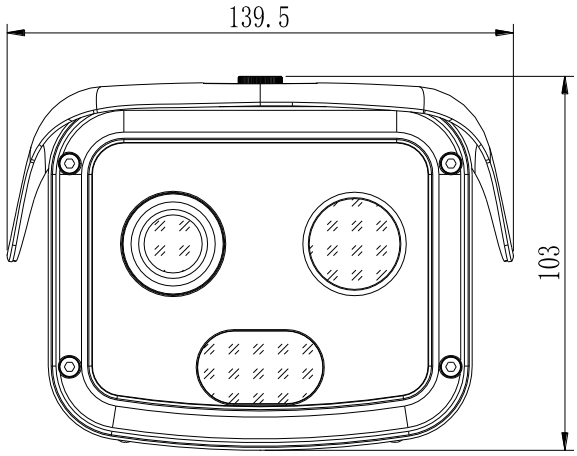


Figure 2-2 Front view

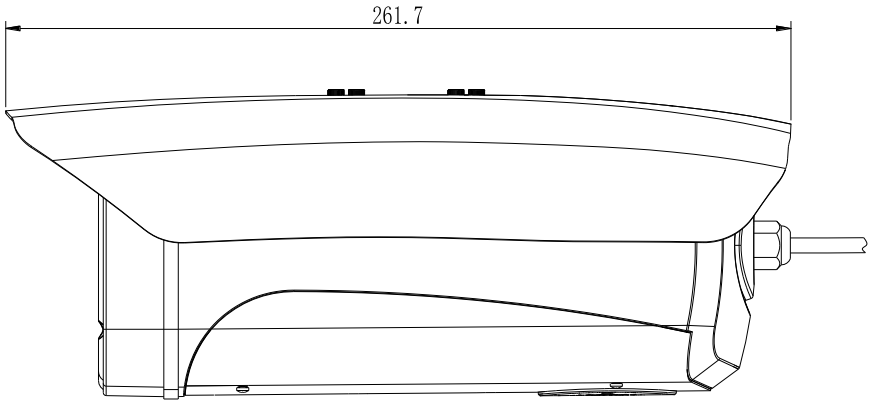


Figure 2-3 Side View

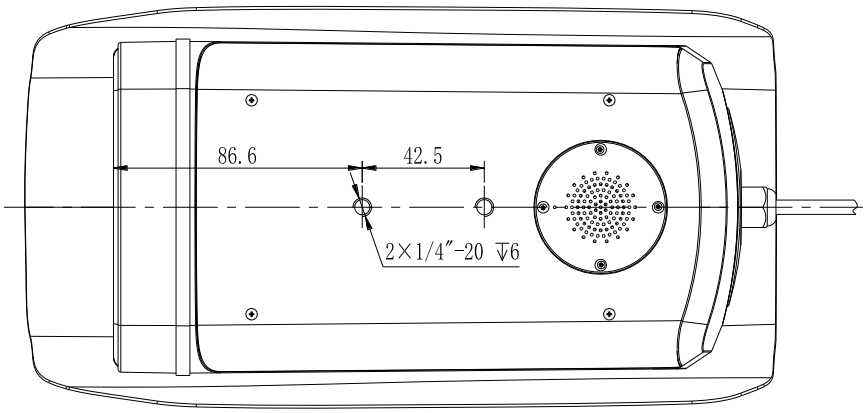


Figure 2-4 Bottom View

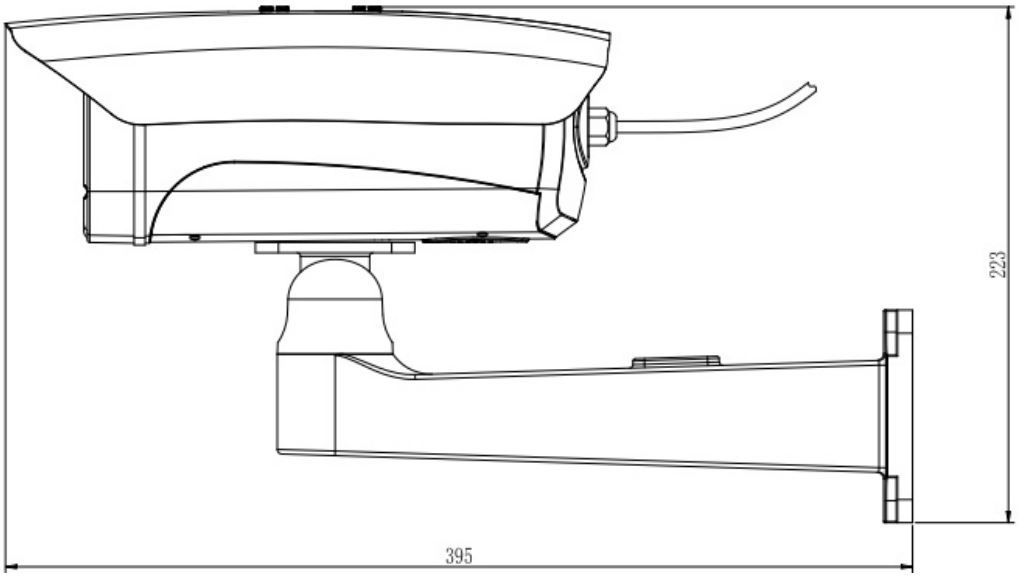


Figure 2-5 Side view of the entire machine

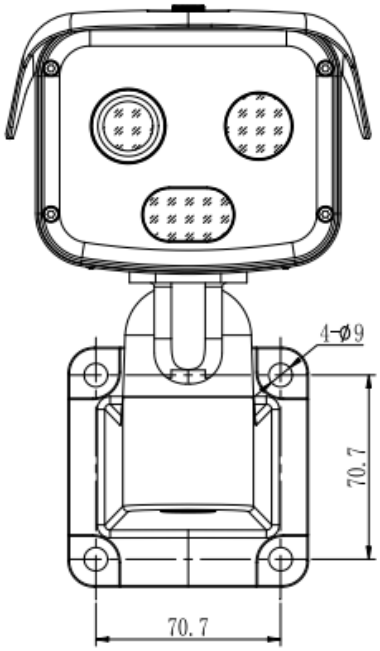


Figure 2-6 Main view of the entire machine

3 Equipment installation and connection

3.1 Installation

3.1.1 Basic requirements

(1) Before installation, please confirm that the equipment is in good condition, all parts are complete, and the random accessories are complete.

(2) All electrical work must comply with the latest electrical regulations, fire regulations and related regulations in the place of use.

(3) Please be sure to turn off the power of all related equipment during installation.

1.1.2 Installation and fixation of the base

The view of the mounting hole on the bottom of the camera is shown in Figure 3-1. Two sets of screws (Hex socket screw 1/4"-20*1/2, Stainless steel spring washer 6, Stainless steel flat gasket 6) are randomly attached to install it on the wall mounted bracket.

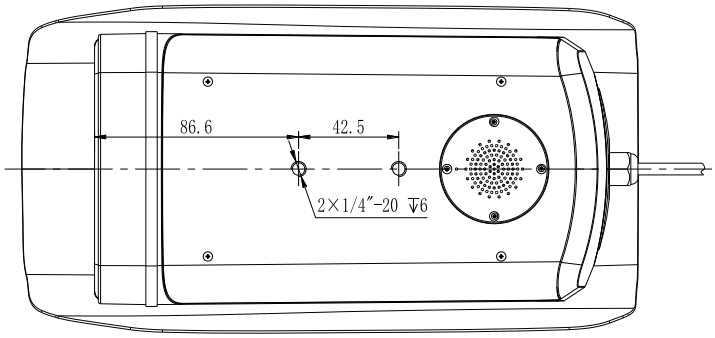


Figure 3-1 Mounting hole at the base of camera

The view of the installation hole at the rear end of the wall mounted bracket is shown in Figure 3-2. The entire machine is installed on the bracket or platform using four sets of screws (Stainless steel hexagon socket screw M6×25, Stainless steel hexagonal nut M6, Stainless steel spring washer 6, Stainless steel flat gasket 6) randomly attached.

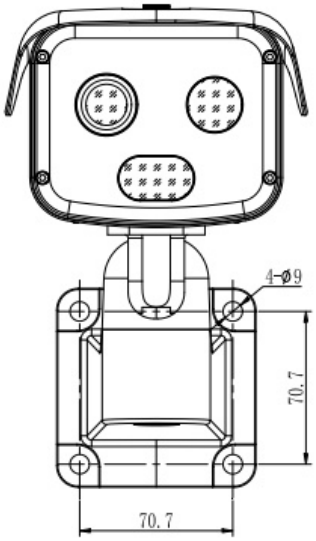


Figure 3-2 View of mounting holes for wall mounted brackets

Note：

- The weight of the platform or bracket is recommended to be more than 20kg;
- The fixing screws are subject to the actual included screws;
- If you need to use self-replaceable screws, do not use too long screws to avoid scratching people or objects; do not use too short screws to avoid personal injury and equipment damage due to poor installation.
- If the device needs to be installed at a high place, it is necessary to confirm in advance that the device can work normally when powered on, and then proceed to the next step of installation.
- The platform for fixing the device needs to confirm its stability before installation to avoid the screen shaking due to shaking.

3.2 Device connection

3.2.1 System connection diagram

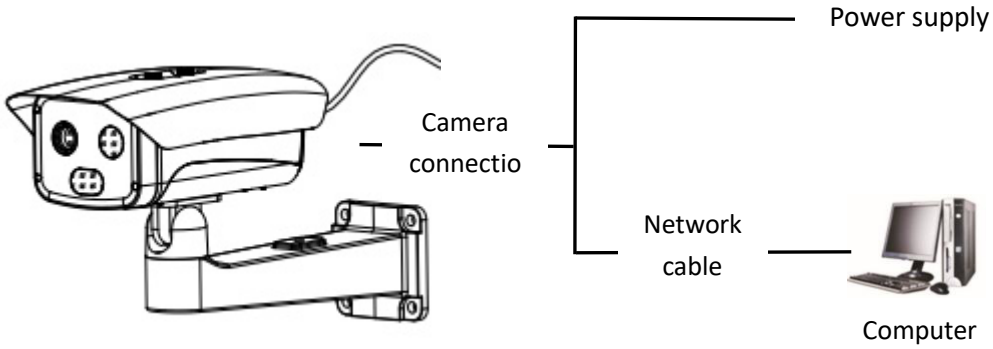
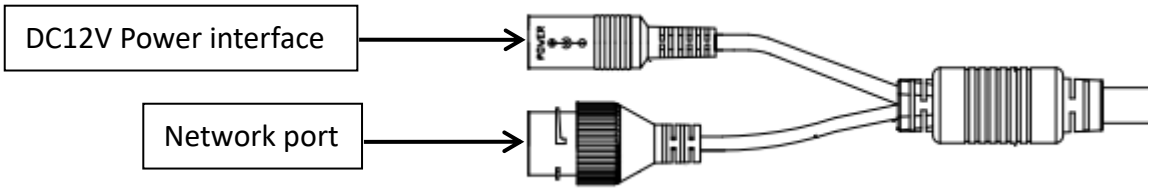


Figure 3-3 System Connection Diagram

3.2.2 Cable description



4 Login operation and common faults

After installing the hardware, you first need to set some network parameters of the IP camera. The parameters that must be configured include the IP address, subnet mask, port number and other network parameters of the IP camera.

Camera factory IP: 192.168.1.64

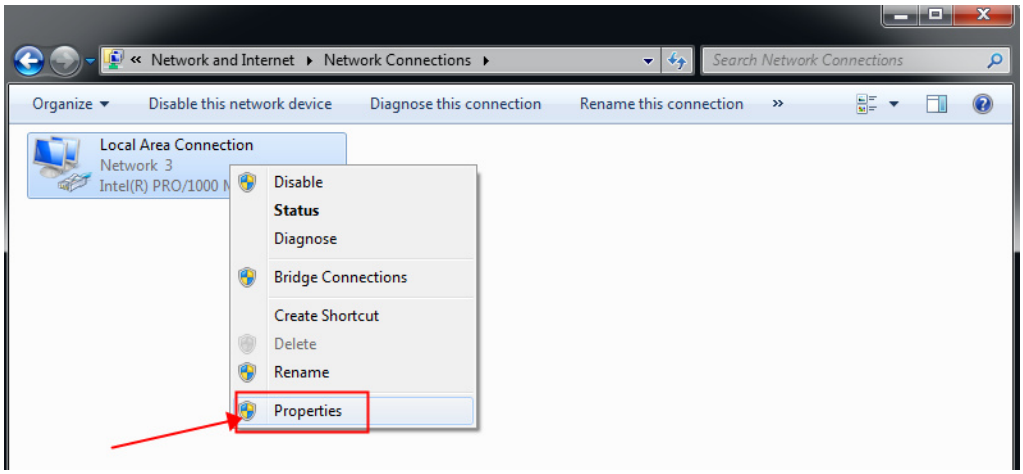
User name: admin

Login password: Abc.12345

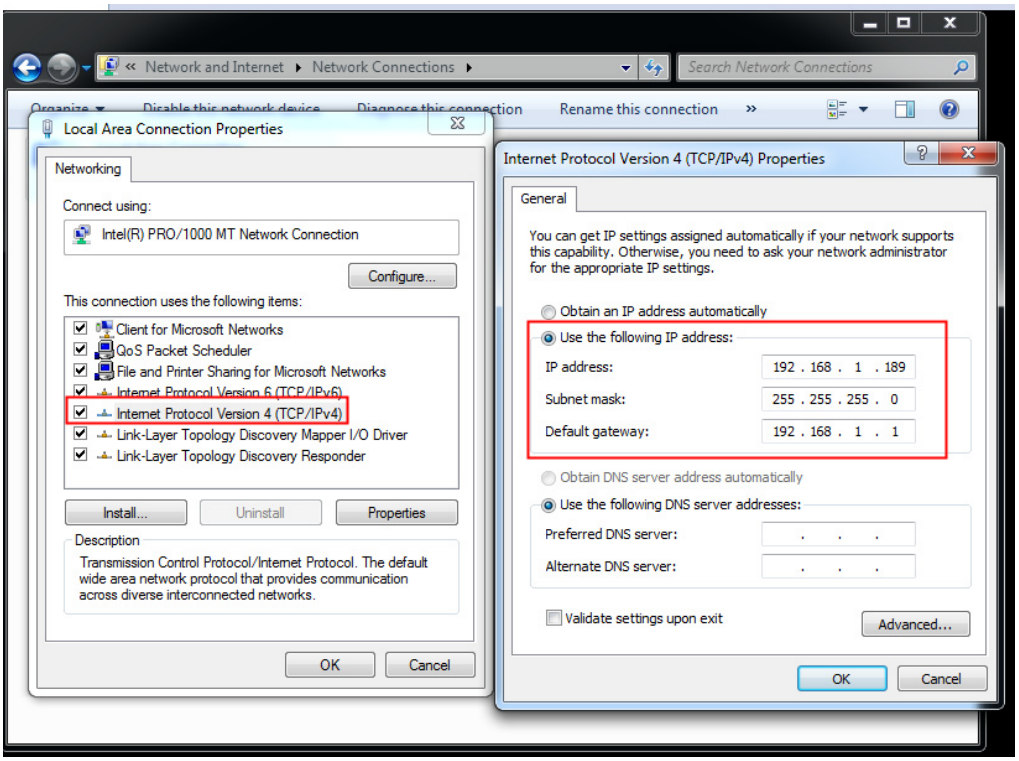
4.1 Modify the computer IP address

In order to connect the computer and the camera smoothly, please plan the IP address according to the actual network environment. The specific steps are as follows:

step 1：Select "Organize--Disable this network device--Diagnose this connection--Rename this connection", right-click "Local Area Connection" and select "Properties", as shown in the figure:



Step 2: Select "Internet Protocol Version 4 (TCP / IPv4)", select "Install", a pop-up box pops up on the right, you need to change the "IP address" of the computer and the IP address of the camera on the same network segment without conflict to ensure that the computer can be successfully connected to the camera.



4.2 Camera WEB interface login operation

Note：

- Please refer to the actual login for the WEB login operation interface. The realization of some functions requires device support.
- The realization of some functions needs to cooperate with PTZ.

4.2.1 login and logout

After logging in to the WEB interface of the device through a browser, you can perform operations such as preview, playback, and settings on the device.

4.2.1.1 login

- After the IP camera is connected to the computer, you can log in by entering the IP address of the IP camera in the address bar of the browser. When the installation browser plug-in interface pops up, please allow the installation. Please close the browser when installing the plug-in, otherwise the plug-in installation will be unsuccessful.
- After the plug-in is installed, re-enter the IP address of the IP camera (factory default:

192.168.1.64) to log in, and enter the user name (factory default: admin) and password (factory default: Abc.12345) of the IP camera to log in to the system.

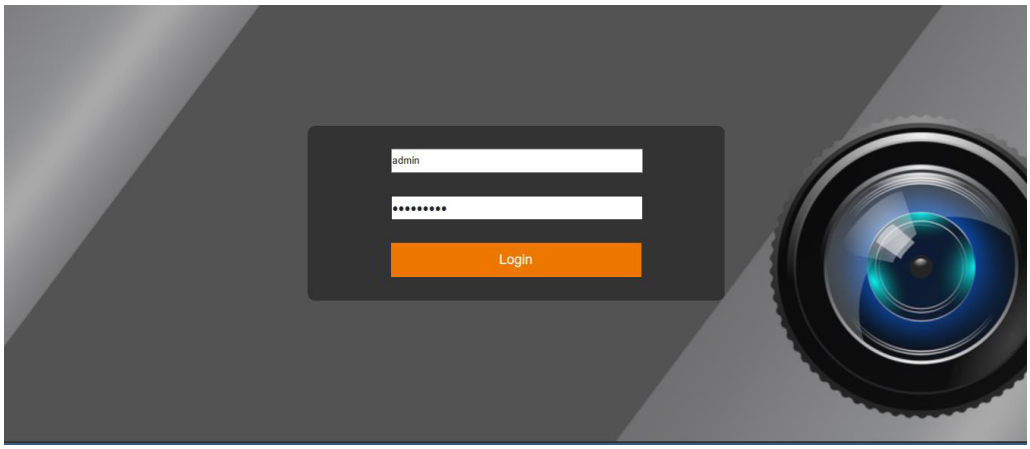


Figure 4-1 login interface

Note：

- Suggest using IE browser, IE browser kernel version needs to use version 10 or later; If the plugin installation fails, you need to first download and install VC-redist.x86.exe or MSVBCRT AIO.exe, then reinstall the plugin.
- When using Edge browser, it is recommended to switch to IE mode.
- When using Chrome and Firefox browsers, there is no need to install plugins, but after logging in to the device, you need to adjust the main stream resolution to 1080P or below and the main stream rate to 2048Kbps or below in the settings interface. Otherwise, it will automatically switch to the secondary stream during preview. When using Chrome and Firefox browsers, different preview modes can be configured, and the functional differences under different preview modes are shown in the table below:

Preview Mode	WEBSDK	RTC	TS	Media Server
Configuration Description (Preview mode configuration switching: **Settings→Network Settings→Advanced→Network Service→Web video format**)	After switching to this mode, non IE browsers can be used without installing plugins to preview videos and replay, supporting H.264 and H.265. But it is necessary to first adjust the main stream resolution of the device to below 1080P and the main stream bit rate to below 2048Kbps.	After switching to this mode, non IE browsers can be used without installing plugins to preview videos and replay, supporting H.264 but not H.265. Using UDP to transfer videos may cause screen blur in poor network environments.	After switching to this mode, non IE browsers can be used without installing plugins to preview videos and replay, supporting H.264 but not H.265. Use TCP to transmit videos. Need to check “WebSocket” and configure the port.	After switching to this mode, non IE browsers can be used without installing plugins to preview videos and replay, supporting H.264 and H.265. You need to select "Media Server" and configure the port. The default video port is 38080, SSL port is 38082, and the video transmission format is FLV In this mode, the video delay is significant, with H.264 encoding delay of 1-2 seconds and H.265 encoding delay greater than 2 seconds. The resolution needs to be adjusted to below 1080P.
Whether H.264 is supported	Yes	Yes	Yes	Yes
Whether H.265 is supported	Yes	No	No	Yes
Whether remote playback of video and pictures is supported	Yes	Yes	Yes	Yes
Whether to support local capture and video	Firefox not supported, Edge, Chrome, and webkit kernel browsers support	Yes	Yes	Yes
Whether to adjust the encoding parameters	The main stream resolution needs to be adjusted to below 1080P, while the bit rate needs to be adjusted to 2048kbps or below	No	No	Video delay of 1-2 seconds in H.264. Under H.265, the video latency is relatively high, and the main stream resolution needs to be adjusted to below 1080P

4.2.1.2 Logout

When entering the main interface of the IP camera, you can click " 

" in the upper right corner to exit the system safely.

4.2.1.3 Main interface description

On the main interface of the IP camera, you can preview, play back, view pictures, view alarms and set other functions.

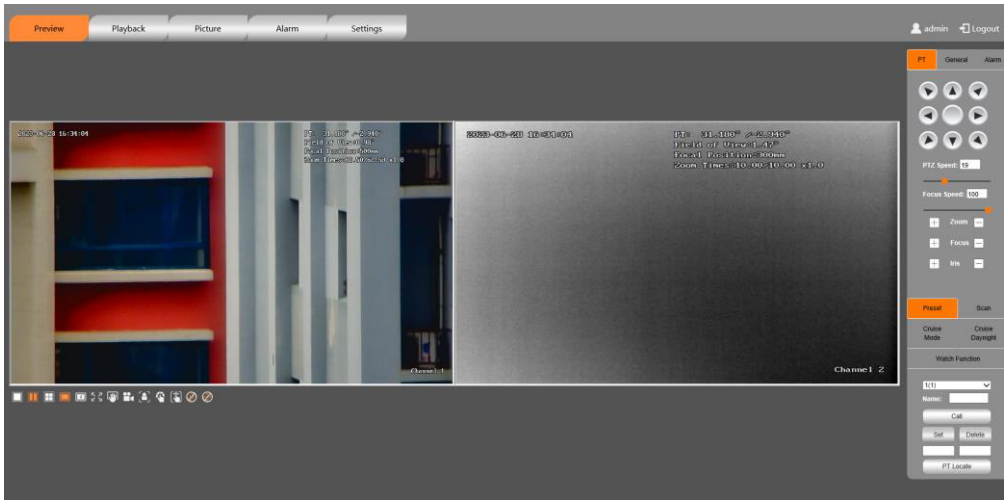


Figure 4-2 Main interface

- **Preview**: used for network camera monitoring screen preview and parameter adjustment
- **Playback**: Find and play back videos by time or video type
- **Picture**: used to query, view and download pictures stored in the SD card of the IP camera
- **Alarm**: Used to view real-time alarm messages
- **Settings**: Enter the IP camera configuration interface for system configuration and function configuration

4.2.2 Preview

4.2.2.1 Preview interface description

The preview interface includes: video display area, shortcut function area, PTZ control area, and PTZ common function area.

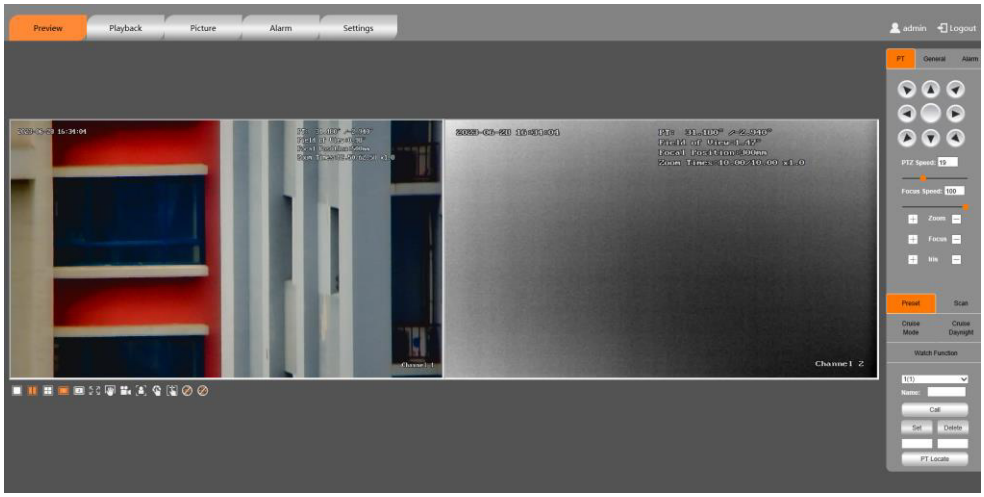


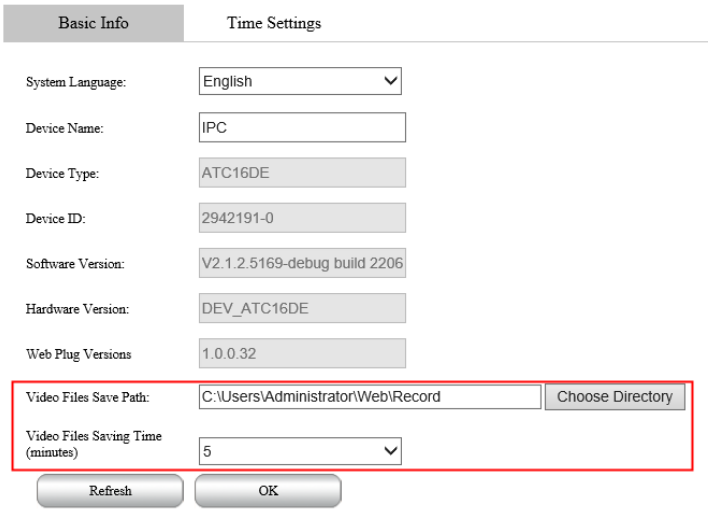
Figure 4-3 Preview interface

4.2.2.2 Quick Ribbon

The use of common functions, including screen split screen switching, primary and secondary stream switching, snapshot, video, focus once, manual correction, background correction, 3D positioning, etc.

Figure 4-4 Shortcut 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
	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. When video recording is enabled, a red video recording icon will be displayed in the upper right corner of the. Select "Settings-System Settings-Basic Settings-Basic Info", you can view or change the video storage path on this interface. 
	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	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:

- Some devices do not support the 3D positioning function, please refer to the actual product.
- 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.

4.2.2.3 PTZ, General and Alarm control area

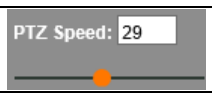
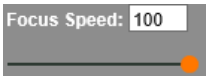
Note:

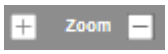
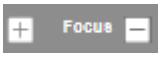
- The realization of some functions needs to cooperate with PTZ.
- Some functions require equipment support, please refer to the actual product.

4.2.2.3.1 PTZ

PTZ control functions, including lens zoom, focus, PTZ direction control, etc.

Figure 4-5 PTZ control

Icon	Instruction
	Long press the arrow keys to control the pan/tilt to rotate horizontally and vertically.
	Adjust the speed of the PTZ.
	Adjust the focus speed of the lens

Icon	Instruction
	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.

4.2.2.3.2 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.

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

4.2.2.3.3 Cruise Mode

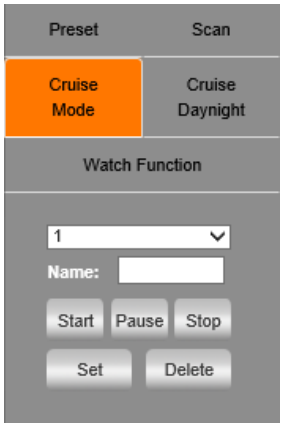


Figure 4-7 Cruise

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 Mode”.

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.

4.2.2.3.4 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.

4.2.2.3.5 General

General functions, including visible light, thermal imaging and auxiliary function settings, etc. Under the auxiliary function interface, the infrared laser and the Flash light can be controlled.

Figure 4-9 General settings

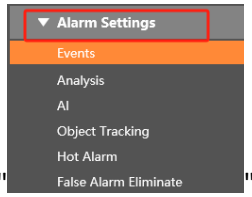
Note：

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

4.2.2.3.6 Alarm

Figure 4-10 Alarm settings

Note：

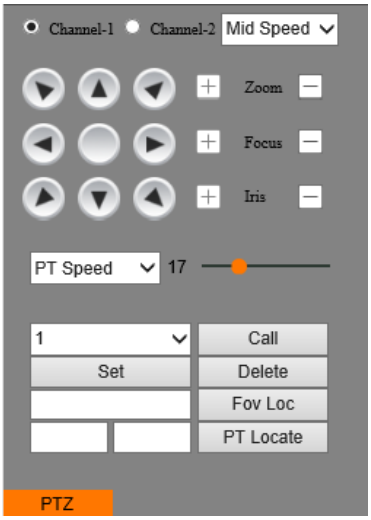
- Please refer to the actual operation interface. Some functions require device support. Please refer to the actual product.
- The corresponding detection must be configured under " 

", and it will be valid only if it is enabled in this interface, otherwise it will be invalid.

4.2.3 Image Settings

In the setting interface, click " 

" 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.

4.2.3.1 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.

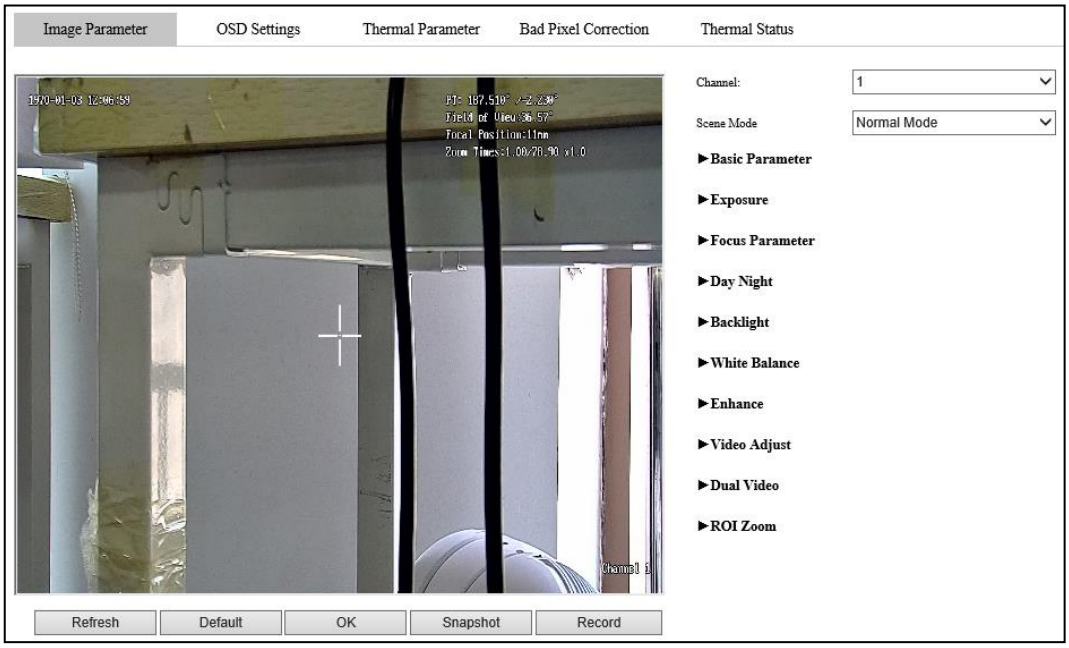


Figure 4-11 Image parameters (channel 1)

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.

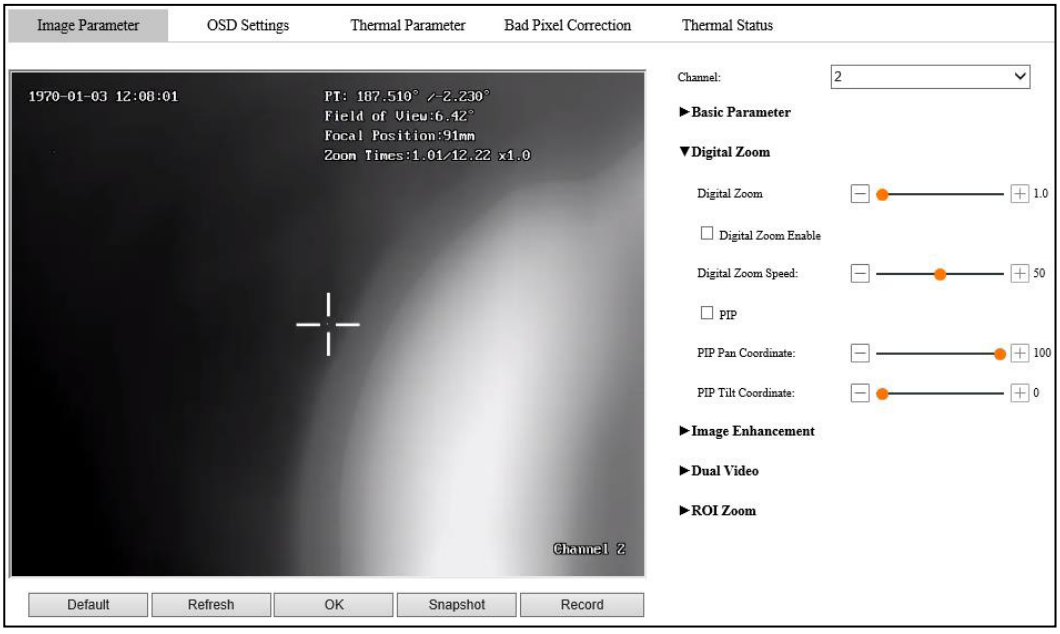


Figure 4-12 Image parameters (channel 2)

4.2.3.2 Thermal Parameter

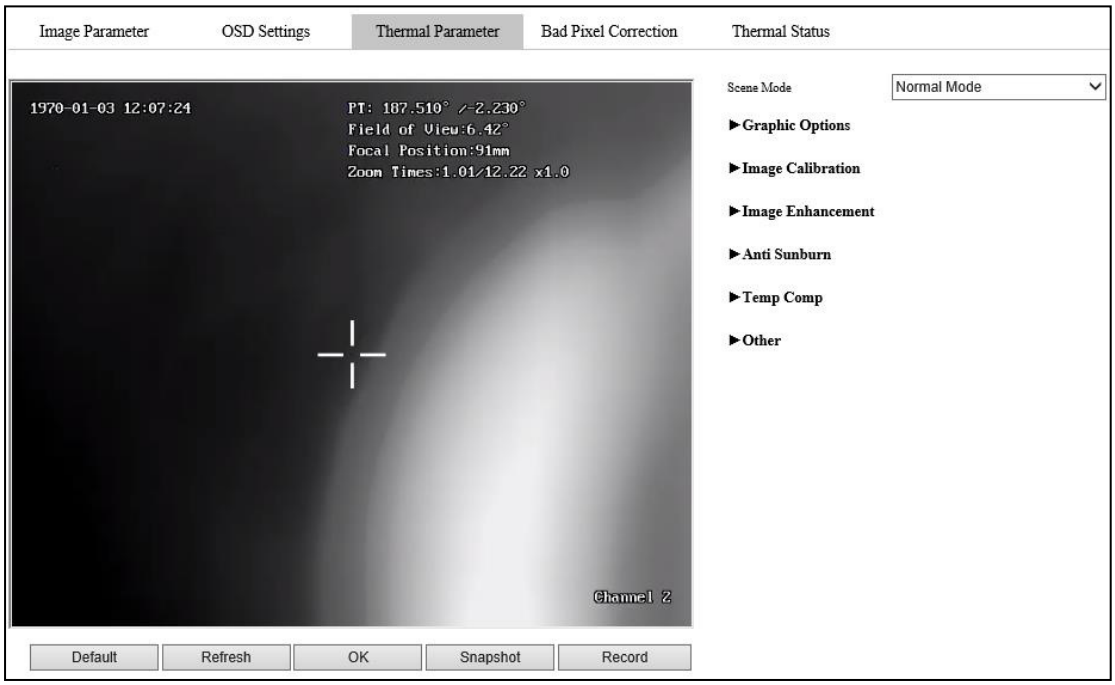


Figure 4-13 Thermal Parameter

- **Graphic Options**

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

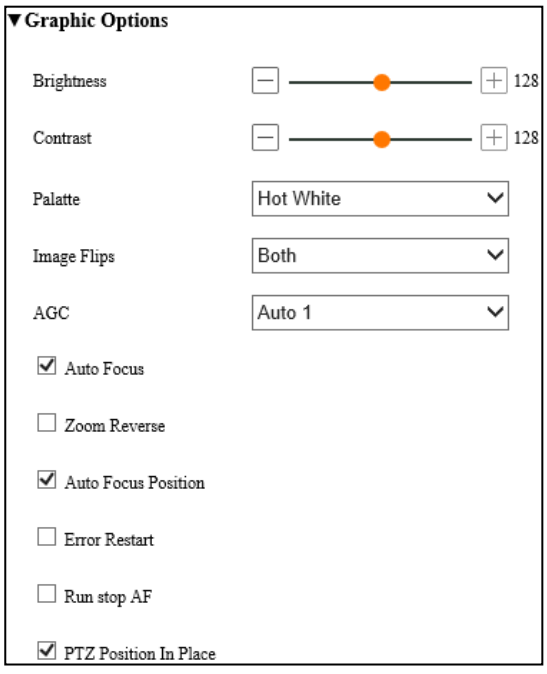


Figure 4-14 Graphic Adjustment

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.
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
Error Restart	When turned on, the thermal imaging self-check will automatically restart after an error

- **Image Calibration**

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

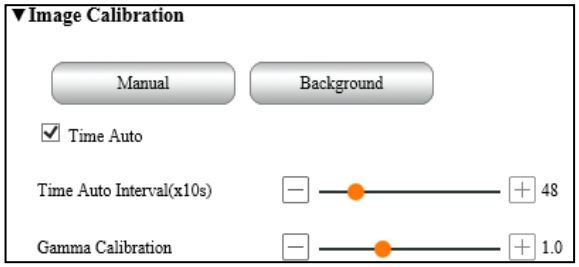


Figure 4-15 Image calibration

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

Function	Description
Manual	Click this button to manually calibrate once.
Background	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

Function	Description
	a lens cover.
Time Auto	After it is turned on, it will automatically calibrate according to the set time interval.
Time Auto Interval(×10s)	
Gamma Calibration	

- **Image Enhancement**

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

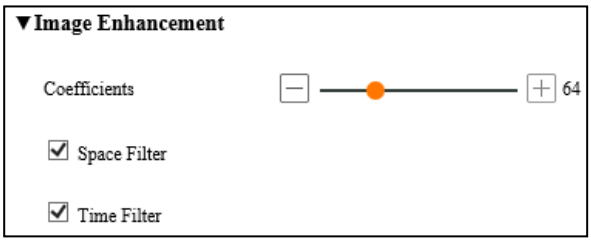


Figure 4-16 Image enhancement

Function	Description
Coefficients	The enhancement coefficient can be adjusted according to the actual scene
Space Filter	Image enhancement using a space composed of pixels and neighborhoods
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.

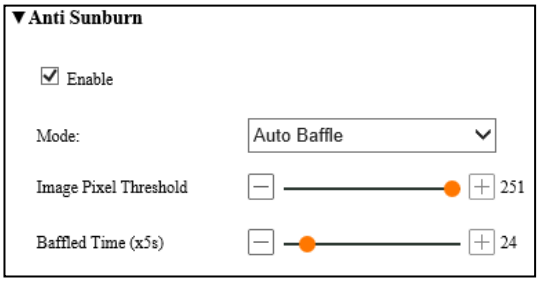


Figure 4-17 Anti sunburn

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(×5s)	The retention time after the block film is blocked. After this time has elapsed, the baffle is removed.

- **Temp Comp**

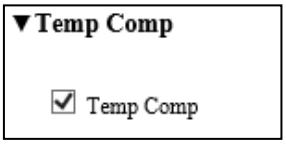


Figure 4-18 Temp Comp

Check " Temp Comp " to turn on temperature compensation.

- **Other**

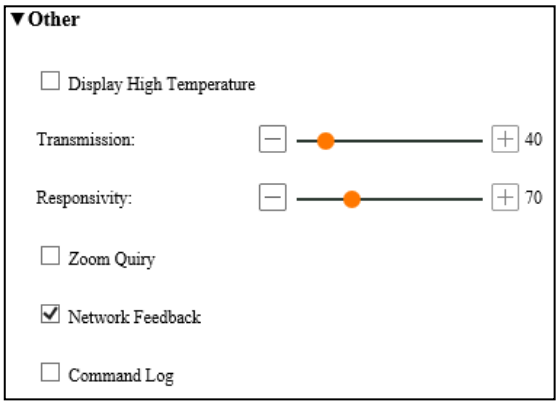


Figure 4-19 Other

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.
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.
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.
Command Log	After opening, the operation code of the program can be viewed in the log

4.2.4 Alarm settings

4.2.4.1 Analysis

4.2.4.1.1 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 → Analysis → Intrusion" to enter the regional intrusion detection configuration interface, as shown in the figure.

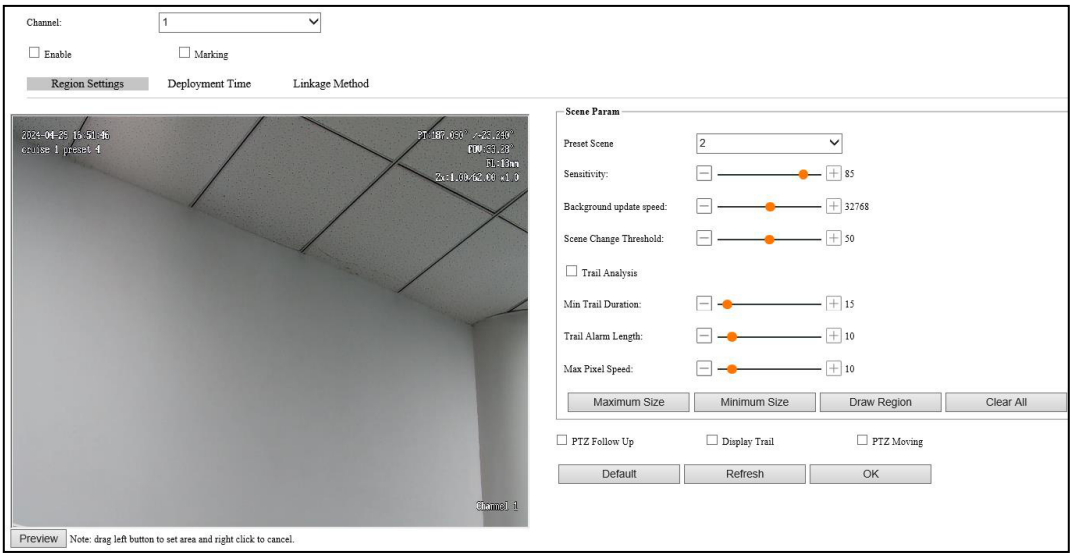


Figure 4-20 Intrusion setting

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
Enable	After opening, after the target enters the area, an alarm will be triggered
Marking	After opening, the detected target will be marked on the video screen
Preset Scene	Can be associated with presets
Sensitivity	The higher the sensitivity, the easier it is to detect moving

Function	Description
	objects, but at the same time the higher the false alarm
Scene Change Threshold	The lower the sensitivity, the less affected by camera shaking, the less prone to false alarms
PTZ Follow Up	After this function is enabled, 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.

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

4.2.5 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.

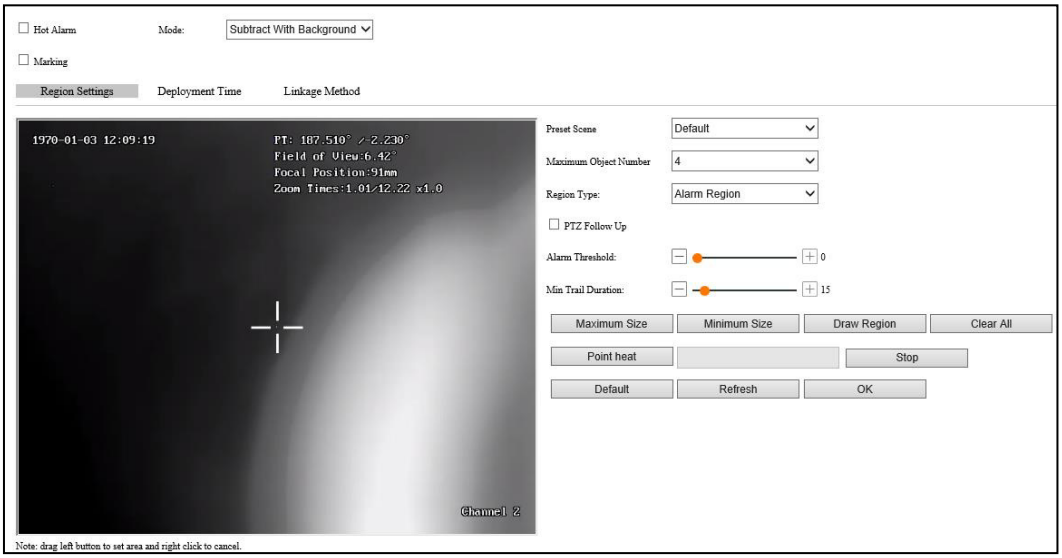


Figure 4-21 Hot alarm

Please refer to the table below for detailed function descriptions.

Function	Description
Hot Alarm	After it is turned on, it will alarm when a hot target is detected
Marking	When turned on, hot targets can be seen in the video
Preset Scene	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
Maximum Size	Maximum size of detected target
Minimum Size	Minimum size of detected target

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

4.2.6 PTZ

- **PTZ Settings**

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

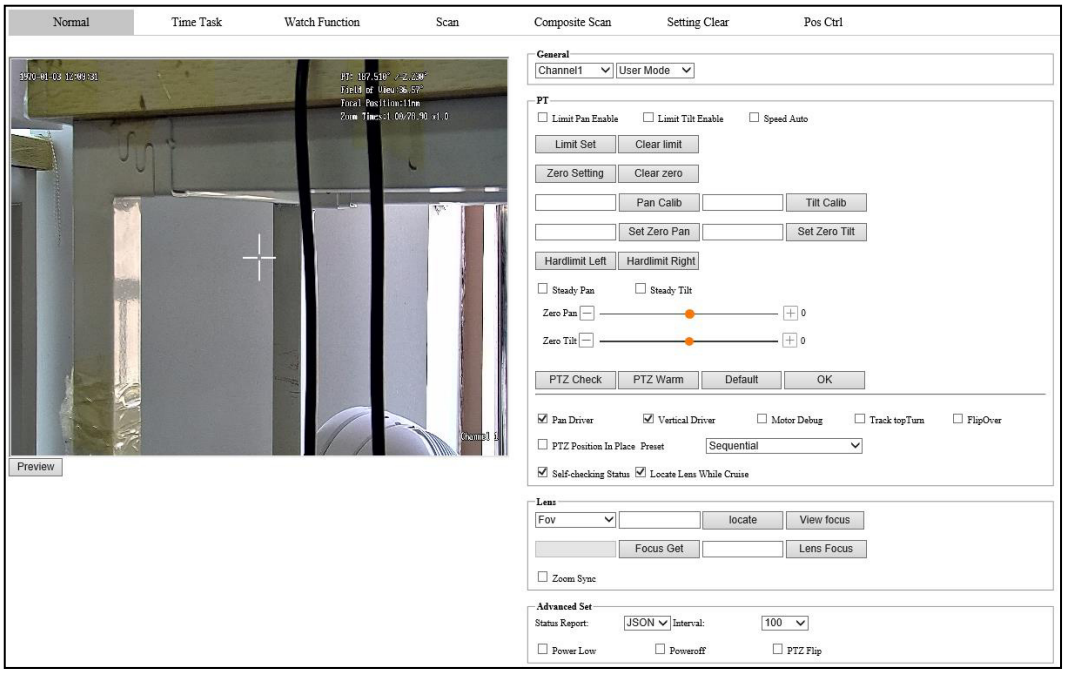


Figure 4-22 PTZ Settings

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 limit and pitch limit position, enable the horizontal limit 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 control PTZ will automatically adjust the speed according to the size of the field of view
Zero setting	The current horizontal position and pitch position can be set to 0, that is, the horizontal position is 0 degrees, and the pitch position is 0 degrees.
Angle calibration	After inputting the horizontal angle and vertical angle, click the horizontal calibration and vertical calibration respectively to calibrate the current horizontal angle 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 Drive\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

Note：

- The realization of some functions needs to cooperate with PTZ.
- Some functions require equipment support, please refer to the actual product.

4.3 Common fault handling

The following lists some problems that users may encounter in the process of using the camera. The following situations may be some of the faults you encounter. You can refer to the table to solve them yourself or contact our company directly. We will provide you with satisfactory technology Support and Service.

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
	Wrong address	Reset the address code
	Wrong protocol and baud rate	Reset protocol or baud rate
Unclear image	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 restore default.
	Auto correction is not ON.	Select auto correction or restore default.
Super high or low brightness	Inappropriate brightness and contrast parameters setting	Adjust brightness, contrast to adapt to corresponding environment or restore default.

5 Client Set and Access

5.1 Accessing by Client Software

Note：

The screenshot of the interface diagram is only an example. There are differences in the interface of each version, please refer to the actual interface.

5.1.1 Client installation

- Run DF3000-setup.exe, click on Next. Follow the prompts to complete the installation and create a shortcut.

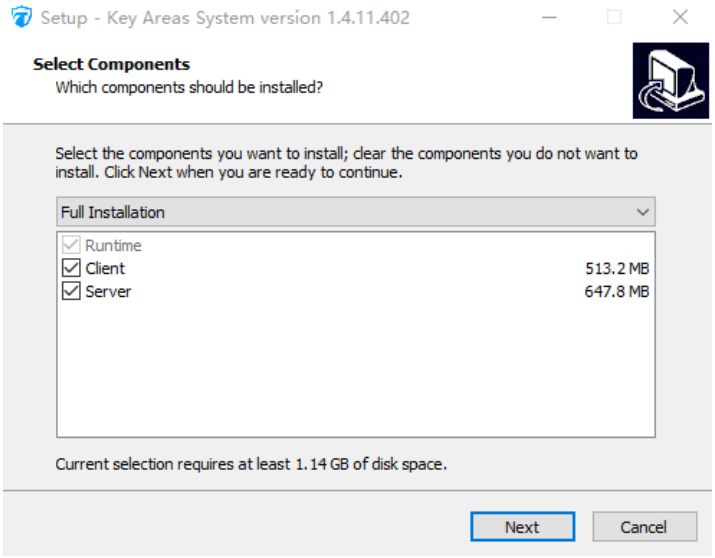


Figure 5-1 Installation interface

- After installation, click on Finish, open the login interface.

5.1.2 Log in

After finishing installation of the client, double click the client icon, enter the login interface, default administration account: admin, password: Abc.12345, the login interface shows in Figure 5-2.

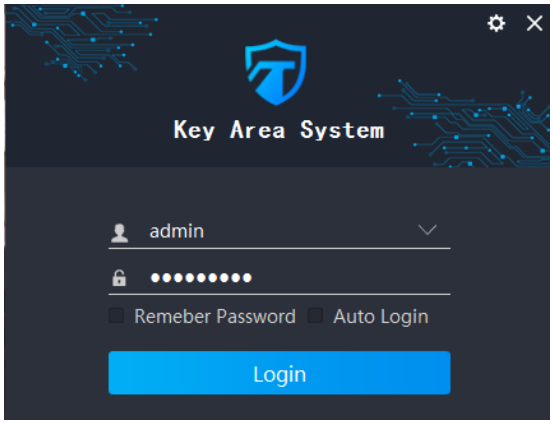


Figure 5-2 Login interface

- User name: Select or enter the user name of the login system.
- Password: Enter the corresponding login password
- Remember the password: After selection, the system will remember the account password automatically, and password will not need in the next log in.
- Automatically login: After selection, the system will log in automatically, when the client is opened.
- Log in: Send the user login message to the client to finish the user information confirmation.

5.1.3 Initialization

After login, it will show the initialized login interface, as shown in Figure 5-3, the initialization progress will show down the right corner, showing login to the equipment server, login to the forest fire server and initializing the client server in turn.

Figure 5-3 Initialization the login interface

5.1.4 Equipment management

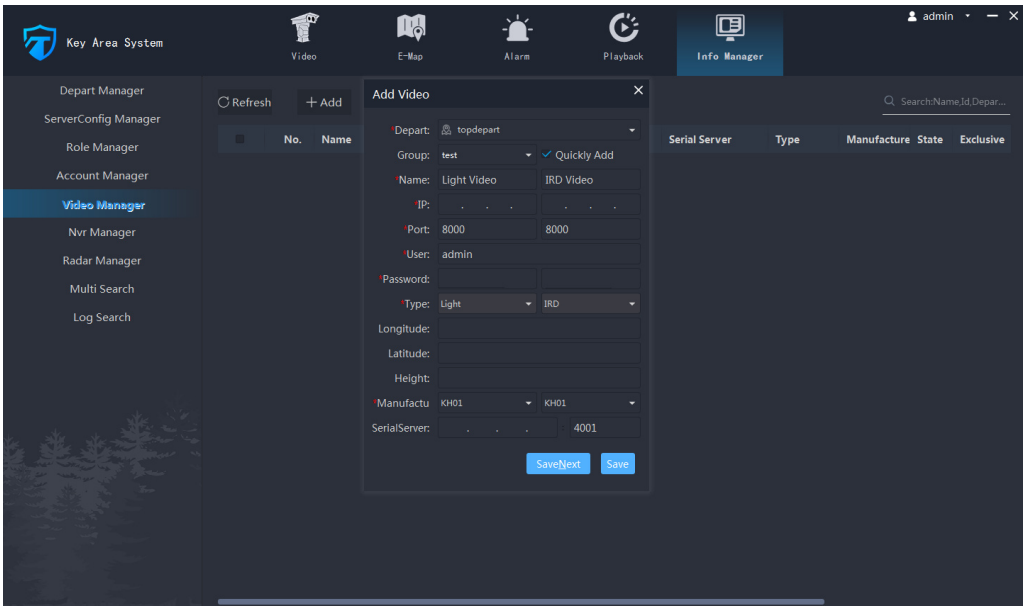


Figure 5-4 Equipment management

➢ Quick add: To add a device camera, click the add button 

, and the device information edit box will pop up, as shown in Figure 5-5. The quick add default check √ "Quickly Add", you need to delete the √ in front of "Quickly Add", and then check √ "Single IP". Enter the Group, IP, Port, User, Password, Type, etc. After clicking "Save", the device is added successfully. Click Save and Continue to continue adding the device.

Note：Please enter content at Group

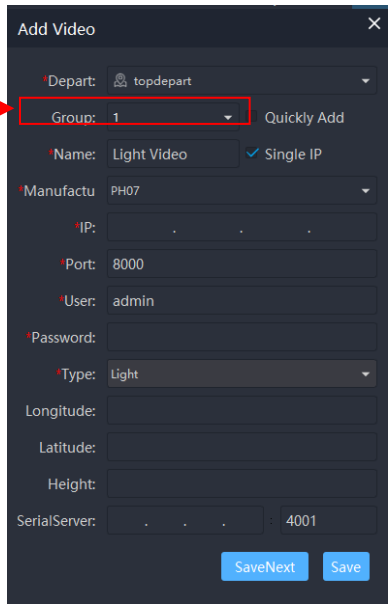


Figure 5-5 Equipment quick add

Default IP address for camera: 192.168.1.64

User name: admin

Manufactu: PH07 Port：8000

User password: Abc.12345

5.1.5 Main interface

After initialization, enter the main interface as shown like Figure 5-6, which include mainly four functional modules: video preview, electronic map, alarming monitor, information management. Click the title to switch to different functional module interface.

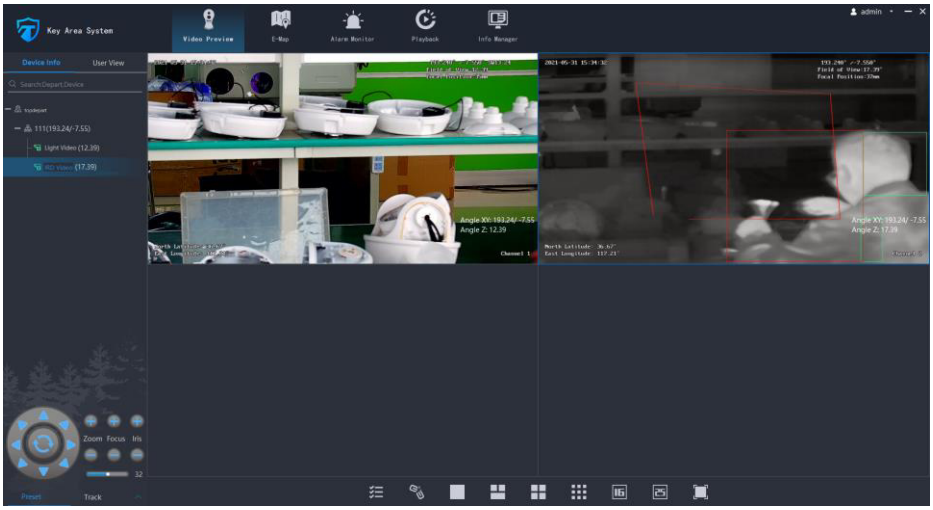
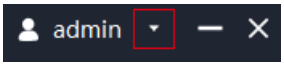
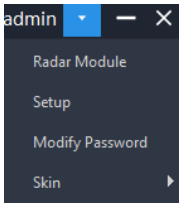


Figure 5-6 Main interface

5.1.5.1 Alarm sound setting

After the account is logged in, the name of the currently logged-in account will be displayed in the upper right corner of the client. Click the menu icon 

to the right of the account name to pop up the menu 

Click "Setup" to enter the system configuration interface. Click the Alarm Config, as shown in the figure below.

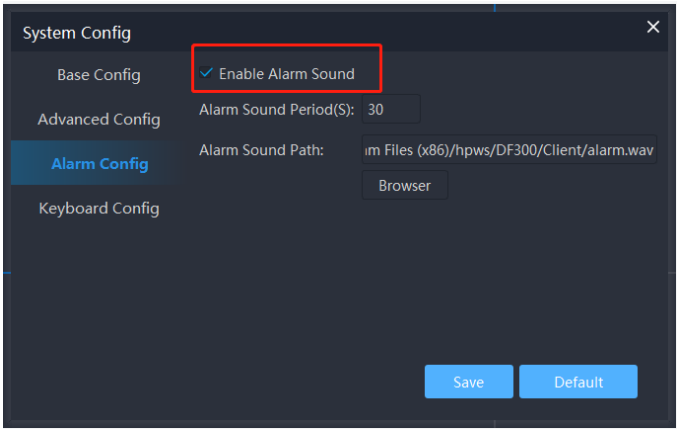


Figure 5-7 Alarm Config

Alarm Config:

(1) Configure whether to enable alarm sound;

(2) Configure the alarm sound period, the default duration is 30 seconds after the alarm is triggered;

(3) Configure alarm sound, you can customize alarm audio, sound file only supports wav format.

5.1.6 Display and control of the video

- Split screen: Video screen can be divided by the bottom of the split screen button, it supports single screen, three screens, four screens, nine screens, sixteen screens, twenty-five screens and television mode. Among them, the three screens is mainly used in panoramic stitching mode. The following is the split screen button instructions.

Icon	Instructions
	Video disconnection
	Single screen
	Three screen
	Four screen
	Nine screen
	Sixteen screen

	Twenty-five screen
	Television mode

➢ Device Para:

Click the  shortcut icon in the video screen to set the device parameters, as shown in the figure below.

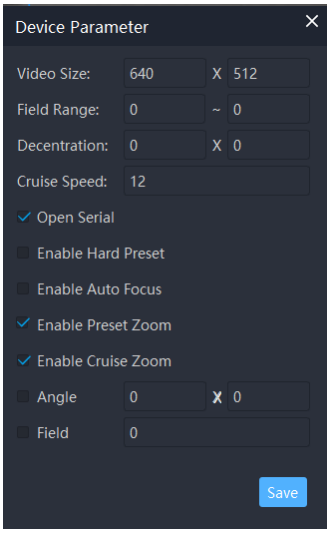


Figure 5-8 Device Para

Icon	Instruction
Video Size:	The original size of the video, the default for visible light is 1920*1080, and the default for thermal imaging is 640*512. When using functions such as 3D positioning, hotspot positioning, and false alarm area, you need to ensure that this data is filled in correctly
View Range:	Reserve
Decentration:	Reserve
Open Serial	Whether to open the transparent channel, thermal imaging is turned on by default, and light can be turned off by default
Enable Hard Preset	Whether to enable hardware presets
Enable Auto Focus	Whether to enable scene change auto focus

Enable Preset Zoom	When manually calling presets, whether to perform lens zoom control
Enable Cruise Zoom	Whether to perform lens zoom control when calling presets during cruise
Angle	For devices that cannot return the azimuth angle or have no pan/tilt, the azimuth angle can be fixed
View	For equipment without field angle return or fixed focus equipment, the field angle can be fixed

➢ Control: After finish the video connection, right click at the screen will pop up control function list as show in Figure 5-9.

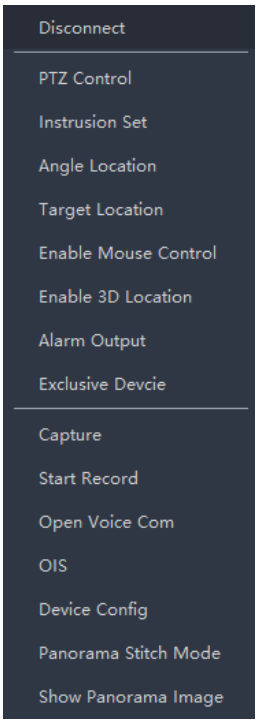


Figure 5-9 Function list

➢ Angle Location: Azimuth positioning and field of view positioning of the device.

➢ PTZ Control: After the video connection is completed, click the right mouse button on the video screen and click "PTZ Control", or click the "PTZ Control" shortcut button in the video screen to enter the PTZ control interface, as shown in the figure below.

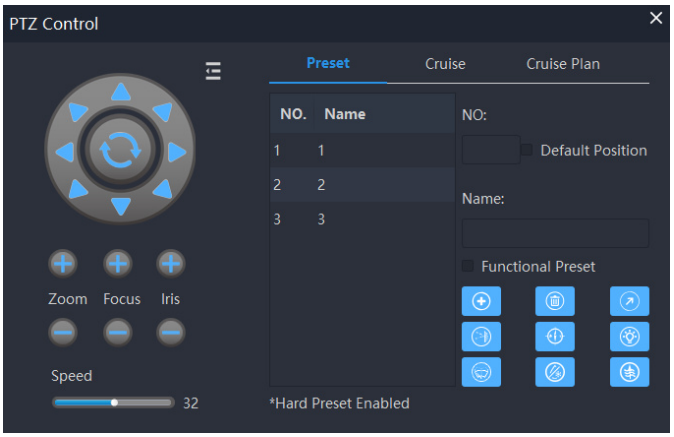
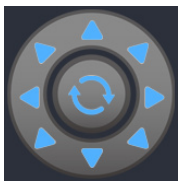
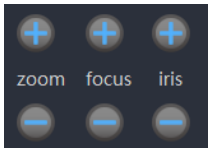
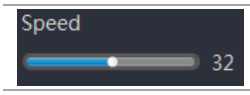


Figure 5-10 Pan-tilt control interface

(1) PTZ control area operation instructions

The basic control of the pan/tilt includes zoom, focus, aperture, speed adjustment, eight-direction control, homing, etc.

PTZ control area operation instructions:

Button	Description
	Direction control panel, support 8 direction control.  Indicates the initial position.
	Lens control panel, adjust lens zoom, focus, aperture
	PTZ speed adjustment, support 0~63
	Expand or collapse the expansion area

(2) Preset function

Support 2048 preset position settings, at the same time support the special preset position call and setting of the device, support the setting of the initial position, as well as the special functions of laser ranging and electronic compass.

Preset operation area description:

Button or attribute	Description
Preset position	Preset position number, support 1~2048, single device cannot be repeated
Preset name	The name of the custom preset
Default Position	A certain preset position can be set as the initial position, and it will be marked in green font in the preset position list after setting.
Functional Preset	After checking, you can call, delete, and set the preset position of the device hardware
	Set (new) preset position
	Delete preset
	Call the preset position, after reaching the preset position, the current preset position number will be displayed superimposed on the video
	Laser ranging, after success, it will be superimposed on the video screen, it needs equipment support
	Electronic compass positioning, equipment support required

(3) Cruise scan function

The system supports 20 custom cruise lines, and special cruise lines such as fan scan (apple peel scan) and line scan (horizontal scan). Support setting cruise stay time and cruise speed.

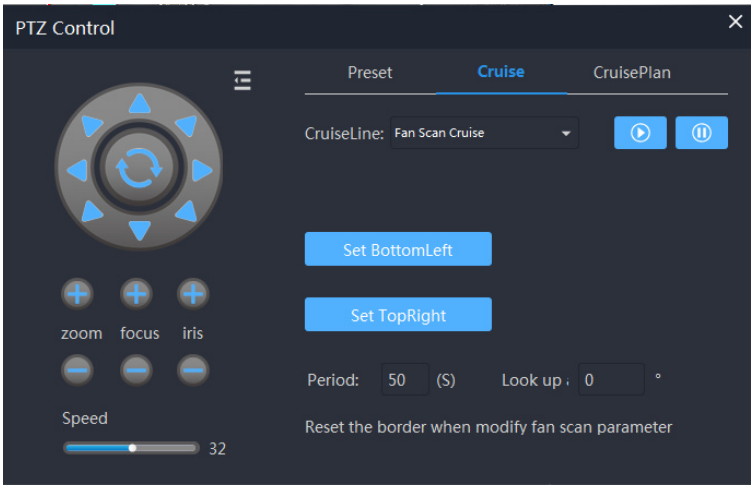
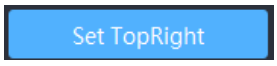


Figure 5-11 Cruise scan interface

Operation instructions for cruise scan function

Button or attribute	Description
	Start or continue the currently selected cruise line
	Stop the current cruise line
	Add the currently selected preset to the current cruise insurance
	Delete the current preset position from the current cruise line
	Set the boundary of the lower left corner of the fan sweep
	Set the upper right corner of the fan sweep
	Set the left margin of the line scan
	Set the right margin of the line scan
Cruise line	Choose a cruise line
Preset	Choose a preset
Period	Preset position stay time
Look up	The look up angle during fan sweep scan, the default is 3/4 field of view
Switching order	Drag the presets in the table to adjust the cruise sequence
Modify stay time	Double-click the stay time in the table to edit the stay time

(4) Cruise plan

The system supports the setting of multiple cruise plans. In the cruise plan, the cruise line to be cruised can be set, and the cruise time can be set (repetitive operation period is a week, the minimum unit is 5 minutes), and one cruise plan can be manually activated each time.

Cruise plan operation instructions

Button or attribute	Description
	Add a new cruise plan
	Delete selected cruise plans in batch
	Start or stop the current cruise plan
 Or double-click the list	Edit current cruise plan
	Delete the current cruise plan
	Clear the time selection of the current date
	Copy the time selection of the current date to another date

5.1.7 Intelligent behavior analysis

The system supports intelligent behavior analysis, including line mixing detection and area intrusion detection. A virtual line or area is drawn on the video screen. When the target moves to trigger the line or area, an alarm will be automatically triggered. The system can simultaneously enable the intelligent behavior analysis functions of thermal imaging and visible light.

5.1.7.1 Behavior detection configuration

Relying on the preset position function, this function supports multi-point and multi-area settings. Different detection rules can be set in different preset positions. For each preset position, three types of sensitivity, high, medium and low can be set, and can be set The day and night mode rules, the system also presets four modes, of which the day and night mode

supports automatic switching, and the preset four modes support manual switching. Users can flexibly configure according to the usage scenario.

Sensitivity: The higher the sensitivity, the more false positives and the fewer false negatives. Conversely, the fewer false positives, the more false negatives. The trajectory mode is not enabled when the sensitivity is high, and it can be applied to scenes with complex scenes and many targets. When the sensitivity is medium and low, the trajectory mode is enabled. The motion trajectory of the invading target will be displayed on the video screen. It is suitable for simple scenes and targets. Fewer scenes.

Four modes: For example, if the user wants to set different detection rules for spring, summer, autumn and winter, four modes can be set correspondingly, and manual switching can be performed, or batch switching can be performed in batch operation.

Day and night mode: Supports setting different detection rules for day and night operation, and it will automatically switch after setting. The day and night switching time can be set in the platform settings.

Tracking: After intrusion detection, the target can be tracked. After the target is lost, or when the target is still, the original scene detection is automatically restored.

Operation steps for behavior detection configuration:

1. Control the turntable to the scene where behavior detection needs to be enabled, and set the preset position.

2. Enter the configuration interface through the video right-click menu or shortcut function button, as shown below.

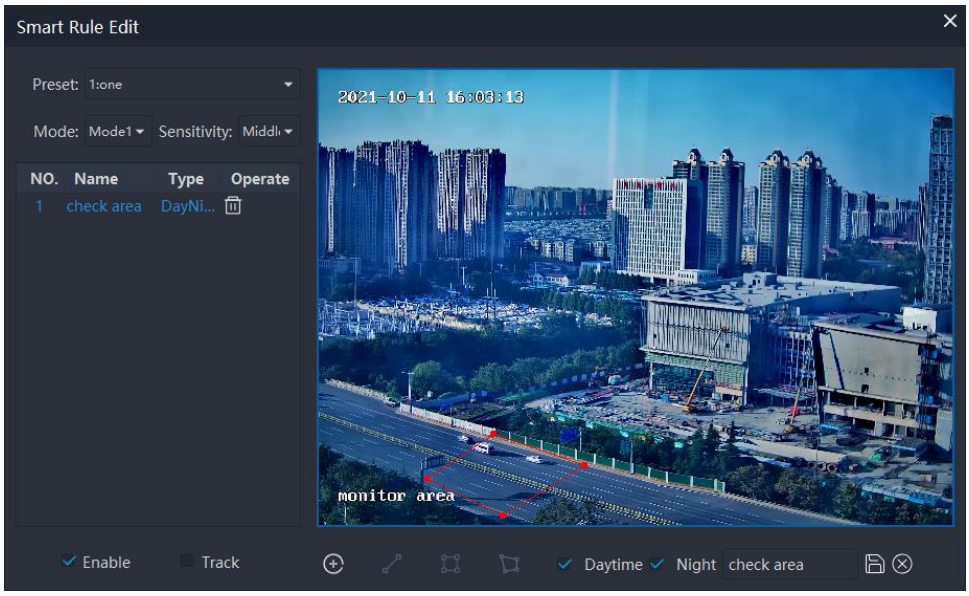


Figure 5-12 Smart Rule Edit

Select the preset position, select the mode, select the sensitivity, and then click the add  icon, select the type of rule to be drawn, and use the mouse to draw the rule. It supports mixing lines, rectangles, and polygons.

After double-clicking the drawing, you can click the rule type again to continue adding in batches.

After all the rules are drawn, select the day and night mode, fill in the rule name, and click Save to complete the operation.

Rule description:

Rule	Description
Mix line	Detect when the target passes through the mixing line
rectangle	Detect when the target crosses the edge line from the inside or outside of the rectangle
Polygon	Detect when the target crosses the edge line from the inside or outside of the polygon

5.1.7.2 Enable intelligent behavior analysis

There are two trigger conditions for intelligent behavior analysis, one is in the preset position,

and the other is the detection is activated. Both are indispensable.

Steps:

1. Call the preset position, or start the cruise to reach the preset position;

2. Tick enable on the smart behavior analysis configuration page, or click the enable button in the video shortcut operation icon.

The two operation steps are interchangeable, and both can open intelligent behavior analysis.

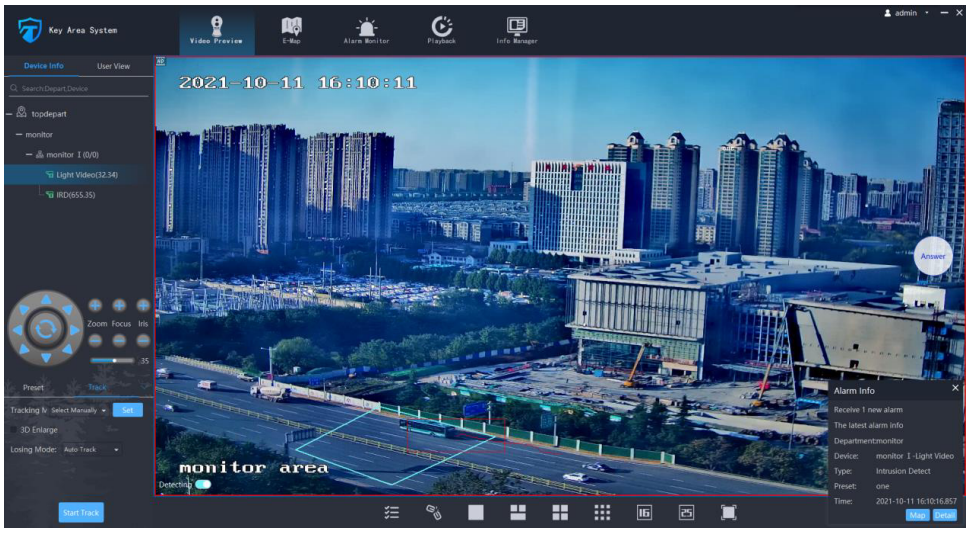


Figure 5-13 Enable intelligent behavior analysis

6 Maintenance Instructions

Thank you for using our company's Thermal (640 x 512) 19mm & Optical IP-Camera. Please read the maintenance instructions carefully when using this product. This chapter will provide you with correct maintenance instructions and precautions. Thermal (640 x 512) 19mm & Optical IP-Camera is a camera product specially designed for long-distance monitoring in special occasions. The external parts of the whole machine that need to be maintained include camera lenses, shields and other accessories. Please check before use, and it is recommended to carry out a comprehensive maintenance check every 3 months. You can maintain it from the following aspects.

6.1 Lens maintenance

Thermal imaging lens and visible light lens glass, when stained with dust, mud, grease, fingerprints, etc., will cause the image performance to deteriorate or scratch the protective cover. Once dirt is found, please deal with it as follows.

- Contaminated with soil, etc.: You can gently wipe with a dry cloth or rinse with clean water to remove the soil. Do not wipe vigorously with a damp cloth directly, this may cause permanent damage to the glass.
- Contaminated with dust, etc.: Use an oil-free soft brush or a hair dryer to gently bounce off the dust.
- Contaminated with grease, etc.: Gently wipe off water droplets or oil with a soft cloth and let it dry, and then use an oil-free cotton cloth or lens cleaning paper dipped in alcohol or lens cleaning solution, and then wipe from the center of the lens outwards. If it is still not wiped clean, replace it with a cloth and wipe it several times.

Note：

When cleaning, do not use paper to wipe, because the paper contains hard calcium, which is easy to scratch the glass and shield. The rag should be made of non-woven fabric or filament cotton that is soft enough. The cleaning solution can be ordinary detergent, do not use alkaline detergent for washing.

6.2 Shield maintenance

When contaminated with soil and grease, please use a soft cloth to rinse with clean water to gently wipe it off and let it dry, and then use an oil-free cotton cloth or lens cleaning paper dampened with alcohol or lens cleaning solution, and then wipe from the center to the outside. If it is still not wiped clean, replace it with a cloth and wipe it several times. Do not wipe the shield vigorously to avoid damaging the surface of the shield and causing the shield to corrode.

Note：

When cleaning, do not use paper to wipe, because the paper contains hard calcium, which is easy to scratch the glass and shield. The rag should be made of non-woven fabric or filament cotton that is soft enough. The cleaning solution can be ordinary detergent, do not use alkaline detergent for washing.

6.3 Hardware Check

In order to keep the camera secure and safe, it is recommended that you conduct a safety inspection of the device before each use. Make sure the screws are matched and secure; make sure no cables are exposed.

- Lightning protection: This product already has lightning protection, and it is still necessary to check whether there are items that are easy to cause lightning strikes around the use environment. □
- Cable protection: Do not disassemble the cable, and pay attention to prevent the cable from being damaged by friction. If the internal cable leaks, please stop using it and replace it in time according to the cable definition. □
- Equipment shell: daily check whether the appearance of the equipment is damaged or deformed. □
- Moisture-proof and anti-corrosion: This equipment has IP66 protection level, and it is still necessary to avoid long-term immersion and corrosion of strong acids and alkalis.