



Security Radar

User Manual

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The security radar sensor is an electronic radiating device. It is intended for installation only in remote, outdoor, and unpopulated areas. Deployment in densely populated environments or in locations where children are likely to be present is strictly prohibited. To ensure safety, the sensor must be installed at a minimum distance of 5 meters from any person. Under no circumstances shall any individual be permitted to stand or remain within this safety zone while the radar is operational.

Electrical Safety

The security radar sensor is not designed for direct connection to the AC power network. Any power supply or converter used with the sensor must be properly isolated and fully compliant with applicable local and national regulations. Hikvision assumes no liability for product damage or power network interference caused by the use of faulty or inappropriate power equipment.

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Mechanical installation of the radar sensor, including the selection and securing of mounting structures such as brackets and fasteners, is the sole responsibility of the installer. Hikvision shall not be liable for any damage, injury, or loss incurred by the customer or any third party resulting from improper installation, including but not limited to loose bolting or inadequate mounting support.

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The security radar sensor is intended for installation in restricted access areas. Installation, maintenance, and servicing must be performed only by qualified and skilled personnel.

Prohibition of Unauthorized Modification

The product enclosure and all internal components are sealed and must not be opened under any circumstances. Removing, loosening, or tampering with any cover fastening screws, or attempting to access the interior of the device, is strictly forbidden and will result in immediate void of the product warranty. Such actions may also expose the user to electrical and radiation hazards.

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- **Performance degradation caused by electromagnetic interference within the detection environment, including but not limited to large metal structures (e.g., high-voltage towers, transformer boxes, metal shelters, dense metal fencing) or radio sources operating in adjacent frequency bands (e.g., communication base stations);**
- **Failure to meet expected detection performance where the customer has not engaged Hikvision to conduct a comprehensive site assessment or solution validation prior to deployment;**
- **Integration of the product with third-party hardware, software, or networks, where Hikvision warrants only the performance of its own product under specified conditions and assumes no responsibility for the compatibility, configuration, or performance of non-Hikvision components.**

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- Damage or defects resulting from voltage surges on power supply or communication lines, regardless of cause;
- Accidental damage during transit, including but not limited to liquid ingress;
- Use of the product for purposes other than its intended application, or operation not in strict accordance with the supplied user manual;
- **Any attempt to open, disassemble, modify, or tamper with the product by anyone not expressly authorized by Hikvision. This includes, but is not limited to, removing or loosening any cover fastening screws;**
- Removal, defacement, or alteration of the serial number label.

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Hikvision reserves the right to change the specifications and operating details of this product without prior notice.

Symbol Conventions

The symbols that may be found in this document are defined as follows.

Symbol	Description
 Danger	Indicates a hazardous situation which, if not avoided, will or could result in death or serious injury.
 Caution	Indicates a potentially hazardous situation which, if not avoided, could result in equipment damage, data loss, performance degradation, or unexpected results.
 Note	Provides additional information to emphasize or supplement important points of the main text.

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Chapter 1 Activation and Login

You can read this **Quick Guidance** to get an overview of the whole procedure:

Steps:

1. Then you can start warning zone setup.

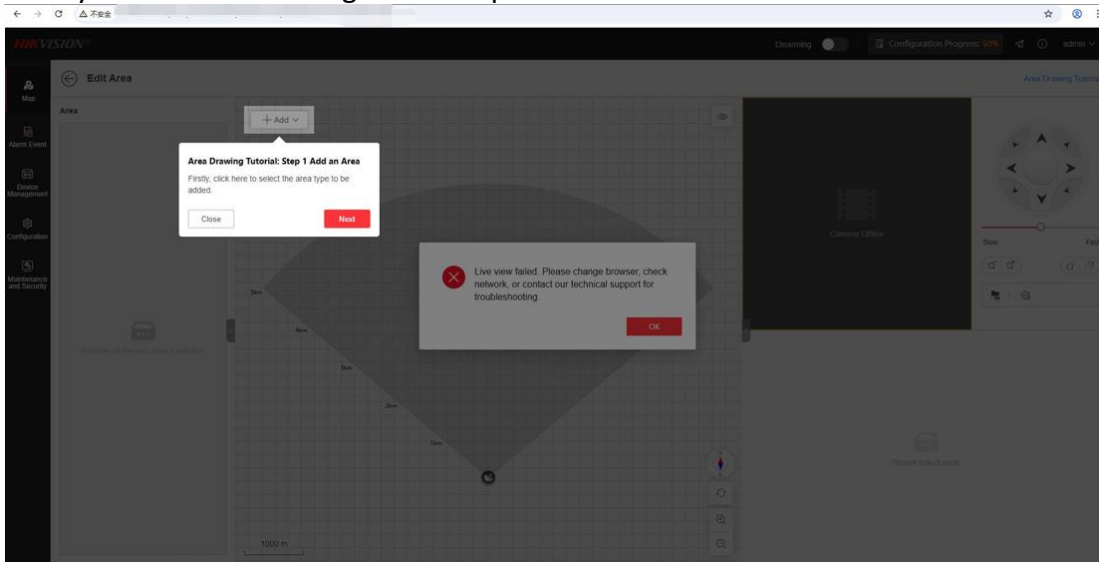


Figure 1-13 Warning zone Setup

2. Move onto camera adding interface.

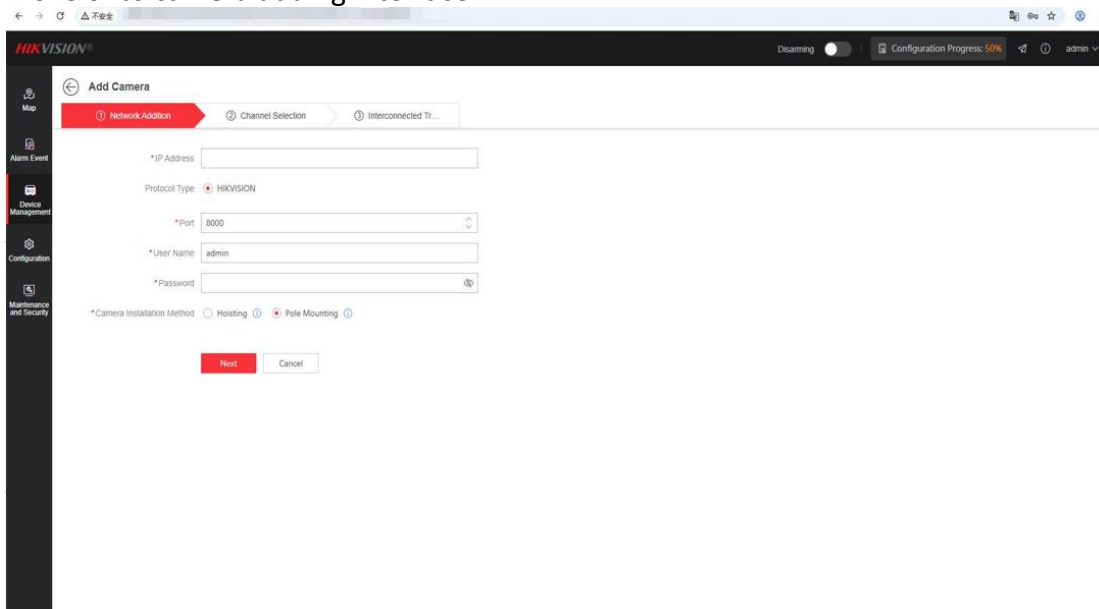


Figure 1-14 Adding Camera

3. After you finish adding camera (uncalibrated), the completion rate turns into 50%.

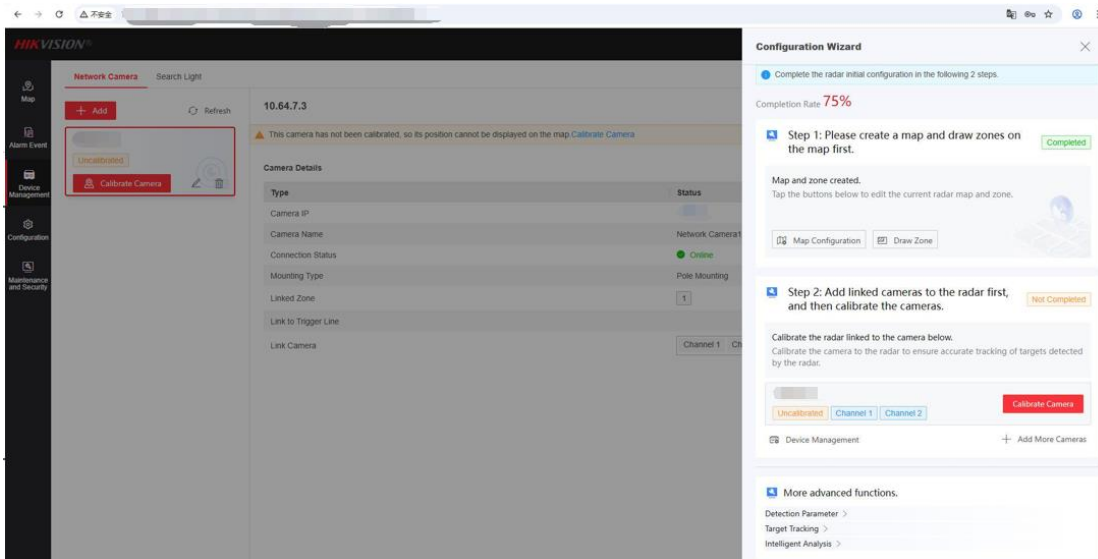


Figure 1-15 Completion Rate 50%

4. Move onto camera calibration process (adjust zero azimuth angle).

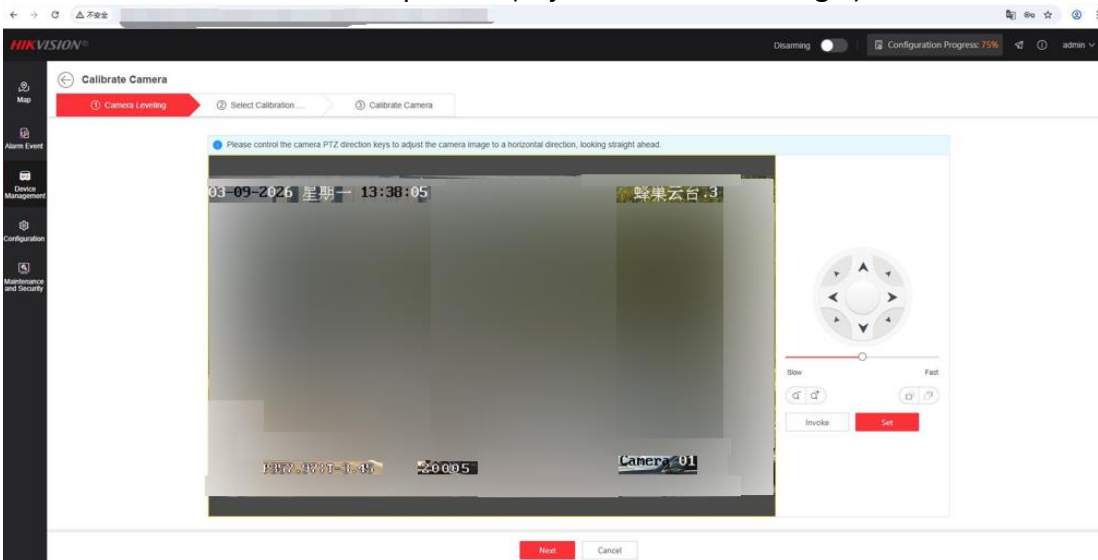


Figure 1-16 Camera Calibration

5. Begin camera calibration process (select calibration mode: same pole or different pole).

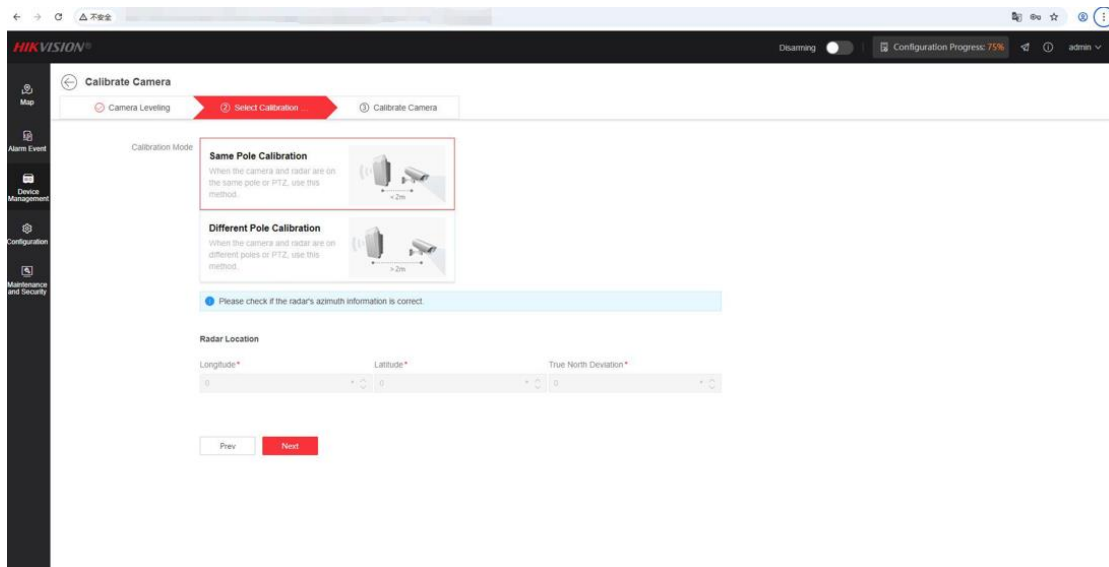


Figure 1-17 Calibration Mode Selection

6. Begin camera calibration process (add calibration points).

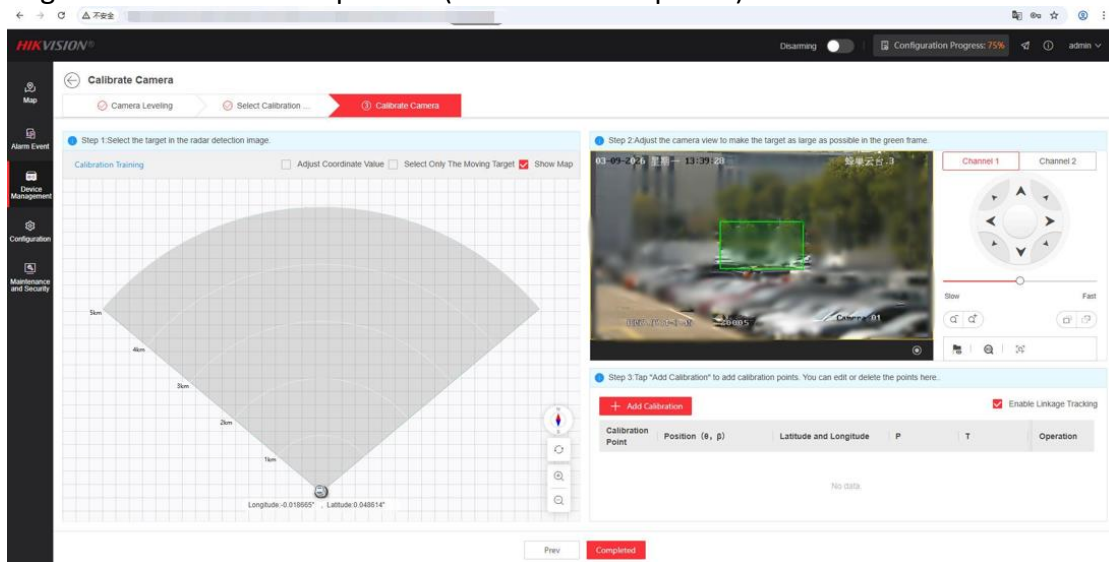


Figure 1-18 Add Calibration

7. Finally, after finishing camera calibration, the completion rate turns into 100%.

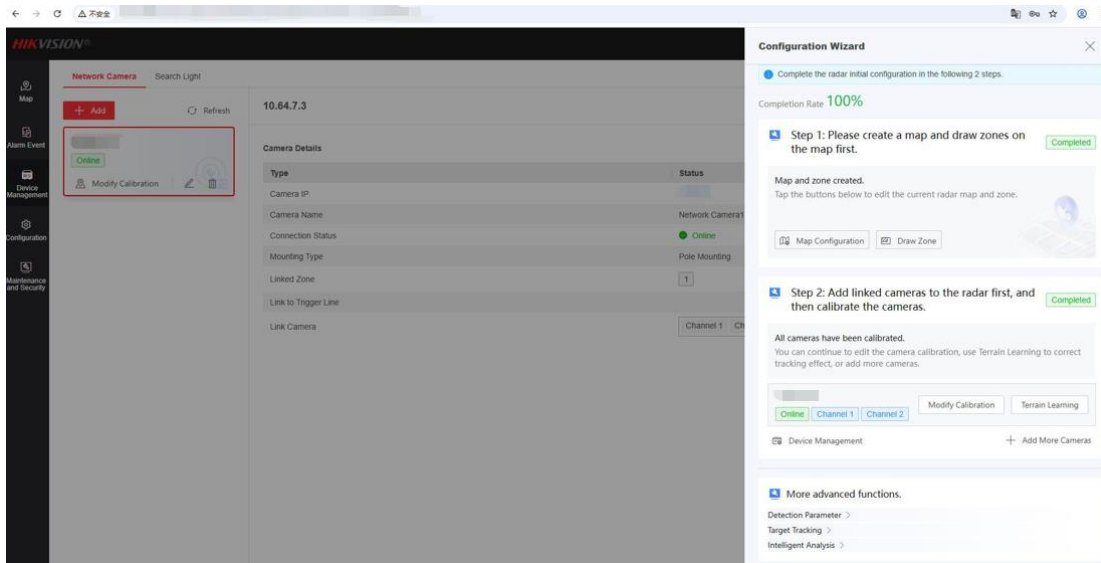


Figure 1-19 Completion Rate 100%

1.1 Activation

For the first-time access, you need to activate the device by setting an admin password. No operation is allowed before activation. The device supports multiple activation methods, such as activation via SADP software and web browser.

1.1.1 Default Information

The device default information is shown as below.

- Default IP address: 192.0.0.64
- Default user name: admin

1.1.2 Activate via SADP

SADP is a tool to detect, activate, and modify the IP address of the device over the LAN.

Before You Start

- Get the SADP software from the supplied disk or the official website (<http://www.hikvision.com/>), and install it according to the prompts.
- The device and the computer that runs the SADP tool should belong to the same network segment.

The following steps show how to activate one device and modify its IP address. For batch activation and IP address modification, refer to *User Manual of SADP* for details.

Steps

1. Run the SADP software and search the online devices.
2. Find and select your device in online device list.
3. Enter a new password (admin password) and confirm the password.



Caution

STRONG PASSWORD RECOMMENDED-We highly recommend you create a strong password of your own choosing (using a minimum of 8 characters, including upper case letters, lower case letters, numbers, and special characters) in order to increase the security of your product. And we recommend you reset your password regularly, especially in the high security system, resetting the password monthly or weekly can better protect your product.

4. Click **Activate** to start activation.

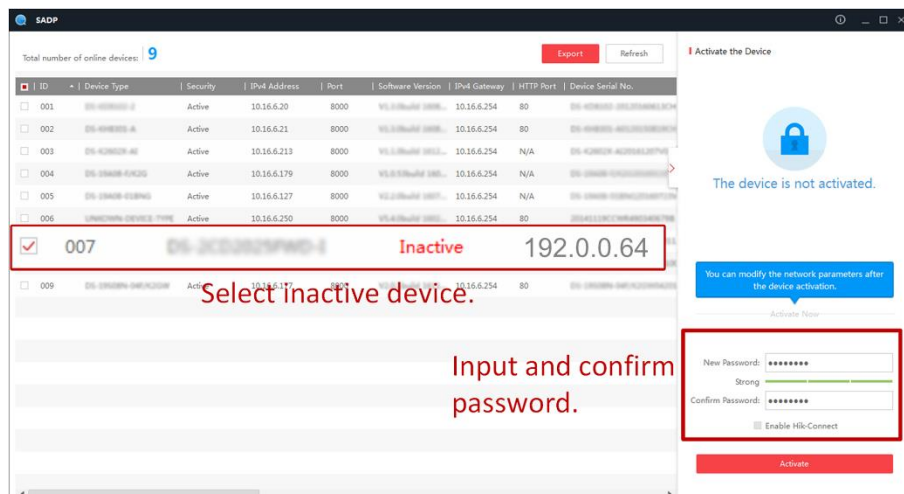


Figure 1-20 Activate via SADP

Status of the device becomes **Active** after successful activation.

5. Modify IP address of the device.
 - 1) Select the device.
 - 2) Change the device IP address to the same network segment as your computer by either modifying the IP address manually or checking **Enable DHCP** (Dynamic Host Configuration Protocol).
 - 3) Enter the admin password and click **Modify** to activate your IP address modification.



Note

The modified IP address of the radar device cannot be in the same network segment as the added camera to the radar.

1.1.3 Activate via Web Browser

Use web browser to activate the device.

Before You Start

Ensure the device and the computer are in the LAN with the same network segment.

Steps

1. Run the SADP software and search the online devices.
2. Find and select your device in online device list, and check its IP address.
3. Change the IP address of your computer to the same network segment as the device.
4. Open the web browser, and enter the IP address of the device found via SADP to enter the activation interface.
5. Create and confirm the admin password.

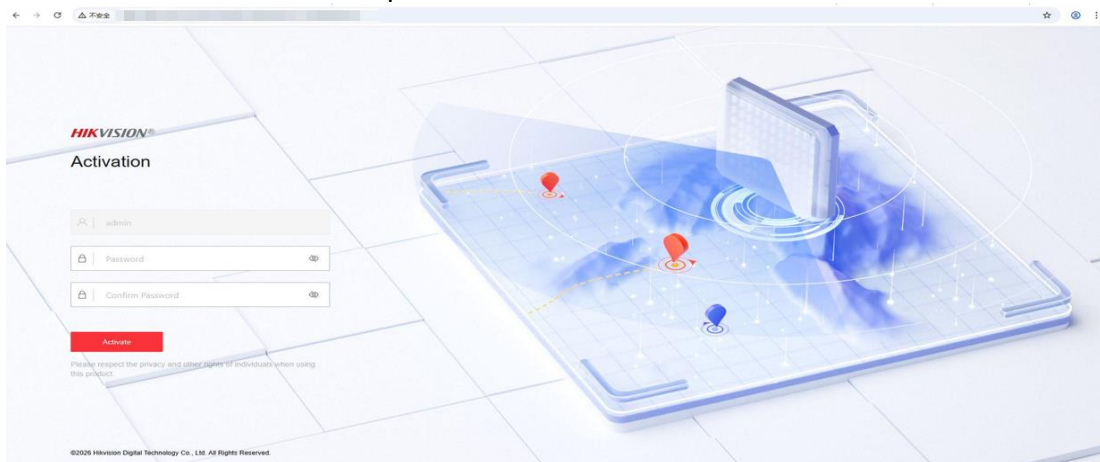


Figure 1-1 Activate via WEB

Caution

STRONG PASSWORD RECOMMENDED-We highly recommend you create a strong password of your own choosing (using a minimum of 8 characters, including upper case letters, lower case letters, numbers, and special characters) in order to increase the security of your product. And we recommend you reset your password regularly, especially in the high security system, resetting the password monthly or weekly can better protect your product.

6. Click **Activate** to complete activation.
7. Optional: Go to the network settings interface to modify IP address of the device.

1.2 Login

You can log in to the device via web browser for further operations such as live view and local

configuration.

Before You Start

Connect the device to the network directly, or via a switch or a router.

Steps

1. Open the web browser, and enter the IP address of the device to enter the login interface.
2. Enter **User Name** and **Password**.
3. Click **Login**.
4. Optional: Click **Log Out** on the upper right corner of the interface to log out of the device.

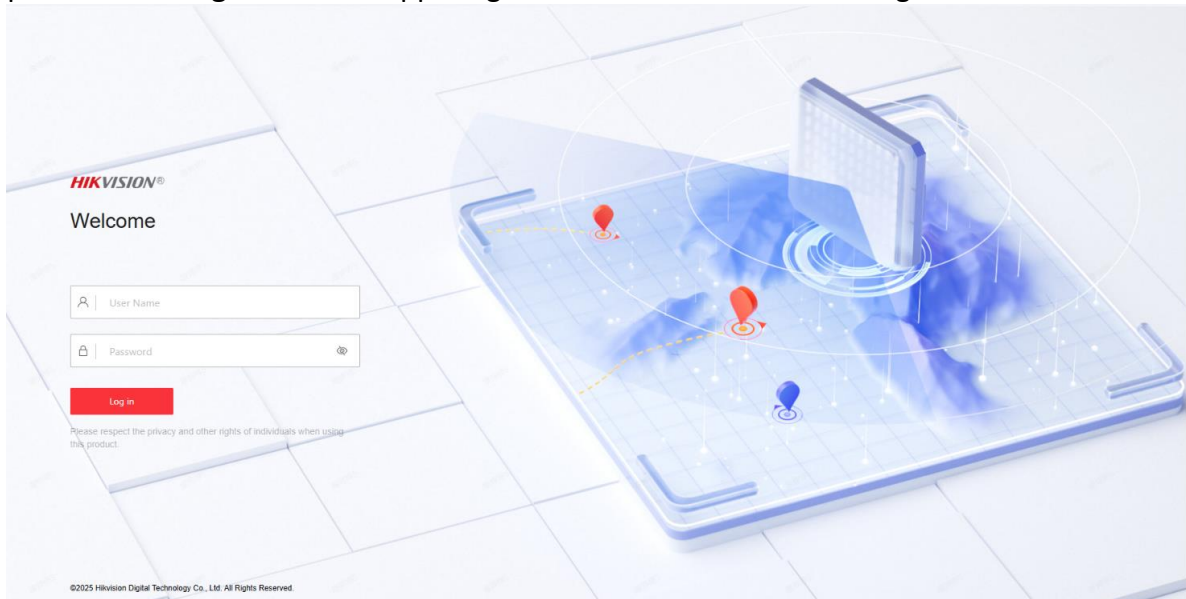


Figure 1-21 Login

5. Optional: On first login, the device requires time synchronization.

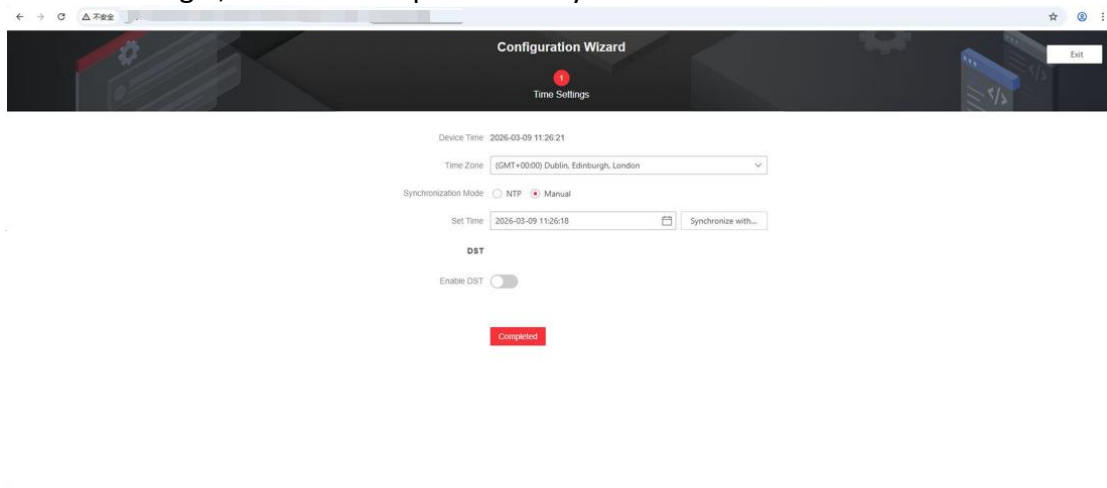


Figure 1-3 Log in

6. Upon completion of the first login, the main interface will display in no-map mode. And the completion rate in the right column shows 0%.

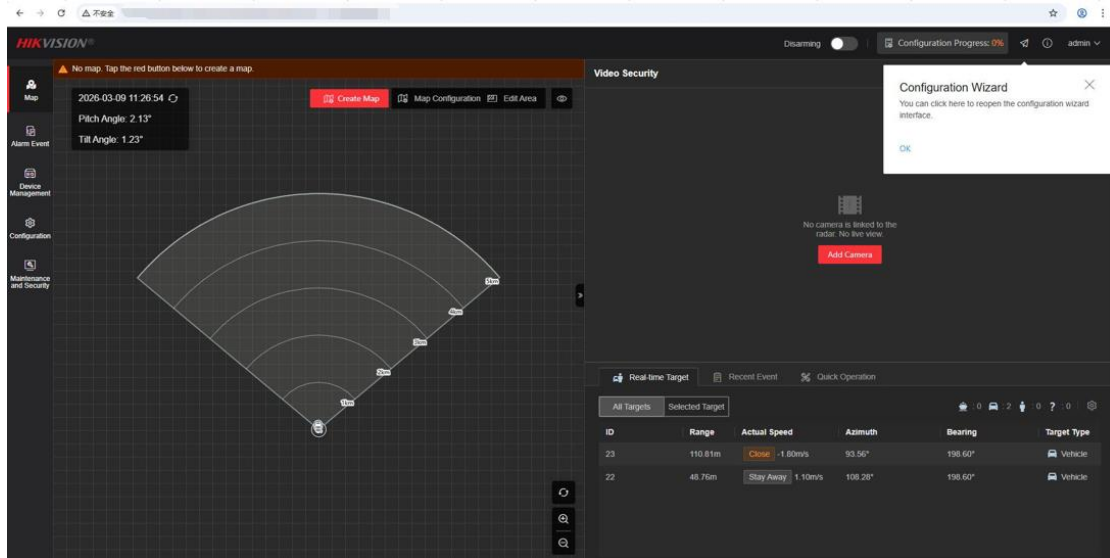


Figure 1-4 No-map Mode

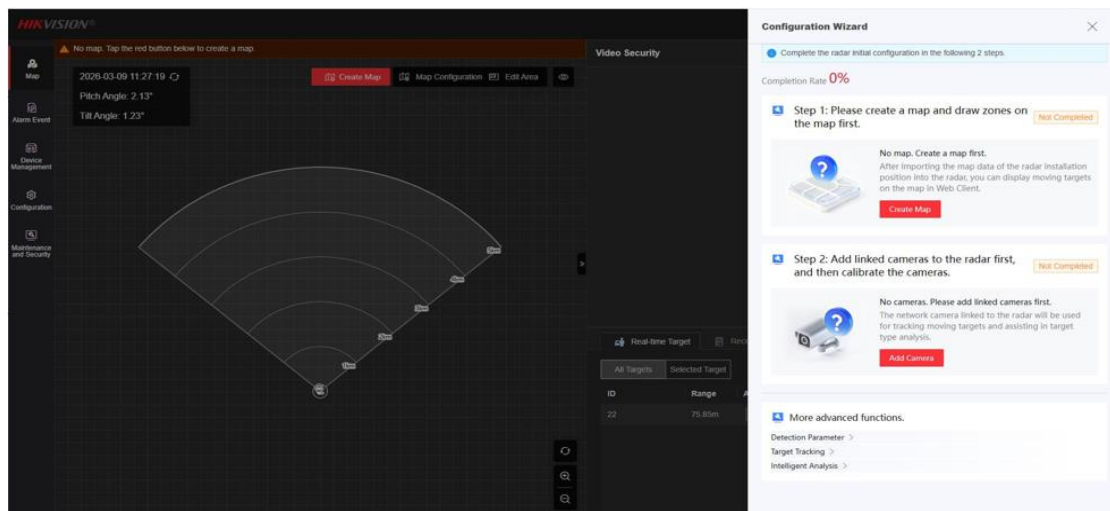


Figure 1-5 Completion Rate 0%

Chapter 2 Radar Interface Introduction

Once you have completed the necessary configuration, the radar display interface will appear as follows.

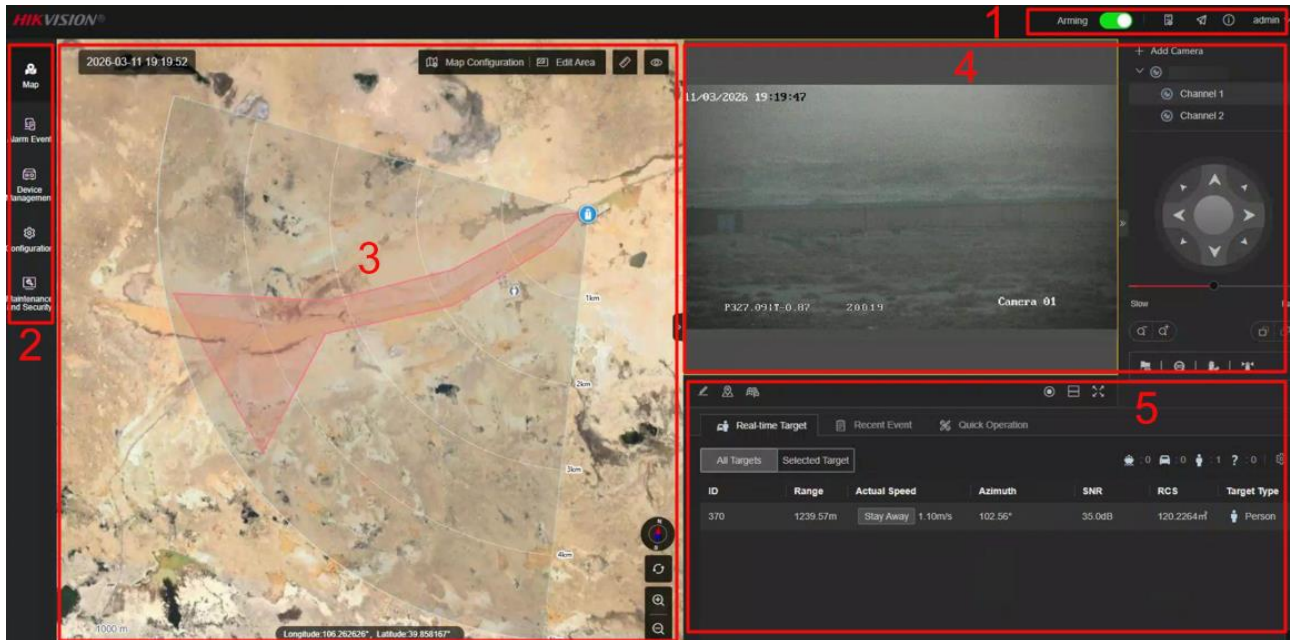


Figure 2-1 Radar Interface

Refer to the table for function introduction.

Table 2-1 Radar Interface Introduction

No.	Description
1	- Arming or disarming: Enable the function to arm the radar, in which the zones and trigger lines can take effect and trigger alarms.  Configuration progress: Provide configuration wizard to help you complete the radar initial configuration in two steps.  provide time settings and device configuration wizard. - Admin: Change password and log out the radar.
2	Menu area includes map, alarms, device management, configuration, maintenance and security.
3	Provide map configuration, regional editor, and other quick control tools, and you can view the location and detection area of the radar visually.
4	The live view window of the camera linked to the radar, and use provided quick control tools to control the camera.
5	Real-time target: It includes all targets and selected target information list. By clicking All Targets on the real-time target list, you can view all target information currently within

No.	Description
	the detection area. Clicking Selected Target will display a list of its historical information. - Recent Event: Alarm events list can show the targets that enters the detection zone or abnormal operation events. - Quick Operation: It includes advanced debugging and data collection, mainly used when the equipment has some problems.

Regarding configuration progress, you can follow its guidance to quickly configure initial radar settings, and it also provides shortcuts to modify calibration, learn terrain, add cameras, and more advanced functions.

Steps

1. Click **Configuration Progress** at the upper-right corner to enter this page.

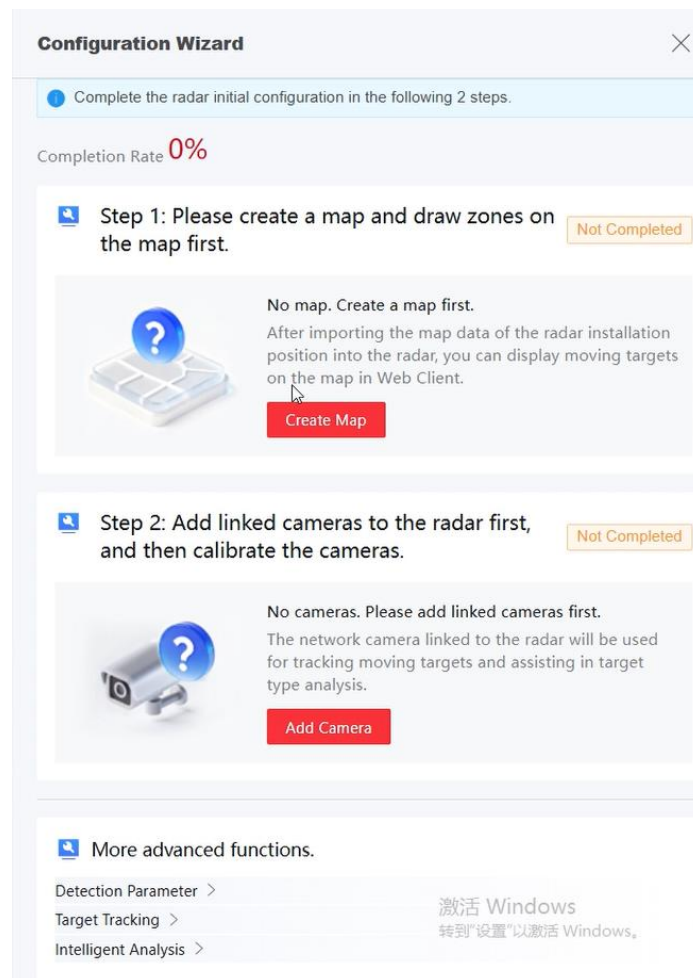


Figure 2-2 Configuration Progress Interface 0%

2. Follow the instructions written at this page. For step 1, you can click **Create Map** to finish further configuration. (Please visit Chapter 3.1 Create Radar Detection Map for more details.) For step 2, you can click Add Camera then finish further configuration. (Please visit Chapter 4.1 Link Camera to Radar for more details.)
3. When the two steps are completed, the page will look like Figure 2-3.

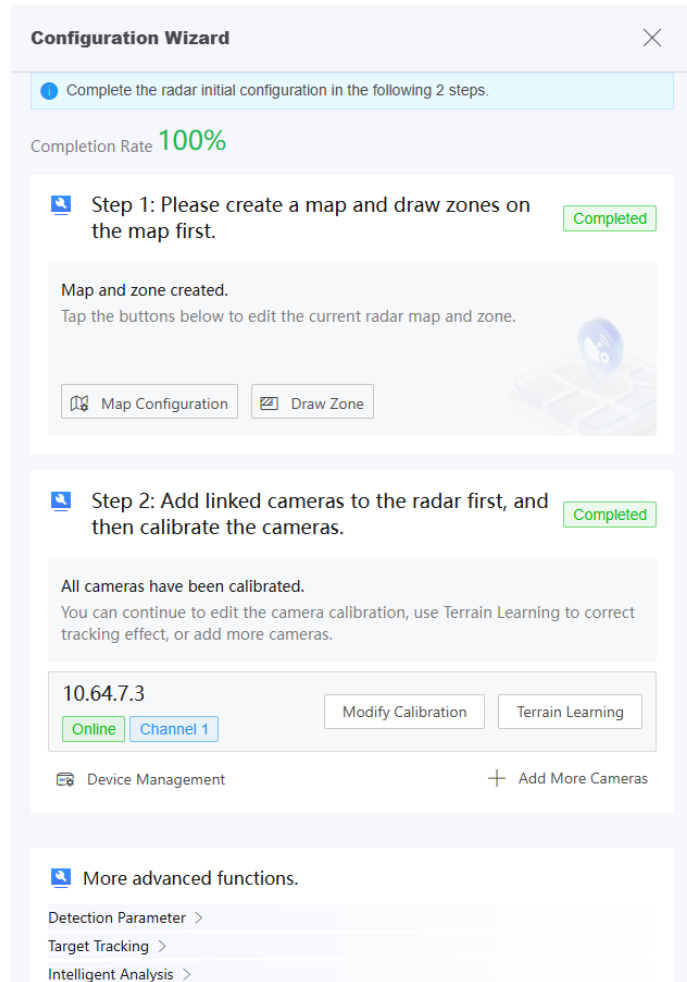


Figure 2-3 Configuration Progress Interface 100%

Chapter 3 Create Map

When first log in, the main interface will display in no-map mode. You can set radar detection area and zones on your map according to your actual needs.

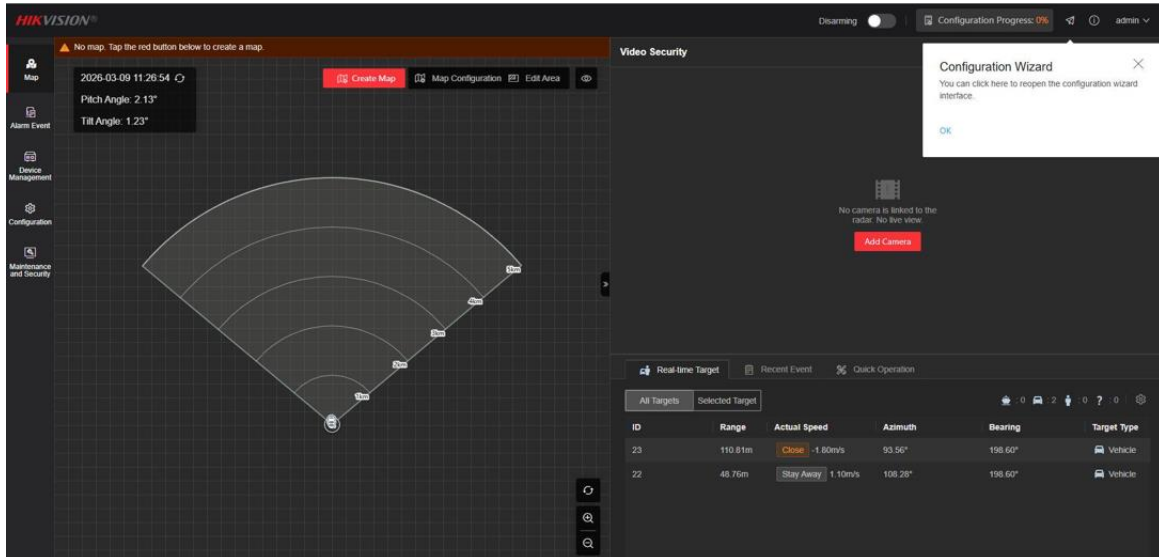


Figure 3-1 No-map Mode

3.1 Create Radar Detection Map

3.1.1 Import Map

Steps

1. Go to  **Creat Map or Configuration Wizard** → **Import Map**.

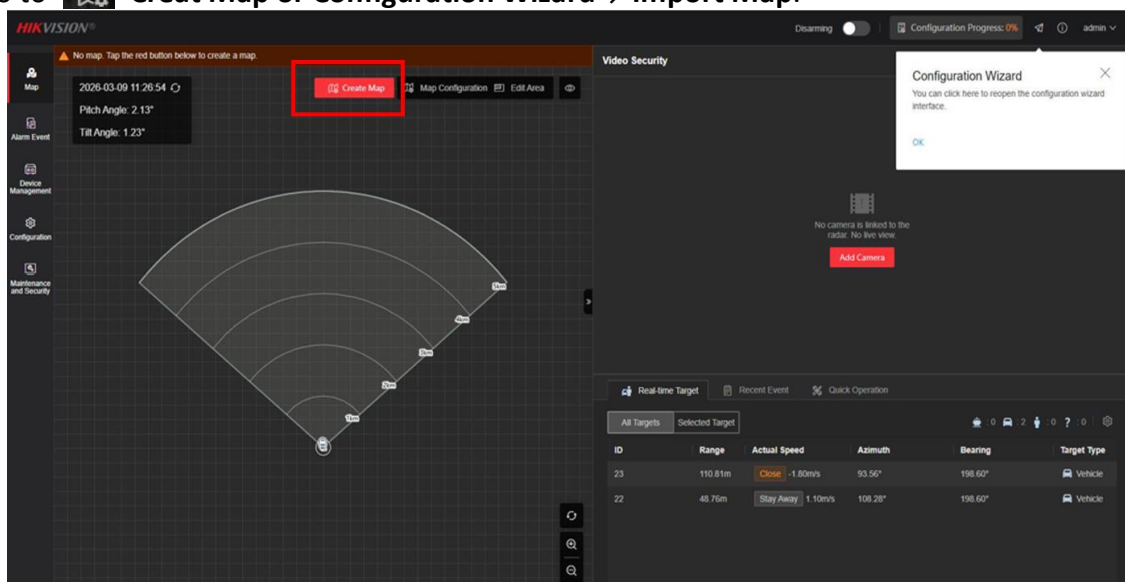


Figure 3-2 Import Map

2. Select the type of map and click **Confirm**.

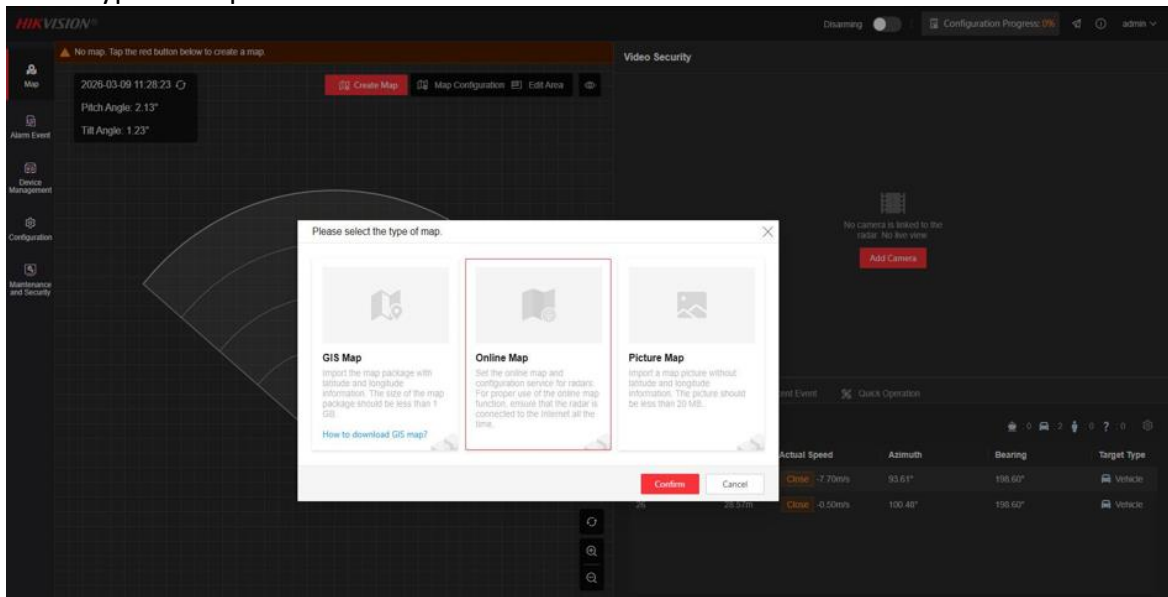


Figure 3-3 Select Map

Hikvision provides three different map importing methods, which can be selected according to on-site conditions in combination with the description in Table 3-1.

Table 3-1 GIS Map and Picture Map

Map Type	Description	How to Import
GIS Map	When GIS maps are available, it is recommended to import GIS maps. Import the map package with latitude and longitude information. The size of the map package should be less than 1 GB.	You can click How to download GIS map to get a manual of <i>How to Download Offline Map Data</i> to guide you how to get GIS map.
Online Map	For proper use of the online map function, ensure that the radar is connected to the Internet all the time.	1. Select Online Map then click Confirm. 2. Copy and paste the address and API Key of the map. 3. Click OK.
Picture Map	Picture maps can only be calibrated by using moving targets. They are recommended when GIS maps are unavailable or when there are no prominent feature objects in the scene location.	1. Select Picture Map then click Confirm. 2. Click  to import a map picture without latitude and longitude information from your computer. (The picture should be

		less than 20 MB.)
		3. Click OK .

4. Create map. Here we take importing online map as an example.
You need to enter the IP address and API key of the online map.

Figure 3-4 Import Online Map

Test if the online map is available.

Figure 3-5 Test Online Map

Click Save to complete online map configuration.

Note

If the map is saved successfully but is not displayed, it may due to the fact that the radar position may deviate too far from the map position. Please adjust the radar position.

5. Optional: If you need to re-import the map, go to **Map → Map Configuration → Import Map Again**.

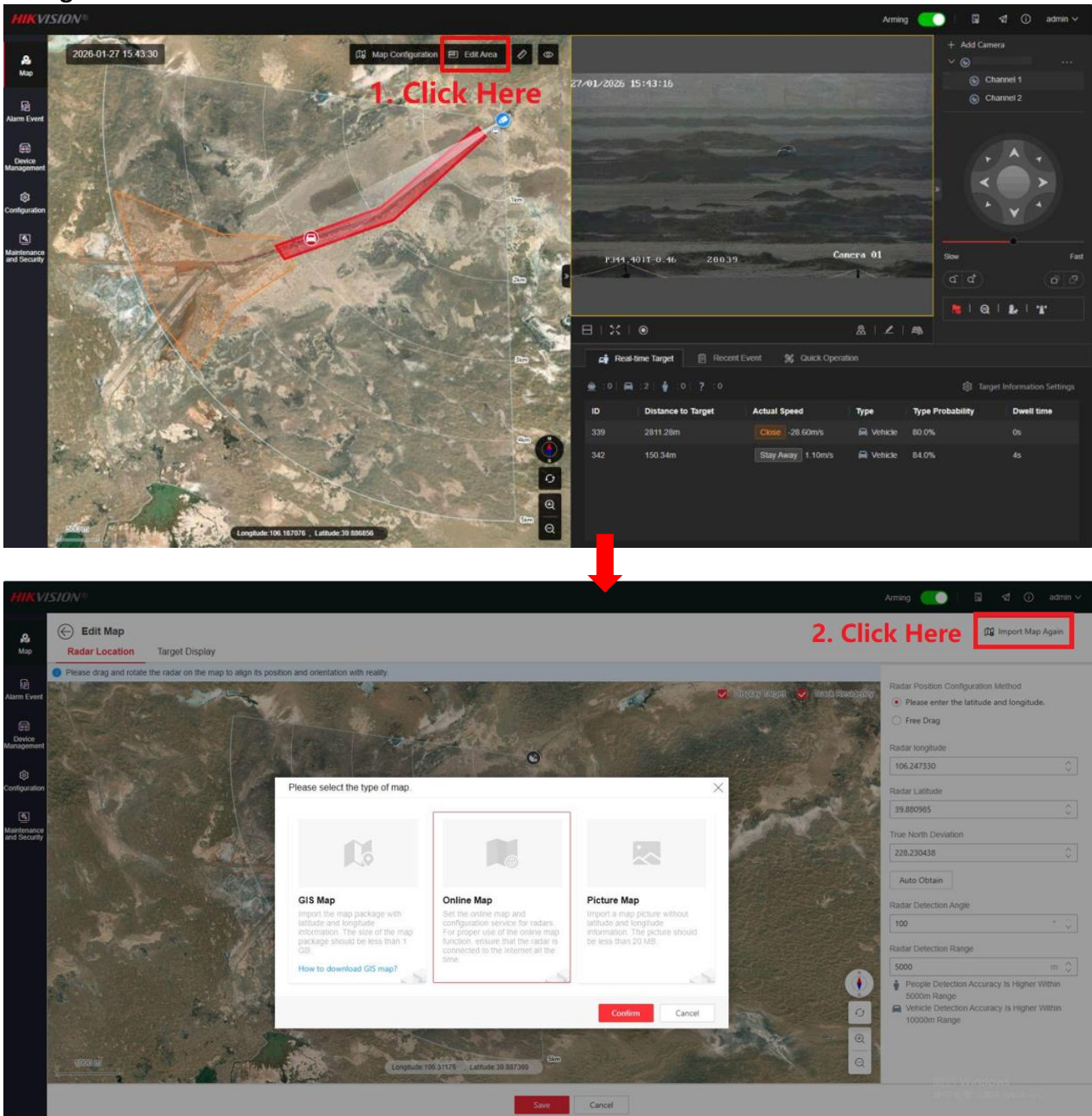


Figure 3-6 Import Map Again

3.1.2 Set Radar Location

The purpose of setting radar location is to place the radar at the corresponding point on the map and adjust its angle, orientation, and detection range as needed according to on-site requirements.

Steps

1. Go to **Map → Map Configuration → Radar Location**.

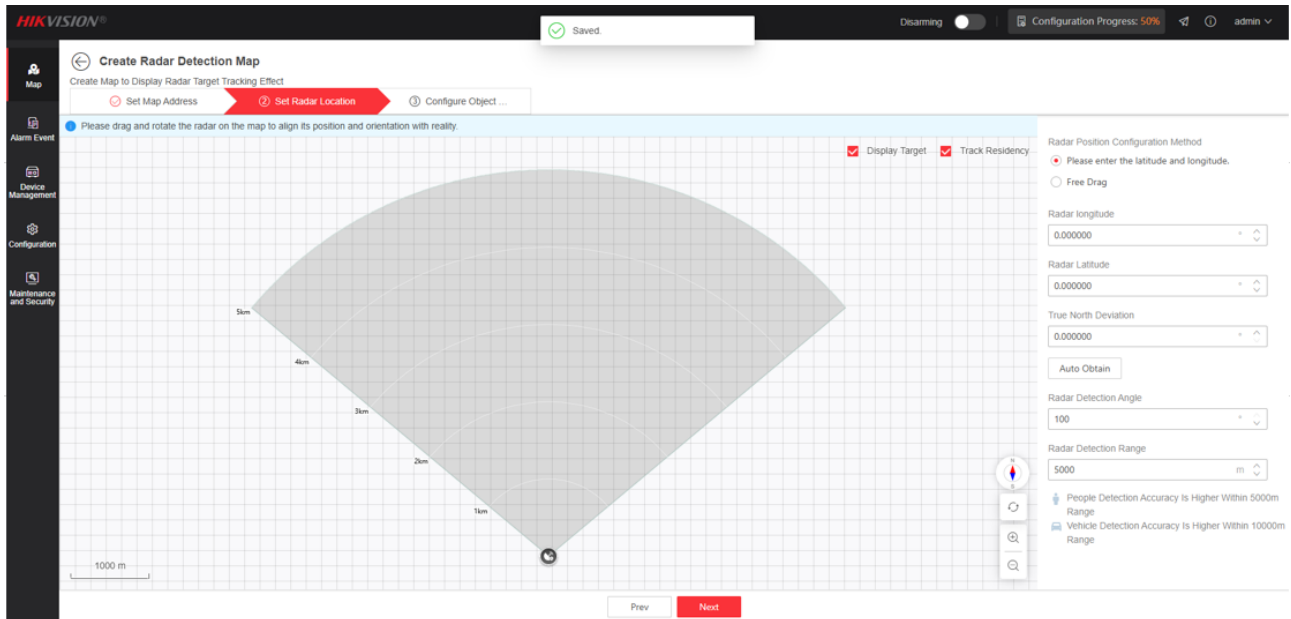


Figure 3-7 Set Radar Location

2. Select **Radar Position Configuration Method** according to actual demands. **Auto Obtain** is prioritized. If **Auto Obtain** is unavailable, radar longitude and latitude can be manually entered. If your need to enter the longitude and latitude manually:
 - 1) Enter latitude and longitude. Set **Radar Longitude**, **Radar Latitude**, **True North Deviation**, **Radar Detection Angle**, and **Radar Detection Range**.
 - 2) Free draw. You can click  to freely locate the radar and  to adjust its direction.

Note

Latitude and longitude affect the calibration accuracy, so you must ensure the correctness of your manual entries.

3. Configure the detection angle and range of radar according to operational requirements.

Note

The configured angle and distance must not exceed the radar's maximum values.

4. Click **Save**. The radar detection zone (white sector area) is shown on the map based on the configured parameters.

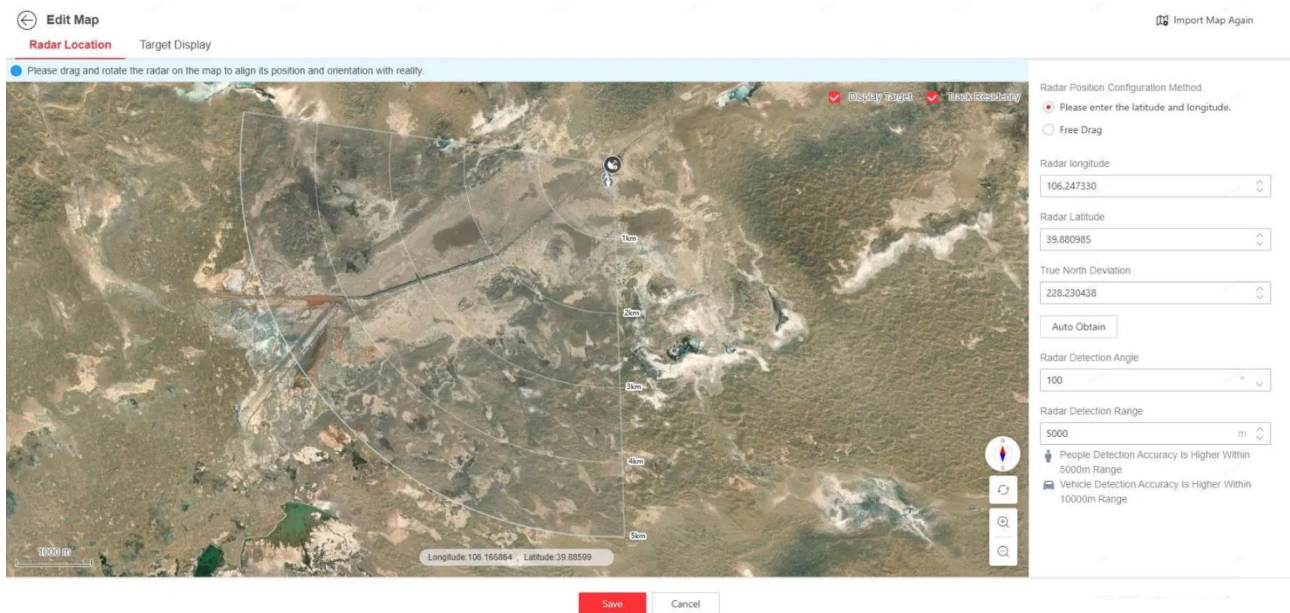


Figure 3-8 Save Radar Location

3.2 Set Radar Alarm Area

After a target enters the radar detection zone, an alarm log will be generated and uploaded. If no detection zone is configured, the radar can still detect targets but will not generate alarm.

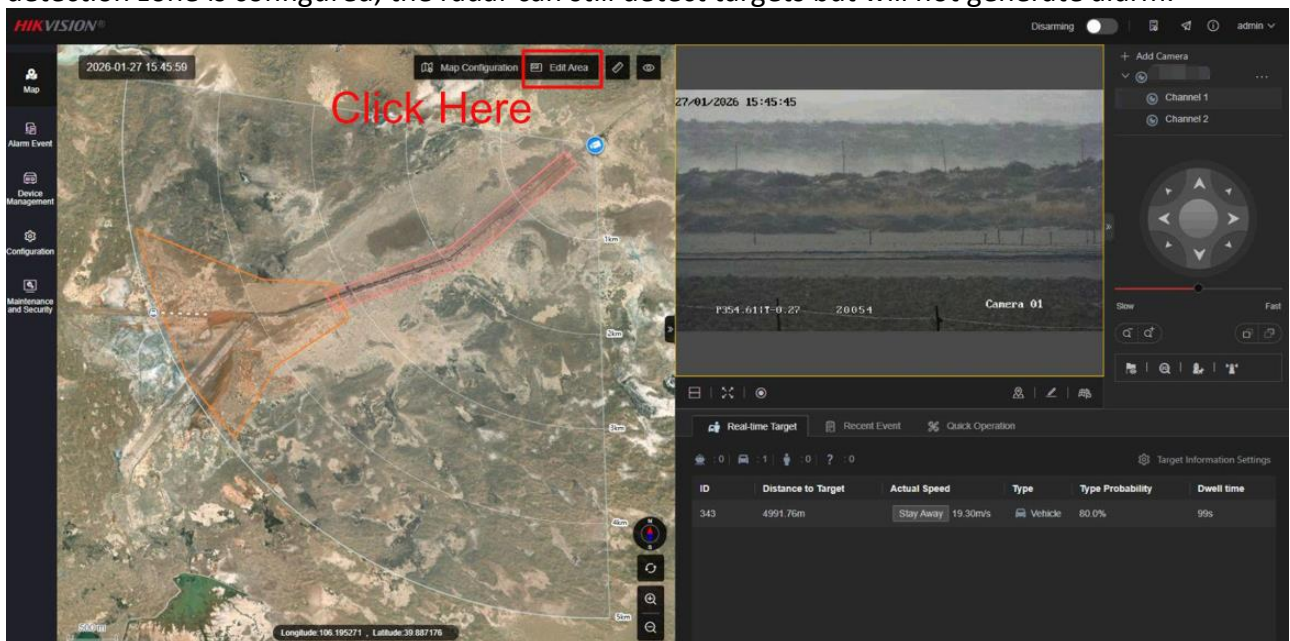


Figure 3-9 Edit Area Overview

3.2.1 Add Zone

Add detection zones of the radar.

Before You Start

Disarm the radar. If not, the zone cannot be added and change.

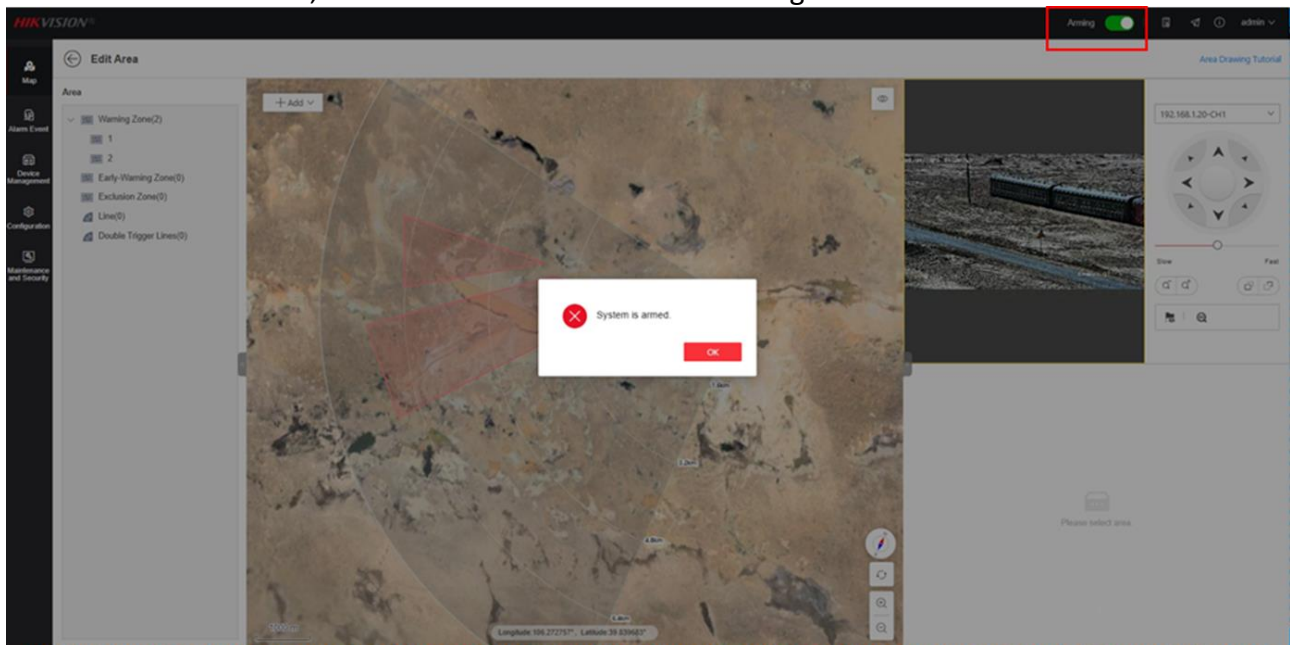


Figure 3-10 If Not Disarmed

Optional: Click **Area Drawing Tutorial** to view tutorial to help you add zone.

Steps

1. Click **Edit Area** in radar interface.

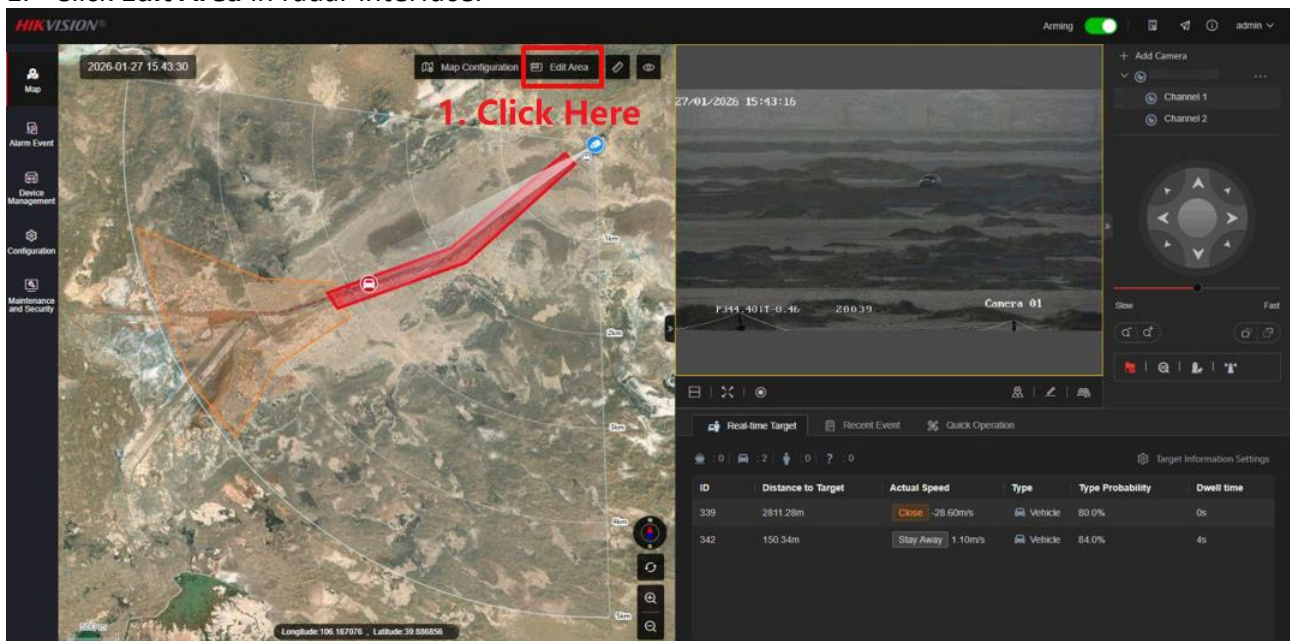


Figure 3-11 Edit Area Detailed Page

2. Click **+ Add** to select the area type to be added.

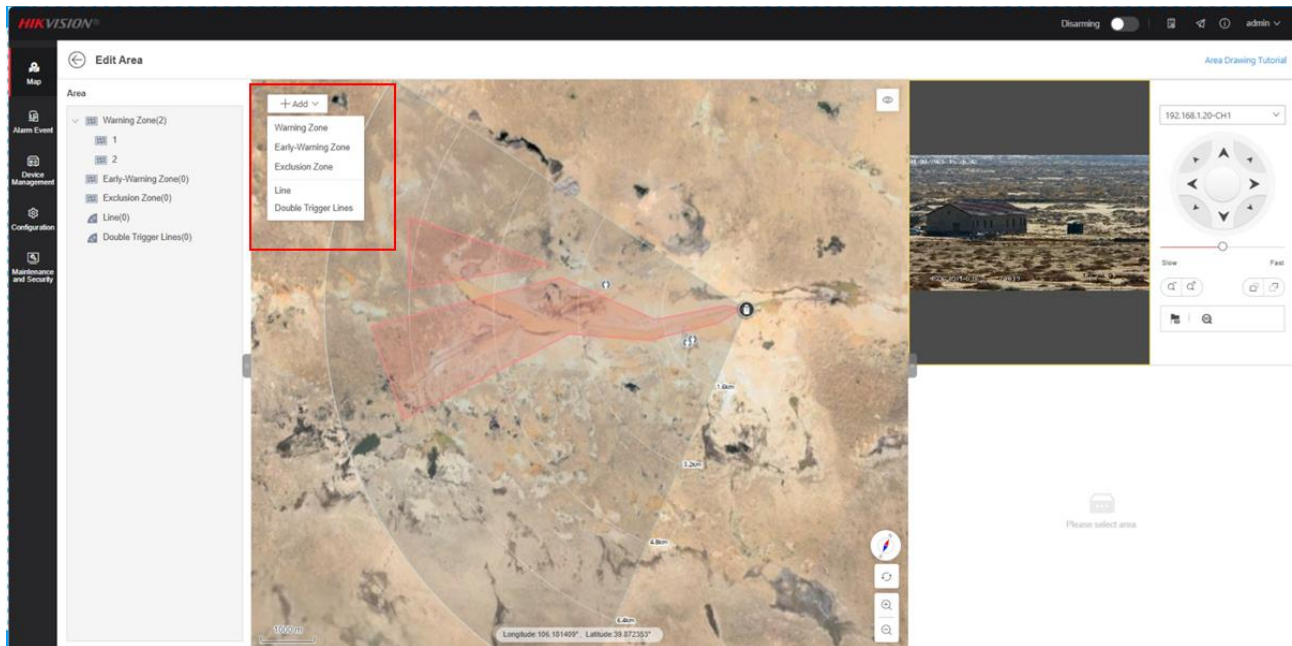


Figure 3-12 Add Zone

Warning Zone	When a target enters the warning zone, an alarm will be triggered and uploaded to the alarm platform. After drawing the zone, you can disable intrusion alarm function, and the radar will not send alarm in this area.
Pre-Warning Zone	The early warning zone will identify targets that have potential risks in advance and trigger alarm, but will not store alarm track.
Disabled Zone	After drawing a disabled zone, if a target enters the shielded area, neither the target nor its trajectory is displayed.

3. Draw the detection zone: After selecting the type of the drawing area, the cursor will change to a cross, indicating that you can draw the area on the map. Left-click on the map to start drawing. Draw the area by connecting multiple points in a polygonal pattern. Right-click on the map to finish the drawing. A closed shape will be formed on the map.

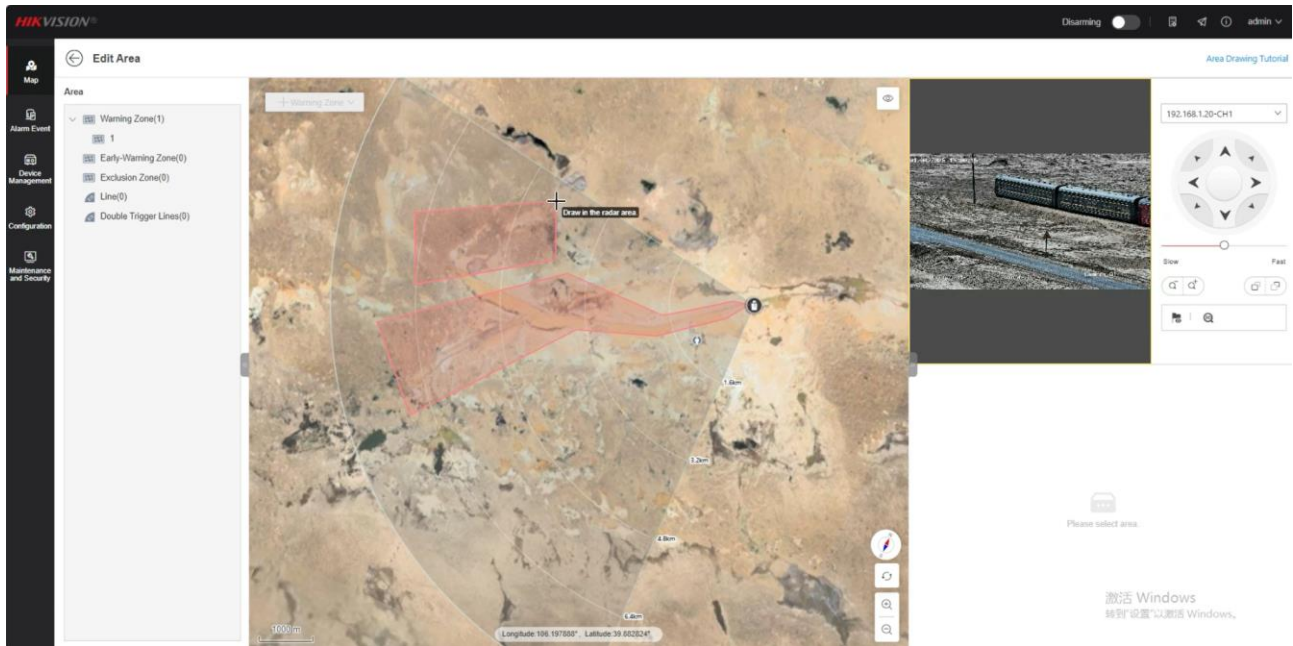


Figure 3-13 Draw the protection zone

Note

Areas can only be drawn within the radar detection zone (the white sector). Areas outside the detection zone cannot be designated zones.

4. Set area name. For the alarm area, it is also necessary to determine whether to enable **Intrusion Alarm Only**. Once enabled, the system will only alarm and track targets that enter the area from outside, while targets moving solely within the alarm area will not trigger an alarm or be tracked.

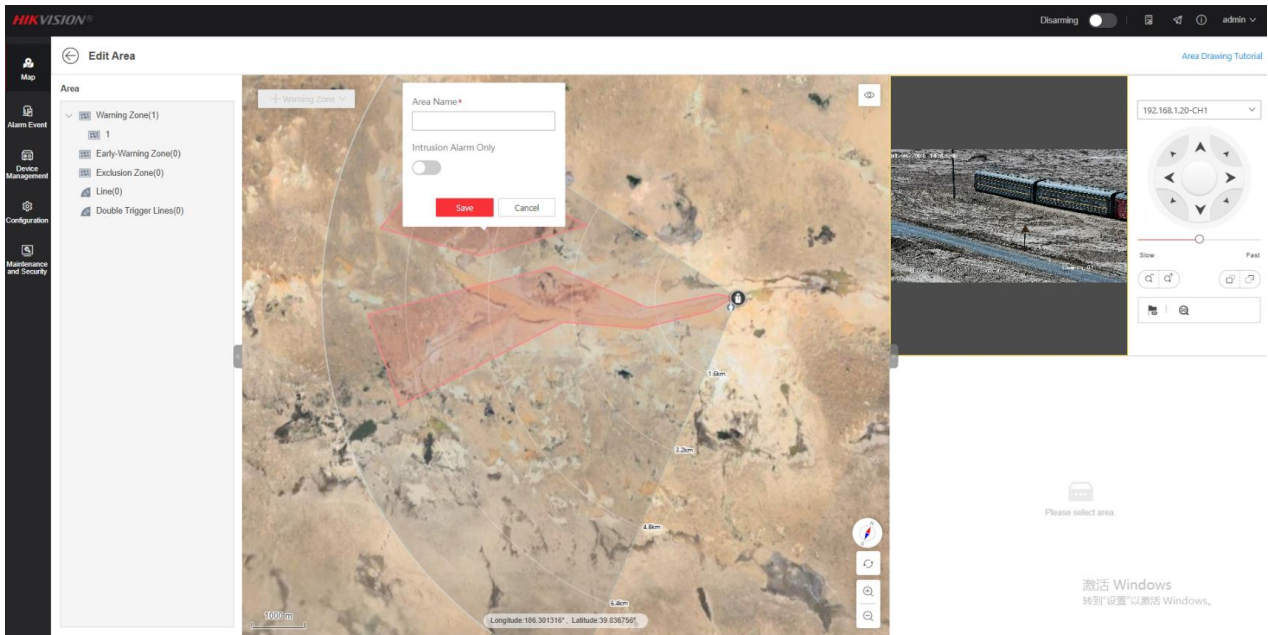


Figure 3-14 Set Warning Zone

6. Optional: Change the zone parameters. For the already established warning zones, you can left-click to select the warning zone, modify the zone information, delete the zone, and drag to change the position and shape of the zone.

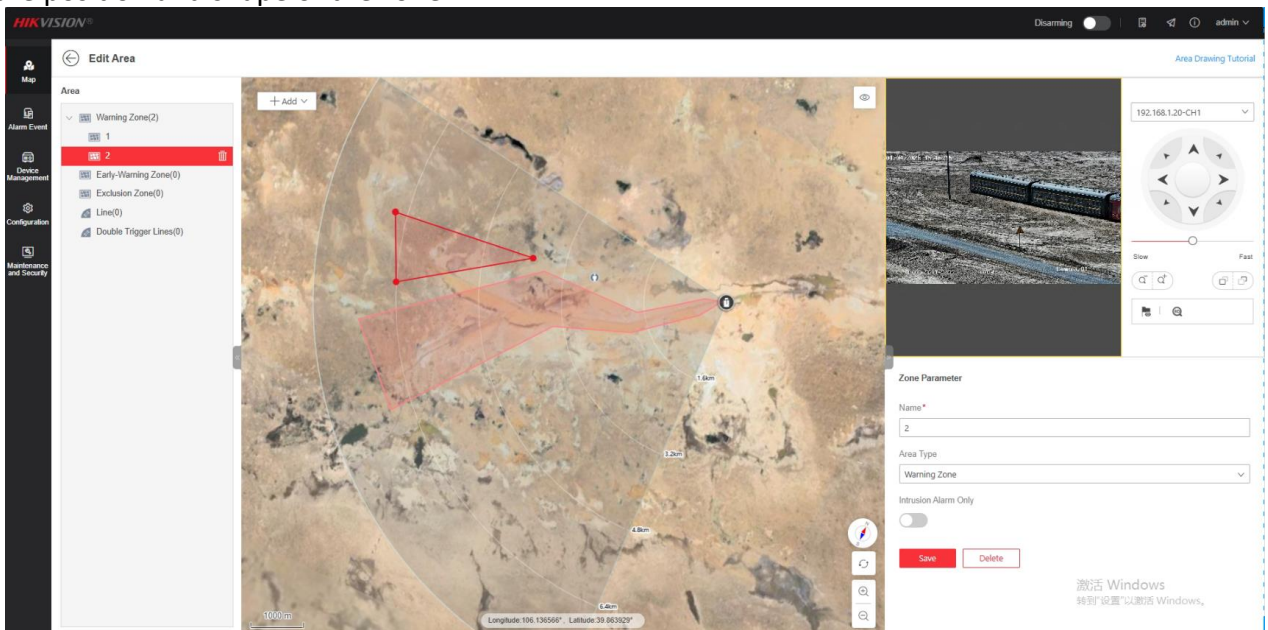


Figure 3-15 Change the zone parameters

3.2.2 Add Trigger Line

Add trigger lines for the radar zones and set the directions of trigger lines.

Before You Start

Disarm the radar. If not, the zone cannot be added. (For more details, see 3.2.1)

Steps

1. Click **Edit Area** in radar interface.

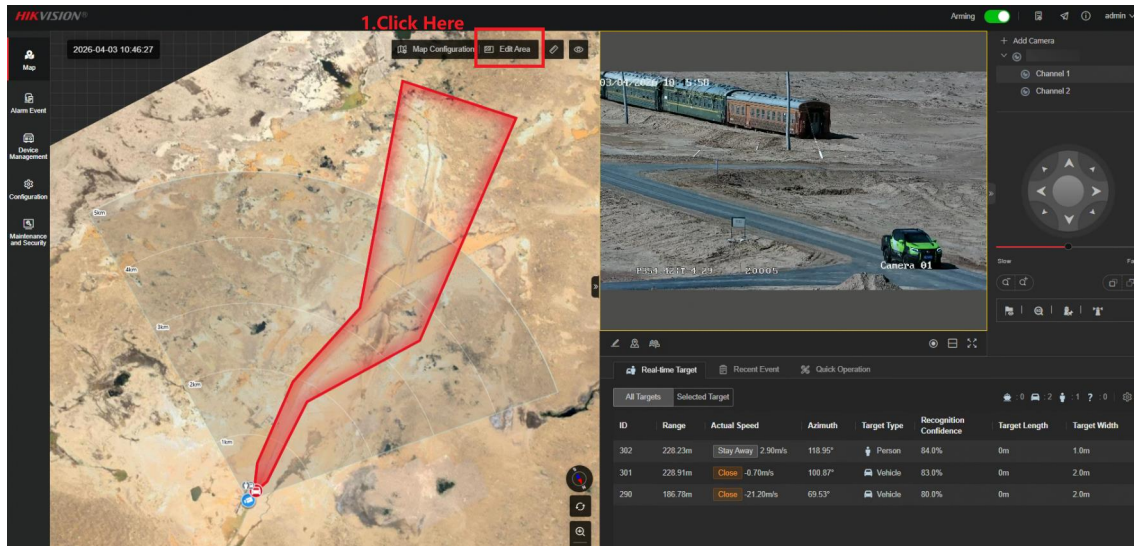


Figure 3-16 Edit Area

2. Click **+ Add** to select the line or double trigger lines.

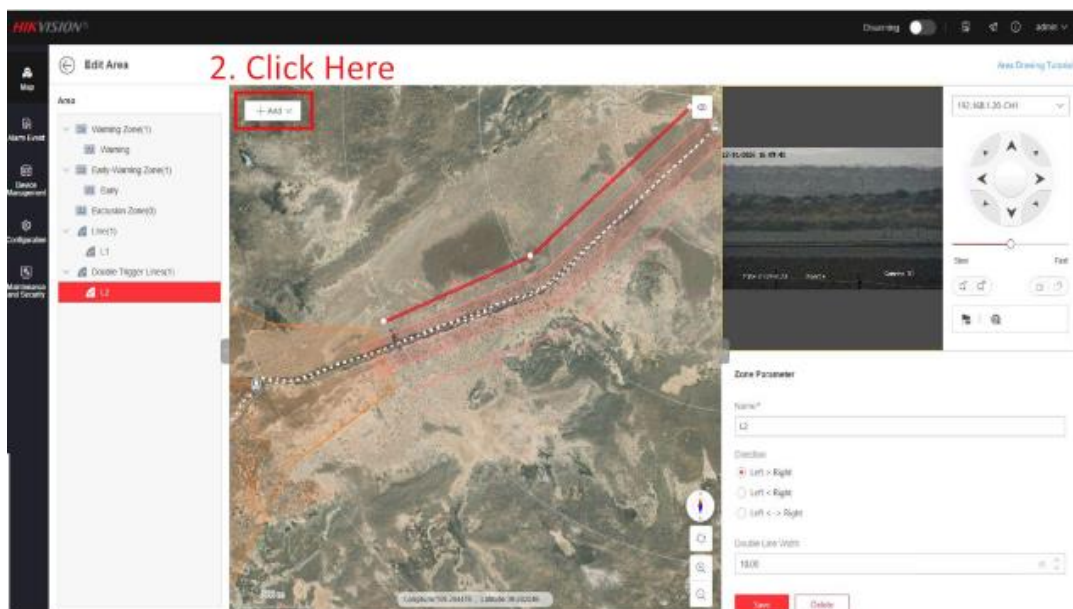


Figure 3-17 Add Trigger Line

Single Line

To draw a single trigger line.

Double Lines

To draw two trigger lines simultaneously.

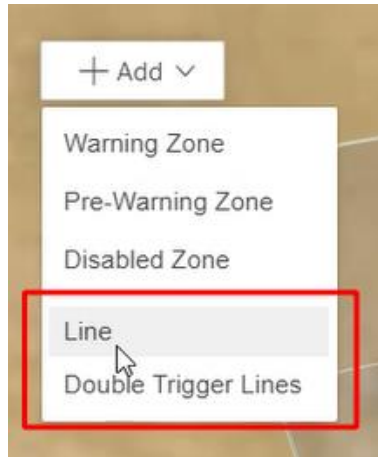


Figure 3-18 Add Trigger Line

3. Draw the trigger line in the radar area. The method of drawing line is similar to that of drawing area.

Note

When you are drawing double trigger lines, you can draw two lines simultaneously after setting **Double Line Width**.

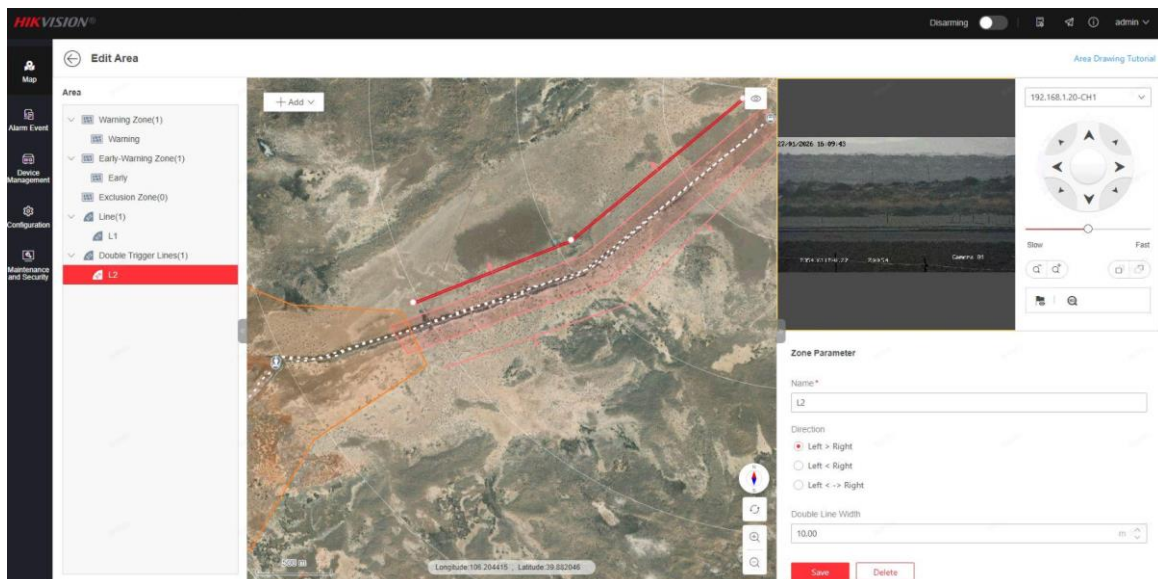


Figure 3-19 Draw Double Trigger Lines

4. Edit parameters after selecting added lines, and click **Save**.

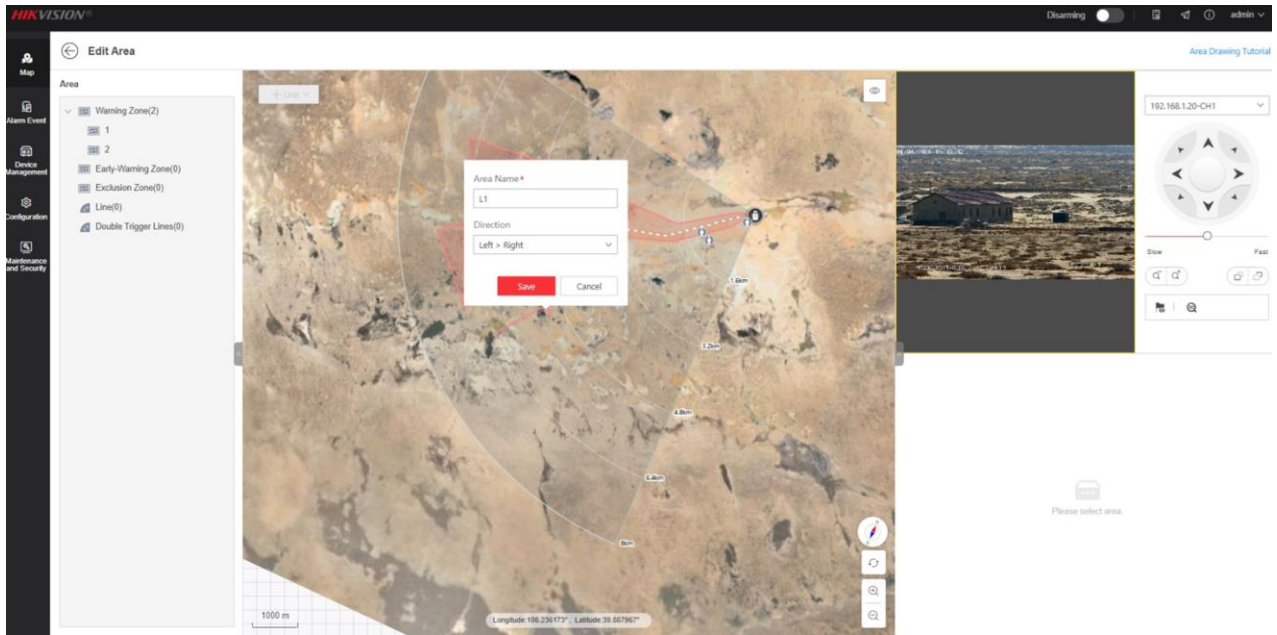


Figure 3-20 Single Line Parameter

3.3 Set Map Display

Map Button List

Button	Description
	Zoom in/ out on the map.
	Refresh the map.
	Compass: Hold and drag this button to rotate the map angle.
	Map Configuration
	Edit Area
	Measure: Left click to set the start point and finish point. Right click to finish drawing. Then you can see the measured distance on map.
	Display Parameters: Check the parameters you want to display on your map. Parameters including Display Target, Track Residency, Display Camera and Show Map are selected by default.

3.3.1 Configure Information Displayed on Map



Click , then you can check the parameters you want to display on your map in the drop-down list.

Parameters including Display Target, Track Residency, Display Camera and Show Map are selected by default.

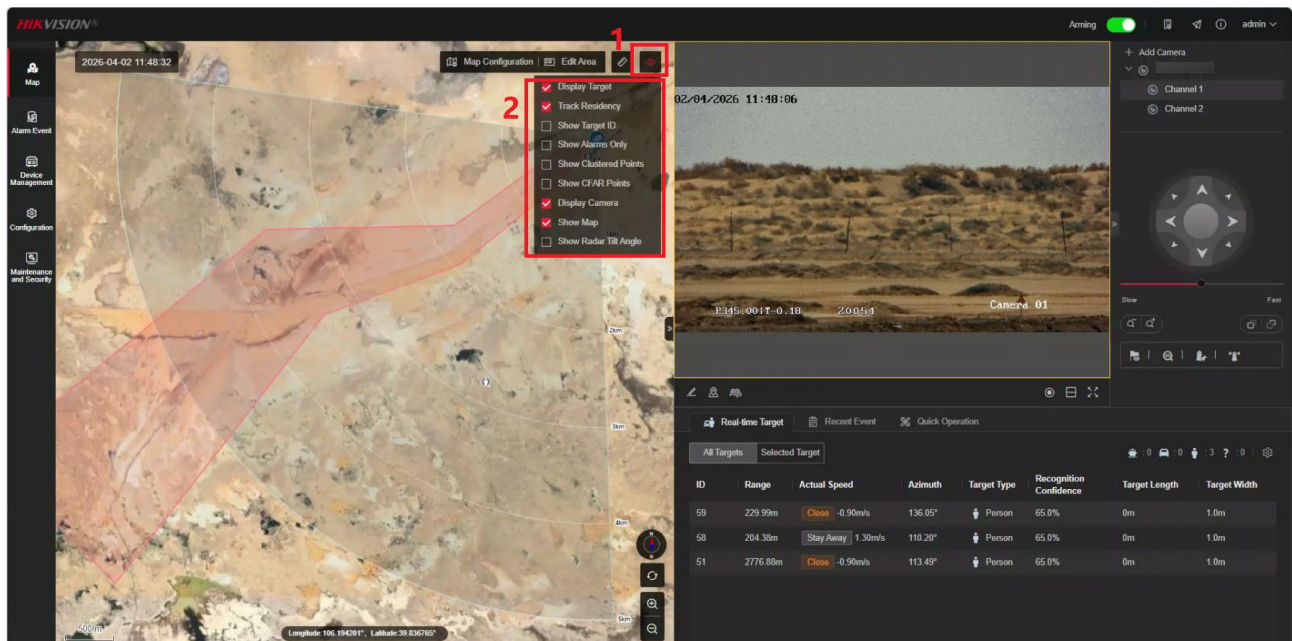
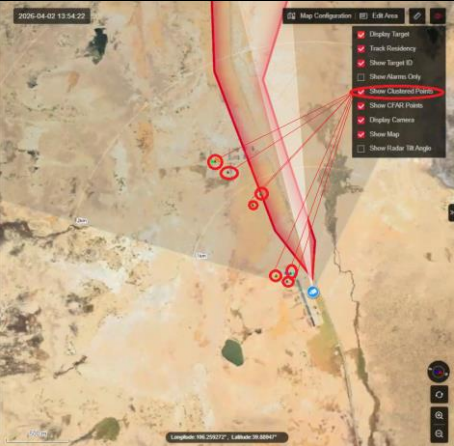
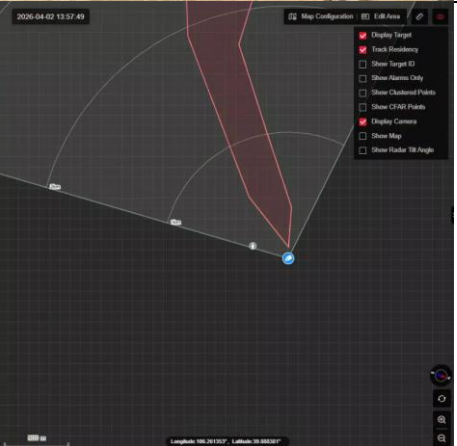


Figure 3-21 Select Parameters

Parameter Name	Function	Example Image
Display Target	Selected by default. You can see an icon of the target on the overview page once the target entered the detection area.	

Track Residency	Selected by default. You can see a track of the target on the overview page once the target entered the detection area.	
Show Target ID	If you select this parameter, you can see the ID of the target on the overview page once the target entered the detection area.	
Show Alarms Only	If you select this parameter, only the targets that triggered alarms will be displayed on the radar interface.	
Show Clustered Points	If you select this parameter, the system will automatically aggregate adjacent targets based on preset distances or algorithms, and display the clustering results as a single icon or area on the interface.	

Show CFAR Points	If you select this parameter, map interface will directly displays all preliminary detection points processed by the CFAR algorithm, including real targets, noise, and clutter.	
Display Camera	Selected by default. The location where the camera is installed will have a corresponding icon on the map.	
Show Map	Selected by default. If you choose not to display this parameter, you won't be able to see the map background.(see example picture)	

Show Radar Tilt Angle	If you select this parameter, you can see the pitch angle and tilt angle of the radar at the upper-left corner of the map.	
-----------------------	--	--

3.3.2 Configure Target Information Displayed

Click , then you can check the target information you want to show, then click “Save”.

Parameters including ID, Range, Actual Speed, Bearing, Target Type, Azimuth are selected by default. Except ID, you can select maximum 7 types of target information to display.

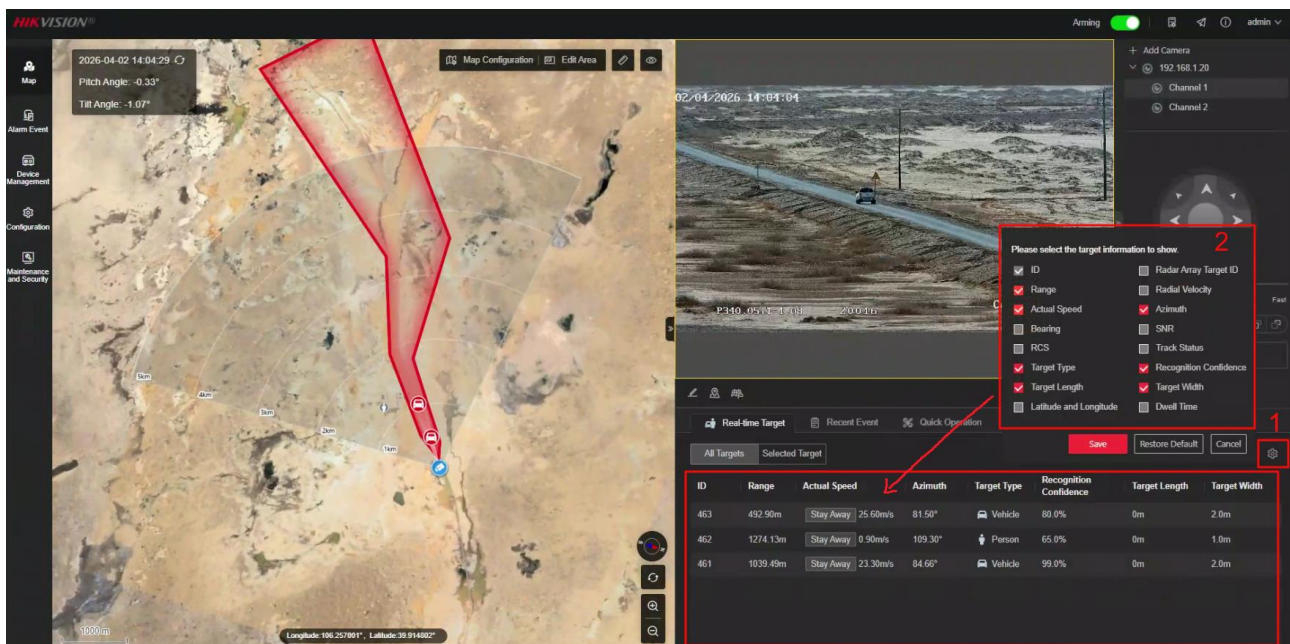


Figure 3-22 Select Target Information to Show

Parameter Name	Function
ID	Shown by default. Target ID.
Range	Selected by default, indicates the straight-line distance between the target and the radar.
Actual Speed	Selected by default. Actual speed is the true

	speed of the target relative to the ground (taking into account the direction of motion).
Bearing	Selected by default, indicates the horizontal angle of the target relative to the radar's north direction.
RCS	Represents the target's ability to reflect radar waves, used to estimate the target's size and material.
Target Type	Selected by default, helps to classify targets (such as vehicles, ship, person, etc.) based on radar echo characteristics.
Target Length	Estimates the physical length of the target through radar echo analysis.
Latitude and Longitude	Provides the geographic coordinates of the target.
Radar Array Target ID	Identifies targets tracked by specific radar arrays in multi-radar systems.
Radial Velocity	The component of the target's velocity along the direction of the radar beam, with positive/negative values indicating movement toward or away from the radar.
Azimuth	Selected by default, indicates the target's horizontal angle relative to the radar.
SNR	Measures the ratio of radar echo signal strength to noise; higher values indicate more reliable detection.
Track Status	Indicates the current tracking status of the target (e.g., confirm target, when target disappears, etc.).
Recognition Confidence	Represents the reliability of the radar's target type identification, expressed as a percentage.
Target Width	Estimates the physical width of the target through radar echo analysis.
Dwell Time	The duration the radar beam continuously illuminates the target.

3.3.3 Configure Target Track Displayed

Go to  Map Configuration → Target Display.

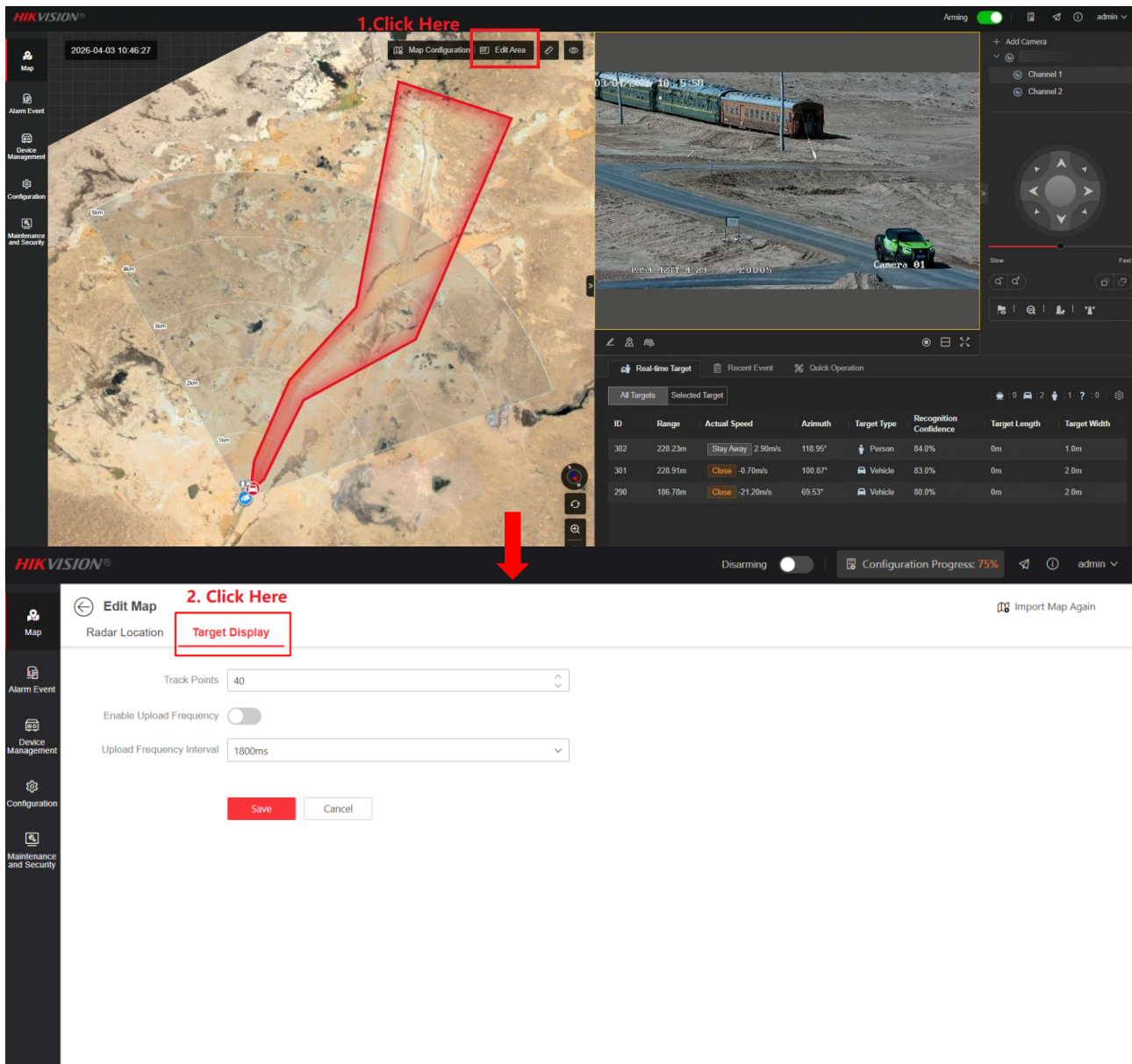


Figure 3-23 Select Target Information to Show

You can set track points at this page(Range 1~65535). Tracking points could affect the length and coherence of tracks on the map.

Chapter 4 Device Management

Camera and search light can be linked to the radar device. Up to 4 camera channels (2 cameras if they are dual-channel) can be added.

The radar can detect targets normally without being connected to other devices such as cameras. Once connected, it enables additional functions such as visual tracking of targets.

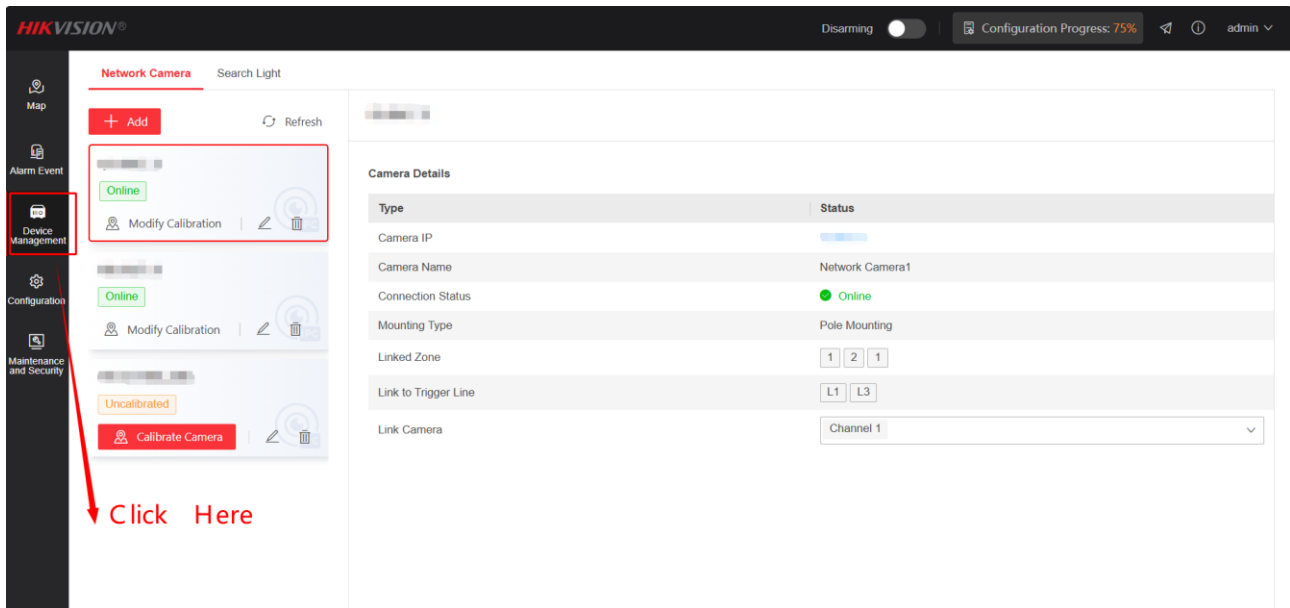


Figure 4-1 Device Management Overview

Note

Search light is only supported in certain models of the radar device.

4.1 Link Camera to Radar

Link the camera to radar for automatic tracking.

After linking a camera and completing calibration, when the target enters the added zones in the radar detection area, an alarm is triggered. The radar sends position information to the camera, and the camera adjusts the PTZ for target tracking.

Note

It's the radar that reports the incident, not the camera.

4.1.1 Link Camera

Before You Start

Disarm the radar before linking a camera.

Steps

1. Go to **Device Management** → **Network Camera**.
2. Click **Add** in the radar interface to add camera.

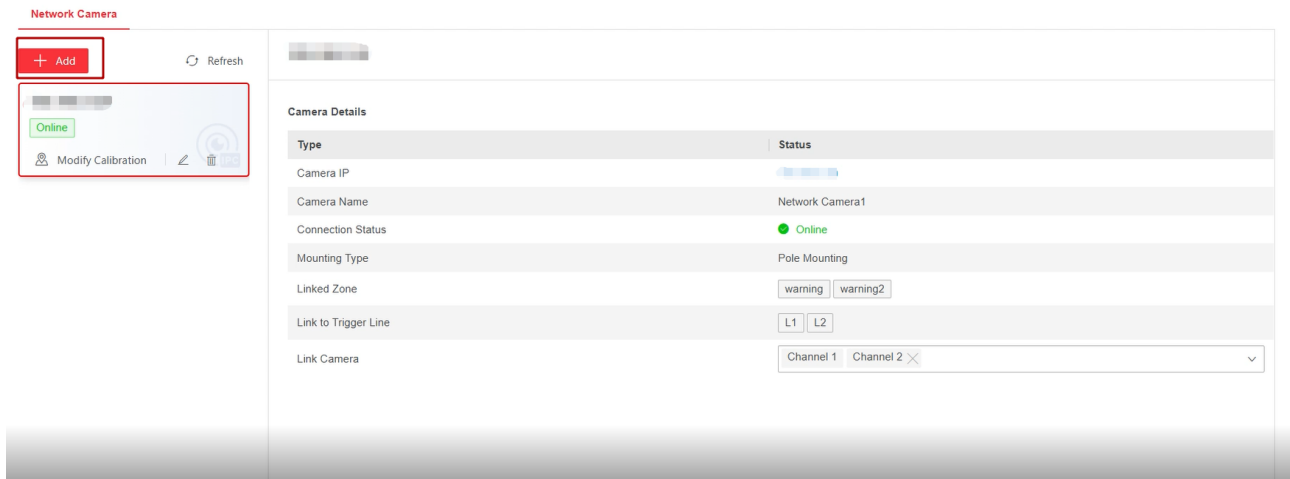


Figure 4-2 Add Network Camera

Note

Up to 4 camera channels (2 cameras if they are dual-channel) can be added. Camera channels that do not require interconnected tracking do not need to be added.

3. Enter network parameters, and click **Next**.

The screenshot shows the 'Add Camera' form with a progress bar at the top. The progress bar has three steps: '1 Network Addition' (highlighted in red), '2 Channel Selection', and '3 Interconnected Tr...'. Below the progress bar, there are several input fields: '* IP Address' with the value '10.64.7.4', 'Protocol Type' with a radio button selected for 'HIKVISION', '* Port' with the value '8000', '* User Name' with the value 'admin', and '* Password' with a masked password '.....'. At the bottom, there is a section for '* Camera Installation Method' with two radio buttons: 'Hoisting' and 'Pole Mounting' (selected). Below this, there are two buttons: 'Next' (highlighted in red) and 'Cancel'.

Figure 4-3 Network Parameters

4. Link the radar to the camera channel.

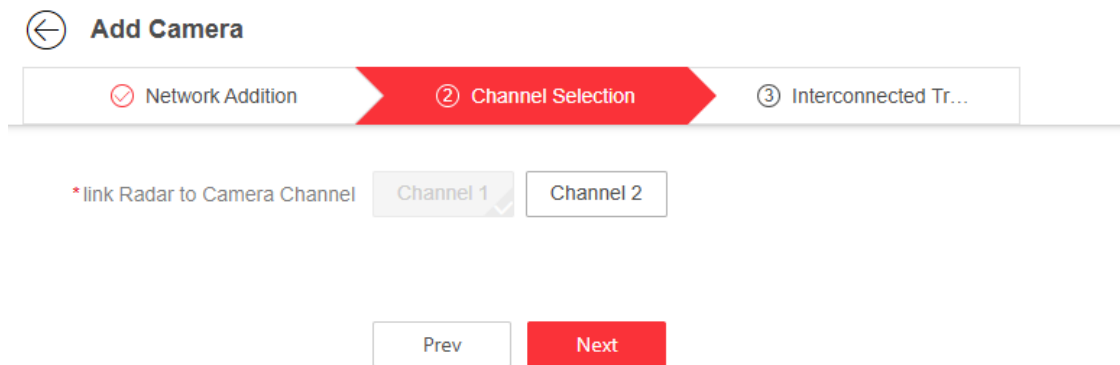


Figure 4-4 Select Channel

5. Set interconnected tracking.

Note

For more information about interconnected tracking, please refer to the section of **4.1.3 Set Camera Parameters**.

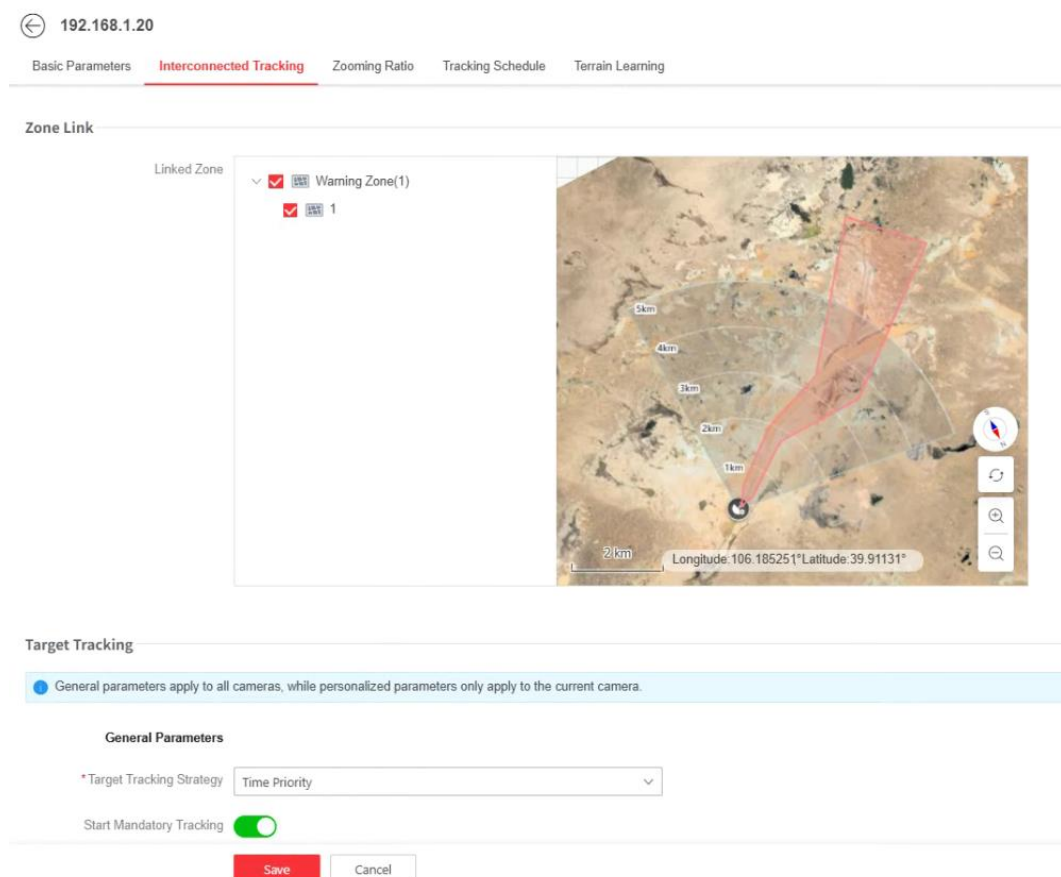


Figure 4-5 Set Interconnected Tracking

6. Optional: After adding camera, you can click **Edit**, **Delete** or **Refresh** the added cameras.

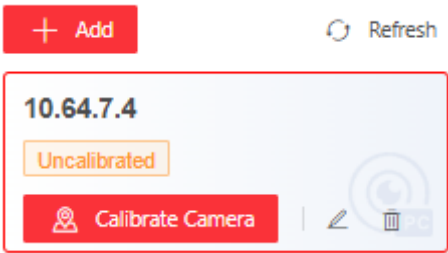


Figure 4-6 Edit, Delete or Refresh Camera

7. Optional: You can view camera details and select camera channel after adding cameras.

10.64.7.4

▲ This camera has not been calibrated, so its position cannot be displayed on the map.[Calibrate Camera](#)

Camera Details

Type	Device Status
Camera IP	10.64.7.4
Camera Name	Network Camera1
Connection Status	Online
Mounting Type	Pole Mounting
Linked Zone	23467
Link to Trigger Line	L1L2L5
Link Camera	Channel 1

Figure 4-7 Camera Details

4.1.2 Set Live View

After adding the camera, you can view and set the live view of the added camera in the radar interface.

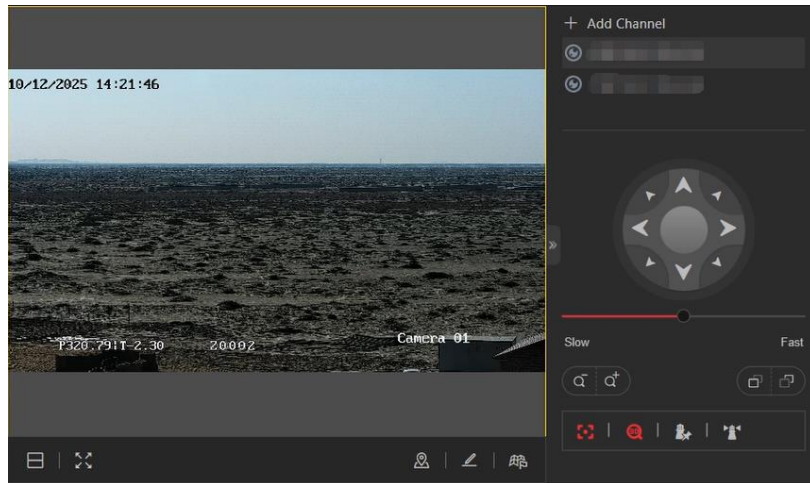


Figure 4-8 Live View Area

Table 4-1 Button Description

Button	Description
	Switch channel mode between single channel and dual channel.
	Full screen function. Press Esc to exit.
	Camera calibration function. Click it to calibrate the camera.
	Click it to edit the camera's parameters.
	Terrain learning function. Click it to learn terrain.
	Camera control panel. Click different arrows to adjust the camera's direction.
	Adjust the camera's speed.
	Zoom + and Zoom - ● Hold to zoom in the scene.1 ● Hold to zoom out the scene.
	Manual live view function. Click it to enter manual live view. Click the icon again to exit.
	3D positioning function. Click it to enable 3D positioning. Click the icon again to exit.

Button	Description
	Camera preset function. Click it to set preset. Click the icon again to exit.
	Quick park function. Click it to enable quick park. Click the icon again to exit. Note: If quick park function is enabled here, then the same function in the camera calibration and terrain learning interface is also enabled.

Note

For the linked camera, the supported functions vary with the models. The actual device prevails.

4.1.3 Set Camera Parameters

Camera parameters including basic parameters, interconnected tracking, zooming ratio, tracking

schedule, and terrain learning.

Set Basic Parameters

Steps

1. Click  in the radar interface to set camera parameters.

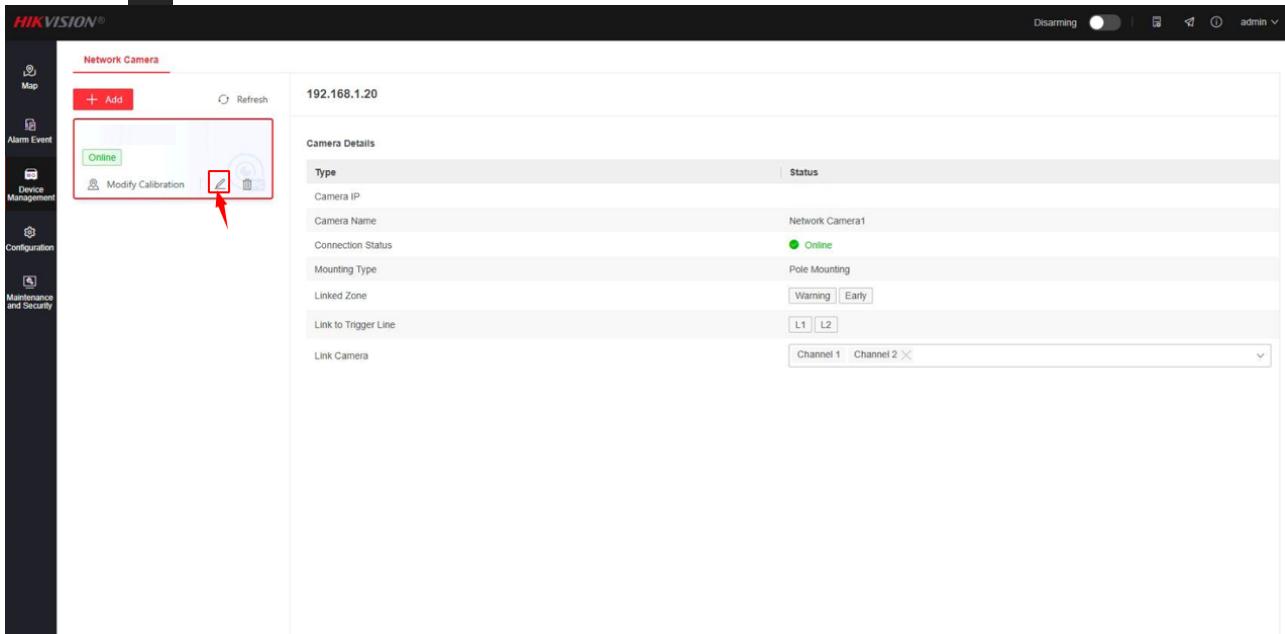


Figure 4-9 Edit Overview

2. Click **Basic Parameters**, and enter basic parameters according to actual demands.

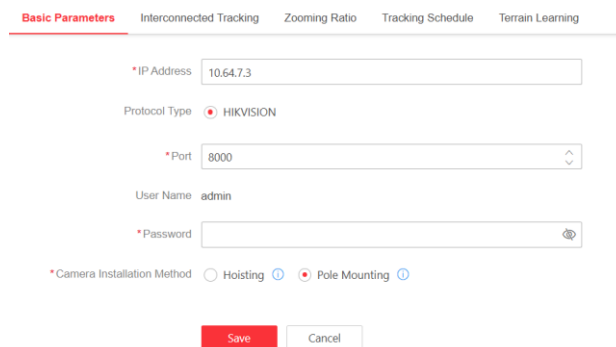


Figure 4-10 Basic Parameters

Set Interconnected Tracking

Interconnected tracking allows you to link camera with different zones, set radar and camera linkage

trace strategy, personalized parameters, and camera parameters.

Steps

1. Click  in the radar interface to set camera parameters. (See Figure 4-9 Edit Overview)
2. Click **Interconnected Tracking**.

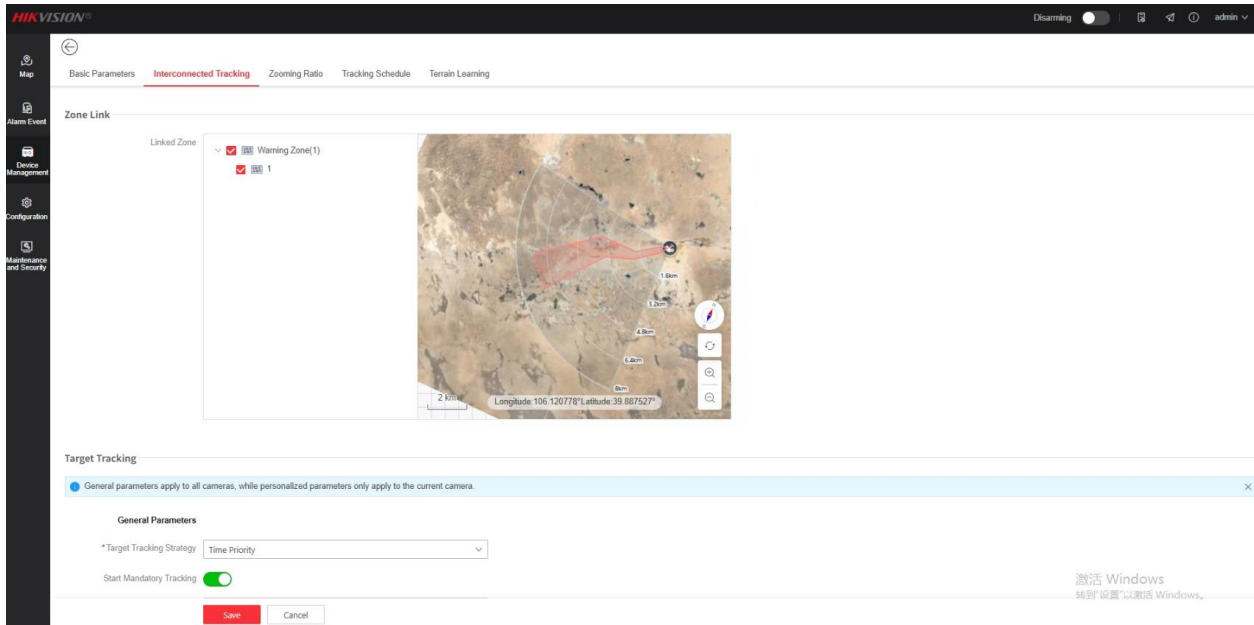


Figure 4-11 Interconnected Tracking.

3. Go to **Zone Link**, and select the radar sectors that need to be associated with the camera. Please select according to actual demands.

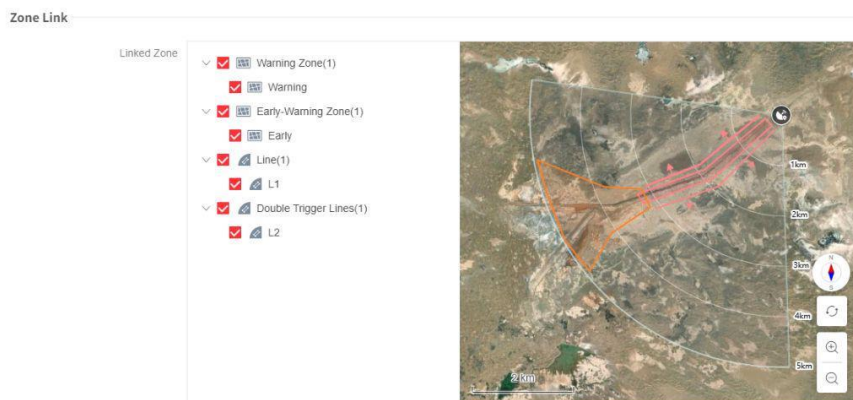


Figure 4-12 Link Zone

Note

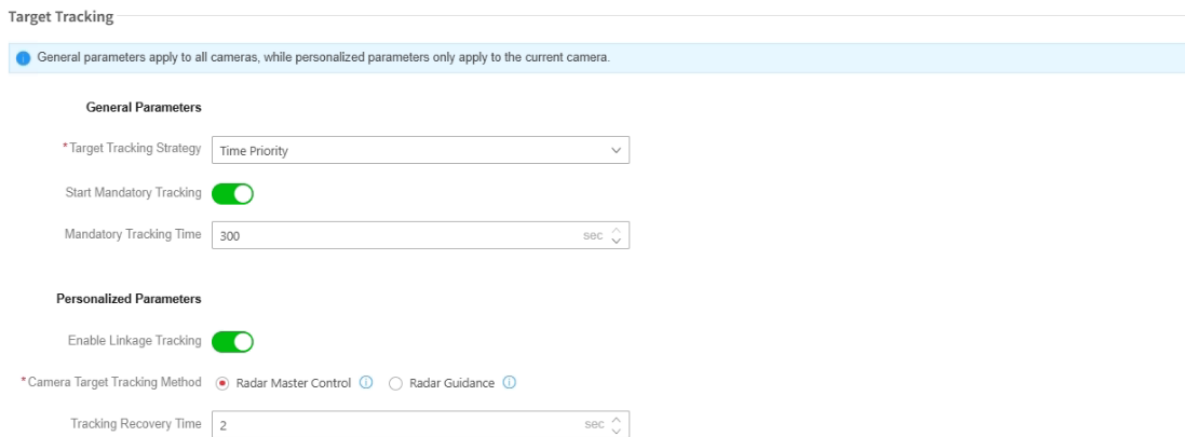
After completing zone link and calibration, the camera will only track targets within the linked zone and will not track targets in non-linked zones.

4. Go to **Target Tracking**, Enable **Linkage Tracking**.

If it is enabled, the camera will perform target detection and tracking.

Note

Personalized parameters are used to enable the linkage tracking function for a single selected camera. So if you enable linkage tracking here, it can only be applied to the single camera you are editing right now.



Target Tracking

General parameters apply to all cameras, while personalized parameters only apply to the current camera.

General Parameters

*Target Tracking Strategy: Time Priority

Start Mandatory Tracking: ☒

Mandatory Tracking Time: 300 sec

Personalized Parameters

Enable Linkage Tracking: ☒

*Camera Target Tracking Method: ☒ Radar Master Control ☐ Radar Guidance

Tracking Recovery Time: 2 sec

Figure 4-13 Target Tracking Parameters

5. Select Camera **Target Tracking Method**.

It supports two kinds of tracking methods, radar master control and radar guidance. The radar master control means that the radar controls the camera to track the target by sending camera coordinates.

While the radar guidance means that after the radar detects the target, it directs the camera to the specified position. Afterward, the radar no longer controls the camera's tracking; the camera performs automatic tracking based on the target in the image and video.

6. Set **Tracking Recovery Time**.

Within the configured recovery time period, if the camera does not receive any other manual operations (such as rotation via directional keys or calling preset points), the camera will automatically restore its linkage capability with the external radar and resume tracking of unauthorized targets.

7. Set Multi-Target tracking strategy.

Go to **Interconnected Tracking → Target Tracking**, and select **Target Tracking Strategy**. When there are multiple targets in the warning area, the camera will track them sequentially according to the selected priority.

Time Priority

Track targets based on the time order of their entry into the warning zone. The first target that enters the warning zone and early-warning zone is being tracked until disappears. Then the next target that triggers the alarm will be tracked.

Distance Priority

Track targets based on their distance proximity to the radar; the closest target is tracked first until it leaves the radar detection area, then track the next target. The target that is shortest away from the radar will be tracked.

Multi-Target Auto-Switch

The target will be switched automatically from the smallest to the largest target No. according to the set **Switch Time Interval**.

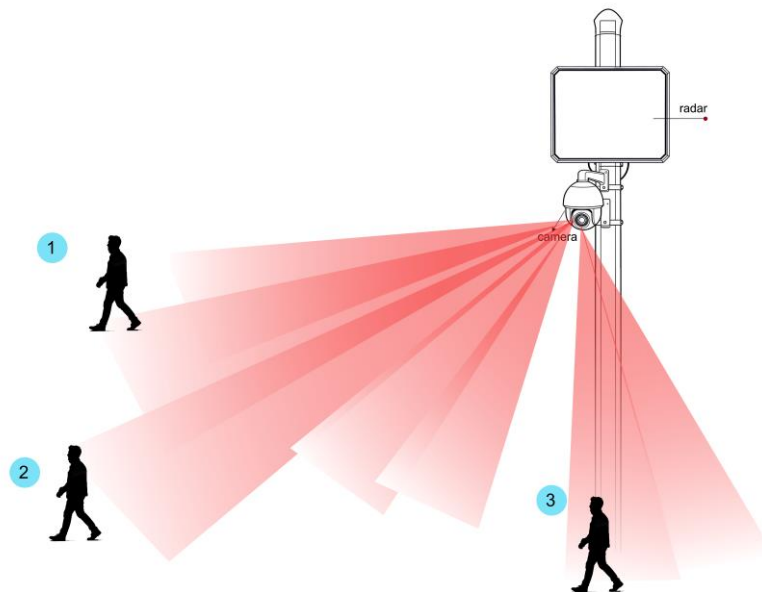


Figure 4-14 Automatic Switching Tracking

Target Trigger Priority

Targets are tracked based on the order they are detected. The most recently detected target will be automatically tracked and the next new target will be tracked after the set **Minimum Tracking Duration for New Target** ends. If there is no new target, the tracking target will be switched automatically from the smallest to the largest target No. according to the set **Polling Time**.

8. Enable **Start Mandatory Tracking** and set **Mandatory Tracking Time**.

It is used to enable mandatory tracking. If it is enabled, the camera will start mandatory tracking on the target after double-clicking the target in the radar area. After this parameter is enabled, you need to set mandatory tracking time.

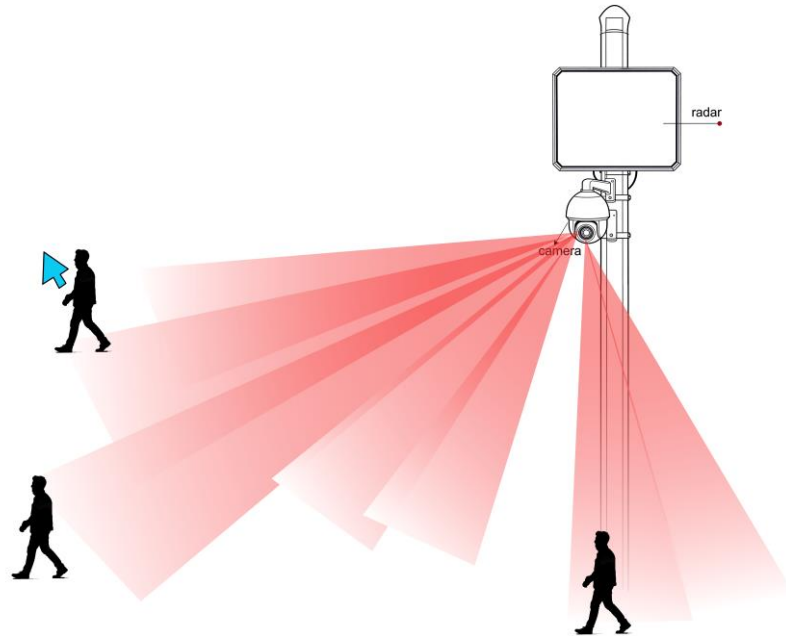


Figure 4-15 Manual Forced Tracking

Note

The mandatory tracking in general parameters is globally effective.

9. Enable **VCA Status Display**.

After enabling VCA Status Display, the thermal imaging channel can show the current linkage status of the camera.

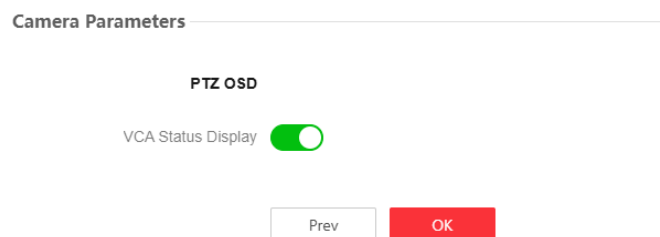


Figure 4-16 Camera Parameters

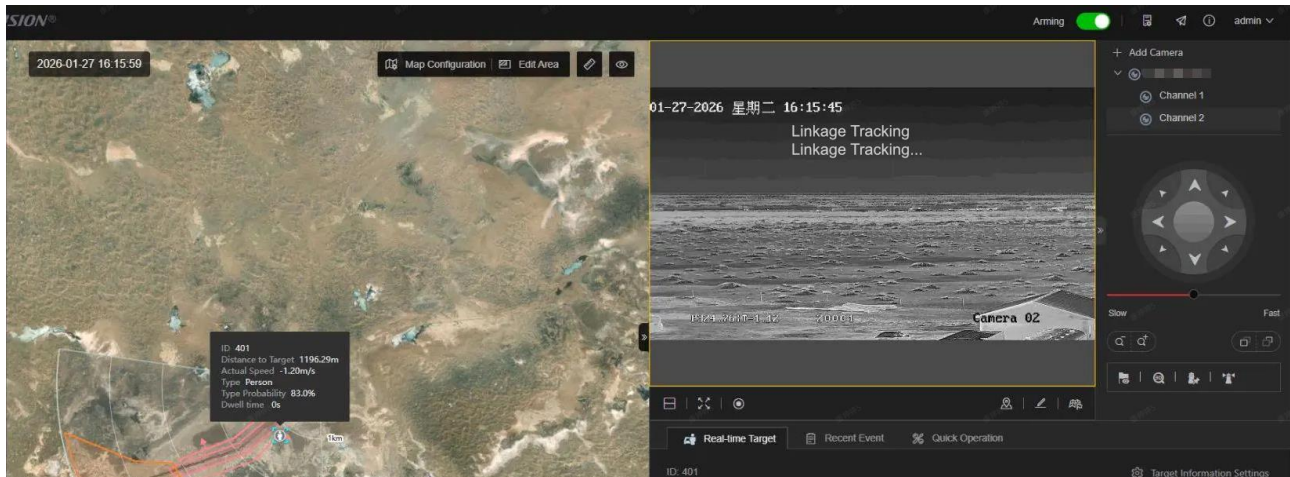


Figure 4-17 Linkage Status

Set Zooming Ratio

If the **Enable Tracking Zoom Ratio Changes** is disabled, the camera performs linkage tracking using the zoom level configured during calibration.

When the configured zoom level cannot meet the requirements, you can enable the function of **Enable Tracking Zoom Ratio Changes** for auto or manual zoom configuration.

Configuration Method	Description
Auto Switch	The camera performs linkage tracking based on the zoom level provided by the radar.
Manual Setting	The camera tracks according to the zoom level configured by manually entered distance and target size.

Steps

1. Click  in the radar interface to set camera parameters.
2. Go to **Zooming Ratio**, and enable **Tracking Zoom Ratio Changes** according to actual demands.
3. Select **Tracking Ratio Configuration Method**, including **Auto Switch** or **Manual Setting**.
4. You need to enter parameters like minimum object distance (m), upper limit of object distance (m) if manual setting is selected as tracking ratio configuration method. If you choose manual method, then you need to finish step 5 and step 6.
5. Optional: Click **Add** to more manual setting parameters. You can use the camera zoom control icon  to adjust the target to the same size as the live green frame. The zoom level at this point is the recommended one for this distance range.

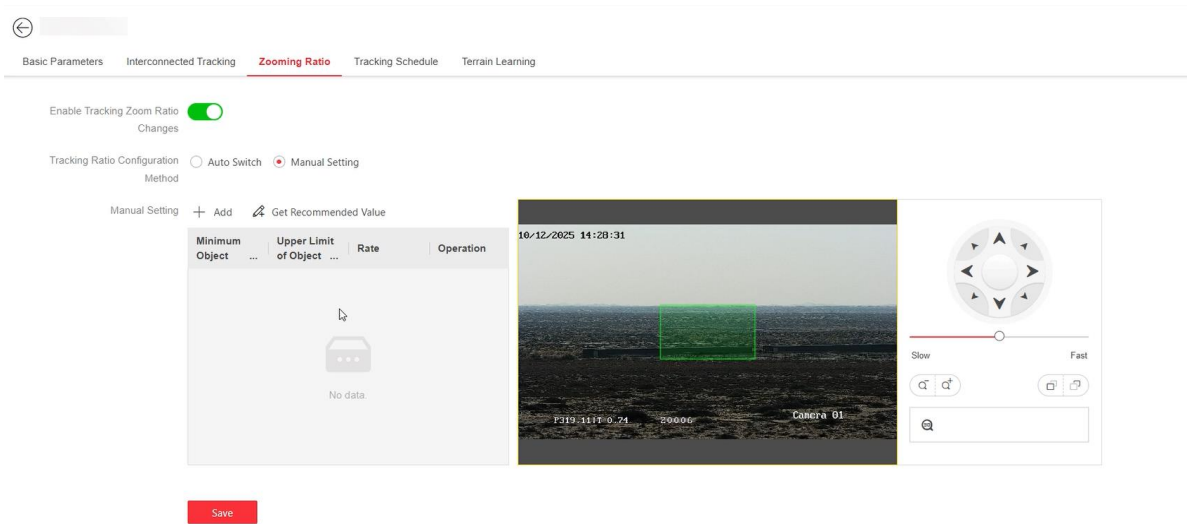


Figure 4-18 Zooming Ratio Parameters

6. Optional: Click **Get Recommended Value** to edit and get recommended value.

Get Recommended Value

Target Size

length *
0.1 m

Width *
0.1 m

Check Range

Min. Value *
1 m

Max. Value *
100000 m

Target Size

Min. Value *
5 %

Max. Value *
80 %

Tracking Accuracy

Confirm Cancel

Figure 4-19 Get Recommended Value

Set Tracking Schedule

Steps

1. Click  in the radar interface to set camera parameters.
2. Go to **Tracking Schedule**, and check **Switch Mode** according to actual demands.

Note

- You need to set **PTZ Schedule** if manual arming is selected as **Switch Mode**.
- You need to set **Camera Target Tracking Method** in interconnected tracking interface as **Radar Guidance** before setting tracking schedule.
- Only dual-channel cameras can switch tracking plans between channels, single-channel cameras can not.

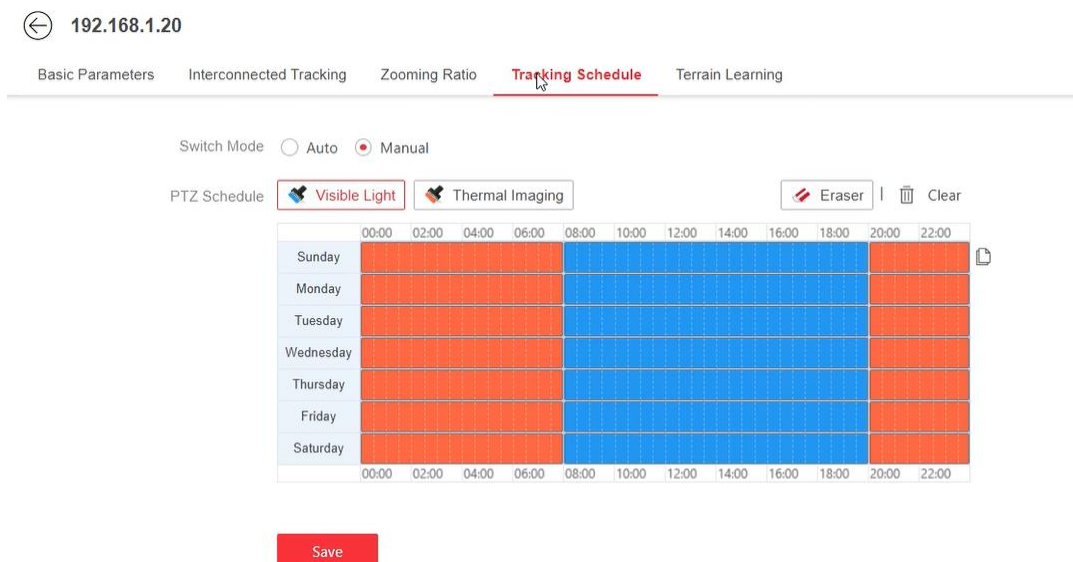


Figure 4-20 Tracking Schedule

3. Click specific channel number, and drag the cursor on the time bar to set a schedule.
4. Adjust the schedule.
 - Click a set period and enter the start time and end time in the pop-up window.
5. Optional: Delete.
 - Click **Eraser** to delete selected schedule.
 - Click **Clear** to delete all the schedules.
6. Optional: Click  to copy the settings to other days.
7. Click **Save**.

Set Terrain Learning

Terrain learning is used to optimize the coordinated effects after calibration, addressing inaccuracies in coordination in specific areas, such as undulating terrain, radar edges, and regions with imprecise calibration. The key of terrain learning is as follows:

- Learning area: Focus on local areas with poor coordination effects. The effective range of a single learning point is approximately 20 meters.
- Ensure the target moves continuously within the learning area so that the radar outputs stable trajectories.
- Simultaneously adjust the camera's PTZ to keep the target centered in the frame, ensuring high-quality learning points are selected.
- Number of calibration points: Adjust dynamically based on environmental complexity—the more complex the terrain, the more learning points are needed. It is recommended to gradually increase points using calibrate-and-verify approach.
- Priority should be given to selecting fixed buildings on the map as calibration references to improve calibration accuracy.

Steps

1. Click  in the radar interface to set camera parameters, and find **Terrain Learning**.

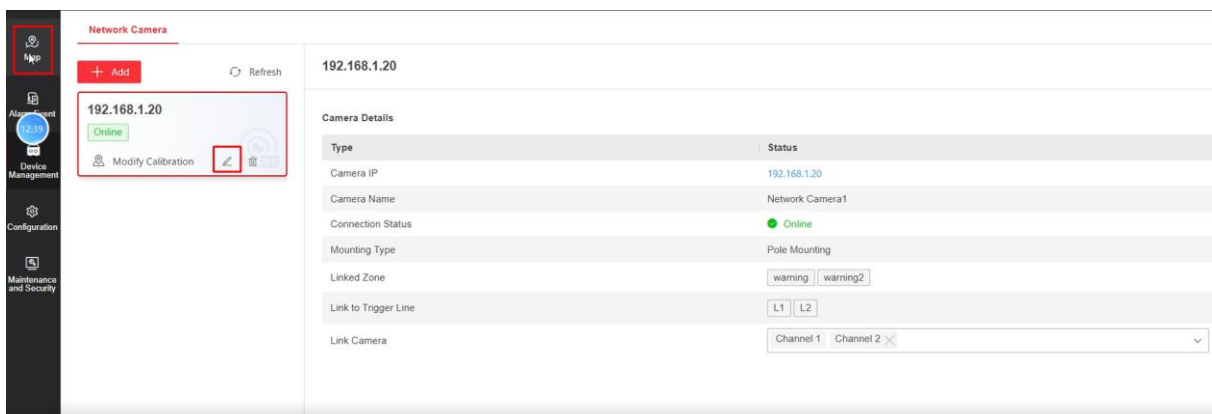


Figure 4-21 Terrain Learning Visiting Path

2. Select the target in the complex terrain of radar detection view.

Note

If it's a GPS Map, you can select a stationary/moving targets.
If it's a picture map, then you should select a moving target.

3.

3. Adjust the camera view to make the target as large as possible in the green frame.
4. Click **Start**, and click **Add Terrain Point** to add terrain points and repeat the above steps until terrain points cover complex terrains.
5. Click **Save** and click **End Learning**.
6. Optional: Click **Clear Terrain Points** to delete terrain points.

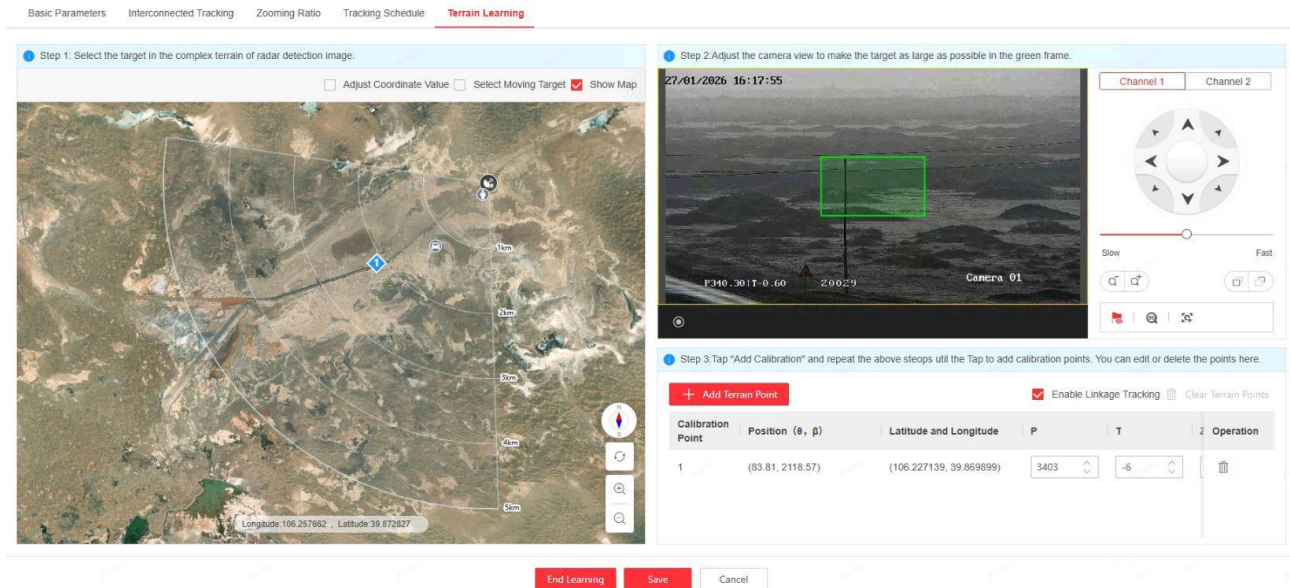


Figure 4-22 Set Terrain Learning

4.1.4 Calibrate Camera

Please select the camera calibration method according to the following table and the actual situation.

Calibration Type	Target Status	Map Requirement	Environmental Conditions
Target-less Calibration	No moving target required	Requires import of GIS map	Prominent landmarks in the actual environment must be clearly visible on the map
Moving Target Calibration	Requires moving targets (e.g., people, vehicles)	Can use GIS map or picture map	Moving objects must be present in the scene

Besides, calibration is also divided into different-pole calibration and same-pole calibration depending on the installation distance between the camera and the target.

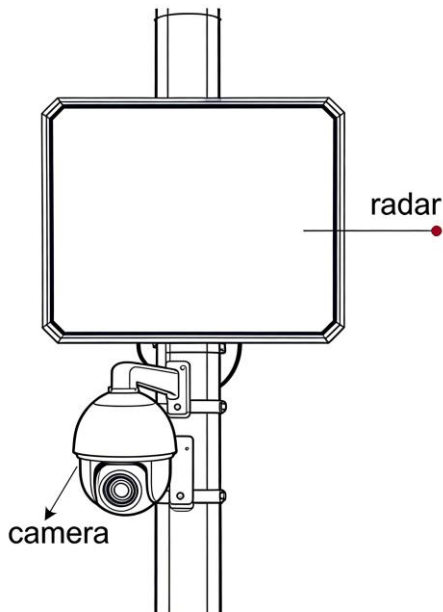


Figure 4-23 Same Pole Calibration

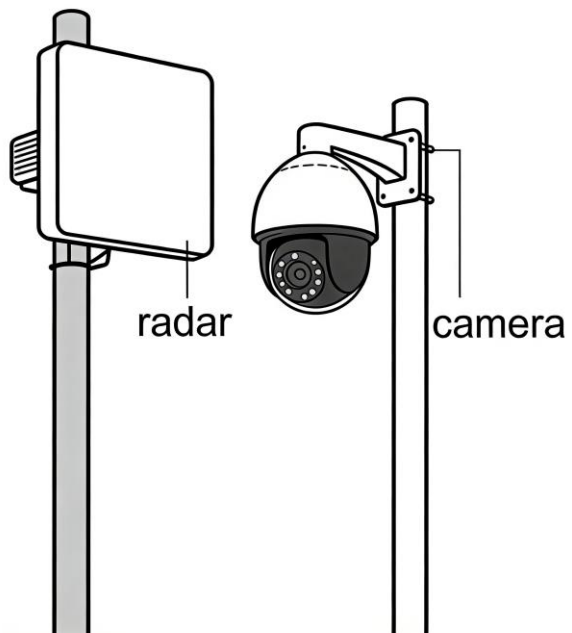


Figure 4-24 Different Pole Calibration

Steps

Before You Start

Before you start the calibration steps, disarm first.



Note

Targets can be detected without calibrating cameras, but visual tracking of targets is possible when cameras are integrated.

Please check if the radar's azimuth information is correct. Note: If you edit the radar's latitude and longitude information, the map will change the radar sector's position.

Go to **Calibrate Camera** → **Calibration Training** and follow the steps to help you calibrate.

1. Click  **Calibrate Camera** in the map interface or go to Device Management and click **Uncalibrated** or **Modify Calibration** in adding camera interface to calibrate added camera.

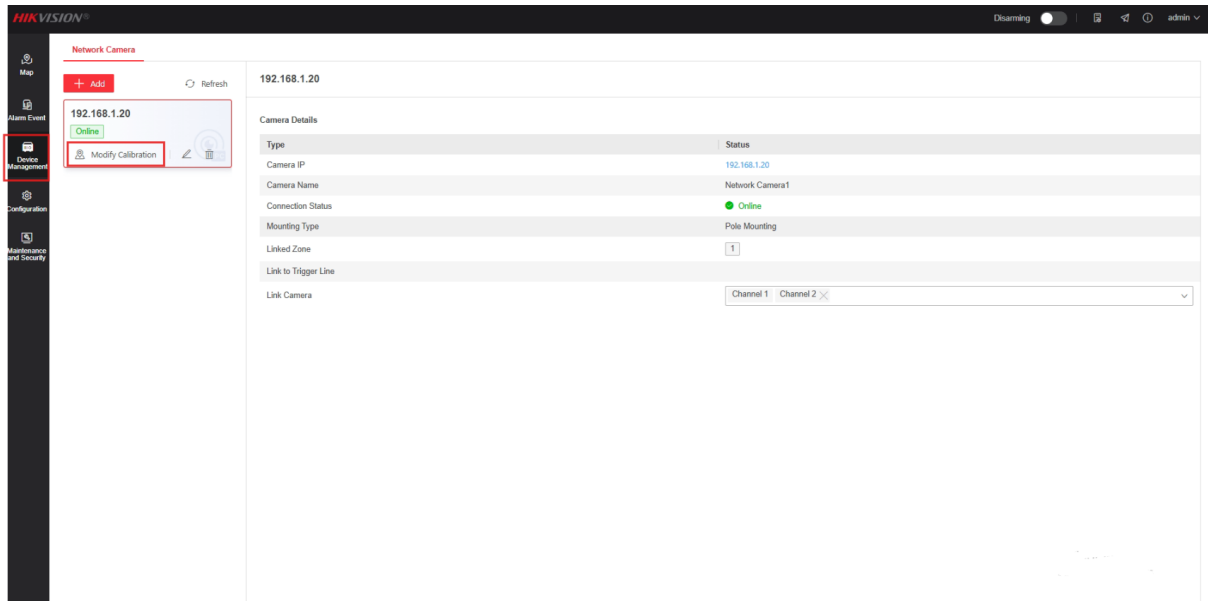


Figure 4-25 Modify Calibration

2. Adjust camera level. Control the camera PTZ direction keys to adjust the camera image to a horizontal direction, looking straight ahead, until the T value of the camera close to 0. Then click **Next**.

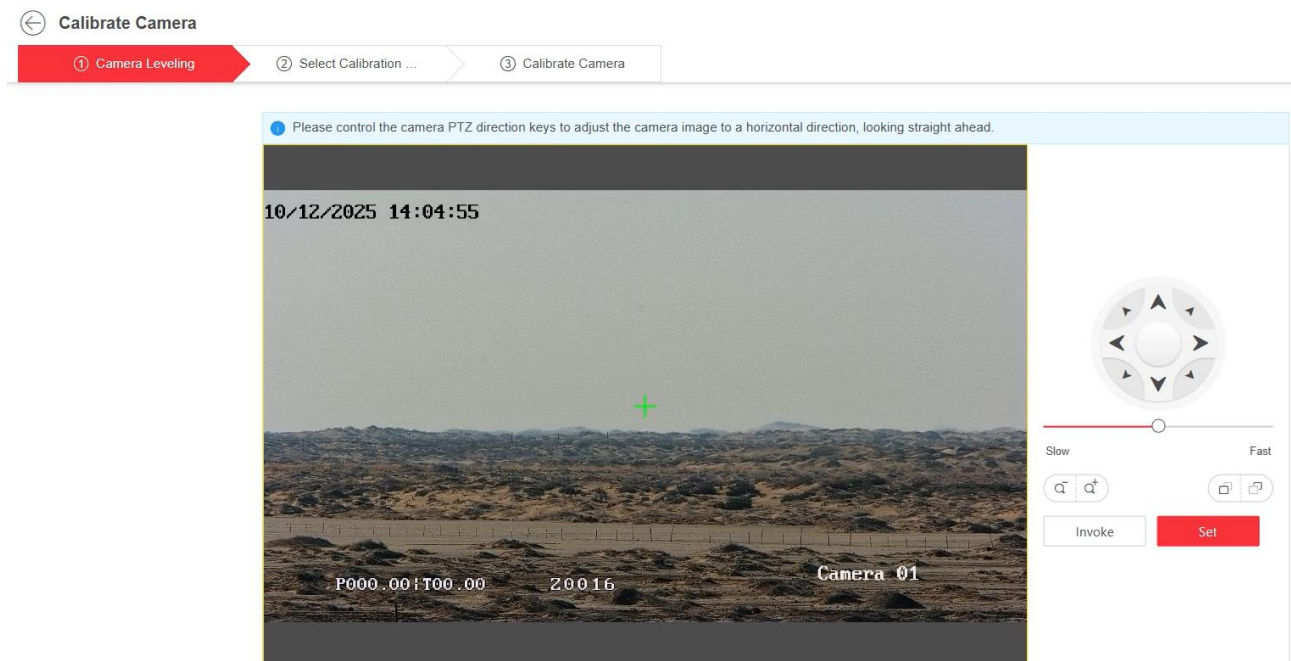


Figure 4-26 Adjust Camera Level

3. Select calibration method. select same pole calibration or different pole calibration according to actual demands. Click **Next**.

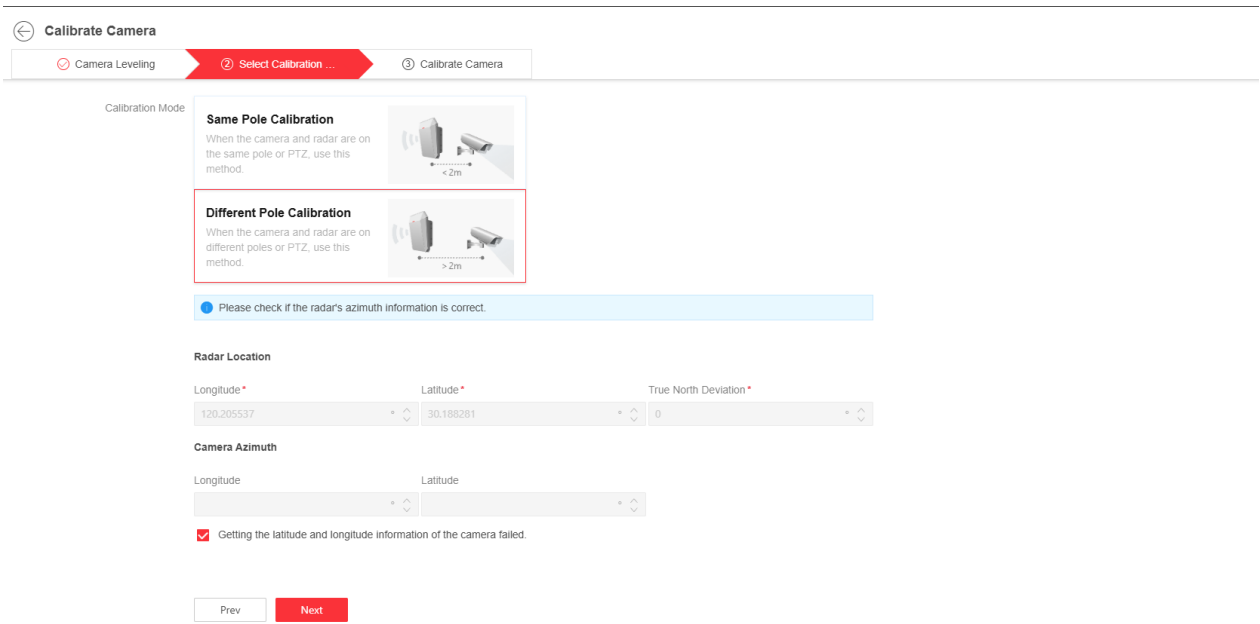


Figure 4-27 Select Calibration Method

Note

Here we take different pole calibration for example to introduce camera calibration process.

4. Calibrate camera. Left click once to select the target in the map and you can see an icon on your map.

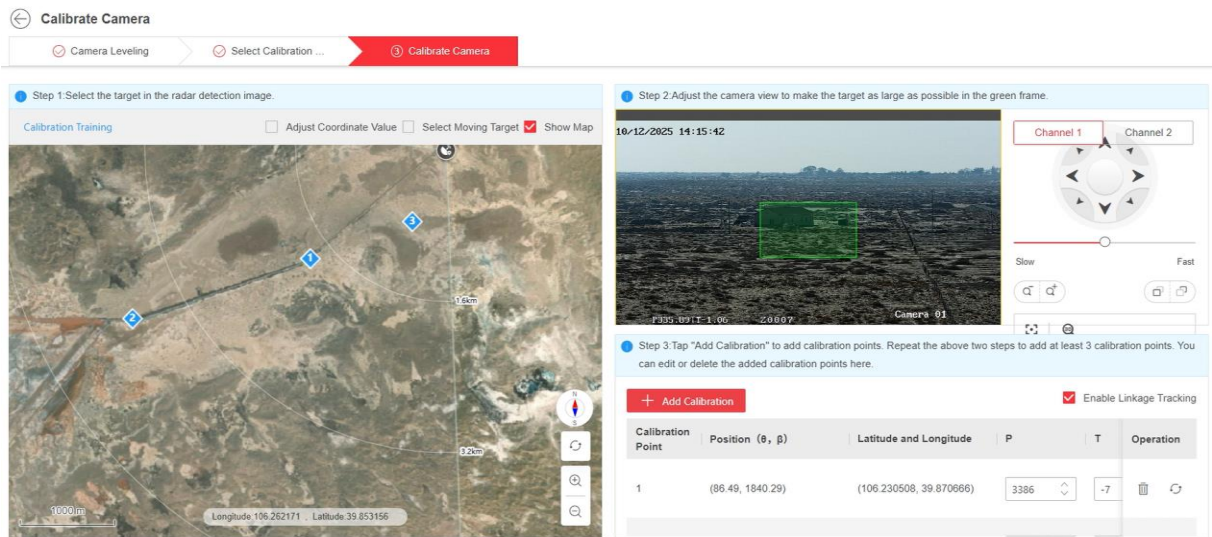


Figure 4-28 Select Target

Note

If it's a GIS map, then you can select any reference object on the map that is not a moving target.

- Adjust the PTZ of the camera until the selected target on the map appears within the green frame of the camera, and is approximately the same size as the green frame.

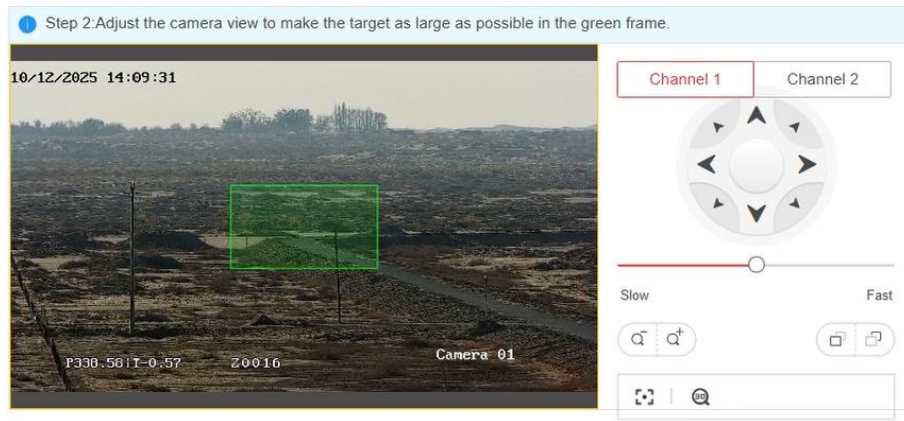


Figure 4-29 Adjust Camera View

Note

After calibration, if the target size remains inappropriate during tracking, it can be optimized via **Zooming Ratio**.

- Tap **Add Calibration** to add calibration points. Repeat the above two steps to add at least 3 calibration points.

Note

If choose same pole calibration, you only need to add one calibration point.

+ Add Calibration				☐ Enable Linkage Tracking	
Marked point	Position (θ , β)	Latitude and Longitude	P	Operation	
1	(108.43, 214.02)	(120.210984, 30.191024)	80		

Figure 4-30 Add Calibration Points

7. Optional: The blue rhombus with number is the added calibration point. If the deviation between the actual location and the location of the calibration point is large, you can delete the calibration point and add a new one.



Figure 4-31 Example

8. Click **Save and Exit** to save calibration.

9. Optional: Click **Calibrate Again** to calibrate the camera again if the requirements are not met.

Note

Possible reasons of failed calibration:

- 1) During calibration, the PT values of the camera (whether it is a PTZ or dome camera) must not be 0.
 - 2) For PTZ cameras, the T value must be negative during calibration; for PTZ dome cameras, the T value must be positive.
 - 3) For multi-point calibration across different poles, a minimum of 3 calibration points is required. These points must not be collinear, and a larger spread among the 3 points is preferred to enhance calibration accuracy and stability.
-

4.2 Link Search Light

Search Light improves light condition of the environment. After adding the search light, you can calibrate it first and link it to the camera.

Before You Start

Before linking the search light, make sure that you have linked the camera to the radar. Because the linkage between the search light and the radar is achieved through the linkage of the search light and the camera.

4.2.1 Add Search Light

Steps

1. Go to **Device Management** → **Search Light**.

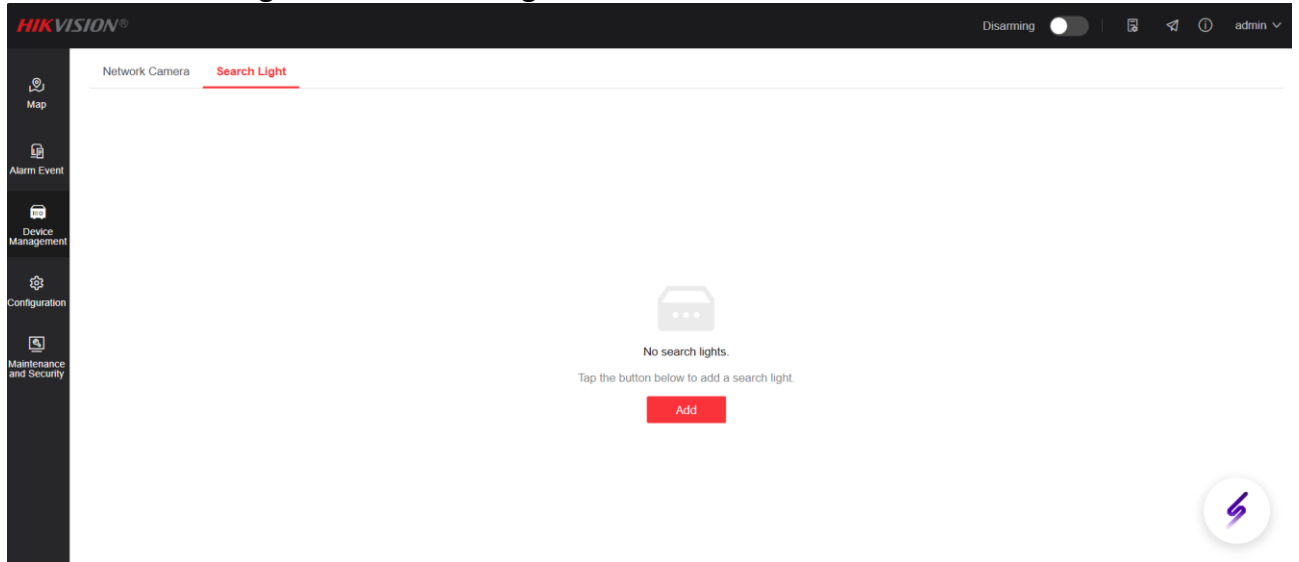


Figure 4-32 Search Light Overview

2. Click **Add** to add search lights.
3. Enter **IP address** and **Port**.

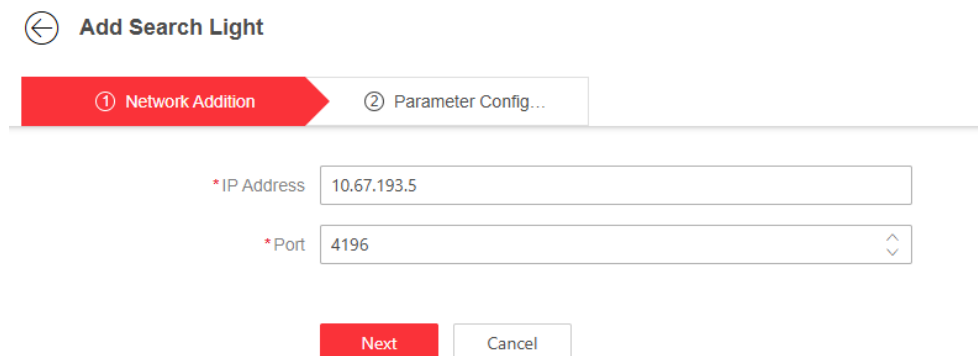


Figure 4-33 Add Search Light

4. Click **Next**.
5. Set parameters, link cameras, and link zones.

← Add Search Light

① Network Addition ② Parameter Config...

*Name 87

Type DeepinMind Search Light Network Camera

*DFN 1

*Linked Camera Network Camera1

Workday Schedule **Turn on the Light** Eraser Clear

Every Day 00:00 02:00 04:00 06:00 08:00 10:00 12:00 14:00 16:00 18:00 20:00 22:00

Linked Zone

- ☐ Warning Zone(5)
 - ☐ 2
 - ☐ 3
 - ☐ 4
 - ☐ 6
 - ☐ 7
- ☐ Pre-Warning Zone(0)

Prev Completed

Figure 4-34 Set Parameters of Search Light

6. Click **Completed**.

4.2.2 Edit Search Light

If you want to edit search light that is already added, follow the steps below.

Steps

1. Go to **Device Management** → **Search Light**.
2. Click  to edit the search light.
3. Enter related parameters and link to added cameras according to actual demands.
4. Click **Save** after editing.

← Search Light Editing

*Name

*IP Address

*Port

Type DeepinMind Search Light Network Camera

*DFN

*Linked Camera

Workday Schedule Turn on the Light Eraser Clear

	00:00	02:00	04:00	06:00	08:00	10:00	12:00	14:00	16:00	18:00	20:00	22:00
Every Day												

Linked Zone

☐ Warning Zone(5)

- ☐ 2
- ☐ 3
- ☐ 4
- ☐ 6
- ☐ 7

☐ Pre-Warning Zone(0)



Save Cancel

Figure 4-35 Edit Search Light

4.2.3 Calibrate Search Light

Steps

1. Go to **Device Management** → **Search Light**.
2. Click **Calibration** to calibrate the search light.
3. Move the light of the searchlight in the video image and click **Calibrate**.

Note

You can adjust the spotlight's beam size based on your actual needs.

4. Optional: Enter **P Compensation Value** and **T Compensation Value** by using manual verification.
5. Click **Save** and **Exit**.



Figure 4-36 Calibrate Search Light

4.2.4 View Search Light Details

After adding, calibrating and editing the search light, you can view its detailed information in search light interface.

10.67.193.5

Search Light Details.

Type	Status
IP Address	10.67.193.5
Port	4196
Name	87
Type	DeepinMind Search Light Network Camera
DFN	1
Linked Zone	12345678901234567890123...12345678901234567890123...12345678901234567890123... 12345678901234567890123...12345678901234567890123...
Linked Camera	Network Camera1

Turn on the Light

00:0002:0004:0006:0008:0010:0012:0014:0016:0018:0020:0022:00

Every Day

Figure 4-37 View Search Light Details

Chapter 5 Alarm Event

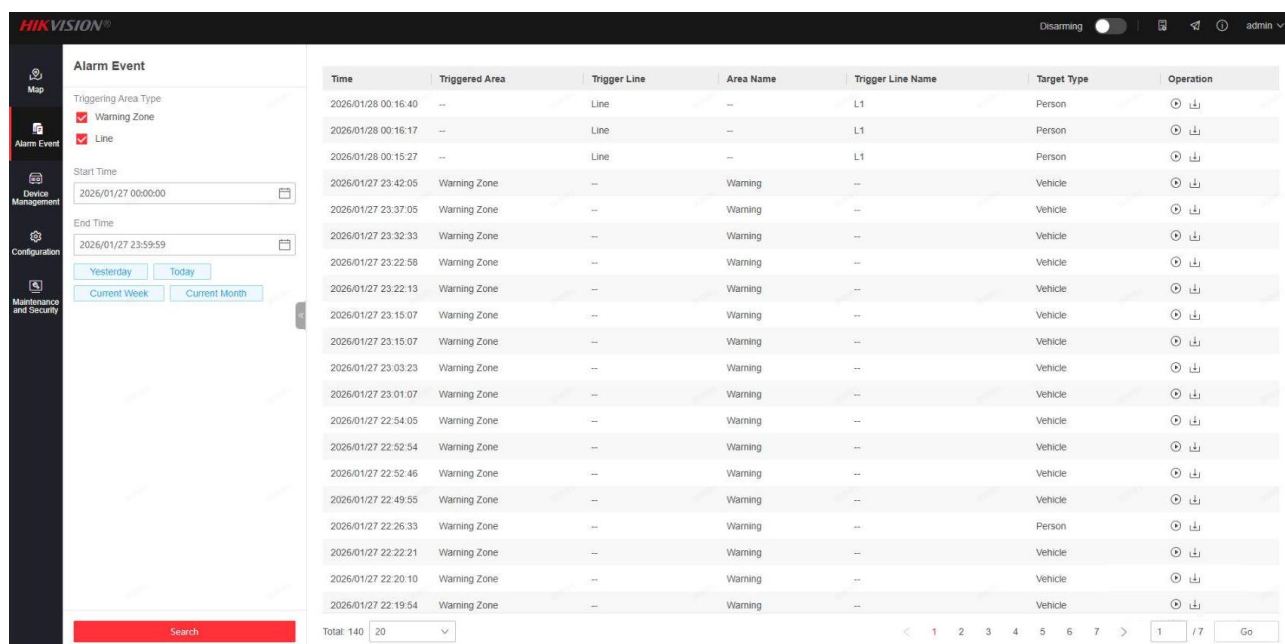


Figure 5-1 Alarm Event

5.1 Search Alarm Event

The device supports searching and playing back the alarm events.

Steps

1. Click **Alarms** in the menu area.
2. Set the search conditions, and click **Search**.

Alarms

Triggering Area Type

☒ Warning Zone

☒ Line

Start Time

2025/10/16 00:00:00

End Time

2025/10/16 23:59:59

[Yesterday](#) [Today](#)

[Current Week](#) [Current Month](#)

Figure 5-2 Set Search Conditions

3. The searched alarm events will display in the list.

Time	Triggered Area	Area Name	Target Type	Operation
2025/10/16 17:56:01	Line	L1	Vehicle	🔍 ⬇
2025/10/16 17:54:25	Line	L1	Vehicle	🔍 ⬇
2025/10/16 17:49:12	Line	L1	Vehicle	🔍 ⬇
2025/10/16 17:35:37	Line	L2	Vehicle	🔍 ⬇
2025/10/16 17:34:27	Line	L2	Vehicle	🔍 ⬇
2025/10/16 17:34:12	Line	L2	Vehicle	🔍 ⬇
2025/10/16 17:34:01	Line	L2	Vehicle	🔍 ⬇
2025/10/16 17:33:56	Line	L2	Vehicle	🔍 ⬇
2025/10/16 17:33:47	Line	L2	Vehicle	🔍 ⬇
2025/10/16 17:33:19	Line	L2	Vehicle	🔍 ⬇
2025/10/16 17:33:16	Line	L2	Vehicle	🔍 ⬇
2025/10/16 17:32:53	Line	L2	Vehicle	🔍 ⬇
2025/10/16 17:32:43	Line	L1	Vehicle	🔍 ⬇
2025/10/16 17:32:27	Line	L2	Vehicle	🔍 ⬇
2025/10/16 17:32:01	Line	L2	Vehicle	🔍 ⬇

Total: 34 < 1 2 > / 2

Figure 5-3 Search Alarm Event

- Click **Playback** in the operation list to view the replay of the radar map and the live recording of the alarm event.

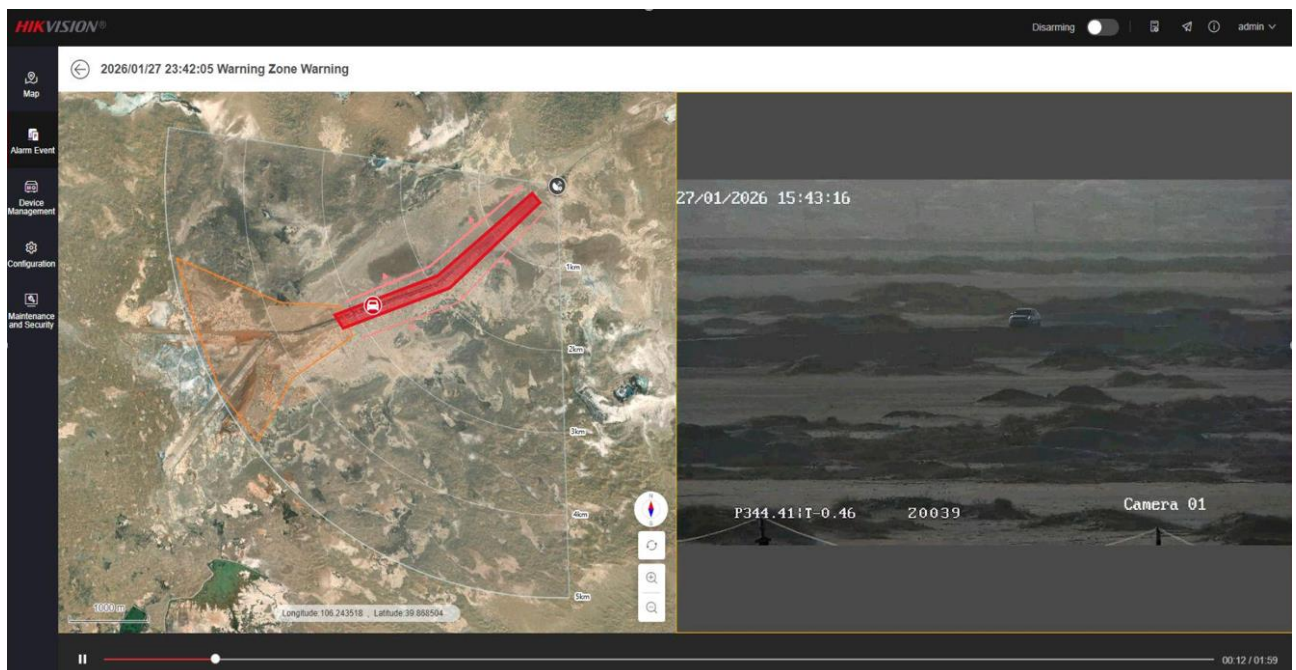


Figure 5-4 Alarm Event Example

You can also see the start/end time, warning zone No., line No., longitude, latitude and some other information of the alarm event at the playback page above.

Note

The target in the playback may not be the current target. It's possible that a new target may enter the warning zone during the playback, triggering a second alarm.

5. Click **Download**, and select **Download Video Record** or **Download Tracking File** to download to the specific saving path of the computer.

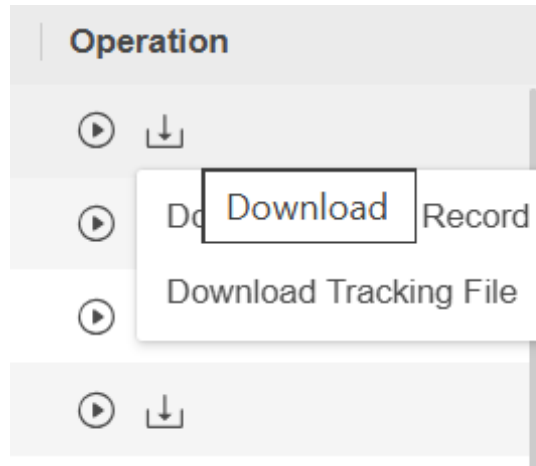


Figure 5-5 Download

 Note

After clicking the download icon, a prompt will pop up at the upper-right corner of your browser by default. Click  to open the folder that contains the file you just downloaded or you can click **Open File** to directly open the file you just downloaded.

Chapter 6 Configuration

6.1 System Settings

6.1.1 View and Edit Basic Information

Go to **Configuration** → **System** → **System Configuration** → **Basic Information** to view the basic information and algorithms library version of the device, and edit **Device Name**.

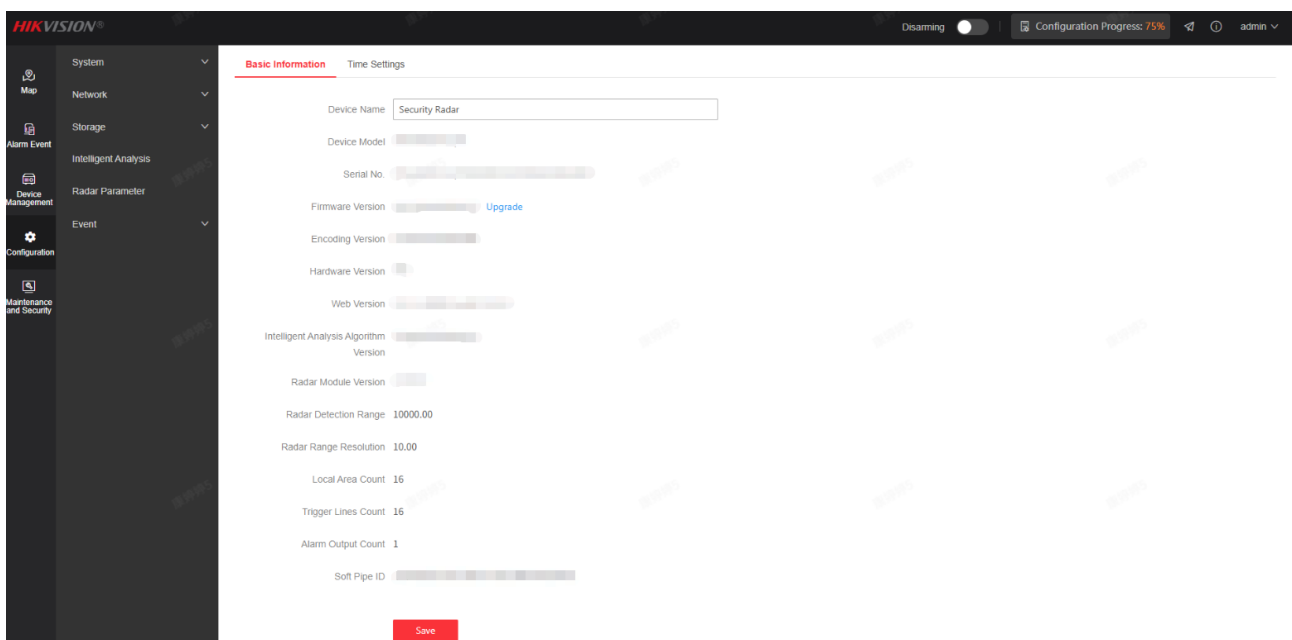


Figure 6-1 Basic Information Overview

6.1.2 Synchronize Time

Synchronize the device time when it is inconsistent with the actual time.

Steps

1. Go to **Configuration** → **System** → **System Configuration** → **Time Settings**.
2. Select **Time Zone**.
3. Select **Synchronization Mode**.

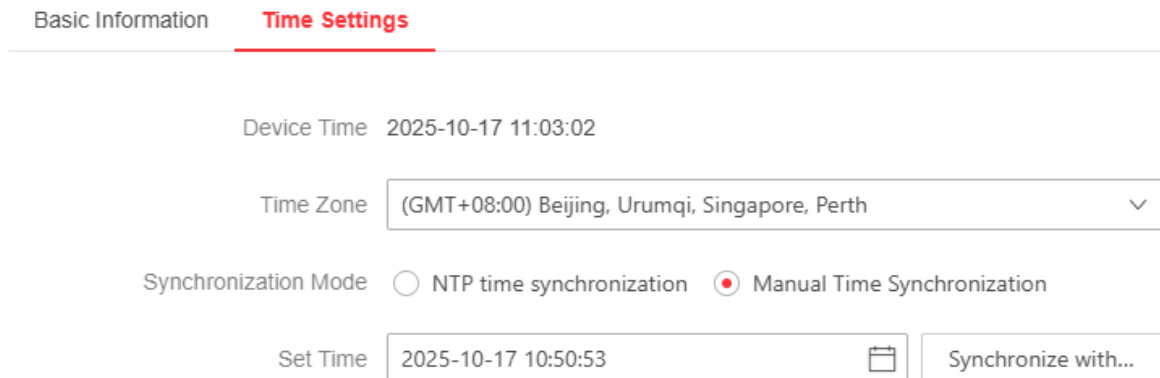
NTP Synchronization

Select it to synchronize the device time with that of the NTP server. Set **Server IP**, **NTP Port**, and **Synchronization Time Interval**.

Manual Synchronization

Select it to synchronize the device time with that of the computer. Set time manually, or check **Sync. with computer time**.

4. Click **Save**.



Basic Information **Time Settings**

Device Time 2025-10-17 11:03:02

Time Zone (GMT+08:00) Beijing, Urumqi, Singapore, Perth

Synchronization Mode ☐ NTP time synchronization ☒ Manual Time Synchronization

Set Time 2025-10-17 10:50:53  Synchronize with...

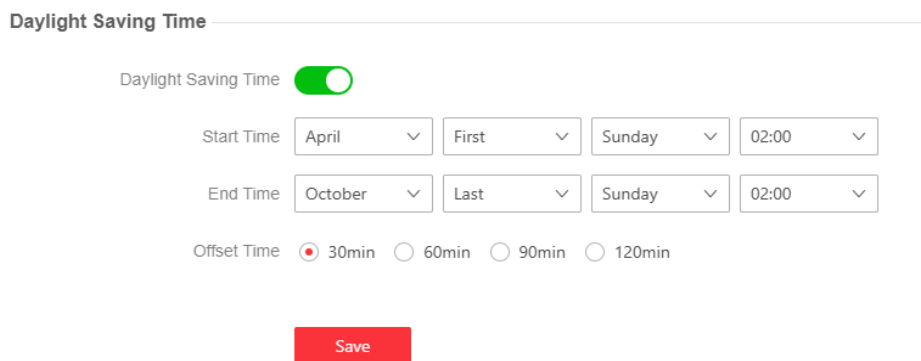
Figure 6-2 Synchronize Time

6.1.3 Set DST

If the region where the device is located adopts Daylight Saving Time (DST), you can set this function.

Steps

1. Go to **Configuration** → **System** → **System Configuration** → **Time Settings** → **Daylight Saving Time**.
2. Check **Enable Daylight Saving Time**.
3. Set **Start Time**, **End Time**, and **Offset Time**.
4. Click **Save**.



Daylight Saving Time

Daylight Saving Time ☒

Start Time April First Sunday 02:00

End Time October Last Sunday 02:00

Offset Time ☒ 30min ☐ 60min ☐ 90min ☐ 120min

Save

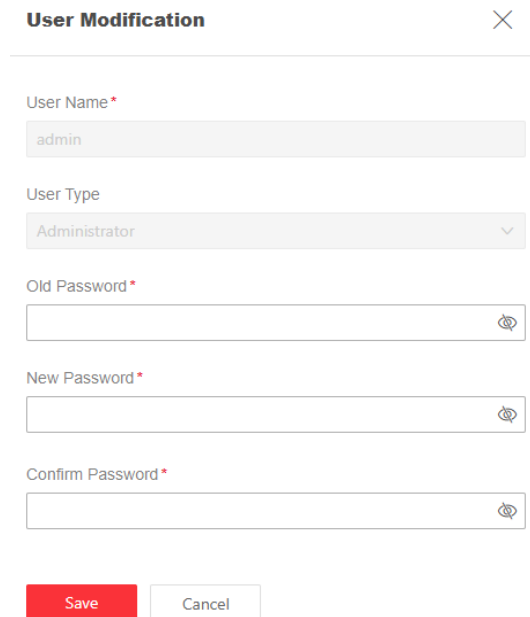
Figure 6-3 Set DST

6.1.4 Manage User

The user management can let administrator change admin's password, and view online users.

Steps

1. Go to **Configuration** → **System** → **User Management** → **User Management**.
2. Click  in the operation list to change user password.
3. Enter **Old Password**, **New Password**, and **Confirm Password**.
4. Click **Save**.



The image shows a 'User Modification' dialog box with a close button (X) in the top right corner. It contains the following fields and controls:

- User Name ***: A text input field containing the value 'admin'.
- User Type**: A dropdown menu currently showing 'Administrator'.
- Old Password ***: A password input field with a toggle icon on the right.
- New Password ***: A password input field with a toggle icon on the right.
- Confirm Password ***: A password input field with a toggle icon on the right.
- At the bottom, there are two buttons: a red 'Save' button and a white 'Cancel' button.

Figure 6-4 Change Password

5. Optional: Click **Online User** to view online users.

6.2 Network Settings

6.2.1 Set TCP/IP

Steps



The supported parameters vary with different models. The actual device prevails.

1. Go to **Configuration** → **Network** → **Network Settings** → **TCP/IP**.

TCP/IP

NIC Type:

DHCP: ☐

*IPv4 Address:

*IPv4 Subnet Mask:

*IPv4 Default Gateway:

Physical Address:

MTU:

DNS Server Configuration

*Preferred DNS Server:

*Alternate DNS Server:

Figure 6-5 Set IP Address

2. Set network parameters.

NIC Type

Select a NIC (Network Interface Card) type according to your network condition.

DHCP

The device automatically gets the IP parameters from the network if you check **DHCP**. The device IP address is changed after enabling the function. You can use SADP to get the device IP address.

Note

The network that the device is connected to should support DHCP (Dynamic Host Configuration Protocol).

Manual

You can set the device IP parameters manually. Enter **IPv4 Address**, **IPv4 Subnet Mask**, and **IPv4 Default Gateway**.

MTU

It stands for maximum transmission unit. It is the size of the largest protocol data unit that can be communicated in a single network layer transaction.
The valid value range of MTU is 1280 to 1500.

DNS Server Configuration

It stands for domain name server. It is required if you need to visit the device with domain name. And it is also required for some applications (e.g., sending email). Set **Preferred DNS Address** properly if needed.

3. Click **Save**.

6.2.2 Set HTTP(s)

It refers to the port through which the browser accesses the device. For example, when the HTTP port is modified to 81, you need to enter **http://192.0.0.64:81** in the browser address bar for login.

Steps



The supported parameters vary with different models. The actual device prevails.

1. Go to **Configuration** → **Network** → **Network Service** → **HTTP(s)**.
2. Set **HTTP Port** according to actual demands.

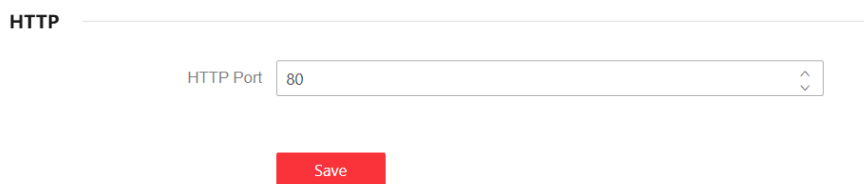


Figure 6-6 Set HTTP(s)

6.2.3 Set WebSocket(s)

It refers to the full-duplex communication protocol port based on TCP. Enable the port for live view without plug-in. It can only be accessed via certificate verification with high security.

Steps



The supported parameters vary with different models. The actual device prevails.

1. Go to **Configuration** → **Network** → **Network Service** → **WebSocket(s)**.
2. Set **Port** according to actual demands.

WebSocket

*Port 8080

Save

Figure 6-7 Set WebSocket(s)

6.2.4 Set Address Mapping

The 2 network interfaces of the device communicate with the switch (external port) and the array (internal port) respectively, and do not communicate with each other. Enable the function to set the array information through the external port.

Steps



Note

The supported parameters vary with different models. The actual device prevails.

1. Go to **Configuration** → **Network** → **Network Service** → **Address Mapping**.
2. Click **Add** to add mapped address, and enter respective parameters according to actual demands.

Add

Mapped IP *

Port Mapping

1

External Port

1

Transport Protocol

TCP

Save

Cancel

Figure 6-8 Add

3. Click **Save**.
4. Optional: Click **Delete** to delete added address after selecting specific address.

6.3 Storage Settings

Storage settings allow you to format selected HDD disk.

Steps

1. Go to **Configuration** → **Storage** → **Storage Management** → **HDD**.
2. Check the HDD disk to be formatted.
3. Click **Formatting**.

Formatting

☒	Disk No.	Capacity	Free Space	Type	Status	Attribute
☒	1	119850MB	119040MB	SD	Normal	Read/Write

Figure 6-9 Format

6.4 Intelligent Analysis Settings

6.4.1 Set Intelligent Analysis

The camera will analyze the targets reported by the radar, and act linkage response to the selected target types.

Before You Start

- Link and calibrate the camera.
- Link the camera to the radar detection zones or trigger lines.
- Make sure the camera supports this function.

Steps

1. Go to **Configuration** → **Intelligent Analysis** → **Intelligent Analysis**.

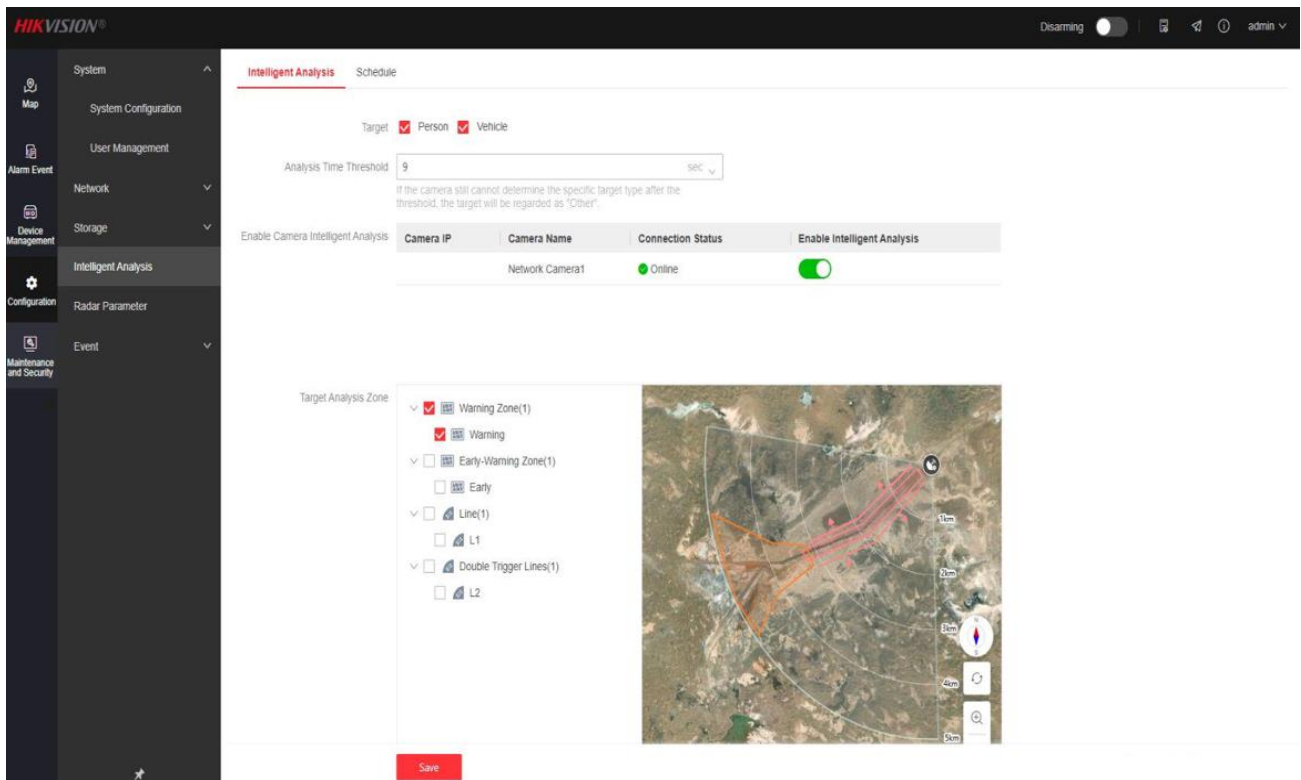


Figure 6-10 Intelligent Analysis Overview

2. Set video content analysis parameters.
 - 1) Select Target (Person, Vehicle).
 - 2) Set Analysis Time Threshold.
3. Slide to **Enable Intelligent Analysis** function.
4. Select the zone(s) to trigger the video content analysis.

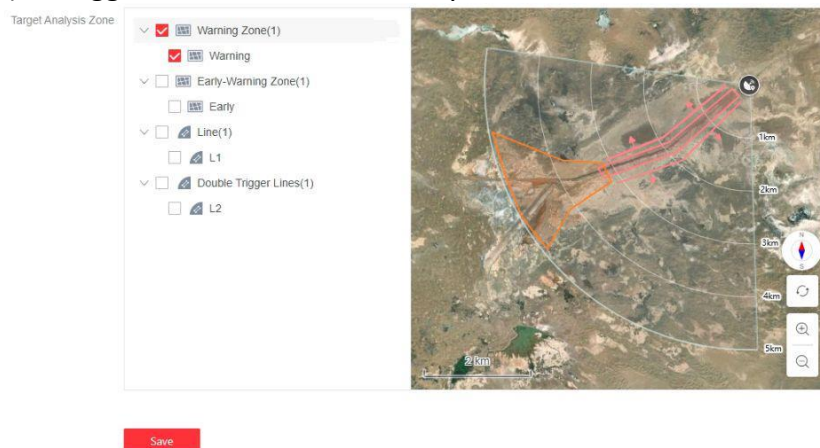


Figure 6-11 Select Zones

5. Click **Save**.

Note

After enabling intelligent analysis function, only targets in zones linked to the camera will be analyzed.

The intelligent analysis interface can only add one camera IP channel, and the configured warning zones and lines of the camera will be automatically synchronized to the intelligent analysis interface.

6.4.2 Set Intelligent Analysis Time Schedule

Steps

1. Go to **Configuration** → **Intelligent Analysis** → **Intelligent Analysis Time Schedule**.
2. Set intelligent analysis time schedule.
 - 1) Click **Intelligent Analysis**.
 - 2) Set the time schedule.
3. Adjust the schedule.
 - Click a period and enter the start time and end time in the pop-up window.
4. Optional: Delete.
 - Click **Eraser** to delete selected schedule.
 - Click **Clear** to delete all the schedules.
5. Optional: Click  to copy the settings to other days.
6. Click **Save**.

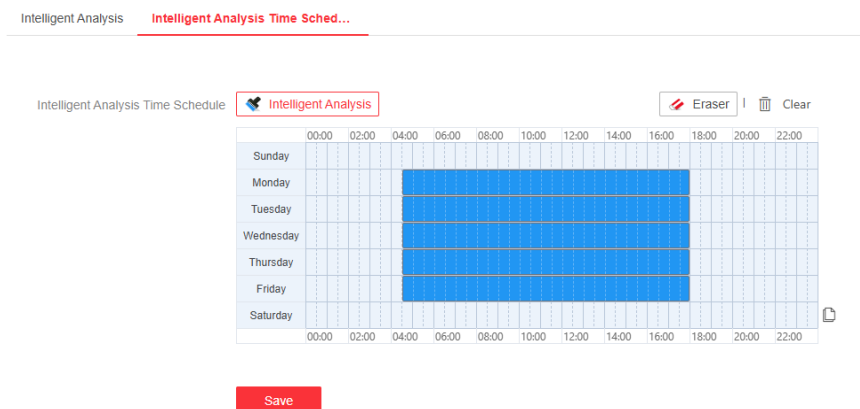


Figure 6-12 Set Intelligent Analysis Time Schedule

6.5 Radar Parameter Settings

Go to **Configuration** → **System** → **Radar Parameter** to set the radar's parameters like signal sensitivity, speed sensitivity, frequency band type, target tracking strategy, mandatory tracking,

mandatory tracking time, and view array configuration, etc.

You can set the radar's parameters according on-site effect and this is optional.

6.5.1 Detection Parameter

Select the Vegetation and Traffic conditions

Based on the on-site conditions, select the environmental vegetation and traffic conditions within the detection area. The equipment will automatically adjust the appropriate radar detection parameters based on the selection.

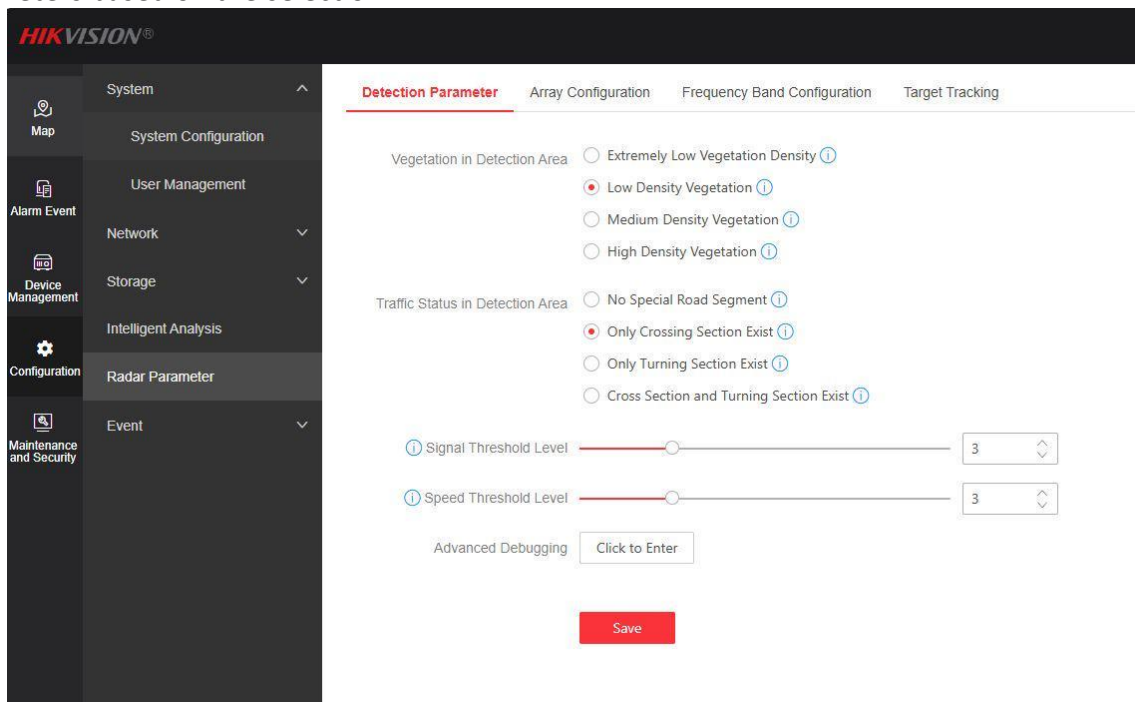


Figure 6-13 Set Detection Parameters

Parameter Name	Meaning
Extremely Low Vegetation Density	Extremely low density or even barren areas, with vegetation coverage less than 10%, such as deserts, gravel plains, alpine tundra, severely degraded land, scattered vegetation distribution, mines, urban built-up areas, exposed rocks, glaciers, and water bodies.
Low Density Vegetation	Low vegetation density means the vegetation coverage is between 10% and 30%, including grassland, savanna, fallow farmland, etc., with sparse trees and shrubs as the main component.
Medium Density Vegetation	Moderate vegetation density means the

	vegetation coverage is between 30% and 70%. For example, sparse forest, shrubbery, farmland (mid-growth period), etc., where vegetation and bare ground are intermingled.
High Density Vegetation	High vegetation density means the vegetation coverage is over 70%, including dense forests, tropical rainforests, and mature artificial forests where the ground is almost covered by vegetation.
No Special Road Segment	Indicates that there are no special road segments within the radar detection coverage area.
Only Crossing Section Exist	Indicates that only 'Crossing Section' exists within the radar detection coverage area.
Only Turning Section Exist	Indicates that only 'Turning Section' exists within the radar detection coverage area.
Cross Section and Turning Section Exist	Indicates 'Crossing Section' and 'Turning Section' are all within the radar detection coverage area.

Set the sensitivity of radar detection

Parameter Name	Meaning
Signal Sensitivity	It represents for the radar signal detection threshold. The higher the sensitivity is, the easier the targets with weak signal can be detected.
Speed Sensitivity	It is used to filter the mistaken alarms caused by the low-speed targets. The higher the sensitivity is, the easier the low-speed targets can be detected.

Advanced Debugging

If the above parameters do not meet the debugging requirements, advanced debugging can be carried out.

Go to **Configuration** → **Radar Parameter** → **Detection Parameter** → Click to enter the **advanced debugging**, or **Map** → **Quick Operation** → Click to enter the **advanced debugging**



Note

Advanced debugging is recommended for professionals only.

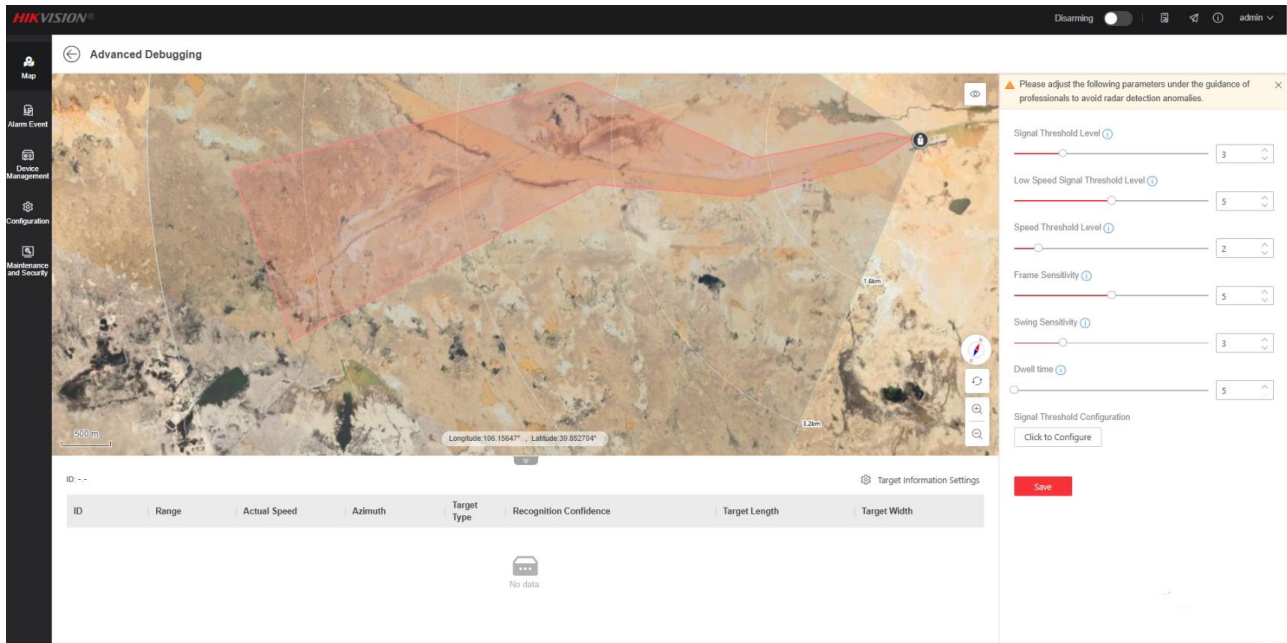


Figure 6-14 Advance Debugging Mode

6.5.2 Frequency Configuration

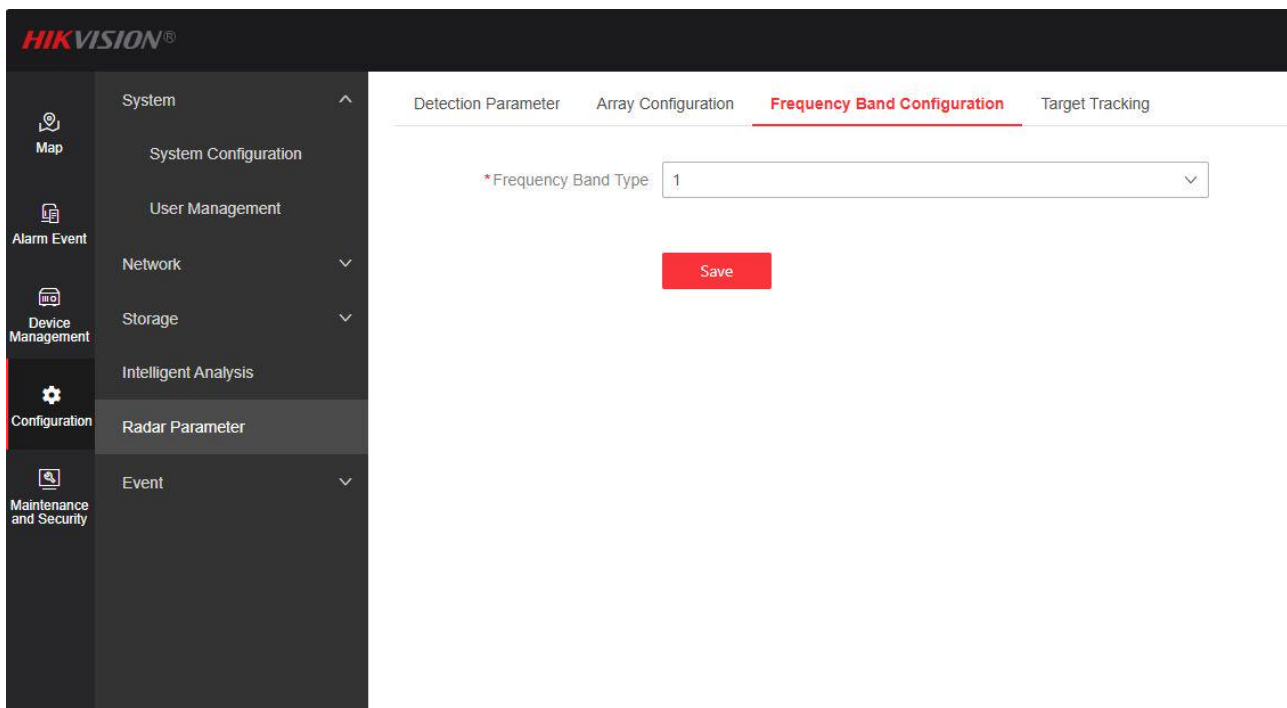


Figure 6-15 Set Frequency Band Type

Frequency Band Type

The radar supports multiple frequency band settings, and you can select the frequency band based on your actual needs here.

Note

When multiple radars cover the same area, interference from overlapping frequencies can be reduced by setting different frequency bands. Please try to avoid overlapping radar coverage areas.

6.5.3 Target Tracking

Figure 6-16 Set Target Tracking

Target Tracking Strategy

Time Priority

The target that enters the warning zone and early-warning zone is being tracked until the target disappears, and then the next target that triggers the alarm will be tracked.

Distance Priority

The target that is shortest away from the radar will be tracked.

Multi-Target Auto-Switch

The target will be switched automatically from the smallest to the largest target No. according to the set **Switch Time Interval**.

Target Trigger Priority

The latest target will be automatically tracked and the next new target will be tracked after the set **Minimum Tracking Duration for New Target** ends. If there is no new target, the tracking target will be switched automatically from the smallest to the largest target No. according to the set **Polling Time**.

Start Mandatory Tracking

It is used to enable mandatory tracking. If it is enabled, the camera will start mandatory tracking on the target after double-clicking the target in the radar area. After this parameter is enabled, you need to set mandatory tracking time.

Note

Target tracking parameters take effect on all cameras.

6.6 Event and Alarm Settings

6.6.1 Set Speed Alarm

If you enable speed alarm function, when a target in the zone is within the specified speed range, the device will detect the target as an intruder and trigger an alarm.

Go to **Configuration** → **System** → **Event** → **Alarm Configuration** → **Speed Alarm**, click **Enable**, and set **Minimum Speed** and **Maximum Speed**.

Speed Alarm Arming/Disarming Schedule Alarm Output

Enable ☒

If you select this, when a target in the zone is within the specified speed range, the device will detect the target as an intruder and trigger an alarm.

Minimum Speed m/s

Maximum Speed m/s

Save

Figure 6-17 Set Speed Alarm

6.6.2 Set Arming/Disarming Schedule

1. Go to **Configuration** → **System** → **Event** → **Alarm Configuration** → **Arming/Disarming Schedule**.

Arming/Disarming Schedule **Arming Schedule** Eraser Clear

	00:00	02:00	04:00	06:00	08:00	10:00	12:00	14:00	16:00	18:00	20:00	22:00
Sunday												
Monday												
Tuesday												
Wednesday												
Thursday												
Friday												
Saturday												

Save

Figure 6-18 Set Arming/Disarming Schedule

- Click **Arming Schedule** and drag the cursor on the time bar to set an arming time.
- Adjust the arming time.
 - Click a set arming period and enter the start time and end time in the pop-up window.
 - Drag two ends of the set arming period bar to adjust the length.
- Optional: Delete arming periods.
 - Click a set arming period and click **Eraser** on the arming schedule interface.

- Click **Clear** to delete all the arming schedules.
- Optional: Click  to copy the settings to other days.
 - Click **Save**.

6.6.3 Set Alarm Output

The external devices (such as the flash light or other audio alarm devices) can be linked to trigger alarms via the relay interfaces of the radar.

Note

Currently, only 1 external device is supported to link alarm output.

Steps

- Go to **Configuration** → **System** → **Event** → **Alarm Configuration** → **Arming Output**.
- Set **Alarm Output Name** and **Pulse Duration**.
- Enable **Link to Zone Alarm**, and select **Linked Zone** in the map.

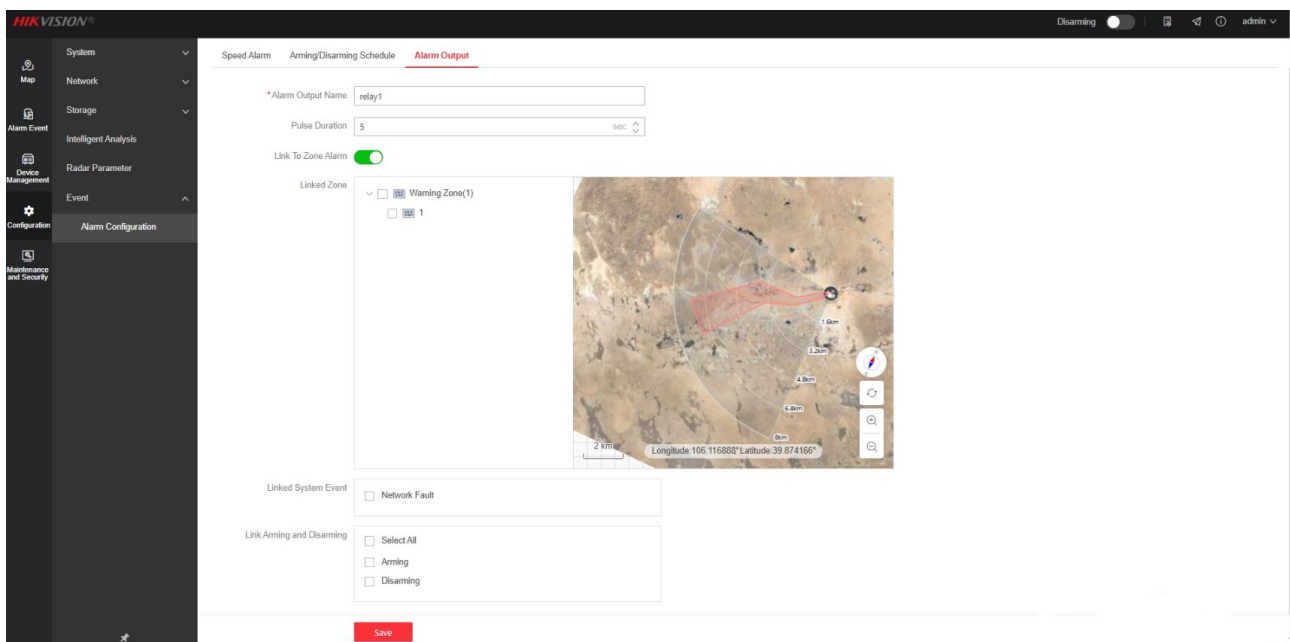


Figure 6-19 Set Alarm Output

- Set **Linked System Event**, and **Link Arming and Disarming**.
- Click **Save**.

The screenshot shows a configuration interface with two sections. The first section, 'Linked System Event', contains a single checkbox labeled 'Network Fault'. The second section, 'Link Arming and Disarming', contains three checkboxes: 'Select All', 'Arming', and 'Disarming'. Below these sections is a red 'Save' button.

Section	Options
Linked System Event	☐ Network Fault
Link Arming and Disarming	☐ Select All ☐ Arming ☐ Disarming

Save

Figure 6-20 Set Linked System Event and Link Arming and Disarming

6.7 Maintenance and Security

6.7.1 View Device Status

Go to **Maintenance and Security** → **Operation Information** → **Device Status**, and view the device status information.

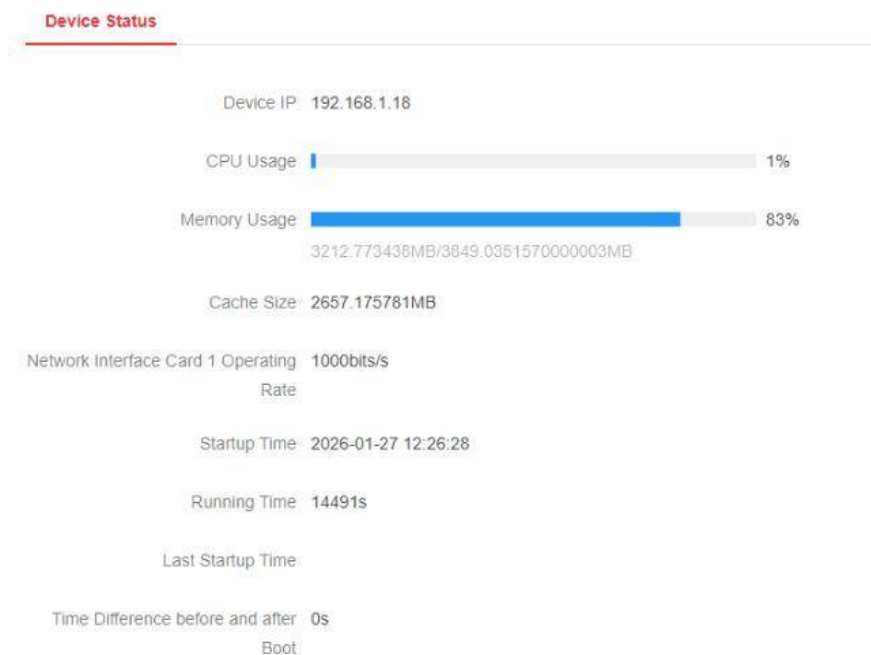


Figure 6-21 View Device Status

6.7.2 System Maintenance

Restart Device

Go to **Maintenance and Security** → **System Maintenance** → **Restart**, and click **Restart** to reboot the device.

Manual Restart

Reboot Device

Figure 6-22 Restart Device

Upgrade Device

Go to **Maintenance and Security** → **System Maintenance** → **Upgrade**, click  to upload local upgrade file, and click **Upgrade** to upgrade the device's firmware.

Firmware Version V2.3.1 build 251014

Local: Upgrade

Upgrade Configuration

Upgrade File 

Figure 6-23 Upgrade Device

Note

The upgrade process requires 3-10 minutes, please do not turn off the power. The device will automatically restart after the upgrade is completed.

Backup and Reset

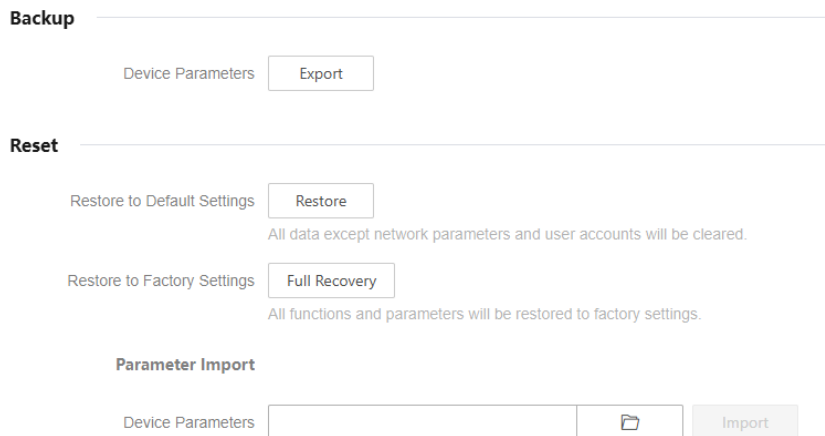
Go to **Maintenance and Security** → **System Maintenance** → **Backup and Reset**, and click **Export** to export the device's parameters, or click  to upload local device's parameters, and click **Import**

to import.

Go to **Maintenance and Security** → **System Maintenance** → **Backup and Reset**, click **Restore** to restore the device to default settings, and click **Full Recovery** to restore the device to factory settings.

Note

- Restore to default settings: All data except network parameters and user accounts will be cleared.
 - Restore to factory settings: All functions and parameters will be restored to factory settings.
-



The screenshot shows a web interface for 'Backup and Reset'. It is divided into three main sections: 'Backup', 'Reset', and 'Parameter Import'. The 'Backup' section has a 'Device Parameters' label and an 'Export' button. The 'Reset' section has two options: 'Restore to Default Settings' with a 'Restore' button and a note 'All data except network parameters and user accounts will be cleared.', and 'Restore to Factory Settings' with a 'Full Recovery' button and a note 'All functions and parameters will be restored to factory settings.'. The 'Parameter Import' section has a 'Device Parameters' label, a text input field, a folder icon button, and an 'Import' button.

Figure 6-24 Backup and Reset

Search Log

Log helps to locate and troubleshoot problems.

Steps

1. Go to **Maintenance and Security** → **System Maintenance** → **Log**.
2. Set search conditions.
3. Click **Search**.
The matched log files will be displayed on the log list.
4. Optional: Click **Reset** to reset search conditions.
5. Optional: Click **Export** to save the log files to your computer.

Security Radar User Manual

Major Type: All Types Sub Type: All Types Time: 2025-10-20 00:00:00 - 2025-10-20 23:59:59 Search Reset

Export

Serial No.	Time	Major Type	Sub Type	Channel No.	Local/Remote User	Remote Host Address	Parameter	Information
1	2025-10-20 09:35:30	Operation	Remote Login	00	admin	10.25.220.51	-	accessRadarSucc
2	2025-10-20 09:08:47	Operation	Remote Login	00	admin	10.25.220.51	-	accessRadarSucc
3	2025-10-20 09:05:57	Exception	radar Signal Restored	00	-	-	-	accessRadarSucc
4	2025-10-20 09:05:10	Exception	Radar Transmitter Fault	00	-	-	-	accessRadarSucc

Figure 6-25 Search Log

Debug Device

To raise network security, you are recommended to disable SSH service. The configuration is only used to debug the device for the professionals. Besides, you can export print log and device's diagnosis information.

Steps

1. Go to **Maintenance and Security** → **System Maintenance** → **Device and Debugging**.
2. Enable or disable **SSH**.
3. Click **Export** in print log and diagnosis information to export print log and device's diagnosis information.

SSH

Enable SSH ☐

Print Log

Print Log Export

Device Debugging

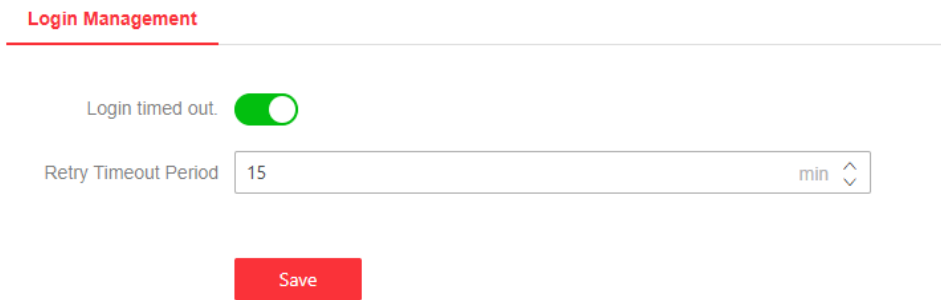
Diagnosis Information Export

Figure 6-26 Debug Device

6.7.3 Manage Login

Go to **Maintenance and Security** → **Security** → **Login Management**, and enable **Login Timed Out** to

set **Retry Timeout Period**.



The screenshot shows a settings page titled "Login Management" in red text. Below the title, there is a toggle switch for "Login timed out." which is currently turned on (green). Below this, there is a text input field for "Retry Timeout Period" containing the value "15". To the right of the input field, the text "min" is displayed next to a small downward arrow icon. At the bottom of the form, there is a red "Save" button.

Figure 6-27 Manage Login

When **Login Timed Out** is disabled, the device will not automatically log out regardless of which interface it is on. When **Login Timed Out** is enabled, the live view interface will not automatically log out. However, non-preview interfaces will automatically log out after the **Retry Timeout Period** is met.



See Far, Go Further