



Security Radar

User Manual

Legal Information

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About this Manual

The Manual includes instructions for using and managing the Product. Pictures, charts, images and all other information hereinafter are for description and explanation only. The information contained in the Manual is subject to change, without notice, due to firmware updates or other reasons. Please find the latest version of this Manual at the Hikvision website (<https://www.hikvision.com/>).

Please use this Manual with the guidance and assistance of professionals trained in supporting the Product.

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Regulatory Information

FCC Information

Please take attention that changes or modification not expressly approved by the party responsible for compliance could void the user's authority to operate the equipment.

FCC compliance: This equipment has been tested and found to comply with the limits for a Class B digital device, pursuant to part 15 of the FCC Rules. These limits are designed to provide reasonable protection against harmful interference in a residential installation. This equipment generates, uses and can radiate radio frequency energy and, if not installed and used in accordance with the instructions, may cause harmful interference to radio communications. However, there is no guarantee that interference will not occur in a particular installation. If this equipment does cause harmful interference to radio or television reception, which can be determined by turning the equipment off and on, the user is encouraged to try to correct the interference by one or more of the following measures:

- Reorient or relocate the receiving antenna.
- Increase the separation between the equipment and receiver.
- Connect the equipment into an outlet on a circuit different from that to which the receiver is connected.
- Consult the dealer or an experienced radio/TV technician for help.

This equipment should be installed and operated with a minimum distance 20cm between the radiator and your body.

FCC Conditions

This device complies with part 15 of the FCC Rules. Operation is subject to the following two conditions:

- This device may not cause harmful interference.
- This device must accept any interference received, including interference that may cause undesired operation.

EU Conformity Statement



This product and - if applicable - the supplied accessories too are marked with "CE" and comply therefore with the applicable harmonized European standards listed under the RE Directive 2014/53/EU, the EMC Directive 2014/30/EU, LVD Directive 2014/35/EU, the RoHS Directive 2011/65/EU.



2012/19/EU (WEEE directive): Products marked with this symbol cannot be disposed of as unsorted municipal waste in the European Union. For proper recycling, return this product to your local supplier upon the purchase of equivalent new equipment, or dispose of it at designated collection points. For more information see: <http://www.recyclethis.info>.



2006/66/EC (battery directive): This product contains a battery that cannot be disposed of as unsorted municipal waste in the European Union. See the product documentation for specific battery information. The battery is marked with this symbol, which may include lettering to indicate cadmium (Cd), lead (Pb), or mercury (Hg). For proper recycling, return the battery to your supplier or to a designated collection point. For more information see: <http://www.recyclethis.info>.



This product operates in a European non-harmonised frequency band.

Industry Canada ICES-003 Compliance

This device meets the CAN ICES-3 (B)/NMB-3(B) standards requirements.

This device complies with Industry Canada licence-exempt RSS standard(s). Operation is subject to the following two conditions:

1. this device may not cause interference, and
2. this device must accept any interference, including interference that may cause undesired operation of the device.

Le présent appareil est conforme aux CNR d'Industrie Canada applicables aux appareils radioexempts de licence. L'exploitation est autorisée aux deux conditions suivantes :

1. l'appareil ne doit pas produire de brouillage, et
2. l'utilisateur de l'appareil doit accepter tout brouillage radioélectrique subi, même si le brouillage est susceptible d'en compromettre le fonctionnement.

Under Industry Canada regulations, this radio transmitter may only operate using an antenna of a type and maximum (or lesser) gain approved for the transmitter by Industry Canada. To reduce potential radio interference to other users, the antenna type and its gain should be so chosen that the equivalent isotropically radiated power (e.i.r.p.) is not more than that necessary for successful communication.

Conformément à la réglementation d'Industrie Canada, le présent émetteur radio peut fonctionner avec une antenne d'un type et d'un gain maximal (ou inférieur) approuvé pour l'émetteur par Industrie Canada. Dans le but de réduire les risques de brouillage radioélectrique à l'intention des autres utilisateurs, il faut choisir le type d'antenne et son gain de sorte que la puissance isotrope rayonnée équivalente (p.i.r.e.) ne dépasse pas l'intensité nécessaire à l'établissement d'une communication satisfaisante.

This equipment should be installed and operated with a minimum distance 20cm between the radiator and your body.




Cet équipement doit être installé et utilisé à une distance minimale de 20 cm entre le radiateur et votre corps.

Battery Caution

- This equipment is not suitable for use in locations where children are likely to be present.
- CAUTION: Risk of explosion if the battery is replaced by an incorrect type.
- Improper replacement of the battery with an incorrect type may defeat a safeguard (for example, in the case of some lithium battery types).
- Do not dispose of the battery into fire or a hot oven, or mechanically crush or cut the battery, which may result in an explosion.
- Do not leave the battery in an extremely high temperature surrounding environment, which may result in an explosion or the leakage of flammable liquid or gas.
- Do not subject the battery to extremely low air pressure, which may result in an explosion or the leakage of flammable liquid or gas.
- Dispose of used batteries according to the instructions.

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 Access to Client Software/Web Client

You can login the Client Software or the web client to configure the device's parameters. You can also configure the radar's network parameters, alarm, permission, system, and search logs via the web client.



Note

You should activate the device the first time it accesses to the network for safety reasons. For details, see **Activation** .


Access to Client Software

Download and install the iVMS-4200 client software. Register to the software. Enter **Device Management** → **Device** → **+Add** in the **Maintenance and Management** list to add the device.



Note

- You should set the device port No. as 80.
 - The activation user name and password are used for device login, registration, etc.
-

After the device is completely added, click  to enter the device configuration page. You can configure the device parameters in this page.

Access to Web Client

After the device is connected to the network, you can search the device IP address via the iVMS-4200 client software and the SADP software. Input the searched IP address in the address bar in the web page and press **Enter**. Use the activation user name and password to login. You can configure the device parameters in the web page.

Chapter 2 Activation

In order to protect personal security and privacy and improve the network security level, you should activate the device the first time you connect the device to a network.

2.1 Activate Device via Client Software

Before You Start

- Get the iVMS-4200 client software from the supplied disk or the official website <http://www.hikvision.com/en/>. Install the software by following the prompts.
- The device and the PC that runs the software should be in the same subnet.

Steps

1. Run the client software.
2. **Optional:** Click , select the **Cloud P2P Region**, and login the Cloud P2P account.



Note


- For the first use, you need to register a cloud P2P account.
- After logging in, you can store your device on the cloud.

-
3. Enter **Device Management** → **Device** in the **Maintenance and Management** list.
 4. Click **Online Device**.
 5. Check the device status from the online device list, and select an inactive device.
 6. Click **Activate**.
 7. Create and confirm the admin password of the device.
-



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.

8. Click **OK** to start activation.
Device status will change to **Active** after successful activation.
9. Edit IP address of the device.
 - 1) Select a device and click  on the online device list.
 - 2) Change the device IP address to the same subnet with your computer and set port number as 80.
 - 3) Enter the admin password of the device and click **OK** to complete modification.
10. **Optional:** Check the device on the online device list and click **Add** to add the device to the device list.

2.2 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/en/>, and install the SADP according to the prompts.
- The device and the PC that runs the SADP tool should be within the same subnet.

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

Steps

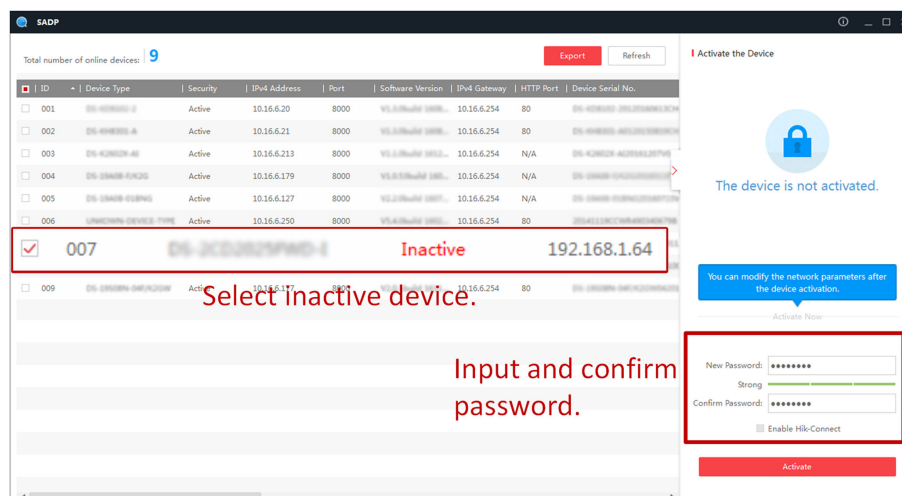
1. Run the SADP software and search the online devices.
2. Find and select your device in online device list.
3. Input new password (admin password) and confirm the password.



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.



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 subnet as your computer by either modifying the IP address manually or checking **Enable DHCP**.
 - 3) Input the admin password and click **Modify** to activate your IP address modification.

2.3 Activate Device via Web Browser

Use web browser to activate the device. Use SADP software or PC client to search the online device to get the IP address of the device, and activate the device on the web page.

Before You Start

Make sure your device and your PC connect to the same LAN.

Steps

1. Open a web browser and input the IP address of the device.



Note

If you connect the device with the PC directly, you need to change the IP address of your PC to the same subnet as the device. The default IP address of the device is 192.0.0.64.

2. Create and confirm the admin 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.

3. Click **OK** to complete activation.
4. Edit IP address of the device.
 - 1) Enter IP address modification page.
 - 2) Change IP address.
 - 3) Save the settings.


Chapter 3 Wired Network Settings

You can set the device IP address and other network parameters.

Steps

 **Note**

Functions varied depending on the model of the device.

1. In the client software, enter **Device Management** page.
2. Select the device in the Device for Management list, click .
3. Click **Communication Parameters** → **Wired Network Settings** to enter the page.

Wired Network Settings

*Network Card Type

Self-Adaptive

DHCP

☐

*IPv4 Address

*Subnet Mask

*Gateway

*DNS1

*DNS2

*HTTP Port

80

*Websocket Port

8080

Save

Figure 3-1 Wired Network Settings Page

4. Set the parameters.
 - Automatic Settings: Enable **DHCP** and set the HTTP port.
 - Manual Settings: Disabled **DHCP** and set **IP Address**, **Subnet Mask**, **Gateway Address**, **DNS Server Address**.

 **Note**

By default, the HTTP port is 80, which is not editable.

5. **Optional:** Set correct DNS server address if the device needs to visit Hik-Connect server via a domain name.
6. Set correct DNS server address if the device needs to visit server via a domain name.
7. Click **Save**.

Chapter 4 Radar Settings

You can add zones, and set camera tracking parameters for the radar in the client software or web client.

4.1 Radar Settings in the Web Client

Edit maps, radars, zones and trigger lines in web client.



Note

- Staying in the Radar page for 2 hours without any operation will automatically log out.
 - Staying in the Configuration page for 5 minutes without any operation will automatically log out.
 - The Radar page in the web client cannot receive CID alarms and zone color changes.
-

4.1.1 Add Map

Steps

1. Enter the IP address of the radar and log in.
 2. Click **Radar** to enter the page.
 3. Click **Edit** to enter the editing mode.
 4. Click **Map Management → Add Map**.
-



Note

The added map should be less than 20 MB.

5. Load a map and click **OK**.
6. Click **Map Management → Edit Scale**.
7. Click on the map to draw a straight line, select the end position and click again to complete the drawing.
8. Enter the actual distance between two points.

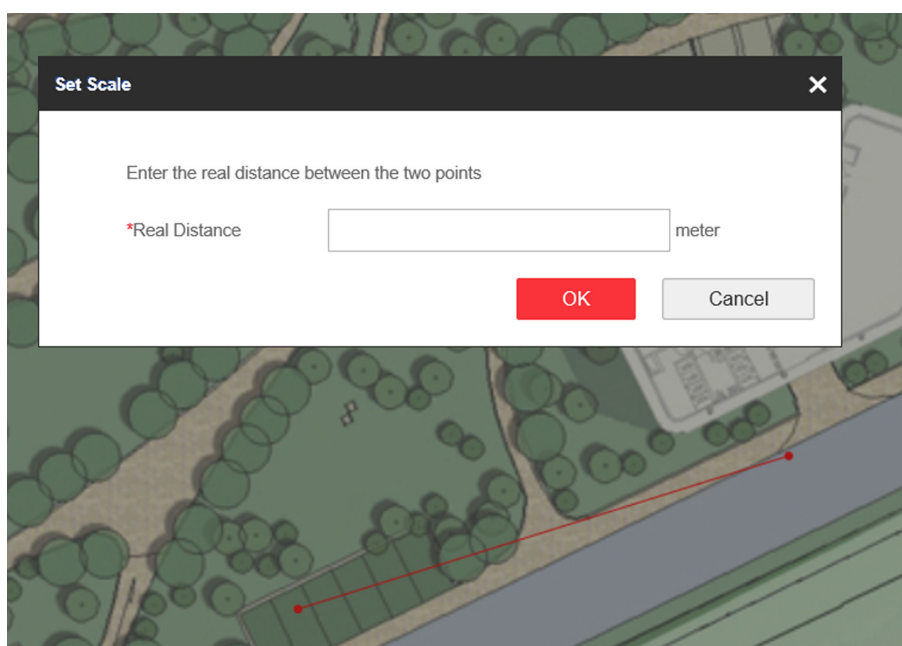


Figure 4-1 Edit Scale



Note

The word range is the predicted distance range of system. You should enter the number in the this range.

-
9. Click **OK**.
 10. Adjust the radar position. Drag the sector to make the radar detection area cover the required filed. You can rotate the sector with the icon 🔄 on the arc side of the sector.
 11. Click **Finish** to fix the radar.
 12. **Optional:** To arm or disarm the radar:
 - Click ☑ to arm the radar.
 - Click to disarm the radar.
 13. **Optional:** The upper left corner of the map will show the radar's identification of the target.
 - 👤 is identified as human.
 - 🚗 is identified as vehicles.
 - 📶 is identified as others.

4.1.2 Add Zones

Steps

1. Enter the IP address of the radar and log in.
2. Click **Radar** to enter the page.
3. Click **Edit** to enter the editing mode.

4. **Optional:** Enable **Enable Auxiliary** in the upper left corner of the map. The target track will appear on the radar detection area. You can draw a zone with reference to the track. The track cleared when disabled.

5. Click **Draw Zone Manually** → **Draw Zone** , and click the mouse to draw a zone on the radar detection area. You can also click **Draw Zone Manually** → **Quick Zone** to draw a quick zone.

Quick Zone

After clicking, a zone with a side length of 1/5 of the detection distance will be generated.



Note

- Zones can overlap, the priority of the effective overlapping zone is: Disabled Zone>Warning Zone>Early Warning Zone. That is, Early Warning Zone can contain Warning Zone and Disabled Zone, and Warning Zone can contain Disabled Zone.
- You can zoom in/out to adjust the size of the displayed radar area.

6. Right-click to complete drawing, and the system will pop up a window. Enter the zone name, and select **Early Warning Zone**, **Warning Zone**, or **Disabled Zone** as the zone type.

Early Warning Zone

The early warning zone will identify target that has potential risks in advance and trigger alarm, but will not store alarm track. The early warning zone is green.

Warning Zone

The warning zone will identify the targets entering the area and trigger alarm. The warning zone is orange.

Disabled Zone

The disabled zone will block the target track into the area. rm. The disabled zone is gray.

7. Click **OK**.

8. **Optional:** Edit or delete the zone.

- 1) Double click on the zone to enter the zone editing mode.
- 2) Put the cursor on the line of the zone and it will change to a cross, click to add a marker.

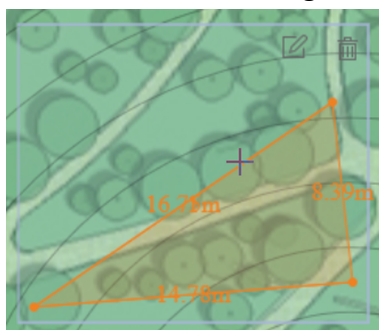


Figure 4-3 Add a Marker

- 3) Drag the marker to change the shape of the zone.

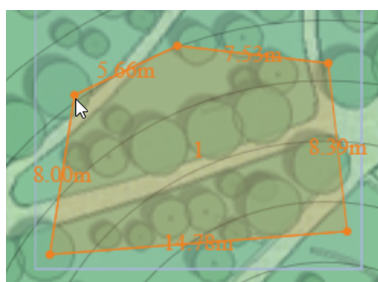


Figure 4-4 Drag a Marker

4) Hold to move the zone.

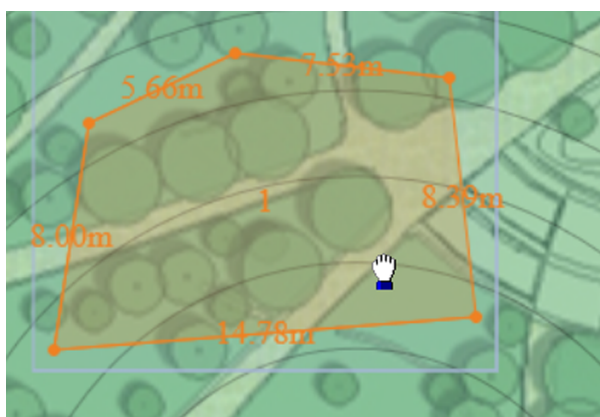




Figure 4-5 Move the Zone

5) Click outside the zone to exit the zone editing mode.



Note

- To delete a zone, click  in the zone editing mode.
- To edit the zone name and the zone type, click  in the zone editing mode.

4.1.3 Add Trigger Line

Before You Start

Before add trigger lines, you should disarm the radar.

Steps

1. Enter the IP address of the radar and log in.
2. Click **Radar** to enter the page.
3. Click **Edit** to enter the editing mode.
4. Click **Draw Trigger Line**. You can draw Trigger Line or Dual-trigger Line. You can also click **Quick Single Line** or **Quick Double Line** to draw quick lines.

Quick Single Line

After clicking, a trigger line with the length of 1/5 of the detection distance will be generated.

Quick Double Line

After clicking, a dual-trigger line with the length of 1/5 of the detection distance will be generated. The distance between 2 trigger lines is 2 m.

Note

- The alarm can be triggered by crossing the trigger line according to the trigger line rule; the alarm can be triggered only after crossing double lines of dual-trigger line according to the trigger line rule.
- Drawing a dual-trigger line that is too tortuous will cause a failure.

5. Draw the trigger line.

- 1) Click on the radar detection area to draw a trigger line.
- 2) Select **Left -> Right**, **Left <- Right** or **Left <-> Right** in the pop-up window.
- 3) Enter the distance between two lines. (Only for Dual-trigger Line.)

Note

- Direction determination: Set the starting point as the center of the circle, the trigger line is clockwise to the right, and counterclockwise to the left.
- Up to 4 trigger lines can be drawn.
- Up to 1 dual-trigger line can be drawn.
- Trigger line rule: A single arrow -> indicates that the target triggers an alarm when it crosses the trigger line in the direction of the arrow; a double arrow <-> indicates that the target triggers an alarm when it crosses the trigger line in any direction.
- The trigger line cannot cross each other.

6. Click **OK** to complete the drawing.

7. **Optional:** Double click on the trigger line to enter the trigger line editing mode.

- **Add a Marker:** Click on the line to add a marker.

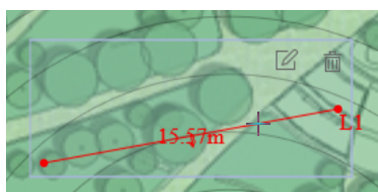


Figure 4-7 Add a Marker

- **Drag a Marker:** Drag a marker on the trigger line to move it.



Figure 4-8 Drag a Marker

- **Move the Trigger Line:** Hold the editing area to move the trigger line.

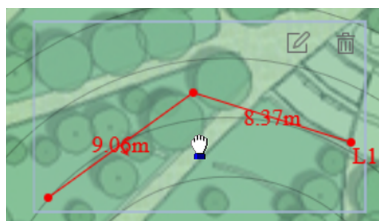




Figure 4-9 Move the Trigger Line

- **Edit:** Click  to edit the trigger line name, trigger line rule and distance (only for Dual-trigger Line).
- **Delete:** Click  to delete the trigger line.

4.1.4 Add False Track Filter Zone via Web

Manual calibration of false track caused by non-human factors can increase the accuracy of radar detection.

Before You Start

Before add false track filter zones, you should disarm the radar.

Steps

1. Enter the IP address of the radar and log in.
2. Click **Radar** to enter the page.
3. Click **Edit** to enter the editing mode.
4. Click **False Track Filter Zone** → **Display False Track Filter Zone** .
5. Click **False Track Filter Zone** → **Add False Track Filter Zone** .
6. In the radar detection area, left click to mark the circle center position, move the mouse to zoom in or out the false track zone, and right click to finish drawing.



Note

- Left click when drawing can adjust the circle center position.
- The radius of false track filter zone is 0.5 to 2 m.

7. **Optional:** Edit or delete the zone.
 - 1) Double click on the zone to enter the zone editing mode.
 - 2) Put the cursor on the line of the zone and it will change to a cross. You can zoom in or out the zone.



Figure 4-10 Zoom In or Out

3) Hold to move the zone.



Figure 4-11 Move the Zone

4) Click outside the zone to exit the zone editing mode.

 **Note**

To delete a zone, click  in the zone editing mode.

4.2 Radar Settings in the Client Software

Edit radar parameters in client software.

4.2.1 Add Map

Steps

1. In the client software, click **E-map** to enter the radar page.
2. Select the group of the radar, and click **Add map** to load a map.

 **Note**

Supported picture formats: jpg/png/bmp/jpeg.

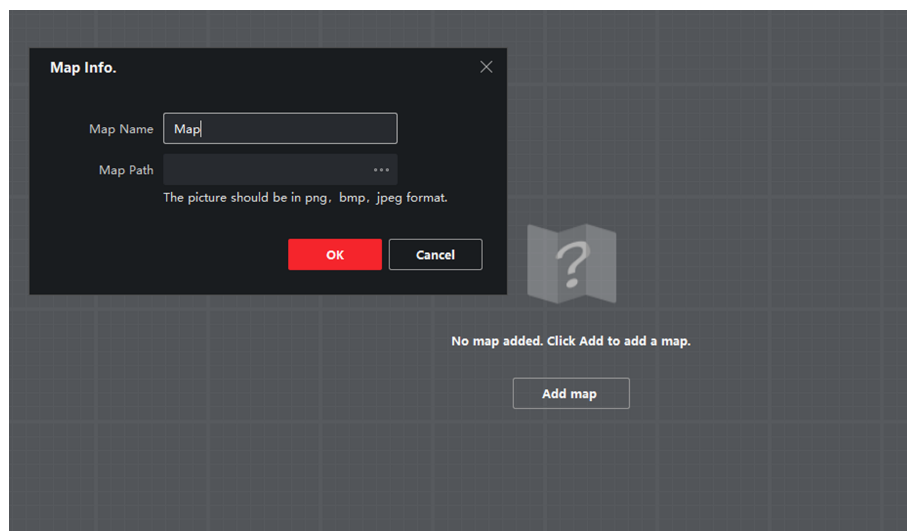


Figure 4-12 Add a Map

3. Click **OK**.
4. Click **Edit Scale**.
5. Click on the map to draw a straight line, select the end position and click again to complete the drawing.
6. Enter the actual distance between two points.

Note

The gray word range is the predicted distance range of system. You should enter the number in the this range.

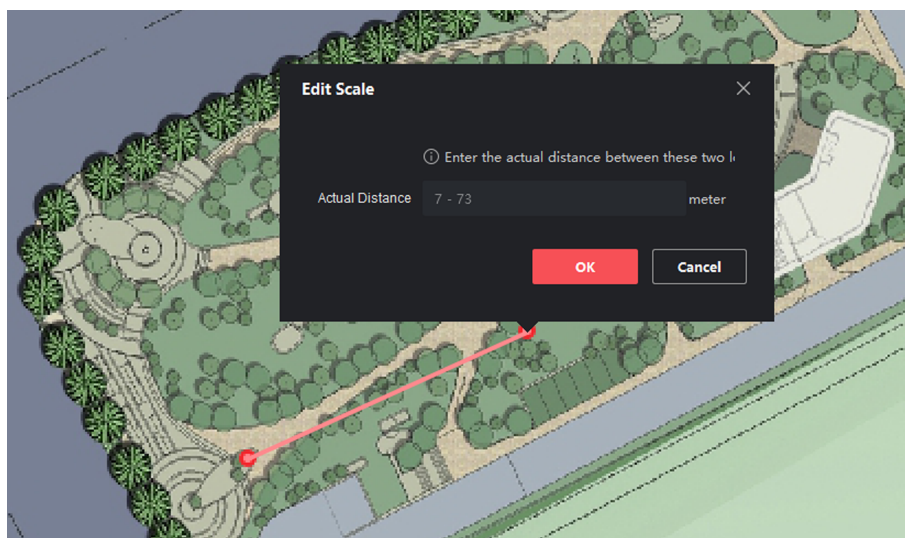


Figure 4-13 Edit Scale

7. Click **OK**.

4.2.2 Add the Radar to the Map

After adding the map, you need to add a radar to the map.


Before You Start

Make sure that you have added the radar (when adding the device, check **Import to Group**) to the client software, as well as the map.


Note



Multiple radars need to be added to the same group before they can be added to the same map.

Steps

1. In the E-map page, click **Edit** in the upper right corner of the map to enter the editing mode.
2. Expand the device group in the left list, and then click and drag the radar onto the map.
3. Adjust the radar position. Drag the radar icon to make the radar detection area cover the required filed. You can rotate the sector with the icon  on the arc side of the sector.

Note

- You can drag the red slider in the lower right corner on the map to adjust the range of displayed map, and click +/- to adjust the size of displayed map. Click  to reset the map.

4. **Optional:** Click  to delete radar or click  to edit radar parameters:

Menu	Description
Hot Spot Name	Radar name
Hot Spot Color	Color of radar name
Hot Spot Icon	The default icon cannot be changed
Apply to Other Radar Hot Spots	After checking, the changes will be synchronized to other radars.

5. Click **Finish** in the upper right corner of the map to exit the editing mode, and the radar is fixed.

6. **Optional:** After exiting the editing mode, click the radar icon and a menu appears above the radar icon.



Figure 4-14 Radar Menu

Menu	Description
Arm	Open the arming mode of the radar detection area.

Note

If there is a target in the warning zone when arming, a prompt will appear: **There are targets in the zone, enable mandatory arming?**, and click **OK** to arm.

Disarm	Close the arming mode of the radar detection area.
Event	Search and play back alarm events.

Note

For details, see [View Alarm Information](#) .

7. **Optional:** After exiting the editing mode, click **Arm/Disarm** → **Arm all Radars** or **Arm/Disarm** → **Disarm all Radars** in the upper right corner of the map to arm/disarm all radars on the map.

8. In editing mode, You can make map calibration.

- 1) Click **Edit** to enter the editing mode.
- 2) Click **Radar Settings** → **Map Calibration** .

- 3) Ask 2 calibration staffs to move into the radar detection area. Select their tracks on the detection area. Calibrator staffs stop at calibration points and the system will generate 2 markers at the terminal of tracks. Click **OK** on the pop-up window to confirm the terminal of the track or click **Delete** to select a new track.



Figure 4-15 Confirm Terminals

- 4) Click on the map to confirm the actual locations of marker 1 and marker 2.

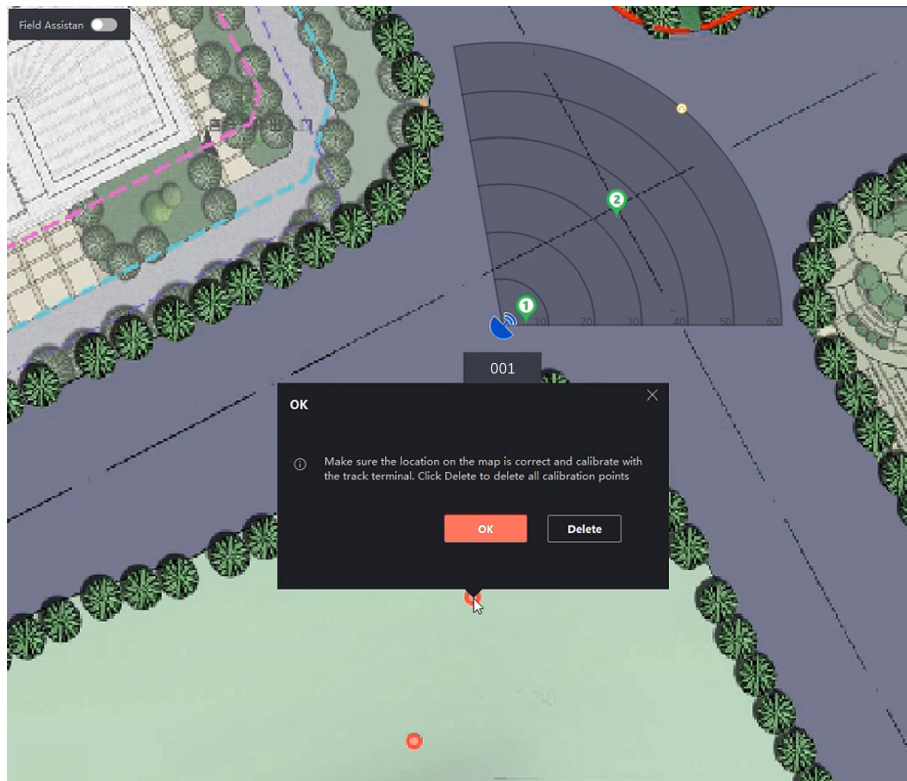


Figure 4-16 Confirm Actual Locations

- 5) Click **OK** on pop-up window. The system will automatically match the markers to the actual locations.

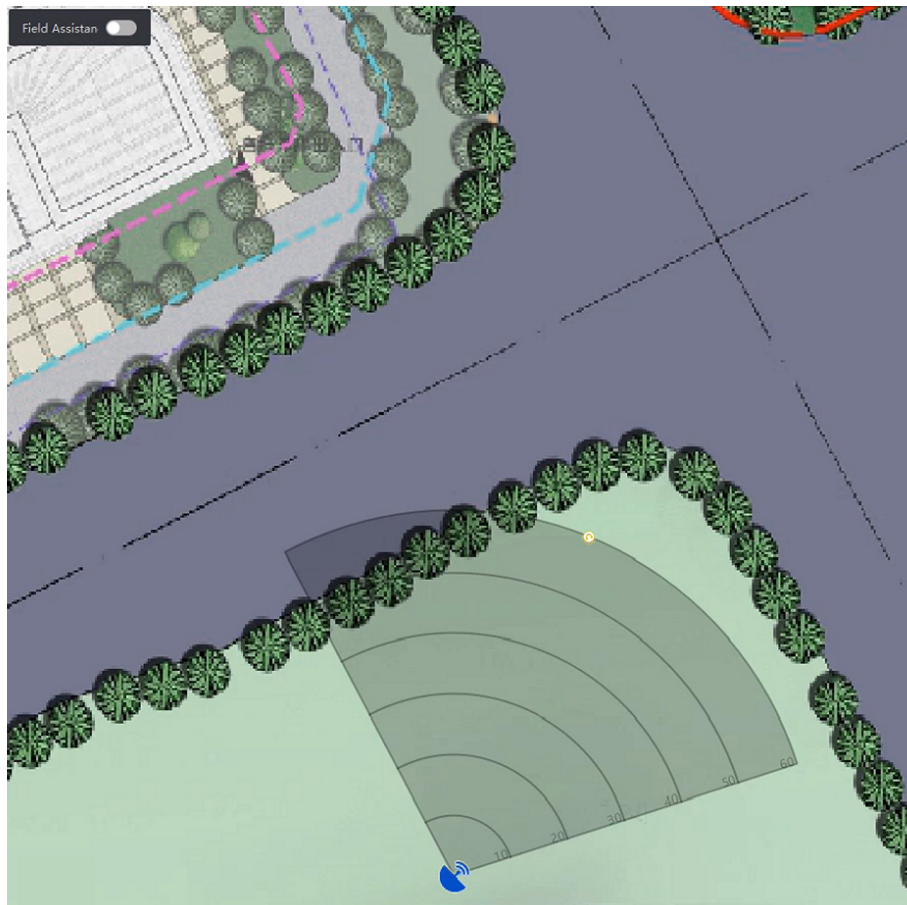


Figure 4-17 Finish Map Calibration

6) Click **Radar Settings** → **End Map Calibration**

4.2.3 Add Radar Zone

Before You Start

You need to disarm the radar before the operation. Click **Finish** in the E-map page to exit the editing mode. Click on the radar icon and select **Disarm** to disarm the radar.

Steps

1. In E-map page, click **Edit** to enter the editing mode.
2. **Optional:** Enable **Field Assistant** in the upper left corner of the map. The target track will appear on the radar detection area. You can draw a zone with reference to the track. The track cleared when disabled.
3. Click **Radar Settings** → **Draw Zone Manually**, and click the mouse to draw a zone on the radar detection area. You can also click **Draw Zone Manually** → **Quick Zone** to draw a quick zone.

Quick Zone

After clicking, a zone with a side length of $\frac{1}{5}$ of the detection distance will be generated.

Note

- Adding zones is a batch operation. If you only add zones to one radar, you need to right-click on the remaining radar detection zones and click **Cancel**.
 - Zones can overlap, the priority of the effective overlapping zone is: Disabled Zone>Warning Zone>Early Warning Zone. That is, Early Warning Zone can contain Warning Zone and Disabled Zone, and Warning Zone can contain Disabled Zone.
 - You can zoom in/out to adjust the size of the displayed radar area.
-



Figure 4-19 Overlap zones

Note

The radar detection area is subject to the actual model.

4. Right-click to complete drawing, and the system will pop up a window. Enter the zone name, and select **Early Warning Zone**, **Warning Zone**, or **Disabled Zone** as the zone type.

Early Warning Zone

The early warning zone will identify target that has potential risks in advance and trigger alarm, but will not store alarm track. The early warning zone is green.

Warning Zone

The warning zone will identify the targets entering the area and trigger alarm. The warning zone is orange.

Disabled Zone

The disabled zone will block the target track in the area. The disabled zone is gray.

5. Click **OK**.

6. **Optional:** Edit or delete the zone.

- 1) Double click on the zone, enter the zone editing mode.
- 2) Put the cursor on the line of the zone and it will change to a cross, click to add a marker.

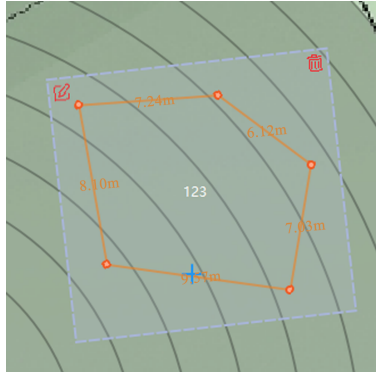


Figure 4-20 Add a Marker

- 3) Drag the marker to change the shape of the zone.

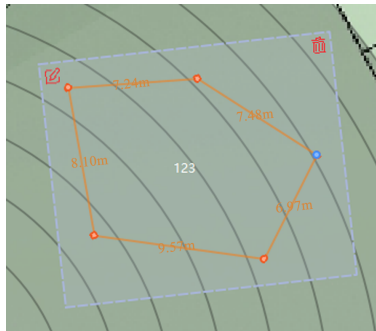


Figure 4-21 Drag a Marker

- 4) Hold to move the zone.

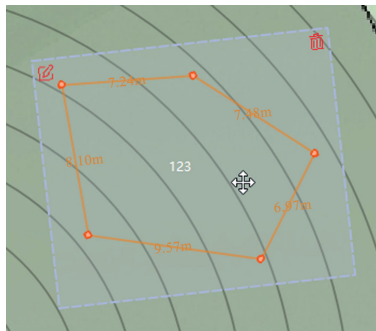




Figure 4-22 Move the Zone

- 5) Click outside the zone to exit the zone editing mode.

Note

- To delete a zone, click  in the zone editing mode.
 - To edit the zone name and the zone type, click  in the zone editing mode.
-

4.2.4 Add Trigger Line

You can draw trigger lines for the radar detection area and set trigger line rule.

Before You Start

- The radar is added to the map.
- Click **Finish** in the E-map page to exit the editing mode. Click on the radar icon and select **Disarm** to disarm the radar.

Steps

1. In E-map page, click **Edit** to enter the editing mode.
2. Click **Radar Settings** → **Draw Trigger Line** . You can draw Trigger Line or Dual-trigger Line. You can also click **Quick Single Line** or **Quick Double Line** to draw quick lines.

Quick Single Line

After clicking, a trigger line with the length of 1/5 of the detection distance will be generated.

Quick Double Line

After clicking, a dual-trigger line with the length of 1/5 of the detection distance will be generated. The distance between 2 trigger lines is 2 m.

Note

- You can draw trigger line for all radars on the map.
 - The alarm can be triggered by crossing the Trigger Line according to the alarm rule; the alarm can be triggered only after crossing double lines of Dual-trigger Line according to the alarm rule.
 - Drawing a dual-trigger line that is too tortuous will cause a failure.
-

3. Draw the trigger line.

- 1) Click on the radar detection area to draw a trigger line.
 - 2) Select **Left -> Right**, **Left <- Right** or **Left <-> Right** in the pop-up window.
 - 3) Enter the distance between two lines. (Only for Dual-trigger Line.)
-

Note

- Direction determination: Set the starting point as the center of the circle, the trigger line is clockwise to the right, and counterclockwise to the left.
- Up to 4 trigger lines can be drawn.
- Up to 1 dual-trigger line can be drawn.

- Alarm rules: A single arrow -> indicates that the target triggers an alarm when it crosses the trigger line in the direction of the arrow; a double arrow <-> indicates that the target triggers an alarm when it crosses the trigger line in any direction.
 - The trigger line cannot cross each other.
-



Figure 4-23 Draw a Trigger Line



Note

The radar detection area is subject to the actual model.

4. Click **OK** to complete the drawing.
5. **Optional:** Click on the trigger line will appear different options: **Edit**, **Delete** and **Move**. You can edit the trigger line by clicking on it.
 - **Add a Marker:** Click on the line to add a marker.



Figure 4-25 Add a Marker

- **Drag a Marker:** Drag a marker on the trigger line to move it.

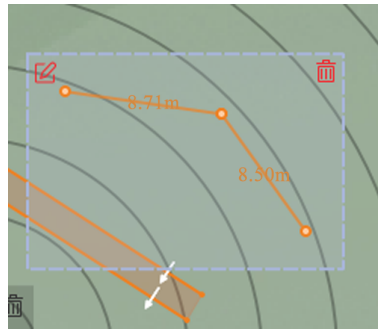


Figure 4-26 Drag a Marker

- **Move the Trigger Line:** Hold the editing area to move the trigger line.

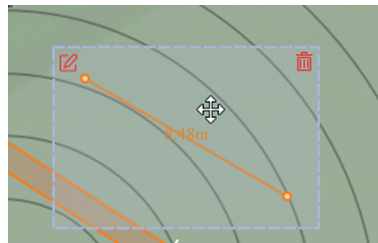




Figure 4-27 Move the Trigger Line

- **Edit:** Click  to edit the trigger line name, trigger line rule and distance (only for Dual-trigger Line).
- **Delete:** Click  to delete the trigger line.

4.2.5 Add False Track Zone

Manual calibration of false track caused by non-human factors can increase the accuracy of radar detection.

Before You Start

Click **Finish** in the E-map page to exit the editing mode. Click on the radar icon and select **Disarm** to disarm the radar.

Steps

1. In the client software, click **E-map** to enter the radar page.
2. Click **Edit** to enter the editing mode.
3. Click **False Track Filter Zone** → **Display False Track Filter Zone** .
4. Click **False Track Filter Zone** → **Add False Track Filter Zone** .
5. In the radar detection area, left click to mark the circle center position, move the mouse to zoom in or out the false track filter zone, and right click to finish drawing.



Note

- Left click when drawing can adjust the circle center position.
 - The radius of false track filter zone is 0.5 to 2 m.
-

6. Optional: Edit or delete the zone.

- 1) Double click on the zone to enter the zone editing mode.
- 2) Put the cursor on the line of the zone and it will change to a cross. You can zoom in or out the zone.



Figure 4-28 Zoom In or Out

- 3) Hold to move the zone.
- 4) Click outside the zone to exit the zone editing mode.

Note

To delete a zone, click  in the zone editing mode.

4.2.6 Other Auxiliary Functions

Live View

Note

Before using this function, you need to confirm that the speed dome has been calibrated and the speed dome has an linked zone.

In E-map page, click **Finish** to exit the editing mode. Click **Live View** and the live view window will appear on the bottom of the page. Drag the cameras in the left list to the live view window and you can view the video in real time.


Chapter 5 Camera Linkage Settings

The radar can work with cameras such as speed dome and box camera for target tracking and video recording.

5.1 Set Speed Dome Initial Position

Set the initial position of the speed dome to ensure the tracking accuracy.

Steps

1. Select a reference object about 50 m away from the speed dome. On the reference object, select a reference point whose altitude is the same as the speed dome's.
2. Enter the IP address of the speed dome in the web browser to enter the web client. Adjust the PTZ buttons to make sure that the reference point is displayed in the live view window. Click  to enable 3D location, click the reference point and the point will be in the middle of the frame.

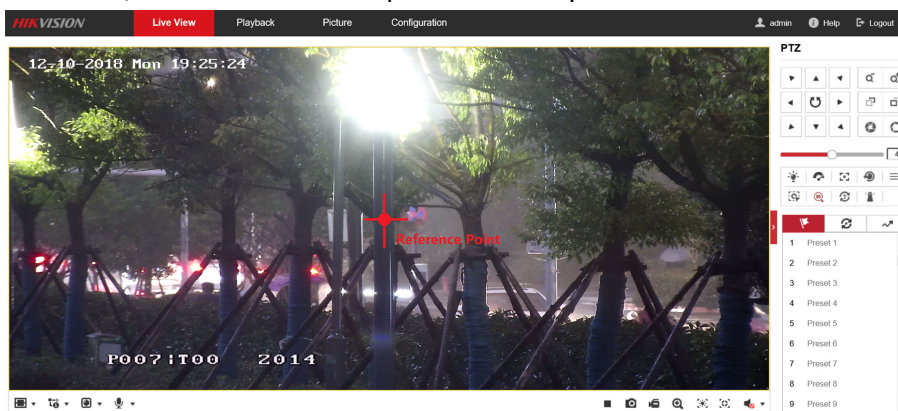



Figure 5-1 Reference Point Position

Note

- If the speed dome is installed tilted, after you click  , you may find the reference point is above the center of the frame or it is outside the frame. In this case, you should adjust the maximum elevation angle of the speed dome. For detail adjustment method, please refer to **How to Solve the Problem that No Reference Point is on the Frame While Setting the Speed Dome Initial Position?**
 - if the maximum elevation angle of the speed dome is adjusted, the reference point needs to be adjusted to the center of the frame again.
 - **PTZ:** Pan /tilt /zoom.
-
3. Enter the **Configuration → PTZ → Initial Position** page, and click **Set** to set the initial position.

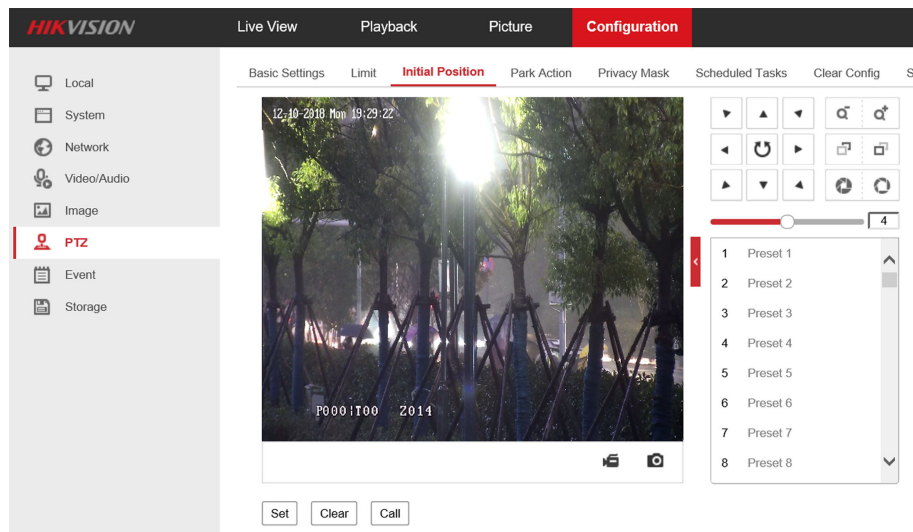


Figure 5-2 Set Initial Position

5.2 Link the Camera to the radar

Before You Start

Click **Finish** in the E-map page to exit the editing mode. Click on the radar icon and select **Disarm** to disarm the radar.

Steps

1. In the client software, click **Device Management**. Select a radar in the device list. Click  → **Smart Rule Settings** → **Camera Linkage Settings** to enter the page.

Note

You can also enter IP address of the radar in a browser to enter the web client. Click **Smart Rule Settings** → **Camera Linkage Settings** to enter the page.

2. Add a camera.

- 1) Click +.
- 2) Enter the IP address, port, user name, password of the camera, and select whether to link to NVR.

Note

To use the NVR for video storage, you can choose to link the NVR and configure the NVR parameters.

Figure 5-3 Add a Camera

- 3) Click **OK**.
3. Link zones and trigger lines to the camera.
 - 1) Select a camera in the camera list.
 - 2) Select zones and trigger lines in the **Linkage Settings**.
 - 3) Click **Save**.



Note

Up to 4 linked cameras can be enabled simultaneously on a single radar.

4. Add the camera to the client software.
 - 1) In the client software, click **Device Management**.
 - 2) Click **Add** in the device list, enter name, IP address, port, user name, password of the camera. Check **Import to Group**.
 - 3) Click **Add**.

5.3 Calibrate Camera

Calibrate the linked camera to ensure the accuracy of camera tracking.

Before You Start

- You need to disarm the radar before the operation. Click **Finish** in the E-map page to exit the editing mode. Click on the radar icon and select **Disarm** to disarm the radar.
- You need to link the speed dome to the zone before calibration, and set the speed dome initial position.
- The installation height of the linked speed dome should to be more than 3 m.

Steps

1. In the client software, click **Device Management** → **Group**.
2. Select the group of the radar and click **Ecoding Channels** → **Import**.
3. Check cameras need to be calibrated and click **Import**.

4. Click **E-map** to enter the page and click **Edit** to enter the editing mode.
5. Click **Radar Settings** → **Linked Positioning Settings**.
6. Select a radar in the drop-down list.
7. Click a live view window and select a camera in the **Linked Cameras** list. The live view window will show the camera screen.
8. Select the live view window of the camera needs to be calibrated, and double click on it to maximum the window.

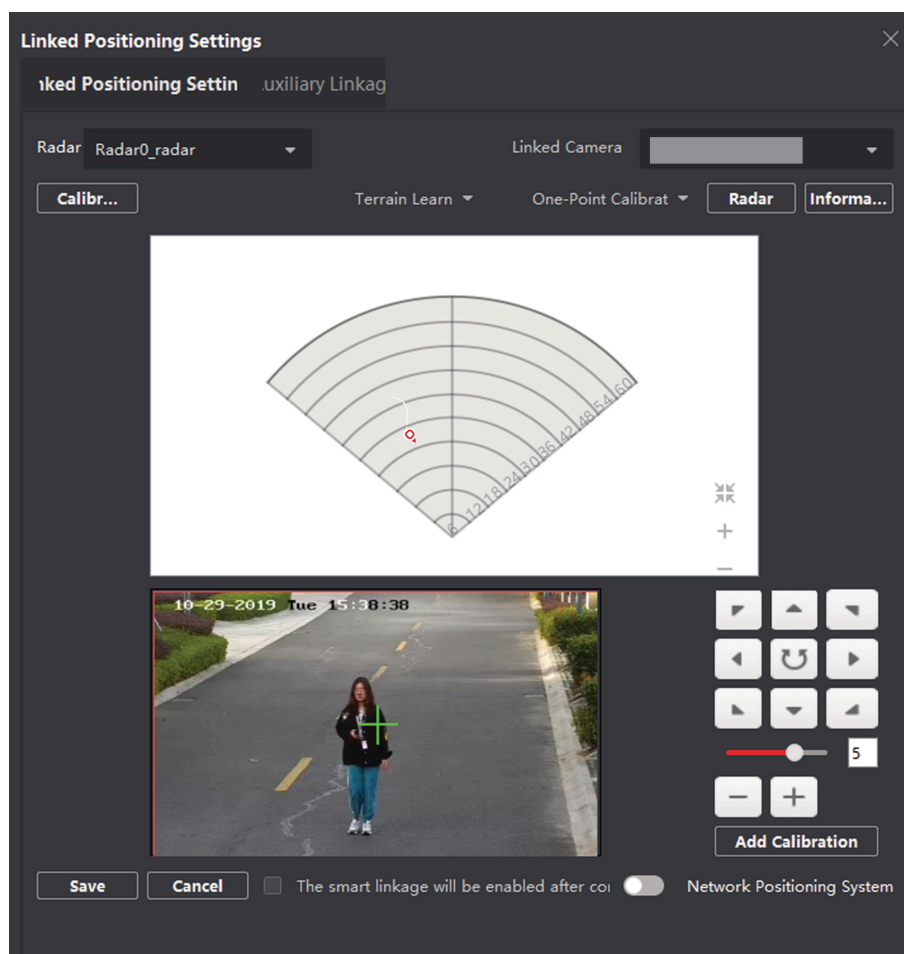


Figure 5-4 Calibration Page

9. Select a schedule for calibration point selection.

Note

According to the relative installation position of the radar and the camera, it is necessary to select a schedule for the calibration point selection (One-Point Calibration or Multi-Point Calibration).

- One-Point Calibration: Applicable to the scene where the radar and the camera are installed on the same pole or the camera is installed within a radar-centered range of 2 m (regardless of the altitude difference between the camera and the radar).
 - Multi-Point Calibration: The scene where is not applicable to the one-point calibration need to adopt the multi-point calibration method.
-



Figure 5-5 Installation Scene for One-Point Calibration



Figure 5-6 Installation Scene for Multi-Point Calibration

10. Calibrate the camera. According to the selected schedule, calibrate the camera by one-point calibration or multi-point calibration method.

5.3.1 One Point Calibration

Before You Start

Arrange a staff (Operation staff) to perform the calibration operation in the client software, and a staff (calibration staff) to cooperate with the calibration.

Steps

1. In calibration page, select **One-Point Calibration** as the calibration mode.
2. Select the track of calibration staff: Ask the calibration staff to move into the radar detection area. Compare the moving object in the live view window of the camera and the track in the radar field diagram, the operation staff needs to select the track of the calibration staff and click it. The color of the selected track will change from red to white.

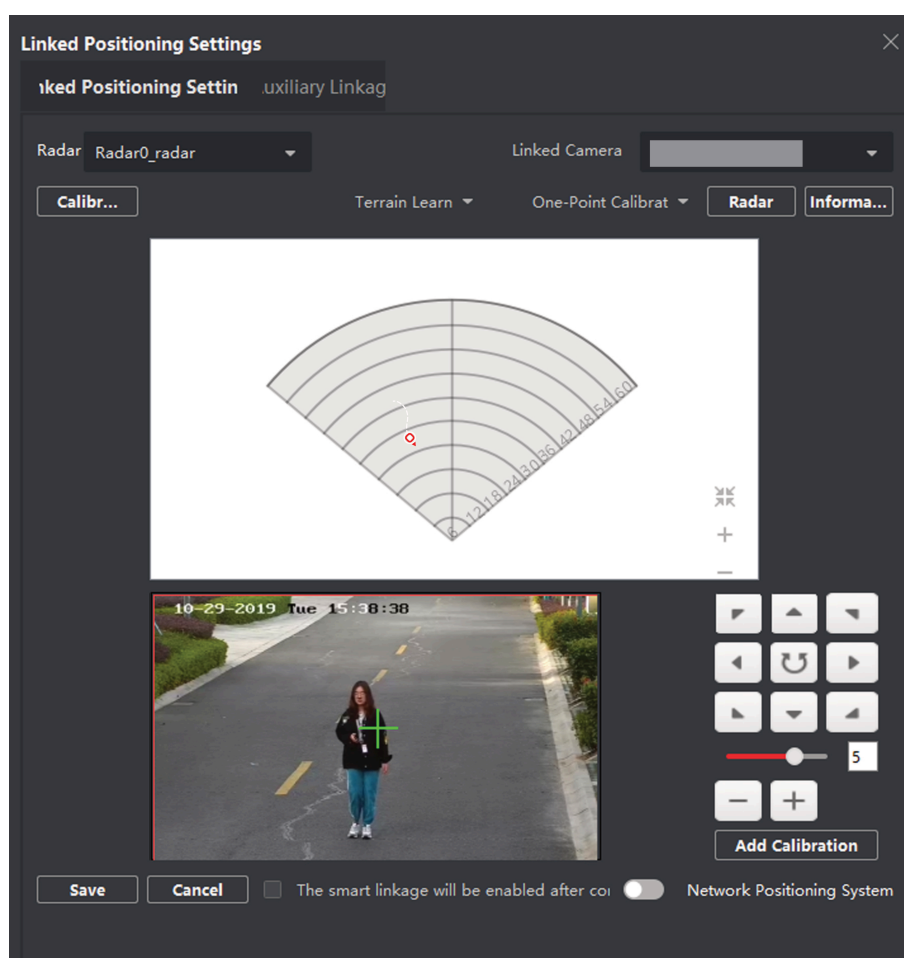


Figure 5-7 Select the Track

3. Ask the calibration staff to move to the calibration point within 20 to 40 m directly in front of the radar, and then stand at the calibration point.
4. Adjust the PTZ buttons in the live view window to get the PTZ position: Click + and - to adjust the altitude of the calibration staff to two-thirds of the altitude of the window, and click the direction buttons to align the central sign + with the calibration staff (For precise alignment, click on the center of the object and the screen will adjust automatically).
5. Click **Add Calibration** to add a calibration point, the PTZ position and the radar position of the calibration staff will be shown in the **Information** list. The option **The tracking will be enabled after completing the settings** will be checked automatically.

Note

- Select the calibration point in the **Information** list, and you can click **Delete** to delete the calibration point.
- The track disappears if the calibration staff is standing in the place for more than 7s. If the calibration staff does not move to the calibration point when the track disappears, you need

to ask the calibration staff to move again to produce a track, and click the track to continue the calibration.

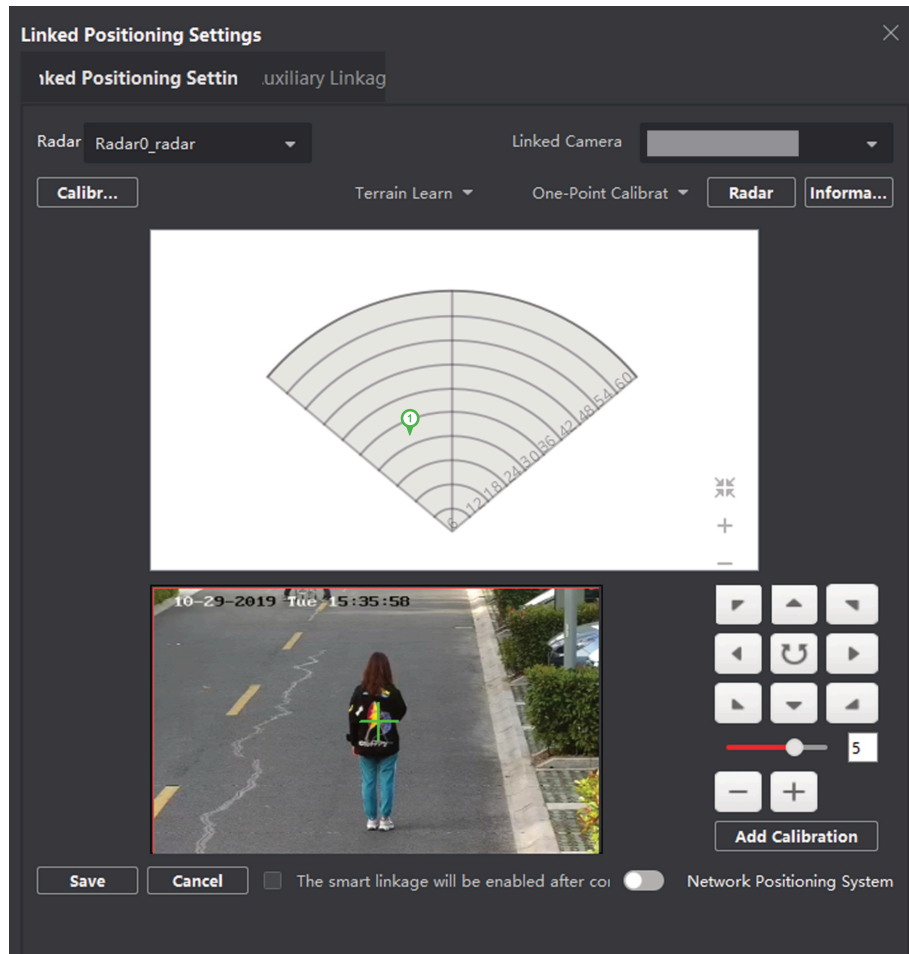


Figure 5-8 Add a Calibration

6. Click **Save**.

5.3.2 Multipoint Calibration

Before You Start

Arrange a staff (Operation staff) to perform the calibration operation in the client software, and a staff (Calibration staff) to cooperate with the calibration.

Steps

1. In calibration page, select **Multipoint Calibration** as the calibration mode.
2. Select calibration points (equally distributed) on the center line of the radar detection field, you can refer to the following figure to select points.



Figure 5-9 Multipoint Distribution Instance

 **Note**

It is required to set 4 calibration points (equally distributed) when multipoint calibration.

3. According to the calibration points, ask the calibration staff to move to a calibration point, and refer to step 2 to step 5 in *One Point Calibration* to calibrate the calibration point.
4. When the first calibration point is calibrated completely, let the calibration staff move to the next calibration point after the yellow track disappears. And then refer to step 2 to step 5 in *One Point Calibration* to calibrate the calibration point. Follow this process to complete all calibration point positioning in turn.

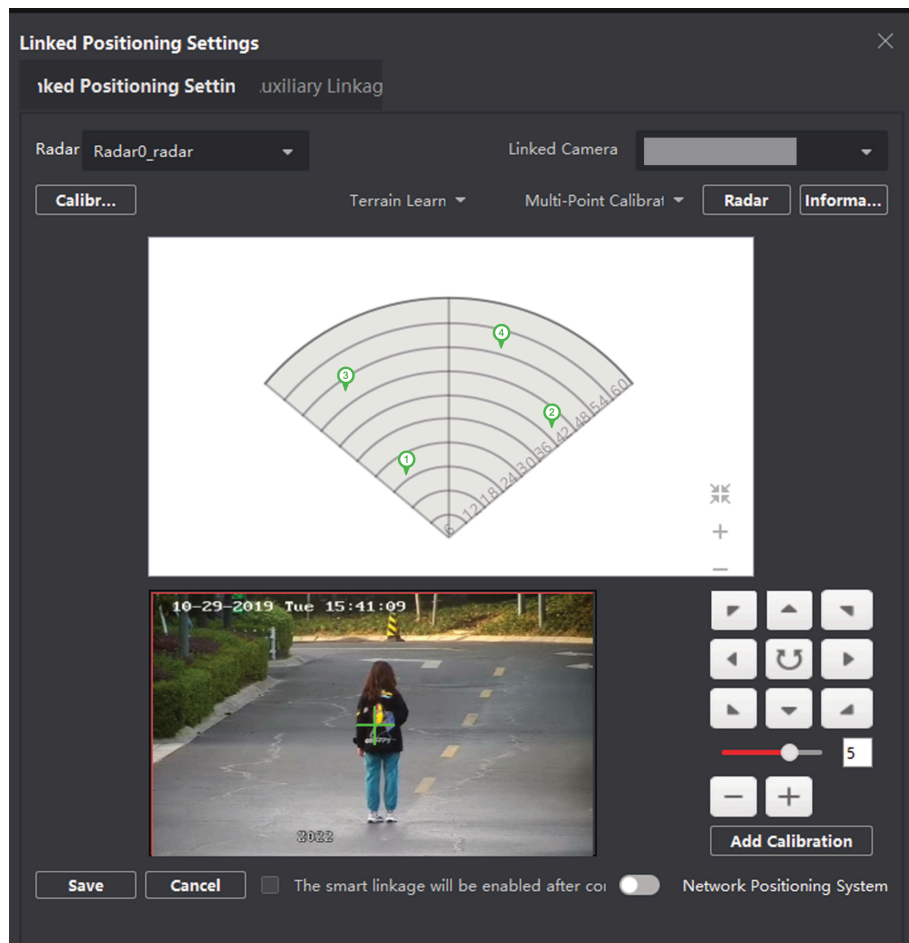


Figure 5-10 Multipoint Calibration Radar Page

Note

- Every time a calibration point is calibrated completely, the operation staff should not adjust the PTZ buttons in the live view window (Adjustment will change the PTZ position of the current calibration point, and results in an incorrect calibration). You can adjust the PTZ buttons when calibrating the calibration point.
- If you need to delete all calibration points, select the calibration point in the **Information** list, and you can click **Delete** to delete the calibration point.

5. After all calibration points is calibrated completely, click **Save**.

Note

You can save the calibration information successfully if there are 4 calibration points, otherwise, you cannot save it.

5.3.3 Calibration Compensation

Fine adjustment of PTZ position of the camera.

Before You Start

The camera is calibrated.

You can use this function to adjust the PTZ position of the camera.

Steps

1. In the calibration page, click **Calibration Compensation**.

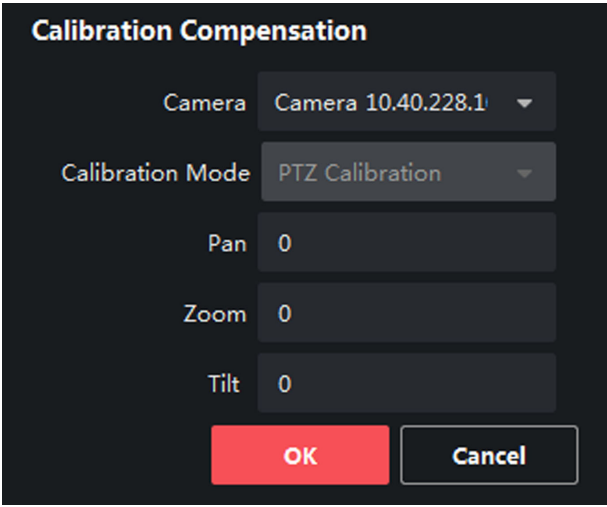


Figure 5-11 Calibration Compensation

2. Select a camera.
3. Select **PTZ Calibration**.
4. Enter the value of **Pan**, **Zoom** and **Tilt**. The input value will be added to the original PTZ value.

5.3.4 Terrain Learning

Terrain learning can improve the environmental adaptability of the radar.

Before You Start

The radar is calibrated.

Steps

1. In the calibration page, Click **Terrain Learning → Start Terrain Learning**.
2. Select a track in the radar detection area.
3. Make the always displayed in the center of the screen, by controlling the arrow keys on the right side of the screen.
4. Click **Terrain Learning → End Terrain Learning**.



Note

You can start terrain learning multiple times, and the learning results will accumulate.

5. Click **Terrain Learning** → **Clear Terrain Learning** to reset terrain learning.

5.3.5 Auxiliary Linkage

When there is an alarm, the camera automatically turns to the preset point.

Before You Start

Zones or trigger lines have been configured.

Steps

1. In the E-map page, Click **Radar Settings** → **Linked Positioning Settings** → **Auxiliary Linkage** .

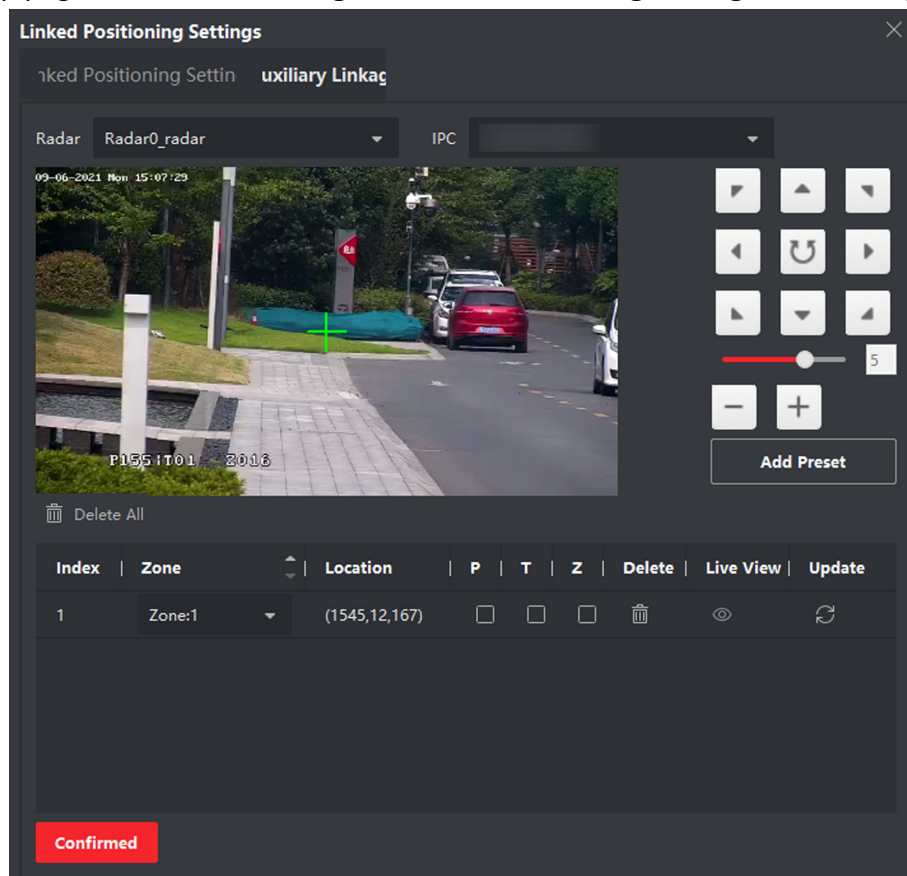


Figure 5-12 Auxiliary Linkage

2. Click **Add Preset**.
3. Select a zone in the drop-down list.
4. Use the arrow keys to adjust the lens. You can also click on the screen and the lens will automatically adjust.
5. Click **Update**.
6. **Optional**: Edit preset point.

Option	Description
P/T/Z	Fix the current P/T/Z value.
Delete	Delete the preset point.
Live View	Turn the lens to view the preset point.
Update	Update the current coordinates of the camera.

7. Click **Confirmed**.

5.4 Set Park Function for Linked Camera

After enabling the radar park mode, the main radar will control the camera to return to the set watch point, when no target appears within 10 s in the radar detection area.

Before You Start

- Add the radar to the map
- Link the camera to the radar, and add the camera to the client software.
- Calibrate the camera and enable camera tracking.
- You need to disarm the radar before the operation. Click **Finish** in the E-map page to exit the editing mode. Click on the radar icon and select **Disarm** to disarm the radar.

Steps

1. Enter E-map page, and click **Edit** to exit the editing mode.
2. Click **Radar Settings** → **Set Parking Point** .

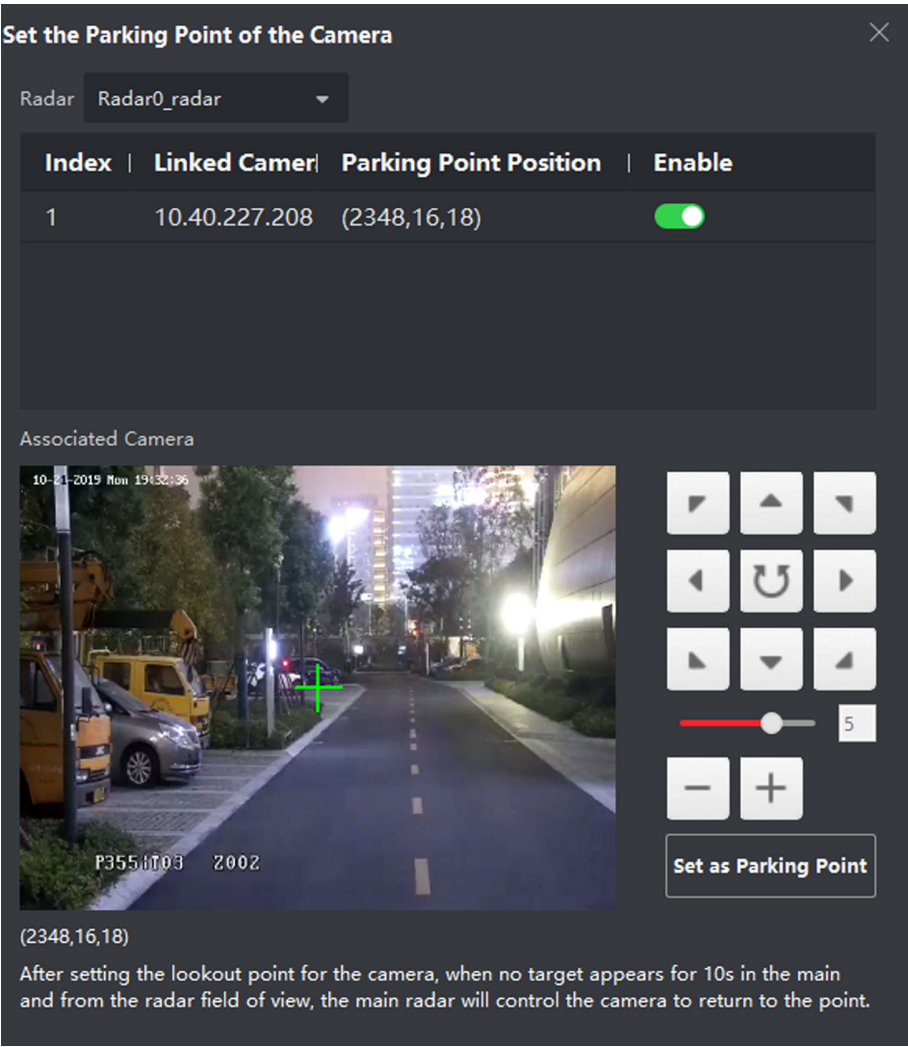



Figure 5-13 Set Camera Parking Point

- 3. Select a linked camera in the drop-down list.
- 4. Use function buttons on the right to adjust the camera screen center position (cross icon position) to the watch point. You can click on the screen and the screen will automatically adjust to the clicked center.

Operation	Description
Direction-control Button	Adjust the camera direction. Hold to move the camera direction continuously.
	Rotate the camera horizontally. Hold to continuously rotate the camera horizontally.
Bar	Adjust the rotation speed of the camera. 1 is the slowest and 7 is the fastest.
+/-	Zoom the screen.

5. Click **Set as Parking Point**.

5.5 Link the Camera to the Zone

Before You Start

- Add the zone to the radar.
- Add the camera to the client software.

Steps

1. In the client software, click **Event Management → Alarm Event** to enter the page.
2. Select a zone in the left list.
3. Check event in the right list.
4. Click **Edit Linkage** to edit the trigger client actions and cameras that you need to link.



Note

- Each zone can link to 4 cameras, and up to 50 cameras can be linked.
 - For more details, see *User Manual of iVMS-4200 Client Software*.
-

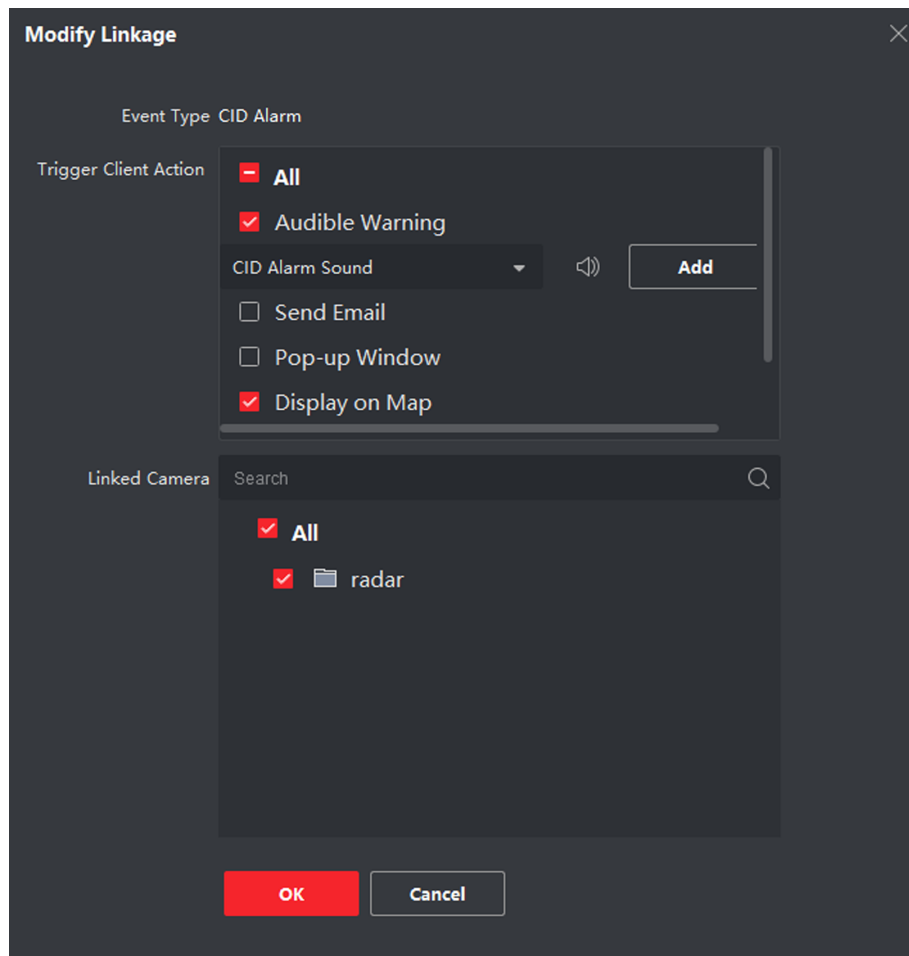


Figure 5-14 Link the Camera to the Zone



5. Click **OK**.

5.6 Pop-up Alarm Notification

Before You Start

- Link the camera to the zone.
- Add the camera, the NVR and the radar to the client software.
- You need to check **Pop-up Window** in the security control panel event page.

Steps

1. In the client software, click **E-map** to enter the page.
2. Click  on the bottom of the page to show the alarm event list.
3. Click  to enable alarm triggered pop-up image.
4. When the alarm is triggered, the client software will automatically pop up an alarm window.

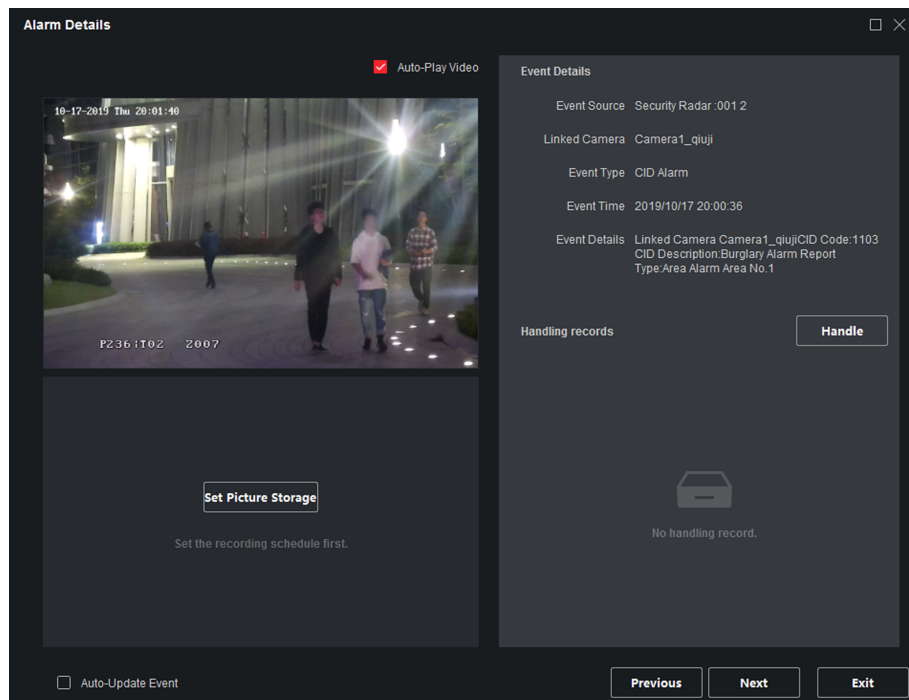



Figure 5-15 The Alarm Window

- Check **Auto-Update Event**, the window will automatically switch to the new alarm video and display the new alarm video in real time.
- Click **Previous** or **Next** to view unread alarm messages.
- Click **Exit** to exit the alarm window.

Note

When the alarm window is not closed and the alarm is triggered again. You need to click **Next** to view the alarm triggered pop-up image.

-
5. **Optional:** Click  to disable alarm triggered pop-up image.

Note

For more details, see *User Manual of iVMS-4200 Client Software*.

Chapter 6 Set Record and Storage Settings

6.1 Set Storage Settings

You can use storage server or NVR to store videos.

6.1.1 Set Storage Schedule via Storage Server

Before You Start

- Make sure your computer has already installed the **Storage Server** that should be selected as the component when installing client.
- Activate and add the storage server to the client before setting storage schedule, you can refer to *User Manual of iVMS-4200 Client Software*.

Steps

1. In client software, click **Storage Schedule** to enter the page.
2. Select the camera in the Camera Group list.

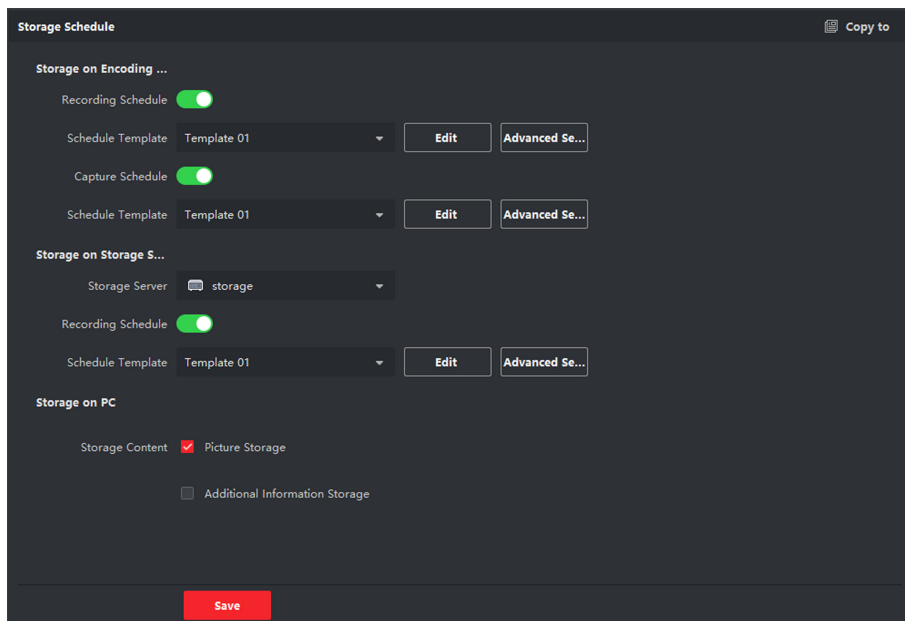


Figure 6-1 Storage Schedule

3. Enable **Recording Schedule** and **Picture Storage** in **Storage on Encoding Device** module.
4. Select a template in the drop-down list (**All-day Template**, **Weekday Template**, **Event Template**, etc.).
5. Click **Edit** and **Advanced Settings** to set the template.
6. Select a storage server from the **Storage Server** drop-down list.
7. Enable **Recording Schedule** and set parameters.
8. Check **Picture Storage** in **Storage on PC** module.

9. Click **Save**.




Note

For detailed settings, please refer to *User Manual of iVMS-4200 Client Software*.


6.1.2 Set Storage Schedule via NVR

Steps

1. In the client software, click , or enter the IP address of radar in browser to enter the web client.
2. Click **Smart Rule Settings** → **Camera Linkage Settings** to enter the page.
3. Add NVR.
 - Add an NVR to an existing camera.
Select an existing camera and click edit icon. Choose **Yes** in **Link to NVR?**. Enter IP address, port, network camera No. and distance to radar. Click **OK**.
 - Add NVR when adding a camera.
Click **+**. Choose **Yes** in **Link to NVR?**. Enter IP address, port password and network camera No. Click **OK**.

6.2 Set Tracking Strategy

Steps

1. Select the radar and click  in client software, or enter the radar IP address in the address bar of the web browser. Click **Smart Rule Settings** → **Video Record Strategy Settings** to enter the page.
2. Select **Time Priority**, **Range Priority**, or **Multi-Target Auto Switch** as the strategy. The camera will record the intrusion till the target leave warning zone.

Time Priority

Record the first target that intrude the zone.

Range Priority

Record the target that has the shortest distance away from the radar.

Multi-Target Auto Switch

Switch the target automatically when there are multiple targets in the zone. You should set **Switch Interval**.


3. Click **Save**.

Chapter 7 Alarm Settings

7.1 Alarm Center

You can set the alarm center's parameters and all alarms will be sent to the configured alarm center.

Steps

1. Select the radar and click  in the client software, or enter the radar IP address in the address bar of the web browser. Click **Communication Parameters** → **Alarm Center Parameters** to enter the Alarm Center Settings page.

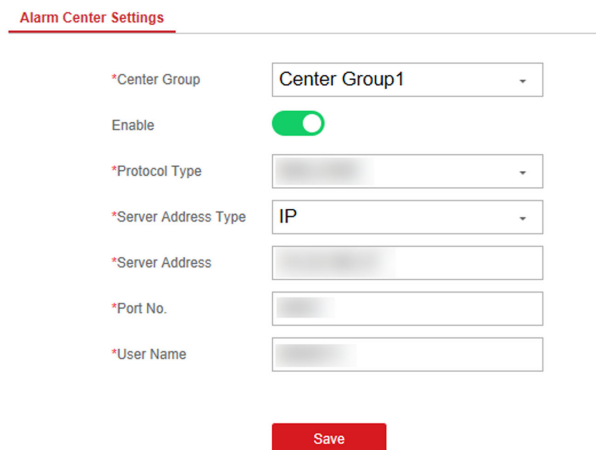


Figure 7-1 Alarm Center Parameters

2. Select **Center Group**, and slide the slider to enable the center group. The alarm information will be uploaded to the selected center group.
3. Select **Protocol Type** from the drop-down list, select **Server Address Type** from the drop-down list, enter the server address, port No., and the user name.

Note

The protocol type NAL2300 is the Hikvision private protocol.

4. Click **Save**.

7.2 Notification Push

When an alarm is triggered, if you want to send the alarm notification to the client, alarm center, cloud or mobile client, you can set the notification push parameters.

Steps

- 1. Select the radar and click  in the client software, or enter the radar IP address in the address bar of the web browser. Click **Communication Parameters → Message Notification**.

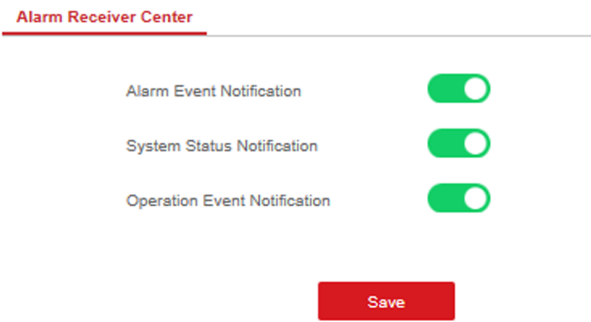


Figure 7-2 Notification Push

- 2. Enable the target notification.

Alarm Event Notification

The device will push notifications when the zone alarm is triggered or restored.

System Status Notification

The device will push notifications when any status in the system is changed.

Operation Event Notification

The device will push notifications when the user operate the device.

- 3. Click **Save**.

7.3 Set Zone

Steps

- 1. Select the radar and click  in the client software, or enter the radar IP address in the address bar of the web browser. Click **Alarm Module Parameters → Zone** to enter the page.




Zone Management				
Zone	Zone Name	Zone Type	Configuration	
5	555	Disabled Zone		
8	Universe~	Disabled Zone		

Figure 7-3 Set Zone

- 2. Select a zone, and click  to edit the zone name and zone type.
- 3. Click **OK** to complete.

7.4 Set Alarm Output

Steps

1. Select the radar and click  in the client software, or enter the radar IP address in the address bar of the web browser. Click **Alarm Module Parameters** → **Relay** to enter the page.

Output






Relay	Relay Name	Output Time	Configuration	
1	relay1	60		
2	relay2	60		
3	relay3	60		
4	relay4	60		

Figure 7-4 Relay



Note

You can also click **E-map** → **Edit** → **Radar Settings** → **Alarm Output** to open or close the relay.

2. Select an relay, and click  to enter the page.
3. Edit the relay name, and output time.
4. Set relay linkage. Link the relay with alarm event, system event, and arming/disarming operation.
5. **Optional:** Check **Enable Zone Tracking**. When enabled, after the relay-linked zone is triggered by an alarm, the relay will remain open until the target exits the zone or the alarm is manually closed.




Note

After the zone tracking is turned on, if only the zone is selected in the alarm event, the relay output time is based on the time when the alarm triggered in the zone.

6. Click **OK** to save.

7.5 Set Arming/Disarming Schedule

Steps

1. Select the radar and click  in the client software, or enter the IP address of the radar in the address bar of the web browser. Click **Smart Rule Settings** → **Arming/Disarming Schedule** to enter the page.

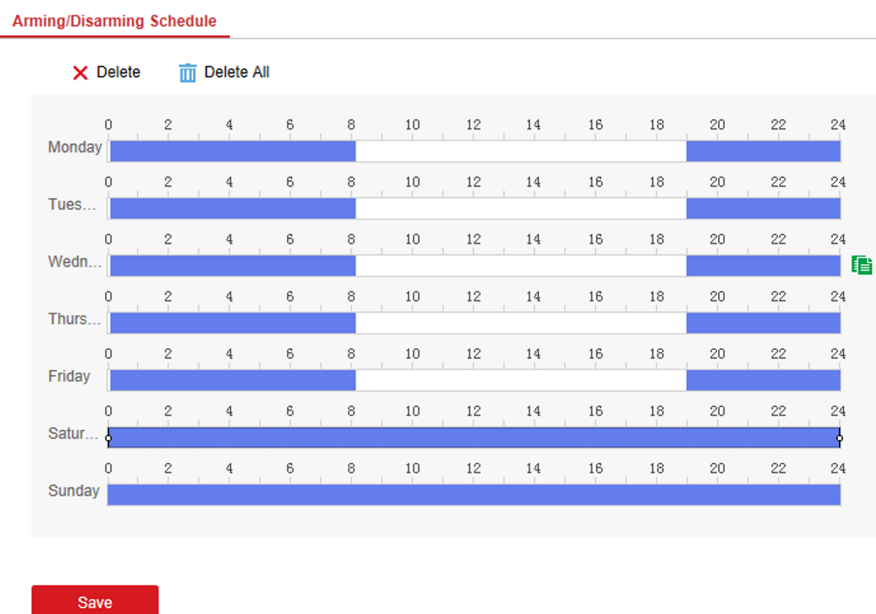


Figure 7-5 Arming/Disarming Schedule

2. Drag the mouse to draw the period bar on the time table, or click the period bar and enter the start and end time.




Note

You can set 2 arming/disarming periods each day.

3. Click **OK** to save.
4. Click **Delete** to delete a selected period. Click **Delete All** to delete all periods in the time table.
5. Click **Save**.


7.6 Alarm Input Settings

Steps

1. Select the device and click  in the client software, or enter the device IP address in the address bar of the web browser. Click **Configuration** → **Smart Rule Settings** → **Alarm Input Settings** to enter the page.
2. Slide **Enable Alarm Input**.
3. Select a input status.
4. Check zones and trigger line to be linked.
5. Click **Save**.

7.7 Set Motion Speed

Steps

1. Select the radar and click  in the client software, or enter the IP address of the radar in the address bar of the web browser. Click **Configuration** → **Smart Rule Settings** → **Alarm Settings** to enter the page.

Alarm Settings

☒ Motion Speed

Min. Speed Threshold

0

✓ m/s

Max. Speed Threshold

20

✓ m/s

☒ Enable Overstay Alarm

Overstay Alarm Time

60

s

Save

Figure 7-6 Alarm Settings

2. Check **Motion Speed**.
3. Enter **Min. Speed Threshold** and **Max. Speed Threshold**.

Note

After enabled, only the target that move in set speed threshold will trigger the alarm.

4. Check **Enable Overstay Alarm**.
5. Set overstay alarm time.


Note

After enabled, targets that stay longer than the overstay time will trigger an alarm.

6. Click **Save**.

7.8 Video Tracking Switch Settings

Steps

1. Select the radar and click  in the client software, or enter the IP address of the radar in the address bar of the web browser. Click **Smart Rule Settings** → **Video Tracking Switch Settings** to enter the page.
2. Check **Enable Mandatory Tracking**.
3. Set time of mandatory tracking.

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Note

After enabled, when you click a target track in the radar detection area, the camera will mandatory track the target.

4. Click **Save**.

7.9 Video Content Analysis

Analyze the video content.

Before You Start

- Link and calibrate the camera.
- Zones linked cameras.
- The camera supports this function.

Steps

1. In the client software, select a radar in the **Device Management** and click , or log in the web client. Click → **Configuration** → **Smart Rule Settings** → **Video Content Analysis** to enter the page.

Video Content Analysis

Video Content Analysis Sensitivity

5

Detection Target

☒ Human ☐ Vehicle

Time Threshold (s)

5

Calibration is required before configure video content analysis.

Camera IP Address List

Camera Name	IP Address	Link Device Port	Status	Enable Video Content Analysis
			Connected	<input checked="" type="checkbox"/>

Trigger Video Content Analysis

Zone

Trigger Line

☐ Select All

☐ 1

Figure 7-7 Video Content Analysis

2. Slide the bar to set the sensitivity and the time threshold.

Video Content Analysis Sensitivity

Identification sensitivity of the target.

Time Threshold

If the analysis time is exceeded, the target will be determined as other.

3. Check detection target.
4. Enable the cameras that require analyzing in the list.



Note

Only one channel of video content analysis can be enabled.

-
5. Check zones and trigger lines that can trigger video content analysis.
 6. Click **Save**.

Chapter 8 Set Radar Advanced Function


8.1 Set Panorama Tracking Settings

If the radar need multiple-radar linkage, you can arrange multiple radars for linkage detection and configure the radar main-sub relationship.

Before You Start

There are at least 2 online radars.

Steps

1. Select the radar and click  in the client software, or enter the IP address of the radar in the address bar of the web browser. Click **Radar Settings** → **Panorama Tracking Settings** to enter the page.
2. Set the radar type and parameters.
 - If the current radar is set as main radar, you can add, edit, delete the sub radar, and set the sub radar priority.
 - If the current radar is set as sub radar, you need to set the main radar IP address.



Note


You need to ensure that the port No. set for the sub radar is the same as the main radar.

What to do next

When the target is appear on the radar, the target information to be tracked is sent to the main radar, and the main radar arranges linked cameras to track the target according to the set radar priority.

8.2 Set Detection Angle and Range


Steps

1. Select the radar and click  in the client software, or Enter the radar IP address in the address bar of the web browser. Click **Radar Settings** → **Detection Angle and Range** to enter the page.
2. Slide the bar to set the radar angle, radar rotation angle and enter the detection range.
3. Click **Save** to complete.

8.3 Set Environment Learning


To ensure the accuracy of radar detection, if there are large objects in the detection area, you need to remove the objects and make the radar complete the environment learning.

Steps

1. Select the radar and click  in client software, or enter the radar IP address in the address bar of the web browser. Click **Configuration → Radar Settings → Environment Learning** to enter the page.
2. Enable overwrite according to requires.
3. Click **Start Environment Learning**.

8.4 Set Scene Mode and Sensitivity

Steps

1. Select the radar and click  in the client software, or Enter the radar IP address in the address bar of the web browser. Click **Configuration → Radar Settings → Sensitivity Settings** to enter the page.
2. Select **Open Mode**, **Shrub Mode**, or **Expert Mode** as the radar sensitivity mode.

Open Mode

There are no large objects in the radar detection area.

Shrub Mode

There are shrubs and other objects that are likely to swing in the radar detection area. The shrub mode can also used to decrease the interference of rainstorm.

Expert Mode

Tracking Sensitivity

Detect the tracking continuity, that is, how many frames the target needs to detect continuously before reporting. The higher the sensitivity, the easier it is to detect the target.

Swing Sensitivity

It is mainly used to filter out false alarms caused by shaking of plants and trees. The target can only be detected by the radar if it swings a certain distance within a certain frames. The higher the sensitivity, the easier it is to detect the target with small shaking amplitude.

Signal Sensitivity

The higher the sensitivity, the easier it is to detect the target. When the environment is noisy, you can reduce the sensitivity reduce the environment interference.


Dwell Time

If the target is stationary after being detected, it will disappear after the set dwell time.

3. Click **Save** to complete.

8.5 Set Frequency Range Settings

Steps

1. Select the radar and click  in the client software, or enter the IP address of the radar in the address bar of the web browser. Click **Radar Settings → Frequency Range Settings** to enter the page.
2. The radar supports 2 frequency bands, you can select one according to needs.




Note

- When multiple radars cover the same area, co-frequency interference can be reduced by setting different frequency bands.
- Try to avoid overlapping radar detection areas.

-
3. Click **Save**.

8.6 Track Settings

Steps

1. In the client software, select a radar in the **Device Management** and click , or log in the web client. Click **→ Configuration → Radar Settings → Track Settings** to enter the page.
2. Enter **Track Marker Number**. Edit the track marker number to control the track length. The default is 40.
3. Slide **Enable Uploading Frequency** according to needs and set **Upload Frequency**.
4. Click **Save**.

Chapter 9 View Alarm Information

The device supports alarm information query and alarm event playback.

Before You Start

Record and storage settings are required before searching and playing back alarm events. For details, see *Set Record and Storage Settings*.


Steps

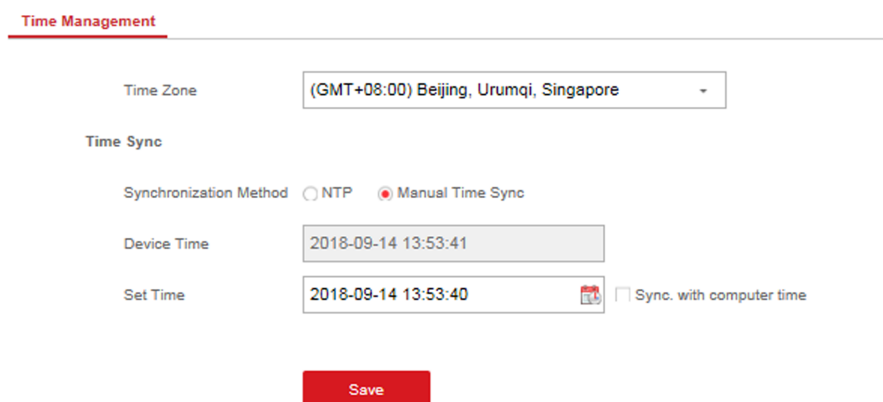
1. In the client software, click **E-map**, and click **Finish** to exit the editing mode.
2. Click on the radar icon that needs to view, and click **Event**.
3. Select the date, and then click **Search**.
4. Double-click an alarm event in the result list. The windows of radar track playback screen and video playback of the selected alarm event will pop up.

Chapter 10 System Management

10.1 Set Time

Steps

1. Select the radar and click  in the client software, or enter the radar IP address in the address bar of the web browser. Click **System** → **Time** to enter the page.



The screenshot shows the 'Time Management' web interface. At the top, there is a red header bar with the text 'Time Management'. Below this, the 'Time Zone' is set to '(GMT+08:00) Beijing, Urumqi, Singapore'. Under the 'Time Sync' section, the 'Synchronization Method' is set to 'Manual Time Sync' (indicated by a red dot). The 'Device Time' is displayed as '2018-09-14 13:53:41'. The 'Set Time' is also '2018-09-14 13:53:40', with a calendar icon to its right. A checkbox labeled 'Sync. with computer time' is unchecked. At the bottom, there is a red 'Save' button.

Figure 10-1 Time

2. Set the time zone and synchronization method.
3. Click **Save**.

10.2 Manage User

Steps



1. Select the radar and click  in the client software, or enter the radar IP address in the address bar of the web browser. Click **System** → **User** to enter the page.

Figure 10-2 User

- 2.** Select the admin account, and click **Edit** to edit the admin information.

10.3 System Maintenance

You can reboot the device, restore default settings, import/export configuration file, or upgrade the device remotely.

Select the device and click  in the client software, or enter the device IP address in the address bar of the web browser. Click **System** → **System Maintenance** to enter the Upgrade and Maintenance page.

Reboot

Click **Reboot** to reboot the device.

Restore Default Settings

Click **Partly Restore** to restore all parameters except for admin user information, wired network, Wi-Fi network, detector information, and peripheral information to default ones.

Click **Restore All** to restore all parameters to the factory settings.

Import Configuration File

Click **View** to select configuration file from the PC and click **Import Configuration File** to import configuration parameters to the device. Importing configuration file requires entering the password set at the time of exporting.

Export Configuration File

Click **Export Configuration File** to export the device configuration parameters to the PC. Exporting configuration file requires a password to be used for file encryption.

Upgrade File


Click **View** to select an upgrade file from the PC and click **Upgrade** to upgrade the device remotely.



Note


Do not power off when the device is upgrading.

10.4 View Device Information

Select the device and click  in the client software, or Enter the device IP address in the address bar of the web browser. Click **System Device** → **Device Information** to see device information.


10.5 Search Log

Steps

1. Select the device and click  in the client software, or enter the device IP address in the address bar of the web browser. Click **System** → **Local Log Search** to enter the page.
2. Select Log type and time, and click **Search** to get the log list.


10.6 Enabling Remote Debugging

You are able to enable SSH (Secure Shell). When SSH is enabled, the technical support can log in to the device remotely to view the printing information of the device.

Select the device and click  in the client software, or enter the device IP address in the address bar of the web browser. Click **System** → **Security** to enter the SSH Settings page and you can enable or disable the SSH function.

10.7 LED Status

You are able to enable LED function.

Select the device and click  in the client software, or enter the device IP address in the address bar of the web browser. Click **System** → **Device Status** to enter the page and you can enable or disable the LED function.

Appendix A. Radar Mounting Height Recommendation

The recommended installation height is 2 to 3 m.
The following table shows the detection range at different mounting heights.

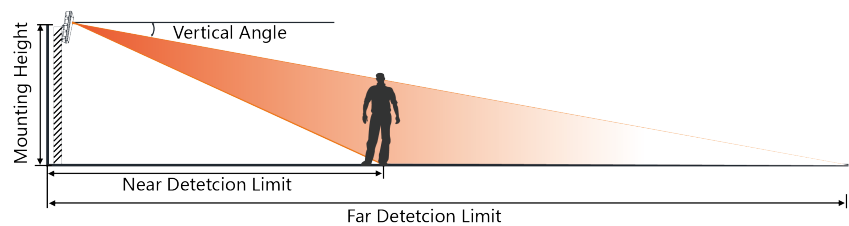


Figure A-1 Radar Mounting Height and Detection Range

Table A-1 Radar Mounting Height and Detection Range

Mounting Height	Vertical Angle	Far Detctcion Limit	Near Detection Limit
1.5 m	0°	59 m	1.91 m
1.5 m	3°	59.2 m	1.98 m
1.5 m	6°	59.4 m	1.87 m
1.5 m	9°	52 m	2.3 m
2.0 m	0°	59.4 m	1.8 m
2.0 m	3°	59.4 m	2.19 m
2.0 m	6°	59 m	1.72 m
2.0 m	9°	59.62 m	2.2 m
3.0 m	0°	58.4 m	4.62 m
3.0 m	3°	59.6 m	4.21 m
3.0 m	6°	59.51 m	3.42 m
3.0 m	9°	58 m	2.9 m
3.5 m	0°	57.17 m	5.5 m
3.5 m	3°	59.5 m	3.9 m
3.5 m	6°	58.51 m	3.86 m

Mounting Height	Vertical Angle	Far Detction Limit	Near Detection Limit
3.5 m	9°	56.25 m	3.8 m
4.0 m	0°	58 m	7.36 m
4.0 m	3°	59.4 m	5.7 m
4.0 m	6°	58.5 m	5.6 m
4.0 m	9°	59.79 m	4.4 m

Appendix B. Formatting Description

You can restore all parameters to default settings for formatting the security radar by the reset button.

You can format the device as follows.

Steps

1. Power off the radar, and then hold the reset button while powering the radar on.
2. Keep holding until the red and green LED flashes for 6 times, then release the reset button and the radar will restart again.
3. All parameters will be restored to default values after the radar restarts, and you need to reactivate the radar.

Appendix C. Indicator Description

The indicator status description of the radar:

Table C-1 Indicator Description

Indicator	Status
Solid Green	Radar Powered on
Solid Red	Zone Alarm Occurred
Flashing Red and Green	Radar Network Disconnection/Radar Sensor Exception When formatting, the red and green LED flashes for 6 times, indicating that the formatting was successful.

Appendix D. FAQ

D.1 How to Achieve an Optimum Detection Range?

Answer:

You can refer to *Radar Mounting Height Recommendation* for installation of radar, and you should test the radar after installation to make sure it is properly mounted. The test method is as follows:



Note

You need to enable OSD function before testing.

The near detection distance: arrange a tester to move directly from 20 m in front of the radar until the tester track disappear on the radar detection area. The last tester distance that displayed by OSD, is the near detection distance.

The far detection distance: Arrange a tester to move from the directly ahead of the radar and far away from the radar installation position (outside the radar detection area) to the radar detection area. When the target track first appears in the detection area, the tester stops moving. The last tester distance that displayed by OSD, is the far detection distance.



Note

When testing the far detection distance, the tester is required to move along the center normal of the detection area, to ensure optimum far detection distance.

According to the tested near detection distance and far detection distance, and refer to *Table A-1 Radar Mounting Height and Detection Range* to adjust the radar mounting angle.

D.2 How to Solve the Problem that the Radar is not Shown in the Device List on the Radar Page?

Answer:

You should delete the radar and add it to the client software again.



Note

The port number of the radar should be 80. When you add the radar to the client software, set the **Port** as 80.

D.3 How to Adjust the Sensitivity to Avoid False Alarm?

Answer:

- If there are shrubs in the radar filed, set the radar sensitivity mode as **Shrub Mode**, which helps avoid the false alarm caused by gale, storm, or shrub swing.
- If **Shrub Mode** is not satisfied, set the sensitivity mode as **Expert Mode** (Custom Mode). Set the **Signal Sensitivity** less than or equal to two, the **Swing Sensitivity** less than five, and the **Tracking Sensitivity** less than or equal to five.

D.4 How to Raise the Precision of Camera Tracking?

Answer:

- Check if the speed dome initial position is set, if not, please set the speed dome initial position.
- Check if the calibration points are correct. Pay attention to the situation that the target is intercepted when calibrating. If the calibration points are error, please calibrate again.
- Check if the calibration positions is equally distributed when you set the multi-point calibration.
- Do not move the speed dome manually after the calibration. If the speed dome is manually moved, please reset the initial position of the speed dome and then calibrate again.

D.5 How to Solve the Problem that No Reference Point is on the Frame While Setting the Speed Dome Initial Position?

Answer:

If the speed dome is tilted, it may cause that the reference point is above the center of the frame or outside the frame while setting the speed dome initial position. In this case, you should adjust the maximum elevation angle of the speed dome as follows.

Steps




1. Enter the IP address of the speed dome in the web browser to enter the web client.
2. Click  to expand the PTZ list on the **Live View** page, and then click  to enter the main menu of the speed dome.



Figure D-1 The Main Menu of Speed Dome

Note

You can adjust the cursor for menu selection by clicking the up and down direction keys in the PTZ list, and click  to enter the selected item.



- Adjust the cursor to **System Settings** in the main menu and click . And then adjust the cursor to **Motion** and click  to enter the page.



Figure D-2 Motion




- Adjust the cursor to **Next Page** in the sport mode menu and click . And then adjust the cursor to **Max Ele Angle (DEG)** and click  to enter the page.



Figure D-3 Maximum Elevation Angle Adjustment

- Click up and down direction keys in the PTZ list to adjust the maximum elevation angle, and then you need to click  to save the settings.
- Adjust the cursor to **Exit** to exit the menu.

Note

You need to reset the speed dome initial position after the maximum elevation angle adjustment.

D.6 What is the Reason that Failed to Draw a Zone Automatically?


Answer:

- The main reason is that the moving target (with track) does not form a closed-loop. You can check if there is a clear intersection of the track in the zone drawing page. If the track does not closed, the drawn zone will be recognized as an invalid zone.
- When the object is moving for drawing a zone, if the track of the target is lost and then appear again on the zone drawing page, and the distance between lost position and the position the target appeared again is too far, the settings will be failed.

D.7 What Makes a Failed Arming?

Answer:

The following two conditions will make a failed arming:

- In the **E-Map** page, click **Finish** to exit the editing mode. If there is a moving target in the warning zone when you click  → **Arm** to arm radars, it is impossible to enable mandatory arming, resulting in failed arming.
- The current status of radar is offline.

D.8 Why Is It Required to Remove Reflective Objects from the Radar Area?

Answer:

- When there are reflective objects in the radar application scene, such as flat glass or large-area metal objects, the radar will produce multipath effects, that is, the people reflect the signal from the radar to the large-area metal objects or flat glasses, and the large-area metal objects or flat glasses reflect the signal again to the receiving end of the radar, thus there will be a false alarm. Since the glasses are flat and the reflection is concentrated, there may be a false alarm when there are glasses in the radar scene.
- The higher the sensitivity, the more probability to trigger a false alarm.

D.9 Why Is the Camera Unable to Track the Target?

- The camera is not calibrated.
- The camera is not linked to the zone.

D.10 Why Is the Detection Effect of Radar on Vehicle Targets Affected?

Answer:

- When there are large of metal objects in the radar detection area (such as the sides of the road is full of vehicles), the detection effect of radar will be affected. For specific reasons, see [Why Is It Required to Remove Reflective Objects from the Radar Area?](#)
- For the target whose speed is higher than 34km/h, the radar may produce speed deviation.

D.11 Common Mistakes of Calibrating Camera

Prompt when selecting target: Please select the calibration target trajectory.

Reason: Target not selected or disappeared when acquiring parameters.

Solution: Select the moving target for parameter acquisition.

Prompt when adding calibration points: Error in parameter range, illegal range: $T \leq 0$.

Reason: The angle of pitch, T , of the speed dome is less than or equal to 0.

Solution: Adjust the angle of pitch of the speed dome so that T is greater than 0.

Prompt when adding calibration points: Incorrect Parameters.

Reason: The status of the linked camera device is offline.

Solution: Reconnect the camera. Make the status of the camera is online to continue calibration.

Appendix E. Communication Matrix and Device Command

Communication Matrix

Scan the following QR code to get the device communication matrix.

Note that the matrix contains all communication ports of Hikvision security control devices.



Figure E-1 QR Code of Communication Matrix

Device Command

Scan the following QR code to get the device common serial port commands.

Note that the command list contains all commonly used serial ports commands for all Hikvision security control devices.



Figure E-2 Device Command

User Privacy Statement

- The debug command is used to control access to the file system to ensure device security. To obtain this permission, you can contact technical support.
- Radar products only set an admin account. You can use this account to access and configure radar device.

Table E-1 User Privacy Information Description

Password	The password for the radar device account, used to log in to the device.
Key	Used to encrypt radar device configuration information.
Username	The username for the radar device account, used to log in to the device.
Server IP	The server IP is used to support network service communication. For example, the NTP server can be used to perform timing on the radar device.
Control port	For details, please refer to <i>Communication Matrix</i> .
Device IP and port	The device IP and port are used to support network service communication. For details, refer to <i>Communication Matrix</i> .
Log	Used to record information such as device operating status and operation records.
Database information	Used to record information such as radar tracks.



See Far, Go Further