

Portable Radar Speed Detector

User Manual

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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 A digital device, pursuant to part 15 of the FCC Rules. These limits are designed to provide reasonable protection against harmful interference when the equipment is operated in a commercial environment. This equipment generates, uses, and can radiate radio frequency energy and, if not installed and used in accordance with the instruction manual, may cause harmful interference to radio communications. Operation of this equipment in a residential area is likely to cause harmful interference in which case the user will be required to correct the interference at his own expense.

FCC Conditions

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

- 1. This device may not cause harmful interference.
- 2. 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 EMC Directive 2014/30/EU, the 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: 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: www.recyclethis.info

Industry Canada ICES-003 Compliance

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

Symbol Conventions

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

Symbol	Description
<u> </u>	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.
iNote	Provides additional information to emphasize or supplement important points of the main text.

Safety Instruction

Regulatory Information

This is a class A product and may cause radio interference in which case the user may be required to take adequate measures.

Laws and Regulations

Use of the product must be in strict compliance with the local laws and regulations. Please shut down the device in prohibited area.

Power Supply

- Use of the product must be in strict compliance with the local electrical safety regulations.
- Use the power adapter provided by qualified manufacturer. Refer to the product specification for detailed power requirements.
- It is recommended to provide independent power adapter for each device as adapter overload may cause over-heating or a fire hazard.
- Make sure that the power has been disconnected before you wire, install, or disassemble the device in the authorized way according to the description in the manual.
- To avoid electric shock, DO NOT directly touch exposed contacts and components once the device is powered up.
- DO NOT use damaged power supply devices (e.g., cable, power adapter, etc.) to avoid electric shock, fire hazard, and explosion.
- DO NOT directly cut the power supply to shut down the device. Please shut down the device normally and then unplug the power cord to avoid data loss.
- The socket-outlet shall be installed near the equipment and shall be easily accessible.
- Make sure the power supply has been disconnected if the power adapter is idle.
- Connect to earth before connecting to the power supply.

Transportation, Use, and Storage

- To avoid heat accumulation, good ventilation is required for a proper operating environment.
- Store the device in dry, well-ventilated, corrosive-gas-free, no direct sunlight, and no heating source environment.
- Avoid fire, water, and explosive environment when using the device.
- Install the device in such a way that lightning strikes can be avoided. Provide a surge suppressor at the inlet opening of the equipment under special conditions such as the mountain top, iron tower, and forest.
- Keep the device away from magnetic interference.
- Avoid device installation on vibratory surfaces or places. Failure to comply with this may cause device damage.
- DO NOT touch the heat dissipation component to avoid burns.

- DO NOT expose the device to extremely hot, cold, or humidity environments. For temperature and humidity requirements, see device specification.
- No naked flame sources, such as lighted candles, should be placed on the equipment.
- DO NOT touch the sharp edges or corners.
- To prevent possible hearing damage, DO NOT listen at high volume levels for long periods.

Maintenance

- If smoke, odor, or noise arises from the device, immediately turn off the power, unplug the power cable, and contact the service center.
- If the device cannot work properly, contact the store you purchased it or the nearest service center. DO NOT disassemble or modify the device in the unauthorized way (For the problems caused by unauthorized modification or maintenance, the company shall not take any responsibility).
- Keep all packaging after unpacking them for future use. In case of any failure occurred, you need
 to return the device to the factory with the original packaging. Transportation without the
 original packaging may result in damage to the device and the company shall not take any
 responsibility.

Network

- Please enforce the protection for the personal information and the data security as the device may be confronted with the network security problems when it is connected to the Internet.
 Contact us if network security risks occur.
- Please understand that you have the responsibility to configure all the passwords and other security settings about the device, and keep your user name and password.

Lens

- DO NOT touch the lens with fingers directly in case the acidic sweat of the fingers erodes the surface coating of the lens.
- DO NOT aim the lens at the strong light such as sun or incandescent lamp. The strong light can cause fatal damage to the device.

Screen

Clean the screen with soft and dry cloth or other substitutes to wipe the interior and exterior surface. DO NOT use alkaline detergents. Protect the screen from scratches.

Data

DO NOT disconnect the power during formatting, uploading, and downloading. Or files may be damaged.

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Chapter 1 Introduction

1.1 Product Introduction

Portable radar speed detector (hereinafter referred to as the "device") is a speed detection device that integrates speed detection, image processing, intelligent analysis, license plate recognition, storage, and display. It supports automatic speed detection of vehicles in a specific direction and violation capture.

1.2 Key Feature

- License plate recognition.
- Radar-triggered capture.
- Wide-range speed detection.
- High vehicle capture rate.
- Continuous violation capture.
- Picture composition.
- Built-in lithium battery for power supply.
- Adjustable lens angle.

Chapter 2 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, web browser, and client software.



Refer to the user manual of client software for the activation via client software.

2.1 Default Information

The device default information is shown as below.

• Default IP address: 192.168.1.64

· Default user name: admin

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/), 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.

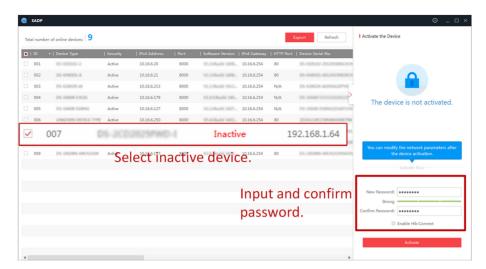
Steps

- 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.



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

2.3 Activate via Web Browser

Use web browser to activate the device. For the device with the DHCP enabled by default, use SADP software or client software to activate the device.

Before You Start

Ensure the device and the computer connect to the same LAN.

Steps

- 1. Change the IP address of your computer to the same network segment as the device.
- **2.** Open the web browser, and enter the default IP address of the device to enter the activation interface.
- **3.** Create and confirm the admin password.



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 **OK** to complete activation.
- **5.** Go to the network settings interface to modify IP address of the device.

Chapter 3 Local Configuration

The device supports local configuration on the screen.

3.1 Login

You can log in to the device locally.

Before You Start

Power on the device.

Steps

- 1. Enter the user name and password.
- 2. Tap Login.
- 3. Optional: If you want to log out, go to Settings → User Management and tap Logout to log out.

Result

You will enter the main menu after login.

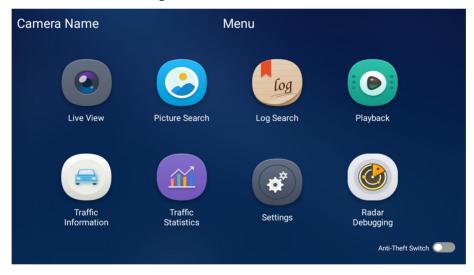


Figure 3-1 Main Menu

3.2 Set Radar Detection Parameters

Set radar detection parameters to detect the vehicle speed via radar.

Steps

- 1. Tap Radar Debugging.
- 2. Set construction parameters.
 - 1) Tap Construction Parameters.

2) Set the parameters below.

Construction Height

The construction height of the radar. 1.5 m is recommended.

Construction Angle

The angle between the radar and the road. 25° is recommended.

Lane Distance

Enter the distance between two lanes according to the actual condition.

Trigger Speed

If the vehicle speed exceeds the set value, capture will be triggered.

Trigger Mode

Head

Capture is triggered by the vehicle head. The vehicles from the approaching direction will be detected.

Tail

Capture is triggered by the vehicle tail. The vehicles from the leaving direction will be detected.

Head and Tail

Capture can be triggered by the vehicle head or tail. The vehicles from both the approaching and leaving directions will be detected.

Advanced Lane Settings

Width of Lane X

Enter the lane width according to the actual condition.

Triggered X at

Capture will be triggered at the set distance of the lane if the speed exceeds the trigger speed.

3) Tap **Save**.

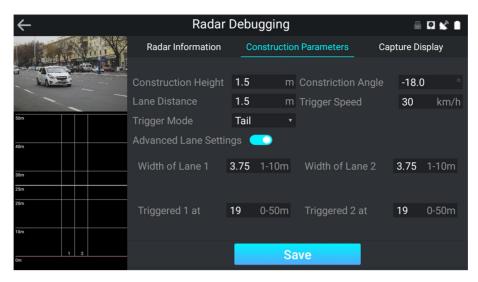


Figure 3-2 Set Construction Parameters

3. Tap Capture Display to view the radar detection effect.

iNote

The live view and lanes on the left of the interface show if the radar tracks match with the vehicles. The vehicle capture picture on the right of the interface shows the vehicle position in the captured picture. Adjust the construction parameters until the radar detection effect satisfies the requirement.

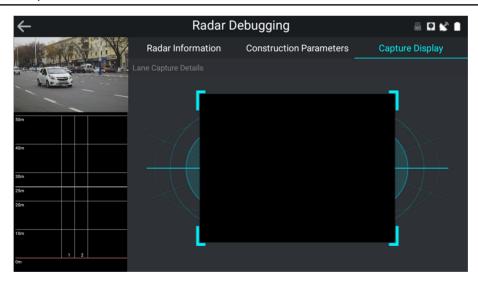


Figure 3-3 Capture Display

4. Optional: Tap **Radar Information** to view the radar status.

3.3 Vehicle Capture

3.3.1 Set Speed Parameters

Set the speed parameters to capture the violation vehicle and check if the radar detection is normal.

Steps

1. Go to Settings → Application Mode → Capture Settings .

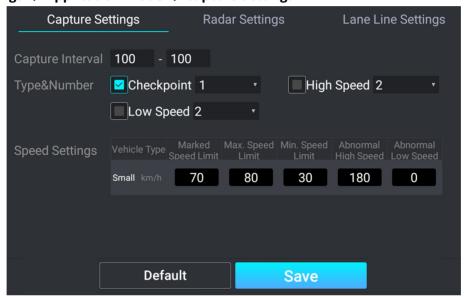


Figure 3-4 Set Speed Parameters

2. Set the parameters below.

Capture Interval

Pictures will be captured every set interval.

Type & Number

Check the capture type and select the number of captured pictures of this type.

Speed Settings

Marked Speed Limit

The speed limit marked on the sign.

Max. Speed Limit

The allowable max. speed. If you have enabled high speed detection, when the vehicle speed exceeds the max. speed limit, capture will be triggered.

Min. Speed Limit

The allowable min. speed. If you have enabled low speed detection, when the vehicle speed is lower than the min. speed limit, capture will be triggered.

Abnormal High Speed

When the radar detected speed exceeds the abnormal high speed, the radar detection will be regarded as exception, and the software will provide a normal speed randomly.

Abnormal Low Speed

When the radar detected speed is lower than the abnormal low speed, the radar detection will be regarded as exception, and the software will provide a normal speed randomly.

- **3. Optional:** Tap **Default** to restore the parameters to the default settings.
- 4. Tap Save.

3.3.2 Set Lane Line

You can draw the lane lines to detect traffic status on the lanes.

Steps

1. Go to Settings → Application Mode → Lane Line Settings .

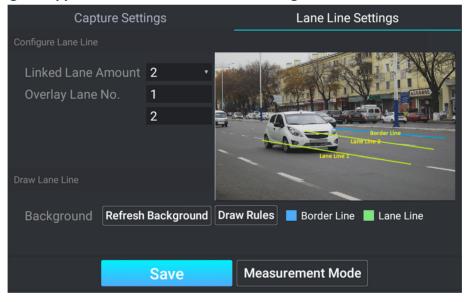


Figure 3-5 Set Lane Line

- 2. Set Linked Lane Amount and Overlay Lane No.
- **3.** Tap **Draw Rules** to adjust the positions of the lane line(s) and border line, and tap **Finish** to finish the drawing.
- **4. Optional:** If you have changed the scene, tap **Refresh Background** to refresh the background.
- 5. Click Save.

3.3.3 Set Measurement Mode

You can measure the radar speed detection accuracy.

Steps

- 1. Go to Settings → Application Mode → Lane Line Settings .
- 2. Tap Measurement Mode.
- 3. Tap Click to detect speed.

Result

The detected speed will be shown on the interface.

3.3.4 Set Capture Parameters

Set Captured Image Parameters

Set the parameters of captured images to raise the image quality.

Steps

1. Go to Settings → Image Parameters → Capture Settings.

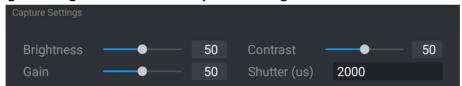


Figure 3-6 Set Captured Image Parameters

2. Set the captured image parameters.

Brightness

The max. brightness of the image.

Contrast

The color contrast between the brightest part and darkest part of the image. Set it to adjust the levels and permeability of the image.

Gain

The upper limit value of limiting image signal amplification. It is recommended to set a high gain if the illumination is not enough, and set a low gain if the illumination is enough.

Shutter

If the shutter speed is quick, the details of the moving objects can be displayed better. If the shutter speed is slow, the outline of the moving objects will be fuzzy and trailing will appear.

3. Tap Save.

Set License Plate Recognition Parameters

When there are vehicles of different types passing from different directions, set the license plate recognition parameters.

Steps

1. Go to Settings → Capture Parameters → License Plate Recognition Parameters .

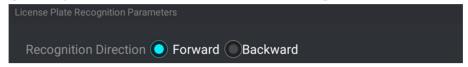


Figure 3-7 Set License Plate Recognition Parameters

- 2. Select Recognition Direction.
 - Select **Forward** when license plates of vehicles from the approaching direction need to be recognized.
 - Select Backward when license plates of vehicles from the leaving direction need to be recognized.
- 3. Tap Save.

Set Flash Light Parameters

Flash light can enhance the image stabilization and adjust the brightness and color temperature. You can use flash light to supplement light at night or when the light is dim.

Steps

1. Go to Settings → Capture Parameters → I/O Output.

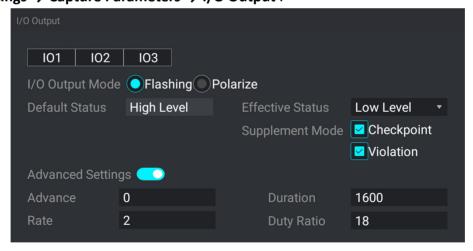


Figure 3-8 Set Flash Light Parameters

- 2. Select the I/O output.
- 3. Select I/O Output Mode.
- 4. Select Effective Status.

High Level/Low Level

The effective status should stay different with the default status for I/O to take effect. And the default status changes according to the selection of the effective status. If you set the effective status as high level, the default level goes to low level. The selection of high/low level is applicable to burst light.

Pulse

If you set the effective status as pulse, you can select the default status as high level or low level. The selection of pulse is applicable to strobe light.

5. Select Supplement Mode.

Checkpoint

The light compensation works on every vehicle.

Violation

The light compensation works when there are violations.

6. Enable **Advanced Settings** and set the parameters.

Advance

It is the preact time [0 to 1000 μ s] of the flash light, to ensure that the flash light is on when capture is triggered.

Duration

It is the dwell time [0 to 10000 μ s] after the flash light responds. The actual flash light supplement time is the result of the dwell time minus advanced time.

Rate

It is the frequency multiplication of 25 of output pulse by strobe light, to keep the flash light as constant. You can set it as default value.

Duty Ratio

It is the time occupation of the high level in a certain period. The higher the duty ratio, the brighter the flash light. High duty ratio will cut life span of the flash light, and duty ratio under 25 is recommended. Set it when you select **Effective Status** as **Pulse**.

7. Tap Save.

Set Image Composition

You can enable the image composition to composite several pictures into one to make it convenient to view the violation captured pictures.

Steps

1. Go to Settings → Capture Parameters → Picture Composition .

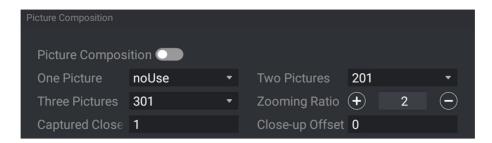


Figure 3-9 Set Image Composition

- 2. Enable Picture Composition.
- 3. Set composition types for different picture quantities.
- **4.** Set other composition parameters.

Zooming Ratio

The higher the value is, the larger the close-up is.

Captured Close-up Picture

The number of captured close-up pictures.

Close-up Offset

The device can capture close-up pictures according to the set offset when no license plate is recognized.

5. Tap Save.

Set Capture Overlay

If you want to overlay information on the captured pictures, set capture overlay.

Steps

- 1. Go to Settings → Text Overlay.
- 2. Select Overlay Mode as Captured Picture.

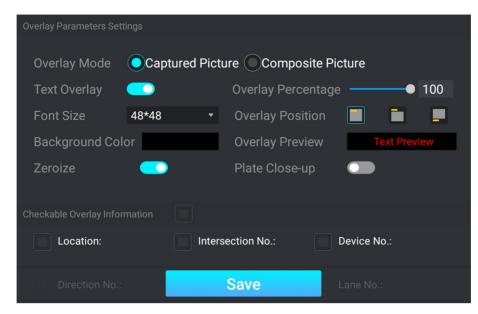


Figure 3-10 Set Capture Overlay

- 3. Enable Text Overlay.
- **4.** Set the percentage, front size, color, overlay position, etc.

Overlay Percentage

It is the percentage that the overlaid information occupies on the picture. For example, if you set the percentage to 50, the overlaid information in a row will occupy up to half of the image width, and the excess content will be overlaid from a new line.

Zeroize

When the overlaid number digits are smaller than the fixed digits, 0 will be overlaid before the overlaid number. E.g., the fixed digits for lane No. is 2. If the lane No. is 1, 01 will be overlaid on the picture.

Plate Close-up

Enable it to overlay the license plate close-up pictures on the captured pictures.

5. Check Checkable Overlay Information, and select the overlay information from the list.

 $\square_{\mathbf{i}}$ Note

The overlay information varies with different models. The actual device prevails.

6. Tap Save.

Set Composite Picture Overlay

If you want to overlay information on the composite pictures, set composite picture overlay.

Steps

1. Go to Settings → Text Overlay.

- 2. Select Overlay Mode as Composite Picture.
- 3. Enable Text Overlay.
- **4.** Set the font size, color, overlay position, etc.

Overlay Percentage

It is the percentage that the overlaid information occupies on the picture. For example, if you set the percentage to 50, the overlaid information in a row will occupy up to half of the image width, and the excess content will be overlaid from a new line.

5. Check Checkable Overlay Information, and select the overlay information from the list.



The overlay information varies with different models. The actual device prevails.

6. Tap Save.

3.3.5 View Real-Time Picture

You can view the real-time captured pictures and license plate information.

Steps

1. Tap Traffic Information.

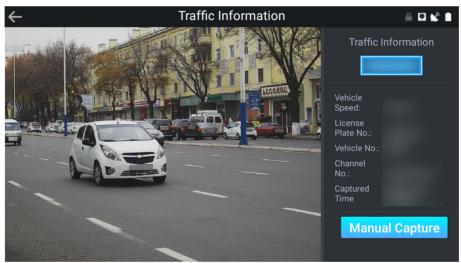


Figure 3-11 View Real-Time Picture

- 2. View the captured scene picture and license plate picture.
- 3. View other information such as vehicle speed, license plate number, captured time, etc.
- **4. Optional:** Tap **Manual Capture** to capture a picture manually.

3.3.6 Search Picture

You can search the captured violation pictures and export them to the USB flash drive.

Before You Start

Connect a USB flash drive to the device.

Steps

- 1. Tap Picture Search.
- 2. Select the violation type.
- 3. Set the start time and end time.
- 4. Tap Search.

The searched pictures information will be displayed in the picture list.

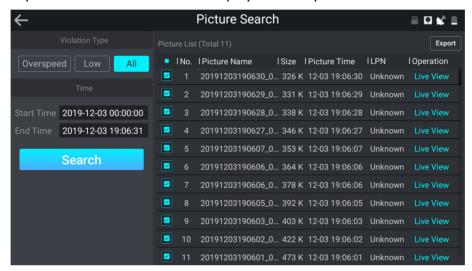


Figure 3-12 Search Picture

- **5. Optional:** Tap **Live View** to preview the selected picture.
- **6. Optional:** Check a picture or several pictures and tap **Export** to export it/them to the USB flash drive.

3.3.7 Search Traffic Statistics

You can search the daily/weekly/monthly number of passing vehicles of different violation types, speeds, and vehicle types.

Steps

- 1. Tap Traffic Statistics.
- 2. Set the search conditions.
- 3. Tap Search.

Result

The daily/weekly/monthly number of passing vehicles of different violation types, speeds, and vehicle types will be displayed on the right.



Figure 3-13 Search Traffic Statistics

3.4 Live View

Tap **Live View** to view the real-time video.

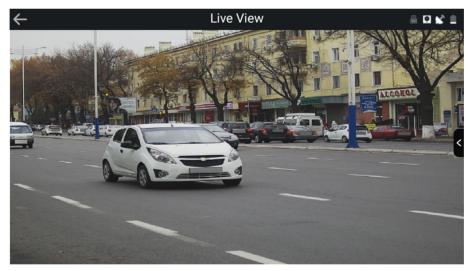


Figure 3-14 Live View

Brightness

It refers to the max. brightness of the image.

Contrast

It refers to the contrast of the image. Set it to adjust the levels and permeability of the image.

Shutter

If the shutter speed is quick, the details of the moving objects can be displayed better. If the shutter speed is slow, the outline of the moving objects will be fuzzy and trailing will appear.

Gain

It refers to the upper limit value of limiting image signal amplification. It is recommended to set a high gain if the illumination is not enough, and set a low gain if the illumination is enough.

2D DNR

The higher the **DNR Level** is, the stronger the noise will be reduced. But if it is too high, the image may become fuzzy.

Angle Baseline

Select **Left** or **Right** to adjust the device construction angle.

3D DNR

Digital Noise Reduction (DNR) reduces the noise in the video stream.

In **Normal** mode, the higher the **DNR Level** is, the stronger the noise will be reduced. But if it is too high, the image may become fuzzy.

In **Expert** mode, set **Space Domain** and **Time Domain**. If the space domain intensity is too high, the outline of the image may become fuzzy and the details may lose. If the time domain intensity is too high, trailing may appear.

3.5 Playback

You can play back and export the recorded videos.

Before You Start

Connect the USB flash drive to the device if you want to export the videos.

Steps

- 1. Tap Playback.
- 2. Set the start time and end time.
- 3. Tap Search.

The searched videos will be listed on the video list.

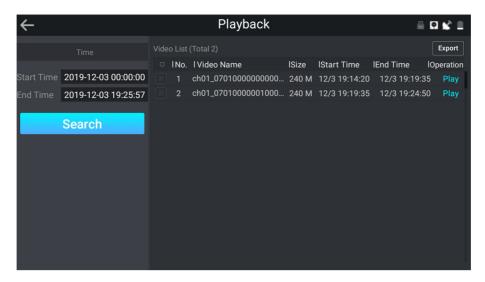


Figure 3-15 Playback

- 4. Tap Play to play back the selected video.
- **5. Optional:** Check a video or several videos and tap **Export** to export it/them.

3.6 Record and Capture

3.6.1 Set Storage Path

Format Storage Media

Format the storage media before saving videos and pictures.

Steps

1. Go to Settings → Maintenance → Storage Information .

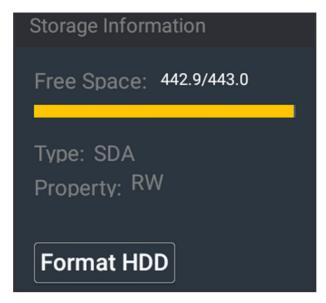


Figure 3-16 Format Storage Media

- 2. Tap Format HDD.
- **3.** Tap **OK** to the popup window.

Set FTP

Set FTP parameters if you want to upload the captured pictures to the FTP server.

Before You Start

Set the FTP server, and ensure the device can communicate normally with the server.

Steps

- 1. Go to Settings → Network Settings → FTP.
- 2. Enable FTP.

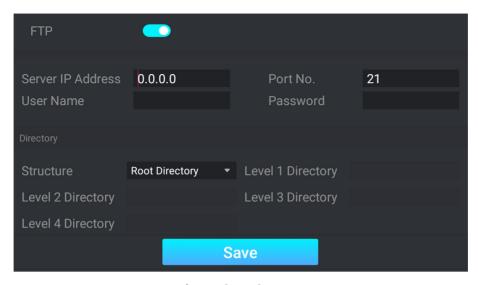


Figure 3-17 Set FTP

- 3. Set FTP server parameters.
 - 1) Enter Server IP Address and Port No.
 - 2) Enter User Name and Password.
- 4. Set directory.
 - 1) Select Structure.
 - 2) **Optional:** Select the directory name if multiple structures are needed.
- 5. Tap Save.

Set Listening Host

The listening host can be used to receive the uploaded information and pictures of the device arming alarm.

Before You Start

The listening service has been enabled for the listening host, and the network communication with the device is normal.

Steps

1. Go to Settings → Network Settings → Interface .



Figure 3-18 Set Listening Host

- 2. Set ANPR IP Address and ANPR Port to upload the alarm information and pictures.
- 3. Set Listening IP and Listening Port to upload the alarm information and pictures.



ANPR and listening conflict with each other. When you enable listening host, pictures will be uploaded via listening host in priority. When you disable listening and have set ANPR IP address and port, pictures will be uploaded via ANPR protocol.

4. Tap Save.

3.6.2 Set Quota

Set the picture ratio in the storage.

Before You Start

Ensure the storage status is normal.

Steps

1. Go to Settings → Maintenance → Storage Quota .

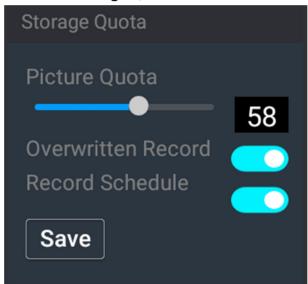


Figure 3-19 Set Quota

- 2. Set Picture Quota.
- 3. Tap Save.

3.6.3 Set Record Schedule

Set record schedule to record video automatically during configured time periods.

Before You Start

Ensure the storage status is normal. You are recommended to set the video quota ratio as not 0.

Steps

1. Go to Settings → Maintenance → Storage Quota .

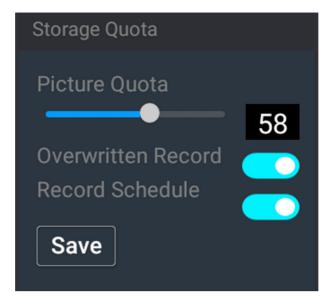


Figure 3-20 Set Record Schedule

2. Optional: Enable Overwritten Record.

When the storage is full, the earliest videos will be overwritten.

- 3. Enable Record Schedule.
- 4. Tap Save.

What to do next

Set the record schedule via the web browser.

3.7 Encoding and Display

3.7.1 Set Image Parameters

You can adjust the image parameters to get clear image.

Steps

1. Go to Settings → Image Parameters → General Parameters .

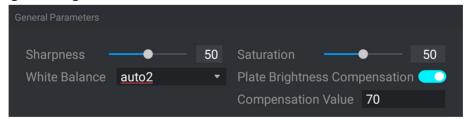


Figure 3-21 Set General Parameters

2. Adjust the parameters.

Sharpness

It refers to the edge contrast of the image.

Saturation

It refers to the colorfulness of the image color.

White Balance

It is the white rendition function of the device used to adjust the color temperature according to the environment.

Plate Brightness Compensation

Check it. The plate brightness compensation can be realized, and various light supplement conditions can be adapted via setting license plate expectant brightness and supplement light correction coefficient. The higher the **Compensation Value** is, the easier this function can be enabled.

3. Tap Save.

3.7.2 Set ICR

ICR adopts mechanical IR filter to filter IR in the day to guarantee the image effect, and to remove the IR filter at night to guarantee full-spectrum rays can get through the device.

Steps

1. Go to Settings → Image Parameters → ICR.

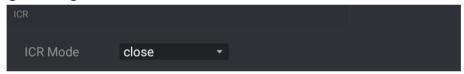


Figure 3-22 Set ICR

2. Select ICR Mode.

auto Switches to ICR mode automatically at night or in dark light conditions.

manual Select Day/Night Mode to switch to the day or night manually.

time Set day/night mode, start time, and end time to switch to ICR mode only during

the set time period.

close Disable the ICR mode.

3. Tap Save.

3.8 Network Configuration

3.8.1 Set IP Address

IP address must be properly configured before you operate the device over network.

Go to Settings → Network Settings → Interface .

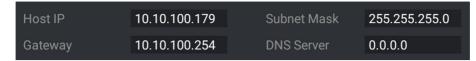


Figure 3-23 Set IP Address

IP Address

You can set the device IP parameters manually. Enter Host IP, Subnet Mask, and Gateway.

DNS Server

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 the server IP address properly if needed.

3.8.2 Dial

Set the dialing parameters if you want to connect the device to the network via SIM card.

Before You Start

Install SIM card.

Steps

- 1. Go to Settings → Network Settings → 3G/4G.
- 2. Enable 3G/4G.

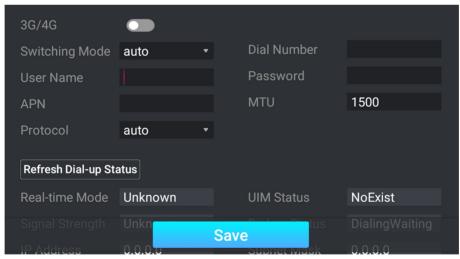


Figure 3-24 Set Dial-up Parameters

3. Select Switching Mode.

manualto4G

Select it to fix to 4G network.

manualto3G

Select it when 4G network is not steady.

manualto2G

Select it when 3G network is not steady.

4. Set the APN information, such as Dial Number, User Name, Password, APN, etc.



- Consult the operator about the dial-up parameters.
- When you have enabled 2G/3G/4G and Wi-Fi simultaneously, the device will use 2G/3G/4G network in priority.
- 5. Tap Save.
- **6. Optional:** Tap **Refresh Dial-up Status** to view the dial-up status.

3.8.3 Connect to Wi-Fi

Set Wi-Fi parameters if you want to connect the device to the network via Wi-Fi.

Steps

- 1. Go to Settings → Network Settings → Wi-Fi.
- 2. Enable Wi-Fi.
- 3. Select Wi-Fi Mode as Wi-Fi.

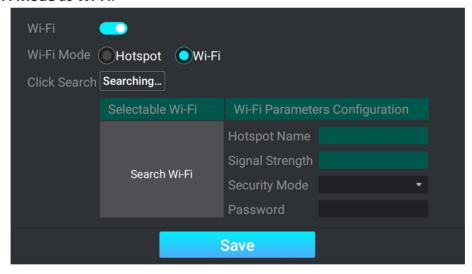


Figure 3-25 Connect to Wi-Fi

- 4. Tap Searching... to search the Wi-Fi.
- 5. Select a Wi-Fi, and enter Password.
- 6. Tap Save.

3.8.4 Set Wi-Fi Hotspot

Set Wi-Fi AP to use the device as a hotspot to share network to another terminal device.

Steps



Wi-Fi AP and Wi-Fi function cannot be enabled at the same time. Once one of them is enabled, the other will be disabled automatically.

- 1. Go to Settings → Network Settings → Wi-Fi.
- 2. Enable Wi-Fi.
- 3. Select Wi-Fi Mode as Hotspot.

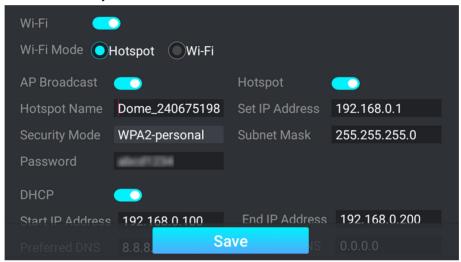


Figure 3-26 Set Wi-Fi Hotspot

- 4. Enable AP Broadcast and Hotspot.
- 5. Set Hotspot Name, IP Address, Security Mode, etc.

Note

The IP address should be different from the one that set in the network parameters.

- 6. Optional: Enable DHCP and enter the start/end IP address.
- 7. Tap Save.

Result

When the device connects to the network via dialing, the connected peripheral device can get access to the network either.

3.9 Anti-Theft Configuration

Set anti-theft to prompt alarm information when the battery of the device is being pulled out or inserted, or the power is off.

Before You Start

Ensure the dial module is normal.

Steps

1. Go to Settings → Network Settings → Anti-Theft .

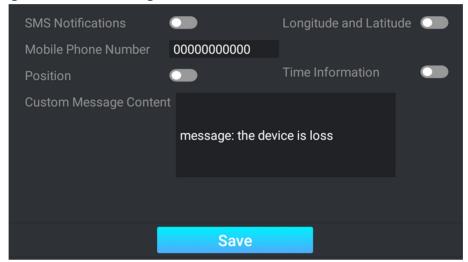


Figure 3-27 Set Anti-Theft

- 2. Enable anti-theft SMS notification.
 - 1) Enable SMS Notifications.
 - 2) Enter Mobile Phone Number.
 - 3) Edit Custom Message Content.

When the battery of the device is being pulled out or inserted, or the power is off, the SMS content will be sent to the specific mobile phone.

- **3. Optional:** Enable **Longitude and Latitude**, **Position**, or **Time Information** according to your needs.
- 4. Tap Save.

What to do next

Go to the main menu to enable **Anti-Theft Switch** on the lower right corner of the interface.

3.10 Maintenance

3.10.1 Manage User

The administrator can add, modify, or delete other accounts, and grant different permissions to different user levels.

Steps

- 1. Go to Settings → User Management .
- 2. Add a user.
 - 1) Tap Add.
 - 2) Enter User Name and select User Type.
 - 3) Enter Password, and confirm the password.



To increase security of using the device on the network, please change the password of your account regularly. Changing the password every 3 months is recommended. If the device is used in high-risk environment, it is recommended that the password should be changed every month or week.

4) Assign remote permission to users based on needs.

User

Users can be assigned permission of viewing live video and changing their own passwords, but no permission for other operations.

Operator

Operators can be assigned all permission except for operations on the administrator and creating accounts.

5) Tap Save.



The administrator can add up to 31 user accounts.

- 3. You can do the following operations.
 - Select a user and tap **View** to change the password and permission.
 - Select a user and tap **Delete** to delete the user.

3.10.2 View Device Information

Basic Information

Go to **Settings → Maintenance → Device Information** to view the basic information such as device name, device model, firmware version, etc. of the device.

Running Status

Go to **Settings** → **Maintenance** → **Running Status** to view the running status of the device.

3.10.3 Search Log

Log helps to locate and troubleshoot problems.

Steps

- 1. Tap Log Search.
- 2. Set search conditions.
- 3. Tap Search.

Result

The matched log files will be displayed on the log list.

3.10.4 Upgrade Radar

You can upgrade radar via USB flash drive.

Before You Start

Save the radar upgrade file to the root directory of the USB flash drive, and connect the drive to the device.

Steps

- 1. Go to Settings → Maintenance .
- 2. Tap Radar Upgrade via USB.
- 3. Select the radar upgrade file, and tap **OK** to start upgrade.

What to do next

Reboot the device to take the upgrade into effect.

3.10.5 Upgrade System

You can upgrade the system via USB flash drive when you need to update the device version.

Before You Start

Save the system upgrade file to the root directory of the USB flash drive, and connect the drive to the device.

- 1. Go to Settings → Maintenance .
- 2. Tap System Upgrade via USB.
- 3. Select the system upgrade file, and tap **OK** to start upgrade.

Note

The upgrade process will take 1 to 10 minutes. Do not cut off the power supply.

Result

The device will reboot automatically after upgrade.

3.10.6 Reboot

When the device needs to be rebooted, you can reboot it via the screen operation instead of cutting off the power directly.

Steps

- 1. Go to Settings → Maintenance .
- 2. Tap Reboot.
- 3. Tap **OK** on the popup window to reboot the device.

3.10.7 Restore Parameters

When the device is abnormal caused by the incorrect set parameters, you can restore the parameters.

Steps

- 1. Go to Settings → Maintenance .
- 2. Select the restoration mode.
 - Tap **Restore Default** to restore the parameters except the IP parameters and user parameters to the default settings.
 - Tap **Restore Factory** to restore all the parameters to the factory settings.
- **3.** Tap **OK** on the popup window to start the restoration.

3.10.8 Set NTP Synchronization

You can set NTP synchronization to synchronize device time with NTP server time.

Before You Start

Ensure the device communicates normally with the NTP server.

- 1. Go to Settings \rightarrow Network Settings \rightarrow NTP.
- 2. Enable NTP.
- 3. Set Server Address, Server Port No., and Sync. Interval.
- 4. Tap Save.

3.10.9 Debug Screen Display

You can set the screen brightness and screen off threshold, and export the screen log.

Steps

- 1. Go to Settings → Display Debugging .
- **2.** Adjust **Screen Brightness**, or check **Auto**. If you check **Auto**, the screen brightness will change according to the environment brightness.
- 3. Adjust Screen Off Threshold.
- 4. Optional: Tap Export to export the screen log.
- 5. Tap Save.

3.10.10 Shutdown

When the device needs to be shut down, you can shut it down via the screen operation instead of cutting off the power directly.

- 1. Go to Settings → Maintenance .
- 2. Tap Shutdown.
- 3. Tap **OK** on the popup window to shut down the device.

Chapter 4 Operation via Web Browser

4.1 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.** Download and install appropriate plug-in for your web browser. Follow the installation prompts to install the plug-in.
- **5.** Reopen the web browser after the installation of the plug-in and repeat steps 1 to 3 to login.
- **6. Optional:** Click **Logout** on the upper right corner of the interface to log out of the device.

4.2 Set Radar Detection Parameters

Radar is used to detect the target and link the capture. Set radar detection parameters before capturing vehicle pictures.

Steps

1. Click Radar.

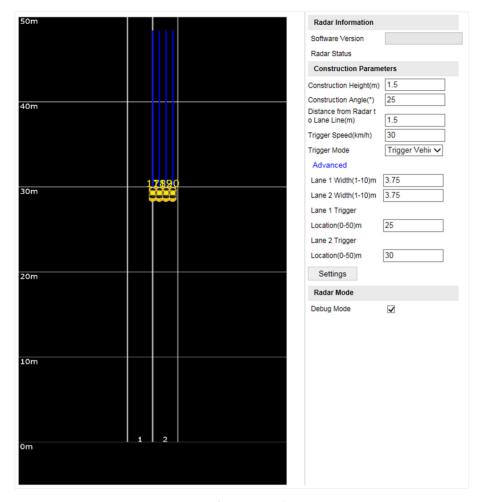


Figure 4-1 Set Radar Detection Parameters

2. View the radar information.

Software Version

The software version of the radar.

Radar Status

The current radar status. The radar can be normally used in normal status. If the radar is in upgrading status, do not reboot the device. Refresh the interface every one minute, and the status can be restored to normal.

3. Set the construction parameters below, and click **Settings** to save the settings.

Construction Height

The construction height of the radar. 1.5 m is recommended.

Construction Angle

The angle between the radar and the road. 25° is recommended.

Distance from Radar to Lane Line

The distance from the radar to the lane line.

Trigger Speed

If the vehicle speed exceeds the set value, capture will be triggered.

Trigger Mode

Trigger Vehicle Head

Capture is triggered by the vehicle head. The vehicles from the approaching direction will be detected.

Trigger Vehicle Tail

Capture is triggered by the vehicle tail. The vehicles from the leaving direction will be detected.

Trigger Vehicle Head and Tail

Capture can be triggered by the vehicle head or tail. The vehicles from both the approaching and leaving directions will be detected.

Advanced

Lane X Width

Enter the lane width according to the actual condition.

Lane X Trigger Location

Capture will be triggered at the set location if the speed exceeds the trigger speed.

4. Check **Debug Mode** to enable the radar debug mode.

In this mode, the vehicles outside the detection area will be displayed, to make it convenient to debug the radar.

4.3 Vehicle Capture

4.3.1 Set Side-Mounted Speed Detection

The device supports side-mounted speed detection.

Steps

1. Go to Configuration → Device Configuration → Application Mode .

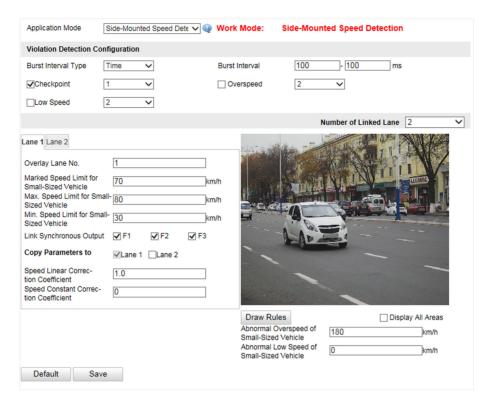


Figure 4-2 Set Side-Mounted Speed Detection

- 2. Set violation detection parameters.
 - 1) Select Burst Interval Type.
 - 2) Set Burst Interval.
 - 3) Check the violation detection type(s), and select the number of captured picture(s).

When the selected violation type is detected, burst will be triggered every set interval.

- **3.** Set the lane parameters.
 - 1) Select Number of Linked Lane.
 - 2) Select the lane.
 - 3) Set the parameters below.

Overlay Lane No.

The No. of the lane overlaid on OSD.

Marked Speed Limit for Small-Sized Vehicle

The speed limit for small-sized vehicles marked on the sign. It will be overlaid on the captured pictures.

Max. Speed Limit for Small-Sized Vehicle

The allowable max. speed for small-sized vehicles. When the vehicle speed exceeds the max. speed limit, capture will be triggered.

Min. Speed Limit for Small-Sized Vehicle

The allowable min. speed for small-sized vehicles. When the vehicle speed is lower than the min. speed limit, capture will be triggered.

Abnormal Overspeed of Small-Sized Vehicle

When the radar detected speed exceeds the abnormal overspeed of small-sized vehicles, the radar detection will be regarded as exception, and the software will provide a normal speed randomly.

Abnormal Low Speed of Small-Sized Vehicle

When the radar detected speed is lower than the abnormal low speed of small-sized vehicles, the radar detection will be regarded as exception, and the software will provide a normal speed randomly.

- 4) Check the supplement light No. to link it to the lane.
- 5) **Optional:** Check the other lane(s) to copy the same settings.
- 4. Draw lane lines.
 - 1) Click Draw Rules.
 - 2) Select the lane type.
 - 3) Select the default lane lines and right border line, and drag the two end points of the line or drag the whole line to adjust its position according to the actual scene.
 - 4) Click OK.

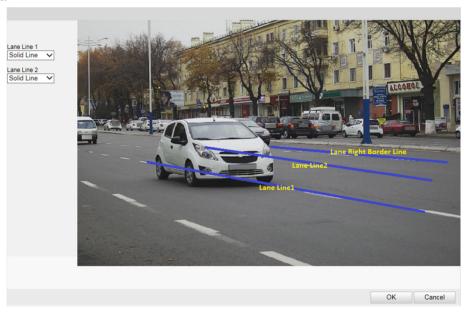


Figure 4-3 Draw Lane Line

5. Click Save.

4.3.2 Set Capture Parameters

Set Captured Image Parameters

Set the parameters of captured images to raise the image quality.

Steps

1. Go to Configuration → Device Configuration → Image Parameters → Picture .

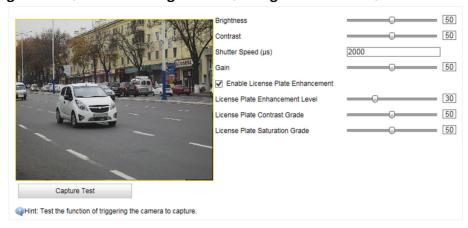


Figure 4-4 Set Captured Image Parameters

2. Set the captured image parameters.

Brightness

The max. brightness of the image.

Contrast

The color contrast between the brightest part and darkest part of the image. Set it to adjust the levels and permeability of the image.

Shutter Speed

If the shutter speed is quick, the details of the moving objects can be displayed better. If the shutter speed is slow, the outline of the moving objects will be fuzzy and trailing will appear.

Gain

The upper limit value of limiting image signal amplification. It is recommended to set a high gain if the illumination is not enough, and set a low gain if the illumination is enough.

Enable License Plate Enhancement

Check **Enable License Plate Enhancement** to capture clearer license plate images. The higher the **License Plate Enhancement Level**, **License Plate Contrast Grade**, and **License Plate Saturation Grade** are, the clearer the captured license plate images are. But if the level is too high, the captured images may be overexposed. It is recommended to keep the default level.

Set License Plate Recognition Parameters

When there are vehicles of different types passing from different directions, set the license plate recognition parameters.

Steps

1. Go to Configuration → Device Configuration → Capture Parameters → License Parameters .



Figure 4-5 Set License Plate Recognition Parameters

- 2. Select License Plate Recognition.
 - Select **Front Plate** when license plates of vehicles from the approaching direction need to be recognized.
 - Select **Back Plate** when license plates of vehicles from the leaving direction need to be recognized.
- **3.** Select **License Plate Type** according to the actual needs.
 - Select Small-Size Plate Recognition when the license plate pixel ranges from 80 to 120.
 - Select Large-Size Plate Recognition when the license plate pixel ranges from 120 to 180.
- 4. Click Save.

Set Flash Light Parameters

Flash light can enhance the image stabilization and adjust the brightness and color temperature. You can use flash light to supplement light at night or when the light is dim.

Steps

- 1. Go to Configuration → Device Configuration → Capture Parameters → Flash Light Parameters .
- 2. Select an IO.
- 3. Select IO Output Mode.
 - Select **Strobe Light Mode**. Refer to **Set Strobe Light Mode** for details.
 - Select Polarizer Mode. Refer to Set Polarizer Mode for details.

Set Strobe Light Mode

Steps

1. Select IO Output Mode as Strobe Light Mode.

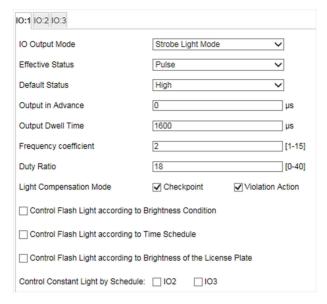


Figure 4-6 Set Strobe Light Mode

2. Select Effective Status.

High/Low

The light will flash when the high/low level signal is output to the flash light. The effective status should stay different with the default status for IO to take effect. And the default status changes according to the selection of the effective status. If you set the effective status as high level, the default level goes to low level. The selection of high/low level is applicable to burst light.

Pulse

The light will flash when the pulse signal is output to the flash light. If you set the effective status as pulse, you can select the default status as high level or low level. The selection of pulse is applicable to strobe light.

3. Set other parameters.

Output in Advance

It is the preact time [0 to 1000 μ s] of the flash light, to ensure that the flash light is on when capture is triggered.

Output Dwell Time

It is the dwell time [0 to 10000 μ s] after the flash light responds. The actual flash light supplement time is the result of the dwell time minus advanced time.

Frequency coefficient

It is the frequency multiplication of 25 of output pulse by strobe light, to keep the flash light as constant. You can set it as default value. Set it when you select **Effective Status** as **Pulse**.

Duty Ratio

It is the time occupation of the high level in a certain period. The higher the duty ratio, the brighter the flash light. High duty ratio will cut life span of the flash light, and duty ratio under 25 is recommended. Set it when you select **Effective Status** as **Pulse**.

Light Compensation Mode

Checkpoint

The light compensation works on every vehicle.

Violation Action

The light compensation works when there are violations.

- 4. Set the flash light control mode.
 - Check **Control Flash Light according to Brightness Condition** when you want the flash light to be controlled by detecting the surroundings brightness automatically. Set the brightness threshold. The higher the threshold is, the harder the flash light can be enabled.
 - Check **Control Flash Light according to Time Schedule** when you want the flash light to be enabled during a fixed time period. Set the start time and end time.
 - Check Control Flash Light according to Brightness of the License Plate when you select
 Effective Status as Pulse. The flash light takes into effect according to the brightness of the
 license plate.
- **5. Optional:** Select other IO(s) to copy the same settings.
- 6. Click Save.

Set Polarizer Mode

Steps

1. Select IO Output Mode as Polarizer Mode.

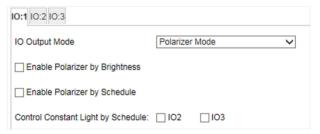


Figure 4-7 Set Polarizer Mode

- 2. Set the polarizer control mode.
 - Check Enable Polarizer by Brightness when you want the polarizer to be controlled by detecting the surroundings brightness automatically. Set the brightness threshold. The higher the threshold is, the harder the polarizer can be enabled.
 - Check **Enable Polarizer by Schedule** when you want the polarizer to be enabled during a fixed time period. Set the start time and end time.
- **3. Optional:** Select other IO(s) to copy the same settings.
- 4. Click Save.

Set Image Composition

You can enable the image composition to composite several pictures into one to make it convenient to view the violation captured pictures.

Steps

1. Go to Configuration → Device Configuration → Capture Parameters → Image Composition .

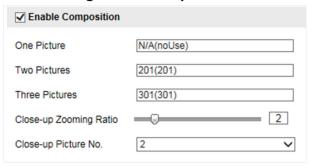


Figure 4-8 Set Image Composition

- 2. Check Enable Composition.
- 3. Set other parameters.

Close-up Zooming Ratio

The higher the value is, the larger the close-up is.

Close-up Picture No.

It is the picture where the close-up comes from.

4. Click Save.

Set Capture Overlay

If you want to overlay information on the captured pictures, set capture overlay.

Stens

- 1. Go to Configuration → Device Configuration → Text Overlay → Capture Overlay Configuration .
- 2. Check Capture Picture Overlay.



Figure 4-9 Set Capture Overlay

3. Set the percentage, front size, color, overlay position, etc.

Percentage

It is the percentage that the overlaid information occupies on the picture. For example, if you set the percentage to 50, the overlaid information in a row will occupy up to half of the image width, and the excess content will be overlaid from a new line.

Overlay Number Zeroizing

When the overlaid number digits are smaller than the fixed digits, 0 will be overlaid before the overlaid number. E.g., the fixed digits for lane No. is 2. If the lane No. is 1, 01 will be overlaid on the picture.

Overlay Plate Close-up

Overlay the license plate close-up pictures on the captured pictures.

4. Select the overlay information from the list.

Note

The overlay information varies with different models. The actual device prevails.

5. Set the overlay information.

Set Type	You can edit the type.
Set Overlay Information	For some information types, you can edit the detailed information.
Set Overlay Position	If you select Overlay on the Picture , you can check it. Then the current information will be displayed from a new line.
Set Space	Edit the number of space between the current information and the next one from 0 to 255. 0 means there is no space.
Set Line Break Characters	Edit the number of characters from 0 to 100 between the current information line and the previous information line. 0 means no line break.
Adjust overlay sequence	Click \uparrow / \downarrow to adjust the display sequence of the overlay information.

6. Click Save.

Set Composite Picture Overlay

If you want to overlay information on the composite pictures, set composite picture overlay.

Steps

- **1.** Go to Configuration → Device Configuration → Text Overlay → Composite Picture Overlay Configuration .
- 2. Check Capture Picture Overlay.



Figure 4-10 Set Composite Picture Overlay

3. Set the font size, color, overlay position, etc.

Percentage

It is the percentage that the overlaid information occupies on the picture. For example, if you set the percentage to 50, the overlaid information in a row will occupy up to half of the image width, and the excess content will be overlaid from a new line.

4. Select the overlay information from the list.



The overlay information varies with different models. The actual device prevails.

5. Set the overlay information.

Set Type	You can edit the type.
Set Overlay Information	For some information types, you can edit the detailed information.
Set Overlay Position	If you check it, the current information will be displayed from a new line.
Set Space	Edit the number of space between the current information and the next one from 0 to 255. 0 means there is no space.
Set Line Break Characters	Edit the number of characters from 0 to 100 between the current information line and the previous information line. 0 means no line break.

Adjust overlay sequence

Click $\uparrow / \downarrow \downarrow$ to adjust the display sequence of the overlay information.

6. Click Save.

Set Vehicle Feature Parameters

Set vehicle feature parameters if you need to detect the vehicle features of the passing vehicle.

Steps

1. Go to Configuration → Device Configuration → Capture Parameters → Vehicle Feature .

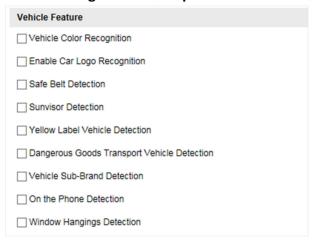


Figure 4-11 Set Vehicle Feature Parameters

- 2. Check the vehicle features that needed to be detected.
- 3. Click Save.

Set Image Encoding Parameters

If the captured pictures are not clear, set the resolution of the captured pictures and the picture size.

Steps

1. Go to Configuration → Device Configuration → Encoding and Storage → Image Encoding.

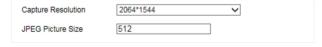


Figure 4-12 Set Image Encoding Parameters

- 2. Select Capture Resolution.
- **3.** Enter the picture size.

JPEG Picture Size

The size of the captured picture.

4. Click Save.

Set Violation Dictionary

Violation dictionary defines corresponding codes of violation types. You can set the violation code, violation type, and violation description in this section. The default parameters are recommended.

Steps



Functions and parameters vary with different models. The actual device prevails.

- 1. Go to Configuration → Device Configuration → System Configuration → Violation Dictionary .
- 2. Set Violation Code, Violation Type, and Violation Description according to the actual needs.
- 3. Click Save.

Result

The violation code and description will be displayed on the captured picture when the corresponding violation happens.

4.3.3 View Real-Time Picture

You can view the real-time captured pictures and license plate information.

- 1. Go to Live View → Real-Time Status and Traffic Flow Statistics .
- **2.** Select an item from the list, and you can view the capture scene picture and license plate picture.

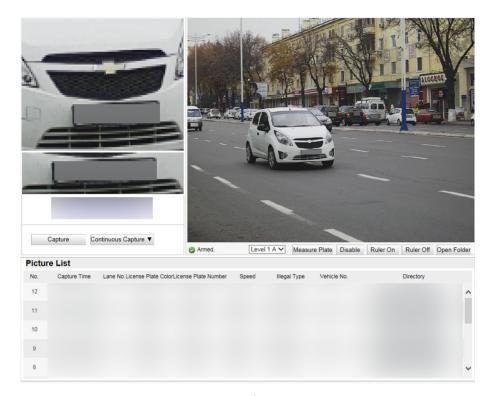


Figure 4-13 Real-Time Picture

- 3. You can do the following operations on this interface.
 - Select the arming mode. **Level 1 Arming** can only connect one client or web. The uploaded pictures will not be stored in the storage media. The pictures in the storage media will be uploaded to the level 1 arming. **Level 2 Arming** can connect three clients or webs. The pictures will be uploaded to the client/web, and stored in the storage media. **Disarming** is to cancel the alarm status or real-time picture.
 - Click **Capture** to enable manual capture. The captured pictures will be saved in the set local path. Or you can click **Open Folder** to view the pictures.
 - Click **Measure Plate/Ruler On** to measure the license plate pixel. After the measurement, click **Disable/Ruler Off**.
 - Click ▼ after Continuous Capture to set the burst parameters.

Capture Times

Up to five pictures can be captured per burst.

Continuous Capture Intervals

Up to four intervals can be set, and the default interval is 100 s.

Click **Continuous Capture**, and the device will capture pictures according to the set intervals.

4.3.4 Search Picture

You can search the captured pictures stored in the storage media and export the pictures you need.

Before You Start

Ensure the storage status is normal.

Steps

- 1. Click Picture.
- 2. Set the search conditions such as Lane No., Vehicle Type, etc.
- 3. Click Search.

The searched pictures information will be displayed in the picture list.



If you have set level 1 arming for the device, the captured pictures will not be saved in the storage media. Go to the saving path of scene pictures to view them. You can go to **Configuration** → **Local Configuration** to get the saving path.

4. Optional: Click **is** to preview the selected picture.

You can view the captured picture and the related information such as the capture time, lane No., license plate number, etc.

5. Optional: Check a picture or several pictures and click **Export Picture** to export it/them to the saving path you have set.

The downloaded picture(s) will be marked as "Downloaded". You can go to **Configuration** → **Local Configuration** to get the saving path of downloaded pictures.

4.4 Live View and Local Configuration

4.4.1 Live View

Start/Stop Live View

Click to start live view. Click to stop live view.

Select Image Display Mode

Click come to display the image in 4:3/16:9/self-adaptive display mode.

Select Stream Type

Click Main Stream / Stream / Third Stream to select the stream type. It is recommended to select the main stream to get the high-quality image when the network condition is good, and select the substream to get the fluent image when the network condition is not good enough. The third stream is custom.

Capture Picture Manually

You can capture pictures manually on the live view image and save them to the computer.

Steps

- 1. Click to start live view.
- 2. Click on to capture a picture.
- **3. Optional:** Click **Configuration** → **Local Configuration** to view the saving path of snapshots in live view.

Record Manually

You can record videos manually on the live view image and save them to the computer.

Steps

- 1. Click to start live view.
- 2. Click is to start recording.
- **3.** Click **a** to stop recording.
- **4. Optional:** Click **Configuration** → **Local Configuration** to view the saving path of record files.

Enable Digital Zoom

You can enable digital zoom to zoom in a certain part of the live view image.

Steps

- 1. Click to start live view.
- 2. Click a to enable digital zoom.
- **3.** Place the cursor on the live view image position which needs to be zoomed in. Drag the mouse rightwards and downwards to draw an area.

The area will be zoomed in.

- **4.** Click any position of the image to restore to normal image.
- **5.** Click quality to disable digital zoom.

Enable Wiper

is a reserved function.

4.4.2 Local Configuration

Go to **Configuration \(\rightarrow\) Local Configuration** to set the live view parameters and change the saving paths of videos, captured pictures, scene pictures, etc.

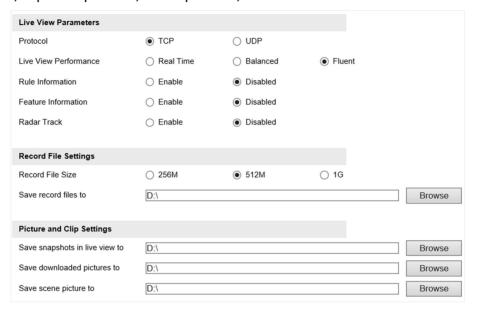


Figure 4-14 Local Configuration

Protocol

Select the network transmission protocol according to the actual needs.

TCP

Ensures complete delivery of streaming data and better video quality, yet the real-time transmission will be affected.

UDP

Provides real-time audio and video streams.

Live View Performance

Real Time

The video is real-time, but the video fluency may be affected.

Balanced

Balanced mode considers both the real time and fluency of the video.

Fluent

When the network condition is good, the video is fluent.

Rule Information

If you enable the rule information, tracking frames will be displayed on the live view interface when there are vehicles passing.

Feature Information

If you enable the feature information, information of the lane, traffic flow, speed, etc. will be displayed on the live view interface.

Record File Size

Select the packed size of the manually recorded video files. After the selection, the max. record file size is the value you selected.

Save record files to

Set the saving path for the manually recorded video files.

Save snapshots in live view to

Set the saving path of the manually captured pictures in live view mode.

Save downloaded pictures to

Set the saving path for the downloaded pictures.

Save scene picture to

Set the saving path of the captured pictures in the **Real-Time Status and Traffic Flow Statistics** interface.



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

4.5 Record and Capture

4.5.1 Set Storage Path

Set Storage Media

If you want to store the files to the storage media, make sure you format the storage media in advance.

Steps

1. Go to Configuration → Device Configuration → Encoding and Storage → Storage Management .

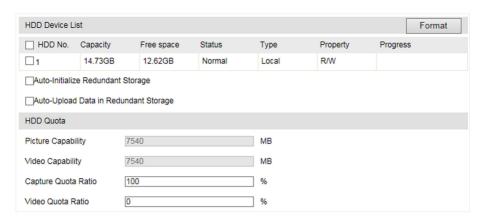


Figure 4-15 Set Storage Media

- 2. Format the storage media in two ways.
 - Check the storage media, and click **Format** to format it manually.
 - If you want to format the storage media automatically when the it is abnormal, check **Auto-Initialize Redundant Storage**.
- **3. Optional:** If the device has been connected to the platform, and you want to upload the storage media information automatically, check **Auto-Upload Data in Redundant Storage**.
- 4. Click Save.

Set FTP

Set FTP parameters if you want to upload the captured pictures to the FTP server.

Before You Start

Set the FTP server, and ensure the device can communicate normally with the server.

Steps

1. Go to Configuration → Device Configuration → Encoding and Storage → FTP.

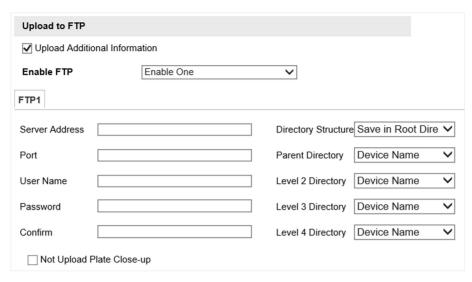


Figure 4-16 Set FTP

- **2. Optional:** Check **Upload Additional Information**, and then the related information can be attached when uploading.
- 3. Enable the FTP server.
- 4. Set FTP parameters.
 - 1) Enter Server Address and Port.
 - 2) Enter **User Name** and **Password**, and confirm the password.
 - 3) Select Directory Structure.



If multiple directories are needed, you can customize the directory name.

- **5. Optional:** Check **Not Upload Plate Close-up** if the license plate close-up pictures are not needed to upload.
- 6. Set the name rule and separator according to the actual needs.
- **7. Optional:** Edit OSD information which can be uploaded to the FTP server with the pictures to make it convenient to view and distinguish the data.
- 8. Click Save.

Set Listening Host

The listening host can be used to receive the uploaded information and pictures of the device arming alarm.

Before You Start

The listening service has been enabled for the listening host, and the network communication with the device is normal.

Steps

1. Go to Configuration → Device Configuration → System Configuration → Network Parameters .



Figure 4-17 Set Listening Host

- 2. Set ANPR IP Address and ANPR Port to upload the alarm information and pictures.
- 3. Set Listening Host IP Address and Listening Host Port, and check Enable Picture Uploading Listening if you need to upload pictures.



ANPR and listening conflict with each other. When you enable listening host, pictures will be uploaded via listening host in priority. When you disable listening and have set ANPR IP address and port, pictures will be uploaded via ANPR protocol.

4. Click Save.

Set Cloud Storage

Cloud storage is a kind of network storage. It can be used as the extended storage to save the captured pictures.

Before You Start

- · Arrange the cloud storage server.
- You have enabled level 1 arm in Real-Time Status and Traffic Flow Statistics.

Steps

1. Go to Configuration → Device Configuration → Encoding and Storage → Cloud Storage.

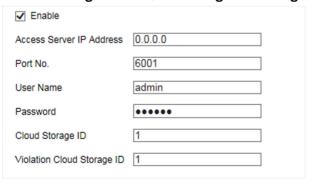


Figure 4-18 Set Cloud Storage

- 2. Check Enable.
- **3.** Set the server parameters.
 - 1) Enter Access Server IP Address and Port No.
 - 2) Enter **User Name** and **Password**.

- 3) Enter the ID according to the storage area No. of the server.
- 4. Click Save.

4.5.2 Set Quota

Set the video and picture ratio in the storage.

Before You Start

Ensure the storage status is normal.

Steps

- 1. Go to Configuration → Device Configuration → Encoding and Storage → Storage Management .
- 2. Set Capture Quota Ratio and Video Quota Ratio according to the actual needs.

i Note

The percentage sum of the capture and video quota ratio should be 100%.

3. Click Save.

What to do next

Format the storage media after the settings.

4.5.3 Set Record Schedule

Set record schedule to record video automatically during configured time periods.

Before You Start

Ensure the storage status is normal. You are recommended to set the video quota ratio as not 0.

Steps

1. Go to Configuration \rightarrow Device Configuration \rightarrow Encoding and Storage \rightarrow Record Schedule .

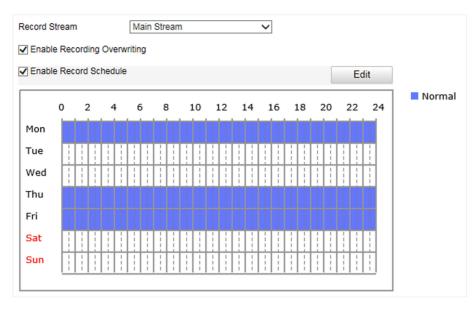


Figure 4-19 Set Record Schedule

2. Optional: Check Enable Recording Overwriting.

When the storage is full, the earliest videos will be overwritten.

- 3. Check Enable Record Schedule.
- 4. Click Edit to edit the record schedule.
 - 1) Select Customize.
 - 2) Set the start time and end time.
 - 3) **Optional:** Select the other days and click **Copy** to copy the settings to other days.
 - 4) Click OK.
- 5. Click Save.

4.6 Encoding and Display

4.6.1 Set Video Encoding Parameters

Set video encoding parameters to adjust the live view and recording effect.

- When the network signal is good and the speed is fast, you can set high resolution and bitrate to raise the image quality.
- When the network signal is bad and the speed is slow, you can set low resolution, bitrate, and frame rate to guarantee the image fluency.
- When the network signal is bad, but the resolution should be guaranteed, you can set low bitrate and frame rate to guarantee the image fluency.
- Main stream stands for the best stream performance the device supports. It usually offers the best resolution and frame rate the device can do. But high resolution and frame rate usually means larger storage space and higher bandwidth requirements in transmission. Sub-stream

usually offers comparatively low resolution options, which consumes less bandwidth and storage space.

Steps

- 1. Go to Configuration → Device Configuration → Encoding and Storage → Video Encoding.
- 2. Set the parameters for different streams.

Stream Type

Video stream and video & audio stream are selectable.

Bitrate

Select relatively large bitrate if you need good image quality and effect, but more storage spaces will be consumed. Select relatively small bitrate if storage requirement is in priority.

Frame Rate

It is to describe the frequency at which the video stream is updated and it is measured by frames per second (fps). A higher frame rate is advantageous when there is movement in the video stream, as it maintains image quality throughout.

Resolution

The higher the resolution is, the clearer the image will be. Meanwhile, the network bandwidth requirement is higher.

SVC

Scalable Video Coding (SVC) is an extension of the H.264/AVC and H.265 standard. Enable the function and the device will automatically extract frames from the original video when the network bandwidth is insufficient.

Bitrate Type

Select the bitrate type to constant, variable, MVBR, or SVBR.

Video Quality

When bitrate type is not constant, 6 levels of video quality are selectable. The higher the video quality is, the higher requirements of the network bandwidth.

Profile

Selectable profiles vary according to device models.

I Frame Interval

It refers to the number of frames between two key frames. The larger the I frame interval is, the smaller the stream fluctuation is, but the image quality is not that good.

Video Encoding

The device supports multiple video encoding types, such as H.264, H.265, and MJPEG. Supported encoding types for different stream types may differ. H.265 is a new encoding technology. Compared with H.264, it reduces the transmission bitrate under the same resolution, frame rate, and image quality.

3. Click Save.

4.6.2 Set Image Parameters

You can adjust the image parameters to get clear image.

Steps



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

1. Go to Configuration → Device Configuration → Image Parameters → General Parameters / Configuration → Device Configuration → Image Parameters → Video .

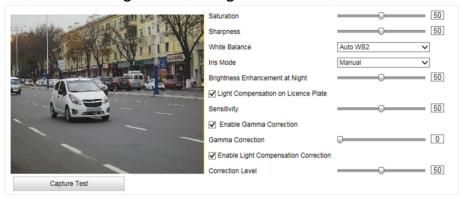


Figure 4-20 Set General Parameters

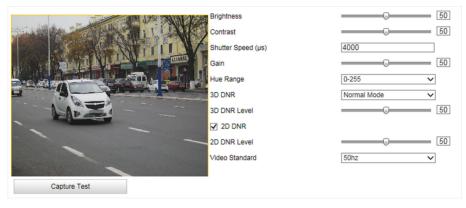


Figure 4-21 Set Video Image Parameters

2. Adjust the parameters.

Saturation

It refers to the colorfulness of the image color.

Sharpness

It refers to the edge contrast of the image.

White Balance

It is the white rendition function of the device used to adjust the color temperature according to the environment.

Iris Mode

Select the iris mode as manual or auto.

Brightness Enhancement at Night

The scene brightness will be enhanced at night automatically.

Light Compensation on License Plate

Check it. The plate brightness compensation can be realized, and various light supplement conditions can be adapted via setting license plate expectant brightness and supplement light correction coefficient. The higher the sensitivity is, the easier this function can be enabled.

Enable Gamma Correction

The higher the gamma correction value is, the stronger the correction strength is.

Enable Light Compensation Correction

Check it and set the correction level to adjust the license plate brightness automatically if the license plate or scene brightness cannot be adjusted via supplement light.

Brightness

It refers to the max. brightness of the image.

Contrast

It refers to the contrast of the image. Set it to adjust the levels and permeability of the image.

Shutter Speed

If the shutter speed is quick, the details of the moving objects can be displayed better. If the shutter speed is slow, the outline of the moving objects will be fuzzy and trailing will appear.

Gain

It refers to the upper limit value of limiting image signal amplification. It is recommended to set a high gain if the illumination is not enough, and set a low gain if the illumination is enough.

Hue Range

Select the range to adapt to the display.

3D DNR

Digital Noise Reduction (DNR) reduces the noise in the video stream.

In **Normal Mode**, the higher the **3D DNR Level** is, the stronger the noise will be reduced. But if it is too high, the image may become fuzzy.

In **Expert Mode**, set **Spatial Intensity** and **Time Intensity**. If the space domain intensity is too high, the outline of the image may become fuzzy and the details may lose. If the time domain intensity is too high, trailing may appear.

2D DNR

The higher the **2D DNR Level** is, the stronger the noise will be reduced. But if it is too high, the image may become fuzzy.

Video Standard

Select the video standard according to the actual power supply frequency.

4.6.3 Set ICR

ICR adopts mechanical IR filter to filter IR in the day to guarantee the image effect, and to remove the IR filter at night to guarantee full-spectrum rays can get through the device.

Steps

1. Go to Configuration \rightarrow Device Configuration \rightarrow Image Parameters \rightarrow ICR.

2. Select ICR Mode.

Auto-switch Switches to ICR mode automatically at night or in dark light conditions.

Manual Switch Select Day/Night Mode to switch to the day or night manually.

Scheduled Switch Set day/night mode, start time, and end time to switch to ICR mode

only during the set time period.

Do not switch Disable the ICR mode.

3. Click Save.

4.6.4 Set ROI

ROI (Region of Interest) encoding helps to assign more encoding resources to the region of interest, thus to increase the quality of the ROI whereas the background information is less focused.

Before You Start

Please check the video encoding type. ROI is supported when the video encoding type is H.264 or H.265.

Steps

1. Go to Configuration → Device Configuration → Encoding and Storage → ROI.

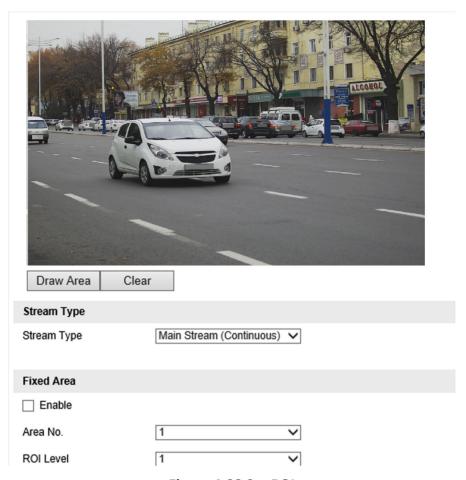


Figure 4-22 Set ROI

- 2. Select Stream Type.
- 3. Set ROI region.
 - 1) Check Enable.
 - 2) Select Area No.
 - 3) Click Draw Area.
 - 4) Drag the mouse on the live view image to draw a fixed area.
 - 5) Select the fixed area that needs to be adjusted and drag the mouse to adjust its position.
 - 6) Click Stop Drawing.
- 4. Select Area No. and ROI Level and enter Area Name.



The higher the ROI level is, the clearer the image of the detected area is.

- 5. Click Save.
- **6. Optional:** Select other area codes and repeat the steps above if you need to draw multiple fixed areas.

4.6.5 Set OSD

You can customize OSD information on the live view.

Steps

1. Go to Configuration → Device Configuration → Text Overlay → OSD Settings .

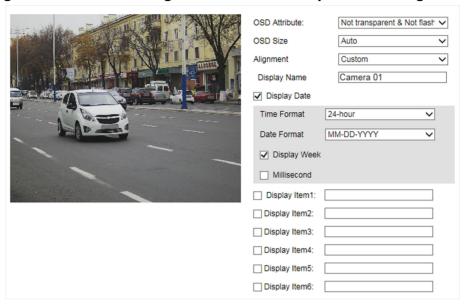


Figure 4-23 Set OSD

2. Set OSD attribute, size, alignment, etc.



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

- **3.** Set the display content.
 - 1) Enter Display Name.
 - 2) Check **Display Date**, and set the time and date format.
 - 3) Check **Display Week** or **Millisecond** according to your needs.
- **4. Optional:** Check the display item(s) and enter the information in the text field(s).
- **5.** Drag the red frames on the live view image to adjust the OSD positions.
- 6. Click Save.

Result

The set OSD will be displayed in live view image and recorded videos.

4.7 Network Configuration

4.7.1 Set IP Address

IP address must be properly configured before you operate the device over network. IPv4 and IPv6 are both supported. Both versions can be configured simultaneously without conflicting to each other.

Go to Configuration → Device Configuration → System Configuration → Network Parameters .



Figure 4-24 Set IP Address

NIC Type

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

IPv4

Two IPv4 modes are available.

DHCP

The device automatically gets the IPv4 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.



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

Manual

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

IPv6

Three IPv6 modes are available.

Route Advertisement

The IPv6 address is generated by combining the route advertisement and the device Mac address.



Route advertisement mode requires the support from the router that the device is connected to.

DHCP

The IPv6 address is assigned by the server, router, or gateway.

Manual

Enter IPv6 Address, IPv6 Subnet Mask, and IPv6 Default Gateway. Consult the network administrator for required information.

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.

Multicast

Multicast is group communication where data transmission is addressed to a group of destination devices simultaneously. After setting the IP address of the multicast host, you can send the source data efficiently to multiple receivers.

DNS

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 Server** properly if needed.

4.7.2 Dial

Set the dialing parameters if you want to connect the device to the network via SIM card.

Before You Start

Install SIM card.

Steps

1. Go to Configuration → Device Configuration → System Configuration → Dial-up Configuration .

2. Check Enable.

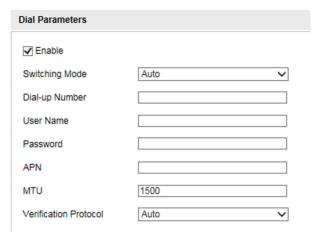


Figure 4-25 Set Dial-up Parameters

3. Select Switching Mode.

Force Switch to 4G

Select it to fix to 4G network.

Force Switch to 3G

Select it when 4G network is not steady.

Force Switch to 2G

Select it when 3G network is not steady.

4. Set the APN information, such as the user name, APN, etc.

\bigcap i Note

- Consult the operator about the dial-up parameters.
- When you have enabled 2G/3G/4G and Wi-Fi simultaneously, the device will use 2G/3G/4G network in priority.
- 5. Click Save.
- **6. Optional:** Click **Refresh** to view the dial-up status.

4.7.3 Connect to Wi-Fi

Set Wi-Fi parameters if you want to connect the device to the network via Wi-Fi.

Steps

- 1. Go to Configuration → Device Configuration → System Configuration → Wi-Fi.
- 2. Select Wi-Fi Mode as Wi-Fi.
- 3. Click Search to search the Wi-Fi.
- 4. Select a Wi-Fi from the wireless network list, and enter Key.
- 5. Click Save.

- **6. Optional:** If you want to edit the IP address connected to the Wi-Fi to make it convenient to access to the device via the IP address of WLAN, set the IP address of WLAN.
 - 1) Select IP Address Type as Static IP.
 - 2) Enter parameters such as IP address, subnet mask, etc.
 - 3) Click **Configuration** to save the settings.
- 7. Optional: Go to Configuration → Device Status to view the connection status of Wi-Fi.

4.7.4 Set Wi-Fi Hotspot

Set Wi-Fi AP to use the device as a hotspot to share network to another terminal device.

Steps



Wi-Fi AP and Wi-Fi function cannot be enabled at the same time. Once one of them is enabled, the other will be disabled automatically.

- 1. Go to Configuration → Device Configuration → System Configuration → Wi-Fi.
- 2. Select Wi-Fi Mode as Wi-Fi Hotspot.

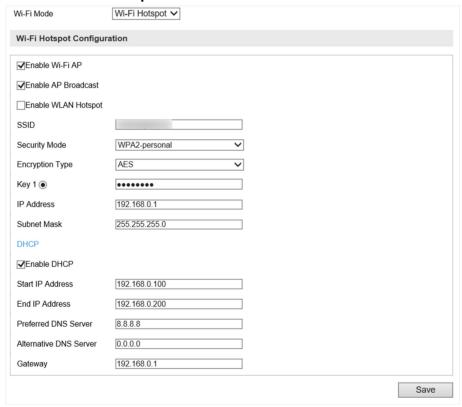


Figure 4-26 Set Wi-Fi Hotspot

- 3. Check Enable Wi-Fi AP, Enable AP Broadcast, and Enable WLAN Hotspot.
- 4. Set hotspot information.

- 1) Enter **SSID** (hotspot name).
- 2) Select Security Mode.
- 3) Select **Encryption Type**.
- 4) Enter Key, IP Address, and Subnet Mask.



The IP address should be different from the one that set in the network parameters.

5. Optional: Check Enable DHCP and enter the start/end IP address.

Result

When the device connects to the network via dialing, the connected peripheral device can get access to the network either.

4.7.5 Connect to EHome Platform

EHome is a platform access protocol. The device can be remotely accessed via this platform.

Before You Start

- Create the device ID on EHome platform.
- Ensure the device can communicate with the platform normally.

Steps

1. Go to Configuration → Device Configuration → System Configuration → EHome .



Figure 4-27 Connect to EHome Platform

- 2. Check Enable.
- 3. Enter Platform IP Address, Platform Port, and Camera No.

i Note

The camera No. should be the same with the added one on the EHome platform.

4. Click Save.

Result

After connecting to the EHome platform, you can add or manage the device via the platform software. Refer to the corresponding user manual for details.

4.7.6 Set DDNS

You can use the Dynamic DNS (DDNS) for network access. The dynamic IP address of the device can be mapped to a domain name resolution server to realize the network access via domain name.

Before You Start

- Register the domain name on the DDNS server.
- Set the LAN IP address, subnet mask, gateway, and DNS server parameters. Refer to "Set IP Address" for details.
- Complete port mapping. The default port is 80, 8000, and 554.

Steps

1. Go to Configuration → Device Configuration → System Configuration → DDNS.

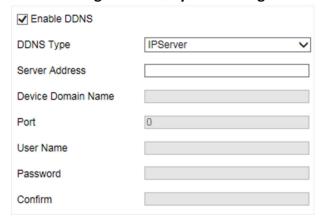


Figure 4-28 Set DDNS

- 2. Check Enable DDNS.
- 3. Enter the server address and other information.
- 4. Click Save.
- 5. Access the device.

By Browsers Enter the domain name in the browser address bar to access the

device.

By Client Software Add domain name to the client software. Refer to the client software

manual for specific adding methods.

4.7.7 Set Port

The device port can be modified when the device cannot access the network due to port conflicts.



Do not modify the default port parameters at will, otherwise the device may be inaccessible.

Go to Configuration \rightarrow Device Configuration \rightarrow System Configuration \rightarrow Port.

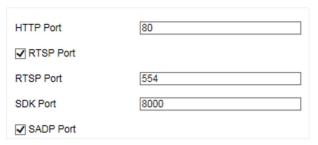


Figure 4-29 Set Port

HTTP Port

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://192.168.1.64:81* in the browser for login.

RTSP Port

It refers to the port of real-time streaming protocol.

SDK Port

It refers to the port through which the client adds the device.

SADP Port

It refers to the port through which the SADP software searches the device.

4.8 Serial Port Configuration

4.8.1 Set RS-485

Set RS-485 parameters if the device needs to be connected to other peripheral devices controlled by RS-485 serial port.

Before You Start

The corresponding device has been connected via the RS-485 serial port.

Steps

1. Go to Configuration → Device Configuration → System Configuration → Serial Ports.



Figure 4-30 Set RS-485

2. Set Baud Rate, Data Bit, Stop Bit, etc.

Note

The parameters should be same with those of the connected device.

3. Click Save.

4.8.2 Set RS-232

Set RS-232 parameters if you need to debug the device via RS-232 serial port.

Before You Start

The debugging device has been connected via the RS-232 serial port.

Steps

- 1. Go to Configuration → Device Configuration → System Configuration → Serial Ports .
- 2. Click Advanced Settings.

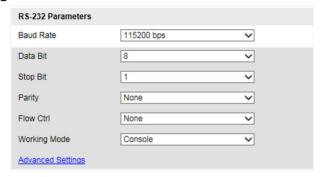


Figure 4-31 Set RS-232

3. Set Baud Rate, Data Bit, Stop Bit, etc.



The parameters should be same with those of the connected device.

4. Select Working Mode.

Console

Select it when you need to debug the device via RS-232 serial port.

Transparent Channel

Select it, and the network command can be transmitted to RS-232 control command via the RS-232 serial port.

Narrowband

Reserved.

5. Click Save.

4.9 Alarm

4.9.1 Set Exception Alarm

Set exception alarm when the network is disconnected, the IP address is conflicted, etc.

Steps

1. Go to Configuration → Device Configuration → Events → Exception Event .



Figure 4-32 Set Exception Alarm

- 2. Select the exception type(s) and the linkage method.
- 3. Click Save.

4.9.2 Set Anti-Theft

Set anti-theft to prompt alarm information when the battery of the device is being pulled out or inserted, or the power is off.

Before You Start

Ensure the dial module is normal.

Steps

1. Go to Configuration → Device Configuration → System Configuration → Anti-Theft .



Figure 4-33 Set Anti-Theft

- 2. Check Enable Anti-Theft.
- 3. Enable anti-theft SMS notification.
 - 1) Check Enable Anti-Theft SMS Notification.
 - 2) Enter Mobile Phone Number.
 - 3) Edit Custom SMS Content.

When the battery of the device is being pulled out or inserted, or the power is off, the SMS content will be sent to the specific mobile phone.

- **4. Optional:** Check **Enable Longitude and Latitude Information**, **Enable Position**, or **Enable Time Information** according to your needs.
- 5. Click Save.

4.10 Safety Management

4.10.1 Manage User

The administrator can add, modify, or delete other accounts, and grant different permissions to different user levels.

Steps

- 1. Go to Configuration → Device Configuration → User Management .
- 2. Add a user.
 - 1) Click Add.
 - 2) Enter **User Name** and select **Level**.
 - 3) Enter Password, and confirm the password.



To increase security of using the device on the network, please change the password of your account regularly. Changing the password every 3 months is recommended. If the device is used in high-risk environment, it is recommended that the password should be changed every month or week.

4) Assign remote permission to users based on needs.

User

Users can be assigned permission of viewing live video and changing their own passwords, but no permission for other operations.

Operator

Operators can be assigned all permission except for operations on the administrator and creating accounts.

5) Click OK.



The administrator can add up to 31 user accounts.

- 3. You can do the following operations.
 - Select a user and click **Modify** to change the password and permission.
 - Select a user and click **Delete** to delete the user.

4.10.2 Enable User Lock

To raise the data security, you are recommended to lock the current IP address.

Steps

- 1. Go to Configuration → Device Configuration → System Configuration → Service .
- 2. Check Enable User Lock.
- 3. Click Save.

Result

When the times you entered incorrect passwords have reached the limit, the current IP address will be locked automatically.

4.10.3 Set HTTPS

Create and Install Self-signed Certificate

HTTPS is a network protocol that enables encrypted transmission and identity authentication, which improves the security of remote access.

Steps

- 1. Go to Configuration → Device Configuration → System Configuration → HTTPS.
- 2. Select Create Self-signed Certificate.
- 3. Click Create.
- 4. Follow the prompt to enter Country, Hostname/IP, Validity, and other parameters.
- 5. Click OK.

Result

The device will install the self-signed certificate by default.

Install Authorized Certificate

If the demand for external access security is high, you can create and install authorized certificate via HTTPS protocol to ensure the data transmission security.

Steps

- 1. Go to Configuration \rightarrow Device Configuration \rightarrow System Configuration \rightarrow HTTPS.
- 2. Select Create certificate request first and continue the installation.
- 3. Click Create.
- 4. Follow the prompt to enter Country, Hostname/IP, Validity, and other parameters.
- **5.** Click **Download** to download the certificate request and submit it to the trusted authority for signature.
- **6.** Import certificate to the device.
 - Select **Signed certificate** is available, start the installation directly. Click **Browse** and **Install** to import the certificate to the device.
 - Select **Create the certificate request first and continue the installation**. Click **Browse** and **Install** to import the certificate to the device.
- 7. Click Save.

4.10.4 Set SSH

To raise network security, disable SSH service. The configuration is only used to debug the device for the professionals.

Steps

- 1. Go to Configuration → Device Configuration → System Configuration → Service .
- 2. Uncheck Enable SSH Service.
- 3. Click Save.

4.11 Maintenance

4.11.1 View Device Information

Basic Information and Algorithms Library Version

Go to Configuration → Device Configuration → System Configuration → Device Information to view the basic information and algorithms library version of the device.

You can edit **Device Name** and **Device No.** The device No. is used to control the device. It is recommended to reserve the default value.

Device Status

Go to **Configuration** → **Device Status** to view the device status, Wi-Fi status, Wi-Fi AP status, etc.

4.11.2 Search Log

Log helps to locate and troubleshoot problems.

Steps

- 1. Click Log.
- 2. Set search conditions.
- 3. Click Search.

The matched log files will be displayed on the log list.

4. Optional: Click Save Log to save the log files to your computer.

4.11.3 Upgrade

Upgrade the system when you need to update the device version.

Before You Start

Prepare the upgrade file.

Steps

- 1. Go to Configuration → Device Configuration → System Maintenance → Upgrade.
- 2. Click Browse to select the upgrade file.
- 3. Click Upgrade.
- 4. Click **OK** in the popup window.



The upgrade process will take 1 to 10 minutes. Do not cut off the power supply.

Result

The device will reboot automatically after upgrade.

4.11.4 Reboot

When the device needs to be rebooted, reboot it via the software instead of cutting off the power directly.

Steps

- 1. Go to Configuration \rightarrow Device Configuration \rightarrow System Maintenance \rightarrow Reboot.
- 2. Click Reboot.
- 3. Click OK to reboot the device.

4.11.5 Restore Parameters

When the device is abnormal caused by the incorrect set parameters, you can restore the parameters.

Steps

1. Go to Configuration → Device Configuration → System Maintenance → Default .

- 2. Select the restoration mode.
 - Click **Restore** to restore the parameters except the IP parameters and user parameters to the default settings.
 - Click **Restore Factory Settings** to restore all the parameters to the factory settings.
- 3. Click OK.

4.11.6 Synchronize Time

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

Steps

- 1. Go to Configuration → Device Configuration → System Configuration → Time Settings .
- 2. Select Synchronization Mode.

NTP Synchronization

Select it to synchronize the device time with that of the NTP server. Set **Server Address**, **NTP Port**, and **Interval**. Click **NTP Test** to test if the connection between the device and the server is normal.

Manual Synchronization

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

 \bigcap i Note

The time synchronization modes vary with different models. The actual device prevails.

3. Click Save.

4.11.7 Export Parameters

You can export the parameters of one device, and import them to another device to set the two devices with the same parameters.

Steps

- 1. Go to Configuration → Device Configuration → System Maintenance → Export Parameters .
- 2. Click Export Parameters.
- 3. Set a password, and click OK.

iNote

The password is used for importing the configuration file of the current device to other devices.

- **4.** Select the saving path, and enter the file name.
- 5. Click Save.

4.11.8 Import Configuration File

Import the configuration file of another device to the current device to set the same parameters.

Before You Start

Save the configuration file to the computer.

Steps



Importing configuration file is only available to the devices of the same model and same version.

- 1. Go to Configuration → Device Configuration → System Maintenance → Import Config. File .
- 2. Select Importing Method.



If you select **Import Part**, check the parameters to be imported.

- **3.** Click **Browse** to select the configuration file.
- 4. Enter the password which is set when the configuration file is exported, and click OK.
- 5. Click Import.
- 6. Click OK on the popup window..

Result

The parameters will be imported, and the device will reboot.

4.11.9 Export Violation Type File

You can export the violation type file to check whether the vehicle has illegal types, etc.

Steps



Export violation type file function vary with different models, please refer to the actual product.

- 1. Go to Configuration → Device Configuration → System Maintenance.
- 2. Click Export Violation Type File.
- **3.** Select the saving path and enter the file name.
- 4. Click Save.

4.11.10 Export Debug File

The technicians can export the debug file to troubleshoot and maintain the device.

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Steps

- 1. Go to Configuration → Device Configuration → System Maintenance → Export Debug File .
- 2. Click Export Debug.
- **3.** Select the saving path, and enter the file name.
- 4. Click Save.

Appendix A. Communication Matrix and Device Command

Scan the QR code below to get the communication matrix of the device.



Scan the QR code below to get the device command.



