

4MP Bullet LPR Camera

User Manual

Version: V1.7.0

Disclaimer and Safety Warnings

Export Compliance Statement

We comply with applicable export control laws and regulations worldwide, including that of the People's Republic of China and the United States, and abides by relevant regulations relating to the export, re-export and transfer of hardware, software and technology. Regarding the product described in this manual, we ask you to fully understand and strictly abide by the applicable export laws and regulations worldwide.

Disclaimer

- The company shall not be liable for any special, incidental, consequential, or indirect damages arising from the use of this manual or the company's products, including but not limited to loss of business profits, loss of data, or documents.
- The products described in this document are provided "as is." Unless required by applicable law, this manual serves only as a user guide, and all statements, information, and recommendations do not constitute any express or implied warranties, including but not limited to warranties of merchantability, satisfactory quality, fitness for a particular purpose, or non-infringement of third-party rights.
- If you connect the product to the internet, you do so at your own risk, including but not limited to potential cyberattacks, hacker attack, virus infections, etc. You should strengthen the protection of your network, device data, and personal information, and take necessary measures to ensure the security of your device and network. The company assumes no responsibility for any product malfunctions, information leaks, or related issues caused by such risks. However, the company will provide relevant security maintenance and support in a timely manner.
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- The company's total liability for all damages shall not exceed the amount you paid for the product purchased from the company.

Privacy Protection Reminder

We comply with appropriate privacy protection laws and is committed to protecting user privacy. You may want to read our full privacy policy at our website and get to know the ways we process your personal information. Please be aware, using the product described in this manual may involve the collection of personal information such as face, fingerprint, license plate number, email, phone number, GPS. Please abide by your local laws and regulations while using the product.

About This Manual

- This manual is intended for multiple product models, and the photos, illustrations, descriptions, etc., in this manual may be different from the actual appearances, functions, features, etc., of the product.
- This manual is intended for multiple software versions, and the illustrations and descriptions in this manual may be different from the actual GUI and functions of the software.
- Despite our best efforts, technical or typographical errors may exist in this manual. We cannot be held responsible for any such errors and reserve the right to change the manual without prior notice.
- Users are fully responsible for the damages and losses that arise due to improper operation.
- We reserve the right to change any information in this manual without any prior notice or indication. Due to such reasons as product version upgrade or regulatory requirement of relevant regions, this manual will be periodically updated.

Network Security

Please take all necessary measures to enhance network security for your device.

The following are necessary measures for the network security of your device:

- **Change default password and set strong password:** You are strongly recommended to change the default password after your first login and set a strong password of at least nine characters including all three elements: digits, letters and special characters.
- **Keep firmware up to date:** It is recommended that your device is always upgraded to the latest version for the latest functions and better security. Visit our official website or contact your local dealer for the latest firmware.

The following are recommendations for enhancing network security of your device:

- **Change password regularly:** Change your device password on a regular basis and keep the password safe. Make sure only the authorized user can log in to the device.
- **Enable HTTPS/SSL:** Use SSL certificate to encrypt HTTP communications and ensure data security.
- **Enable IP address filtering:** Allow access only from the specified IP addresses.
- **Minimum port mapping:** Configure your router or firewall to open a minimum set of ports to the WAN and keep only the necessary port mappings. Never set the device as the DMZ host or configure a full cone NAT.

- **Disable the automatic login and save password features:** If multiple users have access to your computer, it is recommended that you disable these features to prevent unauthorized access.
- **Choose username and password discretely:** Avoid using the username and password of your social media, bank, email account, etc., as the username and password of your device, in case your social media, bank and email account information is leaked.
- **Restrict user permissions:** If more than one user needs access to your system, make sure each user is granted only the necessary permissions.
- **Disable UPnP:** When UPnP is enabled, the router will automatically map internal ports, and the system will automatically forward port data, which results in the risks of data leakage. Therefore, it is recommended to disable UPnP if HTTP and TCP port mapping have been enabled manually on your router.
- **SNMP:** Disable SNMP if you do not use it. If you do use it, then SNMPv3 is recommended.
- **Multicast:** Multicast is intended to transmit video to multiple devices. If you do not use this function, it is recommended you disable multicast on your network.
- **Check logs:** Check your device logs regularly to detect unauthorized access or abnormal operations.
- **Physical protection:** Keep the device in a locked room or cabinet to prevent unauthorized physical access.
- **Isolate video surveillance network:** Isolating your video surveillance network with other service networks helps prevent unauthorized access to devices in your security system from other service networks.

Safety Warnings

The device must be installed, serviced and maintained by a trained professional with necessary safety knowledge and skills. Before you start using the device, please read through this guide carefully and make sure all applicable requirements are met to avoid danger and loss of property.

Storage, Transportation, and Use

- Store or use the device in a proper environment that meets environmental requirements, including and not limited to, temperature, humidity, dust, corrosive gases, electromagnetic radiation, etc.
- Make sure the device is securely installed or placed on a flat surface to prevent falling.
- Unless otherwise specified, do not stack devices.
- Ensure good ventilation in the operating environment. Do not cover the vents on the device. Allow adequate space for ventilation.
- Protect the device from liquid of any kind.
- Make sure the power supply provides a stable voltage that meets the power requirements of the device. Make sure the power supply's output power exceeds the total maximum power of all the connected devices.
- Verify that the device is properly installed before connecting it to power.
- Do not remove the seal from the device body without consulting our company first. Do not attempt to service the product yourself. Contact a trained professional for maintenance.
- Always disconnect the device from power before attempting to move the device.
- Take proper waterproof measures in accordance with requirements before using the device outdoors.

Power Requirements

- Install and use the device in strict accordance with your local electrical safety regulations.
- Use a UL certified power supply that meets LPS requirements if an adapter is used.
- Use the recommended cordset (power cord) in accordance with the specified ratings.
- Only use the power adapter supplied with your device.
- Use a mains socket outlet with a protective earthing (grounding) connection.
- Ground your device properly if the device is intended to be grounded.

Battery Use Caution

- When battery is used, avoid:
 - Extremely high or low temperature and air pressure during use, storage and transportation;
 - Battery replacement.
- Use the battery properly. Improper use of the battery such as the following may cause risks of fire, explosion or leakage of flammable liquid or gas.
 - Replace battery with an incorrect type;
 - Dispose of a battery into fire or a hot oven, or mechanically crushing or cutting of a battery;
- Dispose of the used battery according to your local regulations or the battery manufacturer's instructions.

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1 Revision Description

This document has been updated based on the version ANPR-B1107.1.7. The changes are as follows:

1. Added Vehicle Color, Vehicle Type, Plate Color, Event Type, Direction and Detection Region descriptions in [Snapshot Recognition Result](#).
2. The item "Detection Region" in [Basic Config](#) added regions including Kyrgyzstan, Israel, Moldova, Australia, Kazakhstan, Lithuania, Turkmenistan, Mexico, Bangladesh, Nepal, Philippines, Canada, EU, GCC, Mongolia, and Taiwan.
3. Added the "Identify Deceptive License Plate", "Vehicle Overstay Detection", "Vehicle Reverse Detection" and "Vehicle Overstay Threshold" descriptions to [Advanced](#).
4. Added the "Vehicle Color", "Vehicle Type", "Plate Color" and "Operation" descriptions to [Photo](#), and modified the "Event Type" description in [Photo](#).
5. Added the "EZcloud to URL" Option to the [HTTP](#) Image Filling Mode under the [Photo Server](#).
6. Added the [E-mail](#) description to [Network](#).
7. Added the "Waring!" description to [Audio File](#).
8. Added the "Wiegand Output Of Card Number From VehicleList" description to [Match Policy](#) under the [Vehicle List](#).
9. Added a new Section [Match Policy](#) and added the "Similar Characters" description to [Exact Matching](#).
10. The item "Detection Region" in [Intelligent Configuration](#) added regions including Kyrgyzstan, Israel, Moldova, Australia, Kazakhstan, Lithuania, Turkmenistan, Mexico, Bangladesh, Nepal, Philippines, Canada, EU, GCC, Mongolia, and Taiwan.
11. Modified the [Motion Detection](#), [Tampering Alarm](#) and [Alarm Input](#) descriptions in [Events](#). Added the [List Linkage](#), [Vehicle Reverse Detection](#), [Vehicle Overstay Detection](#) and [Motor Vehicle Metadata](#) functions to [Events](#).
12. Added the "Plate Color" description to the Overlay OSD Content under the [Photo](#).

2 Introduction

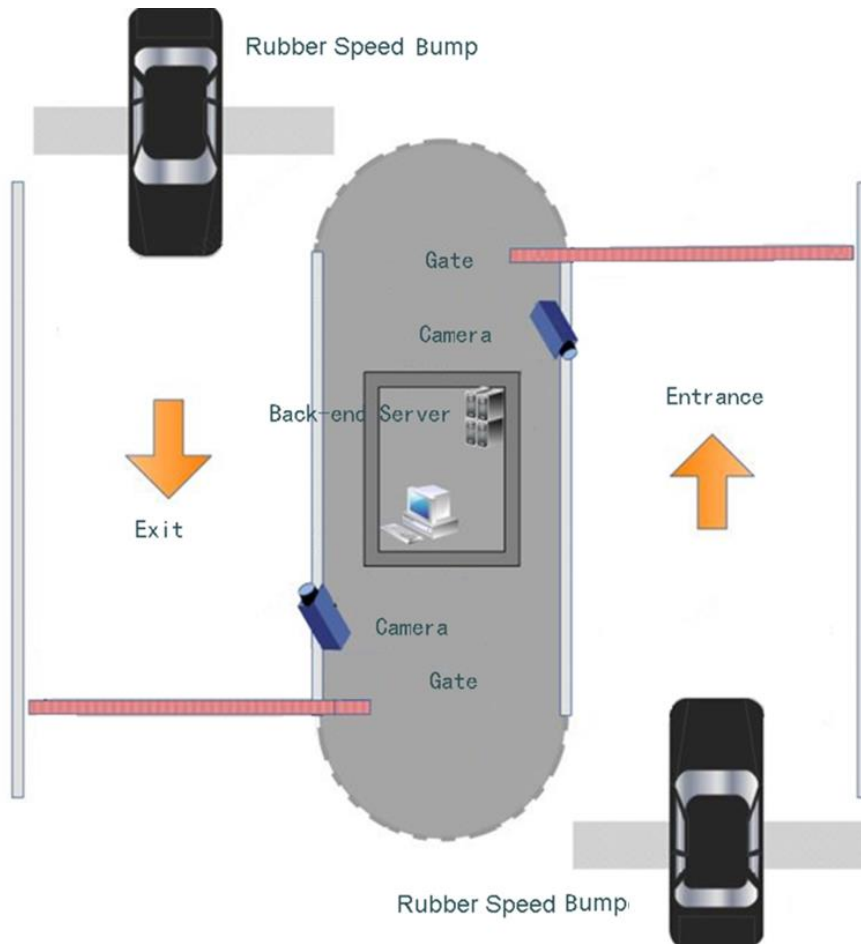
2.1 Applicable Products

4MP bullet LPR camera:

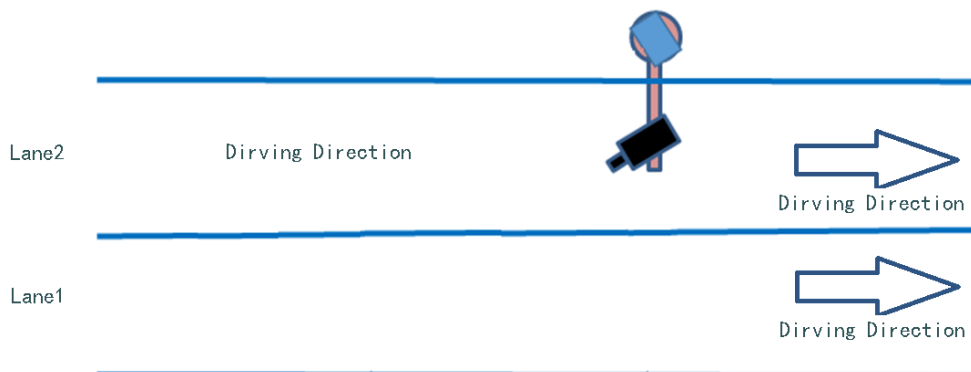
- PKC2641-Z100-IR-P
- PKC2641-Z100-IR-P-NB
- PKC2641-Z100-P
- PKC2641-Z100-P-NB
- PKC2641-Z28-IR-P
- PKC2641-Z28-IR-P-NB
- PKC2641-Z28-P
- PKC2641-Z28-P-NB
- PKC2641-Z80-IR-P
- PKC2641-Z80-IR-P-NB
- PKC2641-Z80-P
- PKC2641-Z80-P-NB
- PKC5601-C4Z-LED44-WH
- PKC5601-C4Z-LED44-WH-NB
- PKC5601-C4Z-LED44-IR
- PKC5601-C4Z-LED44-IR-NB
- PKC2841-Z28-WH
- PKC2841-Z28-WH-NB
- PKC2841-Z28-IR
- PKC2841-Z28-IR-NB

2.2 System Networking Diagram

2.2.1 Campus Scenes



2.2.2 Road Scenes



3 Login

3.1 Log In

It is recommended to use a non-IE browser to log in to the camera. Some functions are unavailable to IE.

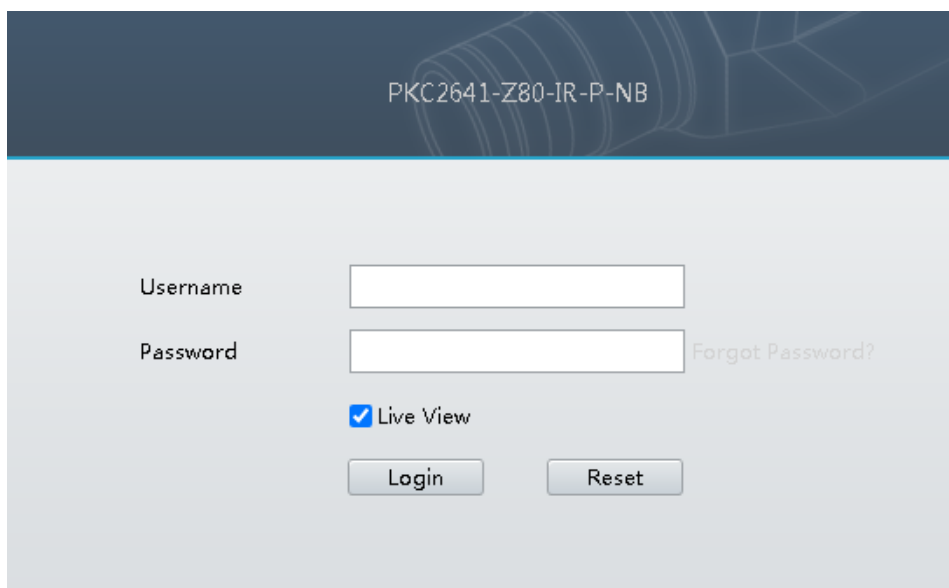
Some functions are not supported by IE. Please use other browsers. [Download Plug-in](#)

3.2 Device Login

By default, DHCP is enabled for the camera. If a DHCP server is configured, the camera IP may be dynamically assigned by the DHCP server, and in this case, please use the actual IP for login. If there is no DHCP server, use the default IP **192.168.1.13**.

Login steps:

1. Visit the camera IP using a web browser, and input the username and password to log in to the camera. The default username/password is **admin/123456**.
2. Multi-language login is supported; users can switch to their preferred language before logging in. Available languages include: English, Deutsch, Español, Português, Slovenčina, Polski, Nederlands, Čeština, Français, Italiano, Magyar, 繁體中文 (Traditional Chinese), 简体中文 (Simplified Chinese), Русский (Russian), Türkçe (Turkish), Español (Latinoamérica) (Spanish – Latin America), Português (Brasil) (Portuguese – Brazil), 日本語 (Japanese), 한국어 (Korean), ไทย (Thai), and العربية (Arabic).(ANPR-1107)
3. You can click **Reset** to clear the username and password.




PKC2641-Z80-IR-P-NB

Username

Password [Forgot Password?](#)

Live View

**NOTE!**

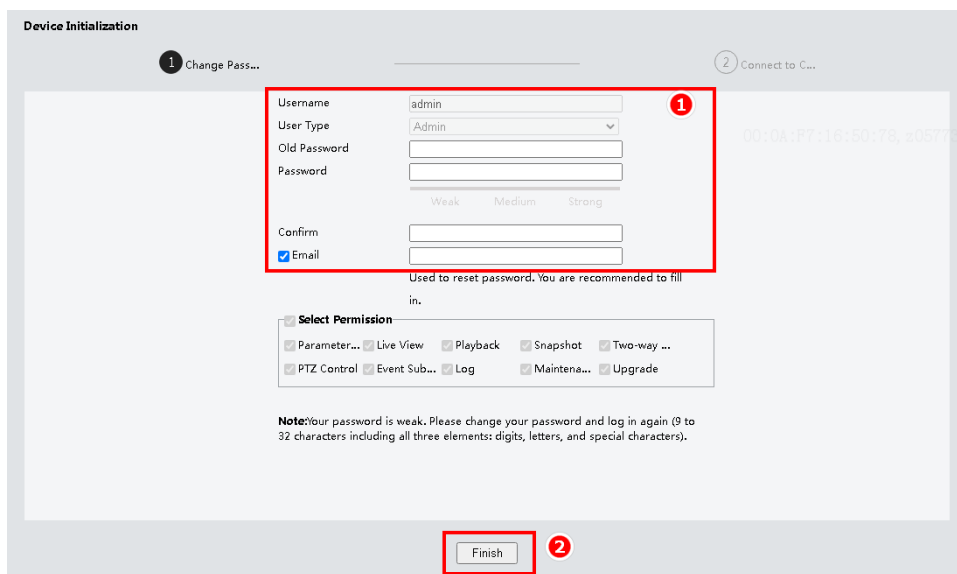
If you log in with **Live View** selected, the live video automatically starts when you are logged in; otherwise, you need to click  to start the live video manually after login.

3.3 Change Password

After logging in for the first time or logging in after restoring factory defaults, you must change the password to a strong password. Enter the old password, the new password twice, your email address, and then click **Finish** to proceed.

**NOTE!**

Email is used for password retrieval. It is optional but is recommended.



Device Initialization

1 Change Pass... 2 Connect to C...

Username: admin 1

User Type: Admin

Old Password: []

Password: []

Weak Medium Strong

Confirm: []

Email

Used to reset password. You are recommended to fill in.

Select Permission

Parameter... Live View Playback Snapshot Two-way ...

PTZ Control Event Sub... Log Maintena... Upgrade

Note: Your password is weak. Please change your password and log in again (9 to 32 characters including all three elements: digits, letters, and special characters).

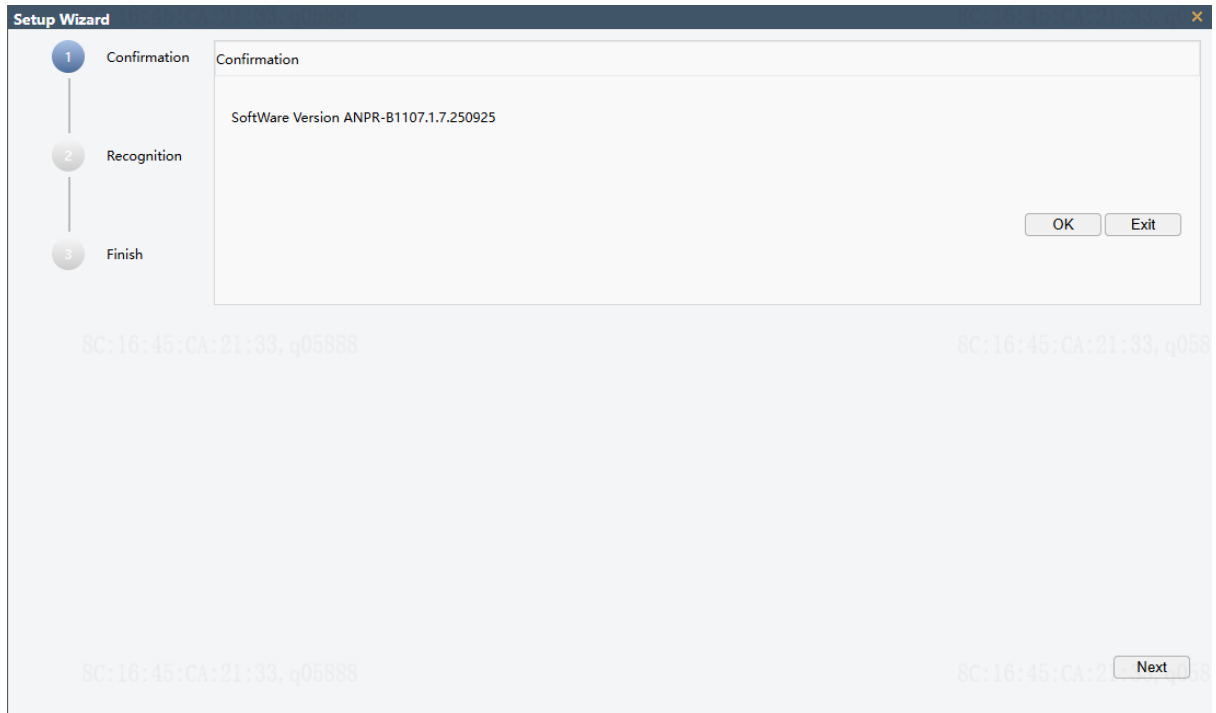
Finish 2

3.4 Setup Wizard

The **Setup Wizard** page appears when you log in for the first time or after restoring factory defaults. The wizard will guide you through the basic configuration.

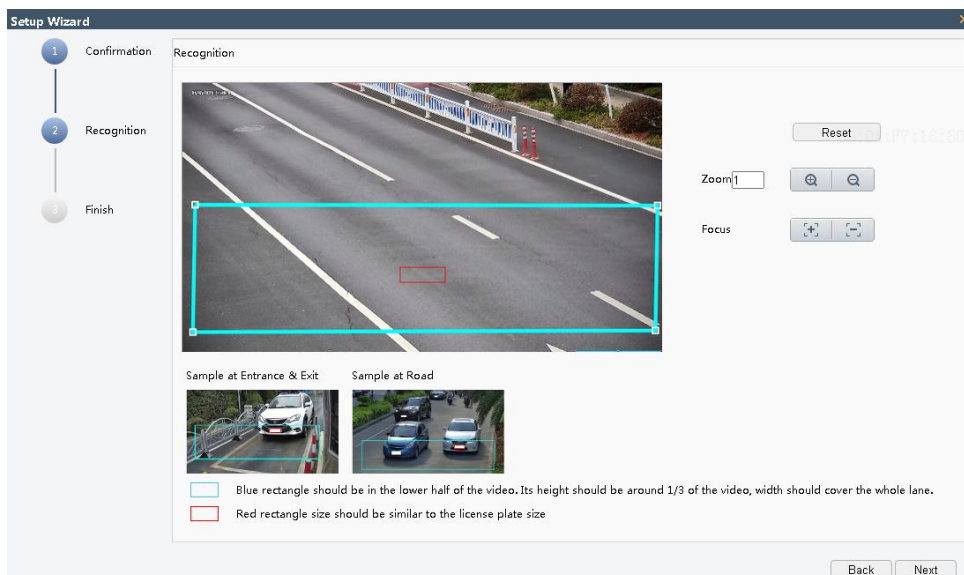
3.4.1 Confirmation

Check that the version is **ANPR-B1107.1.7.250925**. Click **OK** or **Next** to go to **Recognition**, and then click **Exit** to exit the wizard.



3.4.2 Recognition

On the **Recognition** tab, adjust the zoom, focus, and detection area according to your actual requirements.



3.5 Forgot Password

If you forgot the camera password, you can click **Forget Password?** to obtain a temporary password to log in and reset the password. There are three methods to obtain a temporary password:

1. Through email

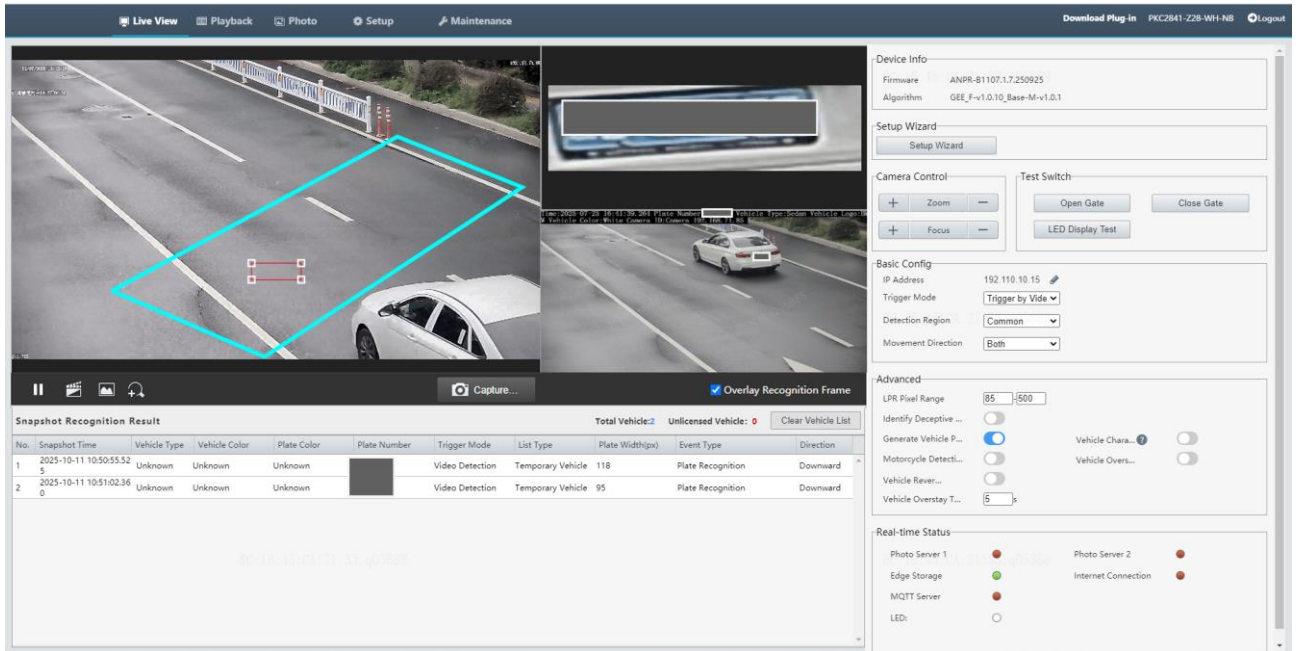
- (1) If you have set your email address before, scan the QR code with your mobile phone, follow the prompts to complete the operation, and then a security code will be sent to your email. The email address can be modified at **Maintenance > Security > User**.

2. Through the cloud server
 - (1) If the camera has been added to cloud, you can request for a temporary password on the cloud server, and then use the temporary password to log in and set a new password.
3. Through manual verification
 - (1) If you haven't set an email address or added the camera to cloud, you can scan the QR code with your mobile phone, follow the prompts to complete the operation, and obtain a security code after passing the manual verification.

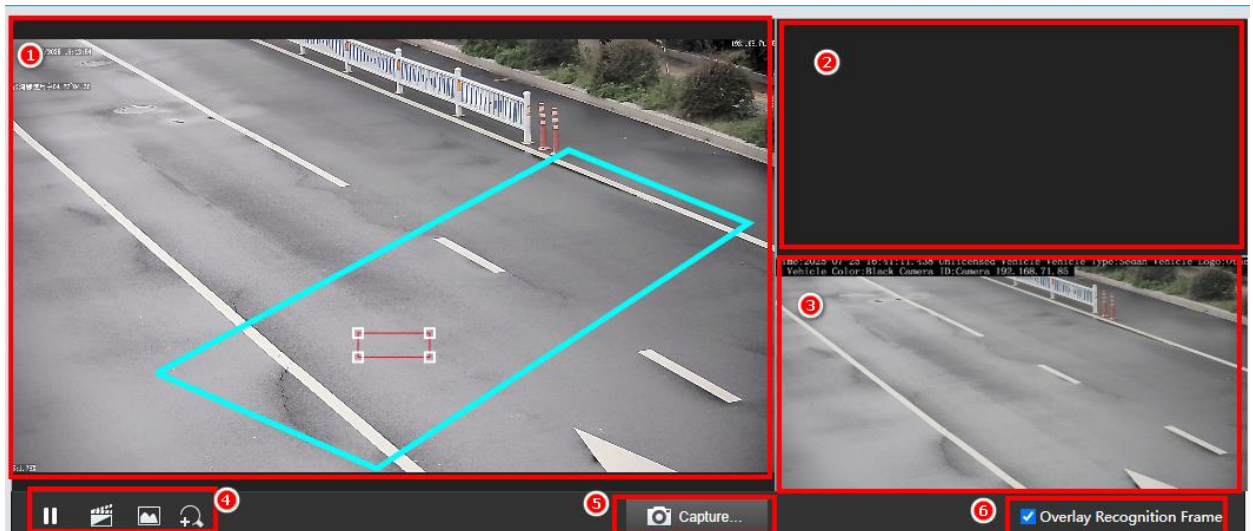


4 Live View








The **Live View** page appears when you are logged in, as shown below.



4.1 Live View



No.	Parameter	Description
1	Live view area	Displays live video.
2	Small Photo of Plate area	Shows the small plate photo in real time. Note: Before using this function, you need to select Generate Color Photo at Setup > Smart > Intelligent Configuration .
3	Vehicle snapshot area	Shows the latest vehicle snapshots in real time.

4	Buttons	  : Start/stop live view   : Start/stop local recording and save the video locally.  : Take a snapshot of the current live view and save the snapshot locally.   : Enable/disable digital zoom. When enabled, you can zoom in on the live video image to view the details of a specific area. Note: <ul style="list-style-type: none"> ● The video recording and snapshot functions are not available when live video is paused. ● If the camera’s audio input is turned on but the plugin is not installed, the video recording function will be unavailable; you need to turn off video input on the Audio page. ● To use two-way audio, the computer must be connected with audio input and output devices.
5	Capture & Recognize	Click to capture the passing vehicle manually. A vehicle passing record and a photo will be generated. When Trigger Mode is set to Manual Snapshot , and if a plate is captured in the image, it will trigger a detection and recognition.
6	Overlay Recognition Frame	<ul style="list-style-type: none"> ● Selected: The live video image shows a blue frame, and you can adjust its size and position as needed. ● Cleared: The live video image does not show the blue frame, but it does not affect the recognition function.

4.2 Snapshot Recognition Result

Snapshot Recognition Result						Total Vehicle: 2	Unlicensed Vehicle Passing: 0	Clear Vehicle List
No.	Snapshot Time	Plate Number	Trigger Mode	List Type	Plate Width(px)			
1	2025-03-04 14:07:45.958	██████████	Video Detection	Temporary Vehicle	192			
2	2025-03-04 14:07:50.368	██████████	Video Detection	Temporary Vehicle	192			

When you stay on the live view page, the **Snapshot Recognition Result** list displays real-time vehicle passing records, including **Total Vehicle**, **Unlicensed Vehicle Passing**, and vehicle passing details (**Snapshot Time**, **Vehicle Type**, **Vehicle Color**, **Plate Color**, **Plate Number**, **Trigger Mode**, **List Type**, **Plate Width(px)** , **Event Type**, **Direction**, **Detection Region**). Leaving the live view page, logout, or clicking the **Clear Vehicle List** button will clear the list and reset **Total Vehicle**, **Unlicensed Vehicle Passing** to zero (0). Some fields are explained as follows:

No.	Parameter	Description
1	Trigger Mode	<ul style="list-style-type: none"> ● When Trigger Mode is set to Trigger by Video, snapshots are triggered by video, the records show Video Detection as Trigger Mode. ● When Trigger Mode is set to Trigger by Loop, snapshots are triggered by the external device, and the records show Peripheral Snapshot as Trigger Mode.
2	Vehicle Type	<ul style="list-style-type: none"> ● Vehicle type is displayed based on recognition results, including: Motorcycle, Sedan, SUV, Van, Bus, Truck, Pickup, MPV, and Unknown.
3	Vehicle Color	<ul style="list-style-type: none"> ● Vehicle color is displayed based on recognition results, including: Black, White, Gray, Red, Blue, Yellow, Orange, Brown, Green, Purple, Pink, and Silvery White.
4	Plate Color	<ul style="list-style-type: none"> ● License plate color is displayed based on recognition results, including: Black, White, Red, Blue, Yellow, Green, Yellow Green, and Gradient Green. ● When the Detection Region is set to Common, United States of America (USA), or Canada, the license plate color is recognized as Unknown.
5	List Type	<ul style="list-style-type: none"> ● If the plate number is on the allowlist and the vehicle passing time is within the effective period, the list type shows Allowlist. ● If the plate number is on the blocklist and the vehicle passing time is within the

		<p>effective period, the list type shows Blocklist.</p> <ul style="list-style-type: none"> ● If the plate number is not on the allowlist and blocklist, or if the vehicle passing time is not within the effective period, the list type shows Temporary Vehicle. ● If the plate number is on both the allowlist and blocklist, and if the vehicle passing time is within the effective period, the list type shows Blocklist. <p>Note: Allowlist and blocklist are configured at Setup > Vehicle List.</p>
6	Plate Width(px)	<p>If the captured vehicle has a license plate, it will show the plate width.</p> <p>Note: You need to first go to Setup > Smart > Intelligent Configurationa and select Generate Color Photo; otherwise, Plate Width will show 0.</p>
7	Event Type	<p>包括 Plate Recognition, Motor Vehicle Reverse Alarm, Motor Vehicle Overstay Alarm, Motor Vehicle Overstay Alarm Cleared, Tampering Detection Alarm, Tampering Detection Alarm Cleared, Motion Detection Alarm, Motion Detection Alarm Cleared.</p>
8	Direction	<p>Based on the recognition results, the direction is indicated as either Downward or Upward.</p>
9	Detection Region	<p>This information is displayed when the Detection Region is configured as one of the following:</p> <ul style="list-style-type: none"> ●GCC : directly shows member states or their respective emirates ●EU : directly shows EU member states or "Unrecognized" ●Thailand : directly shows province names ●United Arab Emirates : directly shows the corresponding emirate

4.3 Device Info

The device information shows the current firmware version and algorithm version.

Device Info	
Firmware	ANPR-B1107.1.7.250925
Algorithm	GEE_F-v1.0.10_Base-M-v1.0.1

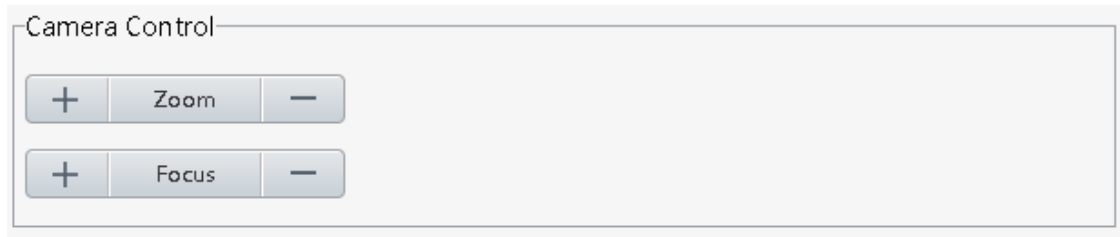
4.4 Setup Wizard

Clicking the button will display the **Setup Wizard** dialog box. See [Setup Wizard](#).



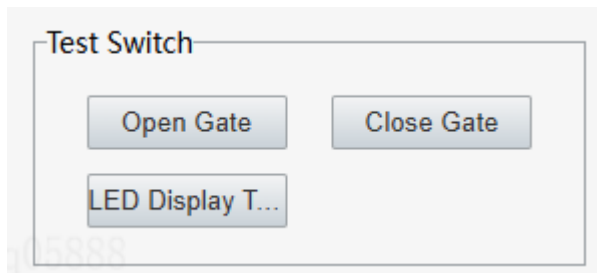
4.5 Camera Control

Click the **+ or -** button to adjust zoom and focus.



4.6 Test Switch

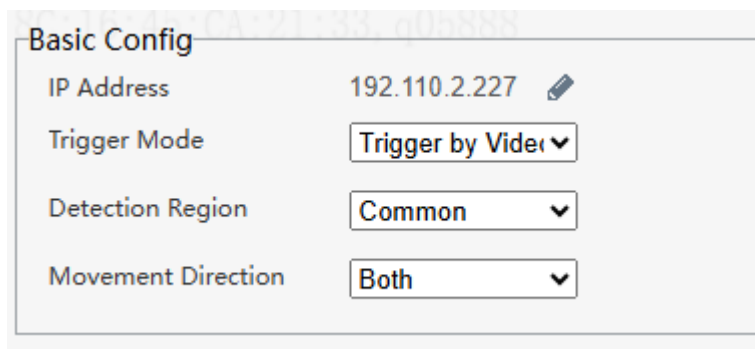
This function support **Open Gate**, **Close Gate**, and **LED Display Test**.




This function is used to test the gate opening/closing and LED display for deployment.

No.	Parameter	Description
1	Open Gate	Connect the camera's alarm output 1 wire to the barrier's gate opening control wire. Click this button to lift the barrier arm.
2	Close Gate	Connect the camera's alarm output 2 wire to the barrier's gate closing control wire. Click this button to lower the barrier arm.
3	LED Display Test	<p>It is only available when the camera's serial mode is set to UV2.0. When the test passes, the LED will show the following:</p> <ul style="list-style-type: none"> Landscape: Show red content "Welcome! / Welcome! / Welcome! / Welcome!" <p>If the LED display test shows an error message, or the command is successfully sent but no display appears, check all wiring and connections.</p>

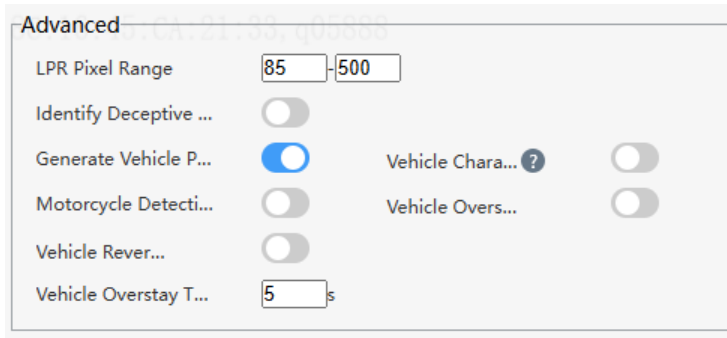
4.7 Basic Config



No.	Parameter	Description
1	IP Address	Shows the current IP address of the camera. You can click  to modify the IP address in the pop-up dialog box.
2	Trigger Mode	<p>The default is Trigger by Video, complete the configuration according to the actual requirements.</p> <ul style="list-style-type: none"> Trigger by Video: When a vehicle passes the recognition frame, if the capture condition

		<p>is met, the camera will capture and recognize the vehicle automatically.</p> <ul style="list-style-type: none"> ● Trigger by Loop: When the camera’s alarm input is connected to an external device such as a detection loop, a vehicle passing by the external device will trigger the camera to capture and recognize the vehicle.
3	Detection Region	<p>The default is Common. Other supported Detection Regions include Hungary, Colombia, Czech Republic, Croatia, Romania, Slovenia, Bulgaria, Serbia, Egypt, South Korea, Thailand, United states of American, Singapore, Saudi Arabia, Indonesia, United Kingdom, Ireland, Brazil, Qatar, Bosnia and Herzegovina, Cambodia, Tajikistan, Uzbekistan, India, Vietnam, Tunisia, Georgia, Kyrgyzstan, Israel, Moldova, Australia, Kazakhstan, Lithuania, Turkmenistan, Mexico, Bangladesh, Nepal, Philippines, Canada, EU, GCC, Mongolia, Taiwan. Choose your country or region as needed.</p>
4	Movement Direction	<p>The default is Both, and you can select Downward and Upward. Set the vehicle movement direction according to the actual requirements.</p> <ul style="list-style-type: none"> ● Both: Vehicles enter the live video image from both directions. ● Downward: Vehicles enter the live video image from the top. ● Upward: Vehicles enter the live video image from the bottom.

4.8 Advanced

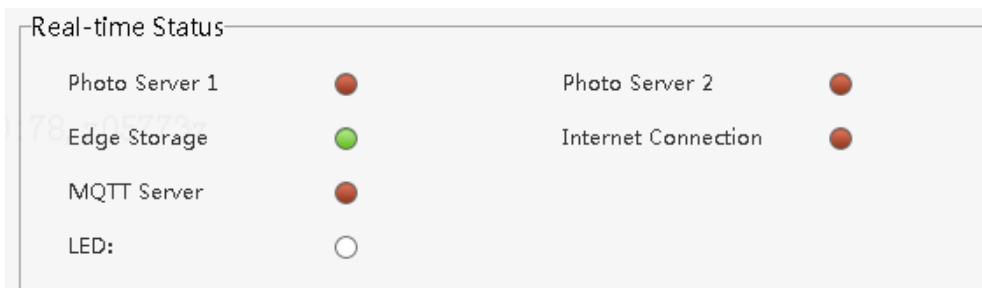


No.	Parameter	Description
1	LPR Pixel Range	The default is 85~500 . A valid value ranges from 50 ~ 500
2	Identify Deceptive License Plate	<ul style="list-style-type: none"> ● Off: The default is Off. When disabled, deceptive license plate detection is not taking effect. ● On: The camera identifies the authenticity of license plates. <p>Identify Deceptive License Plate <input checked="" type="checkbox"/> Do Not Capture Deceptive Plate <input type="checkbox"/></p> <ul style="list-style-type: none"> ➤ OSD Overlay Display: In the live view OSD under Vehicle Information, or in the photo OSD immediately following the license plate number, a Ture/False field is displayed to indicate license plate authenticity, as shown in the figure. <ul style="list-style-type: none"> – View OSD: <code>[PL81017] [115Pixel] [False]</code> – Photo OSD: <code>KE6132 [False]</code> ➤ Do Not Capture Deceptive Plate <ul style="list-style-type: none"> – Selected: No vehicle passage record is generated when a license plate is detected as false. – Unselected: A vehicle passage record is generated even when the license plate is detected as false.
3	Generate Vehicle Pass-thru Records Without Recognition	The default is Off . When disabled, the unlicensed vehicles will not be captured.
4	Vehicle	The default is Off . When enabled, the camera can recognize vehicle features (vehicle logo,

	Characteristics Recognition	vehicle type).
5	Motorcycle Detection	This function is disabled by default. When enabled, the camera can capture and recognize Motorcycles.
6	Vehicle Overstay Detection	<ul style="list-style-type: none"> ● Off: By default, vehicle overstay detection is disabled. ● On: When a captured motor vehicle remains in the detection area longer than the configured vehicle overstay threshold, the camera generates a motor vehicle overstay alarm record. Once the vehicle leaves the detection area, the camera generates a motor vehicle overstay alarm cleared record.
7	Vehicle Reverse Detection	<ul style="list-style-type: none"> ● Off: By default, vehicle reverse detection is disabled. ● On: When a previously captured vehicle performs a reverse maneuver, the system detects this action and generates a vehicle reverse alarm.
8	Vehicle Overstay Threshold	The default value is 5, supporting integers from 5 to 600, and is used in conjunction with vehicle overstay detection.

4.9 Real-time Status

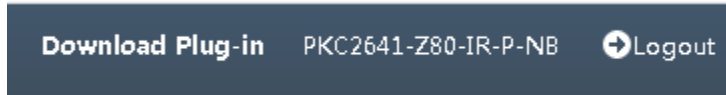
This area shows the status of servers, network, storage, and illuminator.



No.	Parameter	Description
1	Photo Server 1	: Photo Server 1 is registered but offline or is not registered. : Photo Server 1 is registered and online.
2	Photo Server 2	: Photo Server 2 is registered but offline or is not registered. : Photo Server 2 is registered and online.
3	Storage	: The SD card is installed and is normal, the eMMC is normal.
4	Internet Connection	: The camera is not connected to the Internet or cannot ping pool.ntp.org. : The camera is connected to the Internet and can ping pool.ntp.org.
5	MQTT Server	: The MQTT server is registered but offline or is not registered. : The MQTT server is registered and online.
6	LED	Real-time status of the illuminator. : The illuminator is off. : The illuminator is lit.

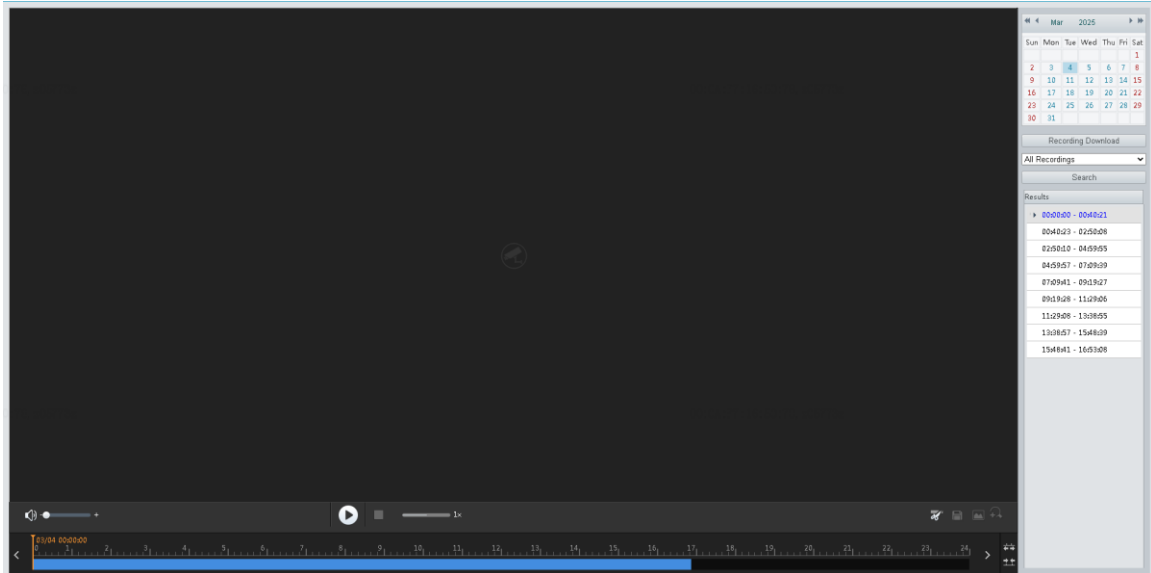
4.10 Navigation Bar

The navigation bar in the top right corner shows the product model and buttons used to download the plugin and log out of the camera.



5 Playback

To use the playback function, you need to install an SD card and configure **Allocate Capacity** and **Video Storage Info** at [Setup > System > Storage](#).

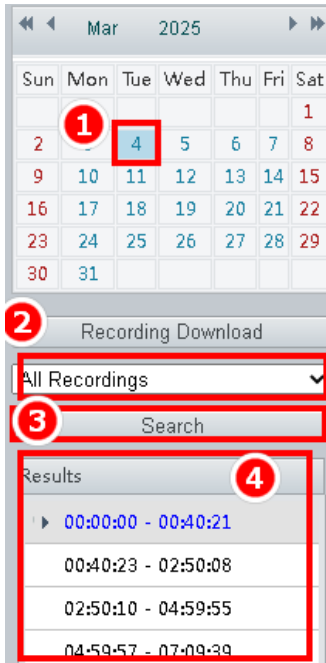


5.1 Search

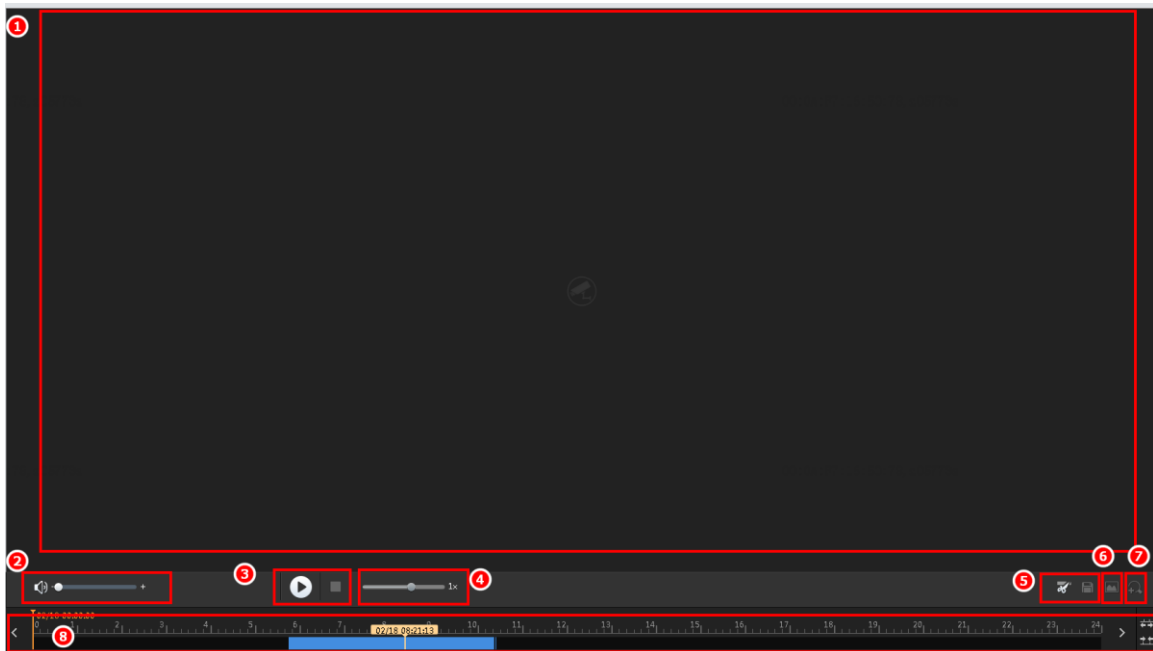
5.1.1 Search




Choose a date and a recording type, and then click **Search** to search for recordings on the specified date. Video recording supports **All Recordings** and **Alarm Recording**.










Alarm Recording allows selection of alarm types, specifically **Motion Detection** and **Tampering Alarm**.



5.1.2 Recording Playback



No.	Parameter	Description
1	Recording display area	Displays the recorded video.
2	Volume control	Control sound volume.
3	Stop/Play/Stop	 : Pause the video  : Play the video  : Stop playback

4	Playback speed	Adjust the playback speed. This function is available only when the plug-in is installed.
5	Cut/Save	   : Start/stop clipping video and save the video clip. You can save and download a selected area
6	Snapshot	 Take a snapshot of the current live view and save the snapshot locally.
7	Digital Zoom	Click  and then drag on the video image to magnify the selected area. Click  to exit.
8	Timeline	<p>The blue part on the bar means saved recording; the black part on the bar means unsaved recording. You can drag the yellow playhead to skip to the part of the video you want to view</p> <p>: Zoom in/out on the scale. You may also zoom in or out on the scale by scrolling the mouse wheel.</p> <p>: When the scale is less than 10 minutes, use this button to search the next time period.</p> <p>: When the scale is less than 10 minutes, use this button to search the previous time period.</p>

5.2 Recording Download

Click the **Recording Download** button, and a dialog box as shown below appears. Select **Recording Type**, set **Recording Time**, and then click **Search**. You can select recordings in the list and then click **Download** to download them.

Video recording supports **All Recordings** and **Alarm Recording**.

Alarm Recording allows selection of alarm types, specifically **Motion Detection** and **Tampering Alarm**.

Recording Download ✕

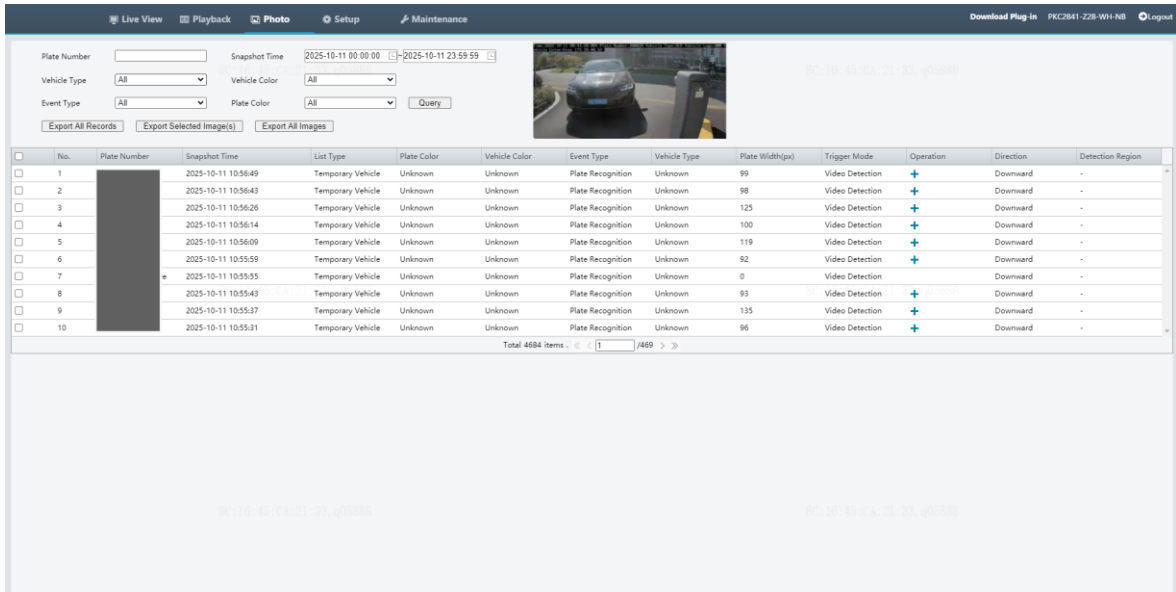
Recording Type: ▾

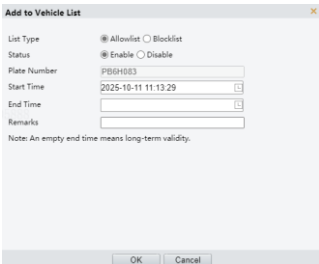
Recording Time:

<input type="checkbox"/>	No.	Start Time	End Time
<input type="checkbox"/>	1	2025-03-04 00:00:00	2025-03-04 00:40:21
<input type="checkbox"/>	2	2025-03-04 00:40:23	2025-03-04 02:50:08
<input type="checkbox"/>	3	2025-03-04 02:50:10	2025-03-04 04:59:55
<input type="checkbox"/>	4	2025-03-04 04:59:57	2025-03-04 07:09:39
<input type="checkbox"/>	5	2025-03-04 07:09:41	2025-03-04 09:19:27
<input type="checkbox"/>	6	2025-03-04 09:19:28	2025-03-04 11:29:06
<input type="checkbox"/>	7	2025-03-04 11:29:08	2025-03-04 13:38:55
<input type="checkbox"/>	8	2025-03-04 13:38:57	2025-03-04 15:48:39
<input type="checkbox"/>	9	2025-03-04 15:48:41	2025-03-04 17:05:09

00:0A

6 Photo



No.	Parameter	Description
1	Search criteria	<ul style="list-style-type: none"> ● Plate Number: Input a complete or partial plate number and search. Fuzzy search is supported. The search results include the input content. ● Snapshot Time: The default is 00:00:00~23:59:59 on the current date. You can adjust the time as needed. ● Vehicle Type: Supports All and Motorcycle, Sedan, SUV, Van, Bus, Truck, Pickup, MPV, Unknown. ● Vehicle Color: Supports All and Black, White, Gray, Red, Blue, Yellow, Orange, Brown, Green, Purple, Pink, Silvery White, Unknown. ● Event Type: Supports All and Plate Recognition, Motor Vehicle Reverse Alarm, Motor Vehicle Overstay Alarm, Motor Vehicle Overstay Alarm Cleared, Tampering Detection Alarm, Tampering Detection Alarm Cleared, Motion Detection Alarm, Motion Detection Alarm Cleared. The search results are all Plate Recognition. ● Plate Color: Supports All and Black, White, Red, Blue, Yellow, Green, Yellow Green, Gradient Green, Unknown. ● Query: Click to show the search results in the list below.
2	Export function	<ul style="list-style-type: none"> ● Export All Records: Export all the retrieved vehicle passing records to a .xls file. ● Export Selected Image(s): Export photos of all the selected records. ● Export All Images: Export all photos. The search criteria are not effective.
3	Operation	 <ul style="list-style-type: none"> ● Click the "+" button to add a vehicle to the Allowlist or Blocklist. ● Remarks: Enter a list remark or a Wiegand card number for Wiegand Interface. The card number must be formatted as cardno16=hexadecimal card number.
4	Passing vehicle list	Shows the retrieved vehicle passing data every 10 records per page. Some of the fields

		in the list are described in Snapshot Recognition Result .
5	Passing vehicle photo	When clicking a record, a photo of the passing vehicle will appear in the upper right corner. You can double-click the photo to magnify it.

7 Setup

7.1 Local Parameters



NOTE!

This page is unavailable if you log in to the camera without installing the plug-in.

Local Parameters

Video

Display Mode Balanced ▼

Protocol TCP ▼

Recording and Snapshot

Recording Subsection By Time ▼

Subsection Time (min) 30

When Storage Full Overwrite Recording Stop Recording

Total Capacity(GB) 10

Local Recording TS ▼

Files Folder
 Browse... Open

Save

No.	Parameter	Description
1	Display Mode	<ul style="list-style-type: none"> ● Balanced: Play real-time and fluent video ● Min. Delay: Good real-time performance, but the fluency may be affected ● Fluent: Smooth video with fewer live video stuttering ● Custom: Set the cache frame rate from 6 to 25. The larger the cache frame rate, the less rule information will not be missed and the smoother the video, but the delay may increase
2	Protocol	Set the protocol used to transmit media streams to be decoded by the PC, including TCP and UDP
3	Recording	<ul style="list-style-type: none"> ● Subsection By Time: When the local recording capacity is full, older recordings are overwritten automatically <ul style="list-style-type: none"> ➢ Subsection Time: 1 to 60 minutes allowed ● Subsection By Size: When the local recording capacity is full, recording stops automatically <ul style="list-style-type: none"> ➢ Subsection Size: 10 to 1024MB allowed
4	When Storage Full	<ul style="list-style-type: none"> ● Overwrite Recording: When the local recording capacity is full, older recordings are overwritten automatically ● Stop Recording: When the local recording capacity is full, recording stops automatically
5	Total Capacity(GB)	Allocate storage capacity for local recording. Range: 1 to 1024GB
6	Local Recording	Set the file format for saving local recordings, including TS and MP4

7	Files Folder	By default, the plug-in installation path is selected. You can also configure a file storage path to store local videos, snapshots, and live view screenshots
---	--------------	---

7.2 System

7.2.1 Device Info

Set device information including **Device Name**, **Device ID**, **Intersection Info**, and **Intersection ID**, which can be used in FTP and OSD.

Device Info	Time	DST	Photo Server	Storage	Log
Device Name	<input type="text" value="1"/>				
Device ID	<input type="text" value="1"/>				
Intersection Info	<input type="text" value="road"/>				
Intersection ID	<input type="text"/>				
<input type="button" value="Save"/>					

7.2.2 Time

Device Info	Time	DST	Photo Server	Storage	Log
Sync Mode	<input type="text" value="Sync with Latest Server Time"/>				
Time Zone	<input type="text" value="(UTC+08:00) Beijing, Hong Kong, Urumqi, Singapore, Taipei, Perth"/>				
System Time	2025-03-14 20:24:51				
Set Time	<input type="text" value="2025-03-14 20:24:48"/>	<input type="checkbox"/>	<input type="button" value="Sync with Computer Time"/>		
NTP Server					
NTP Server Address	<input type="text" value="pool.ntp.org"/>	<input type="button" value="Test"/>			
Port	<input type="text" value="123"/>				
Update Interval(s)	<input type="text" value="600"/>				

No.	Parameter	Description
1	Sync Mode	<ul style="list-style-type: none"> ● Sync with System Configuration: The camera uses the configured system time or syncs with the computer time ● Sync with Photo Server: When the photo server is online, the camera can sync time with the photo server, and the time sync interval is the HTTP heartbeat time ● Sync with NTP Server: Enter the NTP server address, port, and update interval, and the camera syncs time with the NTP server at the set interval. Click Test to test the camera's connection to the NTP server

		<div style="border: 1px solid gray; padding: 5px;"> <p>NTP Server</p> <p>NTP Server Address <input type="text" value="0.0.0.0"/> <input type="button" value="Test"/></p> <p>Port <input type="text" value="123"/></p> <p>Update Interval(s) <input type="text" value="600"/></p> <p style="text-align: center;"><input type="button" value="Save"/></p> </div> <ul style="list-style-type: none"> ● Sync with ONVIF Access Time: The camera regularly syncs time with the server that is connected via Onvif ● Sync with Latest Server Time: The camera syncs time with all servers, and the latest server time prevails. For example, both server 1 and server 2 are registered. After Server 1 syncs time to the camera, the camera's time is updated to Server 1's time. When Server 2 syncs time to the camera, the camera's time is updated again to Server 2's time. ● Sync with Cloud Server: The camera syncs time with the cloud server once when it gets online. The camera does not sync again until it gets offline and online again
2	Time Zone	It is (UTC+00:00) London, Dublin, Lisbon by default
3	System Time	Current running time of the camera
4	Set Time	You can manually configure the system time or select Sync with Computer Time . When Sync Mode is set to Sync with Photo Server, Sync with Management Server, or Sync with NTP Server, Set Time is grayed out and cannot be configured

7.2.3 DTS

Device Info	Time	DST	Photo Server	Storage	Log
DST		<input checked="" type="radio"/> On <input type="radio"/> Off			
Start Time	<input type="text" value="Dec"/> ▼	<input type="text" value="Second"/> ▼	<input type="text" value="Wed"/> ▼	<input type="text" value="10"/> ▼	h
End Time	<input type="text" value="Jan"/> ▼	<input type="text" value="Second"/> ▼	<input type="text" value="Wed"/> ▼	<input type="text" value="10"/> ▼	h
DST Bias	<input type="text" value="60mins"/> ▼				

No.	Parameter	Description
1	DST	By default, Off is selected. If you select On , you can configure Start Time , End Time , and DST Bias . DST Bias indicates the offset between the display time and the actual time

7.2.4 Photo Server

1. Protocol

Platform 1 supports **HTTP, Video&Image Database, and FTP**. Platform 2 supports **Video&Image Database and FTP**.

Platform 1 Platform 2

Enable

Protocol Video&Image Database

Transfer Protocol Type Video&Image Database

Server IP FTP

HTTP

2. HTTP

Device Info Time DST Photo Server Storage Log

Platform 1 Platform 2

Enable

Protocol HTTP

Server IP 0.0.0.0

Server Port 5073

Parking Lot ID park1

Camera No. PKC5601-C4Z-LED44-WH

AES Encryption On Off

Quick Report of Vehicle Passi... On Off

Keep-Alive Interval(s) 30

Image Filling Mode No Filling Base64 Encoding EZCloud to URL Alibaba OSS

Advanced Settings

Heartbeat Keepalive Path /api/upark/keepalive

Alarm Report Path /api/upark/commonalarm

Basic Data Path /api/upark/basicinfo

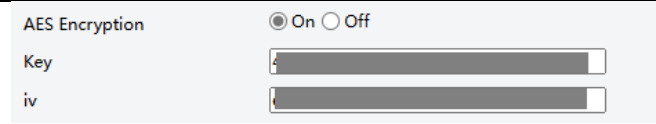

Passing Vehicle Snapshot Path /api/upark/capture

Quick Report Path of Vehicle ... /api/upark/quickcapture

Transparent Channel Path /api/upark/transchannel

Manual Snapshot Results Re... /api/upark/notifyresult/manualcapture/cor

No.	Parameter	Description
1	Enable	When selected, the camera can register with the photo server
2	Server IP	Enter the address of the HTTP server to be registered
3	Server Port	Enter the port of the HTTP server to be registered
4	Parking Lot ID	Enter it based on the server requirement
5	Camera No.	Enter it based on the server requirement
6	AES Encryption	The default is Off . After turning on, you need to configure Key and iv according to actual requirements

		
7	Quick Report of Vehicle Passing Records	<ul style="list-style-type: none"> ● Off: The camera reports vehicle information and image data simultaneously ● On: The camera reports vehicle information first and then reports image data
8	Keep-Alive Interval(s)	The value ranges from 1 to 3600, and the default value is 30
9	Image Filling Mode	<ul style="list-style-type: none"> ● Base64 Encoding: The photo field in the reported data is BASE64-encoded photo. ● No Filling: The photo field in the reported data is blank ● EZCloud to URL: In the data reported to the server, the photo field contains the URL of the image stored in EZCloud.(supported only by Uniview-branded devices). ● Alibaba OSS: When selected, the Alibaba OSS configuration appears. Set according to actual requirements. The photo field in the reported data is the URL of the photo stored in Alibaba OSS 
10	Heartbeat Keepalive Path	The default is /api/upark/keepalive , which needs no modification unless there are specific requirements
11	Alarm Report Path	The default is /api/upark/commonalarm , which needs no modification unless there are specific requirements
12	Basic Data Path	The default is /api/upark/basicinfo , which needs no modification unless there are specific requirements
13	Passing Vehicle Snapshot Path	The default is /api/upark/capture , which needs no modification unless there are specific requirements
14	Quick Report Path of Vehicle Passing Records(no image)	The default is /api/upark/quickcapture , which needs no modification unless there are specific requirements
15	Transparent Channel Path	The default is /api/upark/transchannel , which needs no modification unless there are specific requirements
16	Manual Snapshot Results Report Path(MQT)	The default is /api/upark/notifyresult/manualcapture/common , which needs no modification unless there are specific requirements

3. MQTT

Enable MQTT Server

mq Server Address

MQ Server Port

Username

Password

Confirm

Request Topic

Response Topic

No.	Parameter	Description
1	Enable MQTT Server	After enabling the MQTT server, you can fill in the MQTT server configuration to register the camera with the MQTT server
2	mq Server Address	Enter the address of the MQ server to be registered
3	MQ Server Port	Enter the port of the MQ server to be registered
4	Username& Password & Confirm	These are the username and password created on the MQ Server
5	Request Topic& Response Topic	Complete the configuration according to the actual requirements

4. Video&Image Database

Both platform 1 and platform 2 support Video&Image Database, but they cannot enable Video&Image Database at the same time.

Platform 1	Platform 2
<input type="checkbox"/> Enable	
Protocol	Video&Image Database
Transfer Protocol Type	HTTP
Server IP	0.0.0.0
Server Port	5073
LPR ID	Camera
Device ID	001
Username	admin
Password	*****
Confirm	*****
Coordinate Mode	Percentage Mode
Connection Mode	Short Connection
Report Data Type	<input checked="" type="checkbox"/> Motor Vehicle <input checked="" type="checkbox"/> Non-Motor Vehicle <input checked="" type="checkbox"/> Person <input checked="" type="checkbox"/> Face
<input type="button" value="Save"/>	

No.	Parameter	Description
1	Transfer Protocol Type	The default is HTTP and can be set to UDP
2	Server IP	Enter the IP address of the server to be registered
3	Server Port	Enter the port of the server to be registered. The default value is 5073
4	LPR ID	This function is unavailable and can be ignored
5	Device ID	The default value is 001 . The Device ID is a 20-digit number with 121 for digits 11-13. The device ID must be unique on the LAN
6	Username	It indicates the username to the server
7	Password& Confirm	It indicates the password to the server
8	Coordinate Mode	The default is Percentage Mode . Options include Percentage Mode, Pixel Mode, Normalized Mode
9	Connection Mode	The default is Short Connection . Options include Short Connection, Standard
10	Report Data Type	Options include Motor Vehicle, Non-Motor Vehicle, Person, Face

5. FTP

Both platform 1 and platform 2 support FTP, but you cannot enable FTP for the two platforms at the same time.

Platform 1
Platform 2

Enable

Protocol FTP

FTP

Server Parameters

Server IP	<input type="text" value="0.0.0.0"/>	Plate Separator	<input type="text"/>	Custom Naming Rules <input type="checkbox"/>
Port No.	<input type="text" value="21"/>	Upload Images	<input checked="" type="checkbox"/>	Convert Path into UT... <input type="checkbox"/>
Username	<input type="text"/>	<input type="button" value="Test"/>		
Password	<input type="text"/>			
Confirm	<input type="text"/>			

Save To:

File Path
File Name

No.	Naming Element
1	<input type="text" value="Disable"/>
2	<input type="text" value="Disable"/>
3	<input type="text" value="Disable"/>
4	<input type="text" value="Disable"/>
5	<input type="text" value="Disable"/>
6	<input type="text" value="Disable"/>

No.	Parameter	Description
1	Server IP	Enter the address of the FTP server to be registered
2	Port No.	Enter the port of the FTP server to be registered
3	Username	It indicates the username to the server
4	Password & Confirm	It indicates the password to the server
5	Plate Separator	This function is unavailable and can be ignored
6	Upload Images	<ul style="list-style-type: none"> ● Selected: the images will be uploaded to the FTP server ● Not selected: the images will not be uploaded to the FTP server
7	Test	Test for successful connection to the FTP server
8	Custom Naming Rules	<ul style="list-style-type: none"> ● Not selected: You can't customize the naming rules ● Selected: You can customize the naming rules of file that will be uploaded to the FTP server
9	Convert Path into UTF8 Format	<ul style="list-style-type: none"> ● Not selected: The format is GBK ● Selected: The format is UTF-8
10	File Path	<ul style="list-style-type: none"> ● No.: The numbers 1 to 6 represent the directory level. Up to 6 levels are allowed ● Naming Element: The path stored in the FTP root directory, supports configuring Naming Element, including Custom, IP Address, Intersection Info, Device ID, Date Time
11	File Name	<ul style="list-style-type: none"> ● Separator: The separator is - by default. It supports ".", "-", "=", "_", and custom. If the file name consists of various elements, they will be separated by the set separators ● No.: The sequence of naming elements in the filename ● Naming Element: Display the naming method of the snapshot uploaded to the FTP server. The file name is displayed based on the set Naming Element, including IP Address, Date Time, Plate Number, etc. It is recommended that the file name includes 4-digit Random Number to avoid overlap between the snapshot and the close-up of the license plate

7.2.5 Storage

The default storage medium is EMMC, totally 3GB space, only for photo storage.

Storage Medium

Storage Medium Status: Normal

Total Capacity 3 GB, Free Space 0 GB.

Image Storage Info

Image Storage Mode Store When Disconnected Real-time Store Not Store

After inserting an SD card, the **Storage Medium** changes to **Memory Card**, and video can be stored.

Device Info | Time | DST | Photo Server | **Storage** | Log

Storage Medium

Storage Medium Status: Normal

Total Capacity 14 GB, Free Space 0 GB.

Allocate Capacity

Video(GB) (The remaining capacity is used for image storage.)

Video Storage Info

Storage Policy Manual and Alarm Recording Alarm Recording Only

When Storage Full Overwrite Stop

Image Storage Info

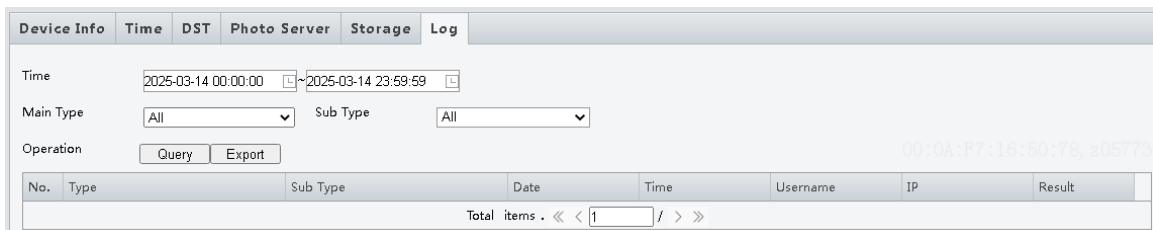
Image Storage Mode Store When Disconnected Real-time Store Not Store

No.	Parameter	Description
1	Storage Medium	<p>The default is EMMC. After an SD card is installed, it changes to Memory Card, and EMMC becomes ineffective.</p> <ul style="list-style-type: none"> ● Format: You can click Format to format the memory card ● Storage Medium Status: Shows the SD card status ● Total Capacity: Shows the total capacity and the free space of the memory card ● Memory Card Health Index: Appears when the specified SD card is installed <p>Note: After an SD card is inserted, photos stored on the EMMC cannot be viewed.</p>
2	Image Storage Info	<ul style="list-style-type: none"> ● Store When Disconnected: <ul style="list-style-type: none"> ➢ Photo Server is offline: Photos will be stored on the SD card. ➢ Photo Server is online: Photos will be uploaded to the Photo Server, and the SD card will not store photos. ● Real-time Store: <ul style="list-style-type: none"> ➢ Photo Server is offline: Photos will be stored on the SD card. ➢ Photo Server is online: Photos will be uploaded to the Photo Server, and the SD card will also store photos. ● Not Store: The SD card will not store photos. <p>Note: This configuration is applicable to Photo Server 1 only. For Photo Server</p>

		2, Image Storage Mode is Store When Disconnected by default.
3	Video(GB)	Allocate video storage capacity. The allocated capacity cannot exceed the total storage capacity available. The remaining capacity after allocation are used to store photos. Note: When the allocated capacity exceeds the remaining capacity, some photos in the SD card will be deleted.
4	Video Storage Info	<ul style="list-style-type: none"> ● Storage Policy <ul style="list-style-type: none"> ➢ Manual and Alarm Recording: Always records and stores videos. ➢ Alarm Recording Only: Stores videos only when an alarm is triggered. ● Stream: The default is Main Stream ● When Storage Full: <ul style="list-style-type: none"> ➢ Overwrite: Overwrites old recordings when the storage space is used up. ➢ Stop: Stops video recording when the storage space is used up.

7.2.6 Log

View camera operation logs. The list is empty by default. Click **Query** to retrieve logs. Up to 100 records can be displayed on each page.



No.	Parameter	Description
1	Time	Set search time period (default: 00:00:00 to 23:59:59).
2	Main Type	Select a log type to query from the drop-down list which includes Operator, Alarm Setting, Network, Video & Audio, Image Setting, Smart, Config Management, Storage, Alarm Event . All is selected by default
3	Sub Type	After choosing a main type, you can choose a sub type of the main type for searching
4	Operation	Search or export all logs.
5	List	<p>A table of camera operation logs, including Type, Sub Type, Date, Time, Username, IP, Result</p> <ul style="list-style-type: none"> ● Type: The corresponding Main type for the current action ● Sub Type: The corresponding sub type for the current action ● Date: Show the execution date of operation ● Time: Show the execution time of operation ● Username: Show who performed the operation ● IP: Show the login IP address. ● Result: Succeeded/Failed

7.3 Network

7.3.1 Wired Network

Wired Network	Dual-Camera Parameters	Network Protocol	Network Port	ONVIF	WebSocket	P2P
IPv4						
Obtain IP Address	<input type="text" value="Obtain Automatically (DHCP)"/>					
IP Address	<input type="text" value="192.168.1.13"/>					
Subnet Mask	<input type="text" value="255.255.255.0"/>					
Default Gateway	<input type="text" value="192.168.1.1"/>					
IPv6						
Mode	<input type="text" value="Obtain Automatically (DHCP)"/>					
Address	<input type="text"/>					
Prefix Length	<input type="text" value="64"/>					
Default Gateway	<input type="text"/>					
Basic						
MTU	<input type="text" value="1500"/>					
Port Type	<input type="text" value="FE Port"/>					
Operating Mode	<input type="text" value="Auto-negotiation"/>					
<input type="button" value="Save"/>						

No.	Parameter	Description
1	Obtain IP Address	The default is Obtain Automatically (DHCP) , can be set to Manual and PPPoE
2	IP Address& Subnet Mask& Default Gateway	If Obtain IP Address is set to Static , you need to manually configure the IP Address, Subnet Mask and Default Gateway
3	IPv6	The default is Obtain Automatically (DHCP) , can be set to Manual . If Mode is set to Manual , you need to manually configure the Prefix Length, Default Gateway
4	MTU	The value is 1500 by default and ranges from 576 to 1500. When the network condition is poor, you can reduce the MTU value.
5	Port Type	The value is FE-Port and cannot be changed
6	Operating Mode	The default is Auto-negotiation , you are advised to retain the default value in applications because the following risks may occur if another value is selected: <ul style="list-style-type: none"> As various switch types exist, network port negotiation with the switch may fail. As the network port rate is limited, images cannot be uploaded in real time, especially at intersections with heavy traffic.

7.3.2 Dual-Camera Parameters

The default is **Off**. Configure according to the actual application scenario: **Single-Channel Camera for Mix Entry&Exit, Primary and Secondary Cameras on Same Side**.

Wired Network	Dual-Camera Parameters	Network Protocol	Network Port	ONVIF	WebSocket	P2P
Dual-Camera Mode <input checked="" type="radio"/> Off <input type="radio"/> Single-Channel Camera for Mix Entry&Exit <input type="radio"/> Primary and Secondary Cameras on Same Side						
<input type="button" value="Save"/>						

1. Single-Channel Camera for Mix Entry&Exit

Suitable for a single lane used for both entry and exit. When in use, one camera is required for entering vehicles and one for exiting vehicles, and both must support **Single-Channel Camera for Mix Entry&Exit**. When this function is enabled and configured, when the same vehicle passes through the two cameras in sequence, one camera will capture the passing vehicle first, and the other camera will not.

Wired Network	Dual-Camera Parameters	Network Protocol	Network Port	ONVIF	WebSocket	P2P
Dual-Camera Mode <input type="radio"/> Off <input checked="" type="radio"/> Single-Channel Camera for Mix Entry&Exit <input type="radio"/> Primary and Secondary Cameras on Same Side Secondary Camera IP <input type="text" value="0.0.0.0"/> Match Time for Entry an... <input type="text" value="300"/>						

2. Primary and Secondary Cameras on Same Side

Suitable for wide-lane scenarios, where the primary and secondary cameras will capture the same scene simultaneously, and the primary camera will judge the capture result.

Wired Network	Dual-Camera Parameters	Network Protocol	Network Port	ONVIF	WebSocket	P2P
Dual-Camera Mode <input type="radio"/> Off <input type="radio"/> Single-Channel Camera for Mix Entry&Exit <input checked="" type="radio"/> Primary and Secondary Cameras on Same Side Camera Type <input type="radio"/> Primary Camera <input type="radio"/> Secondary Camera Secondary Camera IP <input type="text" value="0.0.0.0"/> Dual Camera Snapshot ... <input type="text" value="1000"/>						



CAUTION!

- When **Primary and Secondary Cameras on Same Side** is enabled, **Quick Report of Vehicle Passing Records** through **HTTP** is unavailable. If you enable **Quick Report of Vehicle Passing Records**, it will be disabled by force when uploading data.
- After the primary camera is configured, its configuration will be synced to the secondary camera. The secondary camera needs no extra configuration.
- After **Primary and Secondary Cameras on Same Side** is enabled, the secondary camera will sync time with the primary camera.
- The primary camera and the secondary camera must have the same version number.
- If the two cameras are different products, please contact technical support before you configure **Primary and Secondary Cameras on Same Side**.

7.3.3 Network Protocol

VPN Service, 802.1X, DDNS, SNMP and **DNS** are supported. Complete the configuration according to the actual requirements. **SNMP** is enabled by default. **VPN, 802.1x,** and **DDNS** are disabled by default.

VPN Service VPN Service <input type="radio"/> On <input checked="" type="radio"/> Off Port Type <input checked="" type="checkbox"/> Ethernet VPN Mode <input type="text" value="VPN1.0"/> UNP Server IP <input type="text" value="0.0.0.0"/> Server Port <input type="text" value="1701"/> Authentication <input checked="" type="radio"/> Enable <input type="radio"/> Disable Username <input type="text"/> Password <input type="text"/> Confirm <input type="text"/>	802.1x 802.1x <input type="radio"/> On <input checked="" type="radio"/> Off Protocol <input type="text" value="EAP-MD5"/> EAPOL Version <input type="text" value="1"/> Username <input type="text" value="admin"/> Password <input type="text" value="*****"/> Confirm <input type="text" value="*****"/>	DDNS DDNS Service <input type="radio"/> On <input checked="" type="radio"/> Off DDNS Type <input type="text" value="DynDNS"/> Server Address <input type="text" value="www.dyndns.com"/> Domain Name <input type="text" value="0.0.0.0"/> Username <input type="text"/> Password <input type="text"/> Confirm <input type="text"/>	SNMP SNMP <input checked="" type="radio"/> On <input type="radio"/> Off SNMP Type <input type="text" value="SNMPv3"/> Username <input type="text" value="admin"/> Authentication Mode <input type="text" value="MD5"/> Password <input type="text" value="*****"/> Confirm <input type="text" value="*****"/> Encryption Mode <input type="text" value="DES"/> Password <input type="text" value="*****"/> Confirm <input type="text" value="*****"/> Trap Community Name <input type="text" value="private"/> Trap Server Address <input type="text" value="0.0.0.0"/> Trap Port <input type="text" value="162"/> SNMP Port <input type="text" value="161"/>
DNS Preferred DNS Server <input type="text" value="8.8.8.8"/> Alternate DNS Server <input type="text" value="8.8.4.4"/>			

7.3.4 Network Port

Wired Network	Dual-Camera Parameters	Network Protocol	Network Port	ONVIF	WebSocket	P2P
Port						
HTTP Port		<input type="text" value="80"/>				
HTTPS Port		<input type="text" value="443"/>				
RTSP Port		<input type="text" value="554"/>				
Note: Modifying the RTSP port number will cause the device to restart.						
Port Mapping						
Port Mapping		<input type="radio"/> On <input checked="" type="radio"/> Off				
<input type="button" value="Save"/>						

No.	Parameter	Description
1	HTTP Port	The value is 80 by default and can be changed. After the change, you need to enter " <i>http://camera IP address:HTTP Port</i> " in the address box of a browser to access the camera.
2	HTTPS Port	The value is 443 by default and can be changed. HTTPS is a securer access mode than HTTP. After the change, you need to enter " <i>https://camera IP address:HTTPS Port</i> " in the address box of a browser to access the camera.
3	RTSP Port	The value is 554 by default and can be changed. After the change, the camera will automatically restart.
4	Port Mapping	To access a camera on a LAN from a device on the public network, you need to set Port Mapping to On . The default value is Off

7.3.5 ONVIF

This function is currently unavailable and can be ignored.

Wired Network	Dual-Camera Parameters	Network Protocol	Network Port	ONVIF	WebSocket	P2P
ANR						
ANR		<input type="radio"/> On <input checked="" type="radio"/> Off				
Stream Address		<input type="text" value="0.0.0.0"/>				



7.3.6 WebSocket

Complete the configuration according to the actual requirements.

Wired Network	Dual-Camera Parameters	Network Protocol	Network Port	ONVIF	WebSocket	P2P
WebSocket <input type="radio"/> On <input checked="" type="radio"/> Off						
Destination IP <input type="text" value="0.0.0.0"/>						
Destination Port <input type="text" value="80"/>						
Device ID <input type="text" value="CBB9D8"/>						
Authentication Key <input type="text" value="*****"/>						
Confirm Authentication ... <input type="text" value="*****"/>						
Encryption <input type="radio"/> On <input checked="" type="radio"/> Off						
Online Status Offline						
<input type="button" value="Save"/>						

7.3.7 P2P

On this page, you can access the camera on the cloud platform for remote device maintenance.

Wired Network	Dual-Camera Parameters	Network Protocol	Network Port	ONVIF	WebSocket	P2P
P2P  <input type="radio"/> On <input checked="" type="radio"/> Off						
Encryption <input type="radio"/> On <input checked="" type="radio"/> Off						
Add Without Signup <input checked="" type="radio"/> On <input type="radio"/> Off						
Register Code <input type="text" value="318"/>						
Device Status Offline						
Scan 						
<input type="button" value="Save"/>						

7.3.8 E-mail

Used in conjunction with the Send Email alarm linkage feature: once an email address is configured, alarm events will be sent to the specified mailbox.

Wired Network | Dual-Camera ... | Network Prot... | Network Port | ONVIF | WebSocket | P2P | E-mail

Sender

Name

Address

SMTP Server

SMTP Port

TLS/SSL On Off

Snapshot Interval(s) Attach Image

Server Authentication On Off

Username

Password

Confirm

Recipient

Name1

Address1

Name2

Address2

Name3

Address3

7.4 Video & Audio

7.4.1 Image

1. Scenes


Scenes


No.	Current	Image Scene Template	Image Scene Name
1	<input checked="" type="radio"/>	<Common>	<input type="text"/>
2	<input type="radio"/>	<Common>	<input type="text"/>
3	<input type="radio"/>	<Common>	<input type="text"/>
4	<input type="radio"/>	<Common>	<input type="text"/>
5	<input type="radio"/>	<Common>	<input type="text"/>


No.	Parameter	Description
1	Image Scene Template	The default is Common
2	Image Scene Name	The image scene name can be set as 1, 2, 3, 4, 5, which are used in conjunction with the image scene switching function (see Setup > Video&Audio > Image Scene Switch)
3	Default	You can click Default to restore configuration on this page to factory settings


2. Image Enhancement


Image Enhancement


Brightness  128

Saturation  128

Contrast  128

Sharpness  128

2D Noise Reduction  128

3D Noise Reduction  128

No.	Parameter	Description
1	Image Enhancement	<p>You are advised to use the default setting</p> <p>Note:</p> <p>2D Noise Reduction indicates noise reduction within a frame. A larger value indicates stronger noise reduction and more blur images. 3D Noise Reduction indicates that non-repeated information is filtered out through adjacent frame image comparison to display pure and refined images. However, motion blur or ghosting may occur.</p>

3. Exposure

Exposure

Exposure Mode


Shutter(s) ~

Gain ~

Iris ~

Slow Shutter On Off

Slowest Shutter

Compensation 

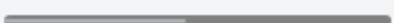
Metering Control

Day/Night Mode Automatic Day Night

Day/Night Sensitivity

Day/Night Switching(s)

WDR

WDR Level 

Suppress WDR Stripes On Off

No.	Parameter	Description
1	Exposure Mode	The value is Custom by default and cannot be changed.
2	Shutter(s)	You are advised to use the default setting Note: A too great value causes ghosting while a too small value produces dark images
3	Gain	You are advised to use the default setting, the default parameters for different models are as follows: <ul style="list-style-type: none"> ● Z28: 0~40 ● Z80: 0~40 ● Z100: 0~35 Note: <ul style="list-style-type: none"> ● A greater gain increases the brightness but introduces noises ● A smaller gain decreases the image brightness
4	Iris	You are advised to use the default setting, the default parameters for different models are as follows: <ul style="list-style-type: none"> ● Z28: There is no such configuration item ● Z80: F9.6~F1.6 ● Z100: F9.6~F1.6
5	Slow Shutter	You are advised to use the default setting, a slow shutter increases the image brightness while reducing the frame rate, and can cause motion blur or ghosting
6	Compensation	The default is 0 , you are advised to use the default setting. If the application environment of the camera has serious front or back light, adjust the compensation value to improve the image effect <ul style="list-style-type: none"> ● In a back light environment: increase the compensation value ● In a front light environment: reduce the compensation value
7	Metering Control	The default is Vehicle Metering , can be set to Center-Weighted Average Metering and Evaluative Metering(BLC) . You are advised to use the default setting <ul style="list-style-type: none"> ● Evaluative Metering(BLC): Adjusting the brightness weight in different areas. ● Center-Weighted Average Metering: Focuses on the center of an image, and the weight of the surroundings is smaller. You are advised to use the default setting. ● Vehicle Metering: Automatically adjusts exposure compensation based on vehicle brightness.
8	Day/Night Mode	<ul style="list-style-type: none"> ● Automatic: Indicates that the camera switches between the day and night modes based on the preset threshold ● Day: Always in day mode, and the illuminator remains off. ● Night: Always in night mode, and the illuminator remains on. Note: Day/night Mode is effective only when Control Mode is set to Custom Level .
9	Day/Night Sensitivity	The default is Medium , can be set to Ultra-low, Low, Medium, High ; A higher sensitivity indicates easier switchover between the day and night modes (High > Medium > Low > Ultra-low)
10	Day/Night Switching(s)	The default is 3 , indicating that the camera switches between the day and night modes after the switching conditions are met for 3s
11	WDR	The default is Off , which takes effect on the whole day
12	WDR Level	The default is 5 , you are advised to use the default setting. A much high WDR level may result in blurred image or noise. A much low WDR level may result in insufficient brightness of the image.

4. Smart Illumination

Cameras are divided into white light camera and IR camera. The parameter configuration for the IR camera is as follows:

Smart Illumination

Smart Illumination On Off

Illumination Mode

Control Mode

Near-illumination Level

Far-illumination Level

The parameter configuration for the white light camera is as follows:

Smart Illumination

Smart Illumination On Off

Illumination Mode

Control Mode

Near-illumination Level

Far-illumination Level

No.	Parameter	Description
1	Smart Illumination	<p>The default is On, can be set Off</p> <ul style="list-style-type: none"> ● On: The illuminator turns on or off based on Day/Night Mode and Smart Illumination. ● Off: The illuminator remains off.
2	Illumination Mode	<ul style="list-style-type: none"> ● IR camera <ul style="list-style-type: none"> ➢ The default is Infrared and cannot be changed ● White light camera <ul style="list-style-type: none"> ➢ The default is White Light and cannot be changed
3	Control Mode	<ul style="list-style-type: none"> ● IR camera <ul style="list-style-type: none"> ➢ Global Mode: The illuminator turning on/off is controlled by Day/Night Mode; Near/Far-illumination Level cannot be adjusted manually; it is adjusted automatically according to ambient lighting. ➢ Overexposure Restrain: The illuminator turning on/off is controlled by Day/Night Mode. Near/Far-illumination Level cannot be adjusted manually; it is adjusted automatically according to the ambient lighting. ➢ Custom Level: The illuminator turning on/off is controlled by Day/Night Mode; Near/Far-illumination Level can be adjusted manually. ● White light camera <ul style="list-style-type: none"> ➢ Custom Level: The illuminator turning on/off is controlled by Day/Night Mode; Near/Far-illumination Level can be adjusted manually. ➢ Custom Level (Always on): The illuminator turning on/off is controlled by Near/Far-illumination Level, not by Day/Night Mode.
4	Near/ Far -illumination Level	Ranges from 0 to 1000

5. Focus

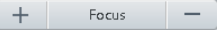
This configuration is available only to Z80 and Z100.

Focus

Focus Mode

Scene

Max. Zoom Ratio

No.	Parameter	Description
1	Focus Mode	<ul style="list-style-type: none"> ● Manual Focus: In this mode, focusing is triggered only when you click  ● One-Click Focus(Locked): In this mode, the determined focal length is locked, and only manual adjustment will trigger focusing.
2	Scene	The default is Normal and cannot be changed
3	Max. Zoom Ratio	<ul style="list-style-type: none"> ● Z28: There is no such configuration item ● Z80: The default is 4, can be set to 8, 16, 32, 64 ● Z100: The default is 5, can be set to 10, 20, 40, 80

6. White Balance

White Balance

White Balance

Red Offset

Blue Offset

No.	Parameter	Description
1	White Balance	The default is Auto , can be set to Outdoor, Fine Tune, Sodium Lamp, Locked, Auto 2 . You are advised to use the default setting
2	Red Offset	A smaller value turns the live view screen to bluish green, while a greater value turns the live view screen to reddish. The value can be configured only when White Balance is set to Fine Tune .
3	Blue Offset	A smaller value turns the live view screen to yellowish, while a greater value turns the live view screen to bluish. The value can be configured only when White Balance is set to Fine Tune .

7.4.2 Image Scene Switch

Set up a schedule so the camera will display image effects according to the scenes configured for the scheduled time.

Image | **Image Scene Switch** | **Video Encoding** | **Image Encoding** | **ROI** | **Media Stream** | **RTSP Multicast Address** | **Audio**

Enable Auto Switch

Switch Mode:

No.	Auto Switching	Schedule	Image Scene Name
1	<input checked="" type="checkbox"/>		1<>
2	<input type="checkbox"/>		2<>
3	<input type="checkbox"/>		3<>
4	<input type="checkbox"/>		4<>
5	<input type="checkbox"/>		5<>

No.	Parameter	Description
1	Enable Auto Switch	<ul style="list-style-type: none"> Selected: the camera will switch image scenes at the scheduled time. Not selected: the camera will not switch scenes
2	Switch Mode	The default is Timed Switch and cannot be changed
3	Auto Switching List	<ul style="list-style-type: none"> Auto Switching: <ul style="list-style-type: none"> Selected: the camera displays image effects according to the scene specified for the scheduled time Not selected: Not switch scenes. Schedule: Set the time when a specific scene will take effect. Image Scene Name: You can select 1, 2, 3, 4, and 5. The options correspond to the image scene names can be set on the Scenes page.

7.4.3 Video Encoding



NOTE!

You are advised to use the default setting.

Image | **Image Scene Switch** | **Video Encoding** | **Image Encoding** | **ROI** | **Media Stream** | **RTSP Multicast Address** | **Audio**

Capture Mode:

Main Stream

Video Compression:

Resolution:

Frame Rate(fps):

Bit Rate(Kbps):

Bitrate Type:

Image Quality:

I Frame Interval:

GOP:

Smoothing:

Smart Encoding:

Enable Sub Stream

Video Compression:

Resolution:

Frame Rate(fps):

Bit Rate(Kbps):

Bitrate Type:

Image Quality:

I Frame Interval:

GOP:

Smoothing:

Enable Third Stream

Video Compression:

Resolution:

Frame Rate(fps):

Bit Rate(Kbps):

Bitrate Type:

Image Quality:

I Frame Interval:

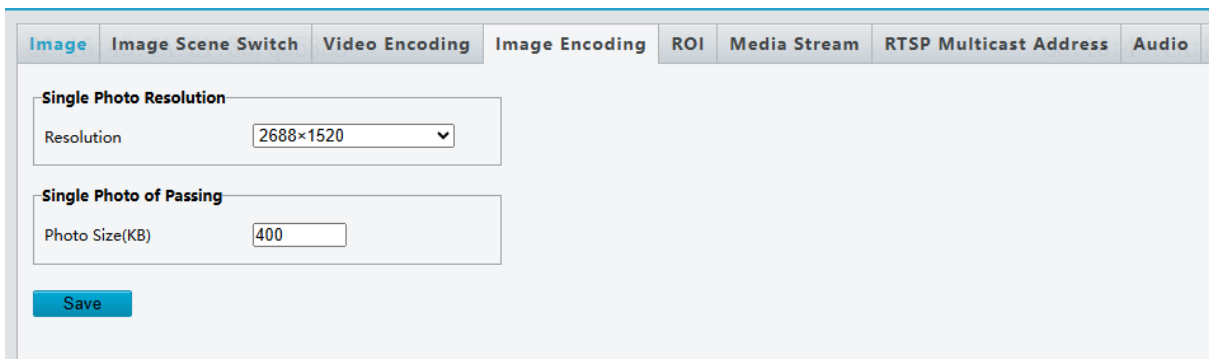
GOP:

Smoothing:

No.	Parameter	Description
1	Capture Mode	Can be set: <ul style="list-style-type: none"> 2688x1520@30 2688x1520@50 2688x1520@60 2688x1520@25
2	Main Stream/Sub Stream/Third Stream	By default, only the main stream is enabled
3	Video Compression	The values include H.264 and H.265
4	Resolution	<ul style="list-style-type: none"> Main Stream: The default is 1920x1080 (1080P) and can be set 2880X1620, 2688x1520, 1280x720 (720P), 720x576 (D1)

		<ul style="list-style-type: none"> ● Sub Stream: The default is 1280×720 (720P) and can be set 1920×1080 (1080P), 720×576 (D1), 704×288 (2CIF), 352×288 (CIF) ● Third Stream: The default is 720×576 (D1) and can be set 704×288 (2CIF), 352×288 (CIF)
5	Bit Rate(Kbps)	The value is an integer from 1 to 16384. Only when the Bitrate Type is set to CBR does this setting take effect
6	Frame Rate(fps)	The default is 30 . You are advised to use the default setting
7	Bitrate Type	The default is CBR and can be set to VBR
8	Image Quality	You can select Bit Rate or Quality based on actual requirements
9	I Frame Interval	The default is 50 . The value is an integer from 5 to 250 , you are advised to use the default setting
10	GOP	The default is IP and cannot be changed
11	Smoothing	You can select Clear or Smooth based on actual requirements
12	U-code	The default is Off and cannot be changed

7.4.4 Image Encoding



No.	Parameter	Description
1	Single Photo Resolution	The default is 2688×1520 and can be set 1920×1080 (1080P) , 1280×720 (720P) , 720×576 (D1)
2	Single Photo of Passing Photo Size(KB)	This parameter sets the size of a single snapshot image. The default value is 400 .

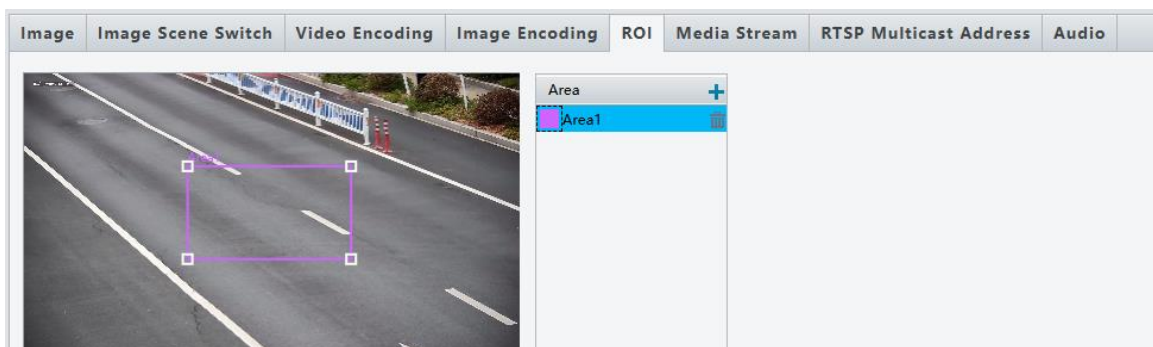
7.4.5 ROI

By default, Region of Interest (ROI) is disabled. If the live view is unclear due to poor network conditions, you can enable ROI to improve the resolution in a specific area.



CAUTION!

If you draw a too large area for ROI, the camera performance is affected. In most cases, you are not advised to enable ROI.



7.4.6 Media Stream

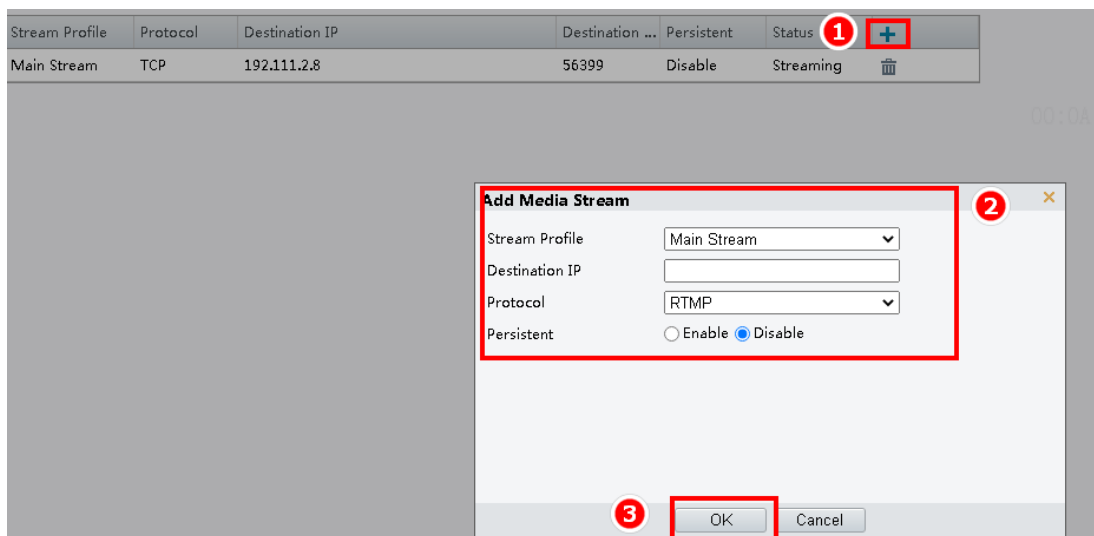
1. Media Stream

This page shows the current stream profile and the corresponding **Destination IP, Destination Port, Protocol, Status**, etc.

Image	Image Scene Switch	Video Encoding	Image Encoding	ROI	Media Stream	RTSP Multicast Address	Audio
Stream Profile	Protocol	Destination IP	Destination ...	Persistent	Status	+	
Main Stream	TCP	192.111.2.8	56399	Disable	Streaming	🗑️	

2. Add Media Stream

The Media Stream can be manually added for Stream Profile.



No.	Parameter	Description
1	Stream Profile	Can be set to Main Stream, Sub Stream, Third Stream
2	Destination IP	Complete the configuration according to the actual requirements
3	Protocol	The default is RTMP and cannot be changed
4	Persistent	<ul style="list-style-type: none"> ● Enable: After the camera restarts, manually added media streams will not be deleted ● Disable: After the camera restarts, manually added media streams will be deleted

7.4.7 RTSP Multicast Address

You can directly configure multicast on the front end and obtain media streams using RTSP.

Image	Image Scene Switch	Video Encoding	Image Encoding	ROI	Media Stream	RTSP Multicast Address	Audio
Main Stream							
Multicast Address	0.0.0.0						
Port	0						

No.	Parameter	Description
1	Multicast Address	The multicast IP address ranges from 224.0.1.0 to 239.255.255.255

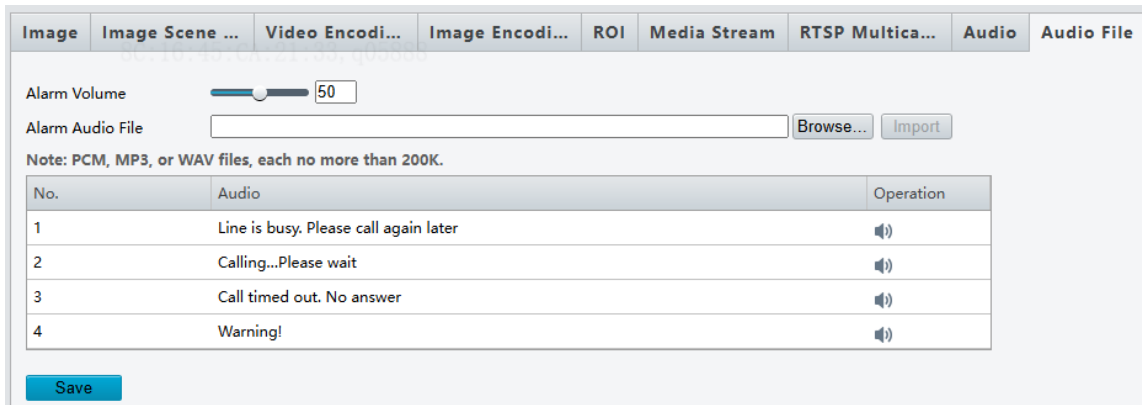
2	Port	The port number ranges from 0 to 65535
---	------	--

7.4.8 Audio

No.	Parameter	Description
1	Audio Input	The value is On by default, and you can set it to Off to receive voice
2	Access Mode	Only Line/Mic is allowed
3	Input Volume	The value ranges from 0 to 100, and the default value is 50 .
4	Audio Compression	The value is G.711U by default, and can be changed to G.711A .
5	Sampling Rate(KHz)	The default value is 8 , and other values 16.
6	Noise Suppression	The value is On by default and can be set to Off .
7	Channel 1	The default and only value is Mic . You can select the Enable check box to enable the channel or clear the check box to disable the channel
8	Audio Output	The default and only value is Speaker .
9	Output Volume	The value ranges from 0 to 100, and the default value is 50 .
10	Call Waiting Timeout(s)	The value ranges from 0 to 255, and the default value is 30 .

7.4.9 Audio File

Only the following camera models—**PKC5601-C4Z-LED44-WH**, **PKC5601-C4Z-LED44-WH-NB**, **PKC5601-C4Z-LED44-IR**, and **PKC5601-C4Z-LED44-IR-NB** have four built-in audio files. All other models include only one built-in **Warning!** audio file.



No.	Parameter	Description
1	Alarm Volume	Default: 50, range: 0-100. Adjust the camera's alarm volume as needed.
2	Audio	<p>There are three default audio files, which cannot be deleted. You can click to try the audio.</p> <p>The alarm audio is used for the two-way audio between the camera and the HTTP server. The application scenes are shown below:</p> <ul style="list-style-type: none"> ● Line is busy. Please call again late: This audio plays when the server actively hangs up the call or the server is busy. ● Calling...Please wait: This audio plays when the camera actively initiates a two-way audio and continues to play during the waiting timeout period. ● Call timed out. No answer: This audio plays if the server does not answer the call after the waiting timeout elapses. ● Warning ! : List Linkage、Vehicle Reverse Detection、Vehicle Overstay Detection 和 Motor Vehicle Metadata 告警联动声音告警时播放。 翻译: When alarm linkage is triggered for List Linkage, Vehicle Reverse Detection, Vehicle Overstay Detection, or Motor Vehicle Metadata, an audible alert is played.

7.5 Vehicle List

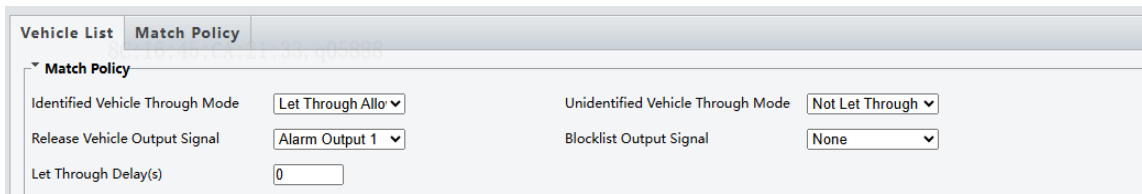
7.5.1 Vehicle List

1. Match Policy



NOTE!

When the camera is not registered with the server, the camera controls the vehicle entry/exit. After the camera is registered with the server, both the camera and the server can control the vehicle entry/exit.

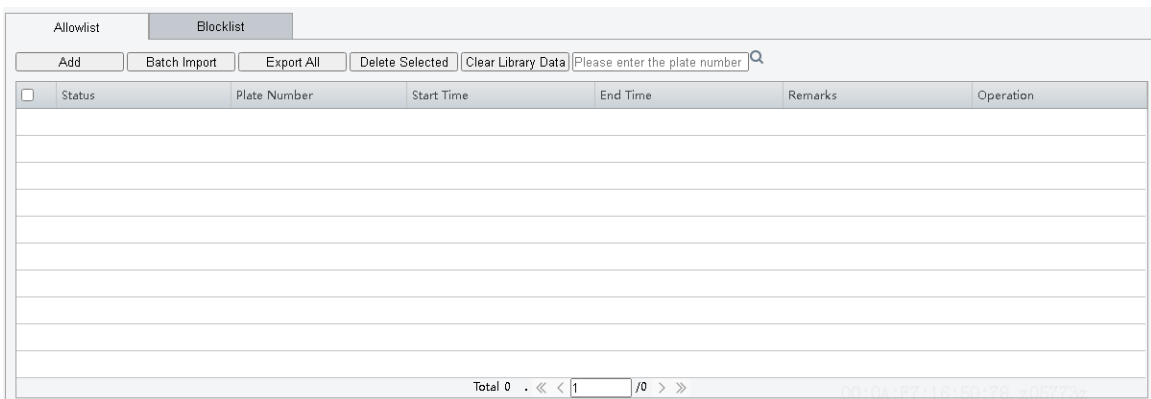


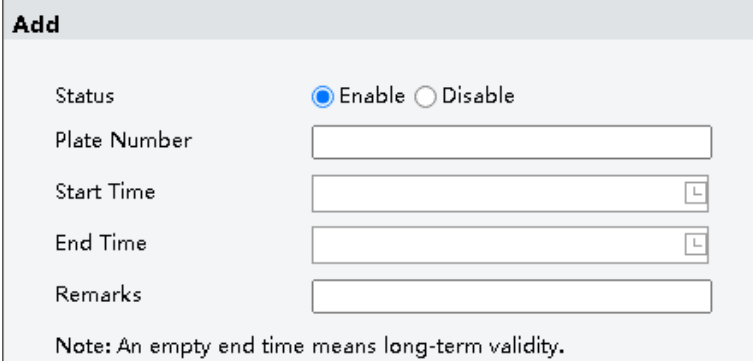
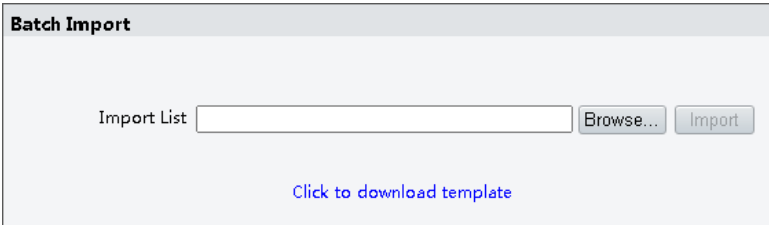
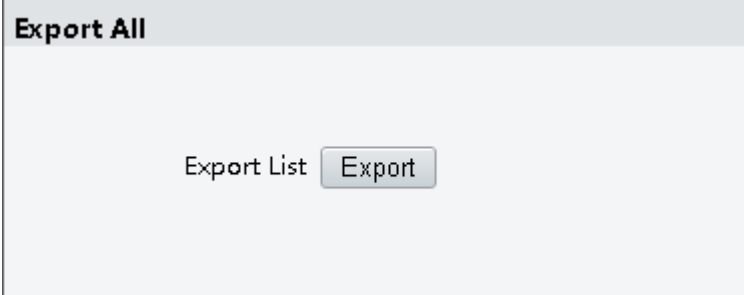
No.	Parameter	Description
1	Identified Vehicle Through Mode	<ul style="list-style-type: none"> ● Let Through All: All vehicles whose license plates are identified are allowed to pass through ● Let Through Allowlist Vehicle: The vehicle is allowed to let through if the plate number is on the allowlist and the vehicle passing time is within the allowlist effective period.

		<ul style="list-style-type: none"> ● Let Through Allowlist Vehicle When Offline: The vehicle is allowed to let through if the Photo Server uses HTTP and is offline, the plate number is on the allowlist, and the vehicle passing time is within the allowlist effective period. ● Let Through Non-Blocklist Vehicle: The vehicle is allowed to let through if the plate number is not on the blocklist or if the vehicle passing time is not within the blocklist effective period.
2	Unidentified Vehicle Through Mode	<ul style="list-style-type: none"> ● Let Through: Vehicles without license plates are allowed to pass through ● Not Let Through: Vehicles without license plates are not allowed to pass through
3	Release Vehicle Output Signal	<p>The default is Alarm Output 1</p> <ul style="list-style-type: none"> ● Alarm Output 1: If the plate number is on the allowlist and the vehicle passing time is within the allowlist effective period, Alarm Output 1 outputs signals. ● Alarm Output 2: If the plate number is on the allowlist and the vehicle passing time is within the allowlist effective period, Alarm Output 2 outputs signals. ● None: If the plate number is on the allowlist and the vehicle passing time is within the allowlist effective period, no signals will be output. ● Wiegand Output: If the plate number is on the allowlist and the vehicle passing time is within the allowlist effective period, Wiegand Output outputs signals. You also need to configure Linkage Wiegand Outputs Fixed Data (Card Number) according to the actual requirements. <div style="border: 1px solid #ccc; padding: 2px; margin: 5px 0;"> Linkage Wiegand Outputs Fixed Data (Card Number) <input style="width: 100px;" type="text" value="123456"/> <input type="button" value="Test"/> </div> ● Wiegand Output Of Card Number From VehicleList: When adding a vehicle to a list in the vehicle passage record, a card number can be entered. If the license plate matches and a card number is provided, Wiegand linkage can be triggered.
4	Blocklist Output Signal	<p>The default is None.</p> <ul style="list-style-type: none"> ● Alarm Output 1: If the plate number is not on the blocklist or the vehicle passing time is not within the blocklist effective period, Alarm Output 1 outputs signals. ● Alarm Output 2: If the plate number is not on the blocklist or the vehicle passing time is not within the blocklist effective period, Alarm Output 2 outputs signals. ● None: If the plate number is not on the blocklist or the vehicle passing time is not within the blocklist effective period, no signals will be output.
5	Let Through Delay(s)	<p>The default is 0. Range: 0~600s</p> <p>After a vehicle passes by and the camera decides to let it through, the gate will wait for the specified delay time before opening.</p>

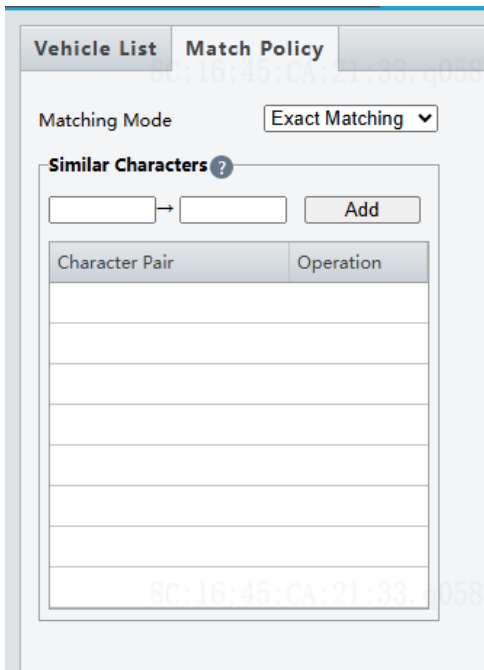
2. Allowlist & Blocklist

The device supports two libraries: allowlist library and blocklist library. Each library supports add, delete, edit, and search functions.

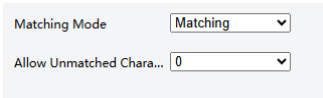


No.	Parameter	Description
1	Add	<p>Click Add, enter the Plate Number, Start Time, End Time, and then click OK. The vehicle is added to the Allowlist/Blocklist.</p> 
2	Batch Import	<p>Click the button, and the Batch Import dialog box appears. You can download the template and import the list.</p> 
3	Export All	<p>Click the button, and the Export All dialog box appears. Click Export to export the list.</p> 
4	Delete Selected	<p>Select vehicle(s) in the list, and then click Delete Selected. The selected vehicle(s) are deleted</p>
5	Clear Library Data	<p>Caution: The Clear Library Data operation will delete all data from the list.</p>
6	Search	<p>Enter a plate number to search. Supports fuzzy search and exact match.</p>

7.5.2 Match Policy



No.	Parameter	Description
1	Exact Matching	<ul style="list-style-type: none"> ● Exact Matching: When the recognized license plate completely matches a plate on the allowlist or blocklist, then the plate is considered on the allowlist or blocklist. ● Similar Characters: After capturing a vehicle image, the camera first attempts direct matching against the configured vehicle list. If this initial match fails and character replacement pairs are defined, the system performs character substitution based on the configured similar character mappings and retries the list matching. If the match succeeds after character replacement, the license plate number displayed in both the passage record and OSD will be the replaced version. If the match still fails, the passage record and OSD will show the originally recognized license plate number. During character replacement, only one similar character is substituted per attempt. <ul style="list-style-type: none"> ➤ Multiple different Similar Characters: If multiple distinct similar character pairs are configured, replacements are applied sequentially according to the similar character list. Example: With character pairs 2 → Z and T → 1, and a captured plate AT2345: <ul style="list-style-type: none"> – First, replace 2 → Z, resulting in ATZ345. If list matching fails, – Then replace T → 1, resulting in A1Z345, and retry matching. ➤ Multiple occurrences of the same Similar Character: If the captured plate contains multiple instances of the same replaceable character, the system performs multiple rounds of substitution until a successful list match is achieved. Example: With character pair 2 → Z, and a list entry A1Z3Z3, if the captured plate is A12323: After replacing both 2s with Zs, the plate becomes A1Z3Z3, which matches the list entry.

		<p>Note:</p> <ul style="list-style-type: none"> ● When Exact Matching is enabled, the system supports the Similar Characters replacement feature. Enabling Fuzzy Matching will disable the Similar Characters function. ● The characters to be replaced must not be duplicated in the replacement rule (i.e., a single character cannot appear as the "to-be-replaced" character in multiple rules). ● If the recognized license plate contains multiple identical characters that are eligible for replacement, the system performs multi-round replacements: <ul style="list-style-type: none"> ➤ First round: replace only the first occurrence, ➤ Second round: replace the first and second occurrences, ➤ ... ➤ Nth round: replace from the first through the Nth occurrence, until a successful match is found. <p>Once a successful list match is achieved through Similar Characters replacement, the replacement process stops immediately (no further rounds or substitutions are performed).</p>
<p>2</p>	<p>Matching</p>	 <p>The screenshot shows two dropdown menus. The first is labeled 'Matching Mode' and is set to 'Matching'. The second is labeled 'Allow Unmatched Chara...' and is set to '0'.</p> <ul style="list-style-type: none"> ● Performs fuzzy matching through Allow Unmatched Character(s) ● Allow Unmatched Character(s): <ul style="list-style-type: none"> ➤ 0: When the recognized license plate completely matches a plate on the allowlist or blocklist, the plate is considered on the allowlist or blocklist. ➤ 1: The recognized license plate can match a plate on the allowlist or blocklist despite a discrepancy of one character (an extra character, a missing character, or an incorrect character). ➤ 2: <ul style="list-style-type: none"> – For plates with letters and digits: The recognized license plate can match a plate on the allowlist or blocklist despite a discrepancy of one or two characters (extra characters, missing characters, or incorrect characters). – For plates with letters, digits, and other characters: The recognized license plate can match a plate on the allowlist or blocklist despite a discrepancy of one or two characters (two extra characters, two missing characters, two incorrect characters, or an incorrect character). <p>Note: If Allow Unmatched Character(s) is selected, it is possible that vehicles with different license plates may be recognized as the same vehicle within a short period of time. It is not recommended to use Allow Unmatched Character(s).</p>

7.6 Smart

7.6.1 Intelligent Configuration

Intelligent C...

Small Photo of Plate Generate Color Photo

License Plate

Detection Region Common ▾

Vehicle Characteristics Parameters

Vehicle Characteristics Recognition On Off

Save

No.	Parameter	Description
1	Small Photo of Plate	<ul style="list-style-type: none"> When Generate Color Photo is selected, a small plate photo will be generated when a licensed vehicle is captured. When Generate Color Photo is cleared, a small plate photo will not be generated when a licensed vehicle is captured.
2	Detection Region	The default is Common , and can be set to Hungary, Colombia, Czech Republic, Croatia, Romania, Slovenia, Bulgaria, Serbia, Egypt, South Korea, Thailand, United states of American, Singapore, Saudi Arabia, Indonesia, United Kingdom, Ireland, Brazil, Qatar, Bosnia and Herzegovina, Cambodia, Tajikistan, Uzbekistan, India, Vietnam, Tunisia, Georgia, Kyrgyzstan, Israel, Moldova, Australia, Kazakhstan, Lithuania, Turkmenistan, Mexico, Bangladesh, Nepal, Philippines, Canada, EU, GCC, Mongolia and Taiwan.
3	Vehicle Characteristics Recognition	The default is Off . When set to On , the camera can recognize vehicle features (vehicle Logo, vehicle types).

7.7 External Device

7.7.1 Serial Port

1. Trans-Channel

This function is unavailable and can be ignored.

Serial Port | **Wiegand Interface**

RS485_1

Port Mode: Trans-Channel
 Baud Rate: 9600
 Data Bits: 8
 Stop Bits: 1
 Parity: None
 Flow Control: None
 Enable Trans-Channel

RS485_2

Port Mode: Trans-Channel
 Baud Rate: 9600
 Data Bits: 8
 Stop Bits: 1
 Parity: None
 Flow Control: None
 Enable Trans-Channel

Save

2. 485-ONLY-PLATE

It is used to report license plate numbers via the 485 protocol. Please configure as needed. Only one port (RS485_1 or RS485_2) can be set to **485-ONLY-PLATE**.

Serial Port | **Wiegand Interface**

RS485_1

Port Mode: 485-ONLY-PLATE
 Baud Rate: 9600
 Data Bits: 8
 Stop Bits: 1
 Parity: None
 Flow Control: None
 Enable Trans-Channel

RS485_2

Port Mode: Trans-Channel
 Baud Rate: 9600
 Data Bits: 8
 Stop Bits: 1
 Parity: None
 Flow Control: None
 Enable Trans-Channel

Save

3. UV2.0

The port mode for LED is UV2.0 by default. It is only available for models including PKC5601-C4Z-LED44-WH, PKC5601-C4Z-LED44-WH-NB, PKC5601-C4Z-LED44-IR, and PKC5601-C4Z-LED44-IR-NB.

Serial Port | **Wiegand Interface**

RS485_1

Port Mode: Trans-Channel
 Baud Rate: 9600
 Data Bits: 8
 Stop Bits: 1
 Parity: None
 Flow Control: None
 Enable Trans-Channel

RS485_2

Port Mode: Trans-Channel
 Baud Rate: 9600
 Data Bits: 8
 Stop Bits: 1
 Parity: None
 Flow Control: None
 Enable Trans-Channel

LED

Port Mode: UV2.0

LED Screen Display

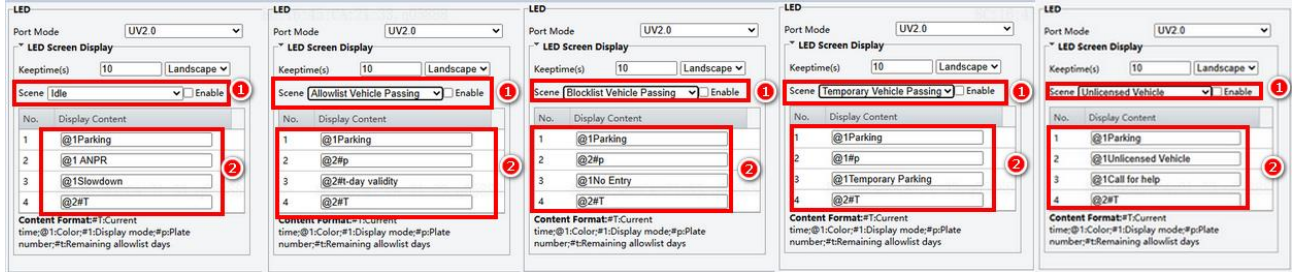
Keypoint(s): 10 | Landscape

Scene: Idle | Enable

No.	Display Content
1	@1Parking
2	@1ANPR
3	@1Slowdown
4	@2#T

Content Format: #T:Current time;@1:Color;#1:Display mode;#p:Plate number;#t:Remaining allowlist days

Save



No.	Parameter	Description
1	Keptime (s)	Default: 10. Range: 1 to 1000. The duration for which the LED screen displays vehicle information when a vehicle passes through. After this time has elapsed, the scene switches to the idle state.
2	Display type	Landscape
3	Scene	All scenes are disabled by default. For standalone camera operation, various scenes must be enabled. The trigger conditions for each scene are as follows: <ul style="list-style-type: none"> ● Idle: No vehicle passes through. ● Allowlist Vehicle Passing: The vehicle’s license plate is on the allowlist, and the pass-thru time is within its validity period. ● Blocklist Vehicle Passing: The vehicle’s license plate is on the blocklist, and the pass-thru time is within its validity period. ● Temporary Vehicle Passing: The vehicle’s license plate is not on the allowlist/blocklist, or the pass-thru time is outside its validity period. ● Unlicensed Vehicle: A vehicle without a license plate passed through. <p>CAUTION! Please do not enable the scene when vehicles are managed by the connected server; otherwise duplicate vehicle information may be displayed.</p>
4	Display Content	The content format is [@m][#n][display content] , where m and n represent positive integers and the three parameters, [@m] , and [#n] can be in any order. This format means [Font Color][Scrolling Mode][Display Content] , and the parameter configurations are as follows: <ul style="list-style-type: none"> ● @m: m=1, 2, 3. The font color is red by default when the parameter is not configured or set to any other positive integer. <ul style="list-style-type: none"> ➢ @1: Red ➢ @2: Green ➢ @3: Yellow ● #n: n=1, 2, 3, 4. The scrolling mode is No scrolling by default when the parameter is not configured or set to any other positive integer. <ul style="list-style-type: none"> ➢ #1: Scroll up ➢ #2: Scroll down ➢ #3: Scroll right ➢ #4: No scrolling ● Display Content: Custom or pre-defined. The configurable items are listed below. It is recommended that each line does not exceed 64 characters. <ul style="list-style-type: none"> ➢ Plate number: #p, the captured plate number will be displayed after the configuration is complete. Available for whitelist, blacklist, and temporary vehicle scenes. ➢ Remaining allowlist days: #t, only takes effect for vehicles on the whitelist. Configurable on any line. For example, when a whitelisted vehicle with 30 days of validity remaining passes through, the display shows "Remaining 30 days". ➢ Current time: #T, camera time. It must occupy a dedicated line and cannot be combined with other fields. Recommended position: last line.

7.7.2 Wiegand Interface

Complete the configuration according to the actual requirements.

7.8 Events

7.8.1 Motion Detection

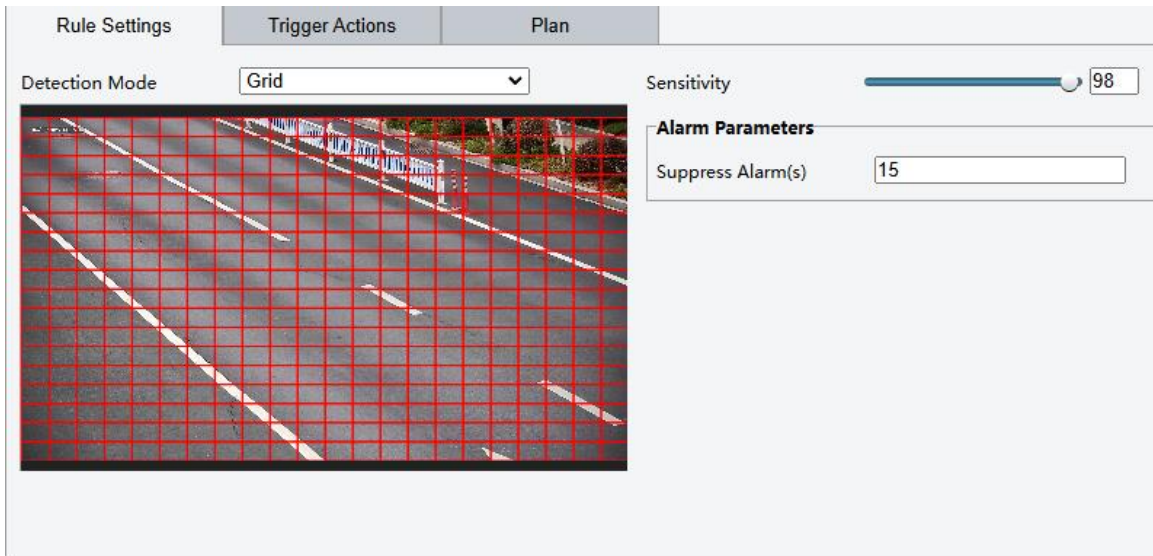
1. Rule Settings-Area

When **Detection Mode** is set to **Area**, you can add up to four detection rules. Each must be set separately, including **Sensitivity** and **Object Size**.

No.	Parameter	Description
1	Sensitivity	The valid range is 1-100. The default is 98. The greater the value, the higher the sensitivity
2	Object Size	The valid range is 1 to 100. The default is 4. Only objects greater than the specified size will be detected
3	Suppress Alarm(s)	The default is 15. <ul style="list-style-type: none"> ● If the interval between two consecutive motions is greater than the Suppress Alarm setting, an alarm will be reported. ● If the interval between two consecutive motions is less than the Suppress Alarm setting, no alarm will be reported.

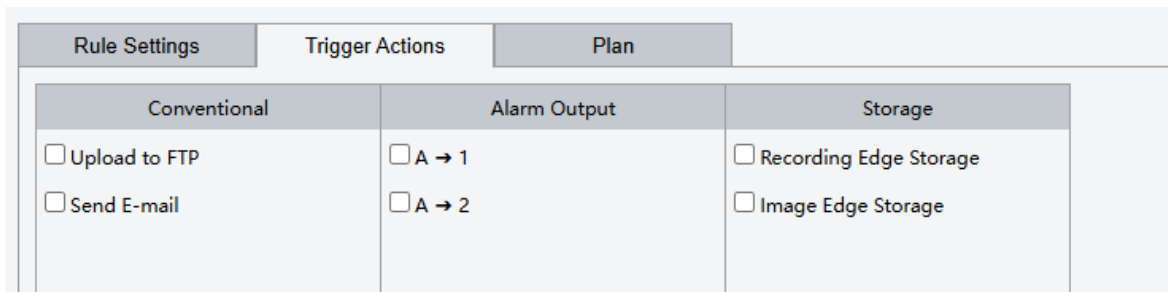
2. Rule Settings-Grid

When **Detection Mode** is set to **Grid**, motion detection will be performed on the grid coverage area. You can drag the mouse on the video image to draw or erase the grid.



No.	Parameter	Description
1	Sensitivity	The valid range is 1-100. The default is 98 . The greater the value, the higher the sensitivity
2	Suppress Alarm(s)	The default is 15, <ul style="list-style-type: none"> ● If the interval between two consecutive motions is greater than the Suppress Alarm setting, an alarm will be reported. ● If the interval between two consecutive motions is less than the Suppress Alarm setting, no alarm will be reported.

3. Trigger Actions



No.	Parameter	Description
1	Conventional	<ul style="list-style-type: none"> ● Upload to FTP: Uploads files to the FTP server upon detecting motion. ● Send E-mail: Sends an email notification upon detecting motion.
2	Alarm Output	<ul style="list-style-type: none"> ● A→1: When motion is detected, Alarm Output 1 outputs signals. ● A→2: When motion is detected, Alarm Output 2 outputs signals.
3	Storage	<ul style="list-style-type: none"> ● Recording Edge Storage: The camera will trigger video recording when motion is detected ● Image Edge Storage: The camera will trigger a snapshot when motion is detected

4. Plan

No.	Parameter	Description
1	Enable Plan	<ul style="list-style-type: none"> Selected: Motion detection is enabled during the arming period. Cleared: Motion detection is disabled during the arming period.
2	Armed/ Unarmed	<ul style="list-style-type: none"> Armed: Click and then select time periods during which motion detection is enabled. Unarmed: Click and then select time periods during which motion detection is disabled.
3	Edit	<p>Configure different arming periods for each day. Up to 4 time periods are allowed per day.</p>

7.8.2 Tampering Alarm

1. Rule Settings

No.	Parameter	Description
1	Enable Tampering Alarm	<ul style="list-style-type: none"> Selected: The camera will perform tampering detection during the arming period Not selected: The camera will disable tampering detection
2	Sensitivity	The valid range is 1-100. The default is 50 . The greater the value, the higher the sensitivity.
3	Duration(s)	The valid range is integers from 1 to 10. The default is 1 . The camera performs tampering detection if the duration of tampering exceeds the set value.

2. Trigger Actions

No.	Parameter	Description
1	Conventional	<ul style="list-style-type: none"> Upload to FTP: Uploads files to the FTP server upon detecting camera tampering. Send E-mail: Sends an email notification upon detecting camera tampering.
2	Alarm Output	<ul style="list-style-type: none"> A→1: When the camera detects tampering, Alarm Output 1 outputs signals. A→2: When the camera detects tampering, Alarm Output 2 outputs signals.
3	Storage	<ul style="list-style-type: none"> Recording Edge Storage: The camera will trigger video recording when tampering is detected Image Edge Storage: The camera will trigger a snapshot when tampering is detected

3. Plan

Refer to the [Plan configuration](#) in Section [7.8.1 Motion Detection](#).

7.8.3 List Linkage

1. Trigger Actions

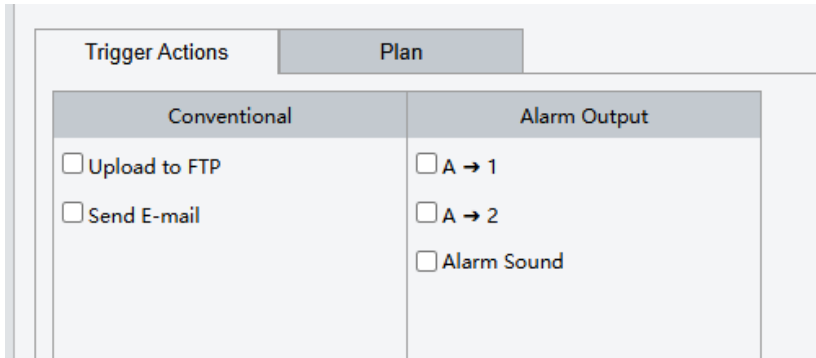
No.	Parameter	Description
1	Vehicle Type	<ul style="list-style-type: none"> ● Allowlist Vehicle: Allowlist vehicles can trigger alarm linkage. ● Blocklist Vehicle: Blocklist vehicles can trigger alarm linkage. ● Temporary Vehicle: Temporary vehicles can trigger alarm linkage. ● Unlicensed Vehicle: Unlicensed vehicles can trigger alarm linkage.
2	Conventional	<ul style="list-style-type: none"> ● Upload to FTP: When the camera identifies a vehicle matching a configured list (e.g., allowlist, blocklist, temporary list, or unlicensed vehicle), it triggers an alarm and uploads the relevant data to the FTP server. ● Send E-mail: When the camera identifies a vehicle matching a configured list (e.g., allowlist, blocklist, temporary list, or unlicensed vehicle), it triggers an alarm and sends a notification email.
3	Alarm Output	<ul style="list-style-type: none"> ● A→1: When the camera identifies a vehicle matching a configured list (e.g., allowlist, blocklist, temporary list, or unlicensed vehicle), it triggers Alarm Output 1 to send a signal. ● A→2: When the camera identifies a vehicle matching a configured list (e.g., allowlist, blocklist, temporary list, or unlicensed vehicle), it triggers Alarm Output 2 to send a signal. ● Alarm Sound: When the camera identifies a vehicle matching a configured list (e.g., allowlist, blocklist, temporary list, or unlicensed vehicle), it triggers Alarm Output 2 to send a signal. <div style="border: 1px solid #ccc; padding: 5px; margin: 10px 0;"> <input checked="" type="checkbox"/> Alarm Sound Audio <input type="text" value="Wa"/> Repeat <input type="text" value="3"/> </div> <ul style="list-style-type: none"> ➤ Audio files can be imported via the Audio File interface. The default audio file is Warning!.pcm. ➤ The default number of playback repetitions is 3, and the current configuration range is unlimited.

2. Plan

Refer to the [Plan configuration](#) in Section [7.8.1 Motion Detection](#).

7.8.4 Vehicle Reverse Detection

1. Trigger Actions



No.	Parameter	Description
1	Conventional	<ul style="list-style-type: none"> ● Upload to FTP: When the camera detects a vehicle reverse alarm, it uploads the relevant data to the FTP server. ● Send E-mail: When the camera detects a vehicle reverse alarm, it triggers an alarm and sends a notification email.
2	Alarm Output	<ul style="list-style-type: none"> ● A→1: When the camera detects a vehicle reverse alarm, it triggers Alarm Output 1 to output a signal. ● A→2: When the camera detects a vehicle reverse alarm, it triggers Alarm Output 2 to output a signal. ● Alarm Sound: When the camera detects a vehicle reverse alarm, it plays an audio file. When enabled, you can configure the audio file and the number of playback repetitions <div style="border: 1px solid #ccc; padding: 5px; width: fit-content;"> <input checked="" type="checkbox"/> Alarm Sound Audio <input type="text" value="Wa"/> Repeat <input type="text" value="3"/> </div> <ul style="list-style-type: none"> ➤ Audio files can be imported via the Audio File interface. The default audio file is Warning!.pcm. ● The default number of playback repetitions is 3, and the current configuration range is unlimited.

2. Plan

Refer to the [Plan configuration](#) in Section [7.8.1 Motion Detection](#).

7.8.5 Motor Vehicle Metadata

1. Rule Settings

Select Metadata Group Motor Vehicle Metadata1 Enable

Rule Settings | **Trigger Actions** | **Plan**

Vehicle Type

All Sedan Pickup SUV MPV Van

Bus Truck Motorcycle?

Vehicle Color

All Black White Red Green Blue

Yellow Purple Gray Orange Brown Pink

Silvery White

Plate Color

All White Yellow Blue Black Green

Red Yellow Green Gradient Green

Save

No.	Parameter	Description
1	Select Metadata Group	<ul style="list-style-type: none"> Three vehicle attribute groups can be configured: Motor Vehicle Metadata1, Motor Vehicle Metadata2, and Motor Vehicle Metadata3. When the camera detects and recognizes a vehicle that simultaneously satisfies all three attribute groups, alarms are triggered for Motor Vehicle Metadata1, Motor Vehicle Metadata2, and Motor Vehicle Metadata3 concurrently.
2	Enable	<ul style="list-style-type: none"> Selected: Enable vehicle Metadata linkage. Unselected: Disable vehicle Metadata linkage.
3	Vehicle Type / Vehicle Color/ Plate Color	<ul style="list-style-type: none"> Disabled by default (grayed out and unconfigurable); becomes configurable only after being enabled When Motorcycle is selected, all options under Vehicle Color are automatically checked and grayed out (locked and unconfigurable). At least one attribute must be selected among Vehicle Type, Vehicle Color, and Plate Color.

2. Trigger Actions

Refer to the [Trigger Actions](#) configuration in Section [7.8.3 List Linkage](#).

3. Plan

Refer to the [Plan configuration](#) in Section [7.8.1 Motion Detection](#).

7.8.6 Alarm Input

1. Rule Settings

No.	Parameter	Description
1	Select Alarm	<p>The camera supports two alarm inputs. The two alarm inputs need to be configured separately.</p> <ul style="list-style-type: none"> ● Alarm Input1: When selected, the Rule Settings, Trigger Actions, and Plan change to the settings of Alarm Input1. You can edit Rule Settings, Trigger Actions, and Plan as needed. ● Alarm Input2: When selected, the Rule Settings, Trigger Actions, and Plan change to the settings of Alarm Input2. You can edit Rule Settings, Trigger Actions, and Plan as needed. <p>Note: This interface can be used in conjunction with external devices such as vehicle detector and detection loop.</p>
2	Rule Settings	<ul style="list-style-type: none"> ● Alarm Name: The default is A1 or A2, the parameter can be customized and must be specified ● Alarm Type: The default is N.O., can be set to N.C. ● Alarm Input: The default is Off. You can select On to enable alarm input

2. Trigger Actions

序号	参数	说明
1	Alarm Output	<ul style="list-style-type: none"> ● A→1: When an Alarm Input is triggered, Alarm Output 1 outputs a signal. ● A→2: When an Alarm Input is triggered, Alarm Output 2 outputs a signal.

3. Plan

Refer to the [Plan configuration](#) in Section [7.8.1 Motion Detection](#).

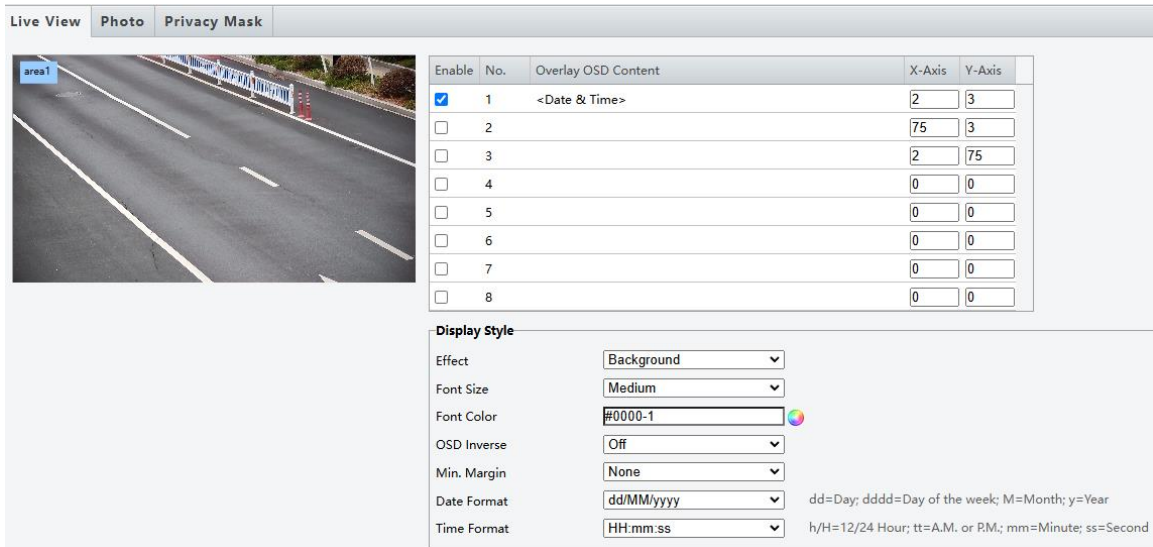
7.8.7 Alarm Output

1. Rule Settings

No.	Parameter	Description
1	Select Alarm	<p>The camera supports two alarm outputs. The two alarm outputs need to be configured separately.</p> <ul style="list-style-type: none"> When selected, the Rule Settings change to the settings of Alarm Output1. You can edit Rule Settings as needed. When selected, the Rule Settings change to the settings of Alarm Output2. You can edit Rule Settings as needed.
2	Rule Settings	<ul style="list-style-type: none"> Alarm Name: The default is A1 or A2, the parameter can be customized and must be specified Alarm Type: The default is N.O., can be set to N.C. Delay(ms): his parameter sets the delay of the camera for sending the Boolean signal. The default value is 1000 Relay Mode: The value is Monostable. This parameter applies to special scenarios and can be ignored

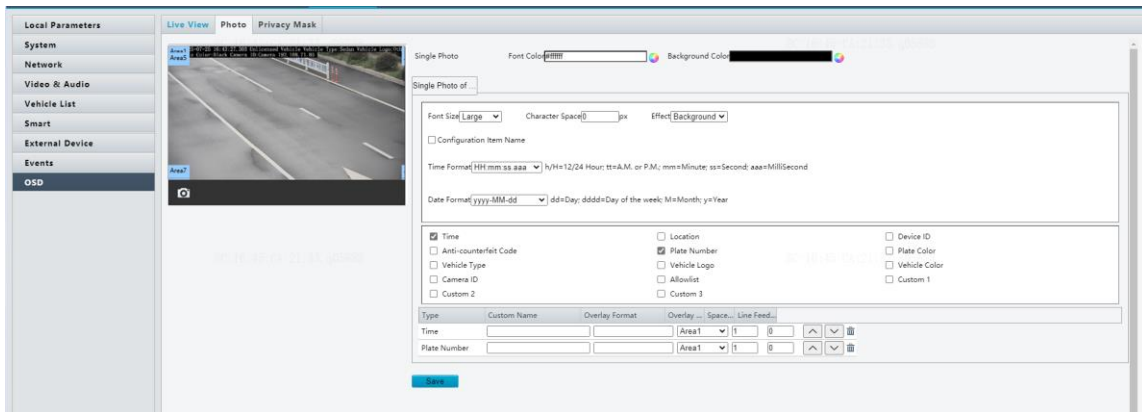
7.9 OSD

7.9.1 Live View






No.	Parameter	Description
1	Overlay OSD Content	<p>8 fixed OSD areas, each area can be customized or set with custom entries.</p> <ul style="list-style-type: none"> ● Custom: When selected, you can input the desired OSD contents in the text box. ● Date+Time: Overlays the current date and time of the camera. ● Time: Overlays the current time of the camera. ● Date: Overlays the current date of the camera. ● Vehicle Plate Info: Shows the plate number and plate width in real time, for example: ● Zoom: Current zoom ratio
2	X-Axis/Y-Axis	You can set the values to adjust the position of the overlay area. Alternatively, you can drag the overlay area in the live view
3	Effect	The default is Background , can be set to Background, Stroke, Hollow, Normal
4	Font Size	The default is Medium , can be set to X-large, Large, Medium, Small
5	Font Color	The default value is #0000-1 . You can click to select a color. Then, the Font Color text box displays the hexadecimal code of the selected color, and the OSD overlay font color turns to the selected color.
6	Min. Margin	The default is None , can be set to Single, Double
7	OSD Inverse	The default is Off . When set to On , you can invert the OSD font color for better visibility when the OSD font color is similar to the live video background color.
8	Date Format	The default is dd/MM/yyyy . Complete the configuration according to the actual requirements
9	Time Format	The default is HH:mm:ss . Complete the configuration according to the actual requirements

7.9.2 Photo



No.	Parameter	Description
1	Font Color	The default value is #ffffff, indicating white. You can click to select a color. Then, the Font Color text box displays the hexadecimal code of the selected color, and the OSD overlay font color turns to the selected color.
2	Background Color	The default value is #000000, indicating black. You can click to select a color. Then, the Background Color text box displays the hexadecimal code of the selected color, and the background of the OSD overlay content turns to the selected color.
3	Configuration Item Name	<ul style="list-style-type: none"> ● Not Selected: The configuration item name will not be displayed on the image ● Selected: the configuration item name is displayed on the image.
4	Font Size	The default is Large , can be set to X-large , Large , Medium , Small
5	Character Space	The value is an integer from 0 to 10, indicating the number of pixels of the space between characters
6	Effect	<ul style="list-style-type: none"> ● Background: The OSD shows a background color. ● Normal: The OSD shows text only, without background color.
7	Date Format	The default is yyyy-MM-dd . Complete the configuration according to the actual requirements
8	Time Format	The default is HH:mm:ss.aaa . Complete the configuration according to the actual requirements
9	Overlay OSD Content	15 options. The selected items will appear in the bottom list and overlay on the photo OSD. <ul style="list-style-type: none"> ● Time: Snapshot time ● Location: Intersection information configured at Setup > System > Device Info. ● Device ID: Device ID configured at Setup > System > Device Info. ● Anti-counterfeit Code: A random 16-digit number + letter combination generated by the camera. ● Plate Number: Plate number recognized by the camera. ● Plate Color: Plate color recognized by the camera. ● Vehicle Color: Vehicle color recognized by the camera. ● Vehicle Type/Vehicle Logo: Vehicle type/Vehicle logo recognized by the camera ● Camera ID: Fixed to Camera, unmodifiable. ● Allowlist: Overlays Yes or No. <ul style="list-style-type: none"> ➢ Yes: The vehicle is on the allowlist. ➢ No: The vehicle is not on the allowlist.

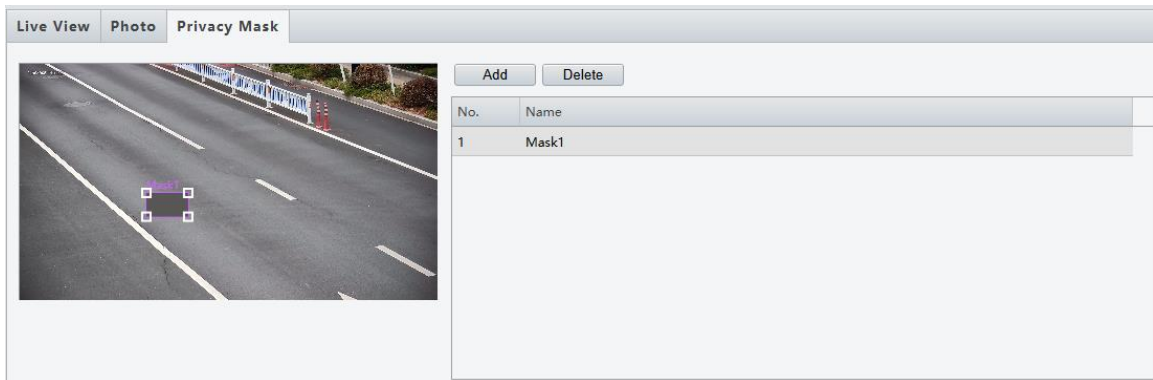
		<ul style="list-style-type: none"> ● Custom 1, 2, 3: Allows you to customize the name and Overlay Format <p>Note: When the Detection Region is set to Common, United States of America (USA), or Canada, the license plate color is recognized as Unknown.</p>						
10	Custom Name	<ul style="list-style-type: none"> ● Selected: Time:2025-03-05 09:10:20.716 ● Not selected: <table border="1" style="border-collapse: collapse; width: 100%;"> <tr> <td style="width: 33%;">Type</td> <td style="width: 33%;">Custom Name</td> <td style="width: 33%;">Overlay Format</td> </tr> <tr> <td>Time</td> <td>Snapshot Time</td> <td></td> </tr> </table> Snapshot Time2025-03-05 09:22:26.346 	Type	Custom Name	Overlay Format	Time	Snapshot Time	
Type	Custom Name	Overlay Format						
Time	Snapshot Time							
11	Overlay Format	<p>It is used to change the overlay content of the configuration item instead of the configuration item name. The valid format is <total length of (padding characters)>, and 1 to 20 characters are allowed</p> <ul style="list-style-type: none"> ● If the length of the overlay information is greater than the total length of the characters, the overlay information is displayed normally and the information beyond the length of the characters will not be missed Location:*****road 						
11	Overlay Position	A maximum of eight areas, areas 1–8						
12	Space Count	<p>The value is an integer from 0 to 10, usually used to separate multiple OSD contents at the same overlay position.</p> <p>For example:</p> <ul style="list-style-type: none"> ● Space Count is 1: Location:roadDeviceId:1 ● Space Count is 2 Location:road DeviceId:1 						
13	Line Feed Count	<p>Used when overlaying multiple contents in the same area. By default, overlaying multiple contents in the same area is displayed on the same line. The line wrapping effect can be achieved through the "line Feed Count" configuration, where 0, 1, 2, and 3 can be configured to represent no line wrapping, line wrapping, changing 1 line, and changing 2 lines, respectively. For example:</p> <ul style="list-style-type: none"> ● 0: No line wrapping Location:road DeviceId:1 ● 1: Changing 1 line Location:road DeviceId:1 						
14	Adjust order	<p>The OSD overlay sequence can be adjusted by clicking the up and down arrows based on sense habits of people and standard requirements of the project</p> <ul style="list-style-type: none"> ● : Adjust the order forward ● : Adjust the order backward 						
15	Delete	<ul style="list-style-type: none"> ● : Click this button to delete the overlay content 						

7.9.3 Privacy Mask

Privacy masking is used to cover the invisible areas that need to be hidden. It supports up to 4 masking areas, and is generally used to cover some sensitive fixed objects or parts in the monitoring interface,

such as some sensitive words, symbols, and special areas.

Live View Photo Privacy Mask



No.	Name
1	Mask1

8 Maintenance

8.1 Maintenance

8.1.1 Maintenance

The screenshot shows a web interface for camera maintenance. It has a top navigation bar with 'Maintenance' and 'Network Diagnosis' tabs. The main content is divided into four sections:

- Software Upgrade:** Includes 'Local Upgrade' with a file input and 'Browse...' button, an 'Upgrade' button, and an 'Upgrade Boot Program' checkbox. 'Cloud Upgrade' has a 'Detect' button. A note states: 'Note: The upgrade will take a while. Please do not disconnect power.' A timer shows '00:0A:F7:16:...'.
- Config Management:** Features a 'Default' button, a checkbox for 'Restore all settings to defaults without keeping current network and user settings.', 'Importing' with a file input and 'Browse...' button, and an 'Import' button. 'Exporting' has an 'Export' button.
- Diagnosis Info:** Includes 'Export Diagnosis Info' with an 'Export' button and a checked checkbox for 'Collect Image Debugging Info'.
- Device Restart:** Has a 'Restart' button, a 'Restart device' dropdown menu, an 'Enable Auto Restart' checkbox, a frequency dropdown (set to 'Each Day'), a time input (set to '02:00:00'), and an 'OK' button.

At the bottom, a note reads: 'Note: 1. Software upgrade, device restart, restoration to defaults or configuration import will restart the device. 2. Restarting the device will interrupt the connection to the device.'

No.	Parameter	Description
1	Software Upgrade	<ul style="list-style-type: none"> ● Local Upgrade: ANPR-B1107.X.X.YYMMDD.zip. The installation package is saved on your local computer and will be used to upgrade the version. <ul style="list-style-type: none"> ➢ Not selected Upgrade Boot Program: By default, boot is not upgraded. ➢ Selected Upgrade Boot Program: When there are no special instructions for version release, no boot upgrade is required. ● Cloud Upgrade: Click Detect, if a new version is available on the cloud platform and is inconsistent with the current version, you can perform a cloud upgrade. <div style="border: 1px solid #ccc; padding: 5px; margin-top: 10px;"> Cloud Upgrade Cloud Upgrade A new version detected for upgrade. </div> <p>Note: Before starting a local upgrade, it is necessary to check that the network environment is normal. For example, by using the ping command, the packet loss rate between the local computer and the camera is 0%, and the average time is less than 40ms. If the conditions are not met, the upgrade may fail.</p>
2	Default	<ul style="list-style-type: none"> ● Default: Not Selected Restore all settings to defaults without keeping current network and user settings. The configurations except network settings and user configuration are restored to the default values ● Factory default: Selected Restore all settings to defaults without keeping current network and user settings. The IP address and user configuration are all restored to the initial state <p>Note: The default is IP: 192.168.1.13, The default is Username/Password: admin/123456</p>
3	Importing/Exporting	<ul style="list-style-type: none"> ● Exporting: Click Browse..., select a local path, and click Export to export the camera configuration, which can be imported to other cameras of the same model

		<div style="border: 1px solid gray; padding: 5px;"> <p>File Encryption ✕</p> <p>Password <input type="text"/></p> <p>Confirm <input type="text"/></p> <ul style="list-style-type: none"> ● Importing: Store a configuration file of the camera model to a local path, click Browse..., select the file, and click Import to import the configuration. After successful import, the camera restarts, and the camera configuration is updated </div>
4	Diagnosis Info	You can export camera diagnosis information to a specific directory or directly open the camera diagnosis information file to locate problems
5	Device Restart	<ul style="list-style-type: none"> ● Manual restart: Click Restart to manually restart the camera ● Auto restart: Select Enable Auto Restart and configure the restart cycle and restart time, and the camera will restart at the set time

8.1.2 Network Diagnosis

Maintenance **Network Diagnosis**

Network Diagnosis

Select NIC: ▼

IP Filter: All Specify Filter

Port Filter: All Specify Filter

Custom Rules

Network Delay and Packet Loss Test

Test Address:

Packet Size (Bytes):

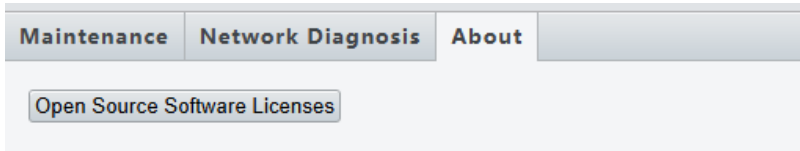
Test Result:

No.	Parameter	Description
1	Network Diagnosis	<ul style="list-style-type: none"> ● Select NIC: NIC1 (default) or NIC2 ● IP Filter <ul style="list-style-type: none"> ➢ All: No IP filtering ➢ Specify: Capture packets from or to the specified IP address(es) ➢ Filter: Capture packets except those from or to the specified IP address(es) ● Port <ul style="list-style-type: none"> ➢ All: No port filtering ➢ Specify: Capture packets from or to the specified port(s) ➢ Filter: Capture packets except those from or to the specified port(s). ● Custom Rules: When enabled, you can customize the filtering rules. The rules must meet pcap syntax, otherwise, a message “Setting the parameter(s) failed” appears after you click Start Capture <p>Note: Each packet file allows up to 100M.</p>
2	Network Delay and Packet Loss Test	<p>Test the network between the camera and other devices, and the test results show two results:</p> <ul style="list-style-type: none"> ● Test is successful: Average Delay: X ms Packet Loss Rate: Y%, You can

		<p>analyze the network status based on Average Delay and Packet Loss Rate.</p> <p>Test Result Average Delay:1.481ms Packet Loss Rate:0%</p> <ul style="list-style-type: none"> ● Test failed: The destination is unreachable. Network troubleshooting is required. <p>Test Result The destination is unreachable.</p>
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8.1.3 About

This page displays the Open Source Software Licenses.



8.2 Device Status

8.2.1 Device Status

This page displays camera-related information, including the **Model**, **Firmware Version**, **System Time**, etc.

Device Status

Basic Info

Model	[REDACTED]
IPv4 Network Info	[REDACTED]
MAC Address	[REDACTED]

Version Info

Firmware Version	ANPR-B1107.[REDACTED]
Hardware Version	A
Boot Version	V3.1
Serial No.	[REDACTED]

Status

System Time	2025/3/5 10:39:49
Operation Time	1 Day(s) 3 Hour(s) 55 Minute(s)

8.3 Security

8.3.1 User

User [HTTPS](#) [Authentication](#) [Registration Info](#) [ARP Protection](#) [Watermark](#) [IP Address Filtering](#) [Access Policy](#) [Certificate Management](#)

No.	Username	User Type
1	admin	Admin

00:0A:P7:16:50:78_e05772

No.	Parameter	Description
1	Add	<ul style="list-style-type: none"> ● Common User: Live View and Playback can be selected ● Operator: Parameter Config, Live View, Playback, Snapshot, Two-way Audio, PTZ Control, Event Subscription, Log, Maintenance, and Upgrade can be selected
2	Edit	<ul style="list-style-type: none"> ● admin: Edit Password and Email ● Non-admin: Edit Password
3	Delete	Only Common User and Operator can be deleted, Admin cannot be deleted

8.3.2 HTTPS

The default is On, you can to enter "*https://camera IP address* " in the address box of a browser to access the camera. The HTTPS port is set under **Setup > Network > Network Port**. An SSL certificate is required to enable HTTPS

8.3.3 Authentication

No.	Parameter	Description
1	RTSP Authentication	The default is Digest , supports Digest, Basic, None . When other devices initiate RTSP requests to the camera, the authentication method of the requesting side needs to be consistent with that of the camera.
2	RTSP Digest Algorithm	The default is MD5 , supports MD5, SHA256, MD5/SHA256 . When other devices initiate RTSP requests to the camera, the digest algorithm of the requesting side needs to be consistent with that of the camera.
3	WEB Authentication	The default is Digest , supports Digest, None . When other devices initiate HTTP requests to the camera, the authentication method of the requesting side needs to be consistent with that of the camera.
4	WEB Digest Algorithm	The default is MD5 , supports MD5, SHA256, MD5/SHA256 . When other devices initiate HTTP requests to the camera, the digest algorithm of the requesting side needs to be consistent with that of the camera.

8.3.4 Registration Info

This function is disabled by default. In this case, the camera vendor information is hidden when the camera interworks with the server using ONVIF.

8.3.5 ARP Protection

If a device on a LAN forges the IP address of the gateway, communication data between the camera and the gateway will be sent to the forged device. After ARP protection is enabled, the camera sends data to the device whose MAC address corresponds to the gateway IP address.

8.3.6 Watermark

The function is used to prevent videos from being tampered. If a video is recorded on the camera or platform after you enable watermark and add the watermark content, you require a specific tool to view this.

8.3.7 IP Address Filtering

No.	Parameter	Description
1	IP Address Filtering	<ul style="list-style-type: none"> ● On: Filtering Mode is effective. ● Off: Filtering Mode is not effective.
2	Filtering Mode	<ul style="list-style-type: none"> ● Allowlist <ul style="list-style-type: none"> ➤ The IP list is empty: All IP addresses are allowed to access the camera ➤ The IP list is not empty: Only the configured IP address is allowed to access the camera ● Deny Access <ul style="list-style-type: none"> ➤ The IP list is empty: All IP address is allowed to access the camera ➤ The IP list is not empty: The configured IP address is rejected to access the camera

8.3.8 Access Policy

No.	Parameter	Description
1	MAC Authentication	This function is unavailable and can be ignored.
2	Illegal Login Lock	<p>By default, On is selected. When enabled, the camera will be locked if you log in with the wrong password. When disabled, the camera will not be locked if you log in with the wrong password.</p> <ul style="list-style-type: none"> ● Illegal Login Limit: The default is 5. The maximum number of illegal login attempts allowed. The account is locked when the limit is reached and the camera cannot log in Incorrect username or password. Please confirm and re-enter. 4 attempts left. Incorrect username or password. Account has been locked because the number of illegal login attempts has reached the upper limit. ● Lock Time (min): The default is 5. The length of time that the camera is locked. The account has been locked. Please try again in 5 minutes.
3	Session Timeout	<ul style="list-style-type: none"> ● On: The camera will be logged out automatically if no operation is performed within the set time. ➢ Timeout: 5 by default. The camera will be automatically logged out if the idle time of the camera exceeds the set time ● Off: The camera will not be logged out automatically,

8.3.9 Certificate Management

You can create, import, export, delete certificates, and view the properties of a certificate.