

Parking Camera

User Manual

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FCC Information

Please take attention that changes or modification not expressly approved by the party responsible for compliance could void the user's authority to operate the equipment. FCC compliance: This equipment has been tested and found to comply with the limits for a Class A digital device, pursuant to part 15 of the FCC Rules. These limits are designed to provide reasonable protection against harmful interference when the equipment is operated in a commercial environment. This equipment generates, uses, and can radiate radio frequency energy and, if not installed and used in accordance with the instruction manual, may cause harmful interference to radio communications. Operation of this equipment in a residential area is likely to cause harmful interference in which case the user will be required to correct the interference at his own expense.

This equipment complies with FCC radiation exposure limits set forth for an uncontrolled environment. This equipment should be installed and operated with minimum distance 20 cm between the radiator & your body.

FCC Conditions

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

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

EU Conformity Statement

CE

X

X

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

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

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

Industry Canada ICES-003 Compliance

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

Symbol Conventions

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

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

Safety Instruction

Laws and Regulations

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

Power Supply

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

Transportation, Use, and Storage

- To avoid heat accumulation, good ventilation is required for a proper operating environment.
- Store the device in dry, well-ventilated, corrosive-gas-free, no direct sunlight, and no heating source environment.
- Avoid fire, water, and explosive environment when using the device.
- Avoid lightning strike for device installation. Install a lightning arrester if necessary.
- Keep the device away from magnetic interference.
- Avoid device installation on vibratory surfaces or places. Failure to comply with this may cause device damage.
- DO NOT touch the heat dissipation component to avoid burns.
- DO NOT expose the device to extremely hot, cold, or humidity environments. For temperature and humidity requirements, see device specification.

Maintenance

- If smoke, odor, or noise arises from the device, immediately turn off the power, unplug the power cable, and contact the service center.
- If the device cannot work properly, contact the store you purchased it or the nearest service center. DO NOT disassemble or modify the device in any way (For the problems caused by unauthorized modification or maintenance, the company shall not take any responsibility).

• Keep all packaging after unpacking them for future use. In case of any failure occurred, you need to return the device to the factory with the original packaging. Transportation without the original packaging may result in damage to the device and the company shall not take any responsibility.

Network

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

Lens

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

Data

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

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Chapter 1 Introduction

1.1 Introduction

The parking camera (hereinafter referred to as device) is applied in the parking guidance and find my car system to detect whether the parking space is occupied or not and recognize the license plate. It is integrated with the parking space status indicator which can indicates red, green, yellow, blue, cyan, and magenta colors. Red indicates the parking space is occupied, green indicates the parking space is available, and blue indicates the parking space is reserved.

The device can be widely applied in the environment with dark light, such as road, warehouse, underground garage, bar, garden, etc. to provide HD display.

1.2 Key Feature

- Built-in high-performance AI chip, supporting ANPR, detection of the parking space status, and smart analysis of crossing over line, motion detection, etc.
- HD camera, applied in environment with low illumination such as underground garage.
- 3D noise reduction to guarantee clean and exquisite image.
- Smart detection of the parking space status, and smart analysis of crossing over line, motion detection, etc.
- Energy-saving LED with high brightness and low consumption.
- Speed recognition in second accuracy to indicate the parking space status in real time and provide accurate available parking space number.
- Network wiring with easy connection, installation, and maintenance.
- ROI encoding.
- Two RJ45 interfaces, supporting connecting cameras in series, and no power cord is needed.
- Dual-stream.
- Built-in iBeacon module, supporting indoor positioning and navigation with the help of APP. iOS or Android SDK is provided.

Chapter 2 Activation

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

iNote

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

2.1 Default Information

Device default information are as follows.

- Default IP address: 192.0.0.64
- Default port: 8000
- Default user name: admin

2.2 Activate via SADP

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

Before You Start

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

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

Steps

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

ACaution

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

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

	er of online devices: 9							Export	Refresh	Activate the Device
I ID	• Device Type	Security	IPv4 Address	Port	Software Version	IPv4 Gateway	HTTP P	ort Device Ser	ial No.	
001	\$10.4078000-A	Active	10.16.6.20	8000	V1.125mld 1895.	10.16.6.254	80	25.40803	- Inclusion and	
002	05-1018303-A	Active	10.16.6.21	8000	VLDDuild 1888.	10.16.6.254	80	25-04830	A ARTICULARIANCE	_
003	D5-K2HIDF-AL	Active	10.16.6.213	8000	V11.06404 1012-	10.16.6.254	N/A	25-42952	6 ACTORIZED IN	
004	05-19488-0425	Active	10.16.6.179	8000	V1.0.53bald 182.	10.16.6.254	N/A	21-2203	>	The device is not activated.
005	DS UNKER CORNS	Active	10.16.6.127	8000	12.2.06a/or 1007.	10.16.6.254	N/A	25.2868	100000000000000000000000000000000000000	
006	UNKOWN-DEVICE-1176	Active	10.16.6.250	8000	VS-ADMAR 2002.	10.16.6.254	80	20143339	COMPRESSOR'S	
	007	%-2CD	2025PWD	4	Inactiv	ve		192.168	.1.64	
009	D5-185389-04(H)(D)W	Act Se	lect in	activ	ve devid	e ^{10.16.6.254}	80	11-1712	a sectored to	You can modify the network parameters after the device activation.
										Activate Now
						Inpu	t ar	nd co	nfirm	New Ressword:
										Strong
										Confirm Password:
						pass	wo	ra.		Enable Hik-Connect

Status of the device becomes Active after successful activation.

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

2.3 Activate via Web Browser

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

Before You Start

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

Steps

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

Caution

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

4. Click **OK** to complete activation.

5. Go to the network settings interface to modify IP address of the device.

Chapter 3 Login

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

Before You Start

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

Steps

- 1. Open the web browser, and enter the IP address of the device to enter the login interface.
- 2. Enter User Name and Password.
- 3. Click Login.
- 4. Download and install appropriate plug-in for your web browser. Follow the installation prompts to install the plug-in.
- 5. Reopen the web browser after the installation of the plug-in and repeat steps 1 to 3 to login.
- 6. Optional: Click **Logout** on the upper right corner of the interface to log out of the device.

Chapter 4 Capture Configuration

4.1 Set Capture Parameters

4.1.1 Set Vehicle Feature Parameters

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

Steps

1. Go to Configuration \rightarrow Device Configuration \rightarrow Capture Parameters \rightarrow Vehicle Feature.



Figure 4-1 Set Vehicle Feature Parameters

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

4.1.2 Set Image Encoding Parameters

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

Steps

1. Go to Configuration \rightarrow Device Configuration \rightarrow Encoding and Storage \rightarrow Image Encoding.

Capture Resolution	1920*1200	~
JPEG Picture Size	512	

Figure 4-2 Set Image Encoding Parameters

- 2. Select Capture Resolution.
- 3. Enter JPEG Picture Size.
- 4. Click Save.

4.1.3 Set Capture Overlay

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

Steps

- 1. Go to Configuration \rightarrow Device Configuration \rightarrow Text Overlay \rightarrow Single Picture Overlay.
- 2. Check Capture Picture Overlay.

Capture Pictu	ire Overlay		
12 42-192-2015 Minn	1 - 12:19 0 00 00 0 00 00 0 000 000 0 000 000 0 000 000 0 000 000 0 000 000 0 000 000	Percentage Font Size Foreground Color Background Color © Overlay on the Pio Overlay Above the Overlay Below the Overlay Below the Overlay Plate Close (Single Captured Pi	Picture Picture eroizing ee-up
Captu	ire Test		
WHint: Test the fur	nction of triggering the camera to capture.		
Overlay Informat	tion List Select All		
Location:	Device No:	Parking Space No.:	Capture Time:
Plate No:	Vehicle Color:	Vehicle Type:	Vehicle Brand:
Туре	Overlay Information	Overlay Position Space	E Line Break Characters

Figure 4-3 Set Capture Overlay

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

Percentage

It is the percentage that the overlaid information occupies on the picture.

Overlay Number Zeroizing

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

Overlay Plate Close-up

Check it, and a license plate close-up picture will be overlaid on the upper left corner of the captured picture.

4. Select the overlay information from the list.

iNote

The overlay information may vary with different models. The actual device prevails.

5. Set the overlay information.

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

6. Click Save.

4.2 View Real-Time Picture

You can view the real-time captured pictures and information of the captured vehicles.

Steps

- 1. Go to Live View \rightarrow Live Traffic Statistics.
- 2. Select the captured picture from the picture list, and you can view the capture scene picture and the captured license plate picture.

2					22015 1				
	Capture	Continuous	Capture V	Armed.	Lev	vel 1 A 🗸 Me	easuring I Closing m	Camera 01 e: Enable Rule Disable Rul O	pen Folder
Picture		Continuous (Capture V	Armed.	Lev	vel 1 A 🗸 Me		Camera 01	pen Folder
		Continuous (Lane No.	Capture V	Armed.	Lev	rel 1 A V Me		Camera 01 e: Enable Rule Disable Rule Op Directory	pen Folder
Picture	e List			1.5			easuring I Closing m		pen Folder
Picture No.	e List	Lane No.		1.5			easuring I Closing m Vehicle No.		pen Folder
Picture No. 9	e List	Lane No.		1.5			vehicle No.		pen Folder
Picture No. 9 8 7	e List	Lane No. 1 1 1		1.5			Vehicle No. 59 58 57		pen Folder
Picture No. 9 8 7 6	e List	Lane No. 1 1 1 1 1 1 1		1.5			Vehicle No. 59 58 57 58		pen Folder
Picture No. 9 8 7	e List	Lane No. 1 1 1		1.5			Vehicle No. 59 58 57		pen Folder
Picture No. 9 8 7 6 5	e List	Lane No. 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1		1.5			Vehicle No. 59 58 57 58		pen Folder

Figure 4-4 Real-Time Picture

- 3. You can do the following operations on this interface.
 - Select the arming mode. Level 1 Arming can only connect one client or web. The uploaded pictures will not be stored in the storage card. The pictures in the storage card will be uploaded to the level 1 arming. Level 2 Arming can connect three clients or webs. The pictures will be uploaded to the client/web, and stored in the storage card. Disarming is to cancel the alarm status or real-time picture.
 - Click Measuring license plate to measure the license plate pixel. After the measurement, click
 Close measurement.
 - Click **Enable Rule** to enable rule when measuring the license plate. After the measurement, click **Disable Rule**.
 - Click Capture to enable manual capture. The captured pictures will be saved in the set local path. Or you can click Open Folder to view the pictures.
 - Click on the right of Continuous Capture to set the continuous capture parameters. After the configuration, click Continuous Capture to capture pictures.

Capture Times

Up to five times are supported.

Continuous Capture Interval

Up to four intervals are supported. You can set the time of each interval.

Chapter 5 Parking Space Detection

5.1 Set Detection Rules

To detect the parking spaces, you should enable the smart analysis and set the parameters of parking spaces.

Steps

```
1. Go to Configuration \rightarrow Device Configuration \rightarrow Smart Analysis \rightarrow Analytics Parameters
```

Camera Recognized Parking Space(s Configuration Type Parking Space 1 Parking 5	Manual Configuration
Parking Space No. Special Parking Space	1 Oyes @No
4	Area 2 2 2 7 Cater or

Figure 5-1 Smart Analysis

- 2. Optional: Select **Camera** if the device supports dual lens.
- 3. Select the number of Recognized Parking Space(s).

iNote

The number may vary with different models.

According to the number of spaces you set, the quadrilateral(s) of the parking space area(s) will appear in the image.

- 4. Click the tab of the parking space No. to set the parameters.
 - 1) Enter Parking Space No.
 - 2) Click Yes if the parking space is a special parking space.
- 5. Adjust the parking space areas.
 - 1) Select a quadrilateral, and drag the vertices of the quadrilateral to adjust its shape, or drag the quadrilateral to adjust the position.
 - 2) Repeat the step above to adjust other areas.
- 6. Click Save.

5.2 Set Parking Space Indicator

The indicator indicates the parking space status. Different colors stand for different status. You can set the indicator colors and flashing status for different parking space status.

Steps

1. Go to Configuration \rightarrow Device Configuration \rightarrow Parking Space Indicator \rightarrow Parking Space Indicator.

Indicator Control Mode	Internal & Exte	rnal Indicator 🗸 🗸	
Parking Space(s)	3	~	
Parking Space 1 Parking	Space 2 Par	king Space 3	
Indicator Source	Internal Inc	dicator	~
Parking Space Status	Enable	Indicator Flicker	Indicator Color
Unoccupied	Yes 🗸	No 🗸	Green 🗸
Occupied	Yes 🗸	No 🗸	Red 🗸
Over Line	Yes 🗸	No 🗸	Yellov V
Special Parking Space	Yes 🗸	No 🗸	Blue 🗸
Alternate Indicator Control F	Parameters		
Enable			
IP Address	0.0.0.0		

Figure 5-2 Set Parking Space Indicator

2. Select Indicator Control Mode.

Internal Indicator

The parking space status is informed via the internal indicator of the device.

External Indicator

The parking space status is informed via the external indicator connected to the device. After the connection, power up the device and the external indicator will start the self-test by indicating red, green, and blue respectively.

iNote

If the self-test fails, check the cable connection.

Internal & External Indicator

The internal and external indicators work at the same time. You can respectively set the indicator to inform the status of each parking space.

3. Set the indicator parameters for different parking space status.

1) Optional: Select Indicator Source if you have selected Internal & External Indicator for Indicator Control Mode.

2) Enable or disable the indication for different parking space status.

Unoccupied

The parking space is free.

Occupied

The parking space is occupied by a vehicle.

iNote

If you select **Internal Indicator** or **External Indicator**, occupied status means all the detected parking spaces are occupied, and unoccupied status means not all the detected parking spaces are occupied. E.g., three parking spaces are detected. When the three spaces are all occupied, the indicator will display the color you set for the occupied status. When two spaces are occupied and one space is unoccupied, the indicator remains the color you set for the unoccupied status.

Over Line

A vehicle occupied two parking spaces.

Special Parking Space

The parking space is specified to a certain vehicle.

- 3) Select Indicator Flicker and Indicator Color for different parking space status.
- 4. Optional: If there are symmetric parking spaces on both sides, and the distance between the device to the monitored parking space lines is too far, you can enable alternate indicator control and set the parameters.

1) Check Enable of Alternate Indicator Control Parameters.

2) Enter **IP Address** of the device on the opposite parking space.

The current device can control the indicator of the device on the opposite parking space, and vice versa.

5. Click **Save**.

iNote

For the detailed application of the different indicator control modes, refer to "Typical Application" for details.

5.3 View Parking Space Status

You can view the occupancy status, license plate number, indicator color, etc. of the detected parking spaces.

Steps

- 1. Go to Configuration \rightarrow Device Configuration \rightarrow Parking Space Indicator \rightarrow Parking Space Status.
- 2. View the parking space status.

Parking Space No.	Occupancy Status	Plate No.	Indicator Flickering Status	Indicator Color	Vehicle Color
1	Occupied	IA757SJ	No	Red	(dark)other
2	Occupied	A1371N	No	Red	(dark)other
3	Occupied	TE0F909	No	Red	(dark)other

Figure 5-3 Parking Space Status

5.4 Typical Application

In this section, the typical applications of the internal indicator control mode, external indicator control mode, alternate indicator control mode, and special parking space will be illustrated.

5.4.1 Internal/External Indicator Application

_____ Note

Here we take example of the scene in which a device monitors three parking spaces.

In internal/external indicator application, the indicator displays the color of occupied status when the three spaces are all occupied. The indicator displays the color of unoccupied status when any of the spaces is free. The indicator displays the color of over line when a parked vehicle occupies two spaces.

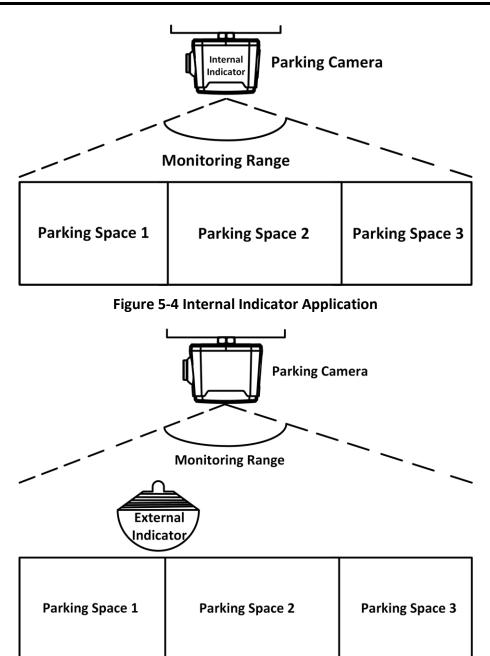


Figure 5-5 External Indicator Application

5.4.2 Internal and External Indicator Application

iNote

Here we take example of the scene in which a device monitors three parking spaces.

In internal and external indicator application, the internal and external indicators work at the same time. All the indicators display the set colors for different parking space status. E.g., the parking camera A controls the internal indicator B, the external indicator 2 of parking camera A,

and the external indicator 2 of parking camera B, and detects the status of the parking spaces B1 to B3. The parking camera B controls the internal indicator A, the external indicator 1 of parking camera A, and the external indicator 1 of parking camera B, and detects the status of the parking spaces A1 to A3, as shown below. After the settings, the external indicator 2 of parking camera A will display the different status of parking space B1, the internal indicator B will display the different status of parking space B2, and the external indicator 2 of parking camera A will display the different status of parking space B3. The external indicator 1 of parking camera A will display the different status of parking space A1, the internal indicator A will display the different status of parking space A1, the internal indicator A will display the different status of parking space A3.

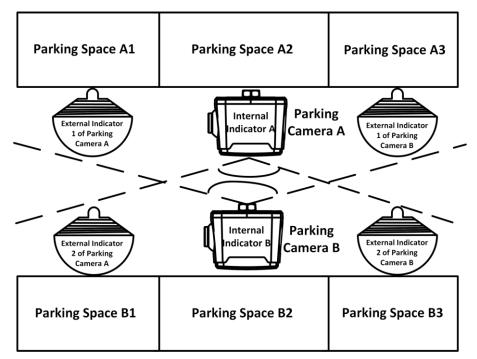


Figure 5-6 Internal and External Indicator Application

5.4.3 Alternate Indicator Control Application

iNote

Here we take example of the scene in which two devices monitor six parking spaces.

The alternate indicator control is applicable to the parking lot where there are symmetric parking spaces on both sides, and the distance between the device to the monitored parking space lines is too far.

E.g., the parking camera A controls the indicator B and detects the status of the parking spaces B1 to B3, while the parking camera B controls the indicator A and detects the status of the parking spaces A1 to A3, as shown below. After the settings, the indicator A/B will display the color of occupied status when the parking spaces A1 to A3/B1 to B3 are all occupied. The indicator A/B will

display the color of unoccupied status when any of the three spaces is free. The indicator A/B will display the color of over line when a parked vehicle occupies two spaces.

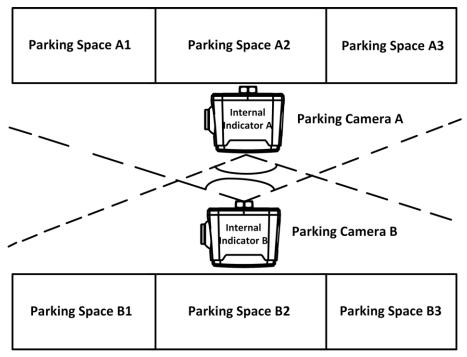


Figure 5-7 Alternate Indicator Control Application

5.4.4 Special Parking Space Application

iNote

Here we take example of the scene in which a device monitors three parking spaces.

E.g., the parking space 1 is set as a special parking space in the monitoring range, and its status is indicated by the external indicator 1 connected to the device. Then the external indicator 1 will display the set color for the special parking space, and the occupied, unoccupied, or over-line status is invalid for the indicator.

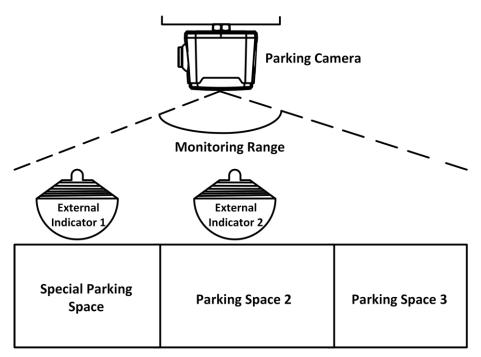


Figure 5-8 Special Parking Space Application

Chapter 6 Live View and Local Configuration

6.1 Live View

6.1.1 Start/Stop Live View

Click 💽 to start live view. Click 🔳 to stop live view.

6.1.2 Select Image Display Mode

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

6.1.3 Select Stream Type

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

Note

The supported stream types vary with different models. The actual device prevails.

6.1.4 Switch Lens

For the dual-lens camera, select Camera 1 Camera 2 to switch the lens.

6.1.5 Capture Picture Manually

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

Steps

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

6.1.6 Record Manually

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

Steps

- 1. Click 🗾 to start live view.
- 2. Click 阃 to start recording.
- 3. Click 📠 to stop recording.
- 4. Optional: Click **Configuration** \rightarrow **Local Configuration** to view the saving path of record files.

6.1.7 Enable Digital Zoom

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

Steps

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

The area will be zoomed in.

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

6.2 Local Configuration

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

Live View Parameters				
Protocol Type	● TCP			
Live View Performance	 Real-time 	O Balanced	 Fluent 	
Rules	C Enable	Disable		
Record File Settings				
Record File Size	○ 256M	512M	○ 1G	
Save record files to	D:\			Browse
Picture Settings				
Save snapshots in live view to	D:\			Browse
Save downloaded picture to	D:\			Browse
Save captured picture to	D:\			Browse



Protocol Type

Select the network transmission protocol according to the actual needs.

ТСР

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

UDP

Provides real-time audio and video streams.

Live View Performance

Real-Time

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

Balanced

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

Fluent

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

Rules

If you enable rules, the colored rectangles will display on the live view image when the motion detection is triggered.

Record File Size

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

Save record files to

Set the saving path for the manually recorded video files.

Save snapshots in live view to

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

Save downloaded picture to

Set the saving path for the downloaded pictures.

Save captured picture to

Set the saving path for the captured pictures in Live View \rightarrow Live Traffic Statistics.

Chapter 7 Storage

7.1 Set FTP

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

Before You Start

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

Steps

1 Go to Configuration	→ Dovico Confi	guration -> Er	acading and St	
1. Go to Configuration	- Device conii	guration 7 cr	icouing and St	orage 7 FIP.

Upload Additi	onal Information to FTP			
Enable FTP	Enable One	~		
FTP1				
Server Address	0.0.0.0	Directory Structure	Save in Roo	ot Dire 🗸
Port	21	Parent Directory	None	\checkmark
User Name		Level 2 Directory	None	~
Password		Level 3 Directory	None	\sim
Confirm Passwor	d	Level 4 Directory	None	~

Figure 7-1 Set FTP

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

iNote

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

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

7.2 Set Cloud Storage

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

Before You Start

- Arrange the cloud storage server.
- You have enabled level 1 arm in Live View \rightarrow Live Traffic Statistics.

Steps

1. Go to Configuration \rightarrow Device Configuration \rightarrow Encoding and Storage \rightarrow Cloud Storage.

C Enable	
Server IP Address	0.0.0.0
Port No.	6001
User Name	admin
Password	•••••
Cloud Storage ID	1
Violation Cloud Storage ID	1

Figure 7-2 Set Cloud Storage

- 2. Check Enable.
- 3. Set the server parameters.
 - 1) Enter Server IP Address and Port No..
 - 2) Enter User Name and Password.
 - 3) Enter the ID according to the storage area No. of the server.
- 4. Click Save.

7.3 Set Listening Host

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

Before You Start

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

Steps

1. Go to Configuration \rightarrow Device Configuration \rightarrow System Configuration \rightarrow TCP/IP.

ANPR IP Address:	0.0.0.0	
ANPR Port:	80	
Listening Host IP:	0.0.0.0	
Listening Host Port No.:	7200	
Enable Uploading Picture		

Figure 7-3 Set Listening Host

- 2. Set **ANPR IP Address/Domain** and **ANPR Port** if you need to upload the alarm information.
- 3. Set Listening Host IP and Listening Host Port No., and check Enable Uploading Picture while Listening if you need to upload pictures.
- 4. Click Save.

Chapter 8 Encoding and Display

8.1 Set Video Encoding Parameters

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

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

Steps

1. Go to Configuration \rightarrow Device Configuration \rightarrow Encoding and Storage \rightarrow Video Encoding.

2. Set the parameters for different streams.

Stream Type

Video stream and video & audio stream are selectable.

Max. Bitrate

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

Frame Rate

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

Resolution

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

SVC

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

Bitrate Type

Select the bitrate type to constant or variable.

Video Quality

When bitrate type is variable, 6 levels of video quality are selectable. The higher the video quality is, the higher requirements of the network bandwidth.

Encoding Complexity

Under the same bitrate, the higher the encoding complexity is, the higher the image quality is, and the higher the requirement of the network bandwidth is.

I Frame Interval

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

Video Encoding

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

3. Click Save.

8.2 Set Image Parameters

You can adjust the image parameters to get clear image.

Steps

Note

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

1. Go to Configuration \rightarrow Device Configuration \rightarrow Image Parameters \rightarrow General Parameters/Configuration \rightarrow Device Configuration \rightarrow Image Parameters \rightarrow Video.

12 dz-92-2015 flow 1=12:19	Saturation Sharpness		50
	White Balance	Auto WB1	~
	WDR Mode	Off	~
	BLC	CLOSE	~
	Lens Type	Manual	\sim
	Brightness Enhanc		50
	Enable Defog		
	Light Compensatio	n on Licence Plate	
2 2 7 Canere 01	Sensitivity		50
Capture Test	🗌 Enable Gamma Co	orrection	
Hint: Test the function of triggering the camera to capture.			

Figure 8-1 Set General Parameters

	Brightness Contrast Shutter Speed (µs) Gain	
00 00 00 00	3D DNR 3D DNR Level	Normal Mode V
227 Carena 01	2D DNR Level	50
Capture Test		

Figure 8-2 Set Video Image Parameters

2. Adjust the parameters.

Saturation

It refers to the colorfulness of the image color.

Sharpness

It refers to the edge contrast of the image.

White Balance

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

WDR Mode

Wide Dynamic Range (WDR) can be used when there is a high contrast of the bright area and the dark area of the scene.

Select **WDR Switch** and set corresponding parameters according to your needs.

On

Set **WDR Level**. The higher the level is, the higher the WDR strength is.

Time

Enable WDR according to the time.

Brightness

Set Light Threshold. When the brightness reaches the threshold, WDR will be enabled.

BLC

If you focus on an object against strong backlight, the object will be too dark to be seen clearly. BLC compensates light to the object in the front to make it clear.

Brightness Enhancement at Night

The scene brightness will be enhanced at night automatically.

Enable Defog

Enable defog to get a clear image in foggy days.

Light Compensation on License Plate

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

Enable Gamma Correction

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

Brightness

It refers to the max. brightness of the image.

Contrast

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

Shutter Speed

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

Gain

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

3D DNR

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

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

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

too high, trailing may appear.

2D DNR

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

8.3 Set ROI

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

Before You Start

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

Steps

1. Go to Configuration \rightarrow Device Configuration \rightarrow Encoding and Storage \rightarrow ROI.



Figure 8-3 Set ROI

2. Select Stream Type.

3. Set ROI region.

1) Check Enable.

- 2) Select Area Code.
- 3) Click Draw Area.
- 4) Drag the mouse on the live view image to draw the fixed area.
- 5) Select the fixed area that needs to be adjusted and drag the mouse to adjust its position.
- 6) Click Stop Drawing.
- 4. Enter Area Name and select ROI Level.

iNote

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

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

8.4 Set OSD

You can customize OSD information on the live view.

Steps

1. Go to Configuration \rightarrow Device Configuration \rightarrow Text Overlay \rightarrow Video.

17 42-02-2015 0n 10 12:19	OSD Properties:	Not Transparent and Not F 🗸
	OSD Font Size	auto 🗸
	Alignment	Custom 🗸
	Camera Name	Camera 01
	 Display Date 	
20 00 00 U	Time Format	24 Hours 🗸
	Date Format	MM-DD-YYYY V
	Display Week	
And And And	Display Item1:	
2 2 7 Canera 01	Display Item2:	
	Display Item3:	
	Display Item4:	
	Display Item5:	
	Display Item6:	

Figure 8-4 Set OSD

- 2. Set OSD property, font size, alignment, etc.
- 3. Set the display content.
 - 1) Check Camera Name and enter the name.
 - 2) Check **Display Date**, and set the time and date format.
 - 3) Check Display Week.
- 4. Optional: Check the display item(s) and enter the information in the text field(s).

5. Drag the red frames on the live view image to adjust the OSD positions.

6. Click Save.

Result

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

Chapter 9 Network Configuration

9.1 Set IP Address

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

Go to **Configuration** \rightarrow **Device Configuration** \rightarrow **System Configuration** \rightarrow **TCP/IP** for parameter settings.

NIC Parameters	
NIC Type	10M/100M/1000M Self-adaptive V
Auto-Obtain	
IPv4 Address	10.10.113.152
IPv4 Subnet Mask	255.255.255.0
IPv4 Default Gateway	10.10.113.254
IPv6 Mode	Auto-Obtain 🗸
IPv6 Address	
IPv6 Default Gateway	
IPv6 Subnet Mask	
MAC Address	68:ed:bc:11:ba:0e
MTU	1500
Multicast Address	

Figure 9-1 Set IP Address

NIC Type

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

IPv4

Two IPv4 modes are available.

Auto-Obtain

The device automatically gets the IPv4 parameters from the network if you check **Auto-Obtain**. The device IP address is changed after enabling the function. You can use SADP to get the device IP address.

Note

The network that the device is connected to should support auto-obtain.

Manual

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

IPv6

Three IPv6 modes are available.

Route Announcement

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

iNote

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

Auto-Obtain

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

Manual

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

MTU

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

Multicast Address

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

DNS

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

9.2 Connect to EHome Platform

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

Before You Start

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

Steps

1. Go to Configuration \rightarrow Device Configuration \rightarrow System Configuration \rightarrow EHOME.

Enable Protocol		
Address Type	IP	\sim
Server IP	127.0.0.1	
Server Port	7660	
Device ID	123456789	
Registration Status	offLine	\checkmark

Figure 9-2 Connect to EHome Platform

- 2. Check Enable Protocol.
- 3. Select Address Type.

Domain Name

When the server is in extranet, and the IP address is dynamic, you can select it.

IP

When the server IP address is static, you can select it.

4. Enter the parameters below.

Server IP

Enter the static IP address of EHome platform.

Server Port

The default value is 7660.

Device ID

The ID of the device registered on the EHome platform. If you leave it empty, the device will be logged in to the platform with serial No.

5. Click Save.

9.3 Set DDNS

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

Before You Start

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

Steps

1. Go to Configuration \rightarrow Device Configuration \rightarrow System Configuration \rightarrow DDNS.

Enable DDNS	
DDNS Type	IPServer V
Server Address	
Device Domain Name	
Port	0
User Name	
Password	
Confirm Password	

Figure 9-3 Set DDNS

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

By Browsers	Enter the domain name in the browser address bar to access the device.
By Client Software	Add domain name to the client software. Refer to the client software manual for specific adding methods.

9.4 Set Port

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

Caution

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

Go to **Configuration** \rightarrow **Device Configuration** \rightarrow **System Configuration** \rightarrow **Port** for port settings.

HTTP Port	80
RTSP Port	554
SDK Port	8000
SSH Port	

Figure 9-4 Set Port

HTTP Port

It refers to the port through which the browser accesses the device. For example, when the **HTTP Port** is modified to 81, you need to enter *http://192.168.1.64:81* in the browser for login.

RTSP Port

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

SDK Port

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

9.5 Set Bluetooth

You can enable Bluetooth to upload the parking space information to the platform.

Steps

iNote

Some models do not support Bluetooth. The actual device prevails.

1. Go to Configuration \rightarrow Device Configuration \rightarrow Bluetooth.

Enable Bluetooth	
Broadcast Time Interval(ms)	100
Rated Power(db)	-61
Transmitted Power	Strong V
Parking Lot ID	123
Parking Lot Floor Amount	2
Parking Space Amount on Each Floo	or 1

Figure 9-5 Set Bluetooth

2. Check Enable Bluetooth.

3. Set the Bluetooth parameters according to the platform Bluetooth communication standard.

Broadcast Time Interval

It refers to the frequency of the sent broadcast frames of the Bluetooth module.

Rated Power

It refers to the signal strength received within 1 m range of the device.

Transmitted Power

The higher the transmitted power is, the further the receiving distance is.

4. Set **Parking Lot ID**, **Parking Lot Floor Amount**, etc. according to the actual parking lot environment.

iNote

Enter the hex characters (0 to F) according to the corresponding standard of Bluetooth for the parking lot ID.

Chapter 10 Serial Port Configuration

10.1 Set RS-485

Set RS-485 parameters if the device has been connected to a vehicle detector or other RS-485 devices.

Before You Start

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

Steps

1. Go to Configuration \rightarrow Device Configuration \rightarrow System Configuration \rightarrow Serial Port Parameters.

RS-485 Parameters						
RS-485 No.	Baud Rate	Data Bit	Stop Bit	Parity	Flow Ctrl	Work Mode

Figure 10-1 Set RS-485

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

iNote

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

3. Select Work Mode.

Application Mode Trigger

Select it if the vehicle detector has been connected via the RS-485 serial port.

Transparent Transmission

Select it, and the network command can be transmitted to RS-485 control command via the RS-485 serial port.

4. Click Save.

10.2 Set RS-232

Set RS-232 parameters if you need to debug the device via RS-232 serial port, or peripheral devices have been connected.

Before You Start

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

Steps

- 1. Go to Configuration \rightarrow Device Configuration \rightarrow System Configuration \rightarrow Serial Port Parameters.
- 2. Click Advanced Settings.

RS-232 Parameters		
Baud Rate	115200 bps	\checkmark
Data Bit	8	~
Stop Bit	1	~
Parity		~
Flow Ctrl		~
Working Mode	Console	~
Advanced Settings		

Figure 10-2 Set RS-232

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

iNote

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

4. Select Working Mode.

Console

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

Transparent Channel

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

Narrowband

Reserved.

5. Click Save.

Chapter 11 Alarm Configuration

This section explains how to set the device to respond to alarm events, including motion detection and exceptions. These events can trigger the linkage methods, such as notifying the security center.

11.1 Set Motion Detection

Motion detection detects the moving objects in the set security area, and a series of actions can be taken when the alarm is triggered.

Steps

- 1. Go to Configuration \rightarrow Device Configuration \rightarrow Exception \rightarrow Motion Detection.
- 2. Check Enable Motion Detection and Enable Dynamic Analysis.
- 3. Set the motion detection area.
 - 1) Click Draw Area.
 - 2) Drag the mouse on the live view to draw a motion detection area.
 - 3) Click **Stop Drawing** to complete the current drawing.
 - 4) Optional: Repeat the steps to draw more areas.
 - 5) Optional: Click **Clear All** to clear all the areas.
 - 6) Adjust **Sensitivity** of the motion detection.

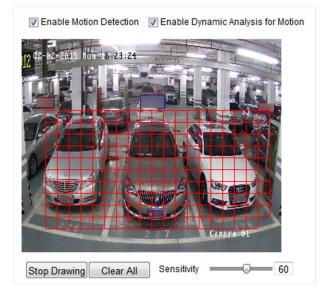


Figure 11-1 Set Motion Detection

- 4. Set the arming schedule for the motion detection.
 - 1) Click Edit.
 - 2) Select a day to set the arming schedule.
 - 3) Set the start time and end time of the periods.

4) Optional: If you want to copy the arming schedule to other days, check the day(s) and click **Copy**.

5) Click OK.

iNote

The time of each period cannot be overlapped. Up to four periods can be set for each day.

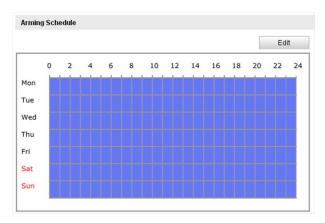


Figure 11-2 Set Arming Schedule

- 5. Check **Notify Surveillance Center** to send an exception or alarm signal to the security center when the motion detection occurs.
- 6. Click Save.

11.2 Set Exception Alarm

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

Steps

```
1. Go to Configuration \rightarrow Device Configuration \rightarrow Exception \rightarrow Exception.
```

Enable	Exception Type	Notify Surveillance Center	Trigger Alarm Output	Alarm Dwell Time (s)
	Network Disconnected			
	IP Address Conflicted			

Figure 11-3 Set Exception Alarm

- 2. Check the exception type to be alarmed.
- 3. Click Save.

Chapter 12 Safety Management

12.1 Manage User

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

Steps

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

Caution

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

4) Assign remote permission to users based on needs.

User

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

Operator

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

5) Click **OK**.

iNote

The administrator can add up to 31 user accounts.

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

12.2 Enable User Lock

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

Steps

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

Result

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

12.3 Set SSH

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

Steps

- 1. Go to Configuration \rightarrow Device Configuration \rightarrow System Configuration \rightarrow Port.
- 2. Uncheck SSH Port.
- 3. Click Save.

12.4 Set HTTPS

12.4.1 Create and Install Self-signed Certificate

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

Steps

- 1. Go to Configuration \rightarrow Network \rightarrow Advanced Settings \rightarrow HTTPS.
- 2. Select Create Self-signed Certificate.
- 3. Click Create.
- 4. Follow the prompt to enter **Country/Region**, **Hostname/IP**, **Validity**, and other parameters.
- 5. Click **OK**.

Result

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

12.4.2 Install Authorized Certificate

If the demand for external access security is high, you can create and install authorized certificate

via HTTPS protocol to ensure the data transmission security.

Steps

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

Chapter 13 Maintenance

13.1 View Device Information

Basic Information and Algorithms Library Version

Go to **Configuration** \rightarrow **Device Configuration** \rightarrow **System Configuration** \rightarrow **Device Information** to view the basic information and algorithms library version of the device. You can edit **Device Name** and **Device No.** The device No. is used to control the device. It is recommended to reserve the default value.

Device Status

Go to **Configuration** \rightarrow **Device Status** to view the status of the current device and vehicle detector.

13.2 Upgrade

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

Before You Start

Prepare the upgrade file.

Steps

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

iNote

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

Result

The device will reboot automatically after upgrade.

13.3 Reboot

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

Steps

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

13.4 Restore Parameters

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

Steps

- 1. Go to Configuration \rightarrow Device Configuration \rightarrow System Maintenance \rightarrow Default.
- 2. Select the restoration mode.
 - Click **Restore** to restore the parameters except the IP address, subnet mask, gateway, and port No. to the default settings.
 - Click **Restore Factory Settings** to restore all the parameters to the factory settings.
- 3. Click OK.

13.5 Synchronize Time

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

Steps

- 1. Go to Configuration \rightarrow Device Configuration \rightarrow System Configuration \rightarrow Time Settings.
- 2. Select Time Zone.
- 3. Select Synchronization Mode.

NTP Synchronization

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

Manual Synchronization

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

iNote

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

4. Click Save.

13.6 Set DST

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

Steps

- 1. Go to Configuration \rightarrow Device Configuration \rightarrow System Configuration \rightarrow DST.
- 2. Check Enable DST.
- 3. Set Start Time, End Time, and DST Bias.
- 4. Click Save.

13.7 Export Parameters

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

Steps

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

iNote

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

4. Select the saving path, and enter the file name.

5. Click Save.

13.8 Import Configuration File

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

Before You Start

Save the configuration file to the computer.

Steps

Caution

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

- 1. Go to Configuration \rightarrow Device Configuration \rightarrow System Maintenance \rightarrow Import Configuration File.
- 2. Select Importing Method.

Note

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

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

Result

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

13.9 Export Debug File

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

Steps

1. Go to Configuration \rightarrow Device Configuration \rightarrow System Maintenance \rightarrow Export Debug File.

- 2. Click Export Debug.
- 3. Select the saving path, and enter the file name.
- 4. Click Save.

