

AI intelligent IP Camera

User Manual



Preface

Thank you for choosing our product. To better utilize the functions of the software, please read this user manual carefully before use. Without the written permission of the Company, any organization or individual shall not extract or copy part or all of the content of this manual, and shall not spread it in any form. The products described in this manual may contain software that is copyrighted by the Company or possible licensors. No one is allowed to copy, distribute, modify, extract, translate, or otherwise infringe the copyright of the aforementioned software without the permission of relevant right holders. Unless otherwise agreed, the Company does not make any representations or warranties, express or implied, in this manual.

About This Manual

This manual serves as a guide for use. The photos, graphics, charts, and illustrations provided in the manual are for explanatory and illustrative purposes only. Due to product updating, the Company does not guarantee that the actual product is consistent with the data provided, nor does it assume any responsibility for any disputes arising from the discrepancy between the actual technical parameters and the data provided. Any changes to the product will not be notified in advance.

We recommend that you use this manual under the guidance of a professional.

Symbol Convention

A description of the symbols that appear in this document is provided below.

Symbol	Description
	Description symbol: description text. These sections provide supplementary information or explanations about the text.
	Note symbol: note text. These sections notify the user of important operations or measures for avoiding potential injury or property damage. Failure to take precautions may result in accidents, equipment damage, or business interruption.

Writing Convention

To simplify the description, the following conventions are used in this document for commonly used functions, names, flowcharts, etc.

- Unless otherwise specified, "device" in this document refers to "IP Camera"
- To protect personal privacy, personal information such as faces and license plates that appeared in this document has been processed.
- To ensure device safety, information such as the IP address, MAC address, and serial number mentioned in this document has been processed.

Contents

1 Product Introduction	6
1.1 Product Description	6
1.2 Product Features	6
2 Operating Instructions	8
2.1 Network Connection	8
2.1.1 Wired Network Connection	8
2.1.2 Wireless Network Connection	9
2.2 Login and Logout	9
2.2.1 Login	9
2.2.2 Logout	10
2.3 Activate and Configure IP Camera	10
2.3.1 Modify Device IP Address	10
2.3.2 Change Password	11
3 Basic Functions	13
3.1 Preview	13
3.1.1 Preview Icon Description	13
3.1.2 PTZ Control	15
3.2 Notification	17
3.3 Common Event	18
3.3.1 Video Blocking	18
3.4 Alarm Settings	20
3.4.1 Alarm Input	20
3.4.2 Alarm Output	23
4 System Functions	24
4.1 System Configuration	24
4.1.1 Basic Device Information	24
4.1.2 Time Configuration	25
4.1.3 About Device	25
4.2 System Maintenance	26
4.2.1 Upgrade Maintenance	26
4.3 User Management	36

4.4 Storage Configuration	37
4.4.1 Storage Methods	37
4.5 Image Attributes	38
4.6 Encoding Settings	49
4.6.1 Main Stream Settings	49
4.6.2 Substream Settings	51
4.7 Audio Settings	53
4.8 Skin Change	56
5 Smart Functions	57
5.1 Face Capture	57
5.2 Facial Comparison	68
5.3 See-through Kitchen Configuration	73
5.4 Safety Helmet and Reflective Vest Configuration	77
5.5 Electric Bicycle Identification Configuration	81
5.6 Structured Configuration of Pedestrians, Vehicles, and Non-motor Vehicles	85
5.7 Number of People (Traffic) Statistics Configuration	97
5.8 Behavior Analysis	100
5.9 Configuration for Detection of Throwing Objects from Height	109

1 Product Introduction

1.1 Product Description

The AI intelligent IP Camera is a digital surveillance product that integrates various functions such as audio and video acquisition, intelligent encoding, and network transmission. It can be flexibly customized into a Scene-Dependent Device based on the target events that need to be monitored through the fusion of physical multi-spectral sensing technology and a graphic AI structured algorithm. Additionally, the IPC adopts an embedded operating system and a high-performance hardware processing platform and provides high stability and reliability to meet diversified needs across industries.

1.2 Product Features

Basic Functions

The basic functions are essential to all types of IPC, satisfying users' most fundamental requirements.

- Support real-time preview and video playback, with the ability to capture and record during a preview;
- Support target event types settings for user monitoring, with timely notifications for events;
- Support event record query;
- Support common events such as video loss, video masking, abnormal events, alarm inputs, and alarm outputs.

System Functions

The system functions are used to configure the hardware and software parameters of the IPC, ensuring its normal operation.

- Support configuration of system parameters and system maintenance (upgrading, restarting, factory resetting);
- Support configuration of network parameters;
- Support user account management. The system administrator (admin) can manage multiple users, and assign different levels of permissions to the users;
- Support storage configuration (recording plan, snapshot plan, storage configuration). After installing an SD card or configuring network storage devices, users can set recording and snapshot plans, and proceed with recording and snapshot according to the plans;
- Support media parameters settings (image properties, encoding settings, audio settings, and character overlay);
- Support change of skins, icons, and login interfaces.

Smart Functions

The smart function relies on the target events of focus for each scenario and can be used to flexibly customize the IPC through the fusion of physical multi-spectral sensing technology and a graphic AI-structured algorithm.

- Support switching of smart modes. Users can enable corresponding modes based on their needs;
- Support target event types settings for user monitoring, with timely notifications for events;
- Support intelligent events (face capture, facial comparison, vehicle recognition, human recognition, electric bicycle recognition, see-through kitchen, recognition of throwing objects from height, safety helmet and reflective vest recognition, and smoke and fire recognition);
- Support common behavioral events (quick movement, tripwire intrusion, area intrusion).

Description

This manual introduces all types of smart functions of the IPC. The smart functions of the product vary depending on the model. Please refer to the actual technical parameters of the product.

2 Operating Instructions

2.1 Network Connection

After the installation of the IPC, users can set its functions and parameters through a web browser.

Note

If you connect the product to the Internet, you need to bear the risks, including but not limited to the possibility that the product suffers from cyber attacks, hacker attacks, and virus infections. The Company is not responsible for any abnormal function, information leakage, and other problems caused by it, but will provide relevant technical support timely.

Description

Before accessing the IPC via the network, you need to ensure that the camera and client are on the same LAN. Then, use the quick configuration tool (FastTool), to search for and obtain the camera's IP address and access it via the client's web browser by entering the IP address in the network address bar.

2.1.1 Wired Network Connection

There are two methods to connect the wired network: connecting to the devices through a switch (as shown in Figure 2-1).

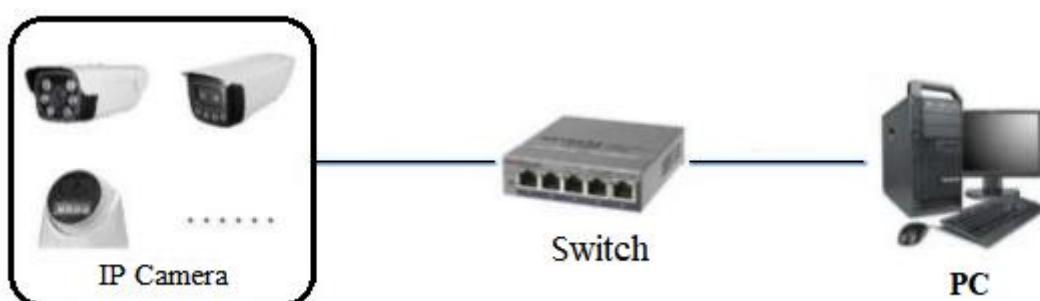


Figure 2-1 Schematic diagram of connecting via a switch

2.1.2 Wireless Network Connection

Some IPCs support wireless network transmission. In a wireless network environment, the connection between the network camera and the computer is shown in Figure 2-2.

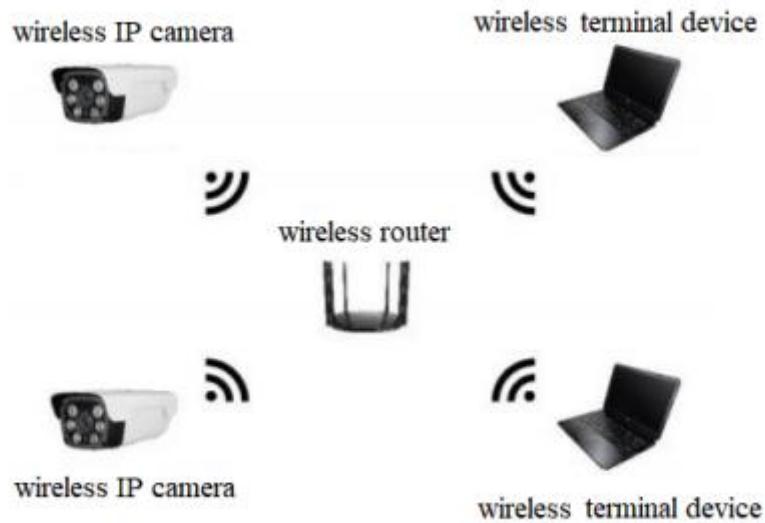


Figure 2-2 Schematic diagram of connecting via wireless network

2.2 Login and Logout

2.2.1 Login



Description

Before accessing the IPC via the network, you need to ensure that the camera and the client are on the same LAN. Then, use the quick configuration tool (FastTool), to search for and obtain the camera's IP address.

Login to the device's WEB interface through a browser. It is recommended to use the Google Chrome browser.

Steps

Step 1: Open the browser, and in the address bar, enter the device's IP address (the default IP address is 192.168.2.100). Press the **Enter** key. The interface is shown in Figure 2-3 below.

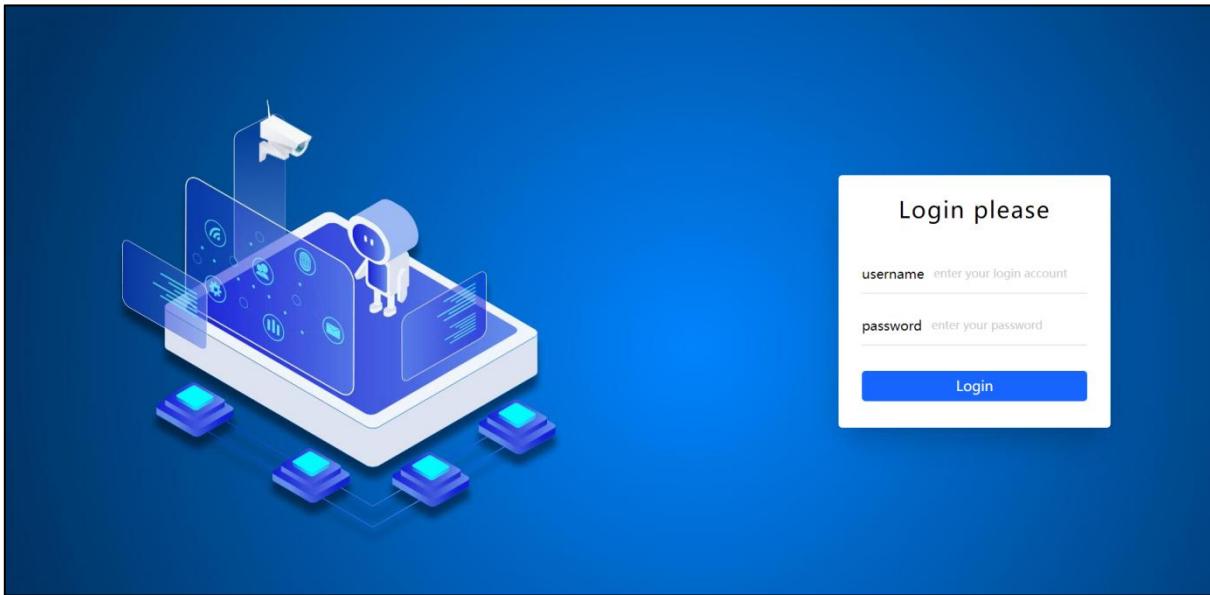


Figure 2-3 Login interface

Step 2: Enter the username and password (the default username and password are admin) and press the **Enter** key or click the **Log in** button.

2.2.2 Logout

On the main interface of the IPC, you can click the  icon at the top right corner to securely log out of the system.

2.3 Activate and Configure IP Camera

2.3.1 Modify Device IP Address

The default IP address of the device is 192.168.2.100, and you need to change it according to the actual network environment.

Steps

Step 1: Log in to the device's WEB Client > **Configuration** > **Network Parameters** > **TCP/IP**. The configuration page is shown in Figure 2-4.

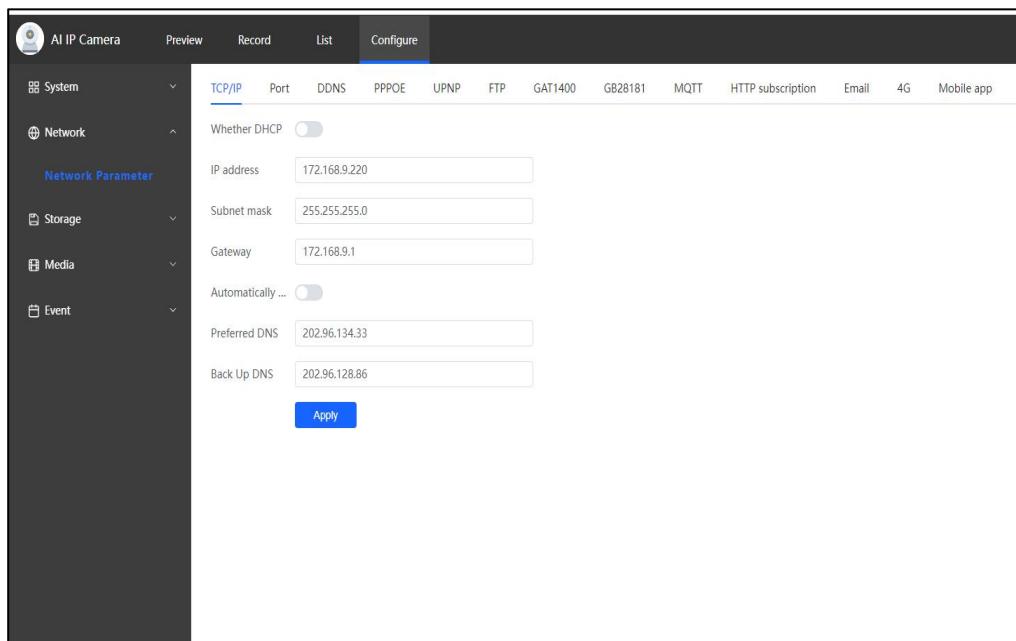


Figure 2-4 TCP/IP configuration page

Step 2: Enter the IP address, subnet mask, gateway, DNS, and other parameters according to the actual network environment.

Step 3: Click the **Save** button.

2.3.2 Change Password



The default username and password of the factory settings are both "admin." For information security of your device, please change the password timely.

Steps

Step 1: Log in to the device's WEB Client > **Configuration** > **User Management**. The configuration page is shown in Figure 2-5.

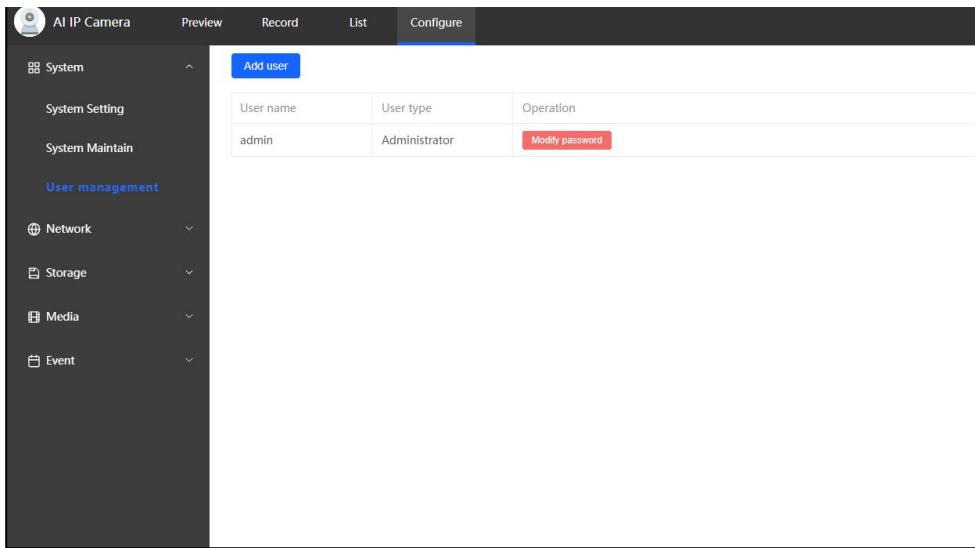


Figure 2-5 User management page

Step 2: Click the **Change Password** button, and the configuration page pops up as shown in Figure 2-6.

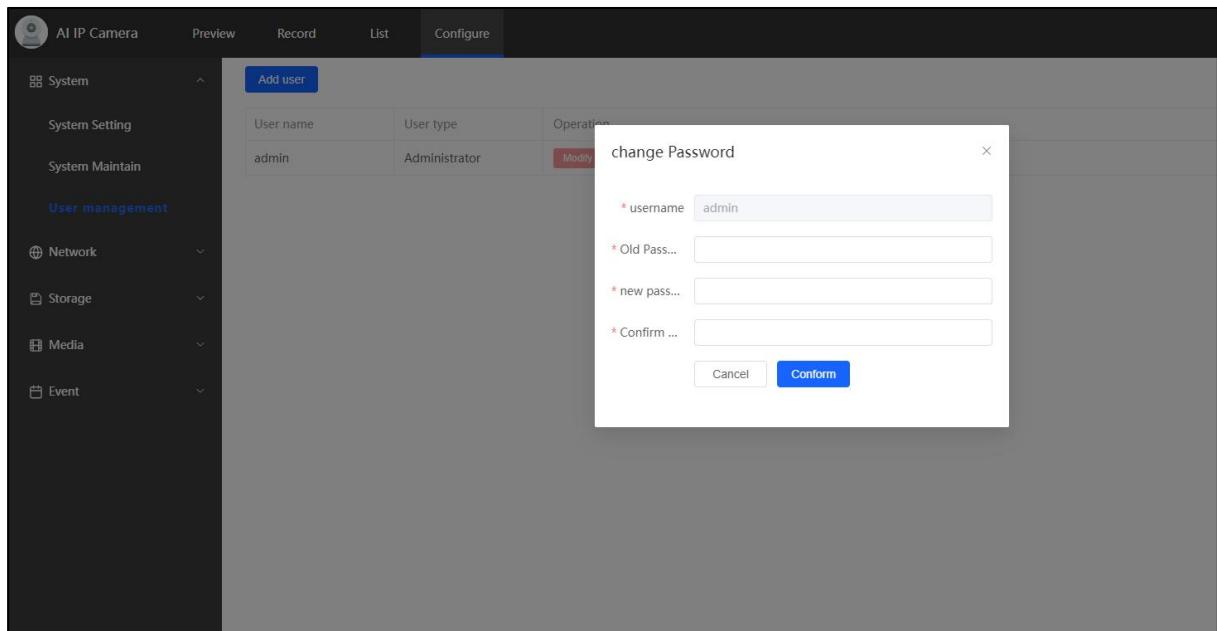


Figure 2-6 Change password

Step 3: Click **Cancel** to return to the user management page without saving the changed password.

Click **Conform** to save the changed password and return to the user management page.

3 Basic Functions

3.1 Preview

The layout of the preview interface may differ for different models of devices. On the main WEB interface, click **Preview** to enter the video preview interface, as shown in Figure 3-1.

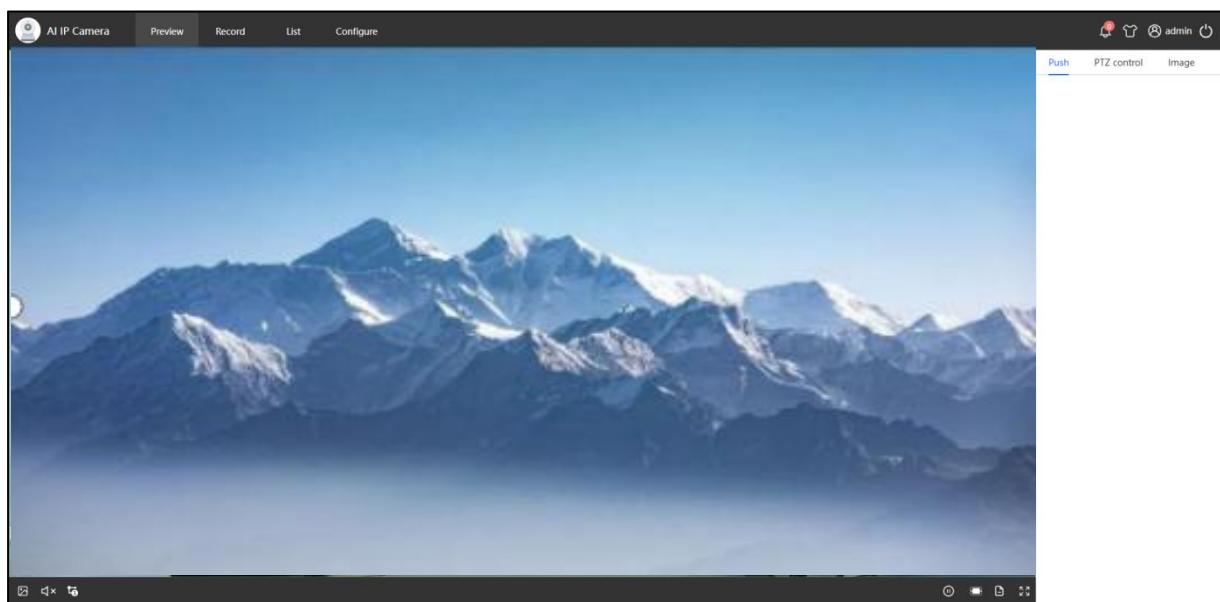


Figure 3-1 Preview interface

3.1.1 Preview Icon Description

(1) Snapshot: Click the button on the lower left corner of the page to take a snapshot and save it locally.

(2) Record: Click the button on the lower left corner of the page to start the video recording. Click it again to stop recording and save the video locally.

(3) Voice intercom: Click the button on the lower left corner of the page to start voice intercom. The button changes to when the function is on.

Click the button again to stop voice intercom, and the button changes to .

(4) Stream selection: Click the  button on the lower left corner of the interface to select different types of streams. The types of stream are as follows:

 represents the main stream, which is a high-definition stream with a larger stream value, a lower image compression ratio, and a higher definition. However, it uses more bandwidth and is suitable for storage and monitoring.

 represents the substream, which is a standard-definition stream with a smaller stream value compared to the main stream. Its image transmission is smoother and it uses less bandwidth. It is a substitute to main stream monitoring when the network bandwidth is limited.

 represents the third stream.

(5) Preview screen enabling and closing: Click the  button on the lower right of the page to enable the preview screen. The button changes to . Click the button again to stop the preview. The button changes to .

(6) Screen size selection: Click the  button on the lower right of the interface to select different screen sizes. The screen sizes are as follows:

 Preview screen displays in a 1:1 ratio;

 Preview screen displays in a 4:3 ratio;

 Preview screen displays in a 16:9 ratio;

 Preview screen displays in a 16:9 ratio.

(7) Display rules: Click the  button on the lower right of the page to display the rules for deployment.

(8) Full screen: Click the  button on the lower right of the page to display in full-screen mode. Press the **Esc** key to exit full-screen mode and return to the preview interface.

3.1.2 PTZ Control

On the bottom right corner of the preview page, click the upward button on to expand the PTZ control page upwards, as shown in Figure 3-2.

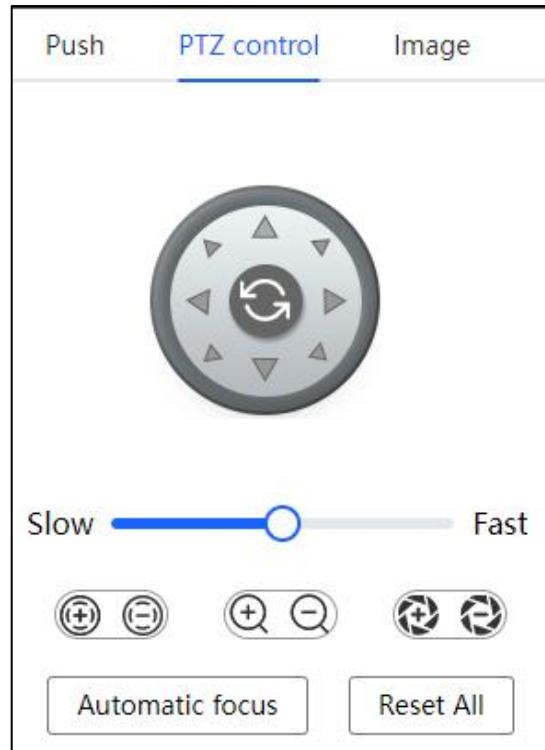


Figure 3-2 PTZ control page

Table 3-1 PTZ control parameters

Button	Description
	<p>Long-press the directional keys to control the PTZ to rotate in eight directions.</p> <p>Click the  button to activate automatic cruising, and the button turns blue.</p> <p>Click again to stop cruising.</p>
<p>Slow </p>	<p>Adjust the rotation speed of the camera.</p>
	<p>Represent Focus+ and Focus-.</p> <p>In manual focus mode, use the Focus+ and Focus- buttons until objects in the scene can be seen clearly.</p>
	<p>Represent Zoom+ and Zoom-.</p>
	<p>Represent Aperture+ and Aperture-.</p> <p>When the monitoring screen is relatively dark, in aperture priority exposure mode or manual mode, you can press and hold the Aperture+ button to increase the aperture or the Aperture- button to decrease the aperture.</p>
<p>Automatic focus</p>	<p>Click the Auto Focus button to automatically adjust the lens imaging clarity.</p>
<p>Reset All</p>	<p>Click the Reset All button to restore the PTZ parameters to their original settings.</p>

Description

The PTZ control function depends on the models. Please refer to the actual device for details.

3.2 Notification

Steps

Step 1: Log in to the device's WEB Client and click the  button in the upper right corner to enter the notification page.

Step 2: After entering the notification page, enter the Start Time and End Time of the event that needs to be queried, as shown in Figure 3-3.

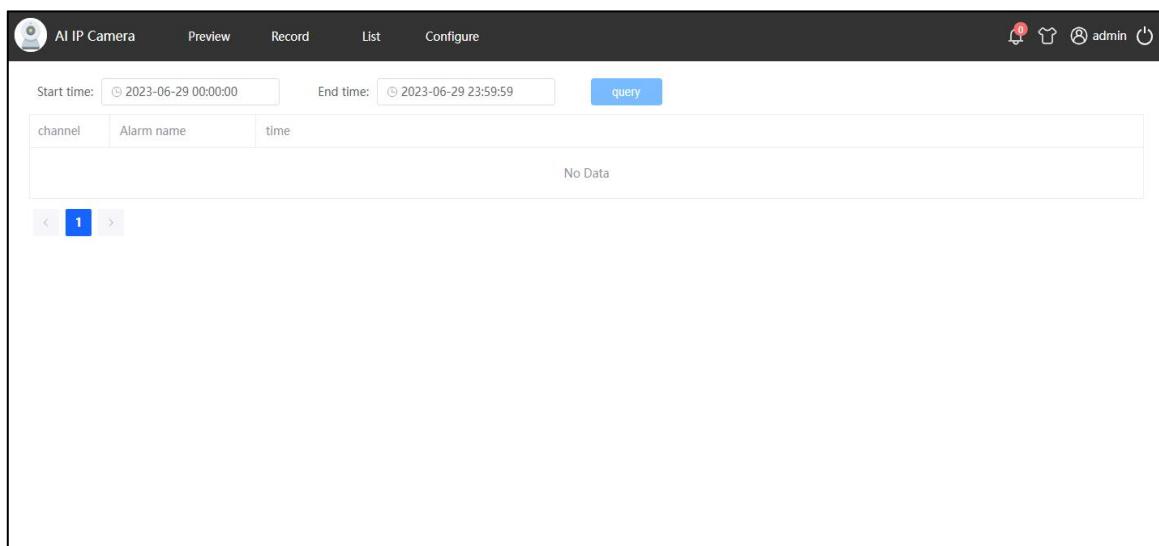


Figure 3-3 Notification page

Step 3: Click the **Query** button.

3.3 Common Event

3.3.1 Video Blocking

Steps

Step 1: Log in to the device's WEB Client, click **Configuration > Event > Common Event > Video Blocking.**

Step 2: Check the **Enable Event** option, as shown in Figure 3-4.

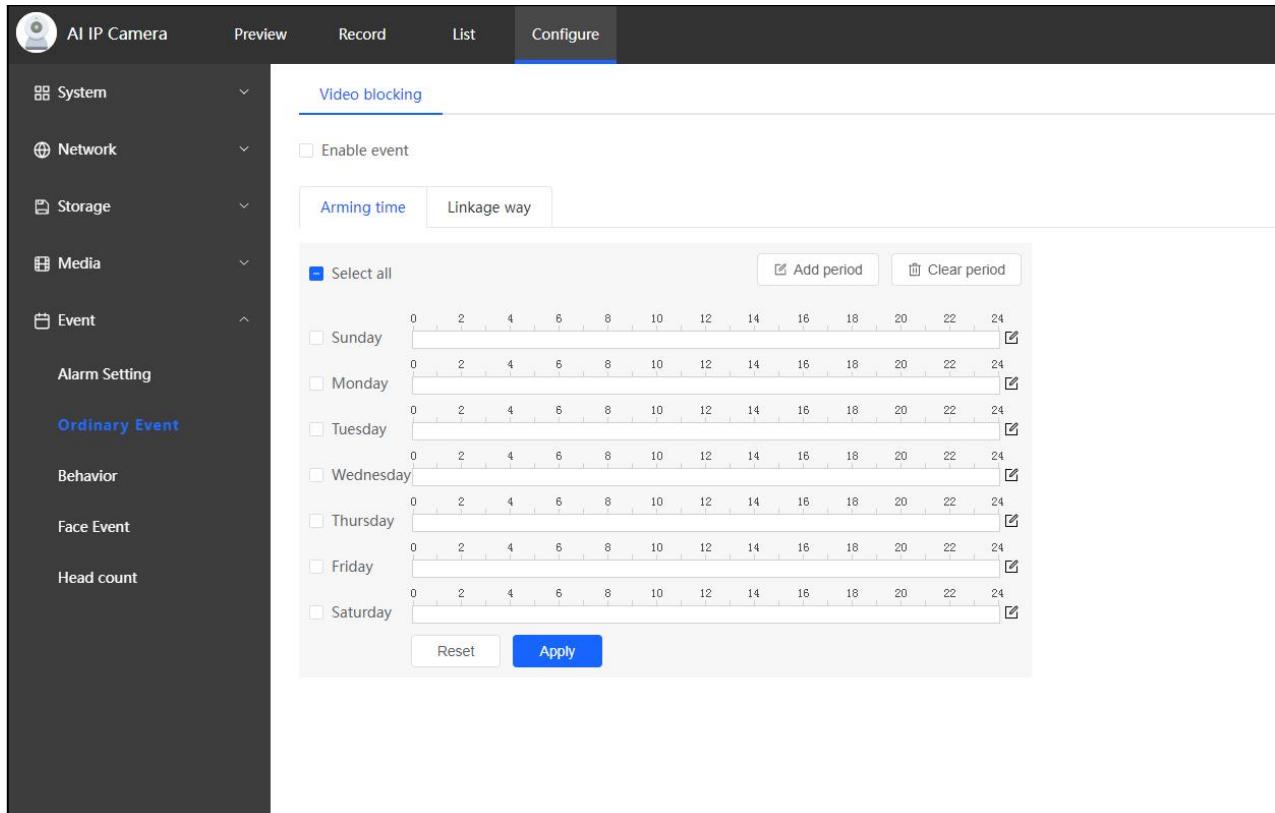


Figure 3-4 Video Blocking page

Step 3: Set time periods for deployment.

Set deployment periods for the events, and the system will only perform the corresponding linkage actions within the set event range.

- (1) Enter **Configuration > Event > Common Event > Privacy Masking**. Click **Add Period** after **Add Time Periods**.
- (2) Click on the selected time period on the left, enter the specific time value within the start time period, and set an accurate start time. You can add multiple time periods. As shown in Figure 3-5.
- (3) Click **Cancel** to discard the set time period and return to the linkage page.
- (4) Click **Confirm** to apply the deployment time period currently set.

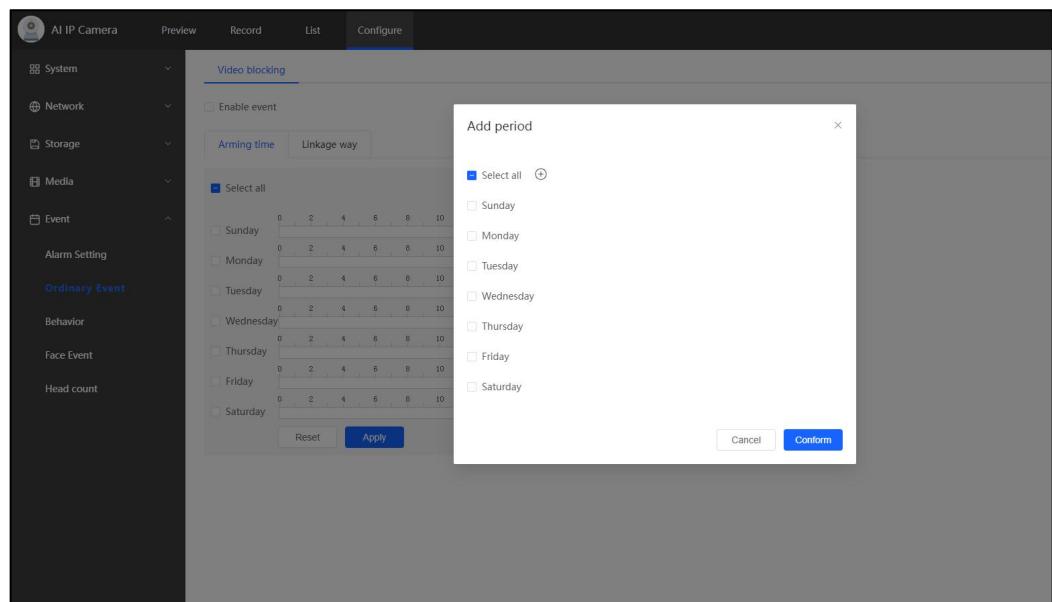


Figure 3-5 The page for adding time periods

Step 4: Set up linkage mode. After an event occurs, the system will generate an alarm linkage according to the user's set mode.

Linkage modes include Screen Prompt, Email Notification, and Alarm Buzzer as shown in Figure 3-6.

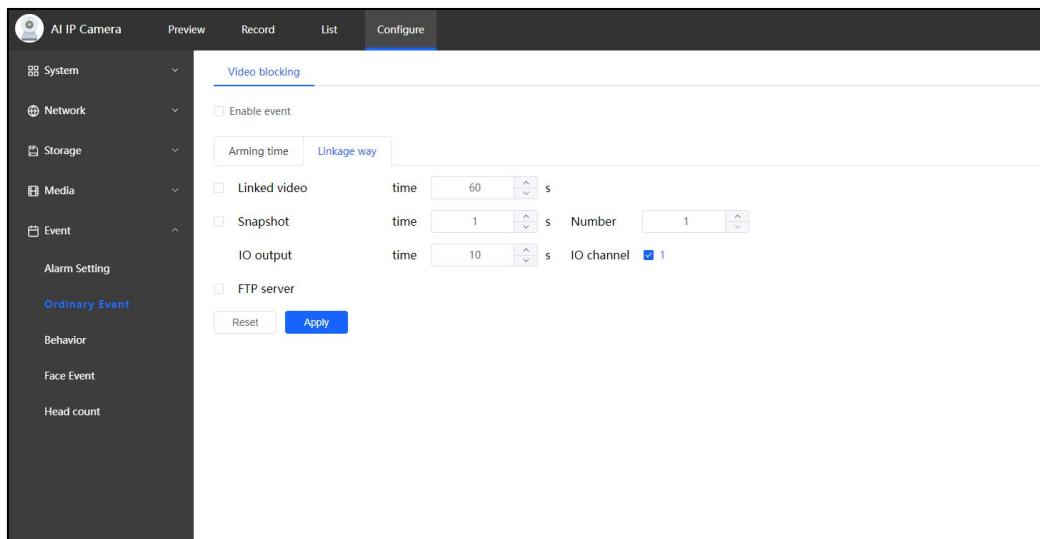


Figure 3-6 Linkage mode page

- (1) Check **Screen Prompt** to receive a notification on the screen when video masking occurs.
- (2) Check **Email Notification** to receive an email notification when video masking occurs.
- (3) Check **Alarm Buzzer** to receive a buzzing alarm when video masking occurs.
- (4) Click **Restore Defaults** to cancel the selected linkage modes.
- (5) Click **Apply** to save the current selected linkage modes.

3.4 Alarm Settings

3.4.1 Alarm Input

Before setting up, you need to connect the device to an external alarm input device and configure the alarm input to allow the device to forward alarm signals received to the camera for further processing.

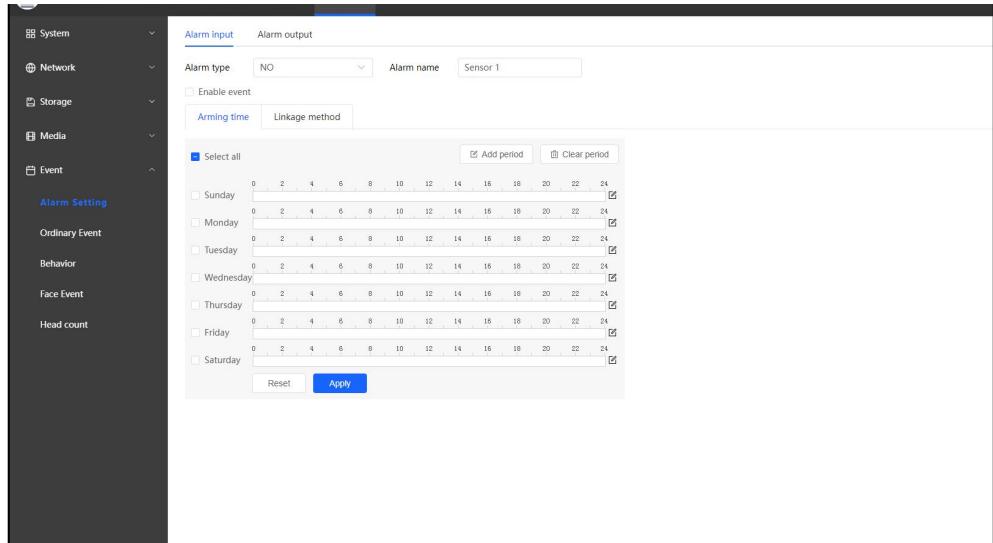


Figure 3-7 Alarm input settings page

(i) Description

Alarm Input depends on the models. Please refer to the actual device for details.

Steps

Step 1: Log in to the device's WEB client and click **Configuration > Event > Alarm Settings > Alarm Input**.
As shown in Figure 3-7.

Step 2: Select the desired alarm input number, then set its name and type.

You can customize the alarm name and set the alarm type based on the alarm device being used.

Step 3: Check **Enable Event**, open alarm input.

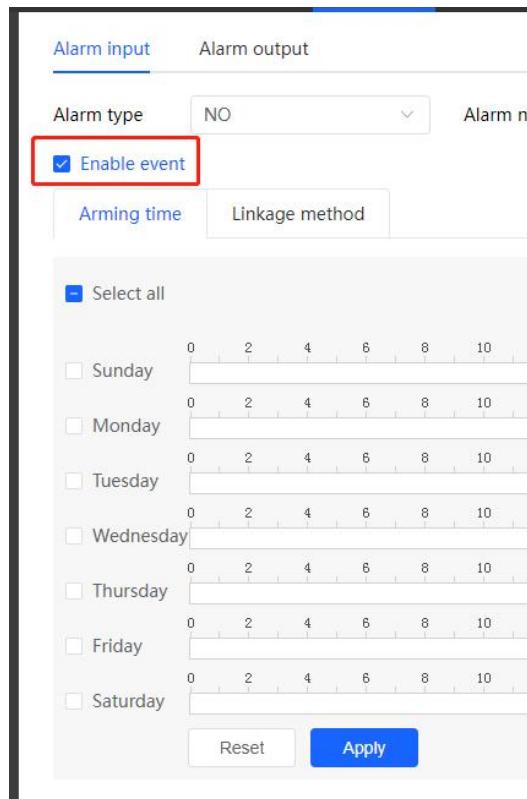


Figure 3-8 Alarm input

Step 4: Set the deployment time. Under **Deployment Time**, you can check and configure the deployment time for the alarm input. Follow these steps to set and adjust the deployment time, as shown in Figure 3-8.

- (1) Click the settings button on the right side of the timeline to set multiple time periods on the same day.
- (2) After setting up the deployment time for a day, if you need to set the same deployment time for other days, you can check **Select All** or a specific day in the interface and click **Apply**.
- (3) You can also click the button to open the **Add Period** window. Click the left column to check the date or a certain day and click the button to add multiple time periods to the deployment time. As shown in Figure 3-9.

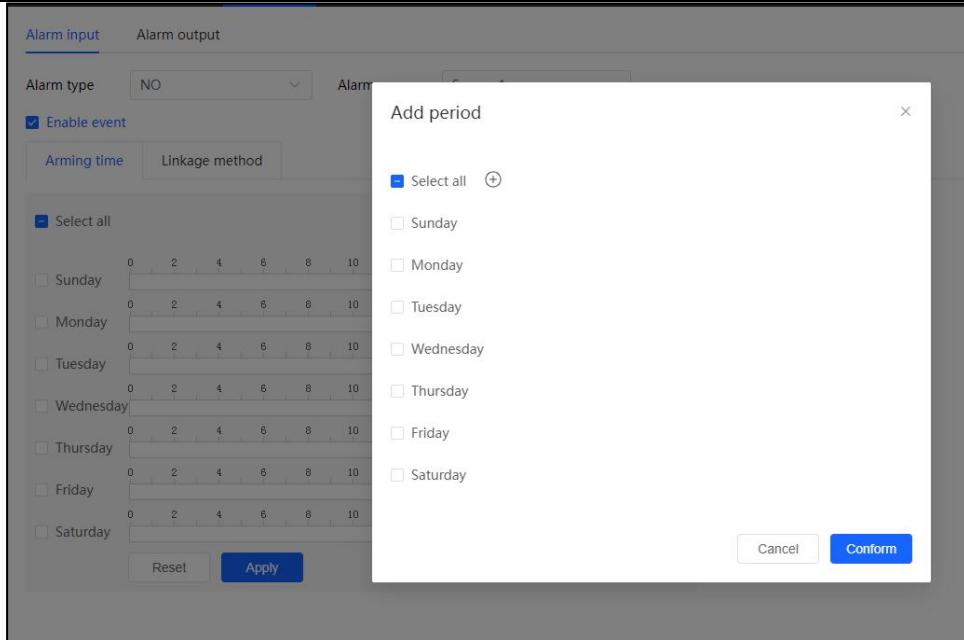


Figure 3-9 Add period

(4) Click the **Restore Defaults** button to cancel the deployment time of the alarm input and restore the default value.

(5) Click the **Apply** button to save the current deployment time settings.

Description

When setting multiple time periods for deployment time, the overlapping parts will be merged.

Step 5: Set up the linkage mode: including Screen Prompt, Email Notification, and Alarm Buzzer. As shown in Figure 3-10.

- (1) Check **Screen Prompt** to receive a notification on the screen when video masking occurs.
- (2) Check **Email Notification** to receive an email notification when video masking occurs.
- (3) Check **Alarm Buzzer** to receive a buzzing alarm when video masking occurs.
- (4) Click the **Restore Defaults** button to cancel the linkage method of the deployed alarm input time period.
- (5) Click the **Apply** button to save the linkage method for the currently deployed time period.

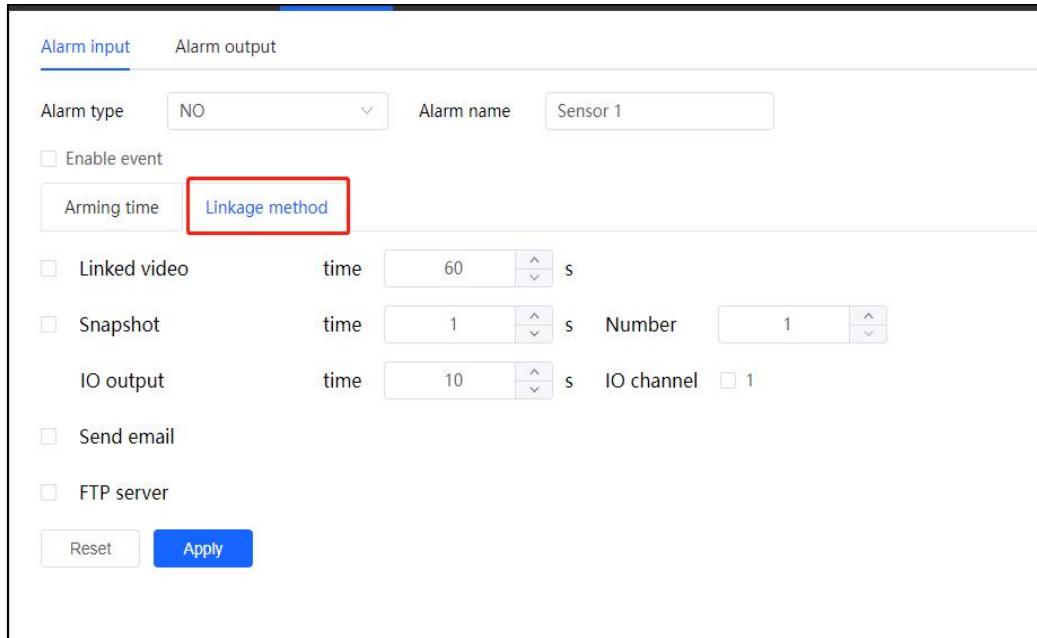


Figure 3-10 Linkage mode settings

3.4.2 Alarm Output

Before setting up, you need to connect the device to an external alarm output device and configure the alarm output to allow the camera's alarm signal to be transmitted to the alarm output device.

Steps

Step 1: Log in to the device's WEB client and click **Configuration > Event > Alarm Settings > Alarm Output**. As shown in Figure 3-11.

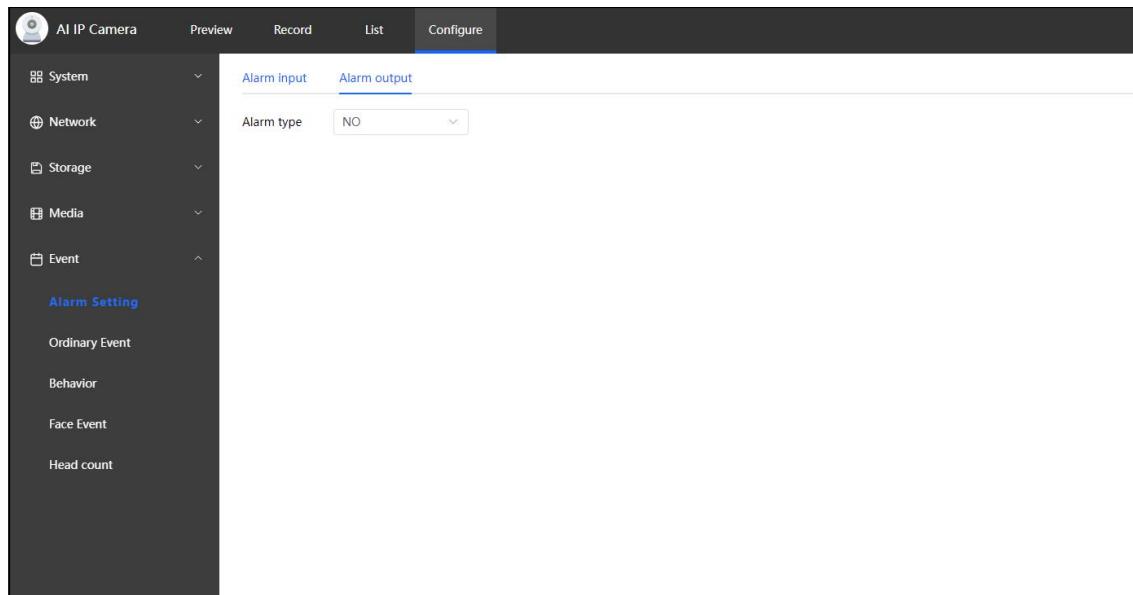


Figure 3-11 Alarm output settings

4 System Functions

Log in to the device's WEB client and click **Configuration > System** to set the system. The system configuration includes parameters such as system configuration, system maintenance, and user management.

4.1 System Configuration

Click **Configuration > System** to enter the system configuration. The system configuration includes parameters such as basic information, time configuration, and device information.

4.1.1 Basic Device Information

Steps

Step 1: Click **Configuration > System > System Configuration > Basic Information**. As shown in Figure 4-1.

Step 2: Input the following parameters.

The basic parameters of IPC include device name, serial number, device model name, software version no, hardware version, alarm inputs and outputs, and other relevant information.

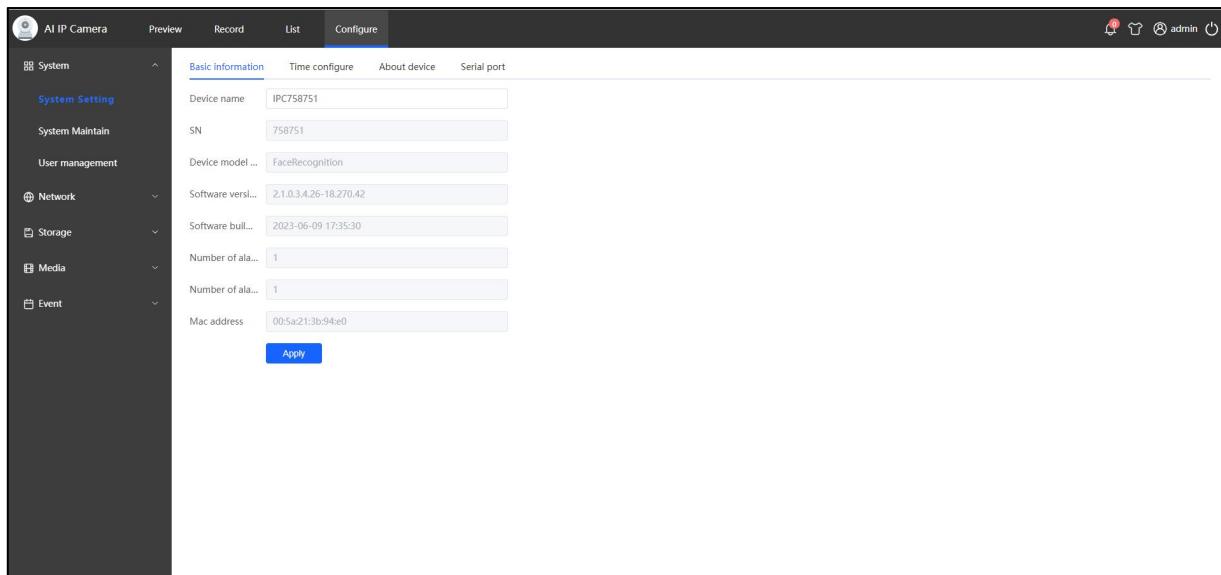


Figure 4-1 Basic information

4.1.2 Time Configuration

Steps

Step 1: Click **Configuration > System > System Configuration > Time Configuration**. As shown in Figure 4-2.

Step 2: You can set the IPC's timezone and timing.

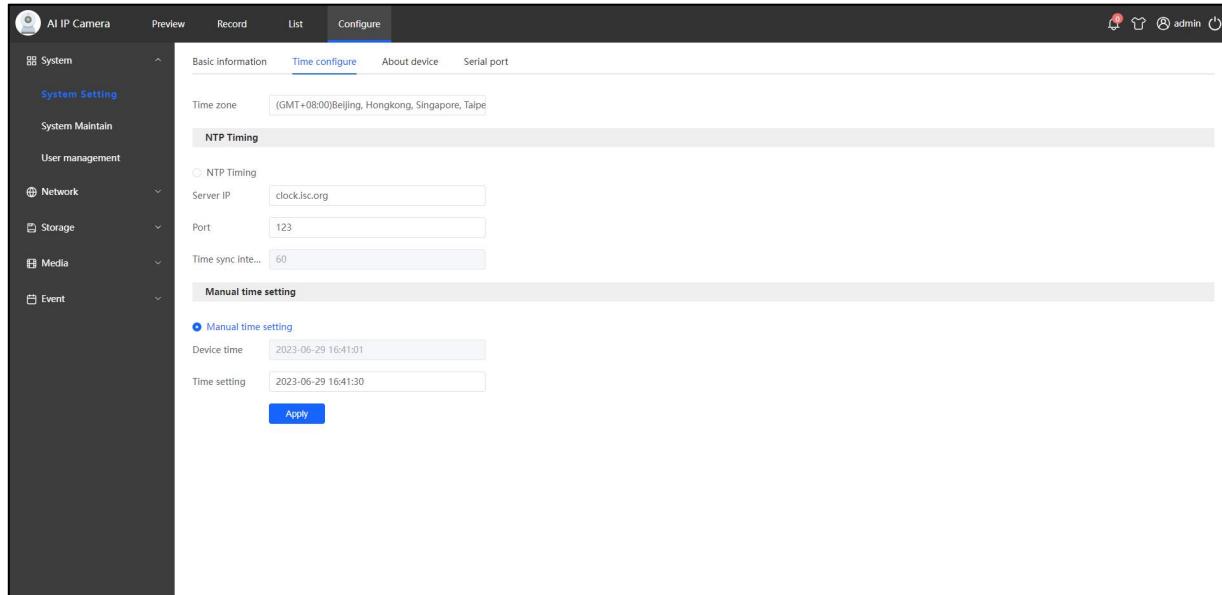


Figure 4-2 Time configuration page

(1) NTP time setting

You can set the NTP server address, NTP port number, and timing interval, and the device will sync the clock periodically. The setting is complete.

(2) Manual time setting

Select the **Manual Time Setting** option and input the device time manually. The timezone will be displayed for reference, and you can choose according to the actual situation. Step 3: Once the time is set, click **Save** to save all parameters.

4.1.3 About Device

Steps

Step 1: Click **Configuration > System > System Configuration > Time Configuration**. As shown in Figure 4-3.

Step 2: You can choose the language of the device from Chinese or English.

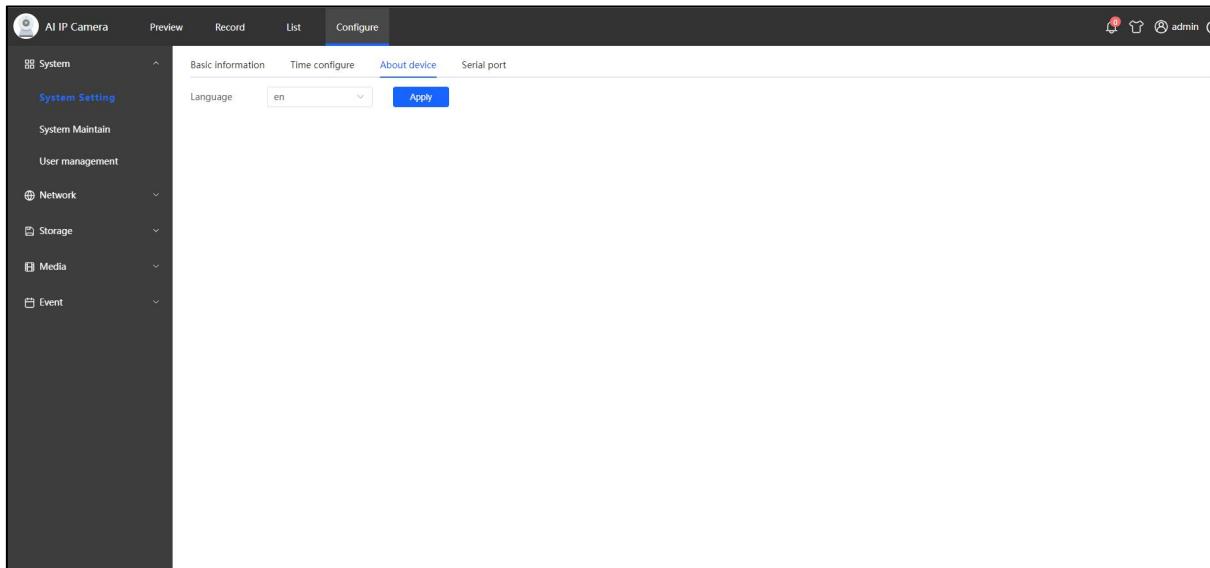


Figure 4-3 About device

Step 3: Click the **Save** button. The system prompts **Save Successfully**.

4.2 System Maintenance

Click **Configuration > System** to enter the system maintenance page. System maintenance includes upgrade maintenance and log recording.

4.2.1 Upgrade Maintenance

Click **Configuration > System > System Maintenance > Upgrade Maintenance** to enter the system maintenance interface. As shown in Figure 4-4.

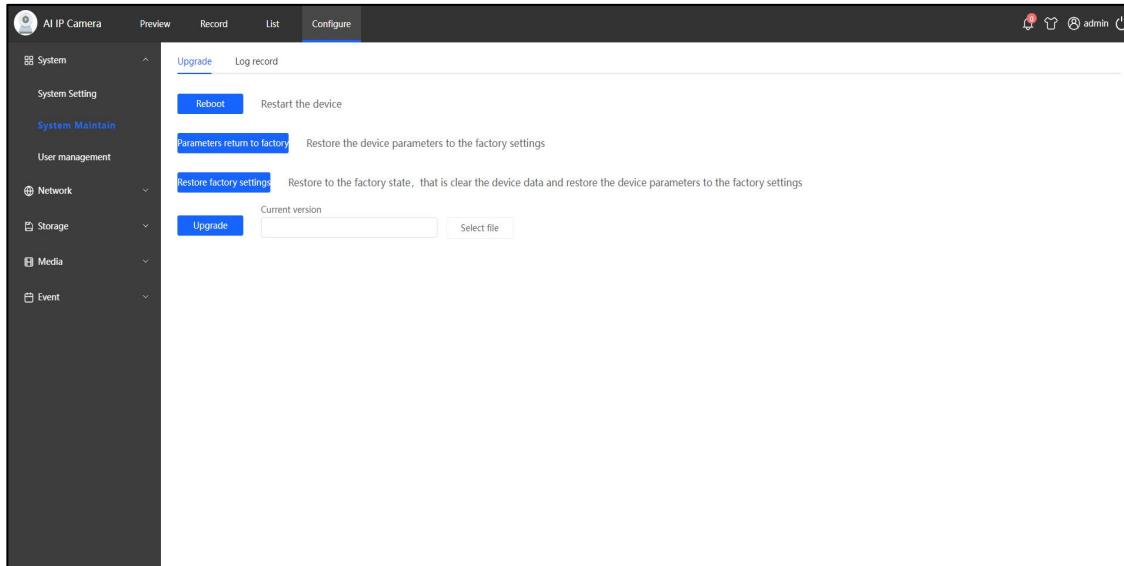


Figure 4-4 Upgrade maintenance

(1) Restart device: Click **Restart** to restart the IPC.

(2) Parameter restoration to factory settings: All parameters of the device will be restored to factory settings.

(3) Upgrade: When the IPC needs an upgrade, you can choose the path where the upgrade file is stored and click **Upgrade** to start.

Note

Please do not turn off the power during the upgrade process. After the upgrade is completed, the IPC will automatically restart.

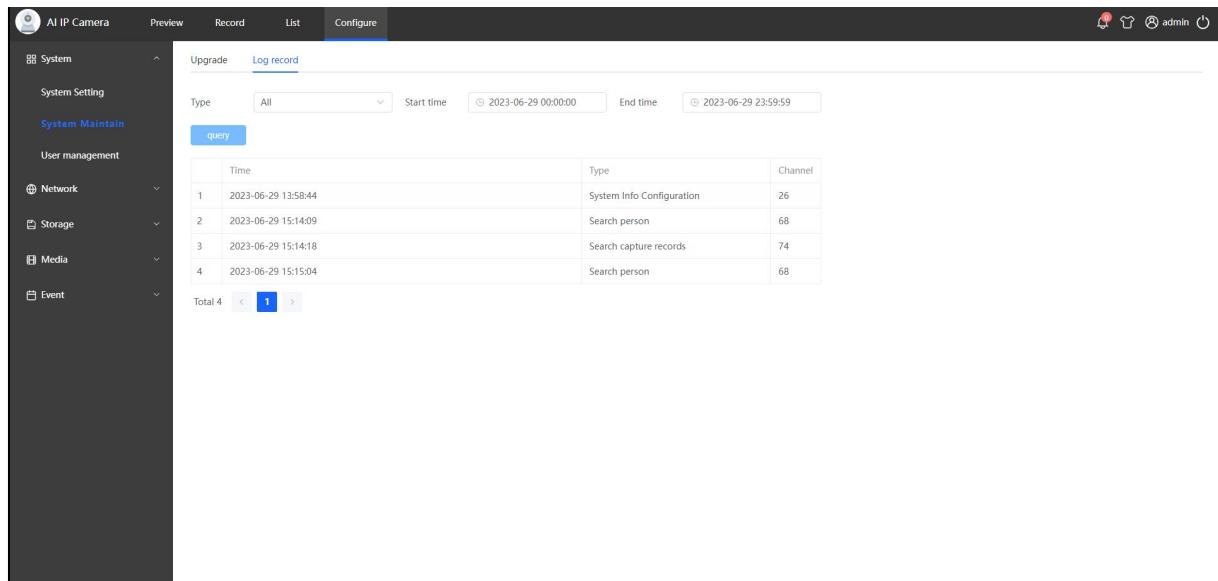
4.2.2 Log Recording

You can query and check the device's log information on the log interface.

Steps

Step 1: Click **Configuration > System > System Maintenance > Log Recording** to enter the log recording interface. As shown in Figure 4-5.

Step 2: Enter the main types and subtypes of the log you want to query and set the date and time range for the log query.



Time	Type	Channel
1 2023-06-29 13:58:44	System Info Configuration	26
2 2023-06-29 15:14:09	Search person	68
3 2023-06-29 15:14:18	Search capture records	74
4 2023-06-29 15:15:04	Search person	68

Figure 4-5 Log recording page

Step 3: Click the **Query** button, and the log information that meets the conditions is displayed in the list.

4.3. Network Configuration

Click **Configuration > Network** to enter the network parameter page. The network parameters include TCP/IP, port, DDNS, PPPOE,FTP,GA/T1400 and MQTT.

4.3.1 TCP/IP

Steps

Step 1: Click **Configuration > Network > Network Parameters > TCP/IP** to enter the TCP/IP interface. As shown in Figure 4-6.

Step 2: Enter the TCP/IP parameters.

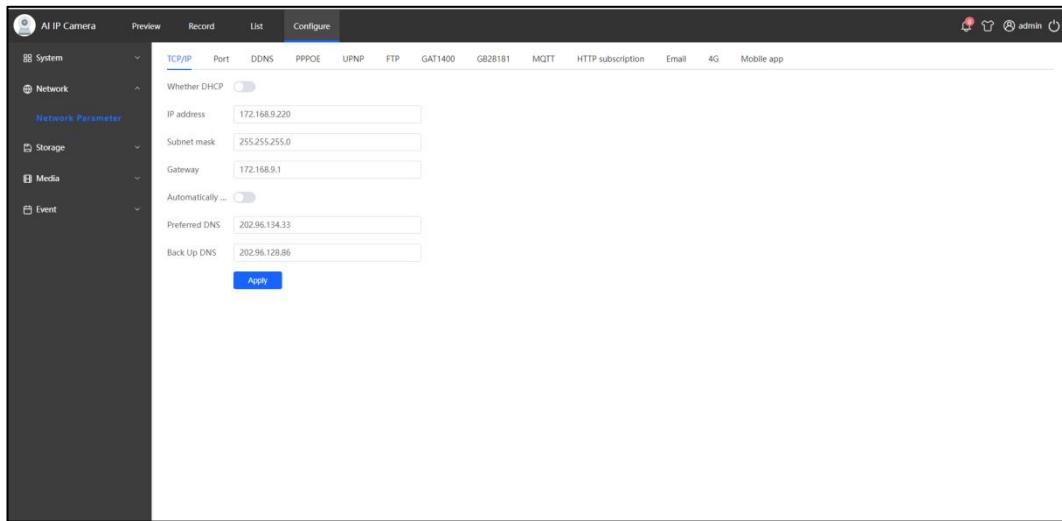


Figure 4-6 TCP/IP

Table 4-1 TCP/IP parameter description

Parameter	Description
IP version	Select IPv4 or IPv6 address format
IP address	According to the network plan, enter the IP address, subnet mask, and default gateway of the device.
Subnet mask	
Gateway	 ⓘ Description The address and default gateway must be in the same network segment.
Network interface card (NIC)	Please select the NIC to be set
Preferred DNS server	IP address of the DNS server.
Standby DNS server	Standby IP address of the DNS server.
	You can enable automatic DNS.

IP mode	IP mode
---------	---------

Step 3: Click the Save button. The system prompts Save Successfully

4.3.2 Port Configuration

Port configuration parameters include Private Protocol Port, HTTP Port, HTTPS Port , RTSP Port, and ONVIF port. You can set the corresponding ports as required for device access through the network.



Please do not modify the default port parameters. If there is a port conflict and you need to modify the port number, please modify the following information. Steps

Step 1: Click **Configuration > Network > Network Parameters > Port** to enter the port interface. As shown in Figure 4-7.

Step 2: Set the port parameters

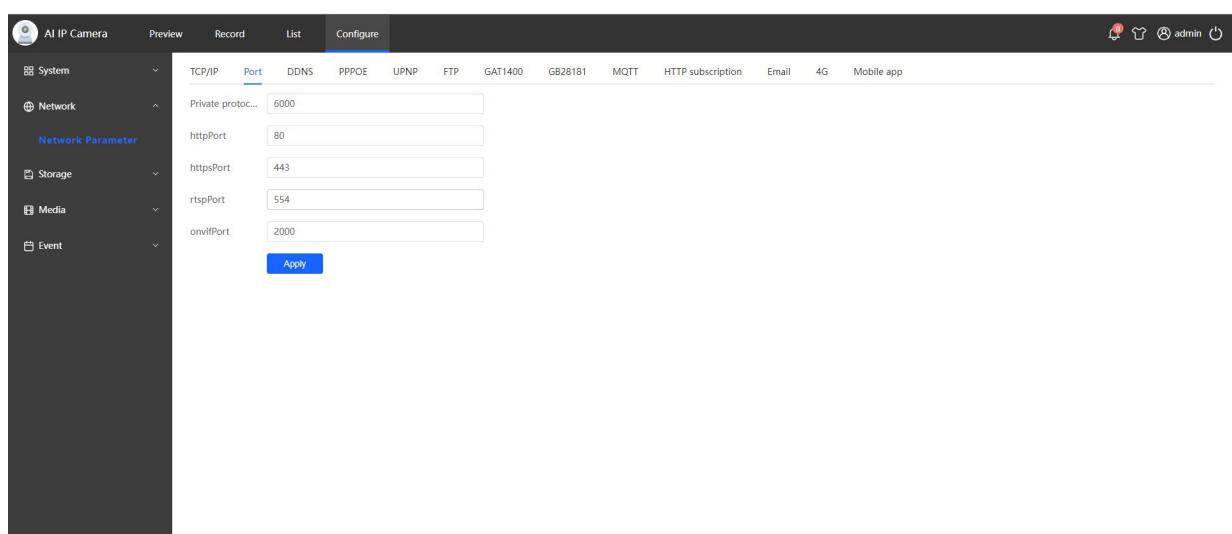


Figure 4-7 Ports

Table 4-2 Port parameters description

Parameter	Description
HTTP port	The HTTP (Hyper Text Transfer Protocol) communication port is set to 8090 by default. If you set it to another value, you need to add the modified port number after the IP address when logging in with a browser.
HTTPS port	The HTTPS (Hyper Text Transfer Protocol over Secure Socket Layer) communication port is set to 443 by default.
RTSP port	To use the RTP (Real-time Transport Protocol) port, please ensure that the port you modify is available.
Preferred DNS server	IP address of the DNS server.
Standby DNS server	Standby IP address of the DNS server. You can enable the automatic DNS acquisition.
IP mode	DHCP (Dynamic Host Configuration Protocol): When a DHCP server is present in the network, select DHCP , and the device automatically retrieves a dynamic IP address without the need for manual IP address configuration.
RTSP port	The RTSP (Real Time Streaming Protocol) port is set to 554 by default.
ONVIF port	ONVIF aims to standardize the network interfaces of various providers' network video products to improve interoperability.

Step 3: Click the **Save** button. The system prompts **Save Successfully**.

4.3.3 DDNS

In a public network environment, most users use dynamic IP addresses and access IPC through the DDNS (Dynamic Domain Name System).

Steps

Step 1: Click **Configuration > Network > Network Parameters > DDNS** to enter the DDNS interface. As shown in Figure 4-8.

Step 2: Click **Switch** to enable the DDNS function.

Step 3: Enter DDNS parameters.

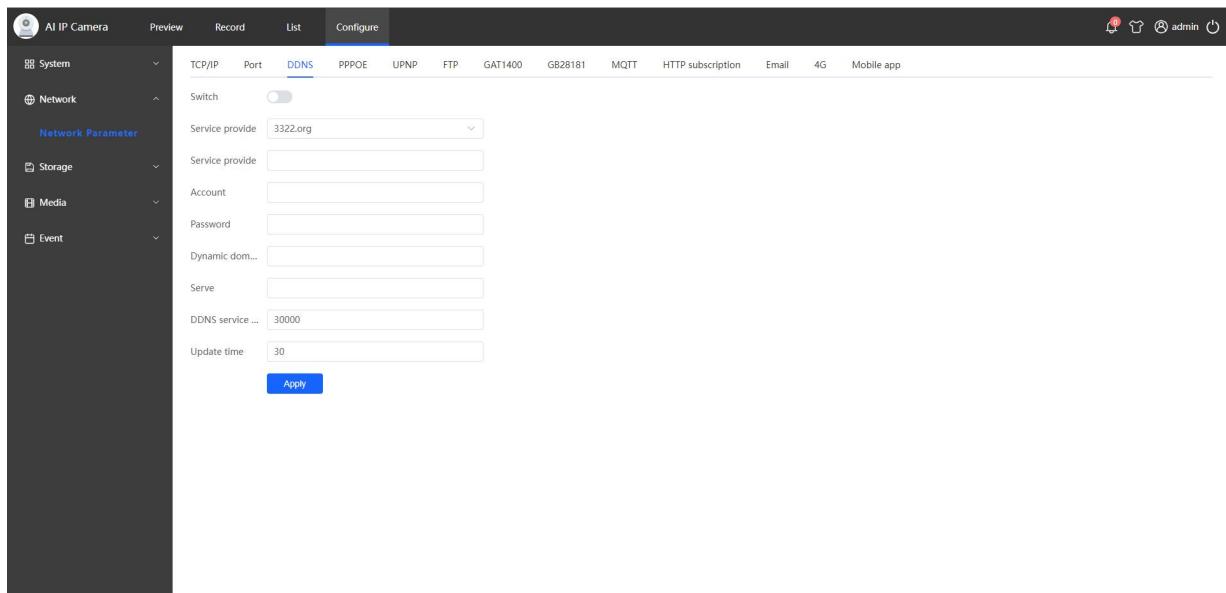


Figure 4-8 DDNS

Table 4-3 DDNS parameters description

Parameter	Description
Type	The name and address provided by the DDNS server provider. The address of the CN99 DDNS server is WWW.3322.org
Address	
Username	Enter the username and password obtained from the DDNS server provider. Users need to register an account (including a username and password) on the provider's website.
Password	

RTSP port	To use the RTP (Real-time Transport Protocol) port, please ensure that the port you modify is available.
Service	Service name.
DDNS service port	30000 by default.
Update time	

Step 4: Click the **Save** button. The system prompts Save Successfully.

4.3.4 PPPOE

PPPOE (Point-to-Point Protocol over Ethernet) is one of the ways for devices to access the network. By dialing through PPPOE, the device can automatically obtain a dynamic public IP address after successfully connecting to the network.

Prerequisites:

- The device is connected to the public network
- The PPPOE username and password provided by the ISP (Internet Service Provider) have been obtained.

Steps

Step 1: Click **Configuration > Network > Network Parameters > PPPOE** to enter the PPPOE interface. As shown in Figure 4-9.

Step 2: Click **Switch** to enable the PPPOE function.

Step 3: Enter PPPOE parameters.

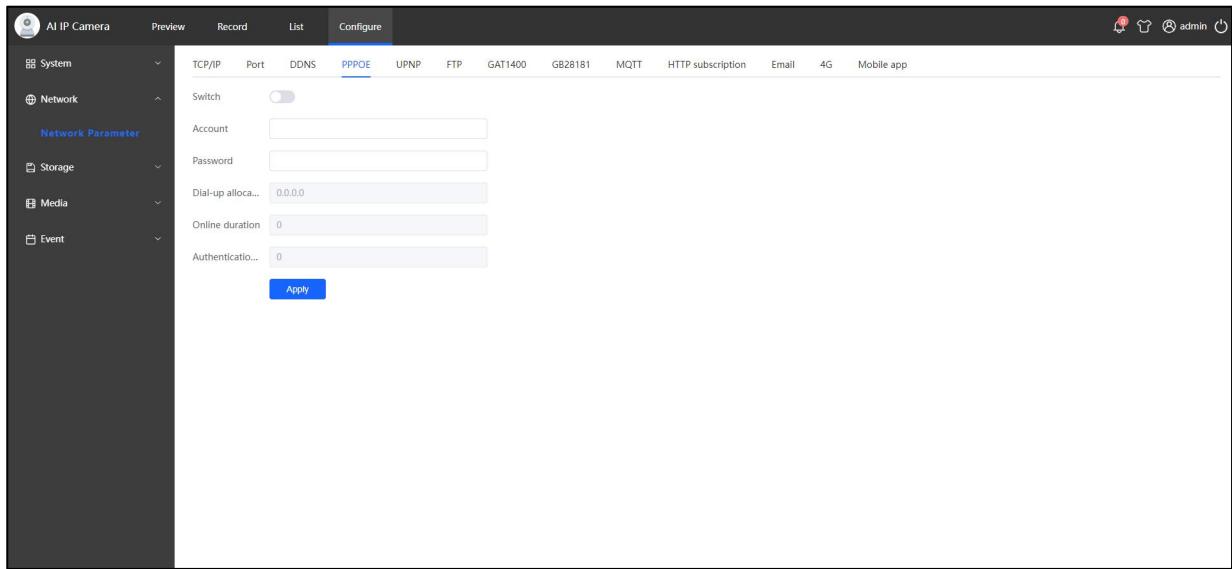


Figure 4-9 PPPoE

Step 4: Click the **Save** button. The system prompts Save Successfully.



Note

After enabling PPPoE configuration, the default gateway becomes invalid.

4.3.5 FTP

Steps

Step 1: Click Configuration > Network > Network Parameters > FTP to enter the FTP interface. As shown in Figure 4-10

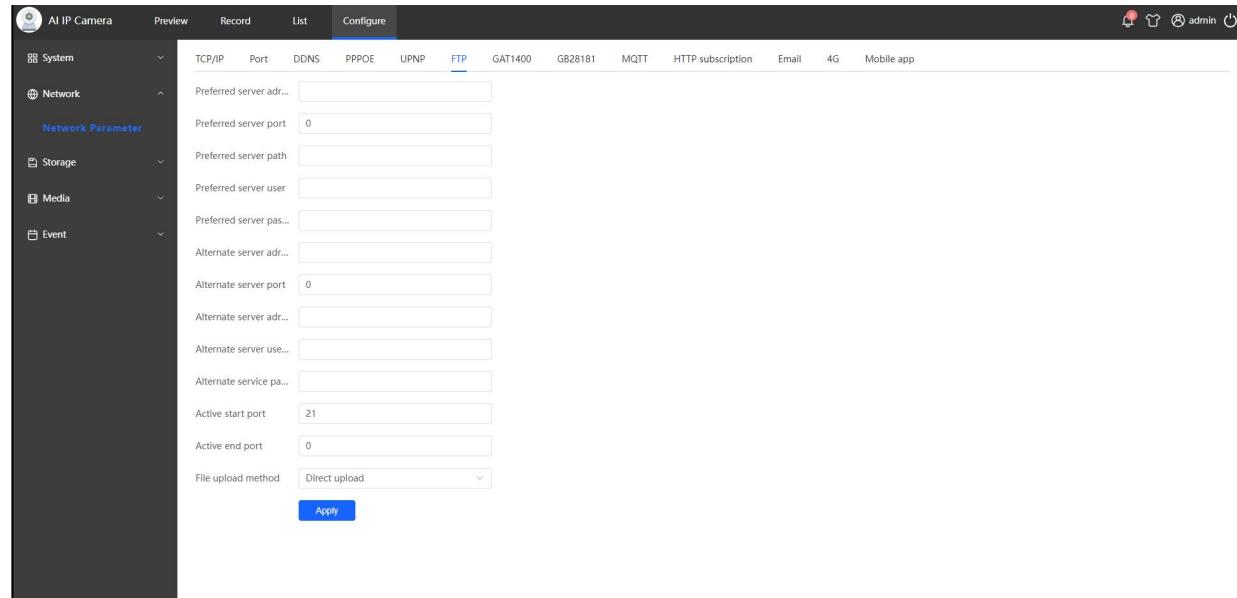


Figure 4-10 FTP

Step 2: Enter the address, port, remote path, username, and password of the preferred server and the address, port, remote path, username, address, and password of the standby

server. The default value for the active start port is 21, and the default value for the active end port is 0. There are two methods for file upload: direct upload and temporary file upload. You can rename the file after uploading it successfully.

Step 3: Click the **Save** button. The system prompts **Save Successfully**.

4.3.6 GA/T1400

Steps

Step 1: Click **Configuration > Network > Network Parameters > GA/T1400** to enter the GA/T1400 interface. The system's default port is GA/T1400. As shown in Figure 4-11.

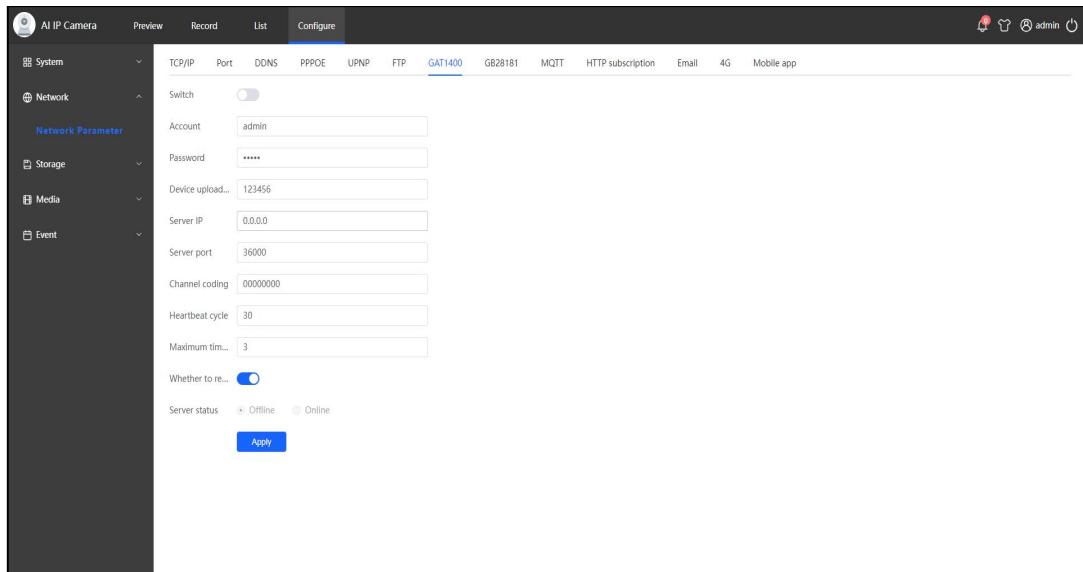


Figure 4-11 GA/T1400

Step 2: Enter the device upload ID.

Step 3: Click the **Save** button. The system prompts **Save Successfully**.

4.3.7 MQTT

Steps

Step 1: Click **Configuration > Network > Network Parameters > MQTT** to enter the GA/T1400 interface. As shown in Figure 4-12.

Step 2: Click **Switch** to enable or disable **MQTT**.

Step 3: Enter MQTT parameters

(1) Cloud ID, Cloud Address, Cloud Port, Cloud Username, Cloud Password, and Cloud Topic.

(2) Select Identification Log: Do Not Upload, Upload w/ Image, or Upload w/o Image.

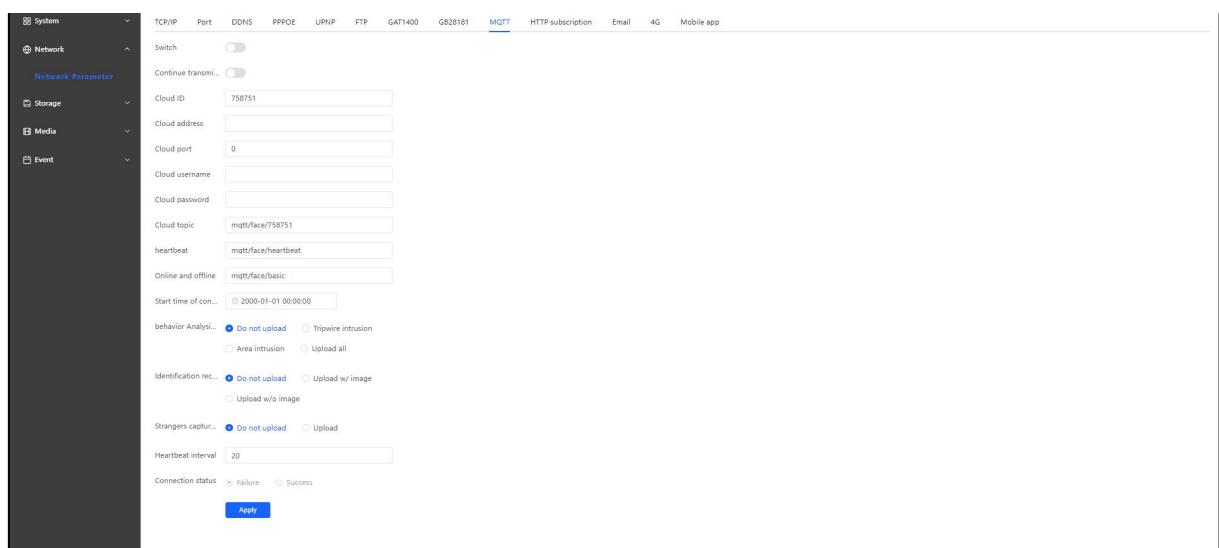


Figure 4-12 MQTT

(1) Select strangers capturing and uploading: Do Not Upload or Upload.

(2) Set the heartbeat interval

Step 4: Click **Save**. The system prompts Save Successfully.

4.4 User Management

4.4.1 Add User

The default user is admin, and you can add new users with different permissions.

Steps

Step 1: Click **Configuration > System > User Management** to enter the user management configuration interface. As shown in Figure 4-13.

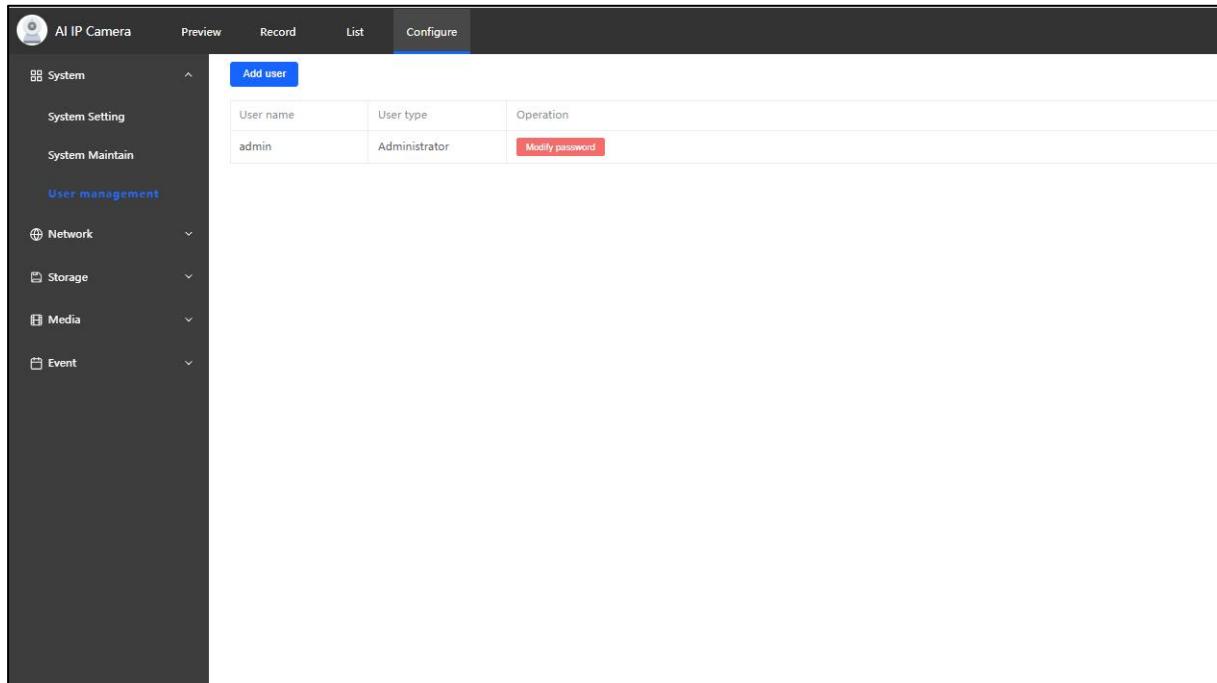


Figure 4-13 User management

Step 2: Click the **Change Password** button on the interface.

Step 3: Edit and modify password parameters in the pop-up window for password change. As shown in Figure 4-14.

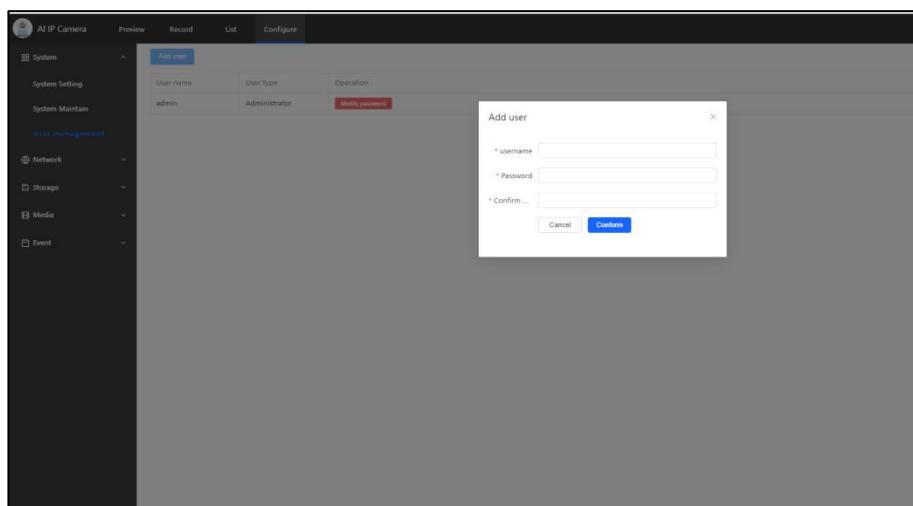


Figure 4-14 Change password

Step 4: Click **Cancel** to return to the user management page without saving the changed password.

Click **Confirm** to save the changed password and return to the user management page.

4.5 Storage Configuration

Click **Configuration > Storage > Storage Configuration** to enter the storage configuration interface. As shown in Figure 4-15.

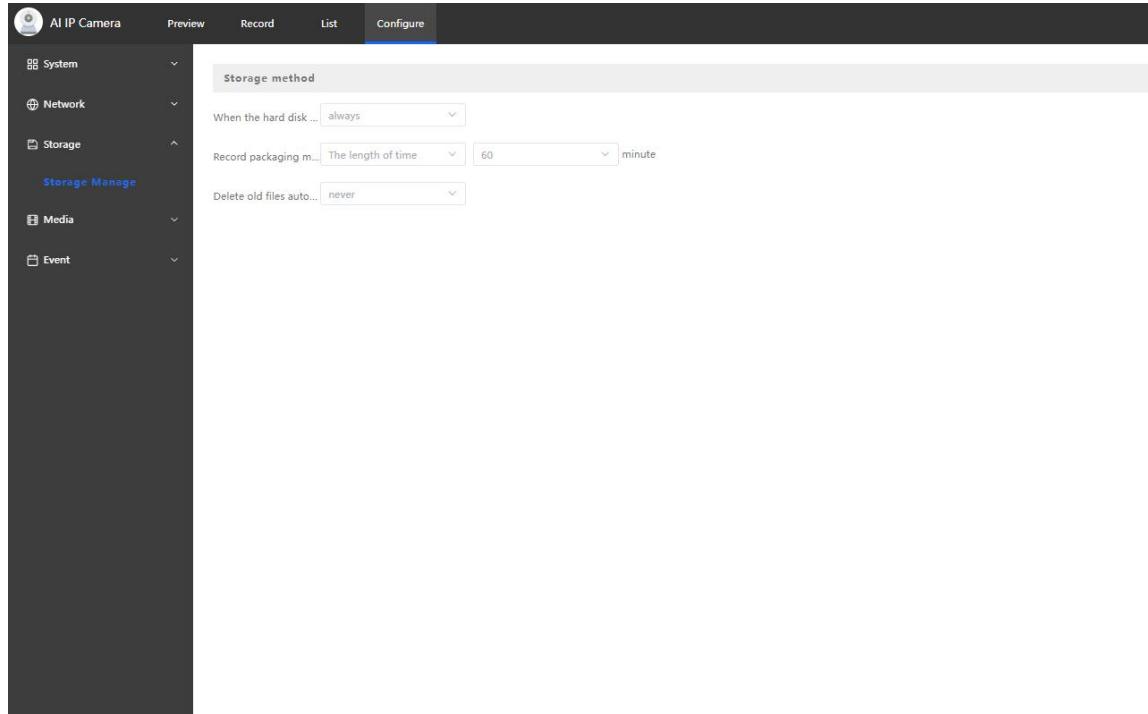


Figure 4-15 Storage configuration

4.5.1 Storage Methods

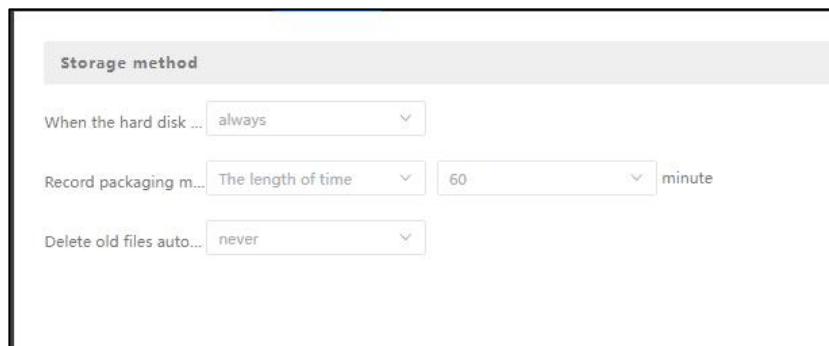


Figure 4-16 Storage methods

- (1) When the hard disk is full: the default setting is **Always**.
- (2) Video packing methods: **Based on Time Duration** or **Based on File Size**.
- (3) Delete old files automatically: **Never** or **Yes**.

4.6 Image Attributes

Click Configuration > Media > Image Properties to enter the image properties interface.

4.6.1 Properties Interface Layout

Adjust camera parameters to improve the clarity of the monitoring scene and ensure a normal monitoring display on the device. Configuration parameters include image, exposure, backlight, aperture, etc. As shown in Figure 4-17.

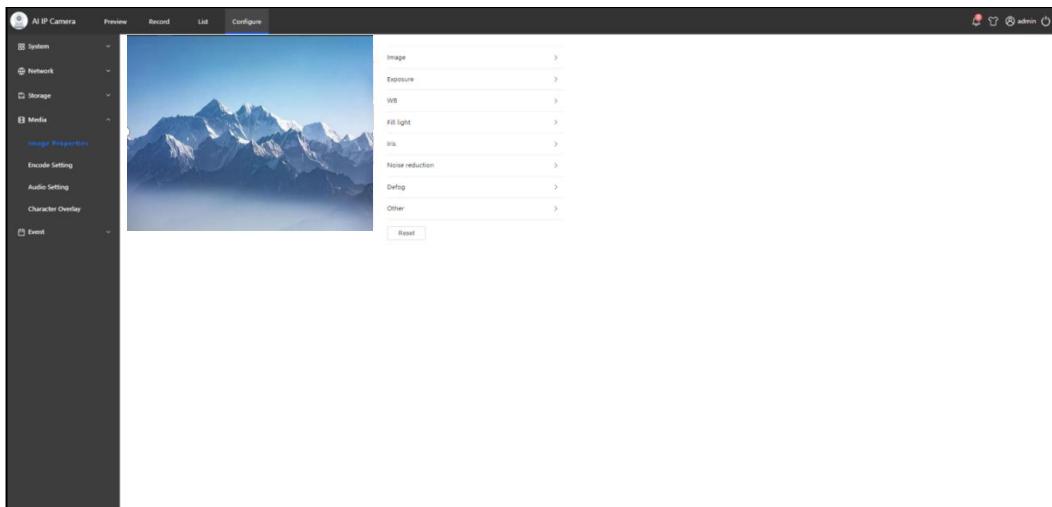


Figure 4-17 Image properties

4.6.1.1 Image Adjustment

You can adjust the image parameters based on the actual environment. Adjust the actual parameters of the device here.

Steps

Step 1: Click **Image** on the right side of the interface to expand the parameters for adjusting the image. As shown in Figure 4-18.

Step 2: Set the parameters.

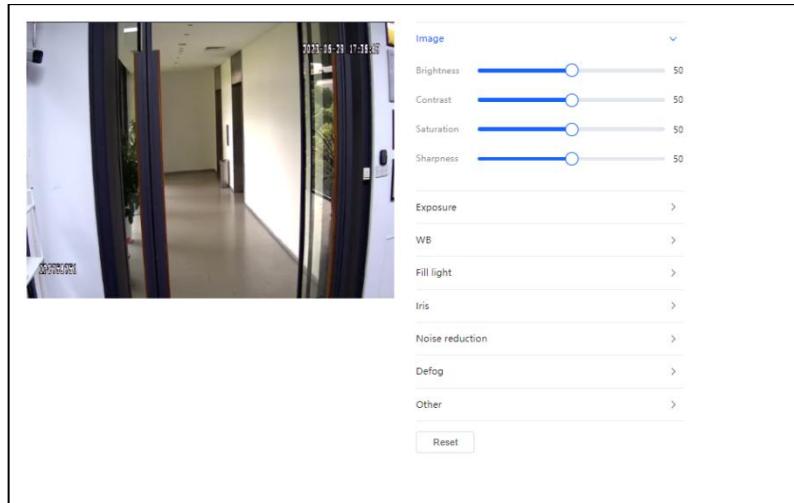


Figure 4-18 Image adjustment

Table 4-4 Image parameters description

Parameter	Description
Brightness	The brightness level of the overall color. The higher the value, the brighter the image. The lower the value, the whiter the image.
Contrast	The ratio of black to white in the image. The higher the value, the richer the color, and vice versa. When the value is high, the dark areas of the image become too dark, and the bright areas are prone to overexposure. When the value is low, the image appears gray.
Saturation	The higher the saturation value, the brighter the image, and vice versa. Adjusting the saturation value does not affect the overall brightness of the image.
Sharpness	The sharpness level of the edges of the image. The higher the value, the clearer the image, and vice versa. When the value is high, the image is prone to noise.

4.6.1.2 Exposure Settings

Adjusting the lens aperture and shutter speed to make the image clearer.

Steps

Step 1: Click **Exposure** on the right side of the interface to expand the exposure parameter settings. As shown in Figure 4-19.

Step 2: Set the parameters.

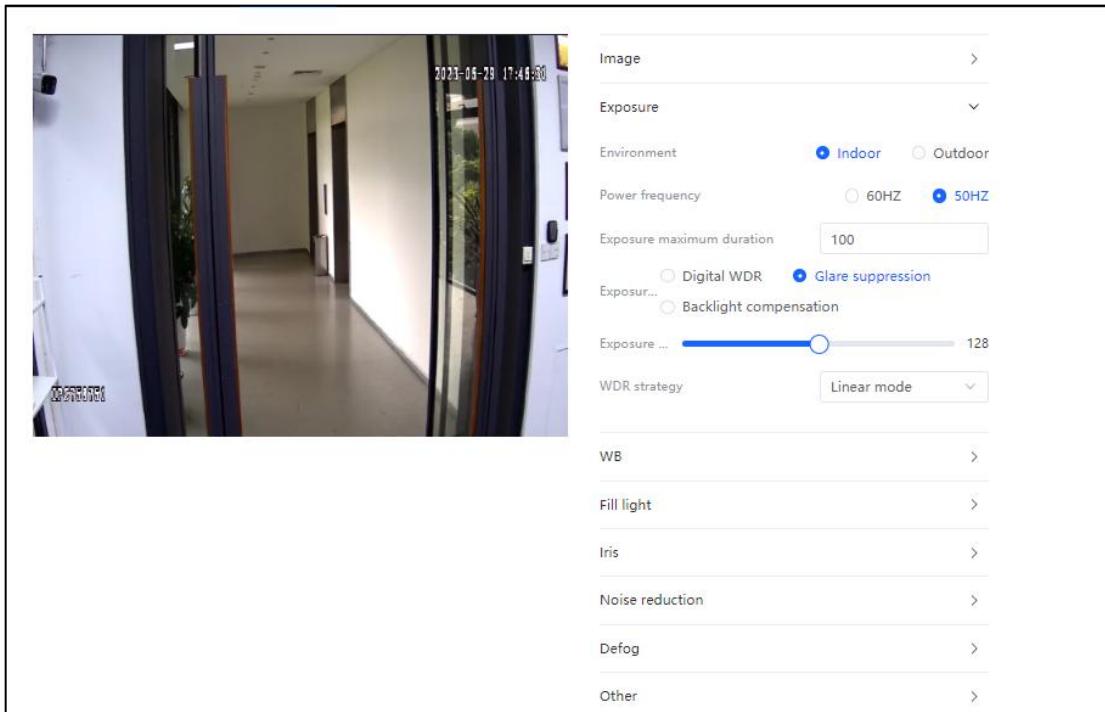


Figure 4-19 Exposure settings

Table 4-5 Exposure parameters description

Parameter	Description
Environment	<input checked="" type="radio"/> Indoor <input type="radio"/> Outdoor
Power Frequency	Check to select 60HZ/50HZ
Maximum Exposure Duration	The maximum exposure duration is 25 by default.
	Adjust the maximum exposure time according to the environment in which the device is located.

Exposure Mode	<ul style="list-style-type: none"> ● Digital WDR The system reduces the brightness of high-brightness areas and increases the brightness of low-brightness areas in the environment, making the overall picture clear. ● HLC Enable the HLC when there is extremely strong light in the environment. The system suppresses the brightness of high-brightness areas in the image, reduces the size of bright spots, and lowers the overall image brightness to capture details of faces and license plates in dark environments. ● Backlight Compensation Enable backlight compensation under backlight conditions to avoid the phenomenon of silhouettes in darker parts of the subject.
Exposure Intensity	<p>Slide the horizontal bar to adjust the exposure intensity, with a minimum value of 0 and a maximum value of 255.</p> <p>Adjust according to the environment brightness.</p>

4.6.1.3 White Balance Settings

The white balance function can correct the color deviation of the image caused by lighting so that white objects in the image appear white status in different color environments.

Steps

Step 1: Click **White Balance** on the right side of the interface to expand the white balance mode settings. As shown in Figure 4-20.

Step 2: Set the white balance mode.

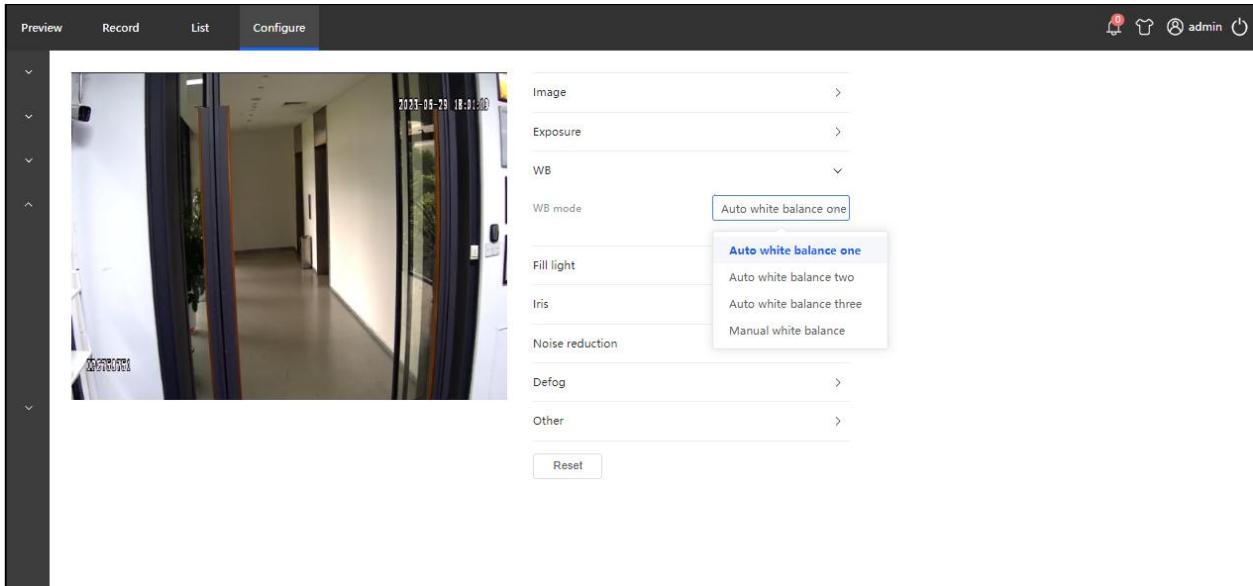


Figure 4-20 White balance settings

Table 4-6 White balance parameters description

Parameter	Description
Automatic	<p>Automatic Mode: AWB 1, AWB 2, and AWB 3.</p> <p>The system automatically compensates for white balance at different color temperatures to maintain correct image colors.</p>
Manual	<p>Set the white balance manually. The system compensates for the white balance based on the setting at different color temperatures in the environment to maintain correct image colors.</p>

4.6.1.4 Fill in Light Settings

When the device comes with a fill in light, it supports the setting of the Fill in Light mode. Different device models support different types of fill in lights, and the configuration interface is also different. Please refer to the actual device for specific settings.

Steps

Step 1: Click **Fill in Light** on the right side of the interface to expand the Fill in Light parameter settings. As shown in Figure 4-21.

Step 2: Set the parameters of the fill in light

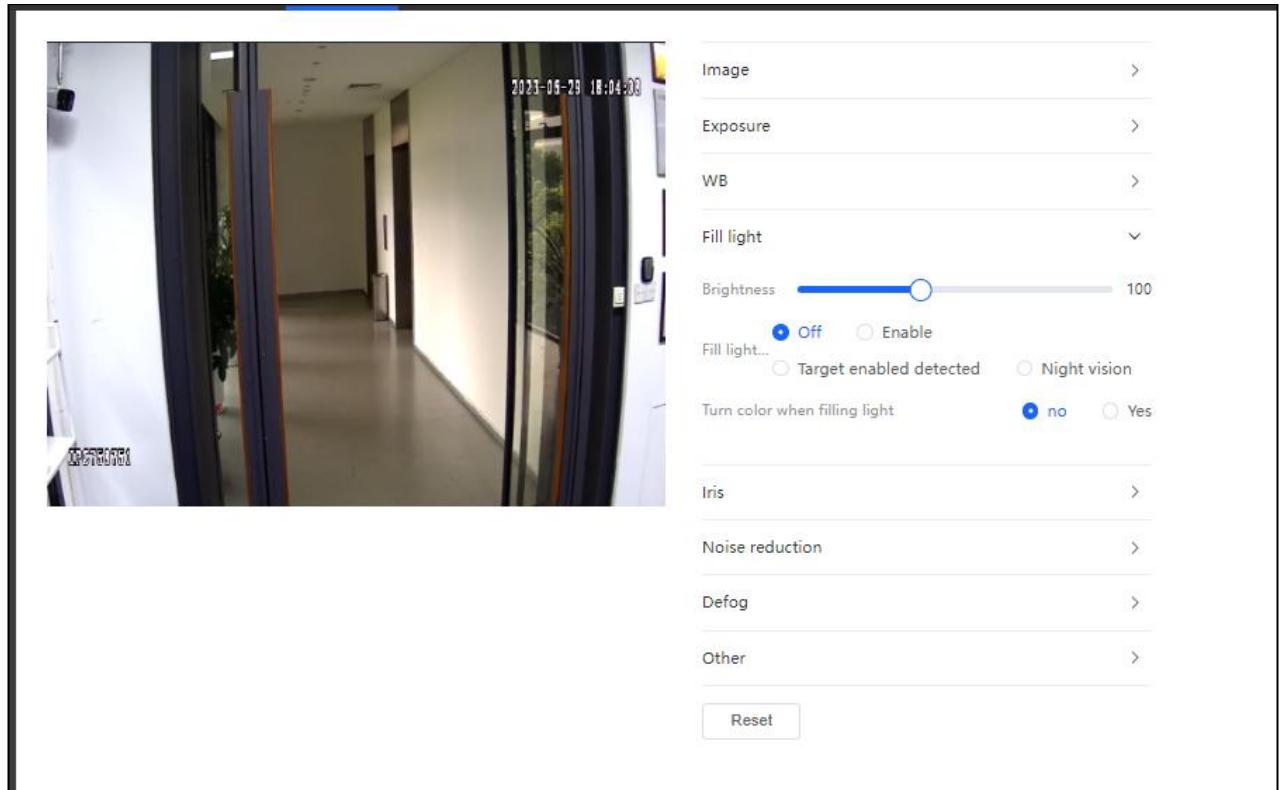


Figure 4-21 Fill in light settings

Table 4-7 Fill in light parameters description

Parameter	Description
Brightness	Adjust the Light Fill Brightness according to the actual scene. The minimum value is 0, and the maximum value is 255.

Fill light mode	<ul style="list-style-type: none"> <input checked="" type="radio"/> Off Disable the fill in light. <input type="radio"/> On Enable the fill in light. <input checked="" type="radio"/> Target enabled detected When the device detects an object in the image, the system will automatically enable the fill in light.
Adjusting the color when using the fill in light	Yes or No

4.6.1.5 Aperture Settings

Steps

Step 1: Click Aperture on the right side of the interface to expand the aperture parameter settings. As shown in Figure 4-22.

Step 2: Set the aperture parameters

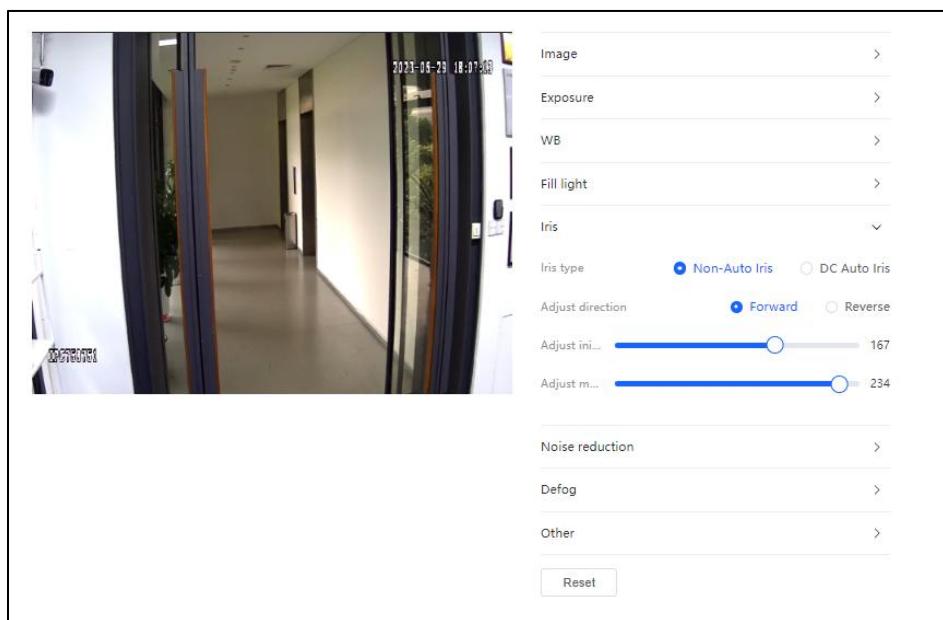


Figure 4-22 Aperture settings

Table 4-8 Aperture parameters description

Parameter	Description
Type	<ul style="list-style-type: none"> ● Non-automatic aperture: For cameras with fixed aperture lenses, this option cannot be changed. ● Auto: Automatically adjust the aperture
Direction	<ul style="list-style-type: none"> ● Forward ● Reverse
Adjust Initial Value	The initial value of the aperture is 167 by default.
Adjust maximum value	The maximum adjustable value of the aperture is 255.

4.5.1.6 Noise Reduction

When the device noise is high, adjusting the noise reduction mode can reduce image noise. The higher the noise reduction value is, the better the noise reduction effect is, but the more smear the image will have.

Steps

Step 1: Click **Noise Reduction** on the right side of the interface to expand the noise reduction parameter settings. As shown in Figure 4-23.

Step 2: Set the noise reduction parameters.

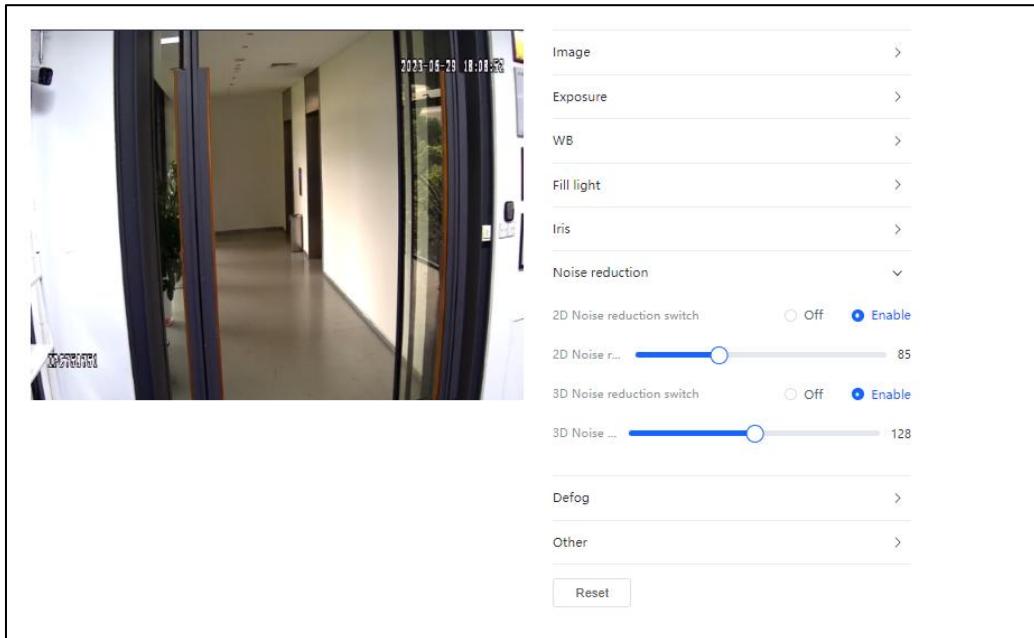


Figure 4-23 Noise reduction settings

Table 4-9 Noise reduction parameters description

Parameter	Description
2D Noise Reduction	<p>Click Off or On</p> <p>To average the pixel points of a single-frame image with other surrounding pixels to reduce image noise.</p>
3D Noise Reduction	<p>Click Off or On</p> <p>For multiple frames (at least 2 frames), process them using the inter-frame information between the front and back frames of the video for noise reduction. The higher the noise reduction value is, the better the noise reduction effect is, but the more smear the image will have.</p>

4.5.1.7 Defogging

In foggy or hazy environments, the image quality will decrease. Adjust the image clarity through the defogging function.

Steps

Step 1: Click **Defogging** on the right side of the interface to expand the defogging parameter settings. As shown in Figure 4-24.

Step 2: Set the defogging parameters.

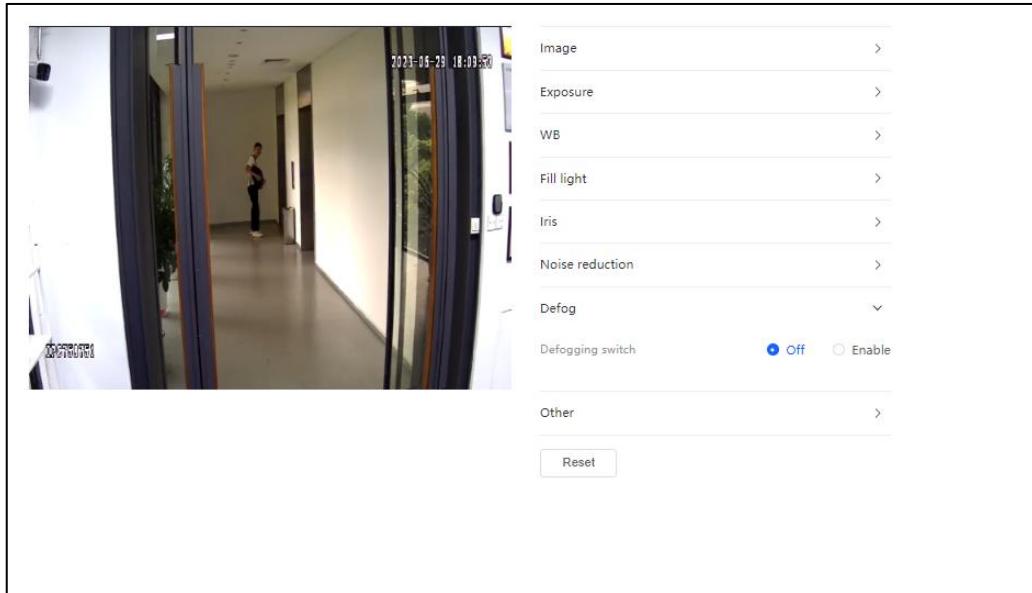


Figure 4-24 Defogging settings

Table 4-10 Defogging parameters description

Parameter	Description
Defogging Switch	<ul style="list-style-type: none"> ● Off: Disable the defogging mode. ● On: Enable the defogging mode.
Pseudo-color Switch	Disable or enable the pseudo-color mode.
Pseudo-color Removal Intensity	Adjust the intensity value of the pseudo-color.

4.6.1.8 Others

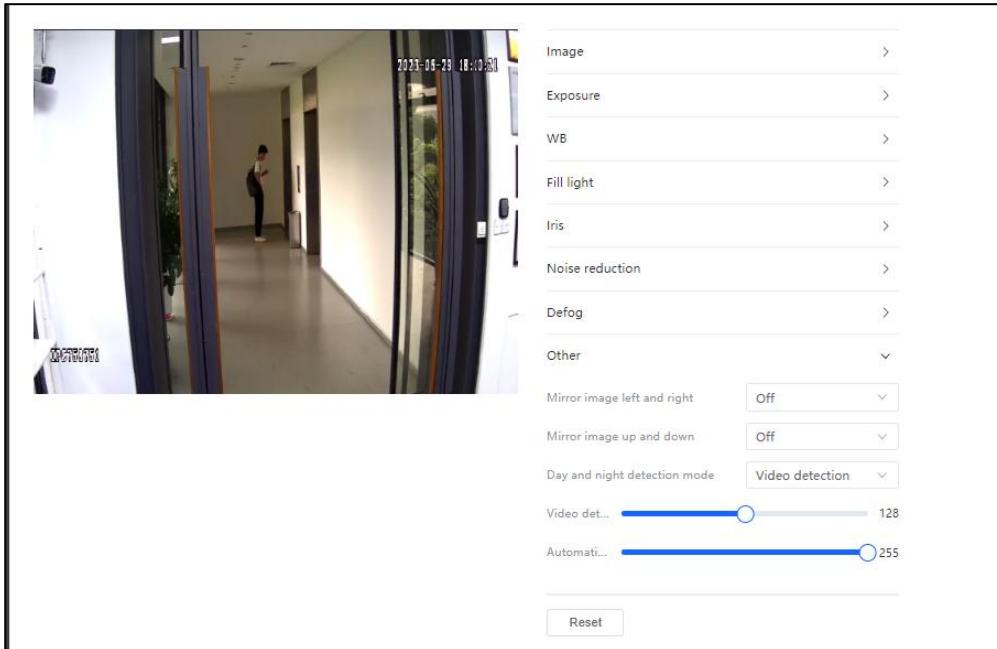


Figure 4-25 Others

Table 4-11 Other parameters description

Parameter	Description
ICR Switch	Disable or enable the ICR.
ICR Switching Control	ICR switching control includes Active Low and Active High.
External Light settings	External light settings include Active Low and Active High.
Day and Night Detection Mode	Detection modes include Video Detection and Time Detection.
Day-night Conversion Time	Input the time point of day-night conversion.
Automatic Gain	The minimum value is 0, and the maximum value is 255.

4.7 Encoding Settings

Click **Configuration > Media > Encoding Settings** to enter the encoding settings interface. Encoding settings include the main stream and the substream.

4.7.1 Main Stream Settings

The higher the bitstream value, the lower the image compression ratio, and the higher the clarity. However, it consumes high bandwidth and is suitable for storage and monitoring.

Steps

Step 1: Click **Configuration > Media > Encoding Settings > Main Stream** to enter the main stream interface. As shown in Figure 4-26. Step 2: Set the main stream parameters

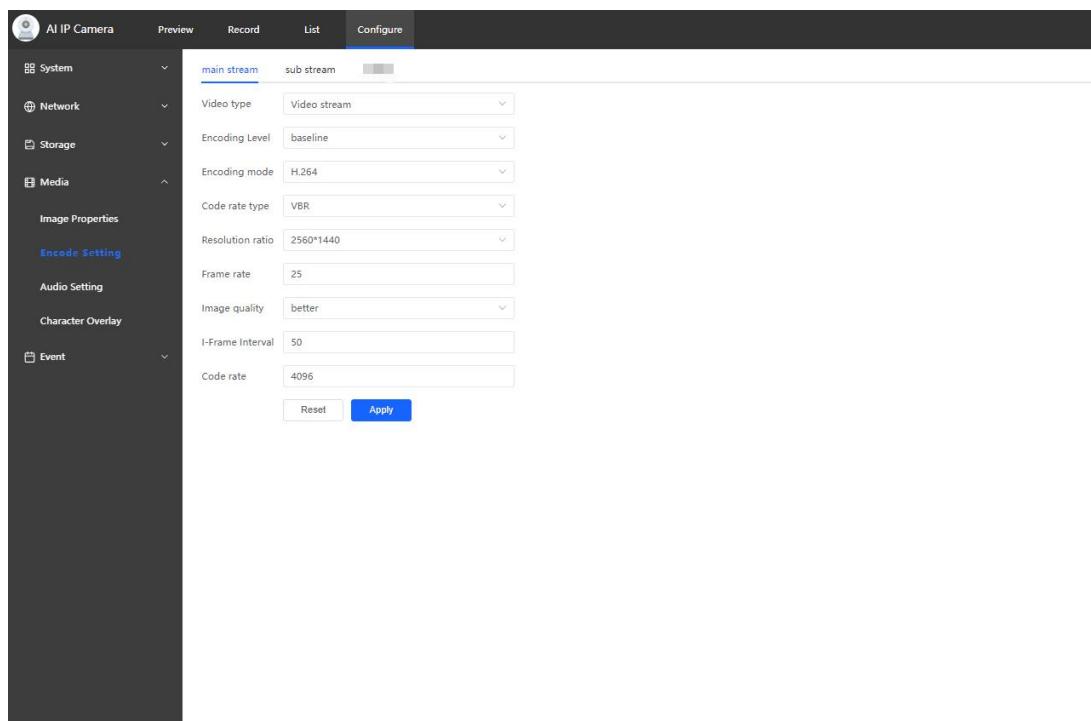


Figure 4-26 Main stream

Table 4-12 Main stream parameters description

Parameter	Description
Encoding Mode	The stream can be set to H.264, H.265, or MPEG4 encoding according to actual conditions. Please refer to the specific model for the video encoding type.
Resolution	Choose according to the actual requirements for video clarity. The higher the resolution, the higher the network bandwidth requirements
Frame per Second (FPS)	The default value is 25, indicating the number of frames per second of the video. The higher the video frame rate, the smoother and more realistic the picture, but the required bandwidth and storage space are larger
Stream Control	The default value is 0. The encoding control mode when transmitting video data
Image Quality	The default value is 0. When the Stream Control is set to Variable Stream , this parameter can be set. The better the video quality, the higher bandwidth is consumed
I Frame Interval	The default value is 75. The larger the I frame interval, the smaller the stream, but the image quality is relatively poor. Conversely, the larger the stream, the better the image quality
Bitrate	The default value is 4608;

Step 3: (1) Click **Restore Defaults** to cancel the settings for the main stream parameters and restore them to their default values.

(2) Click **Apply** to save the settings for the main stream parameters.

4.7.2 Substream Settings

The bitstream value is relatively small compared to the main stream, and the image is smoother with low bandwidth consumption, which is suitable for replacing main stream monitoring when the network bandwidth is insufficient.

Steps

Step 1: Click **Configuration > Media > Encoding Settings > Substream** to enter the substream

interface. As shown in Figure 4-27.

Step 2: Set the substream parameters.

The screenshot shows a configuration interface for a substream. At the top, there are two tabs: "main stream" and "sub stream", with "sub stream" being the active tab. Below the tabs are several configuration fields:

- Video type: Video stream
- Encoding Level: baseline
- Encoding mode: H.264
- Code rate type: VBR
- Resolution ratio: 704*576
- Frame rate: 25
- Image quality: ordinary
- I-Frame Interval: 50
- Code rate: 512

At the bottom of the form are two buttons: "Reset" and "Apply".

Figure 4-27 Substream

Table 4-13 Substream parameters description

Parameter	Description
Encoding Mode	The stream can be set to H.264, H.265, or MPEG4 coding according to actual conditions. Please refer to the specific model for the video coding type.
Resolution	Choose according to the actual requirements for video clarity. The higher the resolution, the higher the network bandwidth requirements
Frame per Second (FPS)	The default value is 25, indicating the number of frames per second of the video. The higher the video frame rate, the smoother and more realistic the picture, but the required bandwidth and storage space are larger
Stream Control	The default value is 0. The encoding control mode when transmitting video data
Image Quality	The default value is 1. When the Stream Control is set to Variable Stream, this parameter can be set. The better the video quality, the more bandwidth is consumed
I Frame Interval	The default value is 50. The larger the I frame interval, the smaller the stream, but the image quality is relatively poor. Conversely, the larger the stream, the better the image quality
Bitrate	The default value is 512;

Step 3: (1) Click **Restore Defaults** to cancel the settings for the substream parameters and restore them to their default values.

(2) Click **Apply** to save the set substream parameters.

4.8 Audio Settings

The audio parameters mainly include the audio input and the sampling rate settings of the input volume.

Steps

Step 1: Click **Configuration > Media > Encoding Settings > Main Stream** to enter the main stream interface. As shown in Figure 4-28.

Step 2: Set the audio parameters.

Note

Please carefully select whether to enable the audio collection function according to the actual scene requirements.

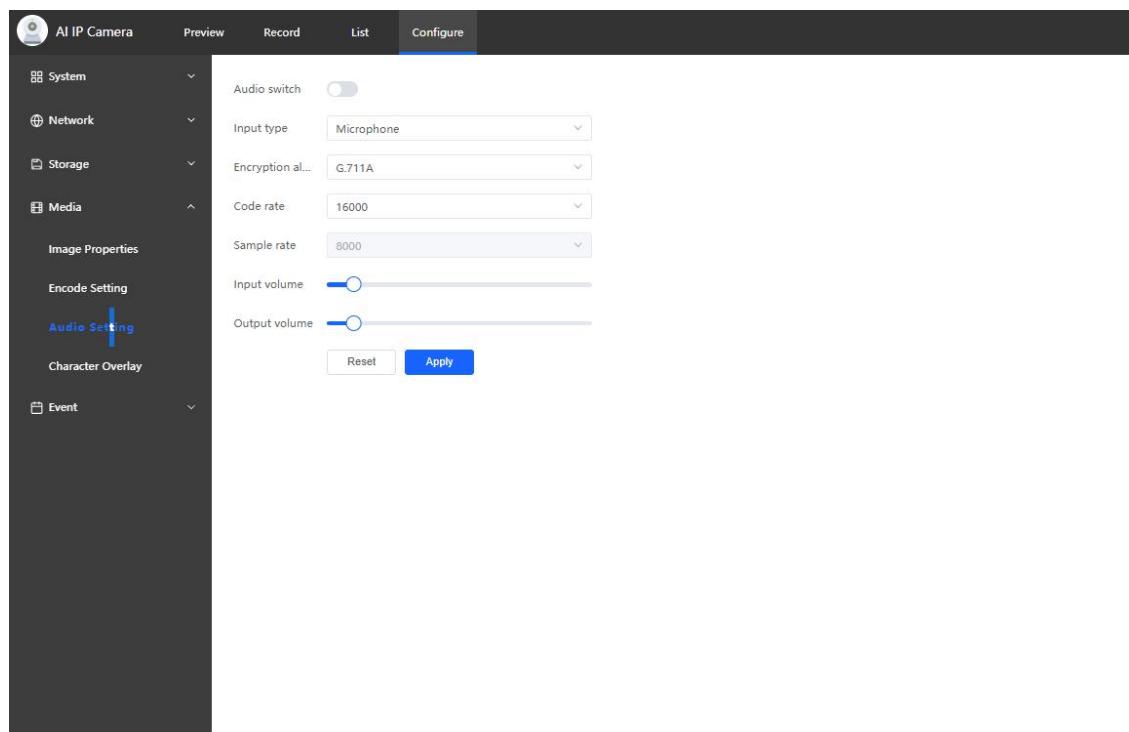


Fig. 4-28 Audio Setting

Table 4-14 Audio parameters description

Parameter	Description
Audio Switch	Click the button to enable or disable the audio settings.
Microphone	Adjust the microphone volume.
Compressed Format	The default value is 321.
Audio Bitrate	Display the audio input source type of the device.
Sampling Rate	The higher the sampling frequency of the audio signal per second, the more samples can be obtained in unit time, and the more accurate the restored audio signal will be.
Audio Volume	Volume Level.

Step 3: Click the **Save** button to save the set audio parameters.

4.9 Character Overlay

In the live view, when it is necessary to adjust the custom overlaid character information in the video footage, you can set the character overlay.

Steps

Step 1: Click Configuration > Media > Character Overlay to enter the character overlay interface. As shown in Figure 4-29.

Step 2: Set the character overlay parameters.

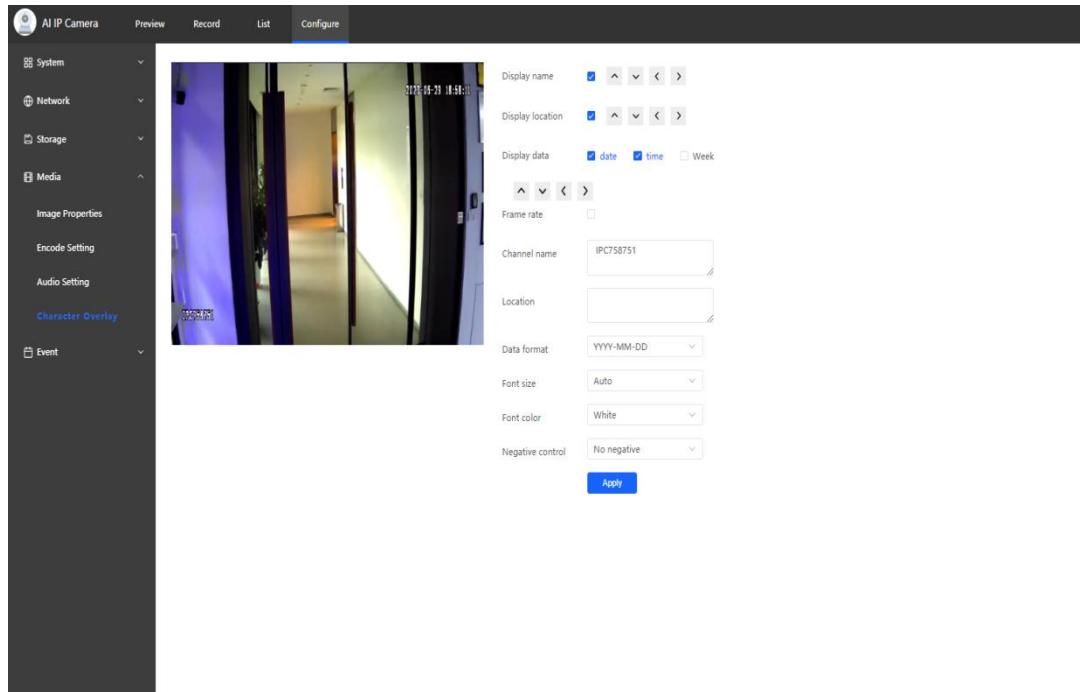


Figure 4-29 Character overlay

Table 4-15 Character overlay parameters description

Description	Parameter
Display Name	Display the device name.
Display Location	Display the device location.
Display Date	Display the actual date and time of the video footage.
Number of Connections	Check the number of connections.
Frame Rate/Bitrate	It indicates the number of frames per second in the video. The higher the video frame rate, the smoother and more realistic the picture, but the required bandwidth and storage space are larger

Channel Name	Display the channel name for overlaid characters.
Location	Set the location for the channel.
Date Format	Choose the display format for the date.
Font Size	Customize the font size.
Text Color	Customize the text color.

Step 3: Click the **Save** button to save the set character overlay parameters.

4.10 Skin Change

On the main interface of the IPC, you can click the  icon at the top-right corner to enter the skin change interface. As shown in Figure 4-30.

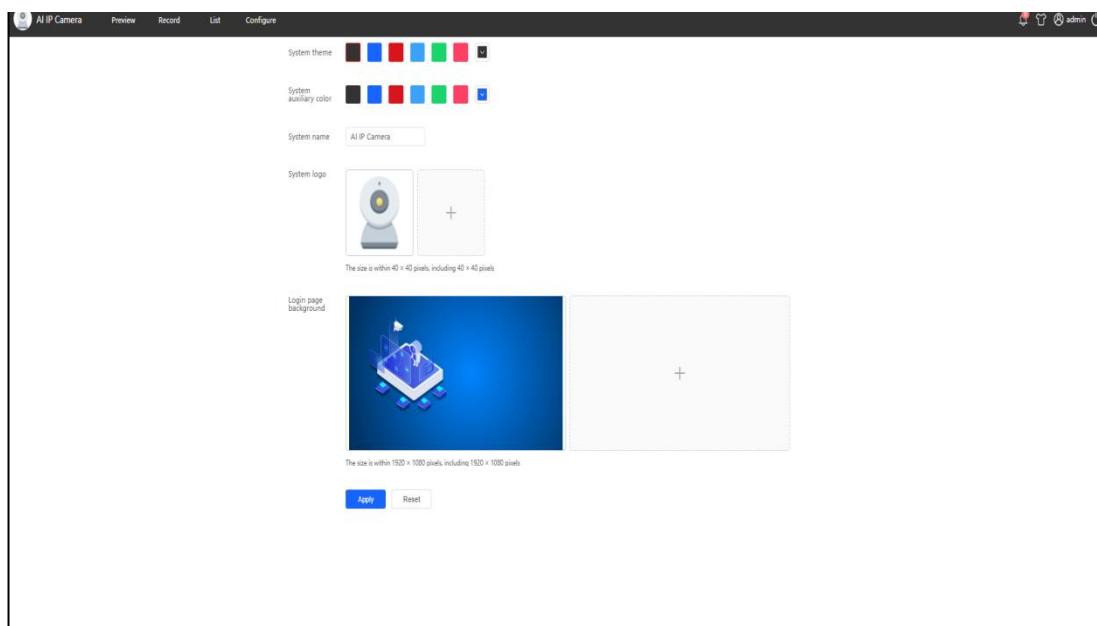


Figure 4-30 Skin change

- **System Main Color:** Users can customize the theme colors of the page.
- **System Sub Color:** Users can customize the sub colors of the page.
- **System Name:** Users can manually edit the system name.
- **System Logo:** Users can manually upload the system logo
- **Login Page Background:** Users can customize the login page background and manually upload background images.

5 Smart Functions

5.1 Face Capture

Face capture refers to capturing faces that meet the rules in the specified area and uploading the captured images to the central platform.



Description

The capture parameter config. for face capture and facial comparison cameras are different. Please refer to the actual device settings.

5.1.1 Face Capture Configuration (Face Capture Camera)

Steps

Step 1: Log in to the device's WEB Client > **Configuration** > **Event** > **Face Event**. The configuration page is shown in Figure 5-1.

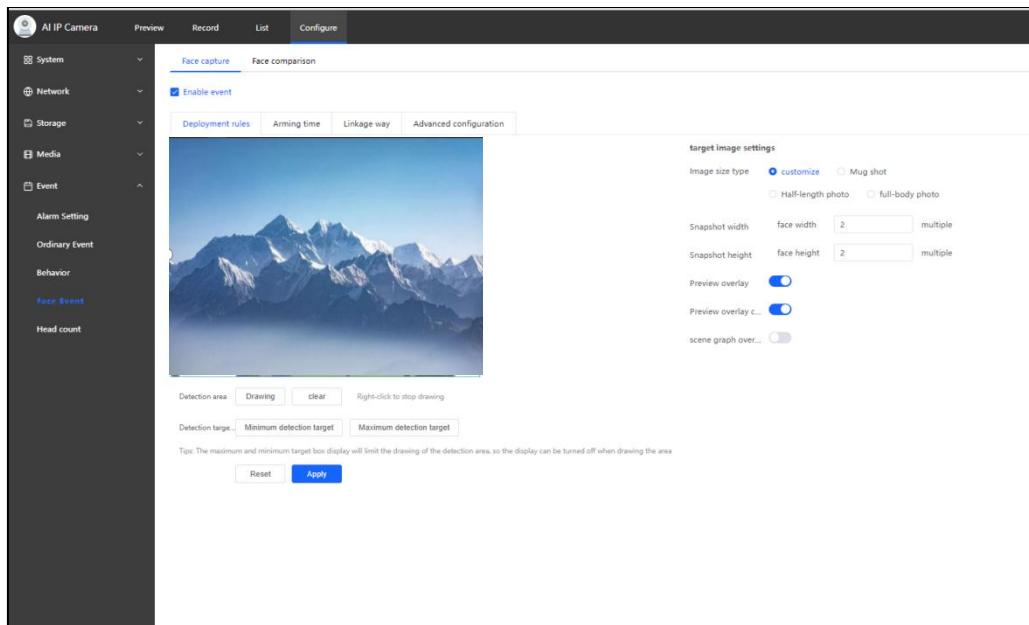


Figure 5-1 Face capture parameter configurations page (face capture camera)

Step 2: Check **Enable Event** to enable smart functions.

Step 3: Set the deployment rules.

- (1) Click the **Draw** button to draw a polygon detection zone in the video area, and right-click to stop drawing;
- (2) Click the **Clear** button to delete the currently drawn detection zone;
- (3) Drag the four corners of the maximum detection target box (max) and minimum detection target box (min) to set the target size for face capture;

(4) Click the **Restore Defaults** button to restore the default parameters of the deployment rule;

(5) Click **Apply** to apply the parameters currently set.

Step 4: Set the deployment time. The deployment time configuration page is shown below

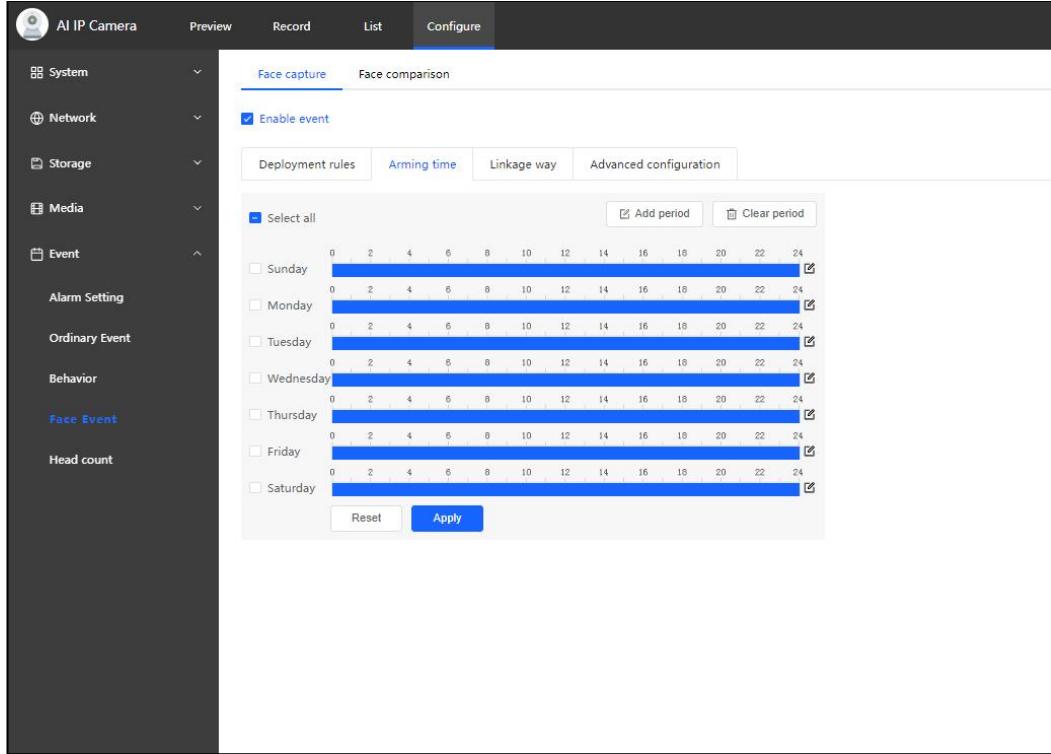


Figure 5-2 Deployment time settings (face capture camera)

(1) Check the dates that need deployment. Click the **Add Time Periods** button to open the deployment period window. Enter the needed deployment time period (up to 4 deployment time periods can be set for each day), then click **Confirm**. The pop-up page is shown in Figure 5-3:

(2) Check the dates and click the **Clear** button to clear the time periods for the day;

(3) Click the **Edit** button next to the deployment time periods to re-edit the deployment time periods for that day

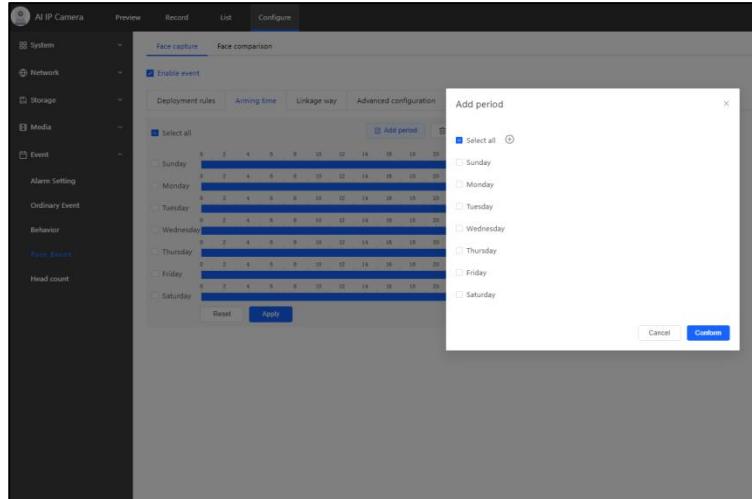


Figure 5-3 The page for adding deployment time periods

- (4) Click the **Restore Defaults** button to restore the default parameters of the deployment time;
- (5) Click **Apply** to apply the parameters currently set.

Step 5: Set the linkage mode. The linkage mode configuration page is shown below:

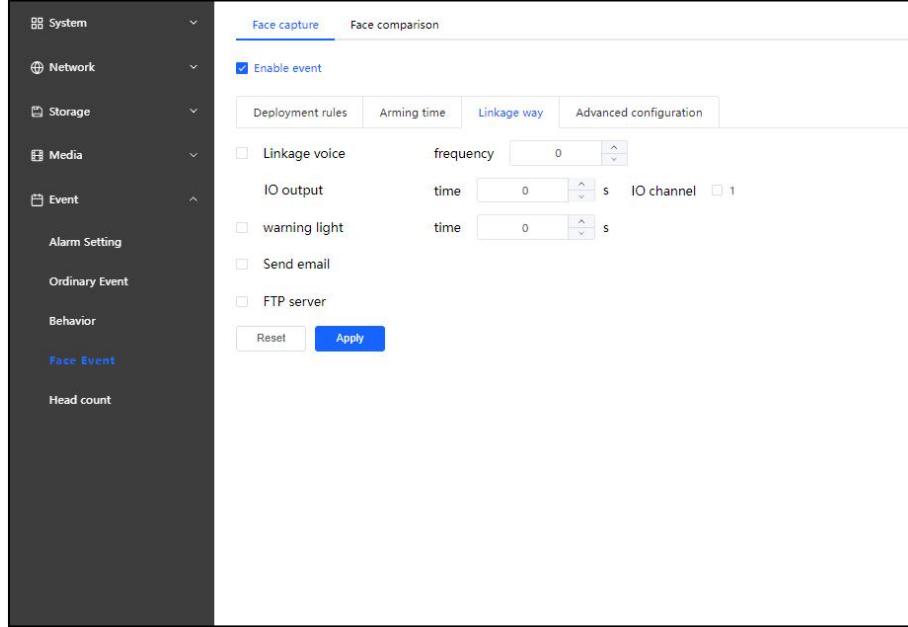


Figure 5-4 Linkage mode settings (face capture camera)

- (1) Check the **Alarm Buzzer** option and set the buzzer duration. When a face capture event occurs, it makes a beeping sound;
- (2) Check the **IO Output Switch** option and set the IO output duration. When a face capture event occurs, the IO port outputs signals;
- (3) Set the duration of the warning light. When a face capture event occurs, the warning light flashes to drive personnel away.

Step 6: Set the advanced configuration. The advanced configuration page is shown in Figure 5-5 below:

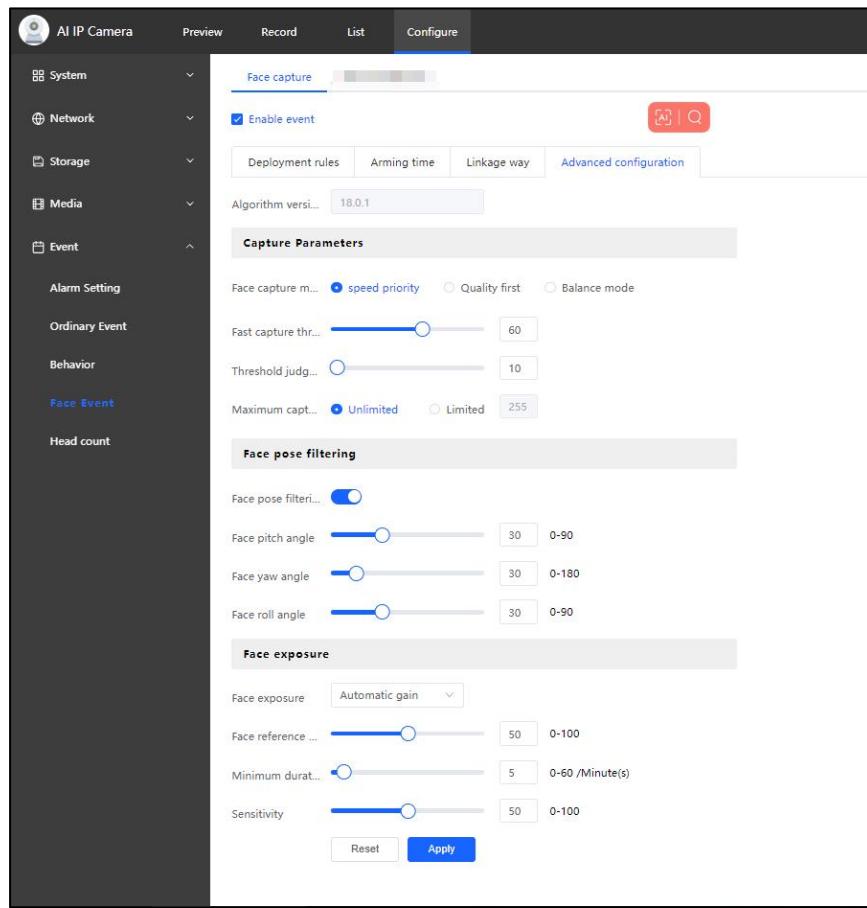


Figure 5-5 Advanced configuration (face capture camera)

- **Minimum Pixels:** Set the minimum value for the face capture target;
- **Interested Area:** Enable the interested area;
- **Algorithm Monitoring:** **Monitor Algorithm Running** is used to detect whether the algorithm is running properly. **Monitor Algorithm Detection** is used to detect whether the algorithm is detecting correctly, and **Off** is to disable the algorithm running;
- **Overlay Frame:** Superimpose the face frame on the video when a face is detected;
- **Sensitivity:** Set the algorithm detection sensitivity;
- **Face Enhancement:** Enhance face images and set the maximum automatic gain.

5.1.2 Face Capture Configuration (Facial Comparison Camera)

Steps

Step 1: Log in to the device's WEB client and go to **Configuration > Event > Face Event > Face Capture**. The configuration page is shown in Figure 5-6.

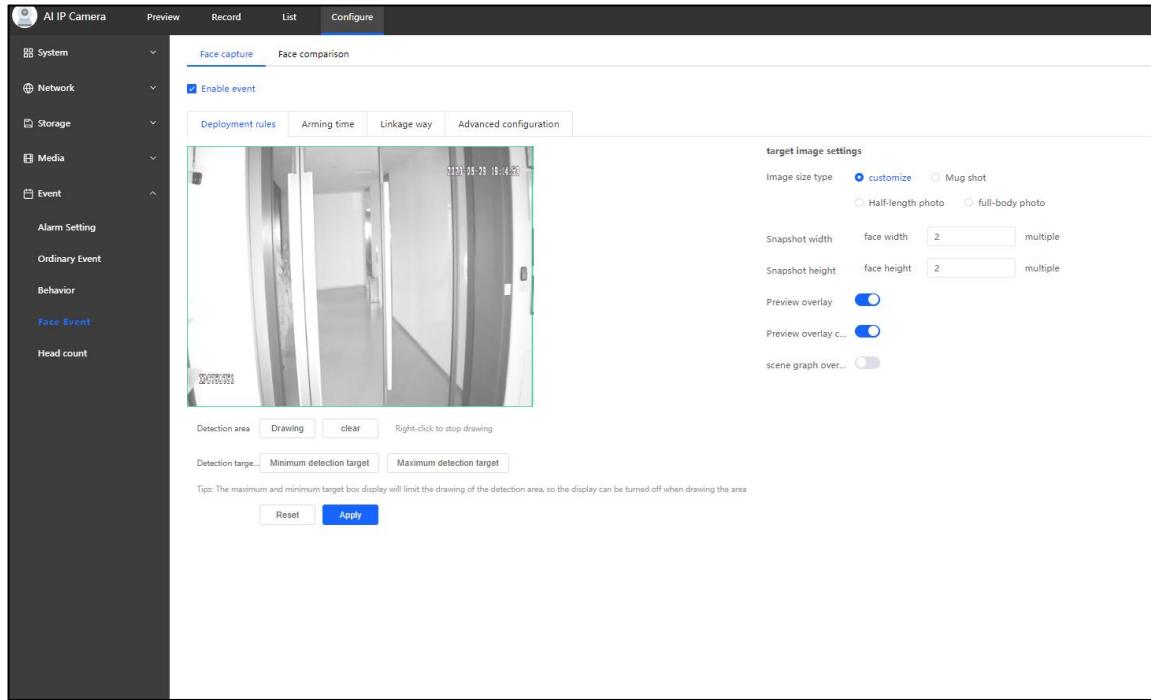


Figure 5-6 Face capture parameter configurations page (facial comparison camera)

Step 2: Check **Enable Event** to enable smart functions.

Step 3: Set the deployment rules.

- (1) Click the **Draw** button to draw a polygon detection zone in the video area, and right-click to stop drawing;
- (2) Click the **Clear** button to delete the currently drawn detection zone;
- (3) Drag the four corners of the maximum detection target box (max) and minimum detection target box (min) to set the target size for face capture;
- (4) You can set the size type of the target image as a headshot, half-body shot, or full-body shot, or customize it according to the width and height of the captured face;
- (5) Set whether to superimpose the face frame on the video when a face is detected;
- (6) Click the **Restore Defaults** button to restore the default parameters of the deployment rule;
- (7) Click **Apply** to apply the parameters currently set.

Step 4: Set the deployment time. The deployment time configuration page is shown in Figure 5-7:

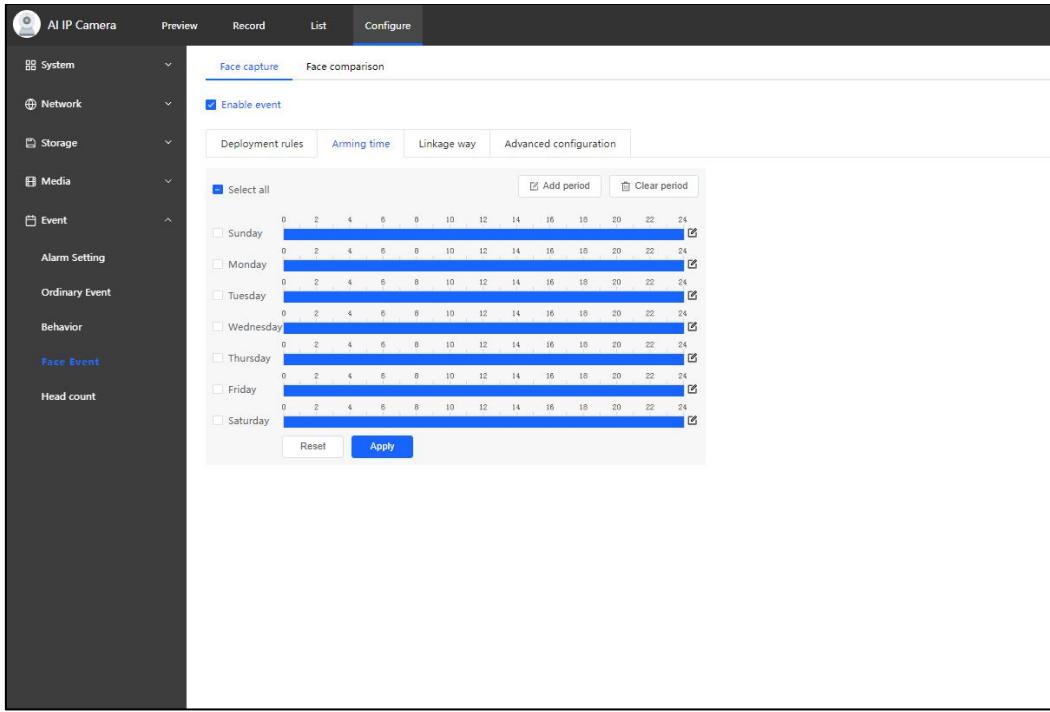


Figure 5-7 The settings of face capture deployment time (facial comparison camera)

(1) Check the dates that need deployment. Click the **Add Time Periods** button to open the deployment period window. Enter the time periods that need deployment (up to 4 deployment time periods can be set for each day), then click **Confirm**. The pop-up page is shown in Figure 5-8:

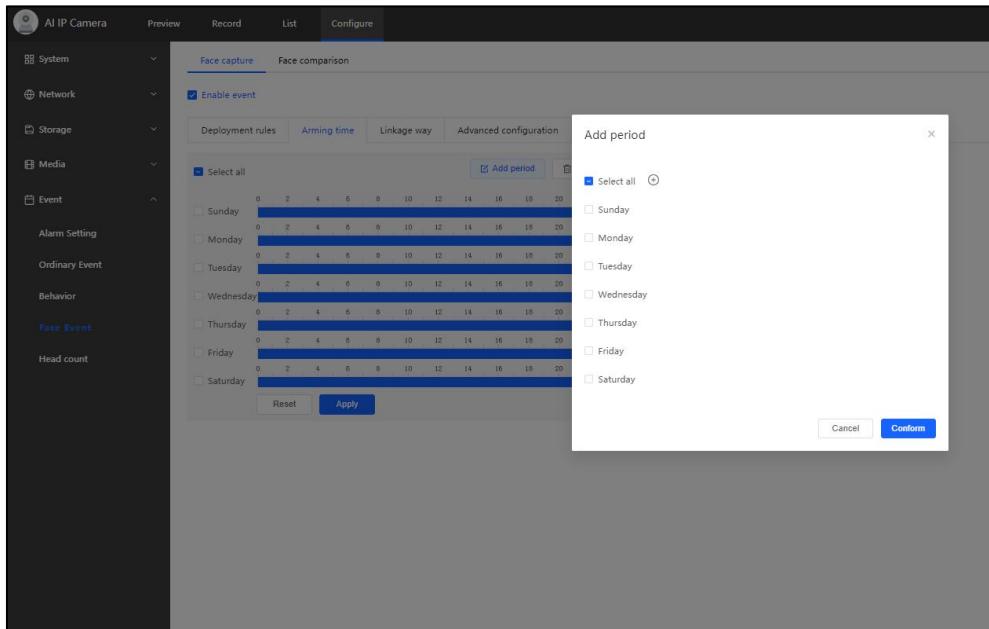


Figure 5-8 The page for adding deployment time periods

- (2) Check the dates and click the **Clear** button to clear the time periods for the day;
- (3) Click the **Edit** button next to the deployment time periods to re-edit the deployment time periods for that day;
- (4) Click the **Restore Defaults** button to restore the default parameters of the deployment time;
- (5) Click **Apply** to apply the parameters currently set.

Step 5: Set the linkage mode. The linkage mode configuration page is shown in Figure 5-9:

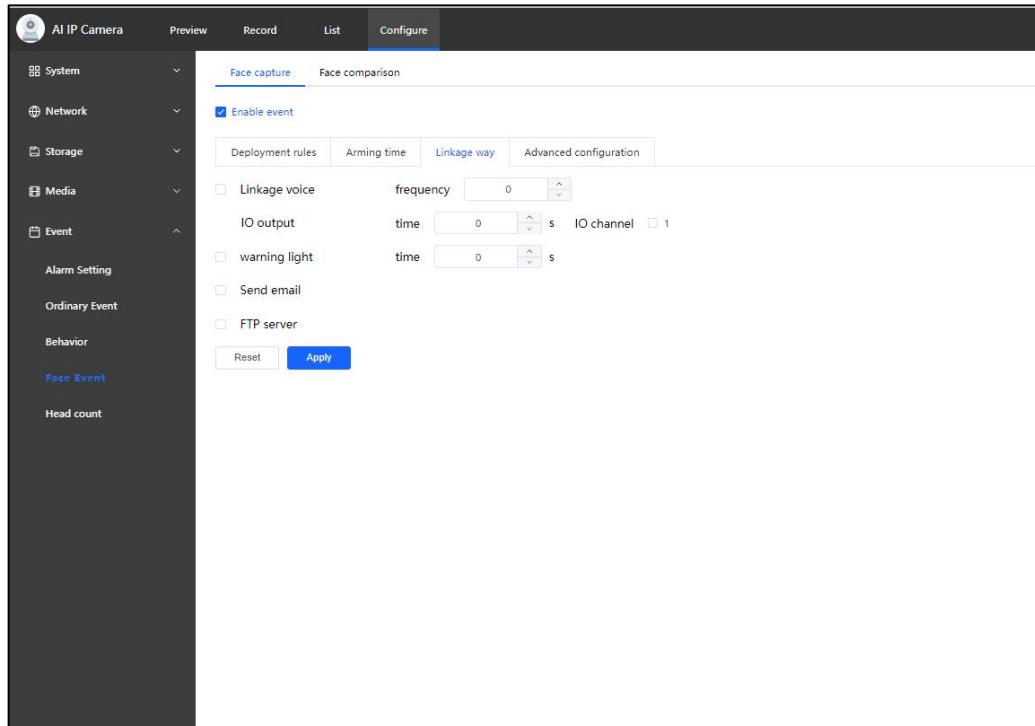


Figure 5-9 The settings of face capture linkage method (facial comparison camera)

- (1) Check the **Alarm Buzzer** option and set the buzzer duration. When a face capture event occurs, it makes a beeping sound;
- (2) You can check the **Recording Switch** and set the recording duration. When a face capture event occurs, the device will save the recording before and after the event;
- (3) Click **Apply** to apply the parameters currently set.

Step 6: Set the advanced configuration. The advanced configuration page is shown in Figure 5-10:

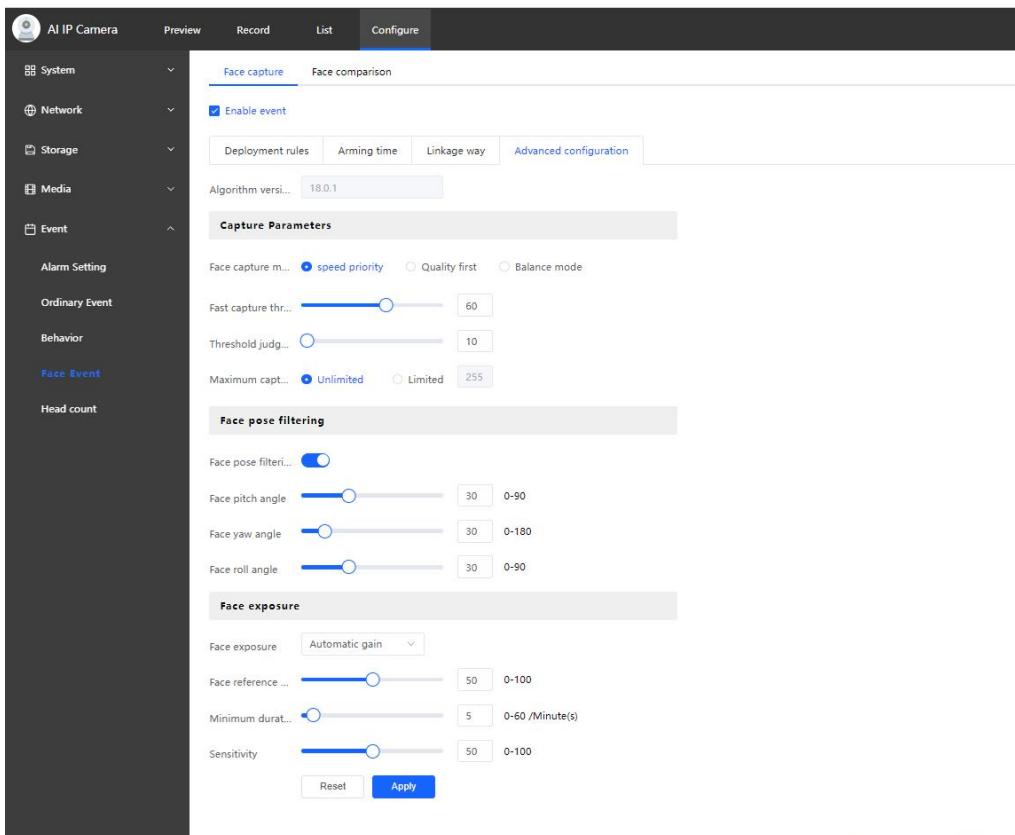


Figure 5-10 Face capture advanced configuration (facial comparison camera)

Quick Capture Mode:

The camera captures and uploads an image when a **score higher than the quick capture threshold** is detected. When no higher score is detected, the camera **selects the highest-scoring image within the threshold judgment time** (if the duration of a **person entering and leaving the detection area** is less than the threshold judgment time, the former duration will be adopted)

for upload. The parameter configurations are shown in Figure 5-11:

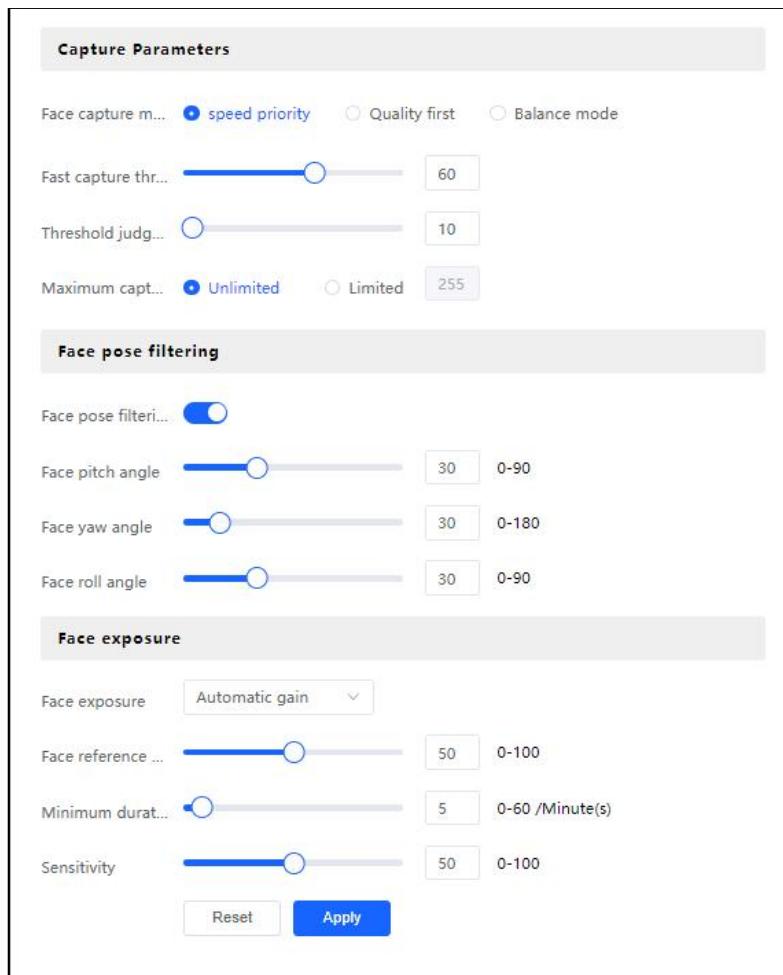


Figure 5-11 Quick capture configuration page (facial comparison camera)

The Optimal Capture Mode:

The camera selects and uploads the highest-scored image taken during the period when a person enters and leaves the capture area. No image will be uploaded if no scored images exceed the **optimal capture threshold** during this period. If a person who has already been captured re-enters and leaves the capture area **within the update time range of the deduplication database**, the image will not be uploaded. The parameter configuration page is shown in Figure 5-12:

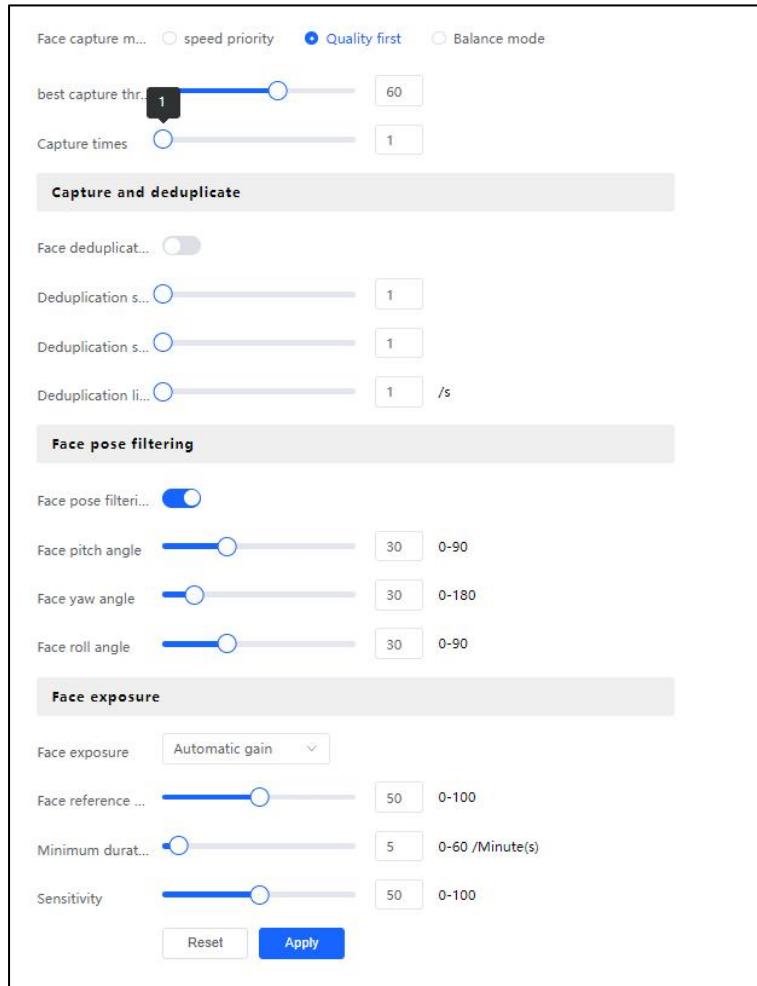


Figure 5-12 Optimal capture mode configuration page (facial comparison camera)

The Selective Capture Mode:

The camera compares the score of the currently captured image with the previously captured image during the period when a person enters and leaves the capture area. If the score of the current image is higher, it will continue to upload; otherwise, it will not. (For the first captured image, any image that scores **higher than the selective capture threshold** will be uploaded.) The Parameters Config. page is shown in Figure 5-13:

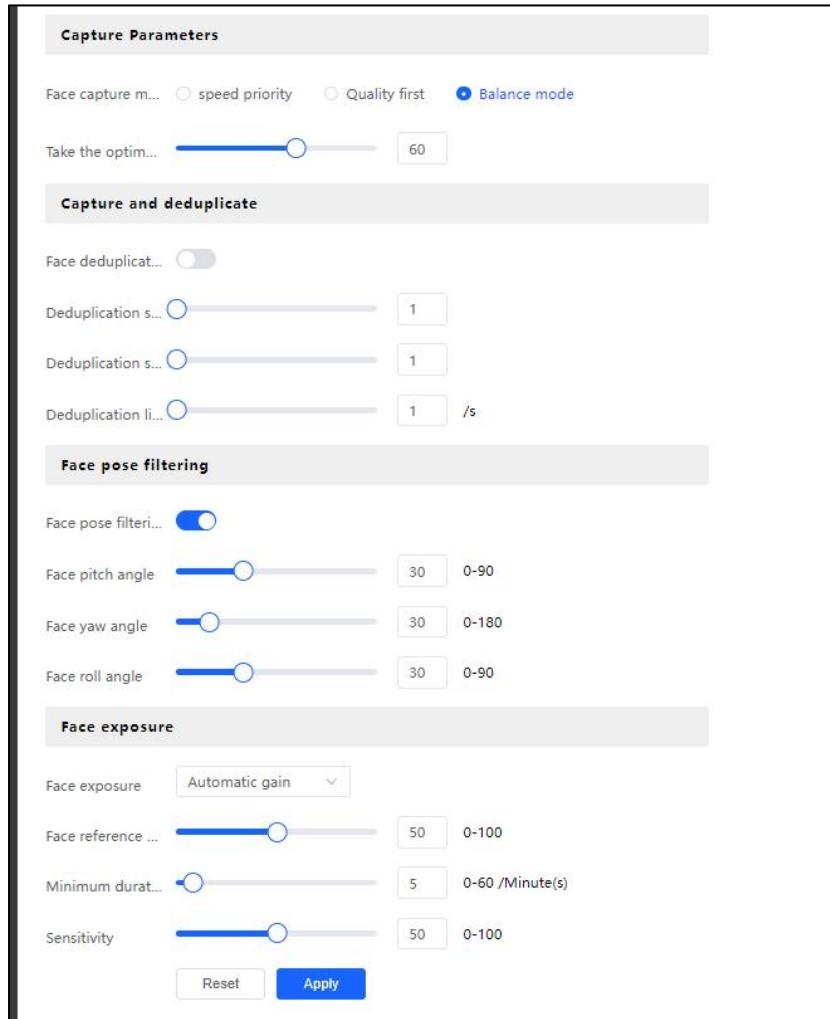


Figure 5-13 Selective capture configuration page (facial comparison camera)

Advanced configuration parameters are explained below:

- (1) Face Database Algorithm Version: display (uneditable);
- (2) Face Capture Mode: Quick Capture, Optimal Capture, and Selective Capture;
- (3) Quick Capture Parameters:
 - Quick Capture Threshold: Set the threshold for the face rating score. Any face with a score above that threshold will be captured. If the quick capture threshold is set too high, it may cause uneven capture intervals. (The default value for the quick capture threshold is determined by actual testing, with a range of 1-100.)
 - Threshold Judgment Time: During the set time period, if no capture score exceeds the quick capture threshold, the highest-scored image in that time period will be selected for upload.
 - Number of Captures: You can set the number of captures for the same target as unlimited or limited.

(4) Optimal Capture Parameters:

➤ Optimal Capture Threshold: Set the threshold for the face rating score. Any face with a score above that threshold will be captured. If the optimal capture threshold is set too high, it may increase the interval time or cause no capture.

➤ Number of Captures: You can set the number of captures for the same target (range 1-3).

(5) Selective Capture Parameters:

➤ Selective Capture Threshold: Set the threshold for the face rating score. Any face with a score above that threshold will be captured.

(6) Face Deduplication Parameters:

➤ Face Deduplication: The device will determine whether a face is a duplicate. Enabling face deduplication may result in fewer captures than the configured amount if the number of captures is greater than 1.

➤ Deduplication Similarity Threshold: When the similarity between the captured image and the deduplication database image is greater than or equal to the threshold value, it is judged to be the same person. (Range 1-100)

➤ Score Threshold for Entering the Deduplication Database: If the image does not meet the score threshold, it cannot enter the deduplication database. (Range 1-100)

➤ Deduplication Database Update Time: face image update interval of the deduplication database. (Range 1-300s)

(7) Face Exposure Parameters:

- Face Exposure: When you check the face exposure function, the camera adjusts the brightness of the face according to the scene brightness to ensure the effect of the face image.
- Reference Brightness: You can adjust the reference brightness parameters according to your needs to increase or decrease the brightness of the preview and snapshots. (Range 1-100)
- Duration: The amount of time the exposure state continues if no face is detected in the scene after enabling face exposure and adjusting the parameters. After this duration, it will automatically switch to normal exposure. (Range 1-300s)

(8) Face Pose Filtering Parameters: Filters for the pitch angle, yaw angle, and roll angle of the human face (range of 1-90°).

5.2 Facial Comparison

By comparing and modeling, it is possible to achieve recognition, capture, and comparison of targets in the rule area, or to collect attributes and establish models for targets and view facial comparison and capture records in the log.

5.2.1 Face Database Configuration

To create and maintain face database information. The specific functions may vary depending on the actual device.

Steps

Log in to the device's WEB client > **Name List**. The face database configuration page is shown in Figure 5-14.

default group		SN	Registration photo	Person Name	Gender	Birthday	ID card	Creation time	Address	Operation
	1		[Photo]	[Name]	male	1985-11-17		2023-03-22 15:20:23		<button>Edit</button> <button>Delete</button>
	2		[Photo]	[Name]	male	1970-03-22		2023-03-22 15:20:23		<button>Edit</button> <button>Delete</button>
	3		[Photo]	[Name]	male	1970-03-22		2023-03-22 15:20:23		<button>Edit</button> <button>Delete</button>
	4		[Photo]	[Name]	male	1970-03-22		2023-03-22 15:20:23		<button>Edit</button> <button>Delete</button>
	5		[Photo]	[Name]	male	1970-03-22		2023-03-22 15:20:23		<button>Edit</button> <button>Delete</button>
	6		[Photo]	[Name]	male	1970-03-22		2023-03-22 15:20:23		<button>Edit</button> <button>Delete</button>
	7		[Photo]	[Name]	male	1970-03-22		2023-03-22 15:20:24		<button>Edit</button> <button>Delete</button>

Figure 5-14 Face database page

- (1) Click the **Refresh** button to refresh the face database information;
- (2) Click the **Add Personnel** button to enter the full name, ID number, type, gender, and face picture of the personnel. Then, click **Add** to create a face model. The pop-up personnel-adding page is shown as follows:

The form has the following fields:

- Full Name: [Input field]
- ID card: [Input field]
- Person Type: whitelist (dropdown)
- Gender: Not defined (dropdown)
- Date of birth: [Input field]
- Address: [Input field]
- Face Photo Placeholder: A dashed box with a '+' icon.

Buttons at the bottom:

- Cancel
- add and continue
- Add

Figure 5-15 Personnel-adding pag

- (3) Check the personnel you want to delete and click the **Delete Personnel** button. Click **OK** on the pop-up confirmation page to delete the selected person;
- (4) Click **Import Personnel** and select the folder containing face pictures. Then, click **Confirm** to perform batch face modeling.

Description

- The whitelist and blacklist databases have the same functions and are not described here.

5.2.2 Facial Comparison Configuration

When the similarity between the captured face image and the face in the face database reaches a certain threshold, the comparison result is uploaded to the platform.

Prerequisites

- First, create a face database and import face data. For details, please refer to Face Database Configuration.
- Enable face capture and configure the capture parameters of the facial comparison camera. For details, please refer to Face Capture Configuration (Facial Comparison Camera).

Steps

Step 1: Log in to the device's WEB client > **Configuration** > **Event** > **Face Event** > **Facial Comparison**.

Step 2: Check **Enable Event** to enable smart functions.

Step 3: Set the deployment time. The deployment time configuration page is shown in Figure 5-16:

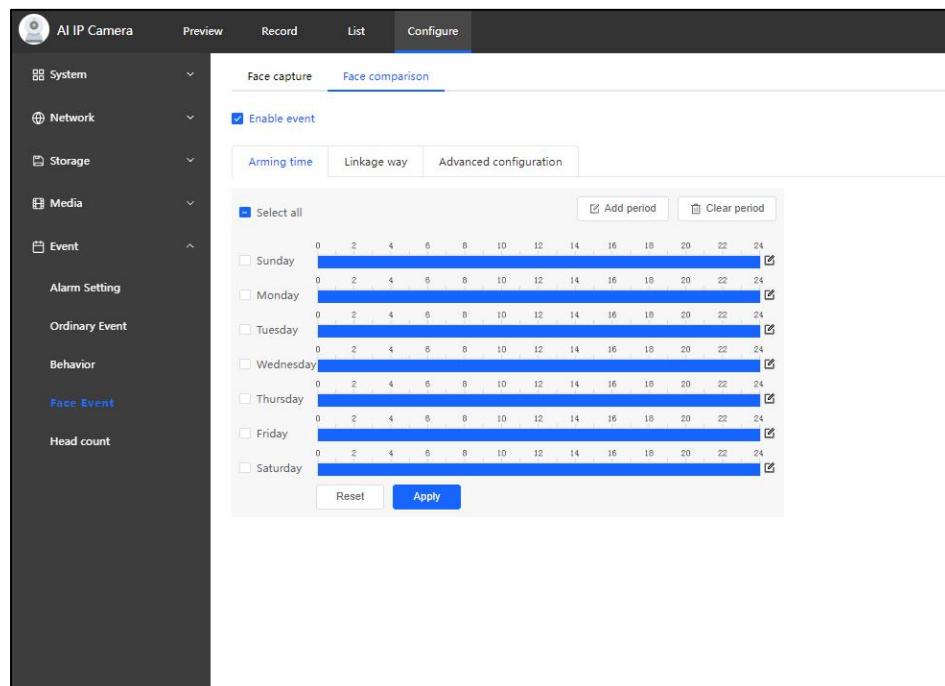


Figure 5-16 Deployment time setting

(1) Check the dates that need deployment. Click the Add Time Periods button to open the deployment period window. Enter the time periods that need deployment (up to 4 deployment time periods can be set for each day), then click Confirm. The pop-up page is shown in Figure 5-17:

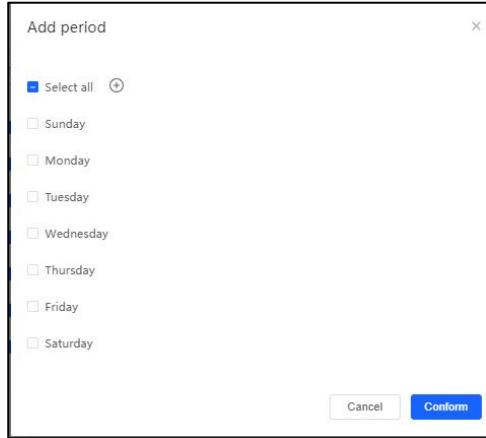


Figure 5-17 The page for adding deployment time periods

- (2) Check the dates and click the **Clear** button to clear the time periods for the day;
- (3) Click the **Edit** button next to the deployment time periods to re-edit the deployment time periods for that day;
- (4) Click the **Restore Defaults** button to restore the default parameters of the deployment time;
- (5) Click **Apply** to apply the parameters currently set.

Step 4: Set the linkage mode. The linkage mode configuration page is shown in Figure 5-18:

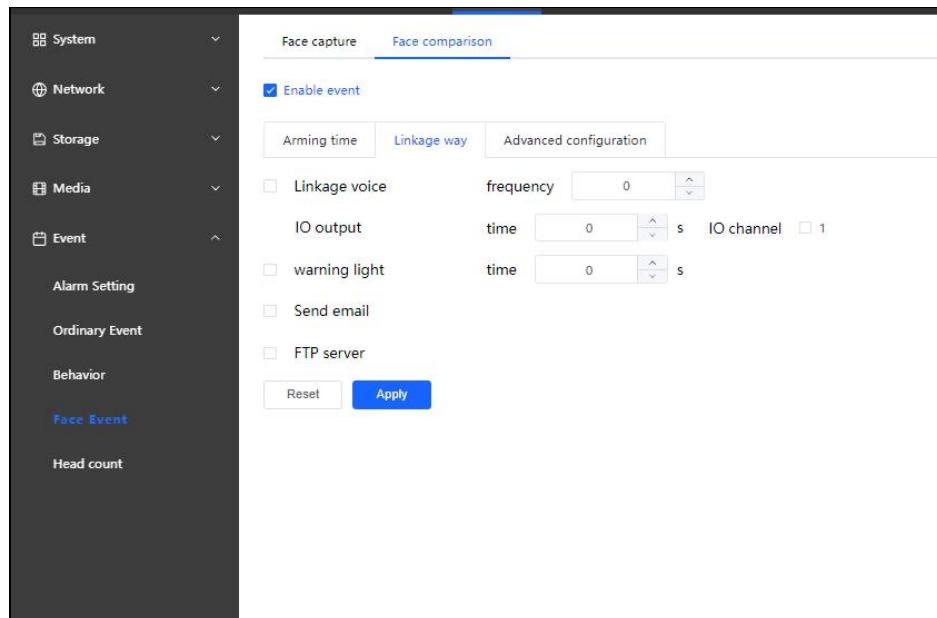


Figure 5-18 Linkage mode settings

- (1) Check the **Alarm Buzzer** option and set the buzzer duration. When a face capture event occurs, it makes a beeping sound;
- (2) You can check the **Recording Switch** and set the recording duration. When a face capture event occurs, the device will save the recording before and after the event;
- (3) Click **Apply** to apply the parameters currently set.

Step 5: Set the advanced configuration. The advanced configuration page is shown in Figure 5-19 below:

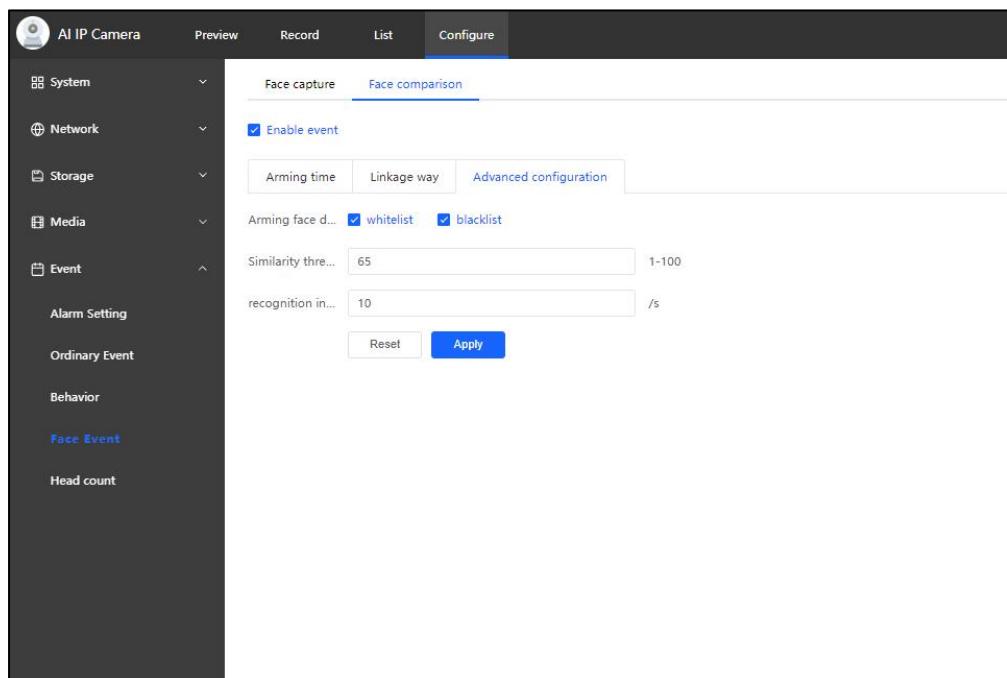


Figure 5-19 Advanced configuration page

- (1) Deployment face library: You can select the face library to be deployed;
- (2) Similarity threshold: When the similarity between the captured face image and the face in the face library is greater than or equal to this threshold, it is recognized as the same personnel (range: 1-100);
- (3) Face library update time: After this time, the number of captures for the face will be recalculated (range: 1-60 minutes).

5.2.3 Facial Comparison Result Query

Used to query the face information of the captured faces that match with the face database and the unmatched strangers, such as full name, gender, and other information.

Steps

Log in to the device's WEB client > **Records**. The records query page is shown in Figure 5-20.

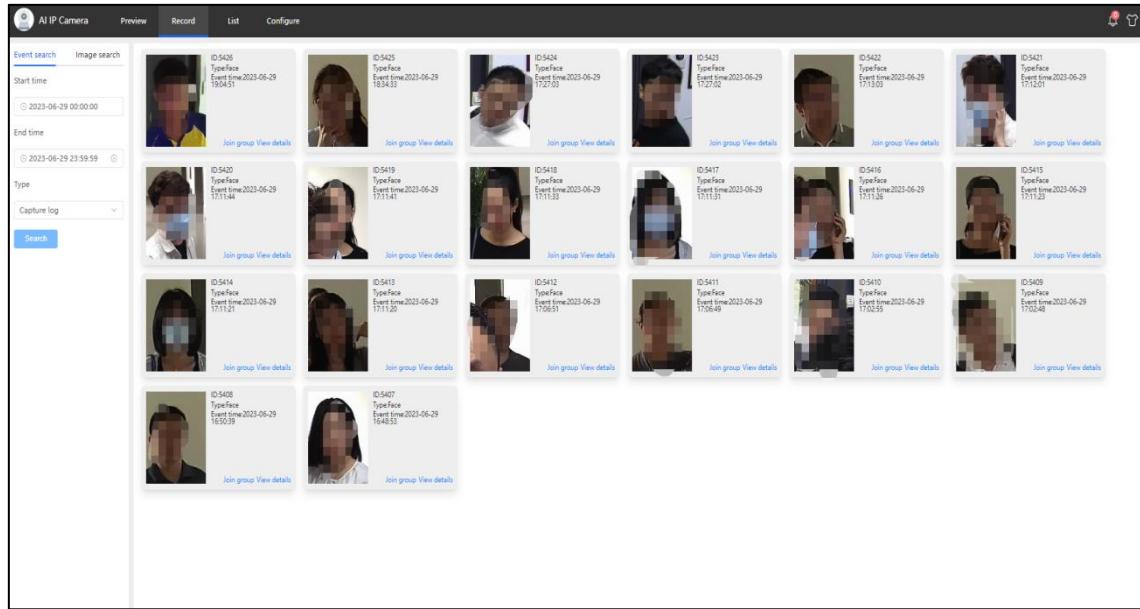


Figure 5-20 Records query page

- (1) Enter the Start Time, End Time, Gender, and Record Type (captured records or stranger records), and click the **Search** button;
- (2) Click the **View Details** button to view the detailed information, scene map, and event recording of the event.

5.3 See-through Kitchen Configuration

The see-through kitchen camera uses a six-in-one AI detection algorithm. During the day, it detects the chef's dress code such as chef uniform, chef hat, mask, and working status, such as smoking, phone usage, etc. At night, it detects rat infestations.

Description

It supports night vision (IR imaging). You can enable the rat detection algorithm at night.

Steps

Step 1: Log in to the device's WEB client > **Configuration** > **Event** > **See-through Kitchen**. The configuration page is shown in Figure 5-21.

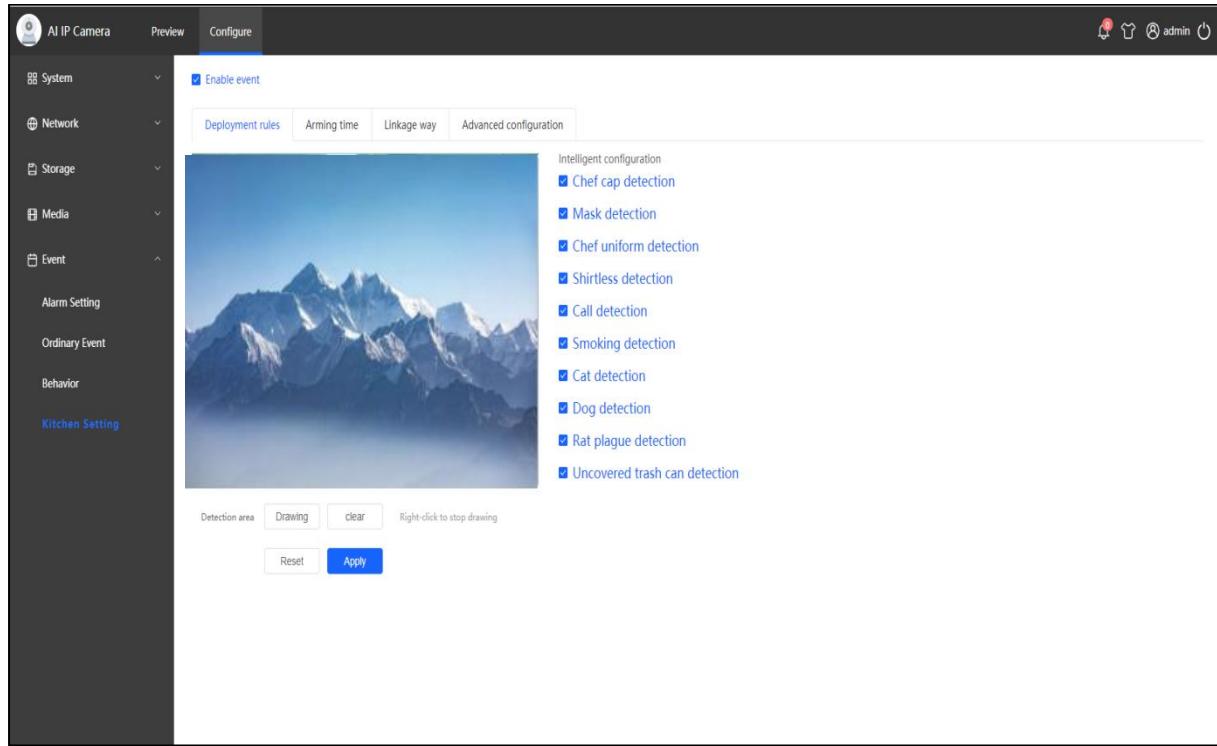


Figure 5-21 See-through kitchen configuration page

Step 2:

Check Enable Event to enable smart functions.

Step 3:

Set the deployment rules.

- (1) Click the **Draw** button to draw a polygon detection zone in the video area, and right-click to stop drawing;
- (2) Click the **Clear** button to delete the currently drawn detection zone;
- (3) Freely configured smart detection algorithms: smoking detection, phone usage detection, rat infestation detection, mask detection, chef hat detection, and chef uniform detection;
- (4) Click the **Restore Defaults** button to restore the default parameters of the deployment rule;
- (5) Click **Apply** to apply the parameters currently set.

Step 4:

Set the deployment time. The deployment time configuration page is shown in Figure 5-26:

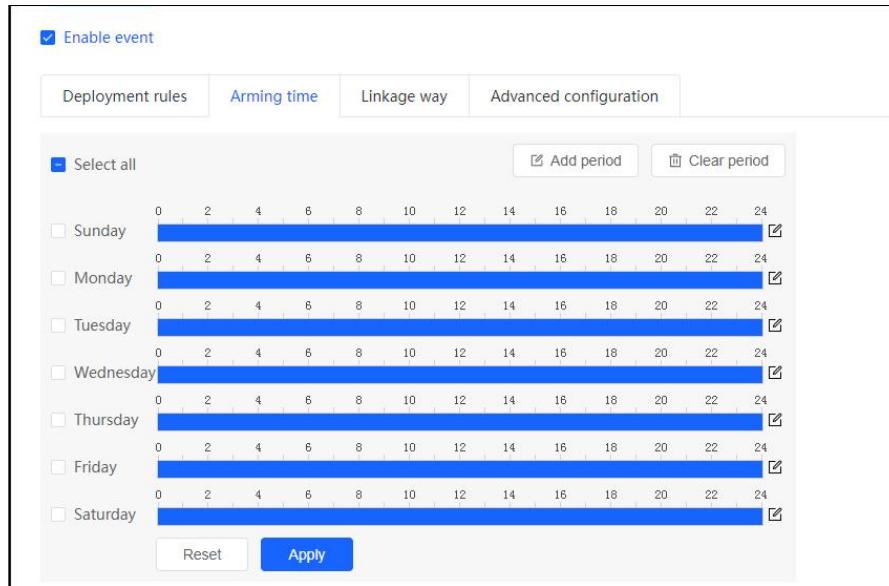


Figure 5-26 Deployment time settings

(1) Check the dates that need deployment. Click the **Add Time Periods** button to open the deployment period window. Enter the time periods that need deployment (up to 4 deployment time periods can be set for each day), then click **Confirm**. The pop-up page is shown in Figure 5-27:

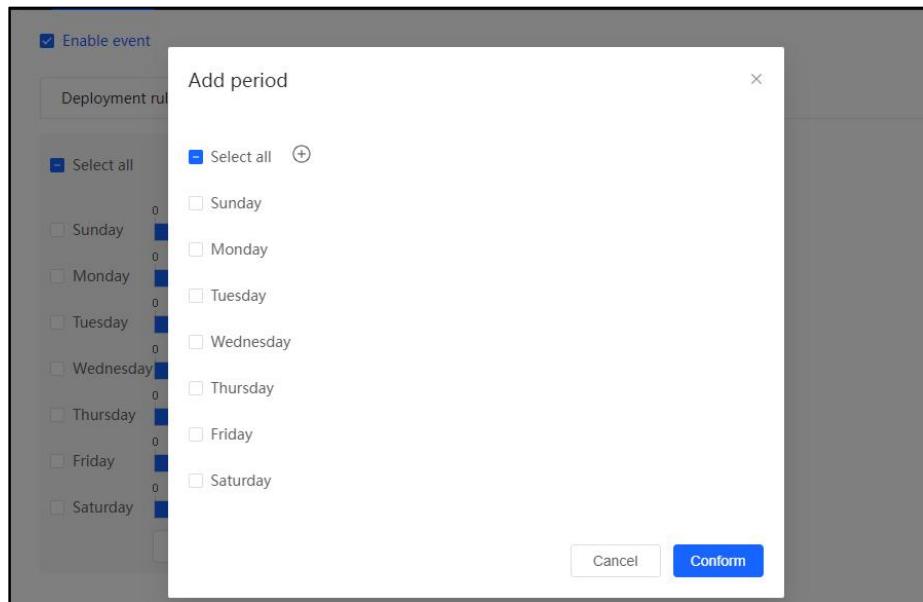


Figure 5-27 The page for adding deployment time periods

- (2) Check the dates and click the **Clear** button to clear the time periods for the day;
- (3) Click the **Edit** button next to the deployment time periods to re-edit the deployment time periods for that day;
- (4) Click the **Restore Defaults** button to restore the default parameters of the deployment time;
- (5) Click **Apply** to apply the parameters currently set.

Step 5: Set the linkage mode. The linkage mode configuration page is shown in Figure 5-28:

<input checked="" type="checkbox"/> Enable event												
Deployment rules	Arming time	Linkage way	Advanced configuration									
<p>Enable <input checked="" type="checkbox"/></p> <table style="width: 100%; border-collapse: collapse;"> <tr> <td style="width: 30%; vertical-align: top;"> <input checked="" type="checkbox"/> Linkage voice </td> <td style="width: 10%; text-align: center; vertical-align: top;">frequency</td> <td style="width: 60%; text-align: right; vertical-align: top;">1</td> </tr> <tr> <td> <input checked="" type="checkbox"/> IO output </td> <td style="text-align: center;">time</td> <td style="text-align: right;">5</td> </tr> <tr> <td> <input type="checkbox"/> warning light </td> <td style="text-align: center;">time</td> <td style="text-align: right;">5</td> </tr> </table> <p style="margin-top: 10px;"> <input type="button" value="Reset"/> <input style="background-color: #0070C0; color: white; border: 1px solid #0070C0; padding: 2px 10px;" type="button" value="Apply"/> </p>				<input checked="" type="checkbox"/> Linkage voice	frequency	1	<input checked="" type="checkbox"/> IO output	time	5	<input type="checkbox"/> warning light	time	5
<input checked="" type="checkbox"/> Linkage voice	frequency	1										
<input checked="" type="checkbox"/> IO output	time	5										
<input type="checkbox"/> warning light	time	5										

Figure 5-28 Linkage mode settings

- (1) Check the **Alarm Buzzer** option and set the buzzer duration. When a face capture event occurs, it makes a beeping sound;
- (2) Check the **IO Output Switch** option and set the IO output duration. When a face capture event occurs, the IO port outputs signals;
- (3) Set the duration of the warning light. When a face capture event occurs, the warning light flashes to drive personnel away.

Step 6: Set the advanced configuration. The advanced configuration page is shown in Figure 5-29:

<input checked="" type="checkbox"/> Enable event																																																																							
Deployment rules	Arming time	Linkage way	Advanced configuration																																																																				
<table style="width: 100%; border-collapse: collapse;"> <tr> <td colspan="2">Minimum pixel</td> <td>32</td> <td>32-672</td> </tr> <tr> <td colspan="4"> Chef uniform color: <input type="checkbox"/> Black <input checked="" type="checkbox"/> White <input type="checkbox"/> Red <input type="checkbox"/> Blue <input type="checkbox"/> Green </td> </tr> <tr> <td>Chef hat confirmation...</td> <td>8</td> <td>10</td> <td>Chef hat violation al...</td> <td>85</td> <td>70</td> </tr> <tr> <td>Mask confirmation c...</td> <td>8</td> <td>10</td> <td>Mask violation alar...</td> <td>85</td> <td>72</td> </tr> <tr> <td>Chef uniform confir...</td> <td>8</td> <td>10</td> <td>Chef uniform violati...</td> <td>85</td> <td>73</td> </tr> <tr> <td>Phone call confirmat...</td> <td>8</td> <td>10</td> <td>Phone call violation ...</td> <td>85</td> <td>65</td> </tr> <tr> <td>Smoking confirmatio...</td> <td>8</td> <td>10</td> <td>Smoking violation al...</td> <td>85</td> <td>66</td> </tr> <tr> <td>Garbage can confir...</td> <td>8</td> <td>10</td> <td>Garbage can violatio...</td> <td>85</td> <td>Garbage can sensitiv...</td> </tr> <tr> <td>Cat confirmation co...</td> <td>8</td> <td>10</td> <td>Cat violation alarm i...</td> <td>85</td> <td>Cat sensitivity thresh...</td> </tr> <tr> <td>Dog confirmation co...</td> <td>8</td> <td>10</td> <td>Dog violation alarm ...</td> <td>85</td> <td>Dog sensitivity thresh...</td> </tr> <tr> <td>Mouse confirmation...</td> <td>8</td> <td>10</td> <td>Mouse violation alar...</td> <td>85</td> <td>Mouse sensitivity th...</td> </tr> <tr> <td>Shirtless confirmatio...</td> <td>8</td> <td>10</td> <td>Shirtless violation al...</td> <td>85</td> <td>Shirtless sensitivity t...</td> </tr> </table> <p style="margin-top: 10px;"> <input type="button" value="Reset"/> <input style="background-color: #0070C0; color: white; border: 1px solid #0070C0; padding: 2px 10px;" type="button" value="Apply"/> </p>				Minimum pixel		32	32-672	Chef uniform color: <input type="checkbox"/> Black <input checked="" type="checkbox"/> White <input type="checkbox"/> Red <input type="checkbox"/> Blue <input type="checkbox"/> Green				Chef hat confirmation...	8	10	Chef hat violation al...	85	70	Mask confirmation c...	8	10	Mask violation alar...	85	72	Chef uniform confir...	8	10	Chef uniform violati...	85	73	Phone call confirmat...	8	10	Phone call violation ...	85	65	Smoking confirmatio...	8	10	Smoking violation al...	85	66	Garbage can confir...	8	10	Garbage can violatio...	85	Garbage can sensitiv...	Cat confirmation co...	8	10	Cat violation alarm i...	85	Cat sensitivity thresh...	Dog confirmation co...	8	10	Dog violation alarm ...	85	Dog sensitivity thresh...	Mouse confirmation...	8	10	Mouse violation alar...	85	Mouse sensitivity th...	Shirtless confirmatio...	8	10	Shirtless violation al...	85	Shirtless sensitivity t...
Minimum pixel		32	32-672																																																																				
Chef uniform color: <input type="checkbox"/> Black <input checked="" type="checkbox"/> White <input type="checkbox"/> Red <input type="checkbox"/> Blue <input type="checkbox"/> Green																																																																							
Chef hat confirmation...	8	10	Chef hat violation al...	85	70																																																																		
Mask confirmation c...	8	10	Mask violation alar...	85	72																																																																		
Chef uniform confir...	8	10	Chef uniform violati...	85	73																																																																		
Phone call confirmat...	8	10	Phone call violation ...	85	65																																																																		
Smoking confirmatio...	8	10	Smoking violation al...	85	66																																																																		
Garbage can confir...	8	10	Garbage can violatio...	85	Garbage can sensitiv...																																																																		
Cat confirmation co...	8	10	Cat violation alarm i...	85	Cat sensitivity thresh...																																																																		
Dog confirmation co...	8	10	Dog violation alarm ...	85	Dog sensitivity thresh...																																																																		
Mouse confirmation...	8	10	Mouse violation alar...	85	Mouse sensitivity th...																																																																		
Shirtless confirmatio...	8	10	Shirtless violation al...	85	Shirtless sensitivity t...																																																																		

Figure 5-29 Advanced configuration
86

- **Minimum Pixels:** Set the minimum value for the face capture target;
- **Interested Area:** Enable the interested area;
- **Algorithm Monitoring:** **Monitor Algorithm Running** is used to check if the algorithm is running properly. **Monitor Algorithm Detection** is used to check whether the algorithm is detected correctly. **Off** is used to disable algorithm run detection;
- **Chef Uniform's Color:** Set the color of the chef's uniform, supporting the detection of black, white, red, blue, and green chef's uniforms; ● **Animal Detection:** Set the animal to be detected, supporting the detection of mice, cats, and dogs;
- **Chef's Hat Detection Sensitivity:** To set the sensitivity of the chef's hat detection algorithm. The higher the value, the easier the detection, but there is a possibility of increased error.
- **Mask Detection Sensitivity:** To set the sensitivity of the mask detection algorithm. The higher the value, the easier the detection, but there is a possibility of increased error.
- **Chef's Uniform Detection Sensitivity:** To set the sensitivity of the chef's uniform detection algorithm. The higher the value, the easier the detection, but there is a possibility of increased error.
- **Detection Sensitivity of Phone Usage:** To set the sensitivity of the phone usage detection algorithm. The higher the value, the easier the detection, but there is a possibility of increased error.
- **Smoking Detection Sensitivity:** To set the sensitivity of the smoking detection algorithm. The higher the value, the easier the detection, but there is a possibility of increased error.

5.4 Safety Helmet and Reflective Vest Configuration

Through AI technology, we analyze real-time video to monitor whether on-site personnel wear safety helmets and reflective vests as required for safe operations.

Steps

Step 1: Log in to the device's WEB client and go to **Configuration > Event > Safety Helmet and Reflective Vest**. The configuration page is shown in Figure 5-30.

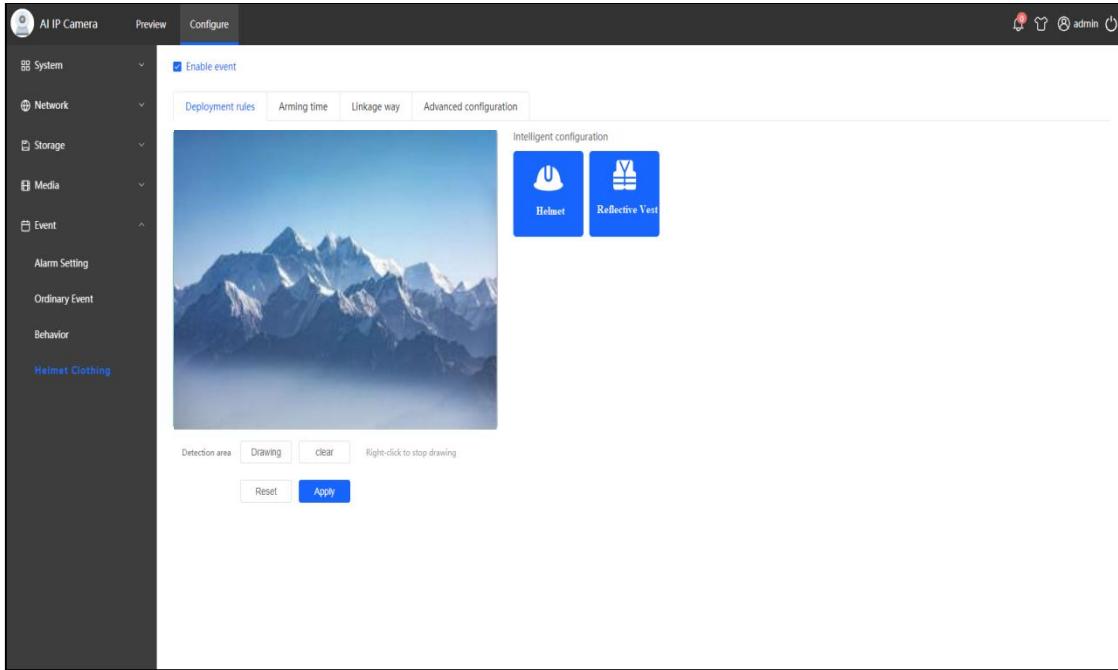


Figure 5-30 Safety helmet and reflective vest configuration

Step 2:

Check Enable Event to enable smart functions.

Step 3:

Set the deployment rules.

- (1) Click the **Draw** button to draw a polygon detection zone in the video area, and right-click to stop drawing;
- (2) Click the **Clear** button to delete the currently drawn detection zone;
- (3) You can configure the smart algorithms freely, including safety helmet and reflective vest detection;
- (4) Click the **Restore Defaults** button to restore the default parameters of the deployment rule;
- (5) Click **Apply** to apply the parameters currently set.

Step 4: Set the deployment time. The deployment time configuration page is shown in Figure 5-31:

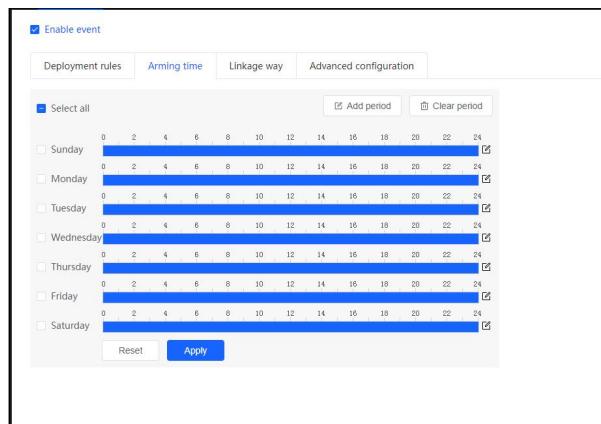


Figure 5-31 Deployment time settings

(1) Check the dates that need deployment. Click **Add Time Periods** to open the deployment period window. Enter the needed deployment time period (up to 4 deployment time periods can be set for each day), then click **Confirm**. The pop-up page is shown in Figure 5-32:

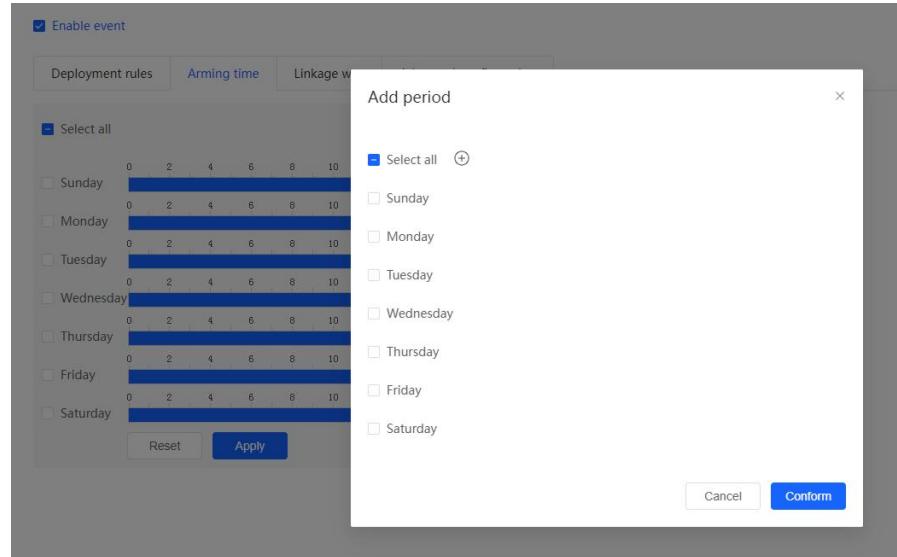


Figure 5-32 The page for adding deployment time periods

- (2) Check the dates and click the **Clear** button to clear the time periods;
- (3) Click the **Edit** button next to the deployment time periods to re-edit the deployment time periods for that day;
- (4) Click the **Restore Defaults** button to restore the default parameters of the deployment time;
- (5) Click **Apply** to apply the parameters currently set.

Step 5: Set the linkage mode. The linkage mode configuration page is shown in Figure 5-33:

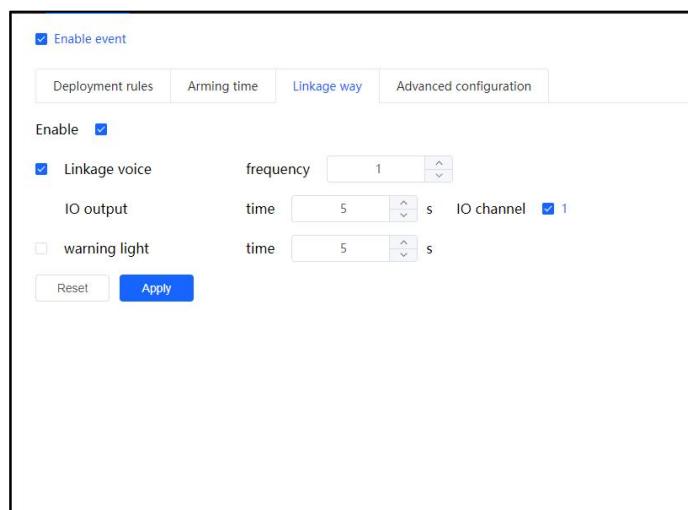


Figure 5-33 Linkage mode settings

- (1) Check **Alarm Buzzer** to receive a buzzing alarm when a face capture event occurs;

Step 6: Set the advanced configuration. The advanced configuration page is shown in Figure 5-34:

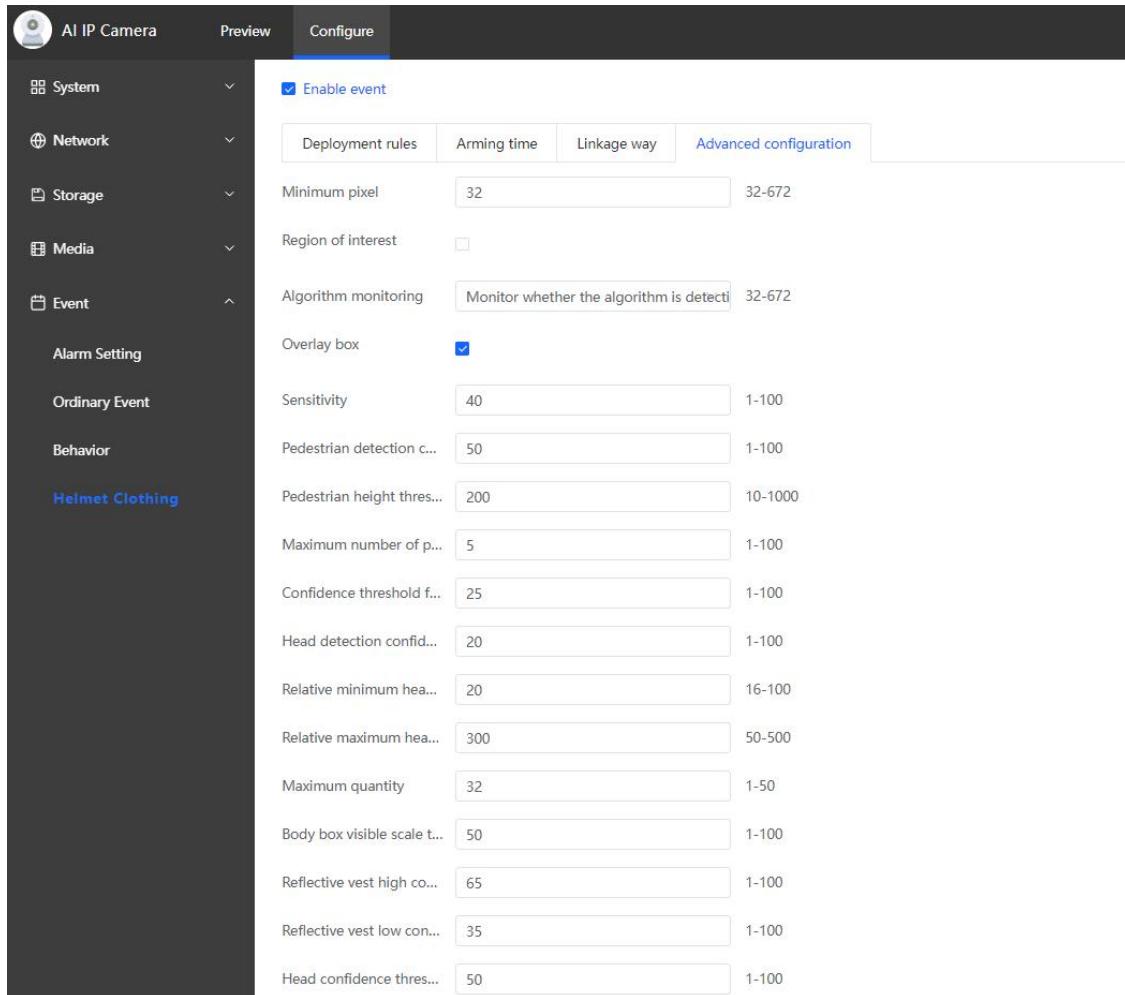


Figure 5-34 Advanced configuration

- The Confidence Threshold for Pedestrian Detection: When the target pedestrian threshold exceeds the set value, it is identified as a pedestrian (range 0.01-0.99). The higher the value, the more difficult it is to detect the pedestrian. The lower the value, the easier it is to detect the pedestrian and the higher the false recognition rate.
- The Threshold for Pedestrian Height: Set the judgment threshold for pedestrian height (range 10-1000).
- Maximum Number of People Analyzed in a Single Frame: Set the maximum number of people for single-frame image analysis.
- The Confidence Threshold for Human Body Key-Point Detection: when the threshold for the detected human body key points exceeds the set value, it is identified as a human (range 0.01-0.99). The higher the value, the more difficult it is to detect the human body. The lower the value, the easier it is to detect the human body and the higher the false recognition rate.

- The Confidence Threshold for Head Detection: when the target person's head threshold exceeds the set value, it is identified as a person's head (range 0-1). The higher the value, the more difficult it is to detect the head. The lower the value, the easier it is to detect the head and the higher the false recognition rate.
- Relative Minimum Width of Head: Set the relative minimum width of the head.
- Relative Maximum Width of Head: Set the relative maximum width of the head.
- The Confidence Threshold for Reflective Vest Detection: when the target reflective vest threshold exceeds the set value, it is identified as a reflective vest. The higher the value, the more difficult it is to detect the reflective vest. The lower the value, the easier it is to detect the reflective vest and the higher the false recognition rate.
- The Confidence Threshold for Safety Helmet Detection: when the target threshold exceeds the set value, it is identified as a safety helmet. The higher the value, the more difficult it is to detect the safety helmet. The lower the value, the easier it is to detect the safety helmet and the higher the false recognition rate.

5.5 Electric Bicycle Identification Configuration

Precise detection and analysis of electric bicycles to achieve analysis, identification, and real-time warning of electric bicycle intrusion events in the perimeter area.

Steps

Step 1: Log in to the device's WEB Client > **Configuration** > **Event** > **Electric Bicycle**. The configuration page is shown in Figure 5-35.

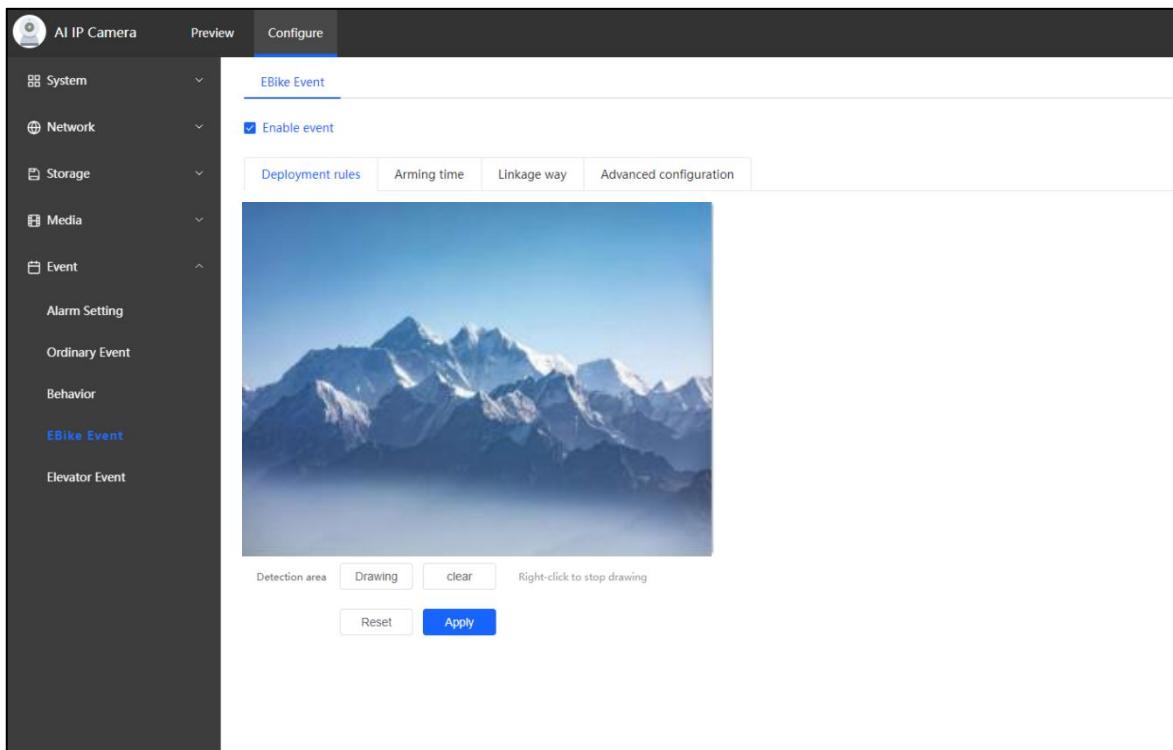


Figure 5-35 Configuration page of electric bicycle detection

Step 2: Check **Enable Event** to enable smart functions.

Step 3:

Set the deployment rules.

- (1) Click the **Draw** button to draw a polygon detection zone in the video area, and right-click to stop drawing;
- (2) Click the **Clear** button to delete the currently drawn detection zone;
- (3) You can configure the smart algorithms freely, including safety helmet and reflective vest detection;
- (4) Click the **Restore Defaults** button to restore the default parameters of the deployment rule;
- (5) Click **Apply** to apply the parameters currently set.

Step 4:

Set the deployment time. The deployment time configuration page is shown in Figure 5-36:

The screenshot shows the 'Arming time' tab of the deployment configuration. At the top, there is a checked checkbox labeled 'Enable event'. Below it, there are four tabs: 'Deployment rules', 'Arming time' (which is selected), 'Linkage way', and 'Advanced configuration'. Under the 'Arming time' tab, there is a section titled 'Select all' with a checkbox. Below this, there is a list of days of the week (Sunday through Saturday) each with a checkbox. To the right of each day's checkbox is a horizontal timeline from 0 to 24 hours, with blue bars indicating selected time periods. At the top right of this section are two buttons: 'Add period' and 'Clear period'. At the bottom of the section are 'Reset' and 'Apply' buttons.

Figure 5-36 Deployment time settings

- (1) Check the dates that need deployment. Click the **Add Time Periods** button to open the deployment period window. Enter the time periods that need deployment (up to 4 deployment time periods can be set for each day), then click **Confirm**. The pop-up page is shown in Figure 3-27:

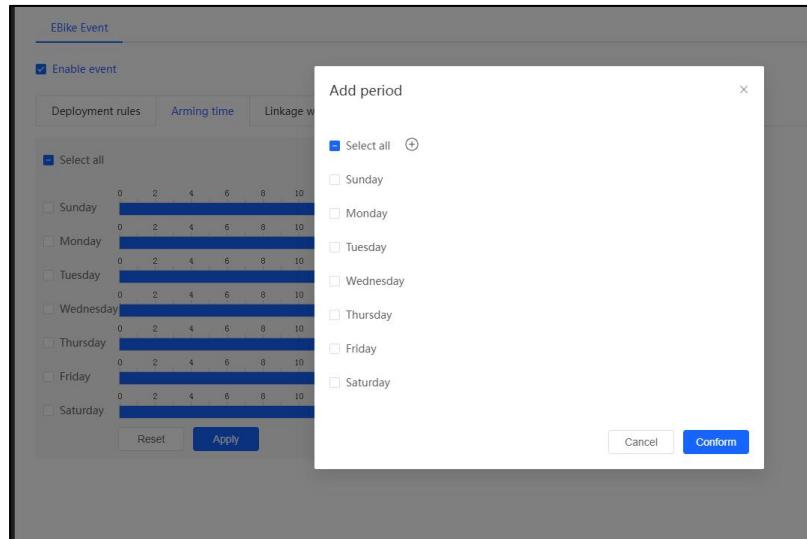


Figure 5-37 The page for adding deployment time periods

- (2) Check the dates and click the **Clear** button to clear the time periods for the day;
- (3) Click the **Edit** button next to the deployment time periods to re-edit the deployment time periods for that day;
- (4) Click the **Restore Defaults** button to restore the default parameters of the deployment time;
- (5) Click **Apply** to apply the parameters currently set.

Step 5: Set the linkage mode. The linkage mode configuration page is shown in Figure 5-38:

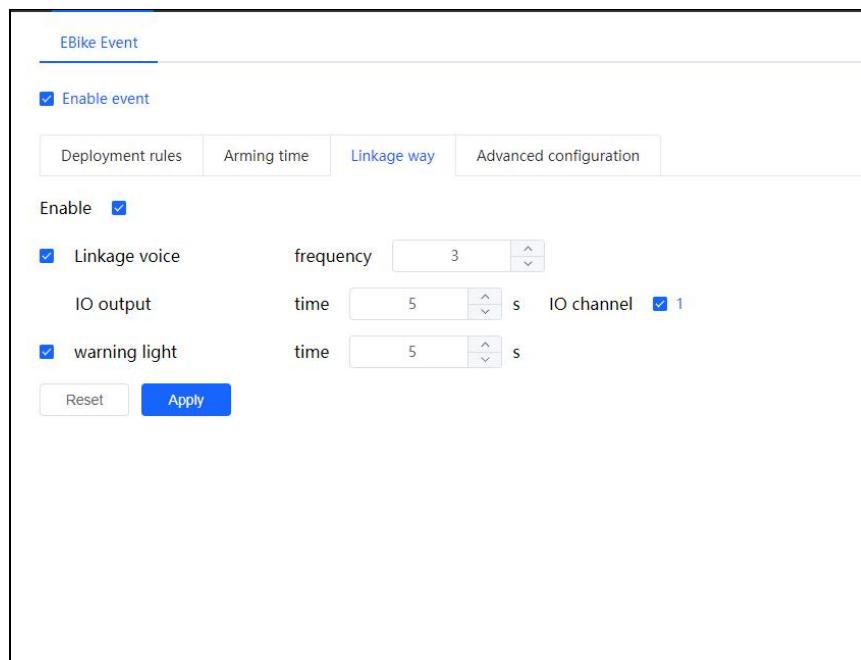


Figure 5-38 Linkage mode settings

- (1) Check the **Alarm Buzzer** option and set the buzzer duration. When a face capture event occurs, it makes a beeping sound;
- (2) Check the **IO Output Switch** option and set the IO output duration. When a face capture event occurs, the IO port outputs signals;
- (3) Set the duration of the warning light. When a face capture event occurs, the warning light flashes to drive personnel away.

Step 6: Set the advanced configuration. The advanced configuration page is shown in Figure 3-39:

EBike Event	
<input checked="" type="checkbox"/> Enable event	
<input type="button" value="Deployment rules"/> <input type="button" value="Arming time"/> <input type="button" value="Linkage way"/> <input type="button" value="Advanced configuration"/>	
Minimum scale of elec...	15 -1~1080
Maximum scale of elec...	-1 -1~1920
Electric vehicle alarm fr...	1 >1
Electric vehicle alarm in...	1 >=1
Region of interest	<input type="checkbox"/>
Algorithm monitoring	<input type="checkbox"/> Monitor whether the algorithm is detecti
Algorithm version No.	V32.0.0 e:3.0.0 d:3.0.1 p:2.0.1
Overlay box	<input checked="" type="checkbox"/>
Sensitivity	40 1-100
<input type="button" value="Reset"/> <input type="button" value="Apply"/>	

Figure 5-39 Advanced configuration

- **Minimum Pixels:** Set the minimum value for the face capture target;
- **Interested Area:** Enable the interested area;
- **Algorithm Monitoring:** **Monitor Algorithm Running** is used to detect whether the algorithm is running properly. **Monitor Algorithm Detection** is used to detect whether the algorithm is detecting correctly, and **Off** is to disable the algorithm running;
- **Overlay Frame:** Superimpose the face frame on the video when a face is detected;
- **Sensitivity:** Set the algorithm detection sensitivity;
- **Face Enhancement:** Enhance face images and set the maximum automatic gain.

5.6 Structured Configuration of Pedestrians, Vehicles, and Non-motor Vehicles

The camera is embedded with smart deep learning algorithms for face, humanoid, vehicle detection, and license plate detection. It supports capturing and identifying targets such as motor vehicles, non-motor vehicles, and human;

5.6.1 Face Event

Steps

Step 1: Log in to the device's WEB client and go to **Configuration > Event > Face Event**. The configuration page is shown in the figure.

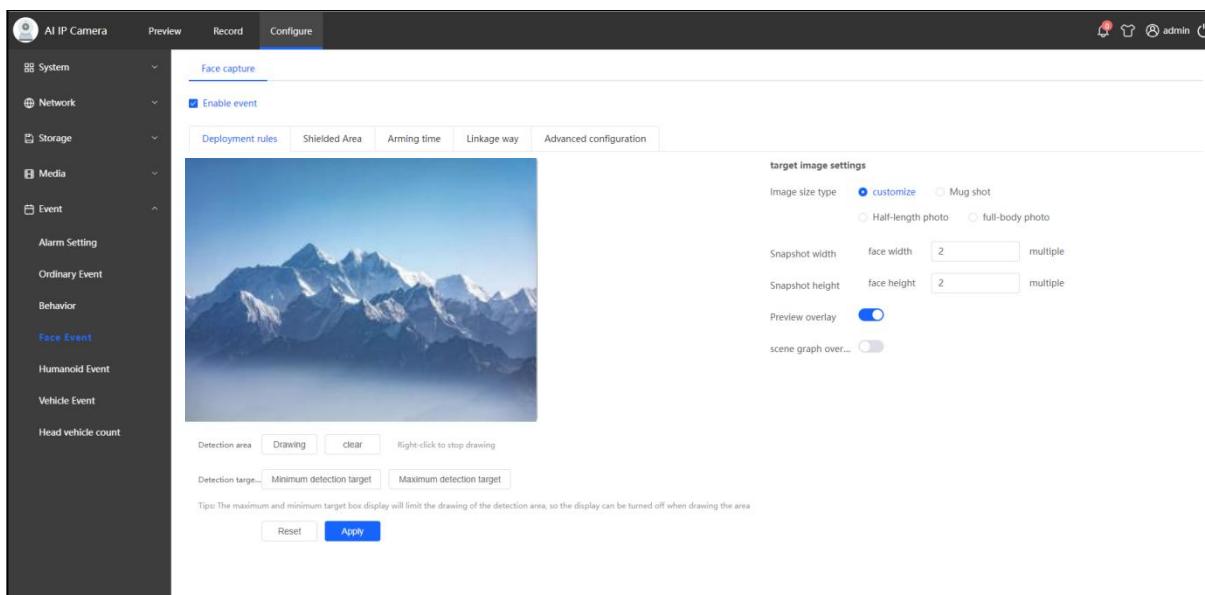


Figure 5-40 Face capture parameter configurations page (structured camera)

Step 2:

Check **Enable Event** to enable smart functions.

Step 3:

Set the deployment rules.

- (1) Click the **Draw** button to draw a polygon detection zone in the video area, and right-click to stop drawing;
- (2) Click the **Clear** button to delete the currently drawn detection zone;
- (3) Drag the four corners of the maximum detection target box (max) and minimum detection target box (min) to set the target size for face capture;
- (4) Click the **Restore Defaults** button to restore the default parameters of the deployment rule;
- (5) Click **Apply** to apply the parameters currently set;
- (6) You can set the target capture image.

Step 4:

Configure the shielding area. The shielding area configuration page is shown as follows:

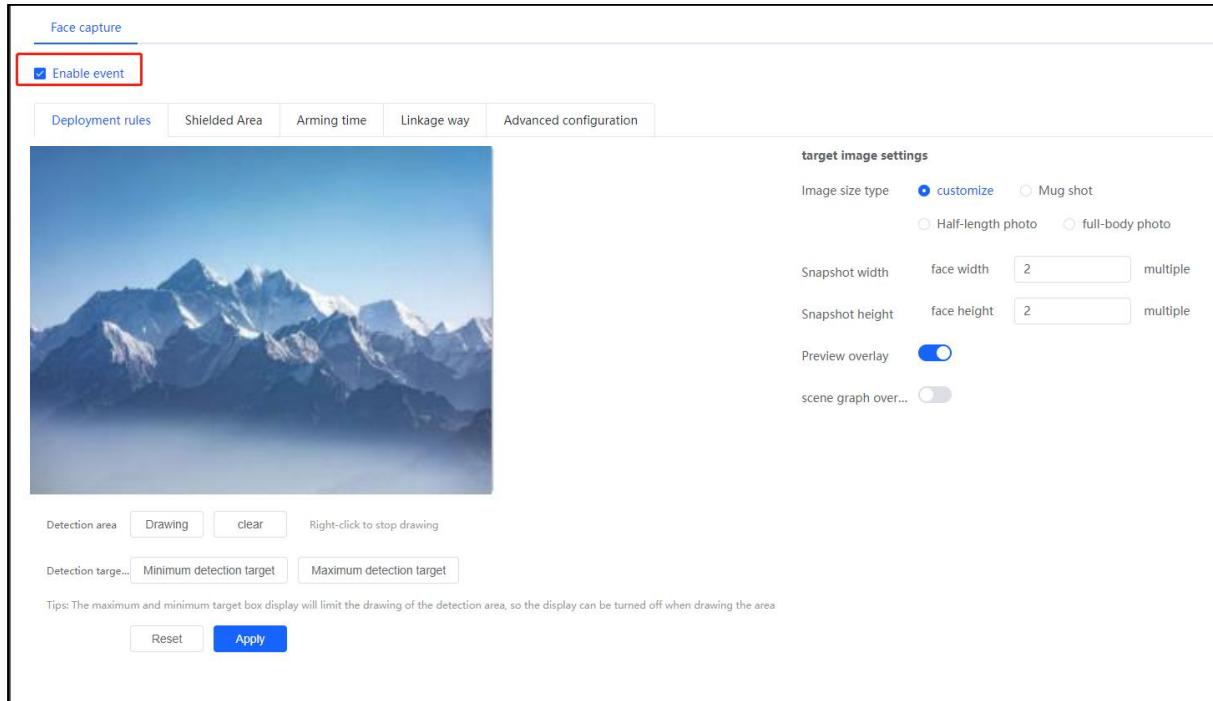


Figure 5-41 The configuration page for shielding area (structured camera)

- (1) Click the **Draw** button to draw a polygon shielding detection zone in the video area, and right-click to stop drawing;
- (2) Click the **Clear** button to delete the currently drawn shielding detection zone;
- (3) Click the **Restore Defaults** button to restore the default parameters of the deployment rule;
- (4) Click **Apply** to apply the parameters currently set.

Step 5: Set the deployment time. The deployment time configuration page is shown below:

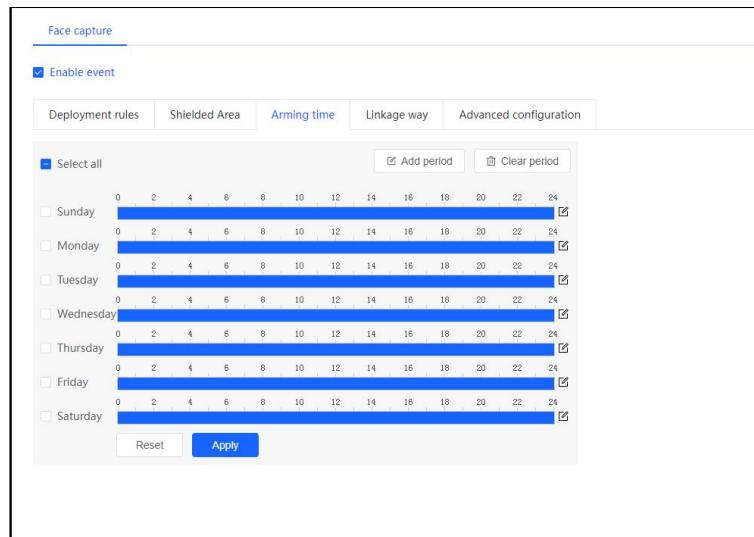


Figure 5-42 Deployment time settings (structured camera)

(1) Check the dates that need deployment. Click the **Add Time Periods** button to open the deployment period window. Enter the time periods that need deployment (up to 4 deployment time periods can be set for each day), then click **Confirm**. The pop-up page is shown in the figure:

(2) Check the dates and click the **Clear** button to clear the time periods for the day;

(3) Click the **Edit** button next to the deployment time periods to re-edit the deployment time periods for that day;

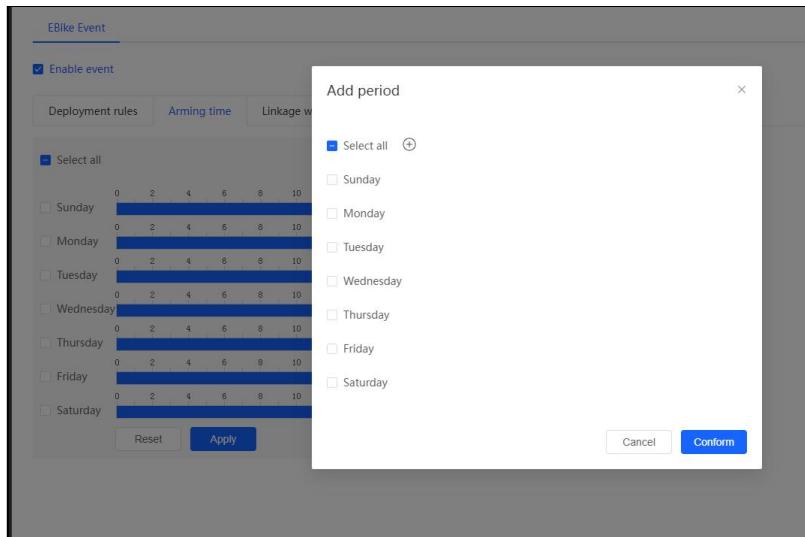


Figure 5-43 The page for adding deployment time periods

(4) Click the **Restore Defaults** button to restore the default parameters of the deployment time;

(5) Click **Apply** to apply the parameters currently set.

Step 6: Set the linkage mode. The linkage mode configuration page is shown below:

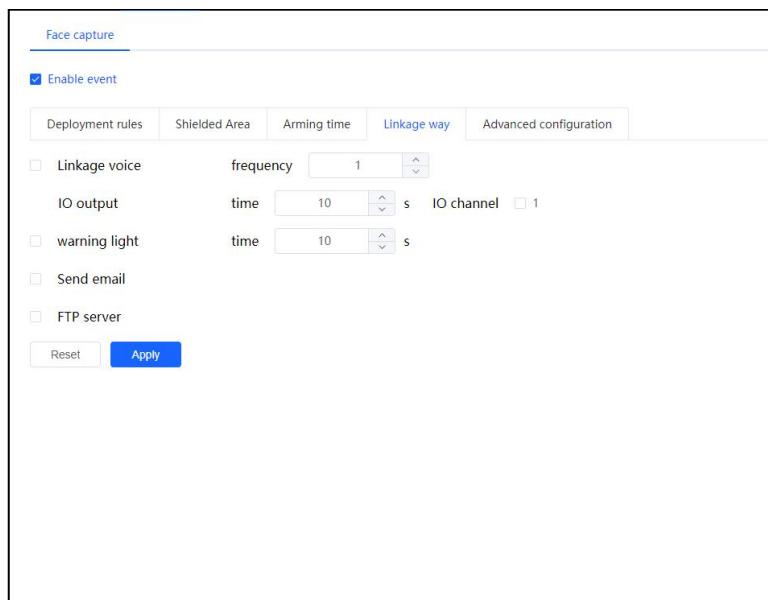


Figure 5-44 Linkage mode settings (structured camera)

(1) Check the **Alarm Buzzer** option and set the buzzer duration. When a face capture event occurs, it makes a beeping sound;

(2) Check the **IO Output Switch** option and set the IO output duration. When a face capture event occurs, the IO port outputs signals;

(3) Set the duration of the warning light. When a face capture event occurs, the warning light flashes.

Step 7: Set the advanced configuration. The advanced configuration page is shown in the figure:

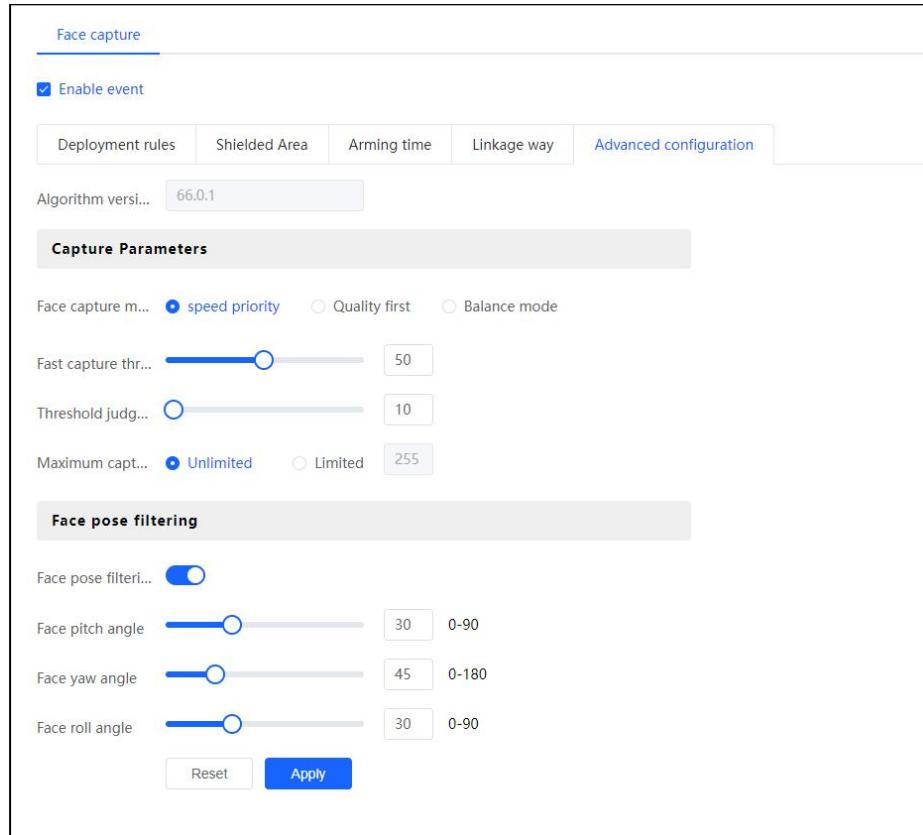


Figure 5-45 Advanced configuration (structured camera)

● Switchable face capture modes: speed priority, quality priority, balanced mode;

● Settable face pose filtering angles: pitch angle, yaw angle, roll angle;

5.6.2 Humanoid Event

Steps

Step 1: Log in to the device's WEB client and go to **Configuration > Event > Humanoid Event**. The configuration page is shown in the figure.

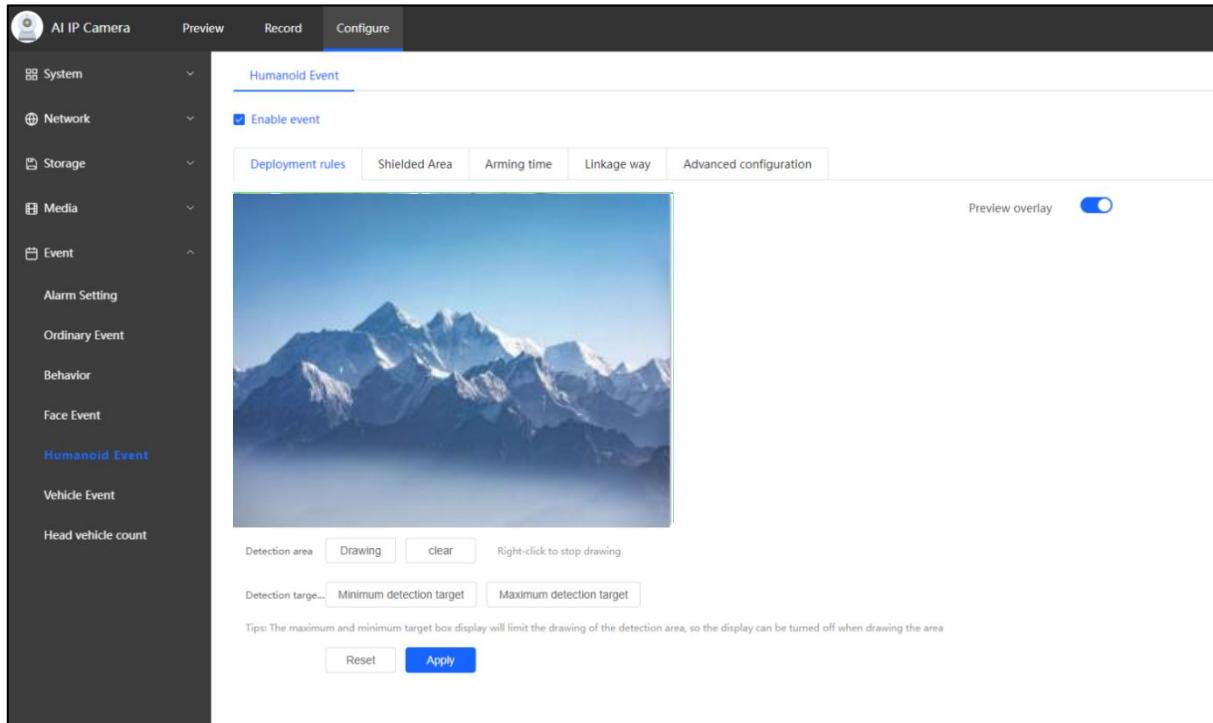


Figure 5-46 Humanoid capture parameter configurations page (structured camera)

Step 2:

Check Enable Event to enable smart functions.

Step 3:

Set the deployment rules.

- (1) Click the **Draw** button to draw a polygon detection zone in the video area, and right-click to stop drawing;
- (2) Click the **Clear** button to delete the currently drawn detection zone;
- (3) Click the **Restore Defaults** button to restore the default parameters of the deployment rule;
- (4) Click **Apply** to apply the parameters currently set;

Step 4:

Configure the shielding area. The shielding area configuration page is shown as follows:

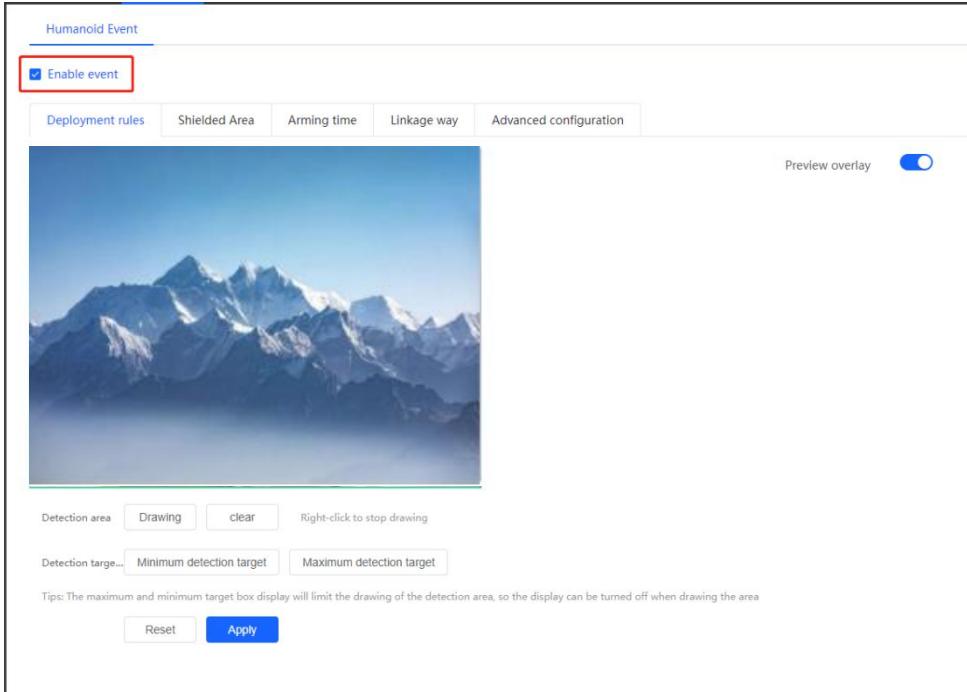


Figure 5-47 The configuration page for the humanoid capture shielding area (structured camera)

- (1) Click the **Draw** button to draw a polygon shielding detection zone in the video area, and right-click to stop drawing;
- (2) Click the **Clear** button to delete the currently drawn shielding detection zone;
- (3) Click the **Restore Defaults** button to restore the default parameters of the deployment rule;
- (4) Click **Apply** to apply the parameters currently set.

Step 5: Set the deployment time. The deployment time configuration page is shown below:

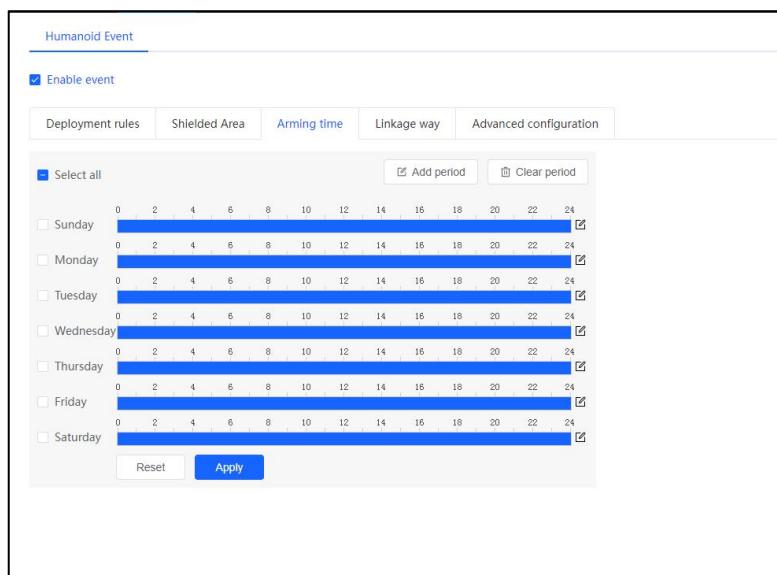


Figure 5-48 Deployment time settings (structured camera)

(1) Check the dates that need deployment. Click the **Add Time Periods** button to open the deployment period window. Enter the time periods that need deployment (up to 4 deployment time periods can be set for each day), then click **Confirm**. The pop-up page is shown in the figure:

(2) Check the dates and click the **Clear** button to clear the time periods for the day;

(3) Click the **Edit** button next to the deployment time periods to re-edit the deployment time periods for that day;

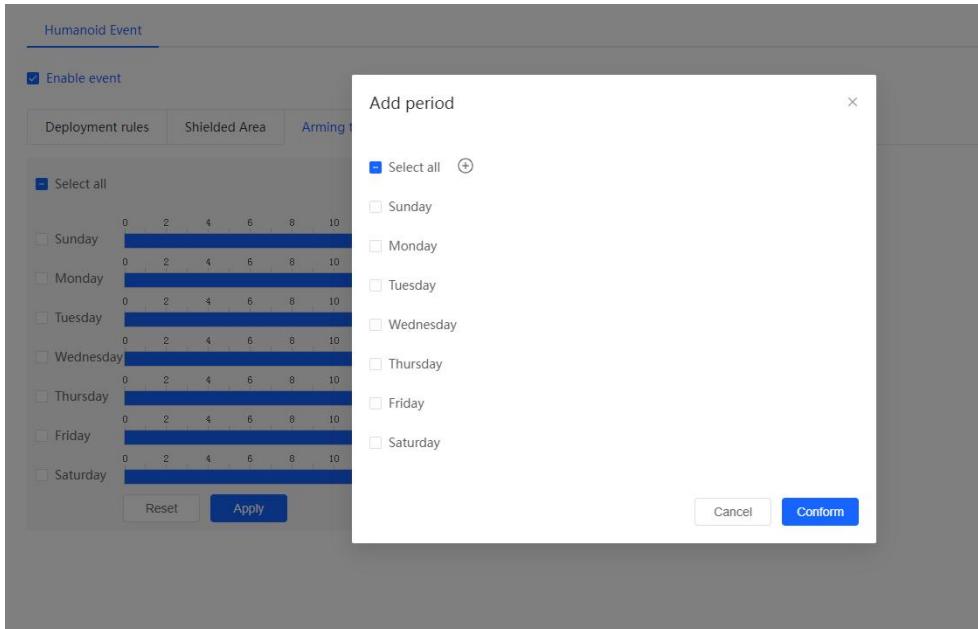


Figure 5-49 The page for adding deployment time periods

(4) Click the **Restore Defaults** button to restore the default parameters of the deployment time;

(5) Click **Apply** to apply the parameters currently set.

Step 6: Set the linkage mode. The linkage mode configuration page is shown below:

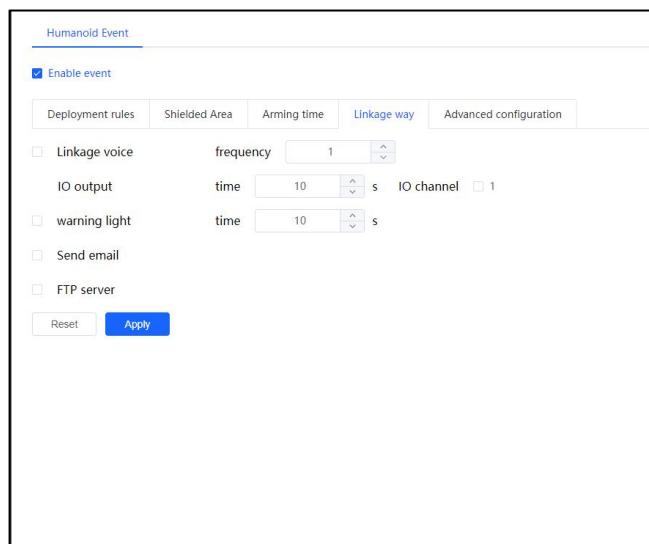


Figure 5-50 Linkage mode settings (structured camera)

(1) Check the **Alarm Buzzer** option and set the buzzer duration. When a face capture event occurs, it makes a beeping sound;

(2) Check the **IO Output Switch** option and set the IO output duration. When a face capture event occurs, the IO port outputs signals;

(3) Set the duration of the warning light. When a face capture event occurs, the warning light flashes.

Step 7: Set the advanced configuration. The advanced configuration page is shown in the figure:

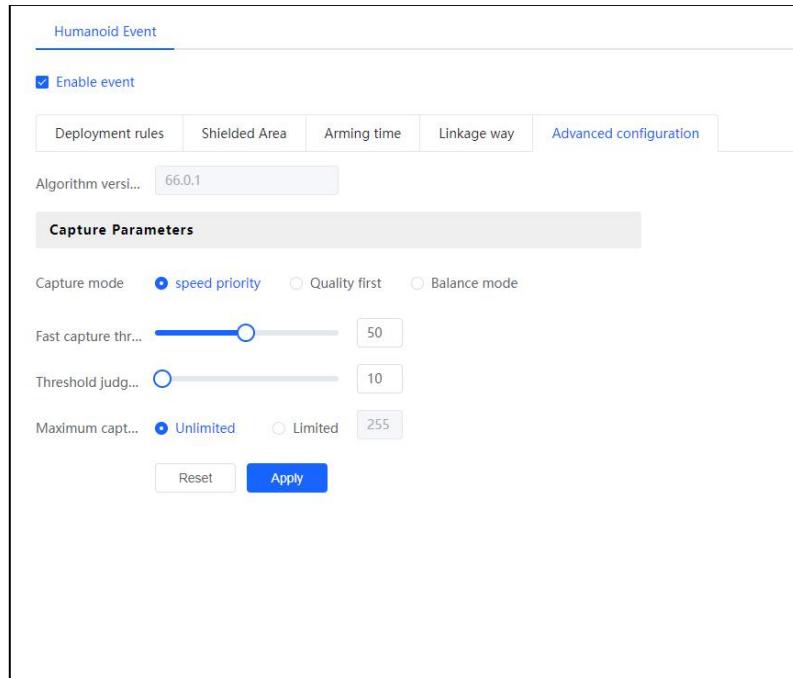


Figure 5-51 Advanced configuration (structured camera)

- Switchable humanoid capture modes: speed priority, quality priority, balanced mode;

5.6.3 Vehicle Event

Steps

Step 1: Log in to the device's WEB client and go to **Configuration > Event > Vehicle Event**. The configuration page is shown in the figure

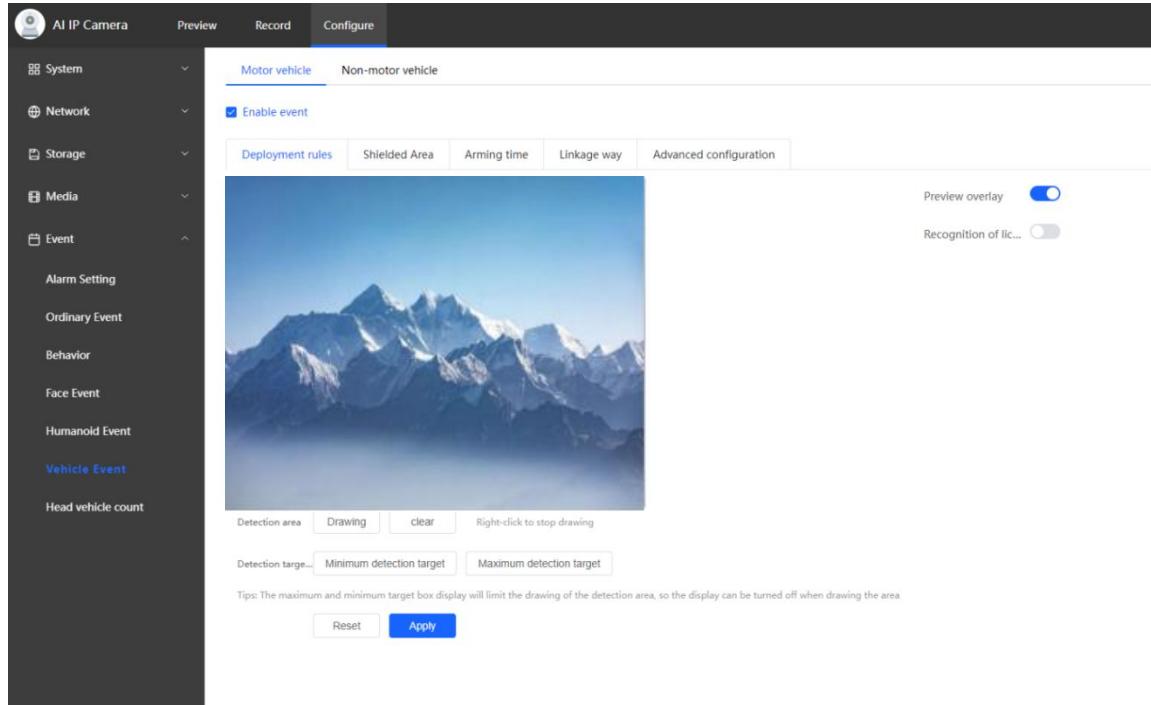


Figure 5-52 Vehicle capture parameter configurations page (structured camera)

Step 2: Check Enable Event to enable smart functions.

Step 3: Set the deployment rules.

- (1) Click the **Draw** button to draw a polygon detection zone in the video area, and right-click to stop drawing;
- (2) Click the **Clear** button to delete the currently drawn detection zone;
- (3) Click the **Restore Defaults** button to restore the default parameters of the deployment rule;
- (4) Click **Apply** to apply the parameters currently set;
- (5) You can set the preview overlay box as on or off;
- (6) You can enable the license plate capture;

Step 4:

Configure the shielding area. The shielding area configuration page is shown as follows:

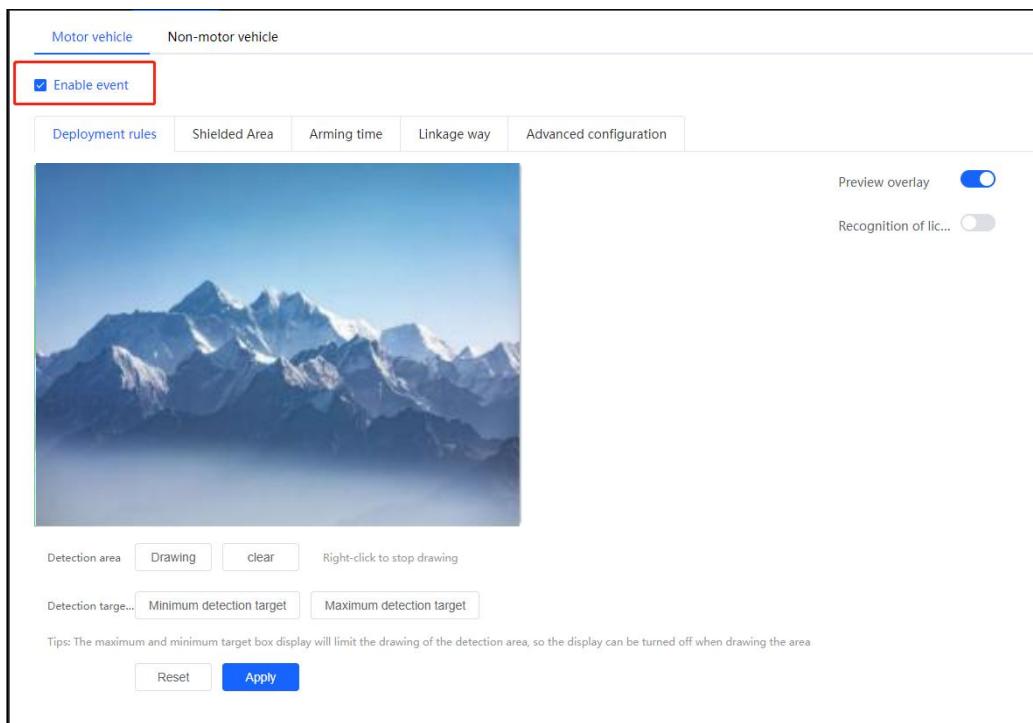


Figure 5-53 Shielding area parameter configurations page (structured camera)

- (1) Click the **Draw** button to draw a polygon shielding detection zone in the video area, and right-click to stop drawing;
- (2) Click the **Clear** button to delete the currently drawn shielding detection zone;
- (3) Click the **Restore Defaults** button to restore the default parameters of the deployment rule;
- (4) Click **Apply** to apply the parameters currently set.

Step 5: Set the deployment time. The deployment time configuration page is shown below:

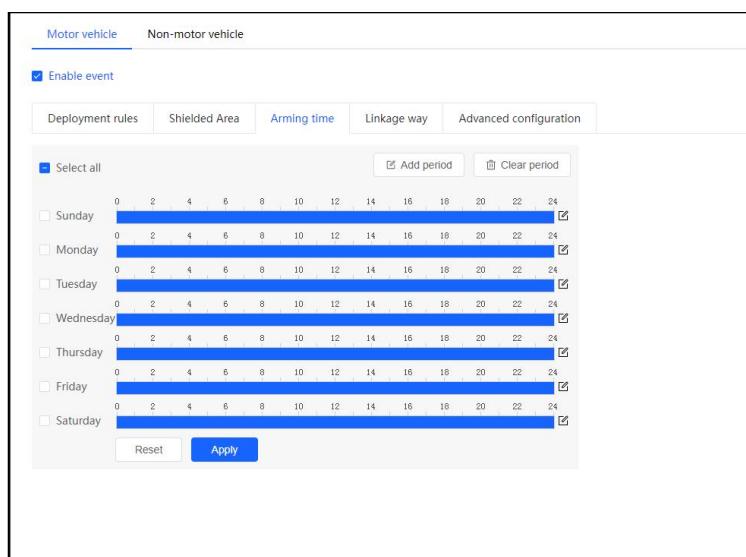


Figure 5-54 Deployment time settings (structured camera)

(1) Check the dates that need deployment. Click the **Add Time Periods** button to open the deployment period window. Enter the time periods that need deployment (up to 4 deployment time periods can be set for each day), then click **Confirm**. The pop-up page is shown in the figure:

(2) Check the dates and click the **Clear** button to clear the time periods for the day;

(3) Click the **Edit** button next to the deployment time periods to re-edit the deployment time periods for that day;

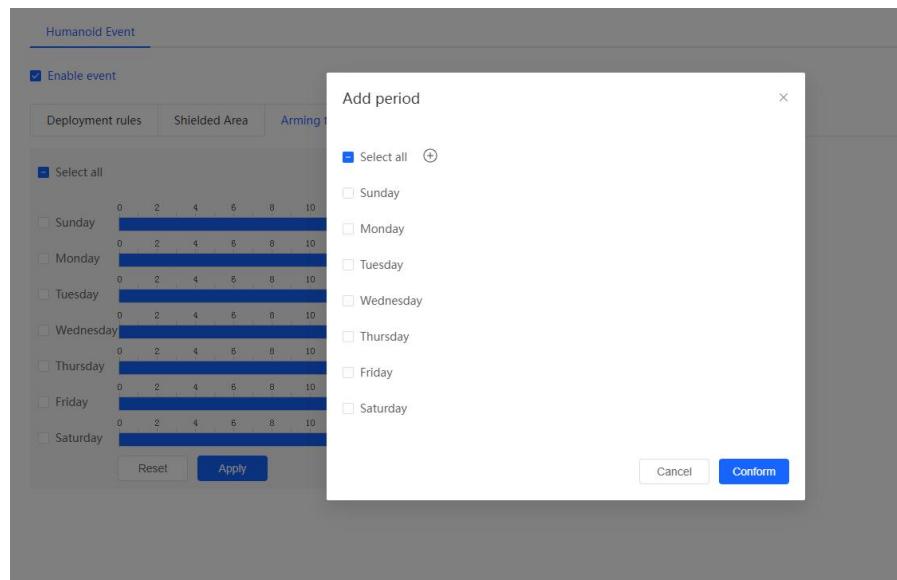


Figure 5-55 The page for adding deployment time periods

(4) Click the **Restore Defaults** button to restore the default parameters of the deployment time;

(5) Click **Apply** to apply the parameters currently set.

Step 6: Set the linkage mode. The linkage mode configuration page is shown below:

Deployment rules	Shielded Area	Arming time	Linkage way	Advanced configuration
<input type="checkbox"/> Linkage voice	frequency	1	<input type="button" value="^"/>	<input type="button" value="v"/>
<input type="checkbox"/> IO output	time	10	<input type="button" value="^"/>	<input type="button" value="v"/>
<input type="checkbox"/> warning light	time	10	<input type="button" value="^"/>	<input type="button" value="v"/>
<input type="checkbox"/> Send email				
<input type="checkbox"/> FTP server				

Figure 5-56 Linkage mode settings (structured camera)

- (1) Check the **Alarm Buzzer** option and set the buzzer duration. When a face capture event occurs, it makes a beeping sound;
- (2) Check the **IO Output Switch** option and set the IO output duration. When a face capture event occurs, the IO port outputs signals;
- (3) Set the duration of the warning light. When a face capture event occurs, the warning light flashes.

Step 7: Set the advanced configuration. The advanced configuration page is shown in the figure:

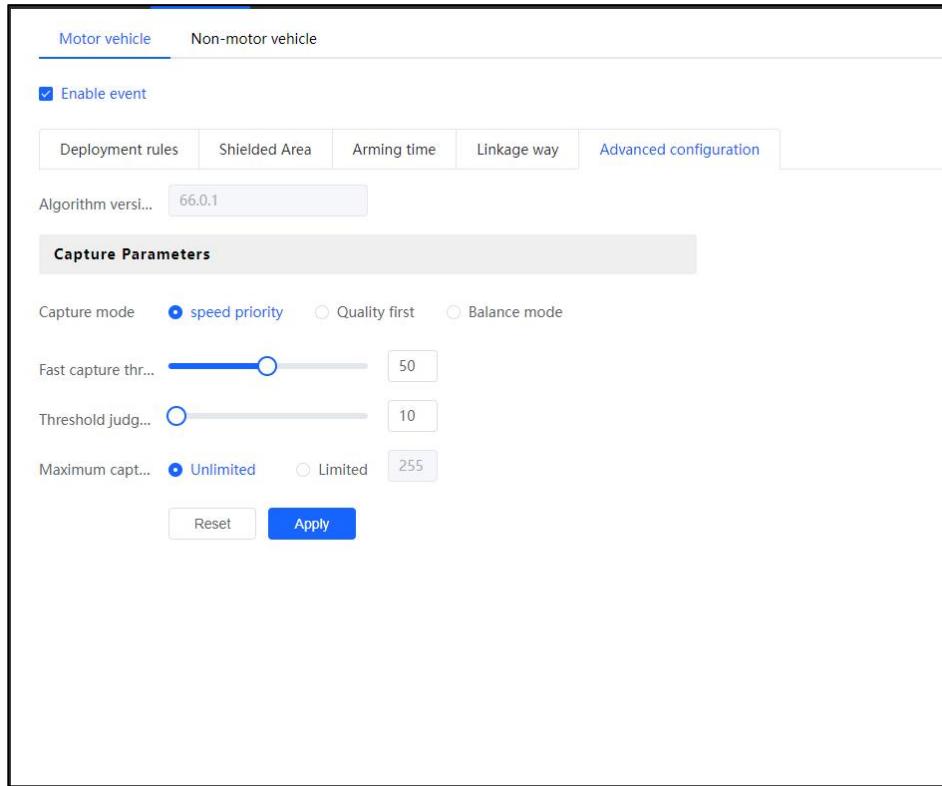


Figure 5-57 Advanced configuration (structured camera)

- Switchable vehicle capture modes: speed priority, quality priority, balanced mode.

5.7 Number of People (Traffic) Statistics Configuration

By drawing lines on the video screen and setting the detection direction (A→B, B→A, or A-B), the camera can count the tripwire intrusion numbers of the detection target, which can be counted as pedestrians, motor vehicles, or non-motor vehicles.

Steps

Step 1: Log in to the device's WEB client and go to **Configuration > Event > Personnel Counts**. The configuration page is shown in the figure.

AI intelligent IP Camera User Manual

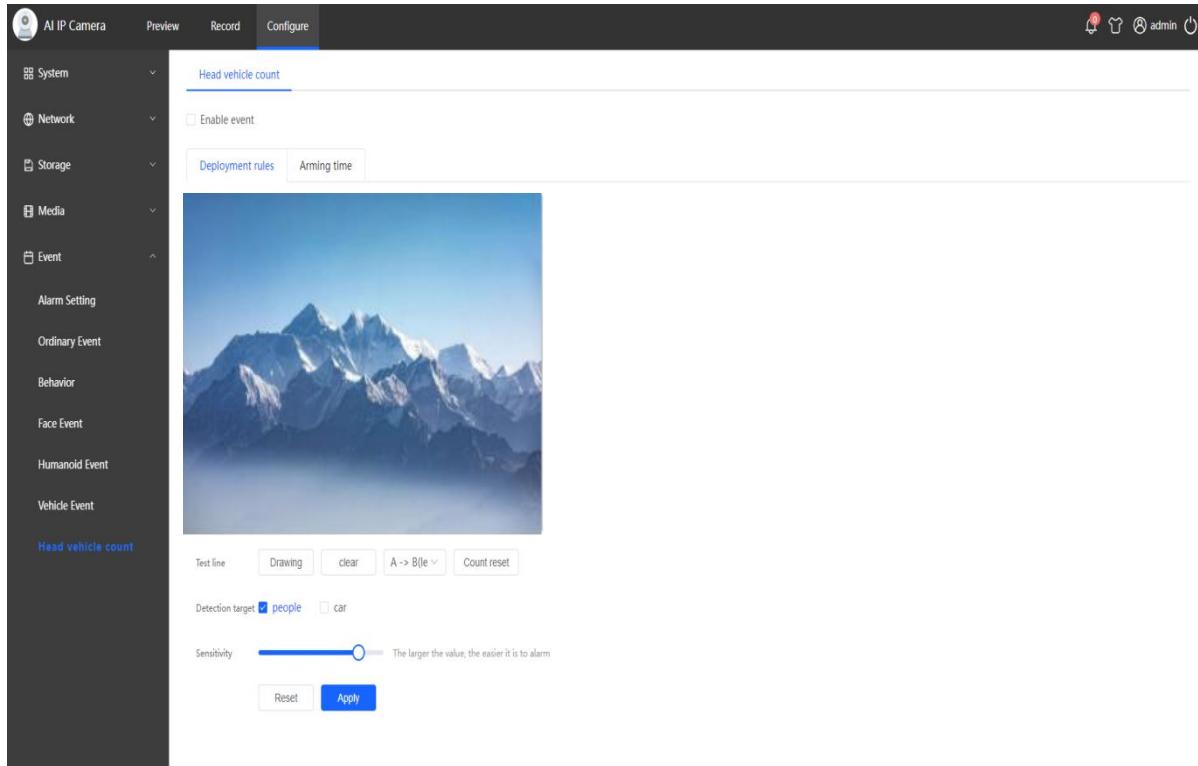


Figure 5-62 Set the personnel counts configuration

Step 2: Check **Enable Event** to enable smart functions.

Step 3: Set the deployment rules. Draw detection lines on the video screen, and set the detection direction, target, and sensitivity. You can clear the statistics displayed on the screen at any time.

Step 4: Set the deployment time. The deployment time configuration page is shown in the figure:

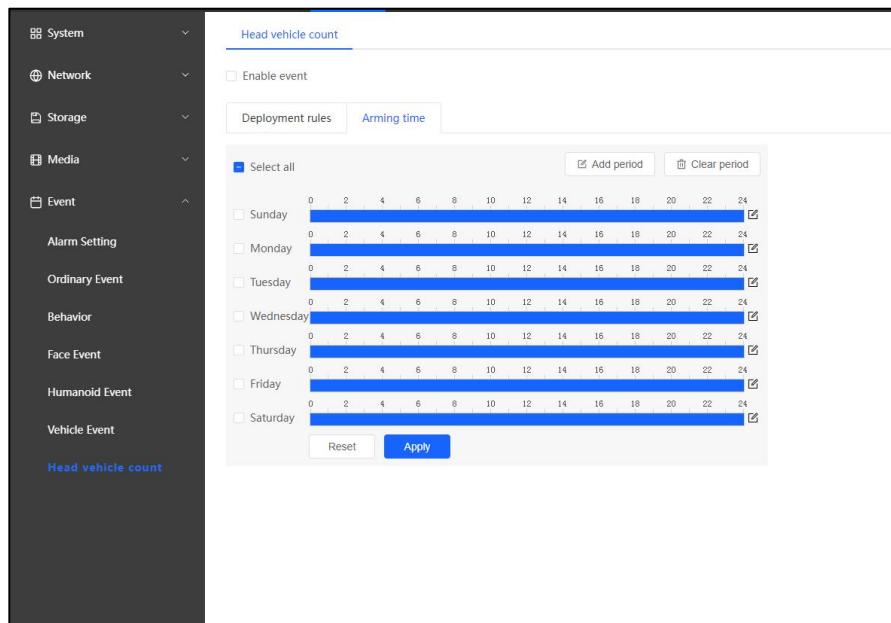


Figure 5-63 Deployment time settings

(1) Check the dates that need deployment. Click **Add Time Periods** to open the deployment period window. Enter the needed deployment time periods (up to 4 deployment time periods can be set for each day), then click **Confirm**. The pop-up page is shown in the figure:

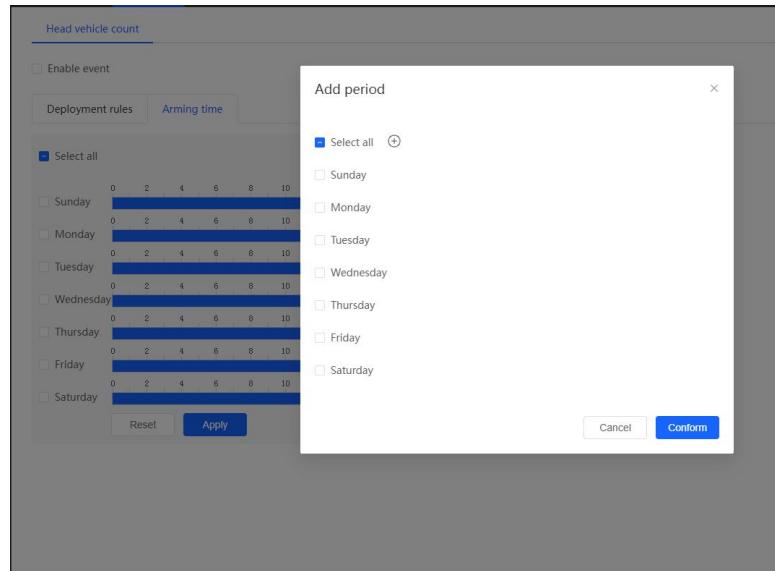


Figure 5-64 The page for adding deployment time periods

- (2) Check the dates and click the **Clear** button to clear the time periods;
- (3) Click the **Edit** button next to the deployment time periods to re-edit the deployment time periods for that day;
- (4) Click the **Restore Defaults** button to restore the default parameters of the deployment time;
- (5) Click **Apply** to apply the parameters currently set.

5.8 Behavior Analysis

The lightweight smart algorithm parameters are configurable for all human, motor vehicle, and non-motor vehicle detection uses, such as tripwire intrusion, area intrusion, fast movement, etc. The device can be triggered to perform linked actions when the target enters the warning area or rapidly moves within the detection range.



Description

Behavior analysis is a universal smart application for cameras. Please refer to the actual device.

5.9.1 Tripwire Intrusion

Steps

Step 1: Log in to the device's WEB client > **Configuration** > **Event** > **Behavior Analysis** > **Tripwire Intrusion**. The configuration page is shown in the figure.

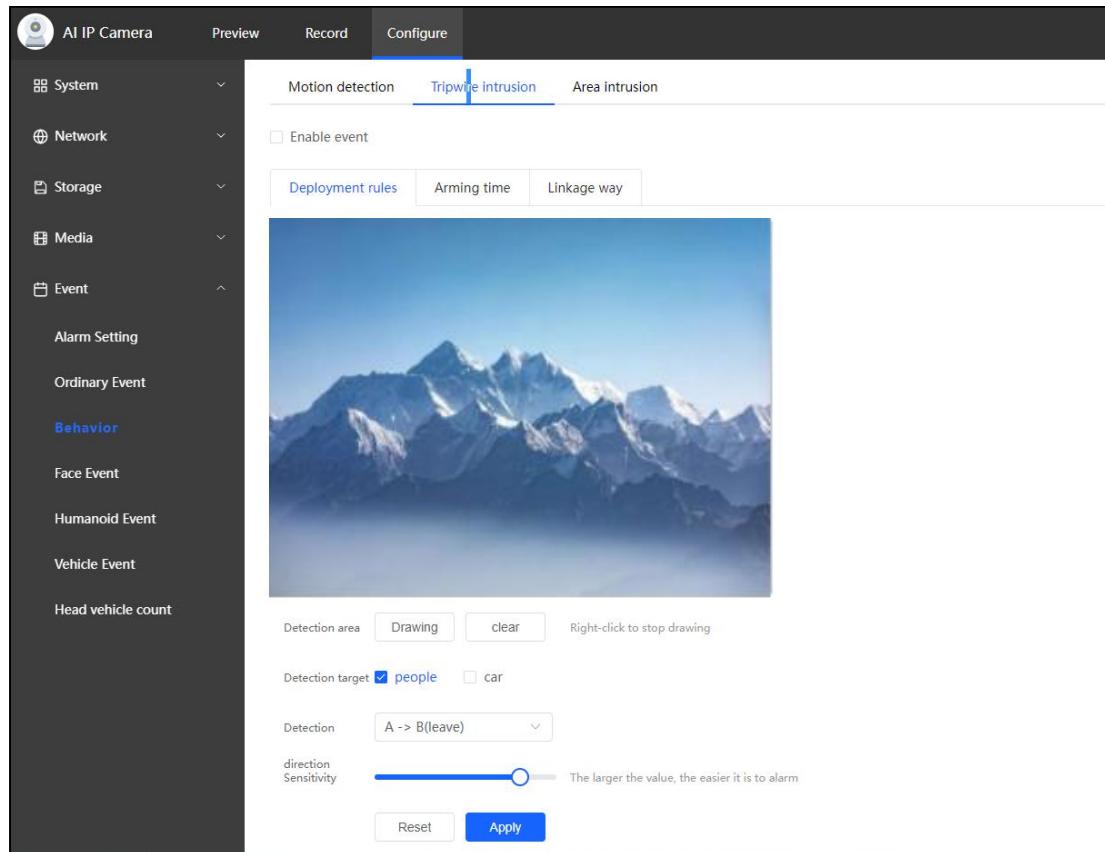


Figure 5-65 Deployment rules configuration page

Step 2: Check Enable Event to enable smart functions.

Step 3: Set the deployment rules.

- (1) Click the **Draw** button to draw zigzag or straight lines in the video area, and right-click to stop drawing. The linkage alarm is triggered when the target passes the detection line;
- (2) Click the **Clear** button to delete the currently drawn detection lines;
- (3) Click the **Restore Defaults** button to restore the default parameters of the deployment rule;
- (4) Click **Apply** to apply the parameters currently set.

Step 4:

Set the deployment time. The deployment time configuration page is shown in the figure:

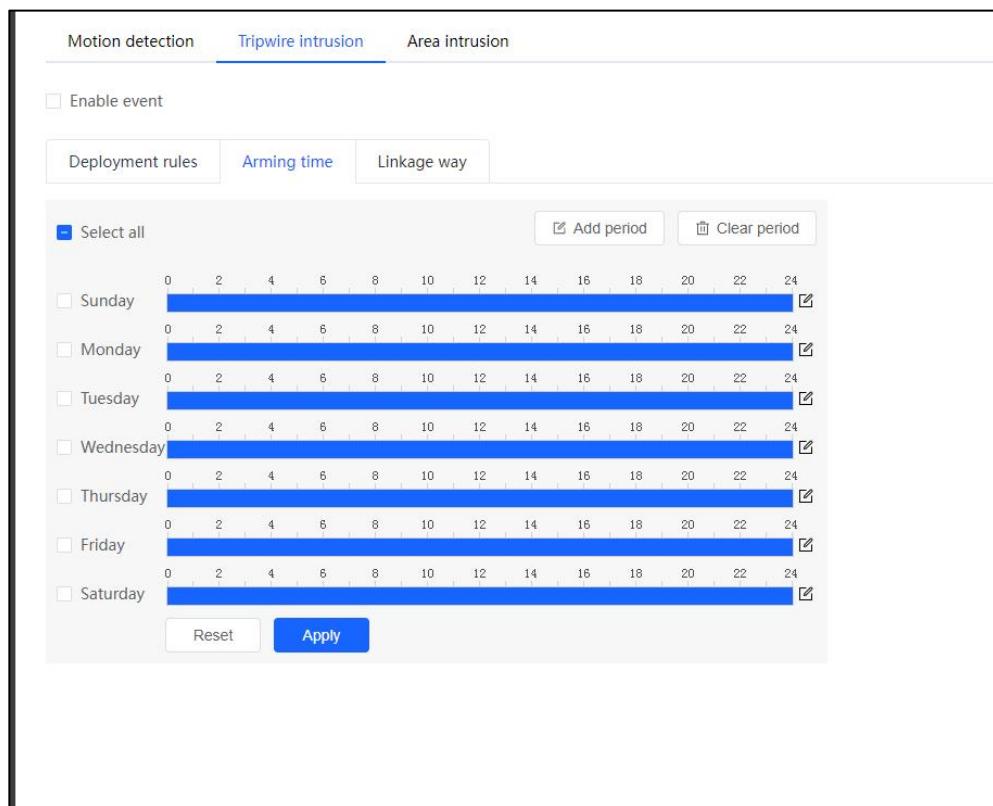


Figure 5-66 Deployment time settings

- (1) Check the dates that need deployment. Click **Add Time Periods** to open the deployment period window. Enter the time periods that need deployment time periods (up to 4 deployment time periods can be set for each day), then click **Confirm**. The pop-up page is shown in the figure:

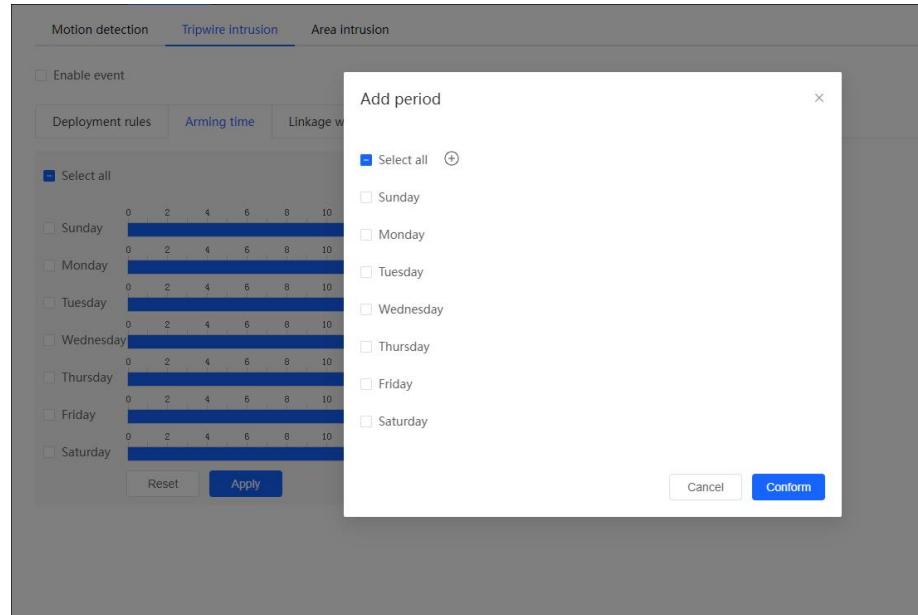


Figure 5-67 The page for adding deployment time periods

- (2) Check the dates and click the Clear button to clear the time periods for the day;
- (3) Click the Edit button next to the deployment time periods to re-edit the deployment time periods for that day;
- (4) Click the Restore Defaults button to restore the default parameters of the deployment time;
- (5) Click Apply to apply the parameters currently set.

Step 5: Set the linkage mode. The linkage mode configuration page is shown in the figure:

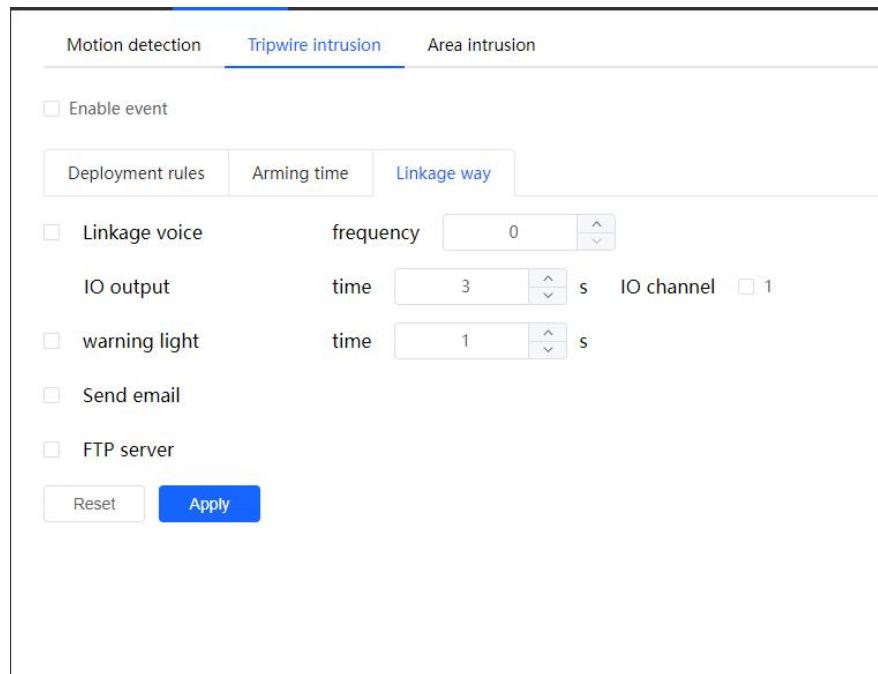


Figure 5-68 Linkage mode settings

- (1) Check the **Alarm Buzzer** option and set the buzzer duration. When a face capture event occurs, it makes a buzzing sound;
- (2) Check the **IO Output Switch** option and set the IO output duration. When a face capture event occurs, the IO port outputs signals;
- (3) Set the duration of the warning light. When a face capture event occurs, the warning light flashes to drive personnel away.

5.9.2 Area Intrusion

Steps

Step 1: Log in to the device's WEB client and go to **Configuration > Event > Behavior Analysis > Area Intrusion**. The configuration page is shown in the figure.

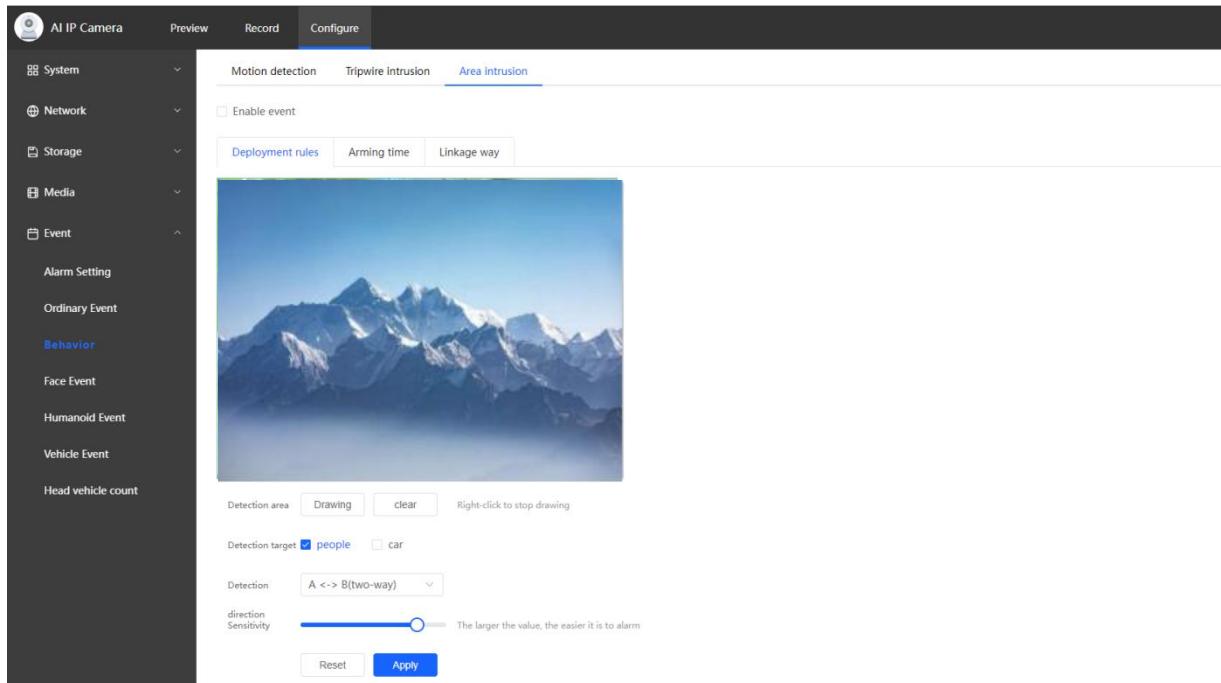


Figure 5-69 Deployment rules configuration page

Step 2: Check **Enable Event** to enable smart functions.

Step 3:
Set the deployment rules.

- (1) Click the **Draw** button to draw a polygon detection zone in the video area, and right-click to stop drawing. The linkage alarm is triggered when the target intrudes the warning area;
- (2) Click the **Clear** button to delete the currently drawn polygon detection zone;
- (3) Click the **Restore Defaults** button to restore the default parameters of the deployment rule;
- (4) Click **Apply** to apply the parameters currently set.

Step 4:

Set the deployment time. The deployment time configuration page is shown in the figure:

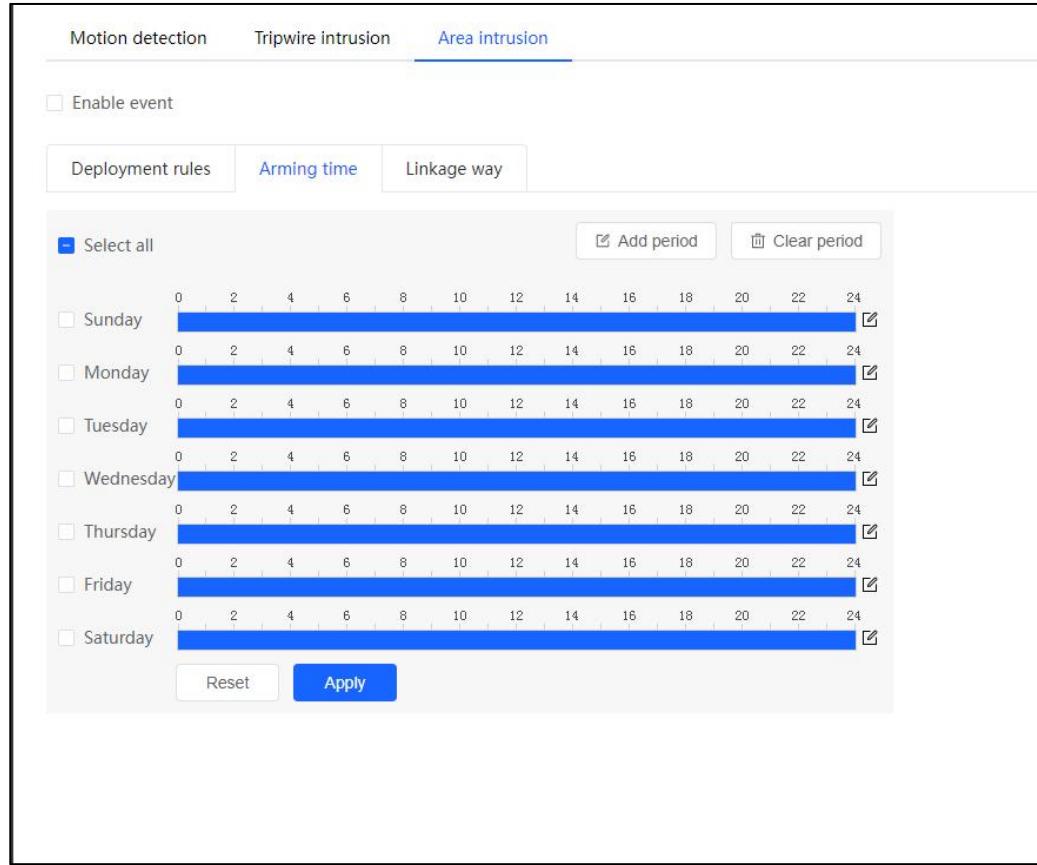


Figure 5-70 Deployment time settings

(1) Check the dates that need deployment. Click **Add Time Periods** to open the deployment period window. Enter the time periods that need deployment (up to 4 deployment time periods can be set for each day), then click **Confirm**. The pop-up page is shown in the figure:

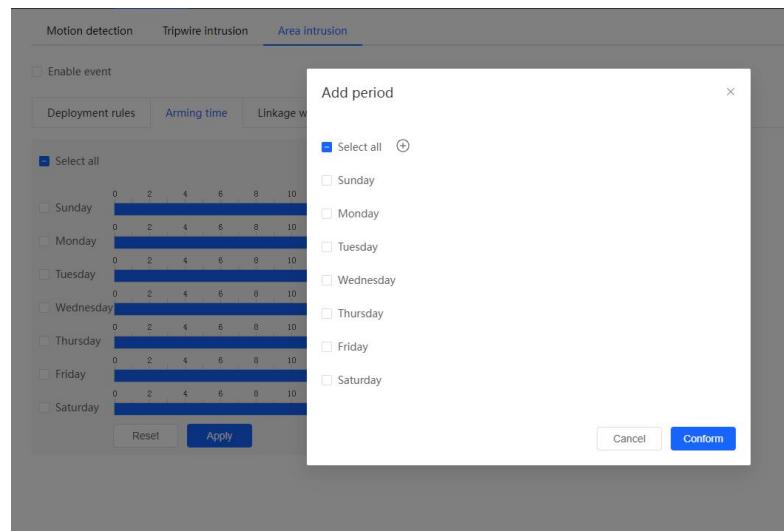


Figure 5-71 The page for adding deployment time periods

- (2) Check the dates and click the **Clear** button to clear the time periods for the day;
- (3) Click the **Edit** button next to the deployment time periods to re-edit the deployment time periods for that day;
- (4) Click the **Restore Defaults** button to restore the default parameters of the deployment time;
- (5) Click **Apply** to apply the parameters currently set.

Step 5: Set the linkage mode. The linkage mode configuration page is shown in the figure:

The screenshot shows the 'Area intrusion' tab selected in the top navigation bar. Under the 'Linkage way' tab, the 'IO output' section is active, showing a frequency of 0, a time of 3 seconds, and an IO channel of 1. The 'warning light' section shows a time of 1 second. There are also sections for 'Linkage voice', 'Send email', and 'FTP server'. At the bottom left is a 'Reset' button, and at the bottom right is a blue 'Apply' button.

Figure 5-72 Linkage mode settings

- (1) Check the **Alarm Buzzer** option and set the buzzer duration. When a face capture event occurs, it makes a beeping sound;
- (2) Check the **IO Output Switch** option and set the IO output duration. When a face capture event occurs, the IO port outputs signals;
- (3) Set the duration of the warning light. When a face capture event occurs, the warning light flashes to drive personnel away.

5.9.3 Fast Moving

Steps

Step 1: Log in to the device's WEB client and go to **Configuration > Event > Behavior Analysis > Fast Moving**. The configuration page is shown in the figure.

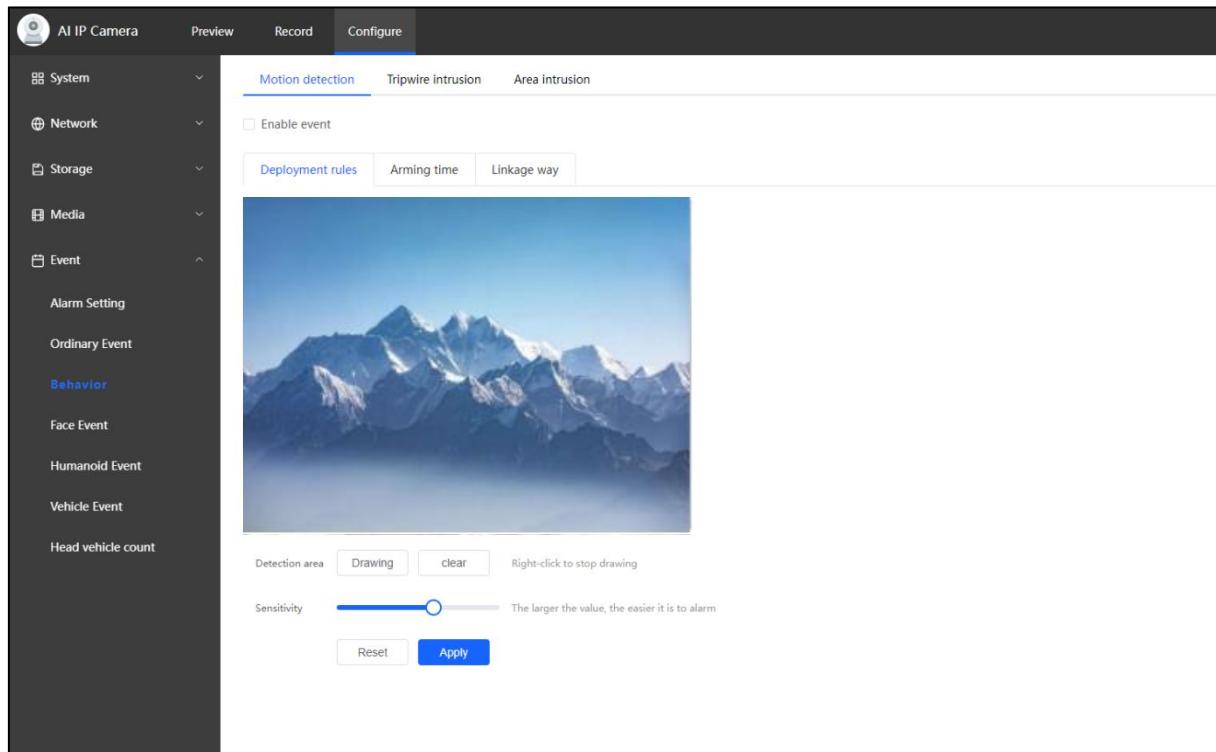


Figure 5-73 Deployment rules configuration page

Step 2: Check **Enable Event** to enable smart functions.

Step 3:

Set the deployment rules.

- (1) Click the **Draw** button to draw a polygon detection zone in the video area, and right-click to stop drawing;
- (2) Click the **Clear** button to delete the currently drawn detection zone;
- (3) Click the **Restore Defaults** button to restore the default parameters of the deployment rule;
- (4) Click **Apply** to apply the parameters currently set.

Step 4:

Set the deployment time. The deployment time configuration page is shown in the figure:

Day	Time Range
Sunday	0, 2, 4, 6, 8, 10, 12, 14, 16, 18, 20, 22, 24
Monday	0, 2, 4, 6, 8, 10, 12, 14, 16, 18, 20, 22, 24
Tuesday	0, 2, 4, 6, 8, 10, 12, 14, 16, 18, 20, 22, 24
Wednesday	0, 2, 4, 6, 8, 10, 12, 14, 16, 18, 20, 22, 24
Thursday	0, 2, 4, 6, 8, 10, 12, 14, 16, 18, 20, 22, 24
Friday	0, 2, 4, 6, 8, 10, 12, 14, 16, 18, 20, 22, 24
Saturday	0, 2, 4, 6, 8, 10, 12, 14, 16, 18, 20, 22, 24

Figure 5-74 Deployment time settings

- (1) Check the dates that need deployment. Click **Add Time Periods** to open the deployment period window. Enter the time periods that need deployment (up to 4 deployment time periods can be set for each day), then click **Confirm**. The pop-up page is shown below:

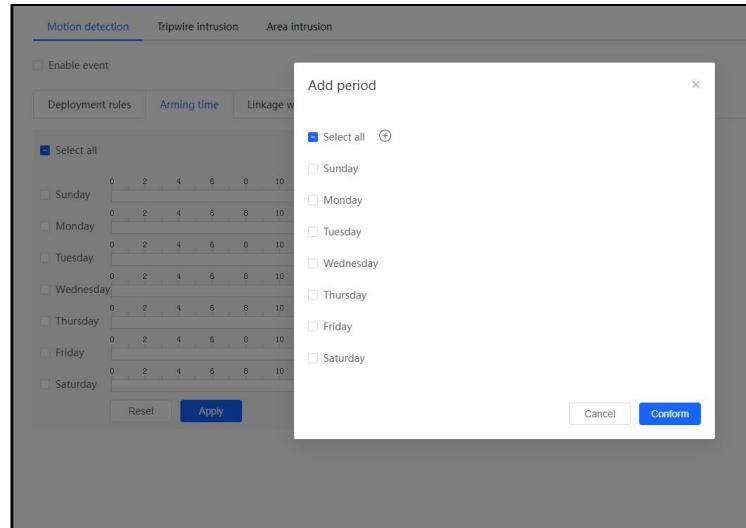


Figure 5-75 The page for adding deployment time periods

- (2) Check the dates and click the **Clear** button to clear the time periods for the day;
- (3) Click the **Edit** button next to the deployment time periods to re-edit the deployment time periods for that day;
- (4) Click the **Restore Defaults** button to restore the default parameters of the deployment time;
- (5) Click **Apply** to apply the parameters currently set.

Step 5: Set the linkage mode. The linkage mode configuration page is shown in the figure:

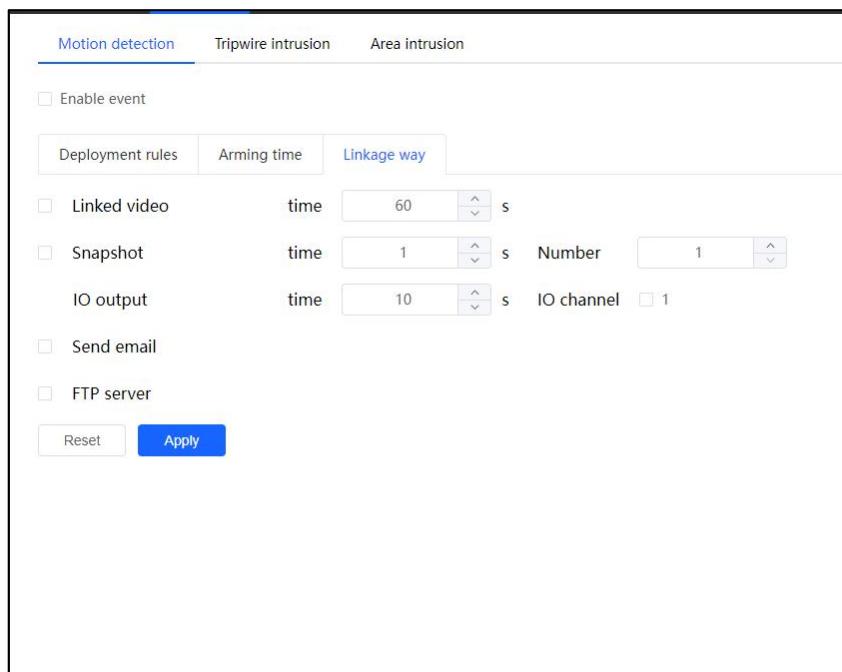


Figure 5-76 Linkage mode settings

- (1) Check the **Alarm Buzzer** option and set the buzzer duration. When a face capture event occurs, it makes a beeping sound;
- (2) Check the **IO Output Switch** option and set the IO output duration. When a face capture event occurs, the IO port outputs signals;
- (3) Set the duration of the warning light. When a face capture event occurs, the warning light flashes to drive personnel away.

5.9 Configuration for Detection of Throwing Objects from Height

Steps

Step 1: Log in to the device's WEB client and go to **Configuration > Event > Throwing Objects from Height**. The configuration page is shown in the figure.

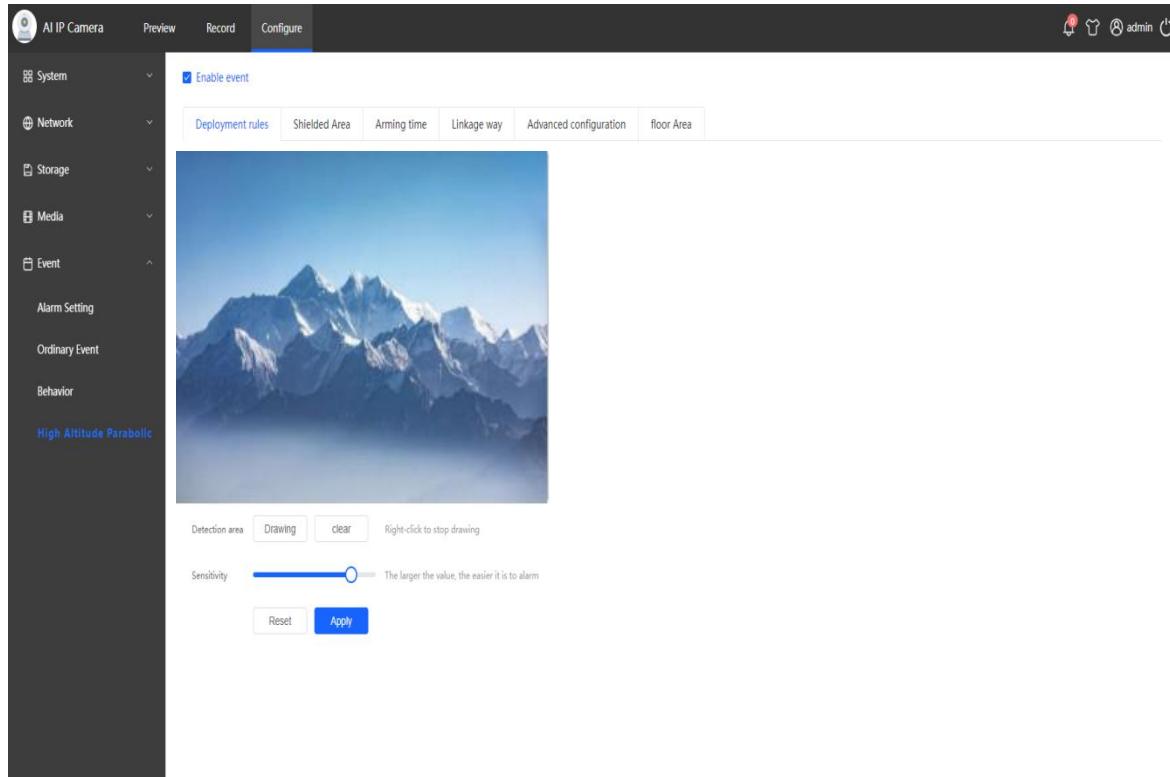


Figure 5-77 Configuration page for detection of throwing objects from height

Step 2:

Check Enable Event to enable smart functions.

Step 3:

Set the deployment rules.

- (1) Click the **Draw** button to draw a polygon detection zone in the video area, and right-click to stop drawing;
- (2) Click the **Clear** button to delete the currently drawn detection zone;
- (3) Click the **Restore Defaults** button to restore the default parameters of the deployment rule;
- (4) Click **Apply** to apply the parameters currently set.

Step 4: Configure the shielding area. The shielding area configuration page is shown as follows:

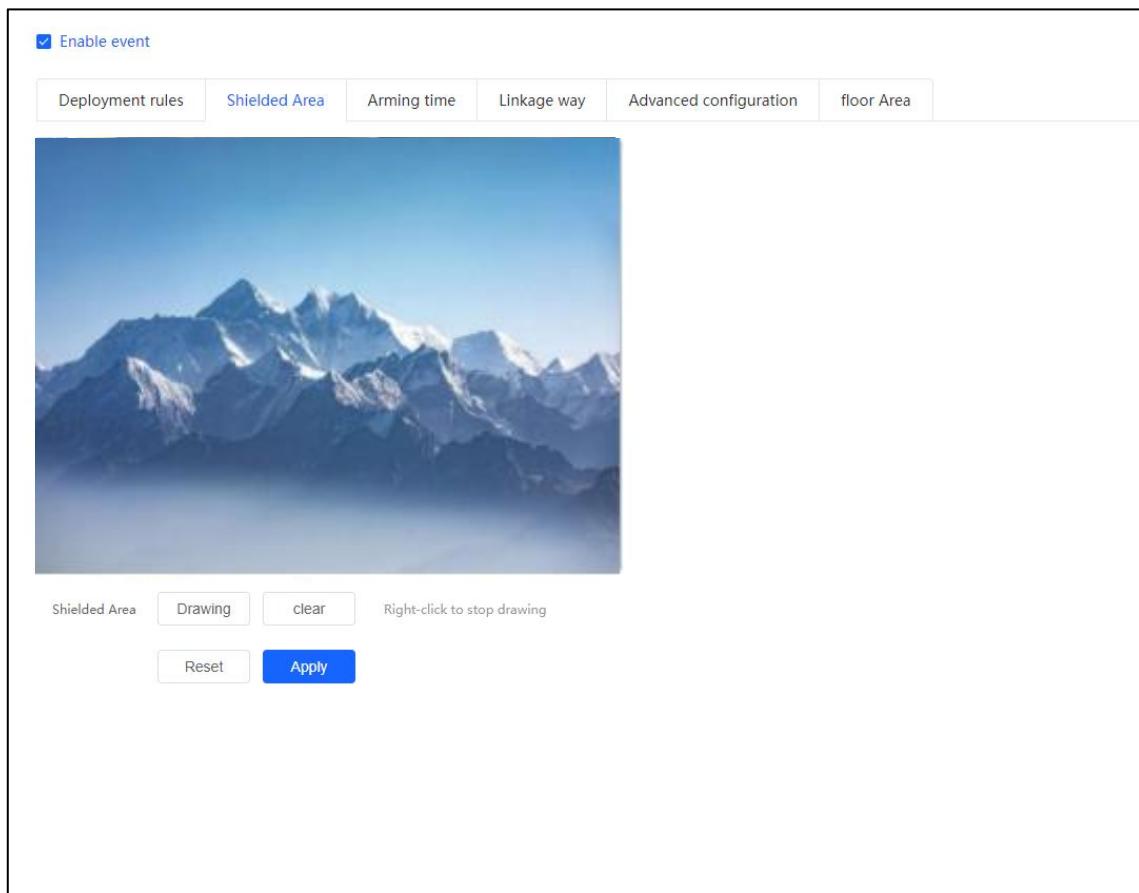


Figure 5-78 Shielding area configuration page

- (1) Click the **Draw** button to draw a polygon shielding detection zone in the video area, and right-click to stop drawing;
- (2) Click the **Clear** button to delete the currently drawn shielding detection zone;

(3) Click the **Restore Defaults** button to restore the default parameters of the deployment rule;

(4) Click **Apply** to apply the parameters currently set.

Step 5: Set the deployment time. The deployment time configuration page is shown below:

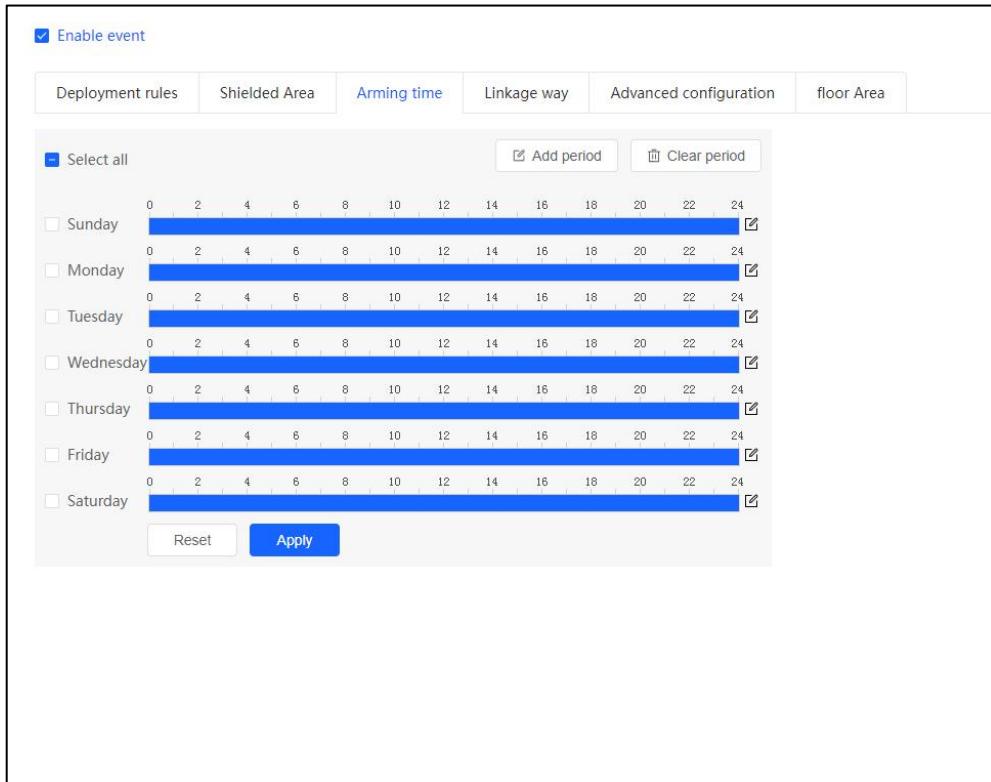


Figure 5-79 Deployment time settings (camera for throwing objects from height detection)

(1) Check the dates that need deployment. Click the **Add Time Periods** button to open the deployment period window. Enter the time periods that need deployment (up to 4 deployment time periods can be set for each day), then click **Confirm**. The pop-up page is shown in Figure 5-3:

(2) Check the dates and click the **Clear** button to clear the time periods for the day;

(3) Click the **Edit** button next to the deployment time periods to re-edit the deployment time periods for that day;

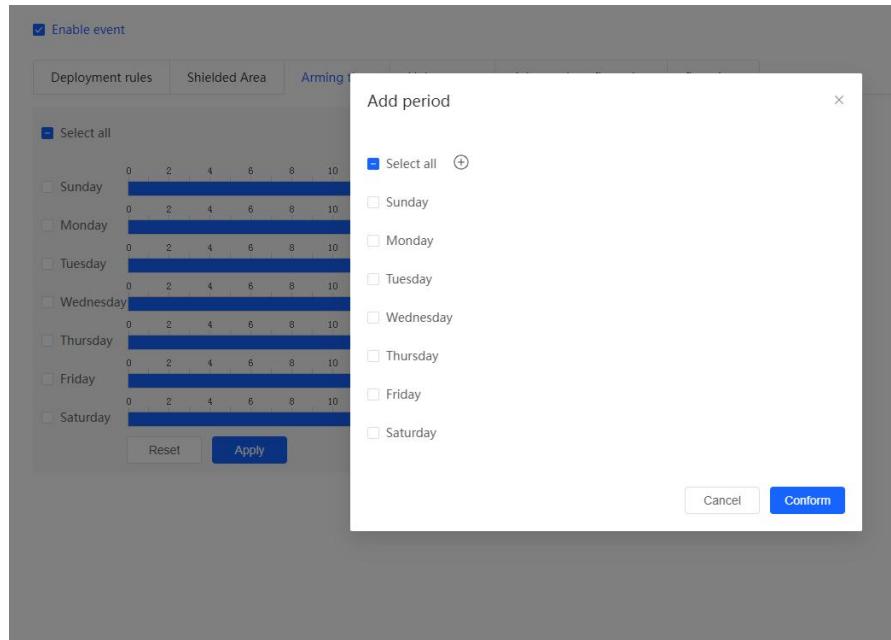


Figure 5-80 The page for adding deployment time periods

- (4) Click the **Restore Defaults** button to restore the default parameters of the deployment time;
- (5) Click **Apply** to apply the parameters currently set.

Step 6: Set the linkage mode. The linkage mode configuration page is shown below:

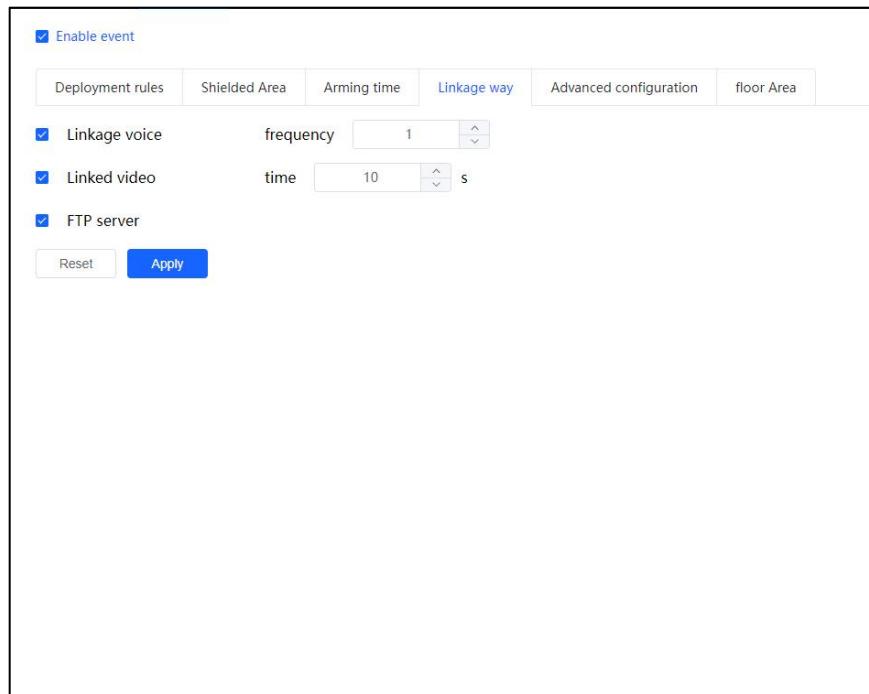


Figure 5-81 Linkage mode settings (camera for throwing objects from height detection)

- (1) Check **Alarm Buzzer** to receive a buzzing alarm when an event occurs;
- (2) Check **Linkage Recording** to set the recording duration. When an event occurs, trigger event recording;

Step 7: Set the advanced configuration. The advanced configuration page is shown in the figure:

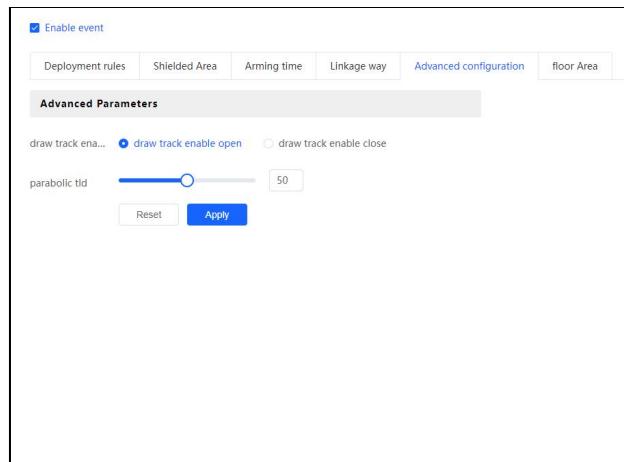


Figure 5-82 Advanced Configuration (camera for throwing objects from height detection)

- Select to enable or disable the trajectory of throwing objects from height;
- Set the detection sensitivity for throwing objects from height. The lower the value, the easier it is to trigger an alarm, and the accuracy is relatively lower;

Step 8: Floor area configuration. The configuration page is shown in the figure:

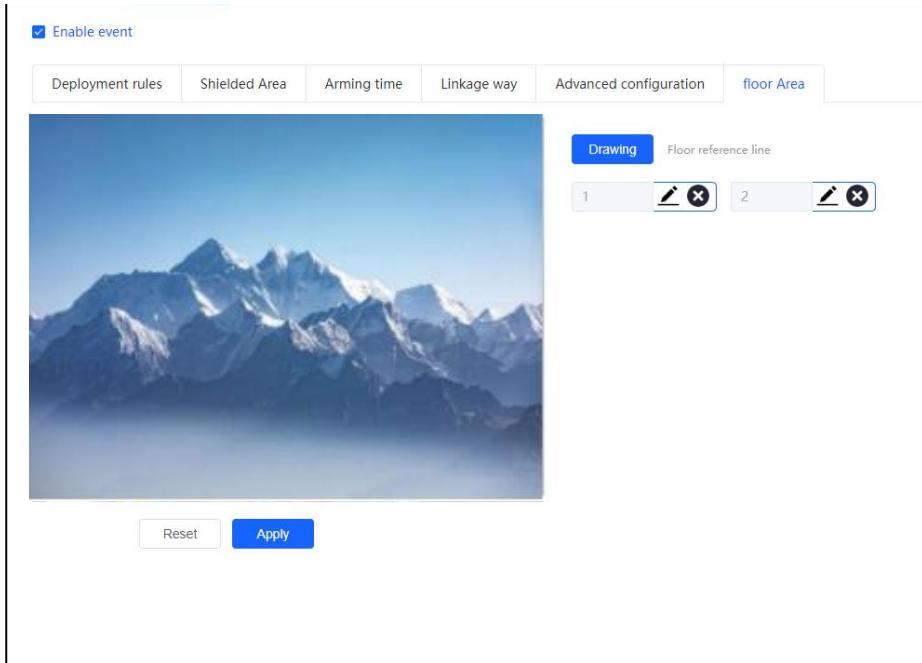


Figure 5-83 Floor area configuration (camera for throwing objects from height detection)

Click **Create** to display the assistant line that marks the floor level on the video screen. You can edit, delete, and move the assistant line as needed.

