Tenda

Web User Guide

CH&RH Series Security Camera

www.tendacn.com

Copyright Statement

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Preface

Thank you for choosing Tenda! This guide is a complement to Quick Installation Guide. The Quick Installation Guide provides instructions for quick internet setup, while this guide contains details of each function and demonstrates how to configure them.

Applicable models

This user guide applies to the Tenda CH&RH series cameras that support web management. The actual product image and firmware function prevail. Unless otherwise specified, CH7-WCA is used for illustration here.

The Dual-lens Linkage Outdoor WiFi Pan/Tilt Camera (such as CH9-WCA) supports dual-channel monitoring of fixed lens and PT lens, which is one more fixed lens channel than the common WiFi Pan/Tilt Camera (such as CH7-WCA). The web UI also has one more lens configuration, but the meaning of the same parameter is the same.

Conventions

The product figures and screenshots in this guide are for reference only. They may be different from the actual products you purchased, but do not affect the normal use.

If the function or parameter is displayed in gray on the product web UI, the product model is not supported or cannot be modified.

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

Item	Presentation	Example
Cascading menus	>	**Playback** > **File**
Parameter and value	Bold	Set **User Name** to **Tom**.
Variable	Italic	Format: *XX*:*XX*:*XX*:*XX*:*XX*:*XX*
UI control	Bold	On the **Policy** page, click the **OK** button.
Message	“ ”	The “Success” message appears.

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

Symbol	Meaning
NOTE	This format is used to highlight information of importance or special interest. Ignoring this type of note may result in ineffective configurations, loss of data or damage to the device.

Symbol	Meaning
TIP	This format is used to highlight a procedure that will save time or resources.

For more documents

If you want to get more documents of the device, visit www.tendacn.com and search for the corresponding product model.

Technical support

Contact us if you need more help. We will be glad to assist you as soon as possible.

Email address: tendasecurity@tenda.cn

Website: www.tendacn.com

Revision history

Tenda is constantly searching for ways to improve its products and documentation. The following table indicates any changes that might have been made since the user guide was released.

Version	Date Description	Description
V1.2	2024-08-30	1. Added the description of the Line Crossing Detection, Intrusion Detection and Dual-lens Smart Linkage function. 2. Optimized the description of the PTZ Control, Motion Detection and Recording Schedule function.
V1.1	2023-07-29	Added the description of the Display Logo function.
V1.0	2023-05-15	Original publication.

Contents

1 Camera Management Method

This guide is for reference only and does not imply that the product supports all functions in the guide. The functions may differ with product models or versions. The actual product prevails.

You can manage the Tenda CH&RH series security cameras through web UI, TDSEE App and Network Video Recorder (NVR). Select the proper management method as required.

1.1 Manage the Camera through Web UI

TIP

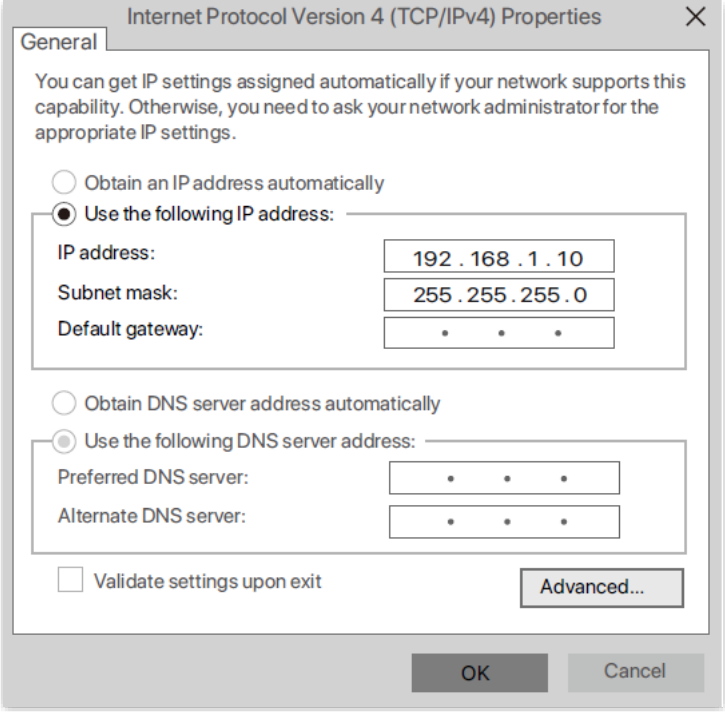
If it is the first time you use a camera or you have reset it, visit www.tendacn.com and search for a quick installation guide of the corresponding product model. After the quick setup, you can refer to the following pages to log in to the web UI.

Step 1 Connect the computer or tablet to a router that is connected to the camera.

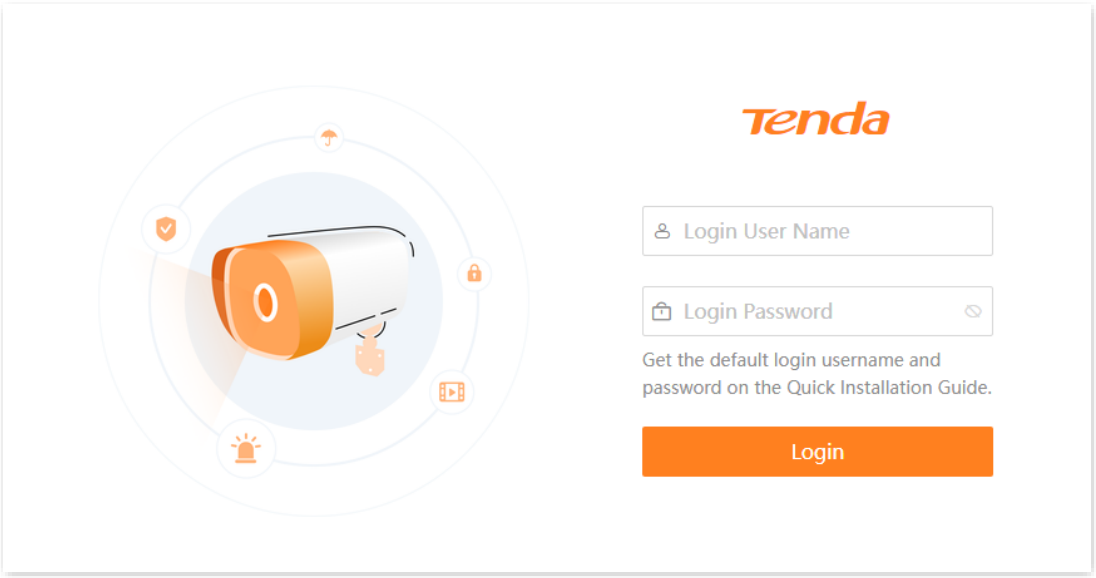
You can connect the computer to the LAN port of the router by using an Ethernet cable, or connect the tablet to the Wi-Fi network of the router.

Step 2 Set the IP address of the computer to an unused one belonging to the same network segment as the IP address of the camera but different from the IP address of the camera. The following figure is for reference only.

The default login IP address of the camera is 192.168.1.203, and the DHCP function is enabled. If there is a DHCP server in the network, the IP address of the camera may be changed. Refer to the actual IP address assigned to the camera by the DHCP server.

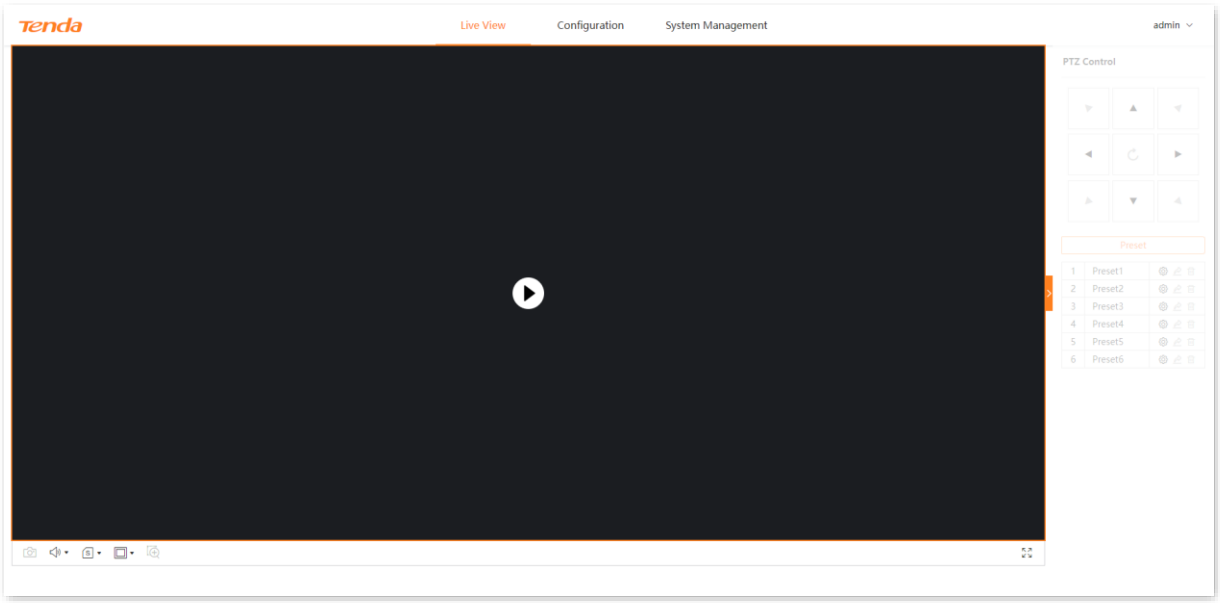


Step 3 Start a browser and enter the IP address of the camera in the address bar to access the login page. Enter the **Login User Name** (default: admin) and **Login Password** (default: admin123456), and then click **Login**.



---End

After you successfully log in to the web UI of the camera, you can start to configure the camera as required.



NOTE

For network security, after logging in to the web UI, modify your password in time. If your camera has been successfully managed by the NVR, modifying the login username or password may cause the camera to go offline. Please operate with caution.

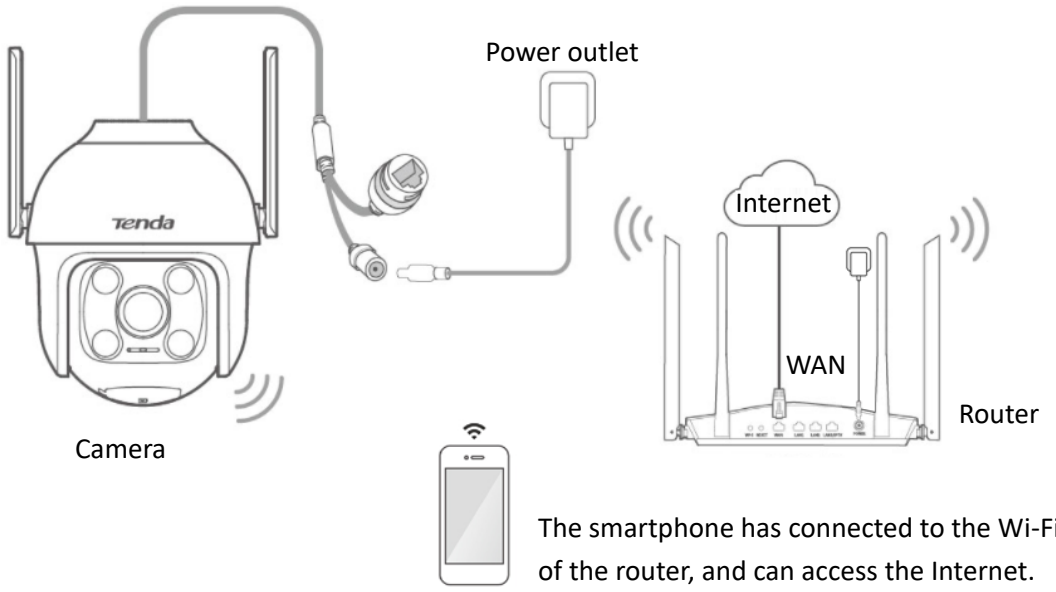
1.2 Manage the Camera through TDSEE App

TIP

Before adding the camera, ensure that the Wi-Fi router is successfully connected to the internet and the filter function is disabled.

Step 1 Power on the camera.

After the camera is powered on, the indicator is solid red. It indicates that the camera is starting up. When the indicator blinks blue quickly, the camera has started up and is waiting to connect to the network.



The smartphone has connected to the Wi-Fi of the router, and can access the Internet.

TDSEE app has been installed on your smartphone.

Step 2 Manage the camera.

Run the TDSEE App. Enter the **Home** page, tap **Add a device** or ⊕ in the upper right corner of the home page, then follow the instructions to operate.

Refer to the user guide of the TDSEE App for details.

---End

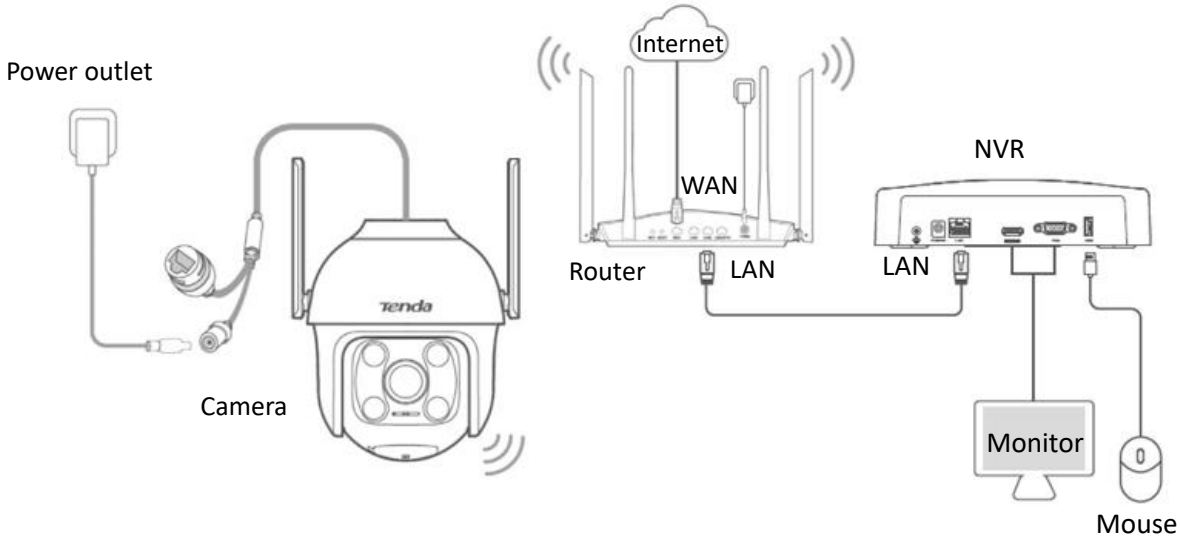
NOTE

For network security, after logging in to the web UI of the camera, modify your password in time. If your camera has been successfully managed by the NVR, modifying the login username or password may cause the camera to go offline. Please operate with caution.

1.3 Manage the Camera through NVR

Step 1 Connect devices.

Refer to the following figure to connect devices.



Step 2 Manage the camera.

Enter the web UI or GUI of the NVR to manage the camera, and perform the related configurations according to the actual situation.

Refer to the user guide of the corresponding NVR model for details.

---End

NOTE

For network security, after logging in to the web UI of the camera, modify your password in time. If your camera has been successfully managed by the NVR, modifying the login username or password may cause the camera to go offline. Please operate with caution.

2 Web UI

This guide is for reference only and does not imply that the product supports all functions in the guide. The functions may differ with product models or versions. The actual product prevails.

2.1 Login

Refer to the Manage the Camera through Web UI.

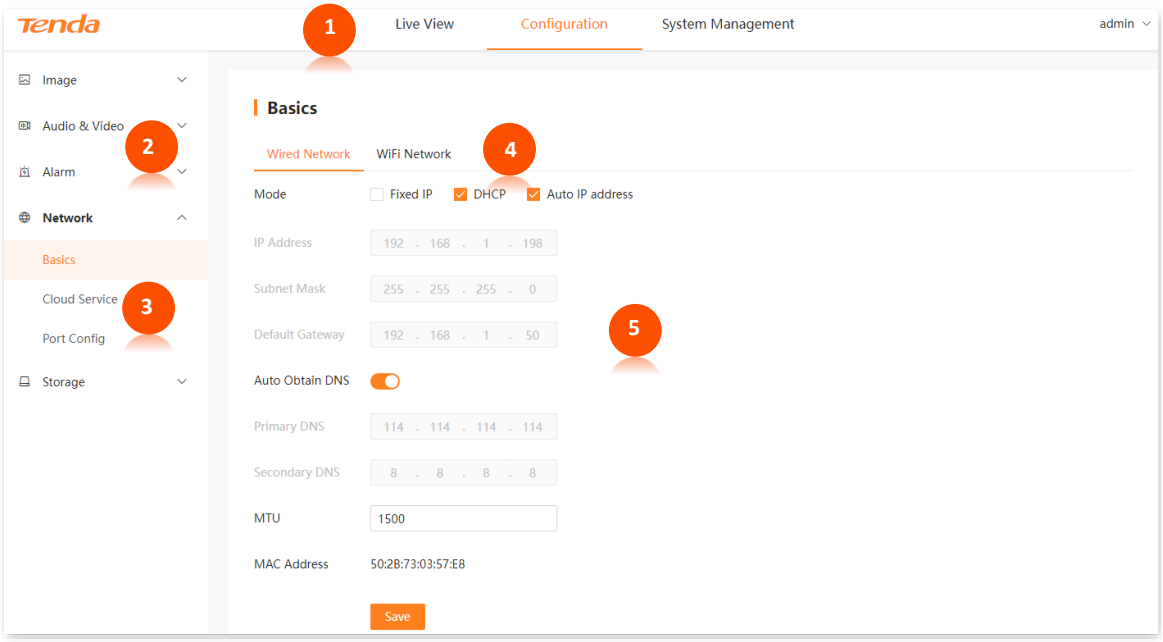
2.2 Logout

If you log in to the web UI of the camera and perform no operation within 5 minutes, the system logs you out automatically. You can also log out by clicking **admin** > **Log out** at the top right corner of the web UI.

2.3 Web UI Layout

2.3.1 Layout

The web UI of the camera consists of two sections, including the navigation bar and the configuration area. See the following figure.



TIP

Features and parameters in gray indicate that they are not available or cannot be changed under the current configuration.

No.	Name	Description
1	Navigation bar	Used to display the function menu of the camera. You can select functions in the navigation bar and then the configuration appears in the configuration area.
2		
3		
4	Tab	
5	Configuration area	Used to view or modify your configuration.

2.3.2 Frequently-used Elements

The following table describes the frequently-used buttons available on the web UI of the camera.

Button	Description
Save	Used to save the configuration on the current page and enable the configuration to take effect.
Restore Default Settings	Used to restore current configurations to the factory default settings and make configurations take effect.

3 Live View

This guide is for reference only and does not imply that the product supports all functions in the guide. The functions may differ with product models or versions. The actual product prevails.

To access the configuration page, log in to the web UI of the camera, and click **Live View**.

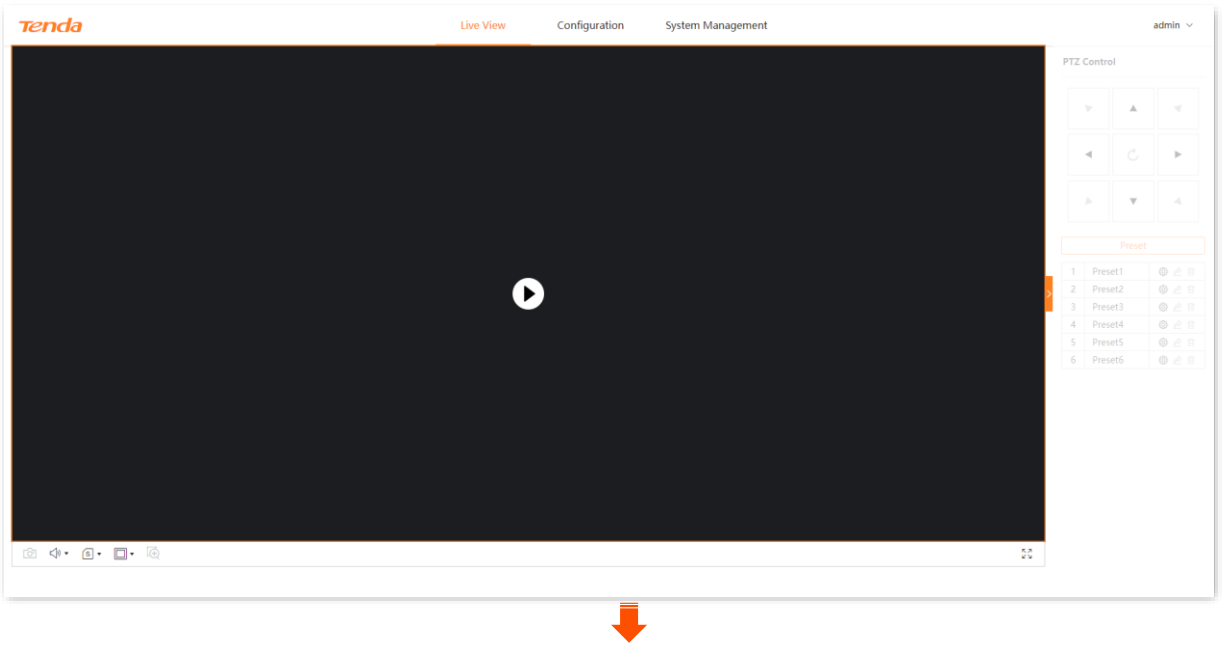
The default page is the live view page after you enter the web UI of the camera. In this section, you can:

- View Real-time Monitoring Image of the camera
- PTZ Control

3.1 View Real-time Monitoring Image

In the Live View page, click the play button ▶ to view the real-time monitoring image.

The CH7-WCA is taken as an example. The page is shown as follows.



Two channels of fixed lens and PT lens are used for monitoring image. The CH9-WCA is taken as an example. The page is shown as follows. If you want to operate a monitoring image, select this channel first.

Parameter description

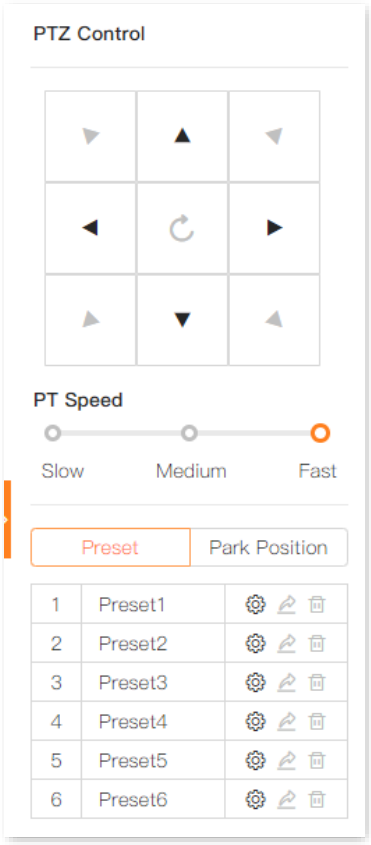
Parameter	Description
	Used to capture the live view image and save it to the computer in png format.
	Audio switch. You can turn on, turn off or adjust the volume of the audio.
	Used to switch the main stream or sub-stream. • For main stream, the network requirements are higher, and the live view image is clearer. • For sub-stream, the live view image is smoother. In poor network environment, you are recommended to select the sub-stream to ensure the network quality.
	Used to switch the display ratio of the live view image. By default, it is full screen, and you can adjust it as required.
	Area zoom in. After clicking it, you can select an area in the live view image and zoom in to the entire window. Click it again to cancel the area zoom.
	Click it to display the live view image in full screen, or you can double-click the image to display in full screen. Press the **Esc** key of the keyboard to cancel full-screen display.
	PTZ control. Used to perform such related operations as adjusting the monitoring direction (only supports up, down, left and right directions) and setting preset for the camera. Refer to PTZ Control for more details.

3.2 PTZ Control

3.2.1 Overview

PTZ indicates a mechanical platform composed of motors, which can move horizontally and vertically. Through the control system, the direction and speed of the PTZ camera or speed dome camera can be remotely controlled.

On the live view page, you can control the PTZ camera or speed dome camera, including adjusting the monitoring direction, setting and calling the preset point. The CH9-WCA is taken as example here.



Parameter & Button description

Parameter/Button	Description
	Used to control the PT direction. The direction (up, down, left, right) of the dome camera can be controlled.
PT Speed	Used to set the rotation speed of manual control pan/tilt.

Parameter/Button	Description
Preset	Used to set the monitoring position of the camera in advance, and 6 positions can be preset.
Park Position	Specifies the camera has no pan-tilt operation in the **Wait Time**, and automatically returns to the position.
Wait Time	Specifies the stay time of the camera if there is no pan-tilt operation at the non-**Park Position**.
Operation	Used to perform operations for the preset/park position: Click to use the currently adjusted monitoring direction and zoom as the parameters of the preset. Click to call the preset, control the dome camera to rotate to the monitoring position of the preset and apply the zoom of the preset. Click to delete the preset.

3.2.2 Set Preset

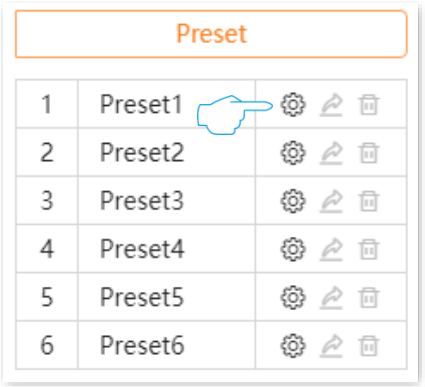
Set the monitoring direction for a specific preset.

Procedure:

Step 1 Log in to the web UI of the camera.

Step 2 Click **Live View**, and use the direction keys to control the camera to rotate to the desired monitoring position in **PTZ Control**.

Step 3 Click **Live View**, target the preset to which this monitoring position is to be applied in **Preset**, and click . The following figure is for reference only.


Preset
1
Preset1
2
Preset2
3
Preset3
4
Preset4
5
Preset5
6
Preset6

---End

3.2.3 Set Park Position (Example: CH9-WCA)

Step 1 Log in to the web UI of the camera.

Step 2 Click **Live View**. In the **PTZ Control** module, rotate the camera to the position to be monitored by the arrow keys.

Step 3 Click ⚙ in **Park Position**.

Step 4 Set **Wait Time**, which is **2minute(s)** in this example. The following figure is for reference only.

TIP

Click ↗ to control the camera to immediately rotate to the park position. Click 🗑 to delete the park position.

---End

4 Configuration

This guide is for reference only and does not imply that the product supports all functions in the guide. The functions may differ with product models or versions. The actual product prevails.

On the configuration page, you can:

- Configure image parameters, OSD and privacy mask.
- Modify the parameter of the audio & video.
- Configure alarm.
- Configure network parameters, cloud service and modify each service port.
- Format SD card and configure the recording schedule.

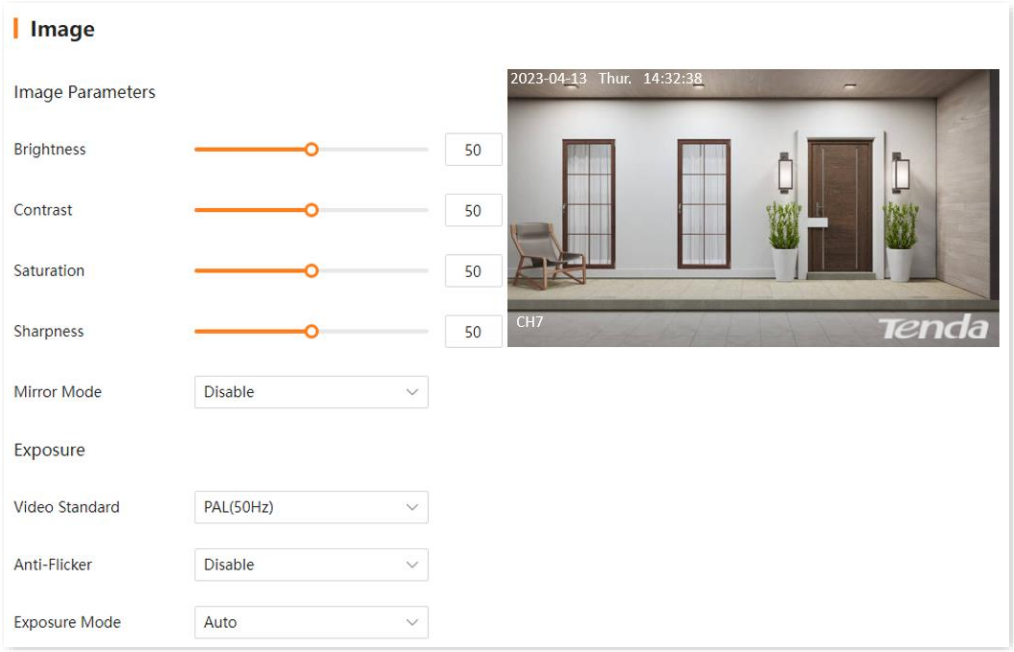
4.1 Image Configuration

4.1.1 Image Parameter

Overview

To access the configuration page, log in to the web UI of the camera, and navigate to **Configuration** > **Image** > **Image**.

You can adjust the image parameters to improve the visual effect of the camera monitoring image.



Parameter description

Parameter		Description
Image Parameters	Brightness	Specifies the brightness of the image. The brightness value can be adjusted when the overall monitoring image is dark or bright. The larger the value, the brighter the image.
	Contrast	Specifies the ratio of the lightest area to the darkest area in the image. The contrast value can be adjusted when the sense of layering in the monitoring image is poor and the contrast between the white and black of the image is insufficient. The larger the value, the greater the contrast between light and dark of the image.
	Saturation	Specifies the vividness of the colors in the image. The larger the value, the more vivid the image color.
	Sharpness	Specifies the sharpness of the edges of the image. The larger the value, the more obvious the edges of the image.
	Mirror Mode	Specifies the direction of the monitoring image. • **Disable:** The image will not be mirrored. • **Up-Down:** The image will be reversed up and down. • **Left-Right:** The image will be reversed left and right. • **Center:** The image will be changed up and down, left and right. This mode can be selected when the camera is installed upside down.
Exposure	Video Standard	Specifies the video standard of the camera, and supports 50 Hz (PAL) and 60 Hz (NTSC). • **PAL(50Hz)**: It is available for such countries or regions as mainland China, China Hong Kong, and the United Kingdom. • **NTSC(60Hz)**: It is available for such countries or regions as China Taiwan, the United States, Japan, and Canada.
	Anti-Flicker	Specifies the system sets the electronic shutter of the camera to an integer multiple or 0.5 times of the flickering frequency of the light to prevent streaks in the image. If there are stripes in the monitoring image, you can enable this function.

Parameter		Description
	Exposure Mode	Specifies the exposure mode of the camera. • **Auto**: Specifies both gain and exposure time are automatic. The exposure time of the image sensor (such as CCD) is adjusted according to the brightness of the environment light to get a clear image. • **Gain Priority**: Specifies the exposure time is automatically adjusted according to the manually adjusted gain, the camera can output standard images under different lighting conditions. It cannot be configured when the **Fill Light Mode** is **Auto**. • **Exposure Priority**: Specifies the gain is automatically adjusted according to the manually adjusted exposure time, the camera can output standard images under different lighting conditions. • **Manual**: Specifies both gain and exposure time can be adjusted manually. It cannot be configured when the **Fill Light Mode** is **Auto**.
	Exposure Time	Specifies the electronic shutter time of the camera. When the image brightness and gain are both constant, the longer the exposure time, the higher the brightness of the image.
Fill Light	Mode	Specifies the fill light mode of the camera. • **Auto**: Specifies the fill light can be automatically enabled according to the change of environment light brightness. • **Schedule**: Specifies the fill light can be enabled/disabled by preset time. • **Always on**: Specifies the fill light is always enabled. • **Always off**: Specifies the fill light is always disabled.
	Sensitivity	Specifies the light threshold of the fill light can be enabled automatically. Only available when the **Fill Light Mode** is **Auto**. The higher the sensitivity, the smaller the light threshold that triggers the fill light, and the easier to enable the fill light.
	Switch Delay	Specifies the extended time for enabling the fill light after the conditions are met. Only available when the **Fill Light Mode** is **Auto**.
	Start Time	Specify the period when the **Fill Light** is enabled. Only available when the **Fill Light Mode** is **Schedule**.
	End Time	

Parameter		Description
	Night Vision Mode	Specifies the monitoring image effect of the camera at night. Only available for full-color version cameras. • **Infrared**: The infrared supplement light of the camera is enabled, and the monitoring image is always in black and white. • **Full Color**: The white supplement light of the camera is enabled, and the monitoring image is always in color. • **Smart**: When a moving object or human figure is detected, the white light of the camera will be enabled and the monitoring image will be in color, otherwise the infrared light will be enabled and the monitoring image will be in black and white.
	Smart IR	Used to control the brightness of the fill light to ensure proper exposure to objects near the camera. Only available in the **Infrared** and **Smart** mode.
	White Light Brightness	Used to customize the brightness of the white light. Only available in the **Infrared** and **Full Color** mode.
Backlight	Disabled	Specifies the **Back Light Compensation (BLC)** function is disabled.
	WDR	Wide Dynamic Range (WDR). When the high brightness area in the monitoring image contrasts with the low brightness area, the system weakens the high brightness area and brightens the low brightness area, so that both the bright part and the dark part can be seen clearly.
	BLC	Back Light Compensation (BLC). Specifies the system exposes the **Compensation Area** to reach the appropriate brightness to ensure the clarity of the image.
	HLC	Highlight Compensation (HLC). Specifies in a strong light environment, the system will weaken the strong light area and brighten the dark light area to achieve light balance and make the whole image clearer.
	Level	Specifies the level of **WDR** or **HLC**. The higher the level, the more obvious the effect.
	Compensation Area	Specifies the area to be exposed. Only available when backlight mode is **BLC**.

Parameter		Description
White Balance	White Balance	Specifies the overall color of the image can be adjusted by setting the white balance mode. • **Auto:** Specifies the image color can be automatically adjusted according to the environment color temperature to restore the true color. • **Manual:** Specifies that R gain and B gain can be manually adjusted to adjust the image color. • **Lock:** Specifies the current color temperature is locked. • **Fluorescent:** Specifies the color of the image can be adjusted according to the color temperature of the fluorescent light. • **Incandescent:** Specifies the color of the image can be adjusted according to the color temperature of the incandescent light. • **Warm:** Specifies the color of the image can be adjusted according to the color temperature of the warm light. • **Natural:** Specifies the color of the image can be adjusted according to the color temperature of the natural light.
Image Enhancement	3D Noise Reduction	Specifies the image noise reduction. Compare the images of the two frames before and after, target the noise location and handle noise reduction to make the image clearer and more delicate.
	Level	Specifies the level of the 3D noise reduction. The higher the level, the more noise locations are handled by noise reduction. NOTE If the noise reduction level is too high, the image may be distorted or blurred.

Set Night Vision Mode of the Camera

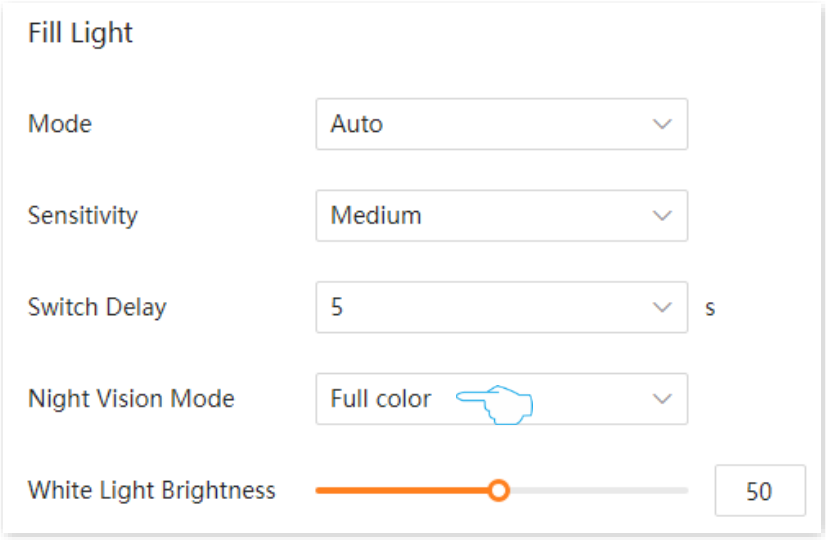
Assume that you want the monitoring images of the camera to be colored during the day and night, you can modify the night vision mode of the cameras.

Procedure:

Step 1 Log in to the web UI of the camera.

Step 2 Navigate to **Configuration** > **Image** > **Image Parameters**.

Step 3 Modify the night vision mode of the camera, which is **Full color** in this example.



Step 4 Click **Save**.

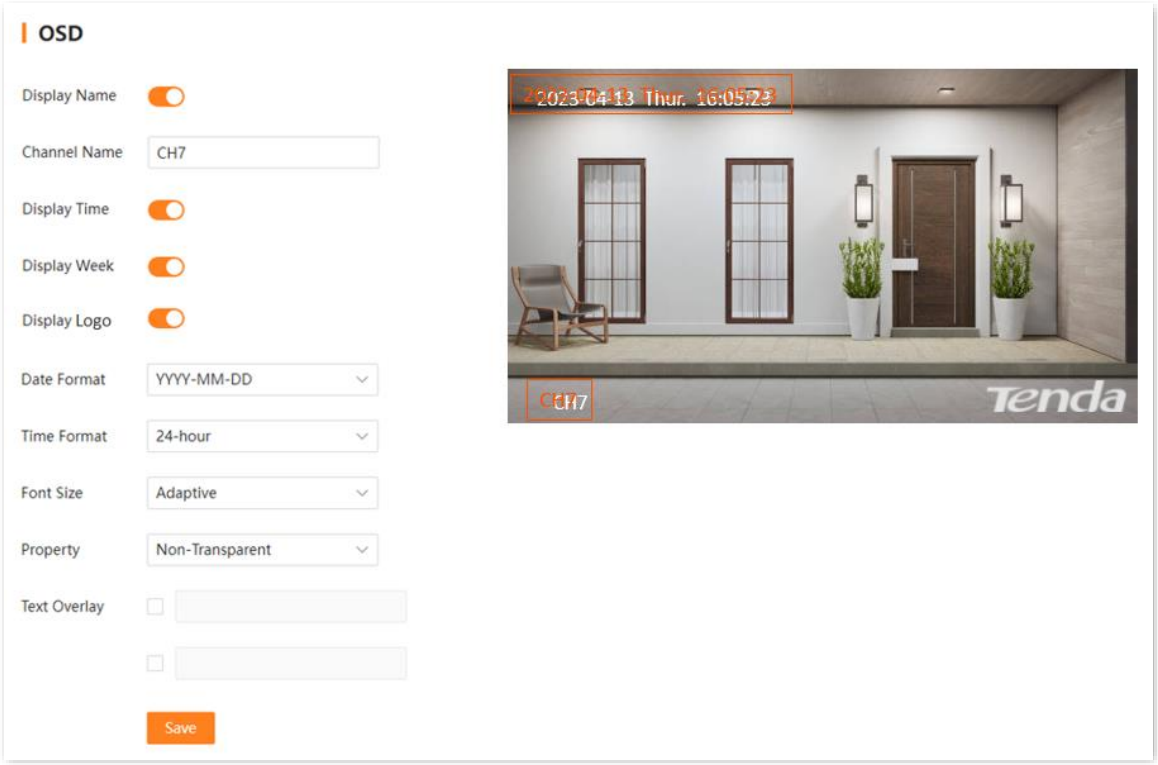
---End

After the setting completes, the monitoring images of the camera is in color during the day.

4.1.2 OSD Configuration

To access the configuration page, log in to the web UI of the camera, and navigate to **Configuration** > **Image** > **OSD**.

On-Screen Display (OSD) refers to displaying the required information on the screen. This refers to the information displayed on the screen overlaid with the monitoring image at the same time.



Parameter description

Parameter	Description
Display Name	Specifies whether to display the channel name on the monitoring image.
Channel Name	Specifies the channel name. You are recommended to modify the channel name to the description of the installation position of the channel camera so that you can quickly locate each camera when managing multiple cameras.
Display Time	Specifies whether to display the channel time.
Display Week	Specifies whether to display the monitoring image. It is available when the **Display Time** function is enabled.
Display Logo	Specifies whether to display the Tenda Logo.
Date Format	Specifies the format of the camera system date display. Y means the year, M means the month, and D means the day. Only available in when the Display Time function is enabled.
Time Format	Specifies the format of the camera system time display. Y means the year, M means the month, and D means the day. Only available in when the **Display Time** function is enabled.
Font Size	Specifies the font size of the OSD information display. You can select it as required.

Parameter	Description
Property	Specifies the transparency of the content displayed on the monitoring image. TIP **Transparent** indicates the transparency of 50%.
Text Overlay	Specifies the displayed content is customized on the monitoring image. A maximum of two are supported.
OSD Position	In live view area, you can use the left mouse button to long press and drag the OSD to modify the display position of the OSD.

4.1.3 Privacy Mask

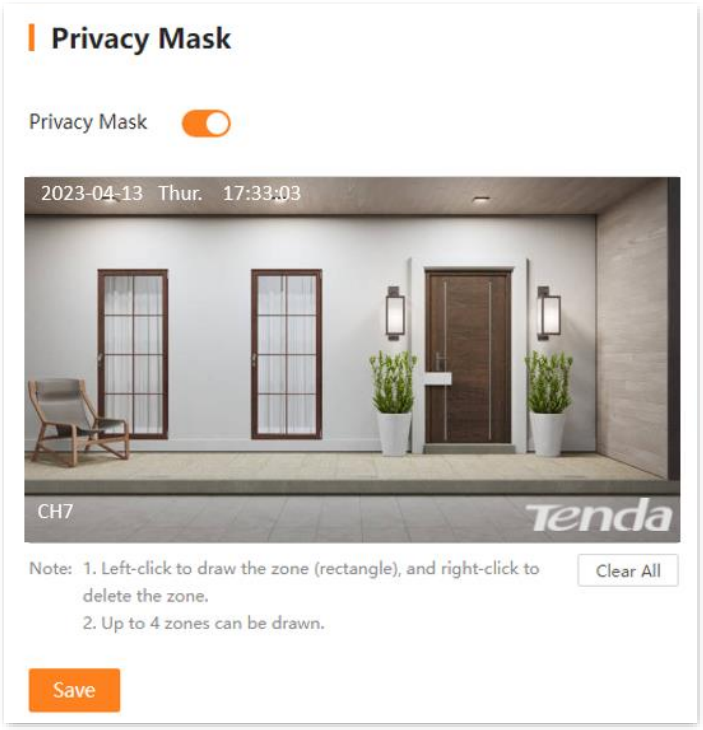
Overview

To access the configuration page, log in to the web UI of the camera, and navigate to **Configuration** > **Image** > **Privacy Mask**.

To protect your privacy, you can set some areas in the monitoring image (such as the bedroom window area) as privacy areas here. The privacy areas will not be displayed on the monitoring image.

This function is disabled by default. When it is enabled, the page is shown as below.

Use the mouse to draw a privacy area in the preview area on the left. The following figure is for reference only.



Draw Privacy Area

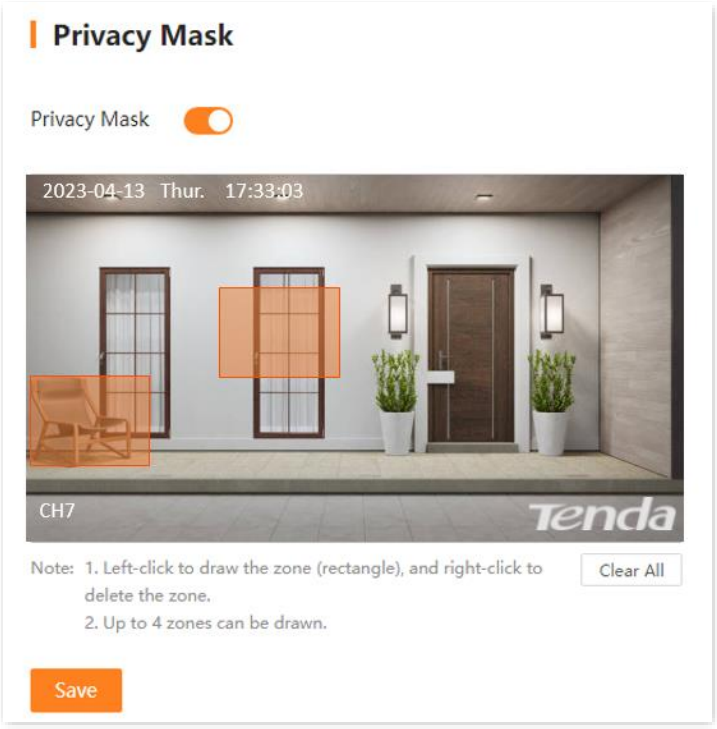
Assume that you want to hide some monitoring areas on the monitoring image.

Procedure:

Step 1 Log in to the web UI of the camera, and navigate to **Configuration** > **Image** > **Privacy Mask**.

Step 2 Enable the **Privacy Mask**.

Step 3 Hold down the left mouse button to draw the private area on the left side of the preview area. Release the mouse after the privacy area is drawn. The following figure is for reference only.



Step 4 Click **Save**.

---End

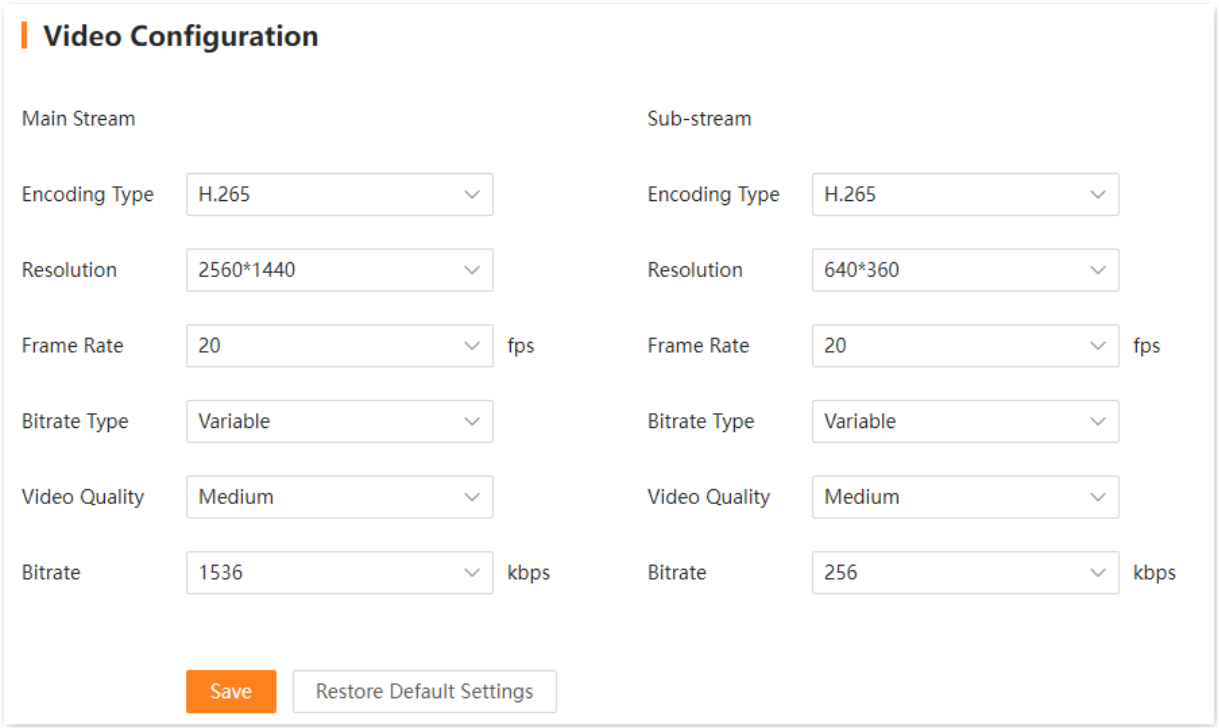
After the setting completes, this privacy area is not displayed on the monitoring image.

4.2 Audio and Video Configuration

4.2.1 Video Configuration

To access the configuration page, log in to the web UI of the camera, and navigate to **Configuration** > **Audio & Video** > **Video Configuration**.

The video configuration function enables you to adjust the video encoding parameters.



Parameter description

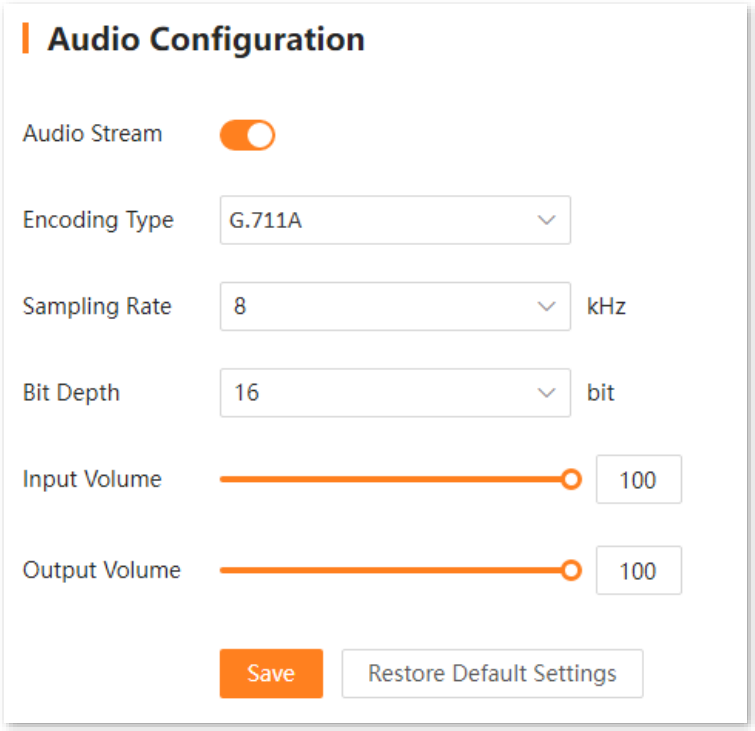
Parameter	Description
Stream Type	Specifies the stream type of the camera. • **Main Stream:** The stream has a large value and a high occupied bandwidth, which is applicable for large-screen monitoring and storage. • **Sub Stream:** The stream has a small value and a small occupied bandwidth, which is applicable for small-screen monitoring and network transmission.
Encoding Type	Specifies the encoding standard of the video. • **H.264:** A generation of highly compressed video codec standards after MPEG4, which improves compression efficiency under the same video quality. • **H.265:** A generation of video coding standards after H.264, which improves the bit stream, coding quality, and delay to optimize coding and save more bandwidth and capacity under the same video quality.

Parameter	Description
Resolution	Specifies the number of pixels contained in a frame of an image. The higher the resolution, the clearer the image and the more obvious details.
Frame Rate	Specifies the number of video frames displayed per second. The higher the frame rate, the smoother the image.
Bitrate Type	Specifies the bit rate control method of the video. • **Fixed:** According to the upper limit of the bit rate to encode, the bit rate will fluctuate up and down in the bit rate value, and will not change with the monitoring scene. • **Variable:** The bit rate will change with the monitoring scene. Adopt a high bit rate when the monitoring scene is moving or changing. The Variable Bit Rate (VBR) adopts a lower bit rate when the monitoring scene is static.
Video Quality	Specifies the quality level of the video. Please set it as required. This parameter is available only when **Bitrate Type** is set to **Variable**.
Bitrate	Specifies the size of the video data per unit time. The larger the bit rate, the better the picture quality.

4.2.2 Audio Configuration

To access the configuration page, log in to the web UI of the camera, and navigate to **Configuration** > **Audio & Video** > **Audio Configuration**.

The audio configuration function enables you to adjust the audio encoding parameters.



Parameter description

Parameter	Description
Audio Stream	Specifies whether to enable the **Audio Stream** function. • **Enable:** Specifies the recording file is audio and video composite stream. • **Disable:** Specifies the recording file is a video stream, and no audio stream.
Encoding Type	Specifies the encoding standard of the audio. Select it according to the actual condition. • **AAC**: Advanced Audio Coding (AAC). A file compression format specially designed for sound data, which is a lossy compression format. • **G.711U, G.711A**: G711 is a set of voice compression standards developed by the International Telecommunication Union (ITU-T), mainly used for telephone voice communication. G.711U and G.711A are two compression methods in the ITU-T G.711 standard. G.711U is the μ-law algorithm, and G.711A is the A-law algorithm.
Sampling Rate	Specifies the number of audio samples collected per second.
Bit Depth	Specifies the number of bits of information in each sample.
Input Volume	Specifies the volume level of the camera audio input.
Output Volume	Specifies the volume level of the camera audio output. TIP The output volume set here will affect the volume of the Sound Alarm.

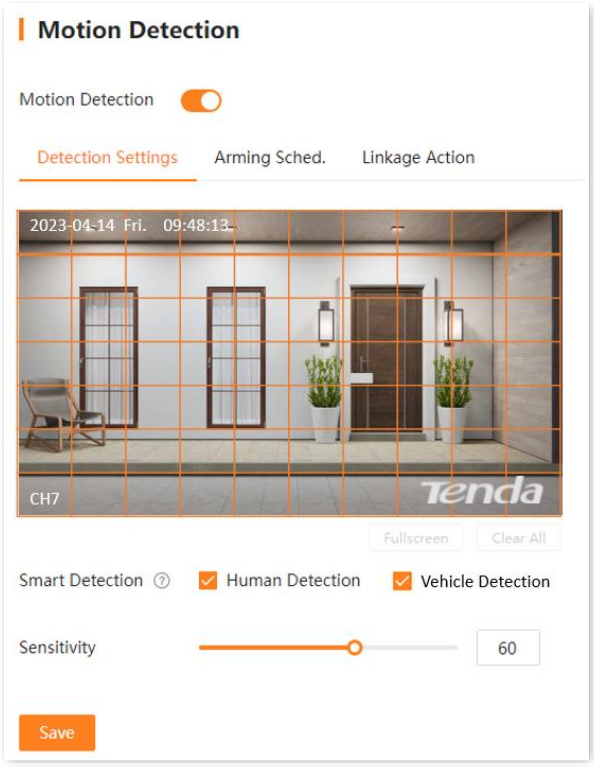
4.3 Alarm Management

4.3.1 Motion Detection

Overview

To access the configuration page, log in to the web UI of the camera, and navigate to **Configuration** > **Alarm** > **Motion Detection**.

The motion detection function refers to the detection and alarm of moving targets. When a moving target appears on the monitoring image and the moving range reaches the threshold corresponding to the preset sensitivity, the system will alarm and record according to the linkage action you set.



Parameter & button description

Parameter	Description
Motion Detection	Specifies whether the motion detection function is enabled.

Parameter		Description
Detection Settings	Smart Detection	Specifies the detection type. • **Human Detection**: The system will alarm only when a human is detected. • **Vehicle Detection**: The system will alarm only when a vehicle is detected. • Tick neither (suitable for single channel): The system will alarm when an object moves in the drawn detection area. • Draw the detection area (suitable for single channel): Hold down the left mouse button to draw the detection area in the live view area. Release the mouse after the detection area is drawn. • Draw the non-detection area (suitable for single channel): In full-screen detection, hold down the left mouse button to draw a non-detection area in the live view area. Release the mouse after the detection area is drawn. • Draw the non-detection area (suitable for dual channel): In full-screen detection, hold down the left mouse button to draw a non-detection area in the live view area, and click four times to determine the area size.
	Sensitivity	Specifies the detection sensitivity threshold that triggers an alarm. The larger the value, the easier it is to trigger an alarm.
	Fullscreen	Used to set all areas as the detection area with one click.
	Clear All	Used to clear the current detection area.
Arming Sched.	Arming Sched.	Used to set an arming schedule. By default, it is 7*24 hours. Set arming schedule: • When there is an arming schedule in the current period, click the arming schedule and set it in the pop-up window. Or put the mouse on the far left or the last side of the arming schedule area, and then hold down the left mouse button to drag. • When the arming schedule is not set in the current period, hold down the left mouse button to draw the arming schedule, and release the mouse after the arming schedule is drawn. TIP The orange area means arming schedule, and the gray area means not arming schedule.
		Synchronize the set arming schedule to other dates.
	Clear All	Used to clear the current arming schedule.

Parameter		Description
Linkage Action	Common Linkage	Specifies the ordinary alarm method of the camera after an alarm is triggered. • **Trigger Recording**: The system will record after an alarm is triggered. For normal recording, please ensure that the SD card is normal or cloud storage has been purchased, and the Recording Schedule is also in effect. • **Message Notification:** The system will send an alarm notification to such alarm center as TDSEE App and NVR after an alarm is triggered. The camera needs to be added successfully through TDSEE App and NVR. Refer to Manage the Camera through TDSEE App and Manage the Camera through NVR for details. • **Human Tracking** (suitable for single channel): After triggering the alarm, the dome camera moves as the human moves. • **Dual-lens Linkage Tracking** (suitable for dual channel): After triggering the human alarm, the dome camera moves as the human moves. Set the Dual-lens Smart Linkage function first.
	Sound & Light Linkage	Specifies the sound and light alarm method of the camera after an alarm is triggered. • **Audio Alarm**: The camera of the alarm channel will sound after an alarm is triggered. Refer to Sound & Light Alarm for details. • **Light Alarm**: The camera of the alarm channel will flash the fill light after an alarm is triggered. Refer to Sound & Light Alarm for details. TIP To ensure that the sound alarm or light alarm works properly, check that the **Arming Sched.** of the sound & light alarm takes effect within the period when the **Arming Sched.** of motion detection is effective.

Configure Motion Detection Alarm (Example: CH7-WCA)

Scenario: Assume that you have set up a monitoring network with a camera.

Requirement: The motion detection function is enabled for the camera at 0:00 to 6:00 and 20:00 to 24:00 from Monday to Sunday. When a human detection alarm is triggered, an alarm notification is pushed to the TDSEE App, and trigger the camera for recording.

Solutions: Configure the **Motion Detection** function to meet this requirement.

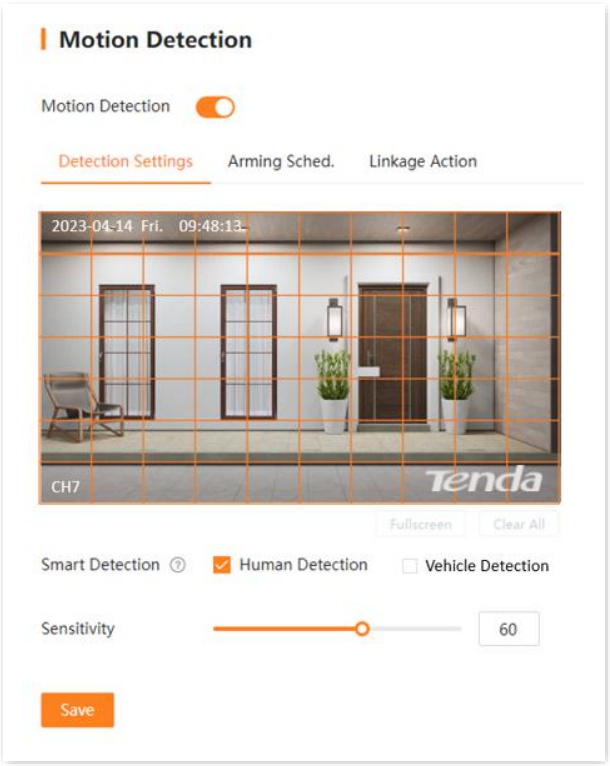
Procedure:

Step 1 Log in to the web UI of the camera.

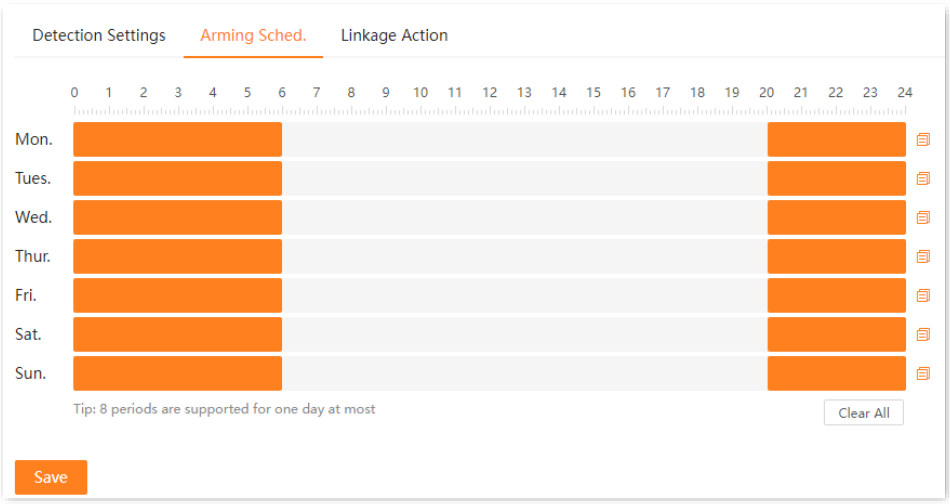
Step 2 Set the motion detection.

1. Navigate to **Configuration** > **Alarm** > **Motion Detection**.
2. Enable the **Motion Detection**.

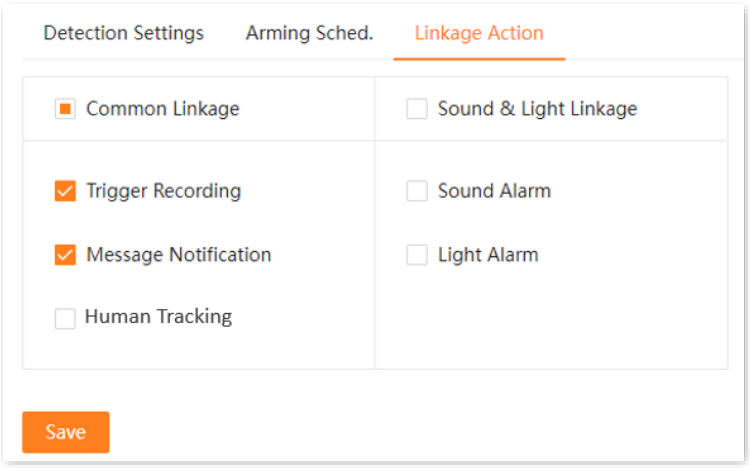
3. Select **Human Detection** in **Smart Detection**, adjust the sensitivity as required, and click **Save**.



4. Click **Alarming Sched.** to set motion detection schedule, which is **0:00** to **6:00** and **20:00** to **24:00** from **Mon.** to **Sun.** in this example, and click **Save**.



5. Click **Linkage Action**, and select alarm methods, which are **Trigger Recording** and **Message Notification** in this example, and click **Save**.



Step 3 Use TDSEE App to add the camera. Refer to Manage the Camera Through TDSEE App for the related steps. (If set, please skip.)

---End

After the setting completes, if the camera detects an alarm, it will push an alarm notification and image to the TDSEE App, and trigger the camera to record at the same time.

Configure Motion Detection Alarm (Example: CH9-WCA)

Scenario: Assume that you have set up a monitoring network with a camera on your doorstep.

Requirement: The human detection and vehicle detection function are enabled for the camera at 0:00 to 6:00 and 20:00 to 24:00 from Monday to Sunday. When an alarm is triggered, an alarm notification is pushed to the TDSEE App, and trigger the camera for recording.

Solutions: Configure the **Motion Detection** function to meet this requirement.

Procedure:

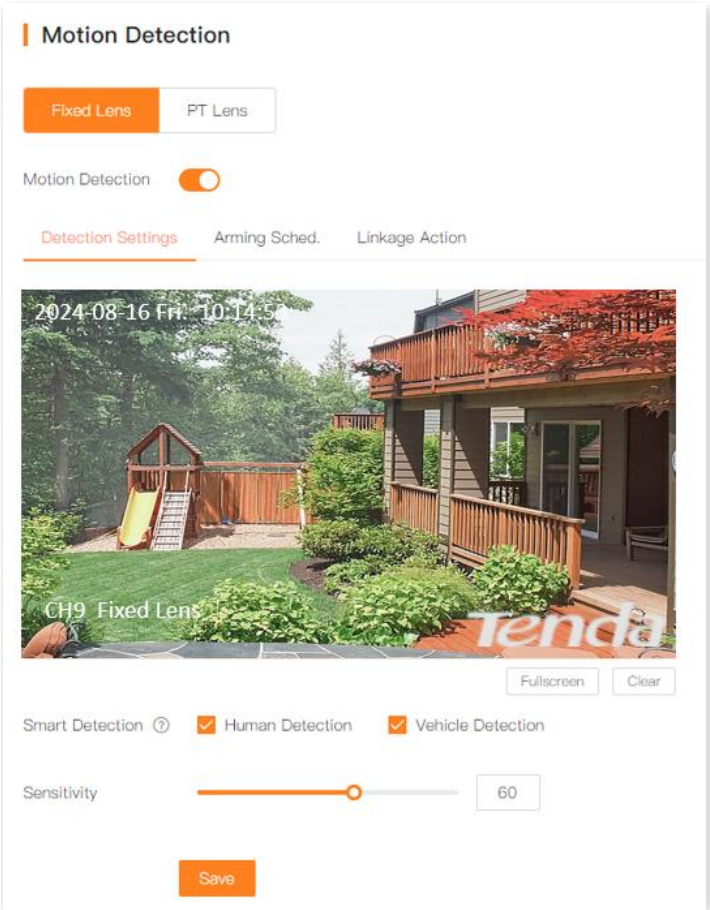
Step 1 Log in to the web UI of the camera.

Step 2 Set the motion detection for fixed lens.

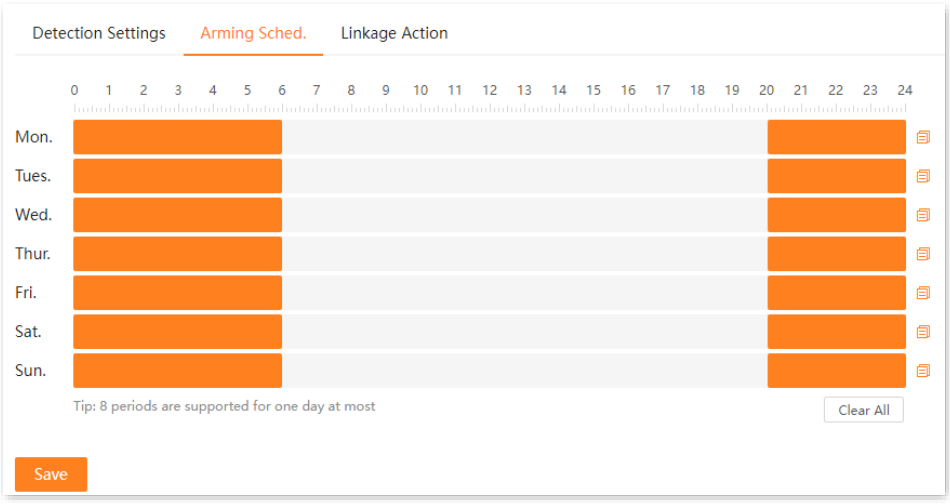
1. Navigate to **Configuration** > **Alarm** > **Motion Detection**.
2. Enable the **Motion Detection**.
3. Select **Human Detection** and **Vehicle Detection** in **Detection Settings**, adjust the sensitivity as required, and click **Save**.

TIP

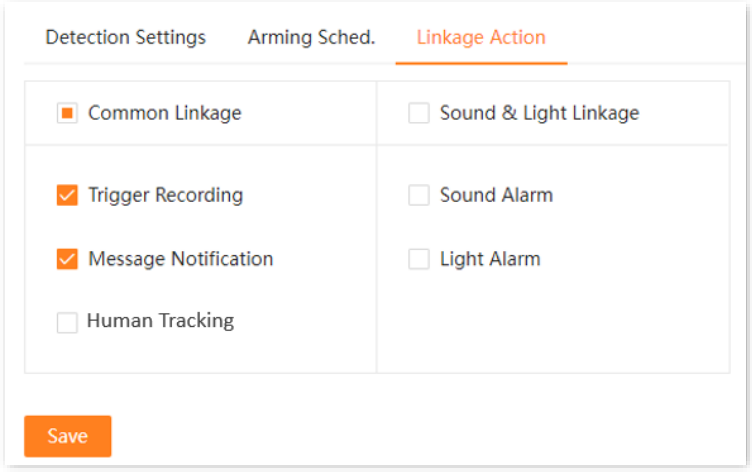
The default is full-screen detection. If you want to customize the detection area, you can click **Clear**, and then click the left mouse button to draw the detection area.



4. Click **Alarming Sched.** to set motion detection schedule, which is **0:00** to **6:00** and **20:00** to **24:00** from **Mon.** to **Sun.** in this example, and click **Save**.



5. Click **Linkage Action**, and select alarm methods, which are **Trigger Recording** and **Message Notification** in this example, and click **Save**.

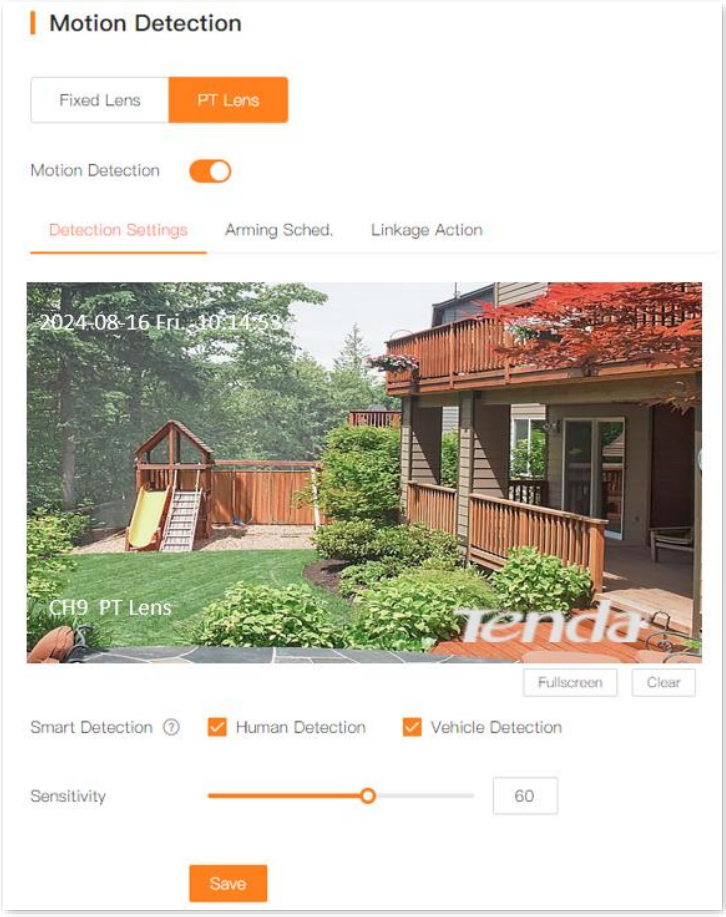


Step 3 Set the motion detection for PT lens.

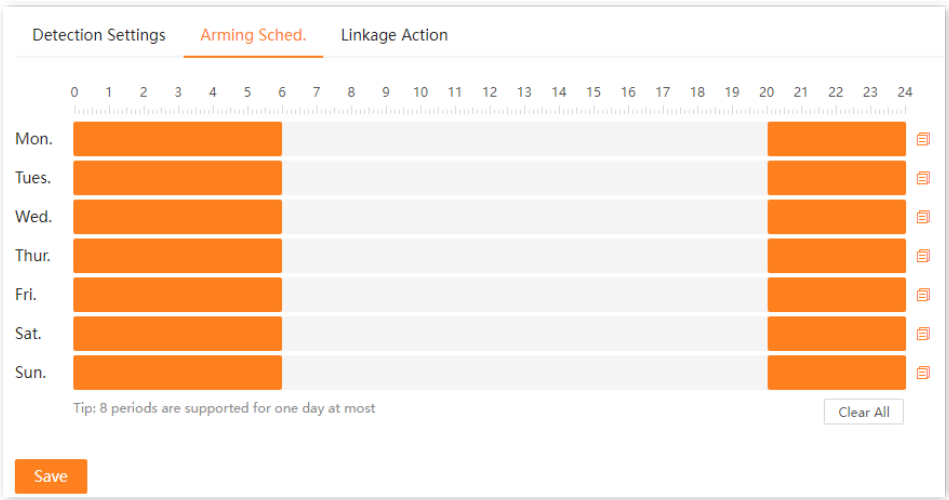
1. Navigate to **Configuration** > **Alarm** > **Motion Detection** > **PT Lens**.
2. Enable the **Motion Detection**.
3. Select **Human Detection** and **Vehicle Detection** in **Detection Settings**, adjust the sensitivity as required, and click **Save**.

TIP

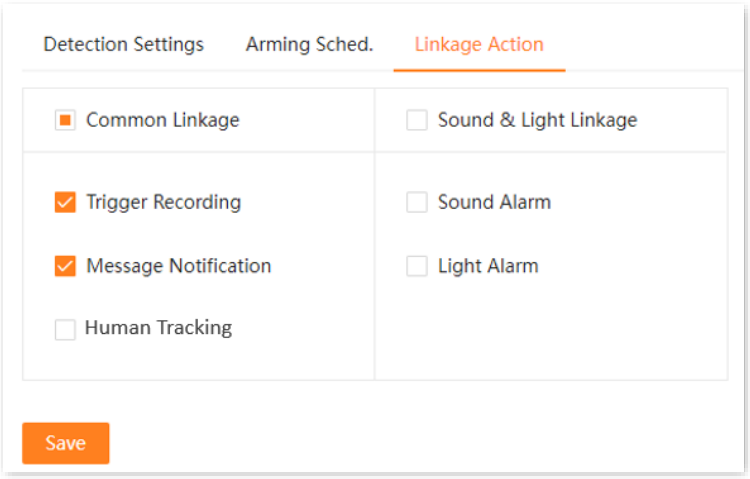
The default is full-screen detection, if you want to customize the detection area, you can click **Clear**, and then click the left mouse button to draw the detection area.



4. Click **Alarming Sched.** to set motion detection schedule, which is **0:00** to **6:00** and **20:00** to **24:00** from **Mon.** to **Sun.** in this example, and click **Save**.



5. Click **Linkage Action**, and select alarm methods, which are **Trigger Recording** and **Message Notification** in this example, and click **Save**.



Step 4 Use TDSEE App to add the camera. Refer to Manage the Camera Through TDSEE App for the related steps. (If set, please skip.)

---End

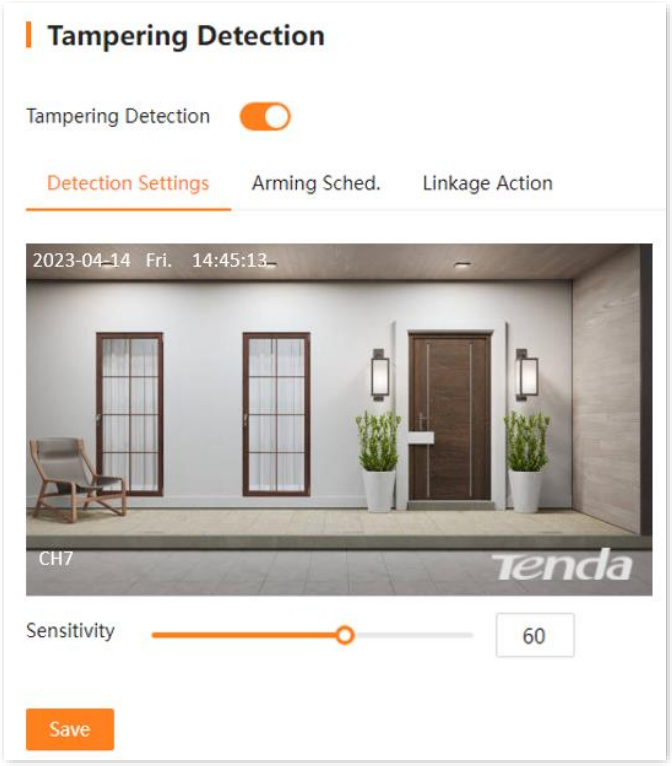
After the setting completes, if the camera detects an alarm, it will push an alarm notification and image to the TDSEE App, and trigger the camera to record at the same time.

4.3.2 Tampering Detection

Overview

To access the configuration page, log in to the web UI of the camera, and navigate to **Configuration** > **Alarm** > **Tampering Detection**.

The tampering detection function refers to the tampering detection alarm of the camera lens. When the camera lens is blocked by other objects and the moving sensitivity reaches the preset value, the system will alarm and record according to the linkage action you set.



Parameter & button description

Parameter		Description
Tampering Detection		Specifies whether the Tampering detection function is enabled.
Detection Settings	Sensitivity	Specifies the detection sensitivity threshold that triggers an alarm. The larger the value, the easier it is to trigger an alarm.

Parameter		Description
Arming Sched.	Arming Sched.	Used to set an arming schedule. By default, it is 7*24 hours. Set arming schedule: • When there is an arming schedule in the timetable, click any arming schedule and set it in the pop-up window. Or put the mouse on the far left or the last side of the arming schedule area, and then hold down the left mouse button to drag. • When the arming schedule is not set in the timetable. In the timetable, hold down the left mouse button to draw the arming schedule, and release the mouse after the arming schedule is drawn. TIP The orange area means arming schedule, and the gray area means not arming schedule.
		Used to synchronize the set arming schedule to other dates.
	Clear All	Used to clear the current arming schedule.
Linkage Action	Common Linkage	Specifies the ordinary alarm method of the camera after an alarm is triggered. • **Trigger Recording**: The system will record after an alarm is triggered. For normal recording, please ensure that the SD card is normal or cloud storage has been purchased, and the Recording Schedule is also in effect. • **Message Notification:** The system will send an alarm notification to TDSEE App after an alarm is triggered. The camera needs to be added successfully through TDSEE App. Refer to Manage the Camera through TDSEE App for details.

Configure Tampering Detection Alarm

Scenario: Assume that you have set up a monitoring network with a camera.

Requirement: The tampering detection function is enabled for the camera at 0:00 to 6:00 and 20:00 to 24:00 from Monday to Sunday. When a tampering detection alarm is triggered, an alarm notification is pushed to the TDSEE App, and trigger the camera for recording.

Solutions: Configure the **Tampering Detection** function to meet this requirement.

Procedure:

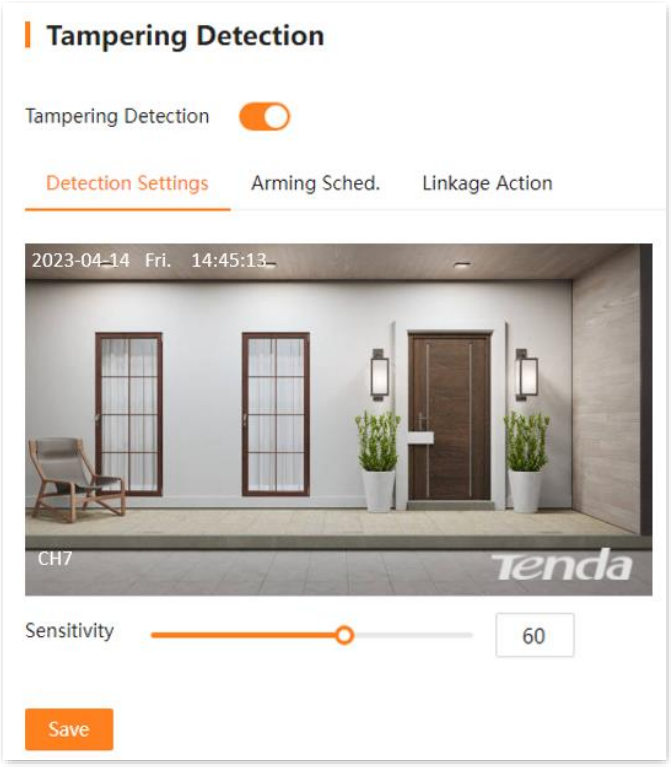
Step 1 Log in to the web UI of the camera.

Step 2 Set the tampering detection function.

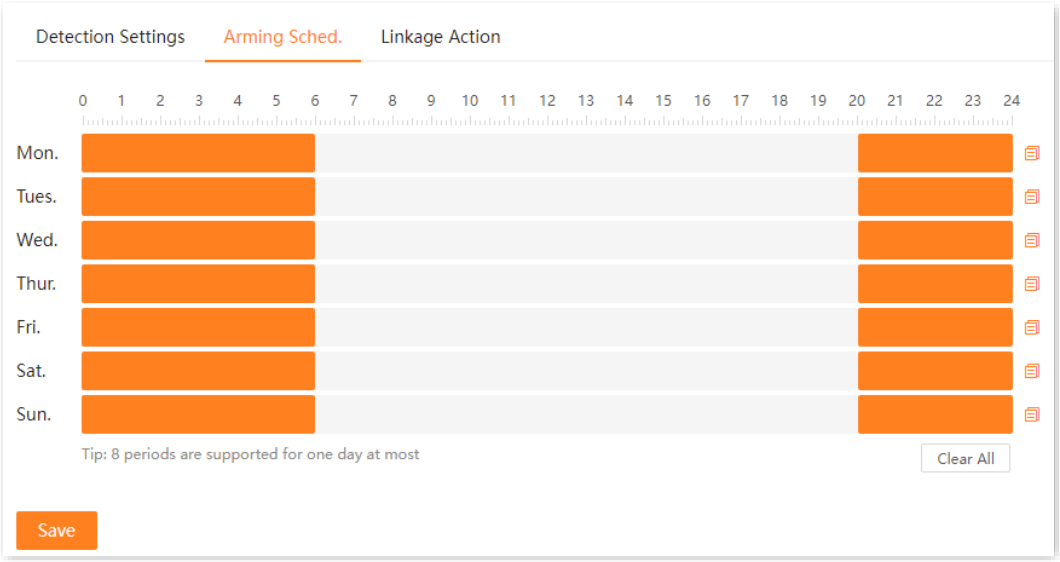
1. Navigate to **Configuration** > **Alarm** > **Tampering Detection**.

2. Enable the **Tampering Detection**.

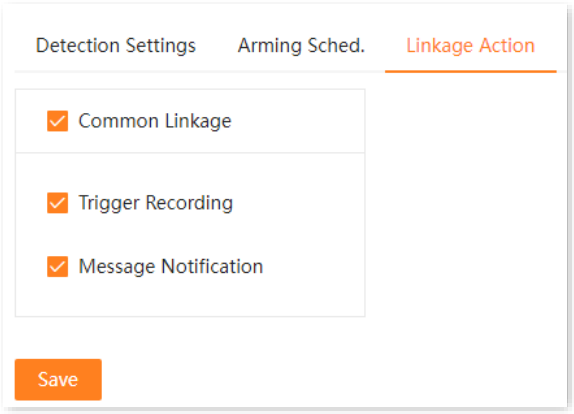
3. Adjust the sensitivity as required, and click **Save**.



4. Click **Alarming Sched.** to set arming schedule, which is **0:00** to **6:00** and **20:00** to **24:00** from **Mon.** to **Sun.** in this example, and click **Save**.



5. Click **Linkage Action**, and select alarm methods, which are **Trigger Recording** and **Message Notification** in this example, and click **Save**.



Step 3 Use TDSEE App to add the camera. Refer to Manage the Camera Through TDSEE App for the related steps. (If set, please skip.)

---End

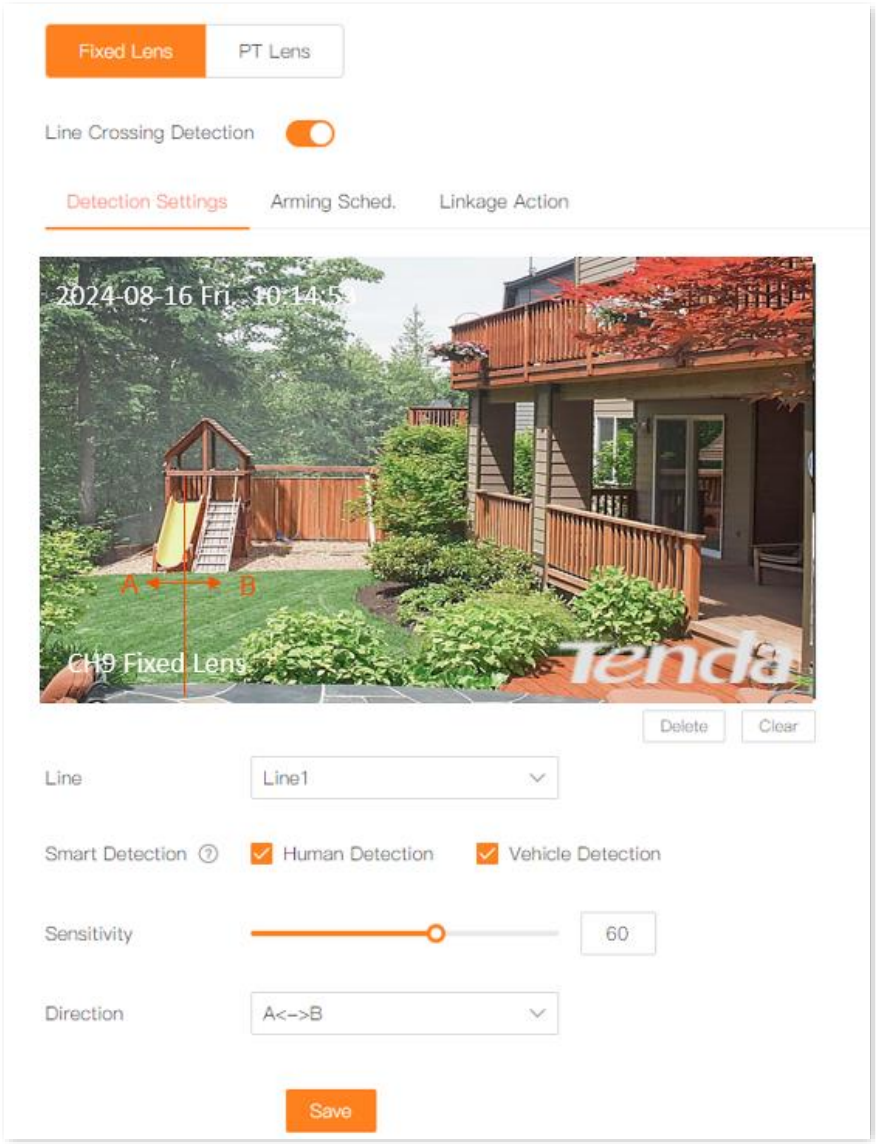
After the setting completes, if the camera detects an alarm, it will push an alarm notification and image to the TDSEE App, and trigger the camera to record at the same time.

4.3.3 Line Crossing Detection (Example: CH9-WCA)

Overview

To access the configuration page, log in to the web UI of the camera, and navigate to **Configuration** > **Alarm** > **Line Crossing Detection**.

The line crossing detection function refers to the detection and alarm of the line crossing behavior of the smart identification target. When the smart recognition target appears on the monitoring image and crosses the warning line in the direction of the boundary, the system will alarm and record according to the linkage mode set. The following figure is for reference only.



Parameter & button description

Parameter		Description
Line Crossing Detection		Specifies whether the Line Crossing Detection function is enabled.
Detection Settings	Line	Used to select the warning line. Draw the warning line first, a single channel supports up to 3. Draw the warning line: In the live view area, click the left mouse button to draw the starting point of the warning line, and click the left mouse button again at the end position to finish drawing. Drag either endpoint to change the length and position of the path.
	Smart Detection	Specifies the detection type. • **Human Detection**: The system will alarm only when a human is detected. • **Vehicle Detection**: The system will alarm only when a vehicle is detected.
	Sensitivity	Specifies the detection sensitivity threshold that triggers an alarm. The larger the value, the easier it is to trigger an alarm.
	Direction	Used to set the direction of the line crossing behavior.
	Delete	Used to delete the selected alert line.
	Clear	Used to clear all alert lines.
Arming Sched.	Arming Sched.	Used to set an arming schedule. By default, it is 7*24 hours. Set arming schedule: • When there is an arming schedule in the timetable, click any arming schedule and set it in the pop-up window. Or put the mouse on the far left or the last side of the arming schedule area, and then hold down the left mouse button to drag. • When the arming schedule is not set in the timetable. In the timetable, hold down the left mouse button to draw the arming schedule, and release the mouse after the arming schedule is drawn. TIP The orange area means arming schedule, and the gray area means not arming schedule.
		Used to synchronize the set arming schedule to other dates.
	Clear All	Used to clear the current arming schedule.

Parameter		Description
Linkage Action	Common Linkage	Specifies the ordinary alarm method of the camera after an alarm is triggered. • **Trigger Recording**: The system will record after an alarm is triggered. For normal recording, please ensure that the SD card is normal or cloud storage has been purchased, and the Recording Schedule is also in effect. • **Message Notification:** The system will send an alarm notification to such alarm center as TDSEE App and NVR after an alarm is triggered. The camera needs to be added successfully through TDSEE App and NVR. Refer to Manage the Camera through TDSEE App and Manage the Camera through NVR for details. • **Dual-lens Linkage Tracking** (suitable for dual channel): After triggering the human alarm, the dome camera moves as the human moves. Set the pan-tilt linkage function first.
	Sound & Light Linkage	Specifies the sound and light alarm method of the camera after an alarm is triggered. • **Audio Alarm**: The camera of the alarm channel will sound after an alarm is triggered. Refer to Sound & Light Alarm for details. • **Light Alarm**: The camera of the alarm channel will flash the fill light after an alarm is triggered. Refer to Sound & Light Alarm for details. TIP To ensure that the sound alarm or light alarm works properly, check that the **Arming Sched.** of the sound & light alarm takes effect within the period when the **Arming Sched.** of motion detection is effective.

Configure Line Crossing Detection Alarm

Scenario: Assume that you have set up a monitoring network with a camera on your doorstep.

Requirement: The line crossing detection function is enabled for the camera at 0:00 to 6:00 and 20:00 to 24:00 from Monday to Sunday. When someone jumps over the wall into the yard, an alarm notification is pushed to the TDSEE App, and trigger the camera for recording.

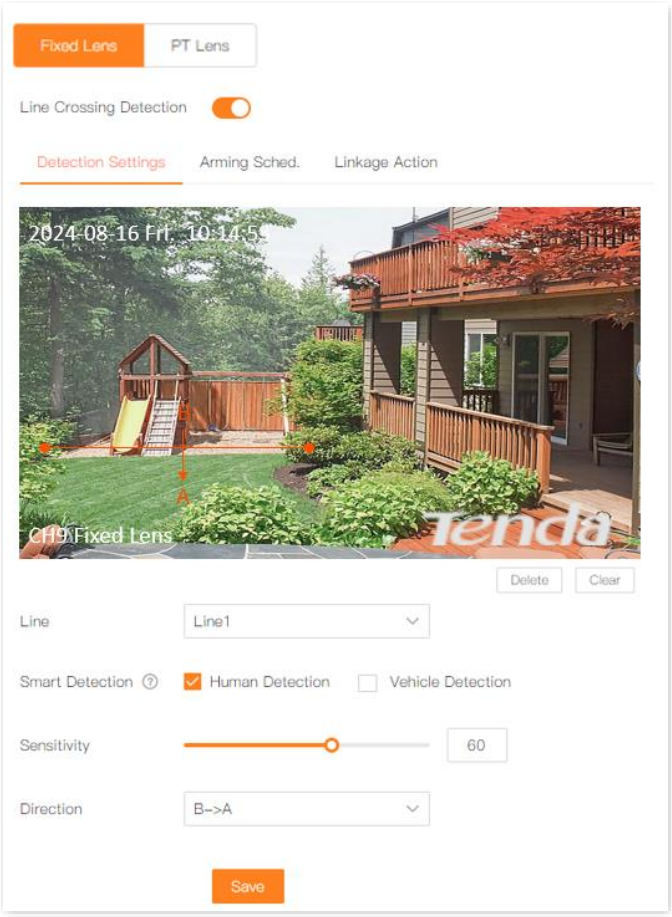
Solutions: Configure the **Line Crossing Detection** function to meet this requirement.

Procedure:

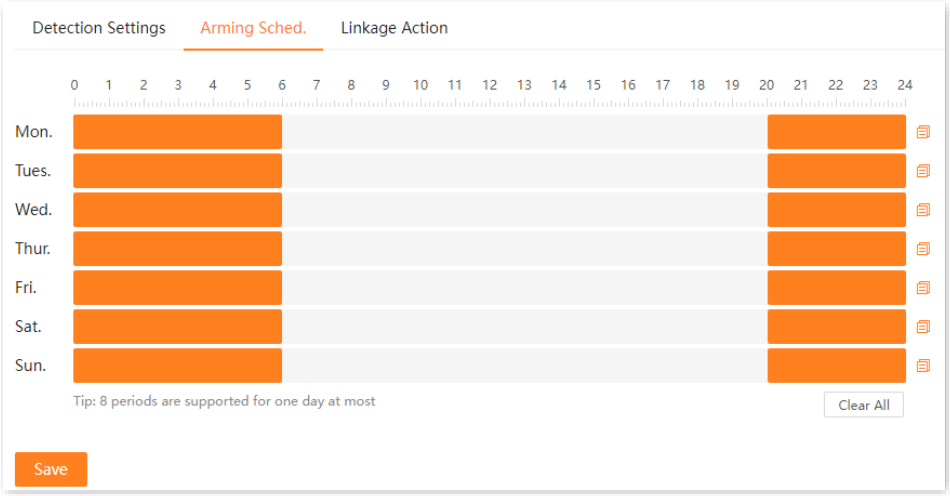
Step 1 Log in to the web UI of the camera.

Step 2 Set the motion detection for fixed lens.

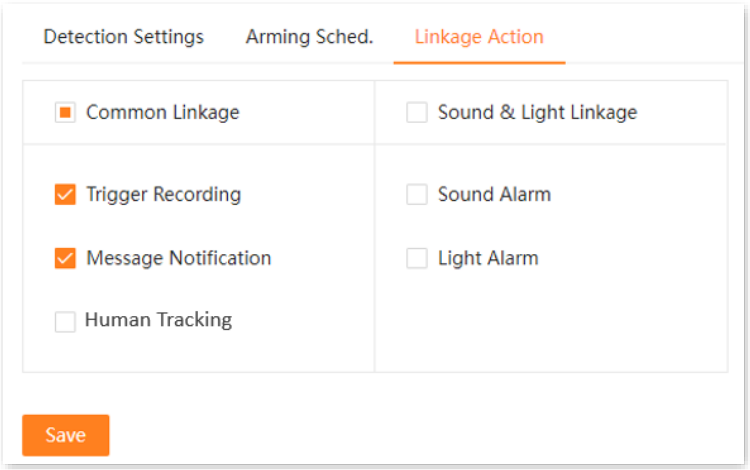
1. Navigate to **Configuration** > **Alarm** > **Line Crossing Detection**.
2. Enable the **Line Crossing Detection**.
3. In the **Detection Settings** tab, draw a warning line in the live view area by clicking the left mouse button.
4. Select **Human Detection**, and adjust the sensitivity as required.
5. The direction is to turn over the wall, which is **B->A** in this example, and click **Save**. The following figure is for reference only.



6. Click **Alarming Sched.** to set motion detection schedule, which is **0:00** to **6:00** and **20:00** to **24:00** from **Mon.** to **Sun.** in this example, and click **Save**.

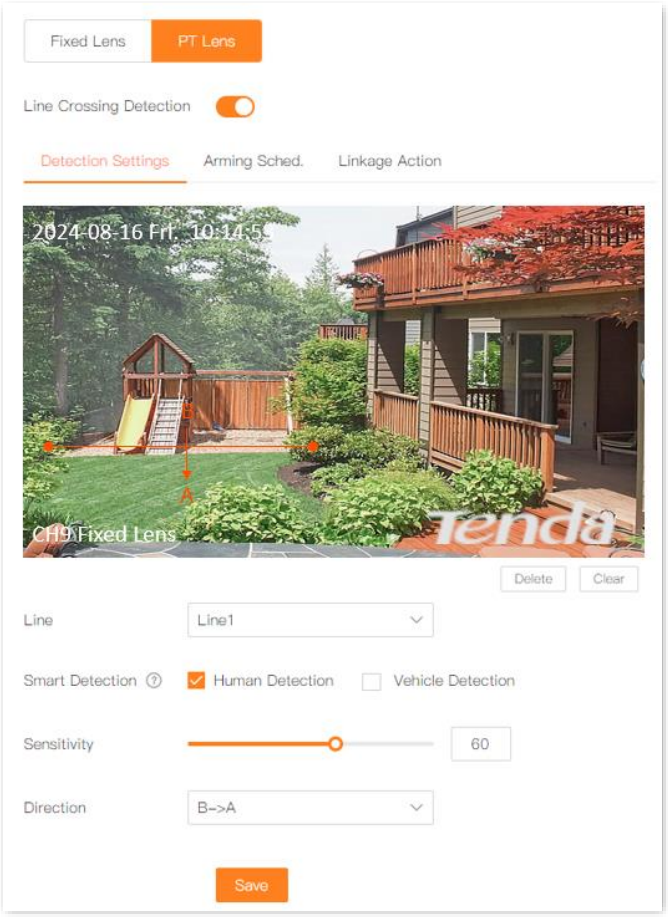


7. Click **Linkage Action**, and select alarm methods, which are **Trigger Recording** and **Message Notification** in this example, and click **Save**.

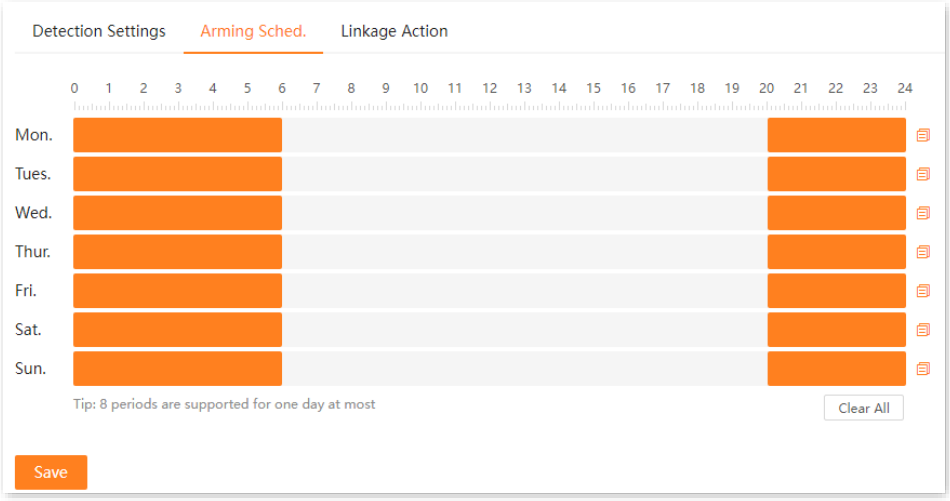


Step 3 Set the motion detection for PT lens.

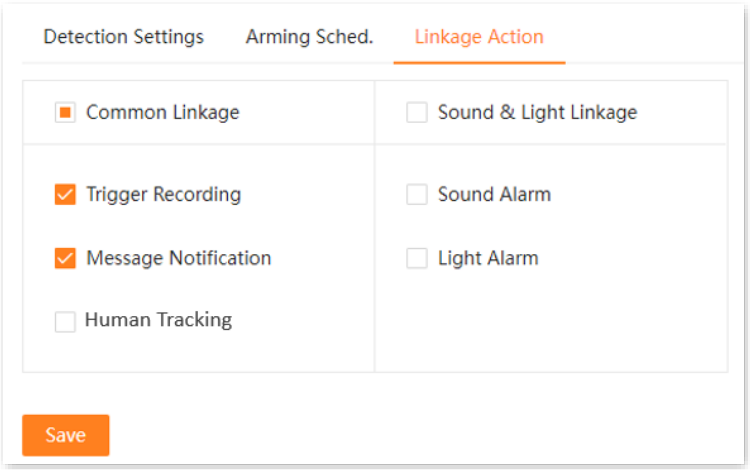
1. Navigate to **Configuration** > **Alarm** > **Motion Detection** > **PT Lens**.
2. Enable the **Line Crossing Detection**.
3. In the **Detection Settings** tab, draw a warning line in the live view area by clicking the left mouse button.
4. Select **Human Detection**, and adjust the sensitivity as required.
5. The direction is to turn over the wall, which is **B->A** in this example, and click **Save**. The following figure is for reference only.



6. Click **Alarming Sched.** to set motion detection schedule, which is **0:00** to **6:00** and **20:00** to **24:00** from **Mon.** to **Sun.** in this example, and click **Save**.



7. Click **Linkage Action**, and select alarm methods, which are **Trigger Recording** and **Message Notification** in this example, and click **Save**.



Step 4 Use TDSEE App to add the camera. Refer to Manage the Camera Through TDSEE App for the related steps. (If set, please skip.)

---End

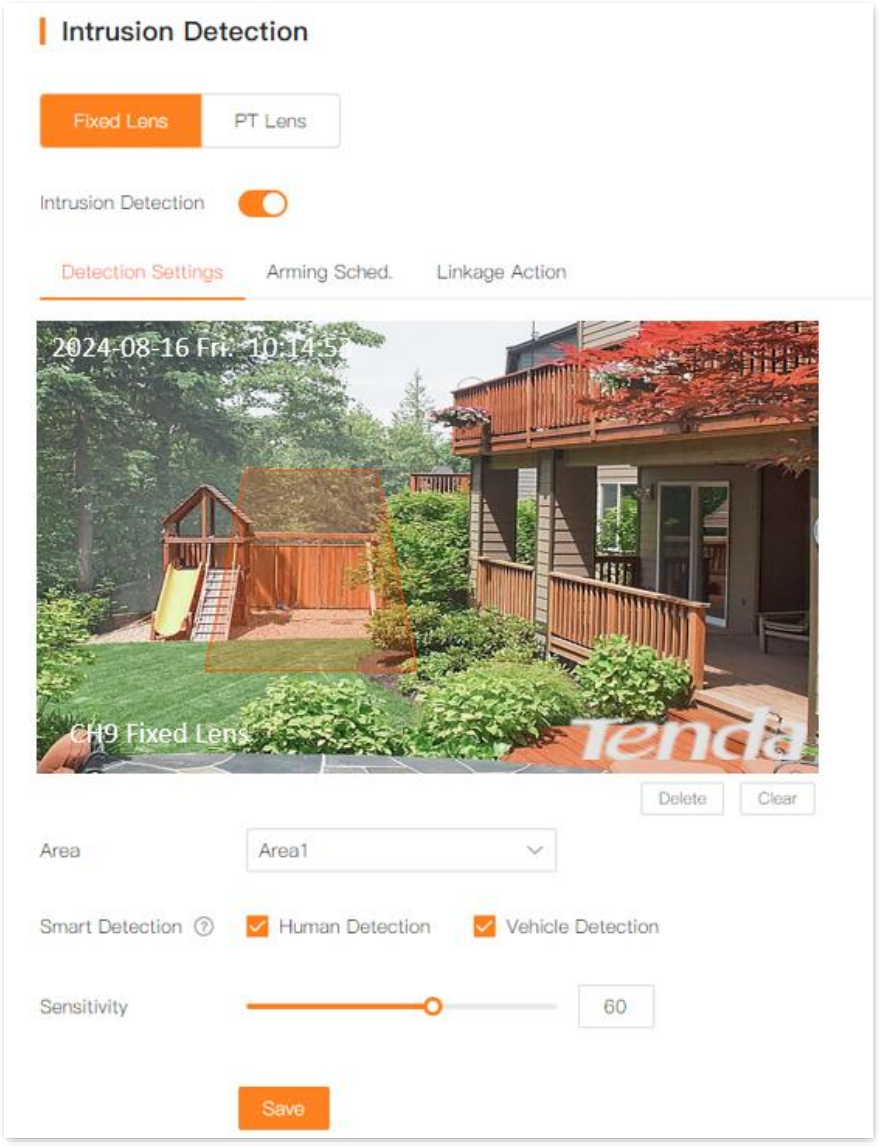
After the setting completes, if the camera detects the human from the wall into the yard, it will push an alarm notification and image to the TDSEE App, and trigger the camera to record at the same time.

4.3.4 Intrusion Detection (Example: CH9-WCA)

Overview

To access the configuration page, log in to the web UI of the camera, and navigate to **Configuration** > **Alarm** > **Intrusion Detection**.

Intrusion detection, that is, when the smart identification target in the monitoring image enters the divided warning area, the system will alarm and record according to the linkage mode set. The following figure is for reference only.



Parameter & button description

Parameter		Description
Intrusion Detection		Specifies whether the Intrusion Detection function is enabled.
Detection Settings	Area	Used to select the alert area. Draw the alert area first. Draw the alert area: In the live view area, click the left mouse button to draw the alert area, and click four times to determine the area size. Drag either endpoint to change the size and position of the alert area.
	Smart Detection	Specifies the detection type. • **Human Detection**: The system will alarm only when a human is detected. • **Vehicle Detection**: The system will alarm only when a vehicle is detected.
	Sensitivity	Specifies the detection sensitivity threshold that triggers an alarm. The larger the value, the easier it is to trigger an alarm.
	Delete	Used to delete the selected alert line.
	Clear	Used to clear all alert lines.
Arming Sched.	Arming Sched.	Used to set an arming schedule. By default, it is 7*24 hours. Set arming schedule: • When there is an arming schedule in the timetable, click any arming schedule and set it in the pop-up window. Or put the mouse on the far left or the last side of the arming schedule area, and then hold down the left mouse button to drag. • When the arming schedule is not set in the timetable. In the timetable, hold down the left mouse button to draw the arming schedule, and release the mouse after the arming schedule is drawn. TIP The orange area means arming schedule, and the gray area means not arming schedule.
		Used to synchronize the set arming schedule to other dates.
	Clear All	Used to clear the current arming schedule.

Parameter		Description
Linkage Action	Common Linkage	Specifies the ordinary alarm method of the camera after an alarm is triggered. • **Trigger Recording**: The system will record after an alarm is triggered. For normal recording, please ensure that the SD card is normal or cloud storage has been purchased, and the Recording Schedule is also in effect. • **Message Notification:** The system will send an alarm notification to such alarm center as TDSEE App and NVR after an alarm is triggered. The camera needs to be added successfully through TDSEE App and NVR. Refer to Manage the Camera through TDSEE App and Manage the Camera through NVR for details. • **Dual-lens Linkage Tracking** (suitable for dual channel): After triggering the human alarm, the dome camera moves as the human moves. Set the pan-tilt linkage function first.
	Sound & Light Linkage	Specifies the sound and light alarm method of the camera after an alarm is triggered. • **Audio Alarm**: The camera of the alarm channel will sound after an alarm is triggered. Refer to Sound & Light Alarm for details. • **Light Alarm**: The camera of the alarm channel will flash the fill light after an alarm is triggered. Refer to Sound & Light Alarm for details. TIP To ensure that the sound alarm or light alarm works properly, check that the **Arming Sched.** of the sound & light alarm takes effect within the period when the **Arming Sched.** of motion detection is effective.

Configure Intrusion Detection Alarm

Scenario: Assume that you have set up a monitoring network with a camera on your doorstep.

Requirement: The intrusion detection function is enabled for the camera at 10:00 to 18:00 from Monday to Sunday. When a child enters the slide area, an alarm notification is pushed to the TDSEE App, and trigger the camera for recording.

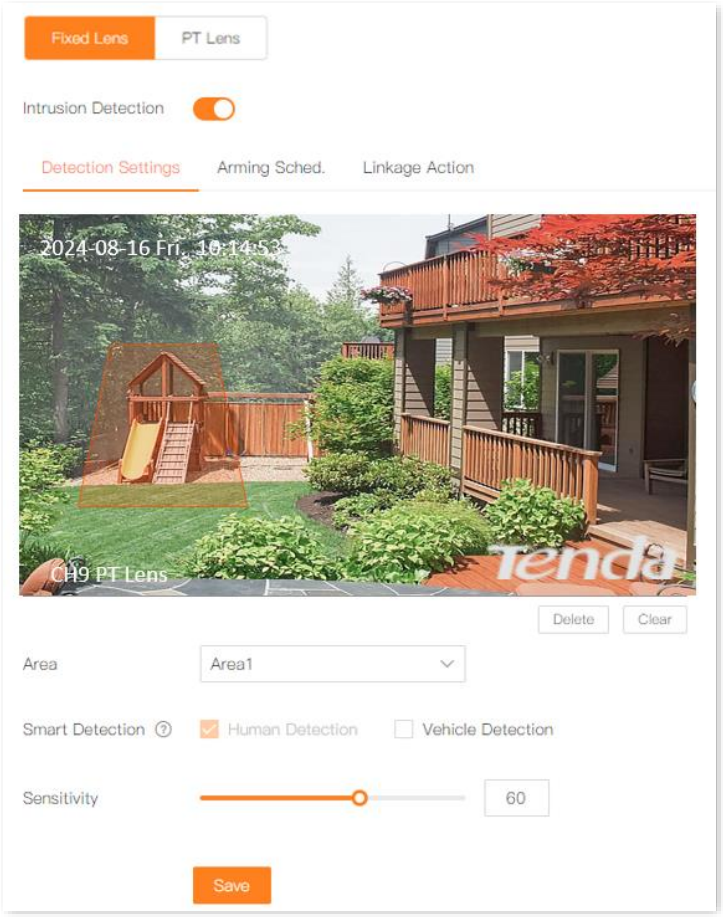
Solutions: Configure the **Intrusion Detection** function to meet this requirement.

Procedure:

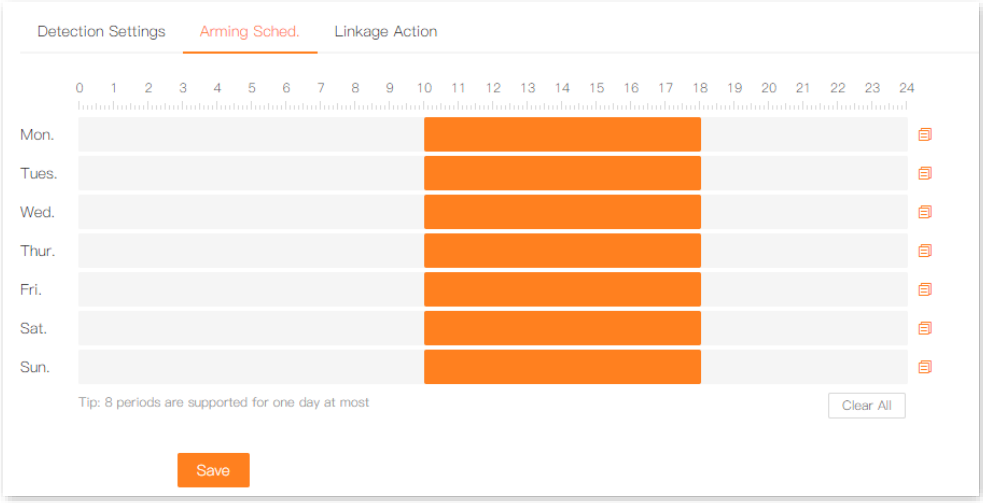
Step 1 Log in to the web UI of the camera.

Step 2 Set the motion detection for fixed lens.

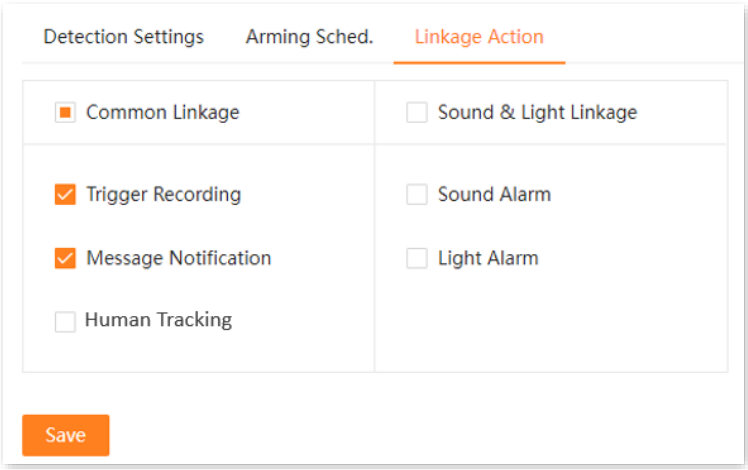
1. Navigate to **Configuration** > **Alarm** > **Intrusion Detection**.
2. Enable the **Intrusion Detection**.
3. In the **Detection Settings** tab, draw an alert area in the live view area by clicking the left mouse button, which is **Side Area** in this example.
4. Select **Human Detection**, adjust the sensitivity as required, and click **Save**.



5. Click **Alarming Sched.** to set motion detection schedule, which is **10:00** to **18:00** from **Mon.** to **Sun.** in this example, and click **Save**.

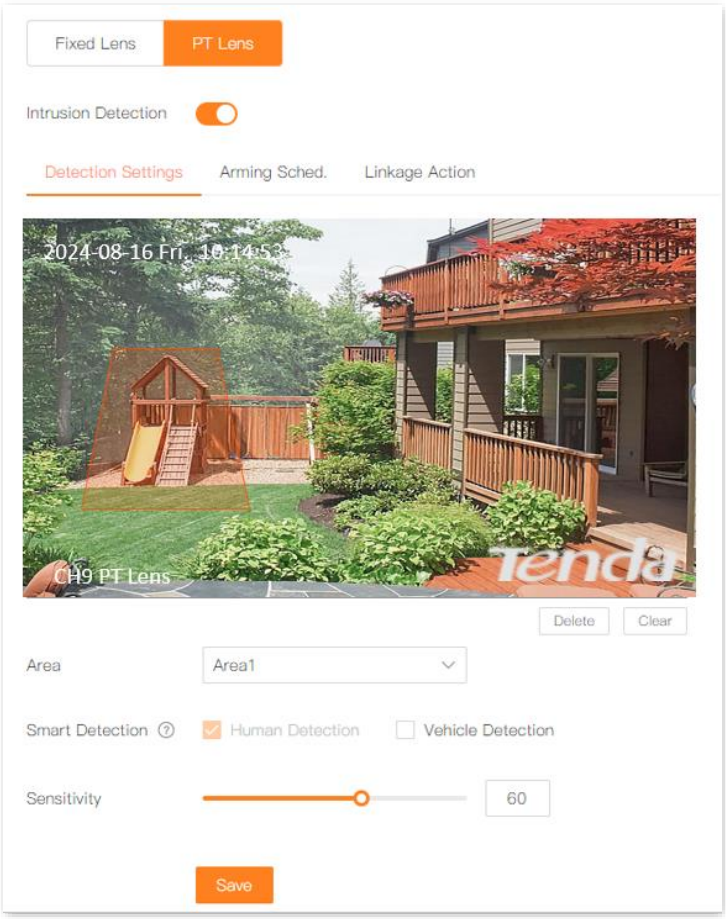


6. Click **Linkage Action**, and select alarm methods, which are **Trigger Recording** and **Message Notification** in this example, and click **Save**.

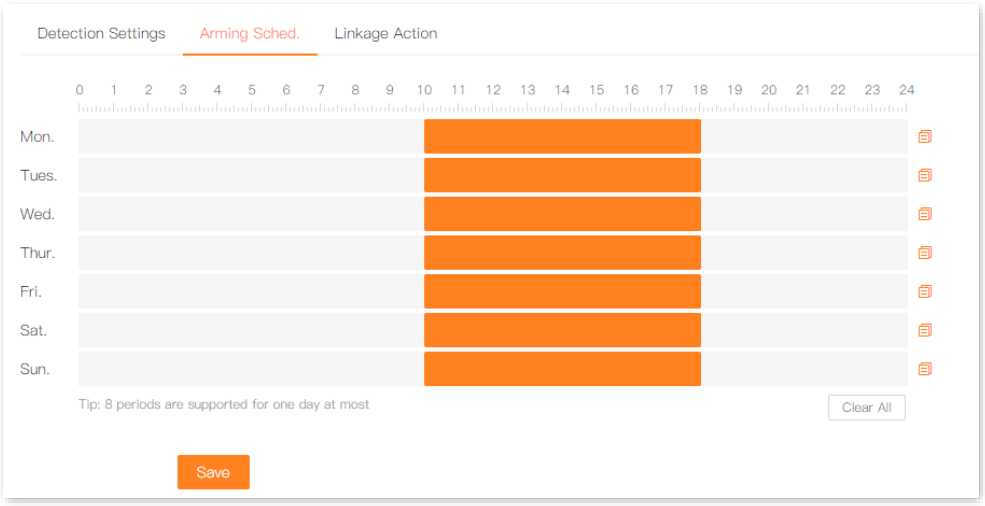


Step 3 Set the motion detection for PT lens.

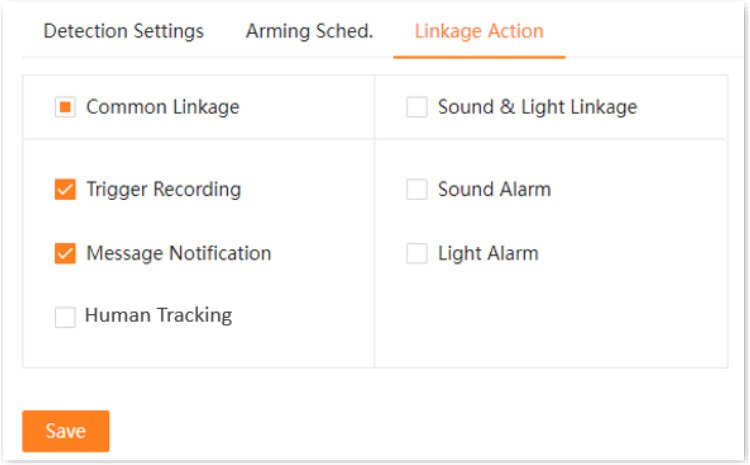
1. Navigate to **Configuration** > **Alarm** > **Motion Detection** > **PT Lens**.
2. Enable the **Intrusion Detection**.
3. In the **Detection Settings** tab, draw an alert area in the live view area by clicking the left mouse button.
4. Select **Human Detection**, adjust the sensitivity as required, and click **Save**.



5. Click **Alarming Sched.** to set motion detection schedule, which is **10:00** to **18:00** from **Mon.** to **Sun.** in this example, and click **Save**.



6. Click **Linkage Action**, and select alarm methods, which are **Trigger Recording** and **Message Notification** in this example, and click **Save**.



Step 4 Use TDSEE App to add the camera. Refer to Manage the Camera Through TDSEE App for the related steps. (If set, please skip.)

---End

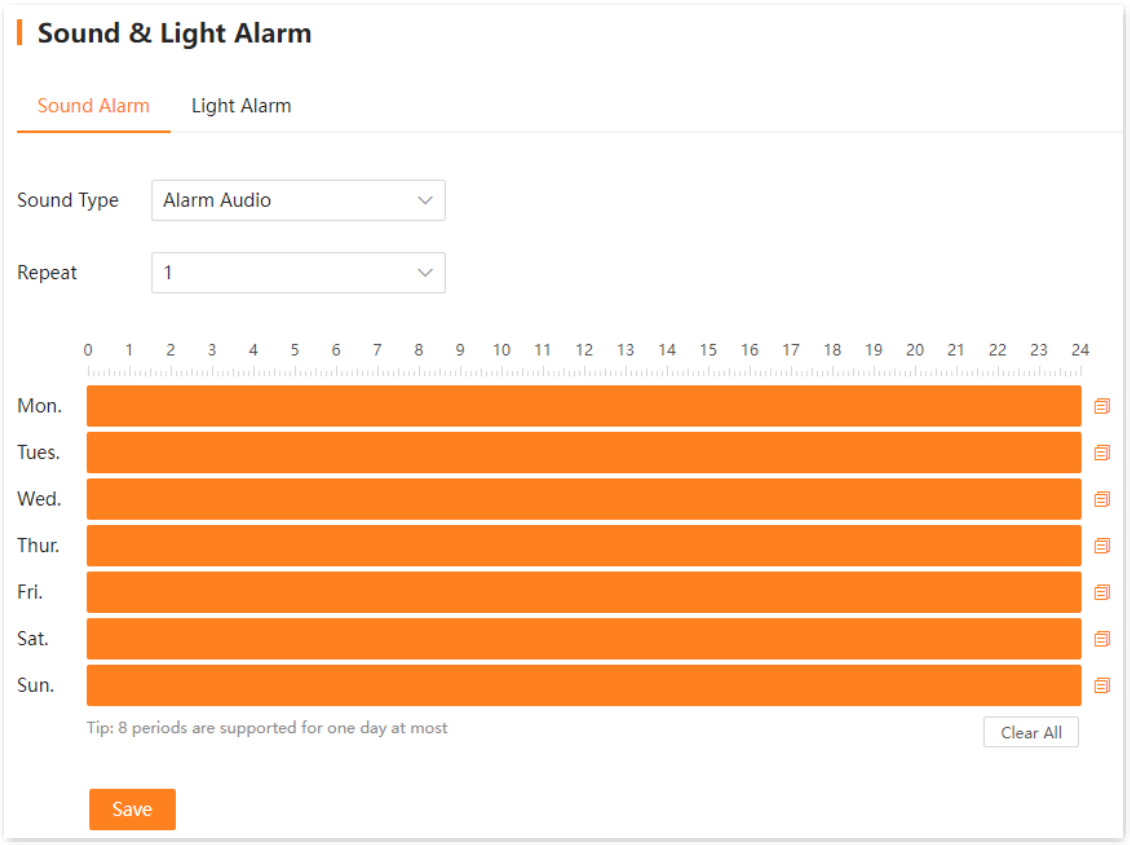
After the setting completes, if the camera detects the human entering the slide area from 10:00 to 18:00 at Monday to Sunday, it will push an alarm notification and image to the TDSEE App, and trigger the camera to record at the same time.

4.3.5 Sound & Light Alarm

Overview

To access the configuration page, log in to the web UI of the camera, and navigate to **Configuration** > **Alarm** > **Sound & Light Alarm**.

The sound & light alarm function refers to the audio and lighting alarm method of the camera. The camera will sound or light the fill light after an alarm is triggered.



Parameter & button description

Parameter/Button		Description
Sound Alarm	Sound Type	Specifies the alarm sound type of the camera after an alarm is triggered. The system has preset a variety of alarm sound modes, select it as required.
	Repeat	Specifies the repeat times of alarm sound.
Light Alarm	Duration	Specifies the duration of the flashing light after an alarm is triggered.

Parameter/Button	Description
Arming Schedule	Used to set an arming schedule. By default, it is 7*24 hours. Set arming schedule: • When there is an arming schedule in the timetable, click any arming schedule and set it in the pop-up window. Or put the mouse on the far left or the last side of the arming schedule area, and then hold down the left mouse button to drag. • When the arming schedule is not set in the timetable, hold down the left mouse button to draw the arming schedule in the timetable, and release the mouse after the arming schedule is drawn. TIP The orange area means arming schedule, and the gray area means not arming schedule.
	Used to synchronize the set arming schedule to other dates.
Clear All	Used to clear the current arming schedule.

Configure Motion Detection and Sound & Light Alarm

Scenario: Assume that you have set up a monitoring network with a camera.

Requirement: The human detection and vehicle detection functions are enabled for the camera at 8:00 to 20:00 from Monday to Sunday. When the sound & light alarm is triggered, an alarm notification is pushed to the TDSEE App at 8:00 to 20:00 from Monday to Friday, and sound & fill light will flash at 8:00 to 18:00 from Monday to Friday. After the alarm is triggered, the camera will record at the same time.

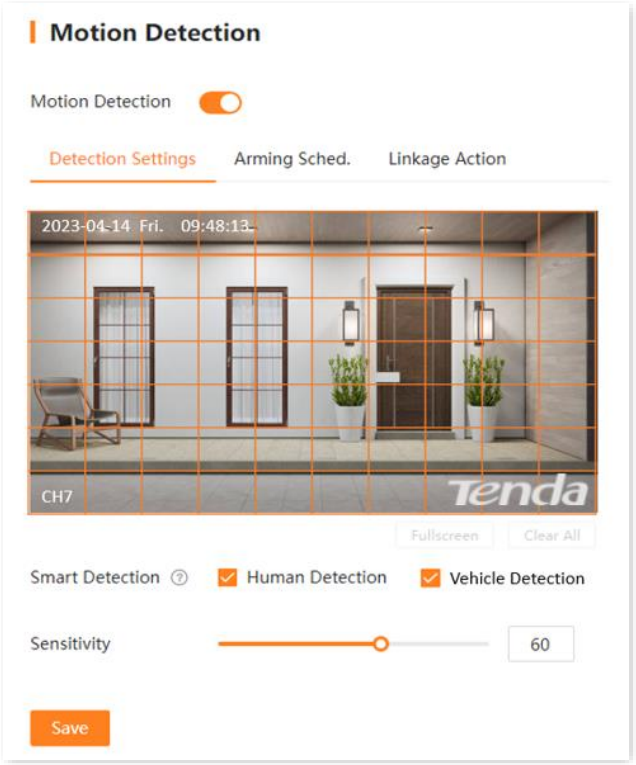
Solutions: Configure the **Motion Detection** and **Sound & Light Alarm** functions to meet this requirement.

Procedure:

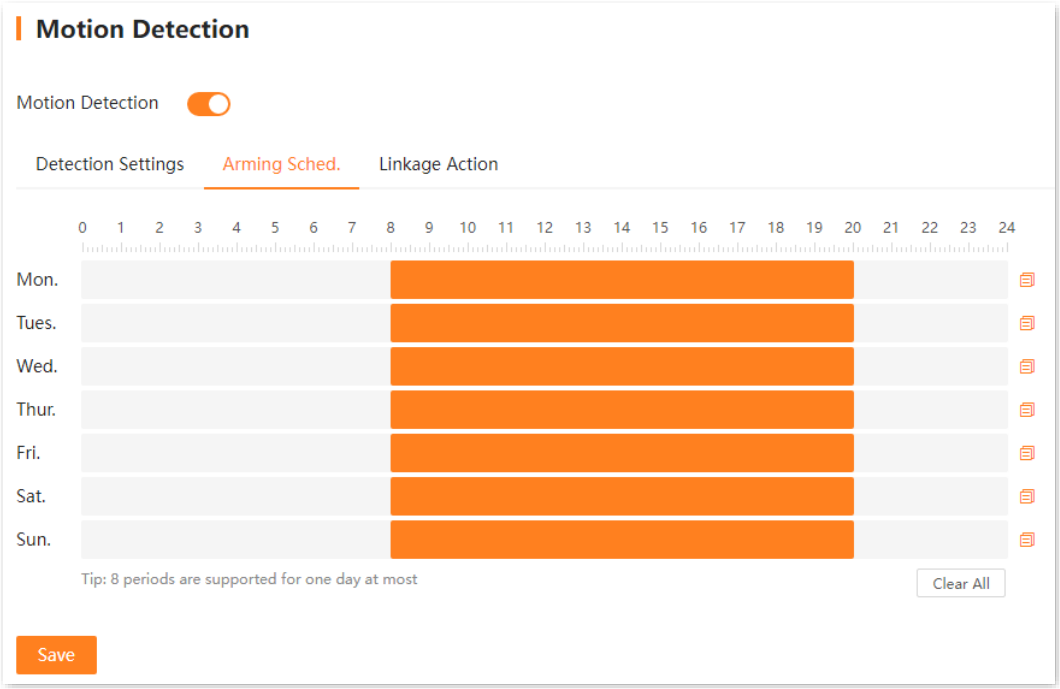
Step 1 Log in to the web UI of the camera.

Step 2 Set the motion detection.

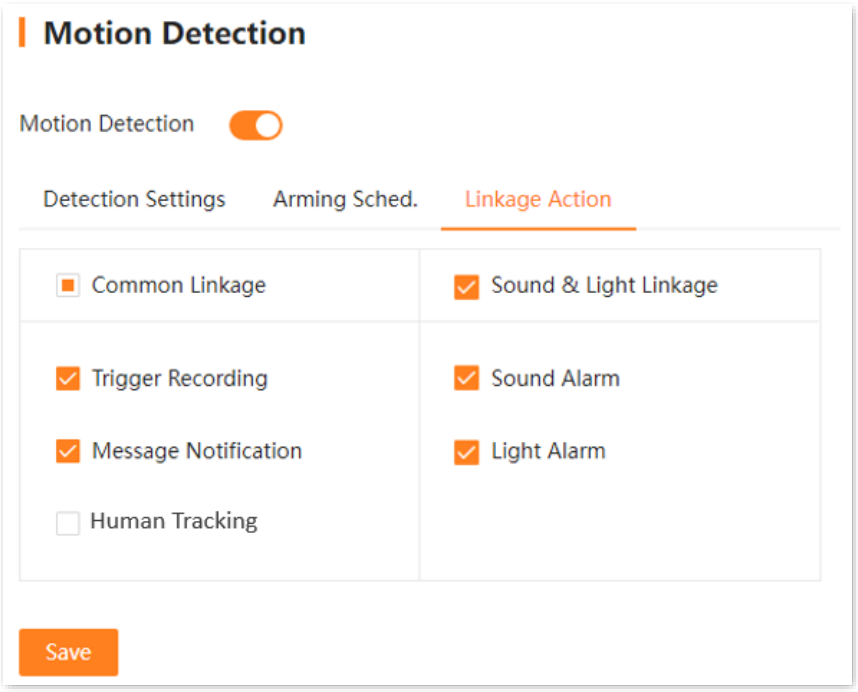
1. Navigate to **Configuration** > **Alarm** > **Motion Detection**.
2. Enable the **Motion Detection**.
3. Tick **Human Detection** and **Vehicle Detection** in **Smart Detection**, adjust the sensitivity as required, and click **Save**.



4. Set motion detection schedule in **Arming Sched.** tab, which is **8:00** to **20:00** from **Mon.** to **Sun.** in this example, and click **Save**.

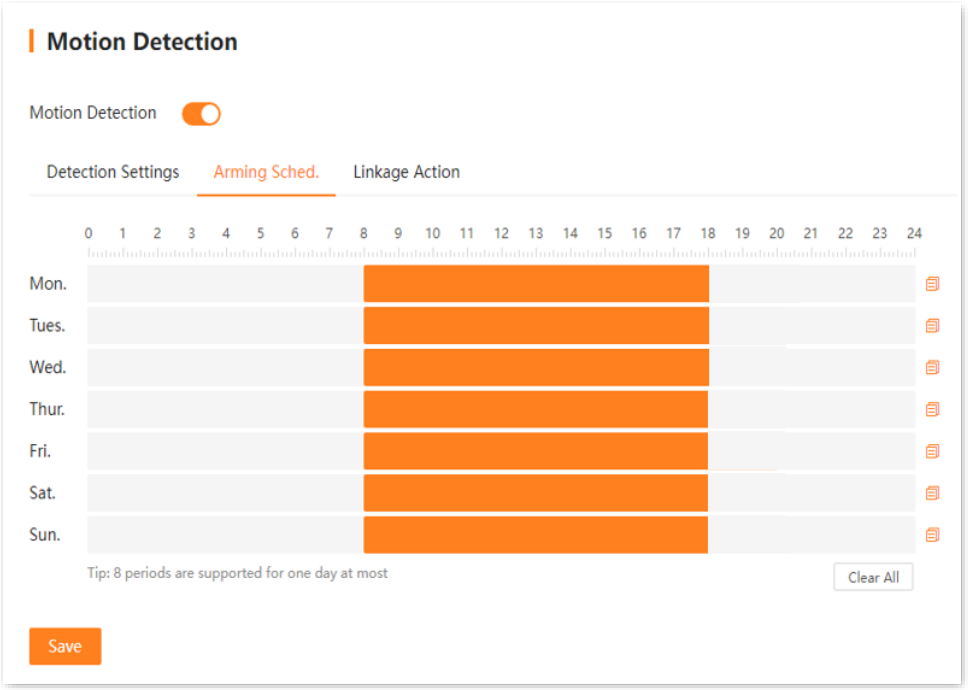


5. Click **Linkage Action**, and select alarm methods, which are **Trigger Recording**, **Message Notification**, **Sound Alarm** and **Light Alarm** in this example, and click **Save**.



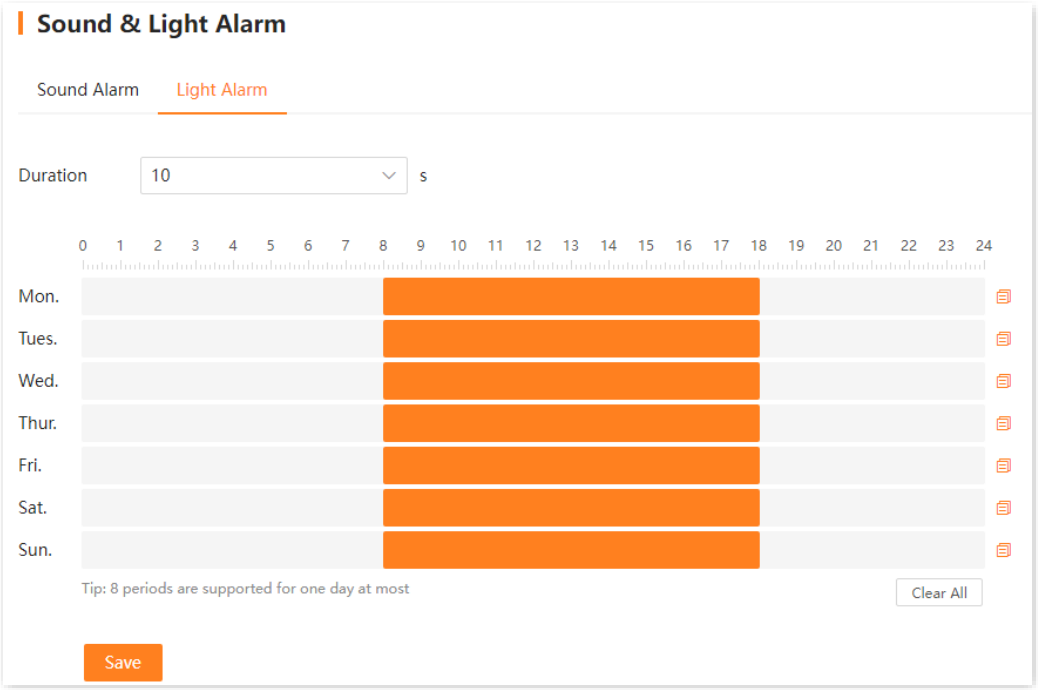
Step 3 Set **Sound & Light Alarm** function.

1. Navigate to **Configuration** > **Alarm** > **Sound & Light Alarm.**
2. Set the sound alarm function of the camera. The following figure is for reference only.
   - Set alarm sound type as required.
   - Set the repeat times the alarm sound will be played after the alarm is triggered as required.
   - Set the sound alarm schedule, which is **8:00** to **18:00** from **Mon.** to **Fri.** in this example.
   - Click **Save**.



3. Set the light alarm function of the camera.

   - Set the duration of the lighting flash as required. The following figure is for reference only.
   - Set the light alarm schedule, which is **8:00** to **18:00** from **Mon**. to **Sun**. in this example.
   - Click **Save**.



Step 4 Use TDSEE App to add the camera. Refer to [Manage the Camera Through TDSEE App] for

the related steps. (If set, please skip.)

---End

The human detection is enabled at 8:00 to 20:00 from Monday to Sunday. If the system detects an alarm, the alarm notification and video will be pushed to the TDSEE App, and the recording will be triggered at the same time.

At 8:00 to 18:00 from Monday to Sunday, if the system detects an alarm, the camera will sound and the fill light will flash.

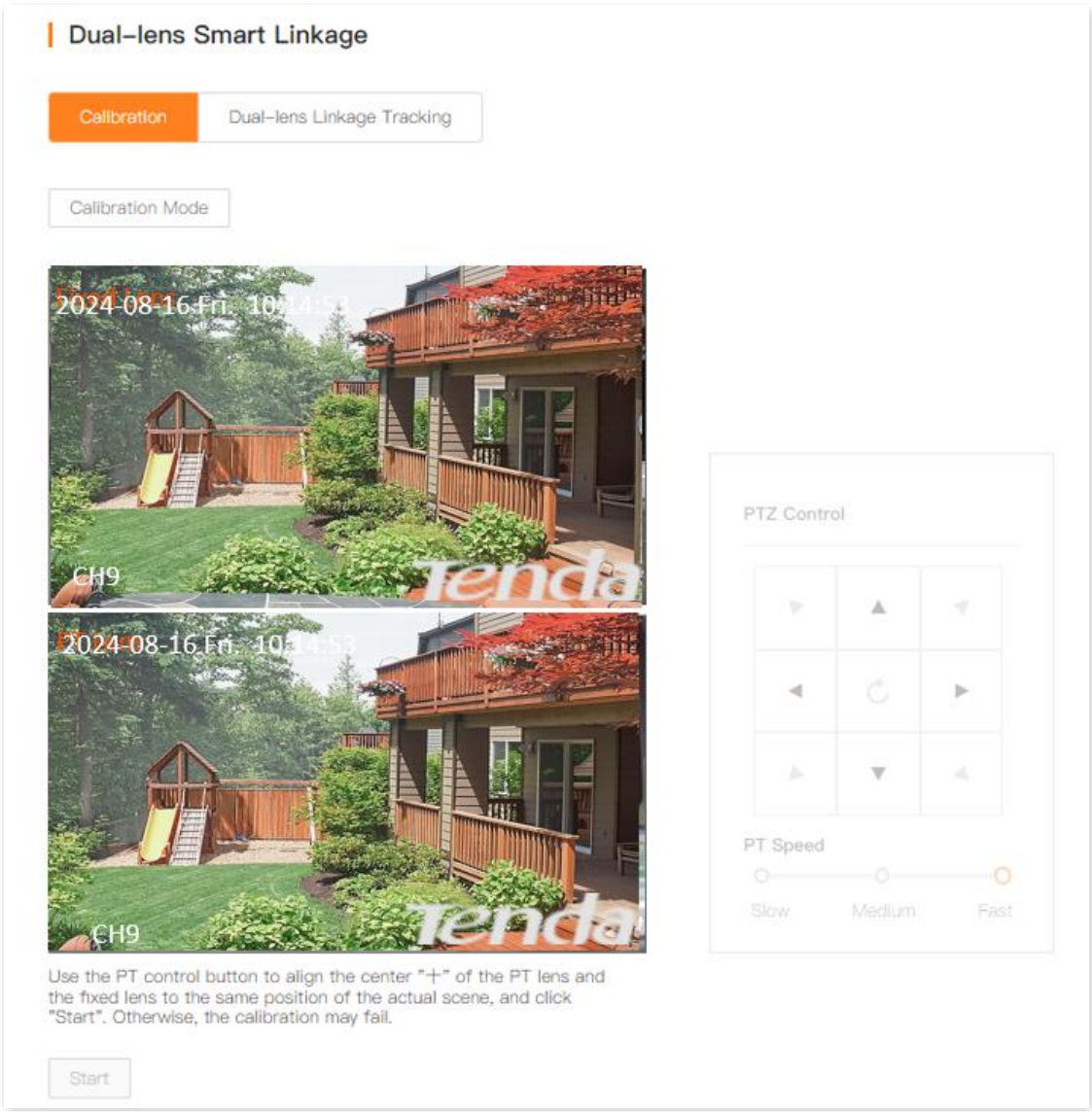
4.3.6 Dual-lens Smart Linkage (Example: CH9-WCA)

To access the configuration page, log in to the web UI of the camera, and navigate to **Configuration** > **Alarm** > **Dual-lens Smart Linkage**.

Here, you can set the dual-lens smart linkage function. After settings, if the linkage mode of detecting events is Dual-lens Linkage Tracking and a human alarm is detected. The dome camera is tracked (horizontal 0-355°, vertical 0-90°) until the human is out of the range monitored by the PT lens, and the tracking is stopped.

- **Calibration**

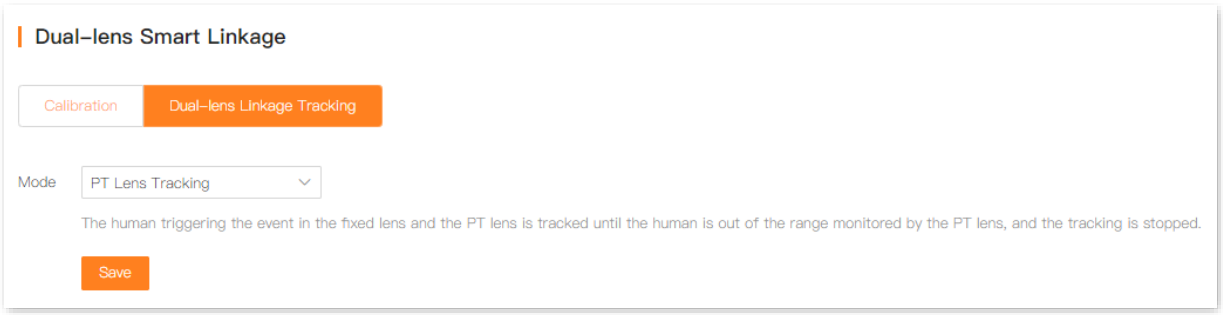
Click **Calibration Mode**, and the dome camera will rotate the lens so that the PT control button to align the center of the PT lens and the fixed lens to the same position of the actual scene. If not, you can adjust the dome camera to align the image center to the same position through the PTZ control on the right, and click **Start**. The calibration will be successful.


Dual-lens Smart Linkage
Calibration
Dual-lens Linkage Tracking
Calibration Mode
2024-08-16 Fri.
CH9
Tenda
PTZ Control
PT Speed
Slow
Medium
Fast
Use the PT control button to align the center "+" of the PT lens and the fixed lens to the same position of the actual scene, and click "Start". Otherwise, the calibration may fail.
Start

Dual-lens Linkage Tracking

In dual-lens linkage tracking mode, you need to enable the **Human Detection** and **Dual-lens Linkage Tracking** function of the corresponding lens.

- **Fixed lens tracking:** When the human that trigger the event in the fixed lens is tracked, until the human is out of the range monitored by the PT lens, and the tracking is stopped.
- **PT lens tracking:** The human that trigger the event in the PT lens is tracked, until the human is out of the range monitored by the PT lens, and the tracking is stopped.



4.4 Network Configuration

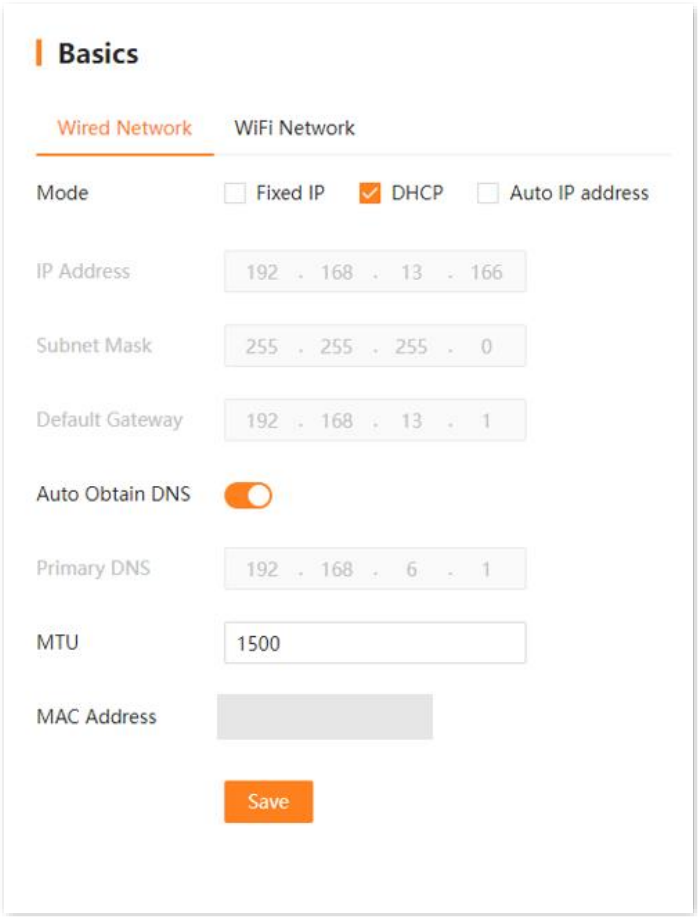
4.4.1 Basic Settings

To access the configuration page, log in to the web UI of the camera, and navigate to **Configuration** > **Network** > **Basics**.

You can view and modify the parameters of the LAN port when the camera is connected to the network through wired or Wi-Fi method.

TIP

- If the camera is connected to the internet through an Ethernet cable, see the **Wired Network** tab.
- If the camera is connected to the internet through Wi-Fi, see the **WiFi Network** tab.



Parameter description

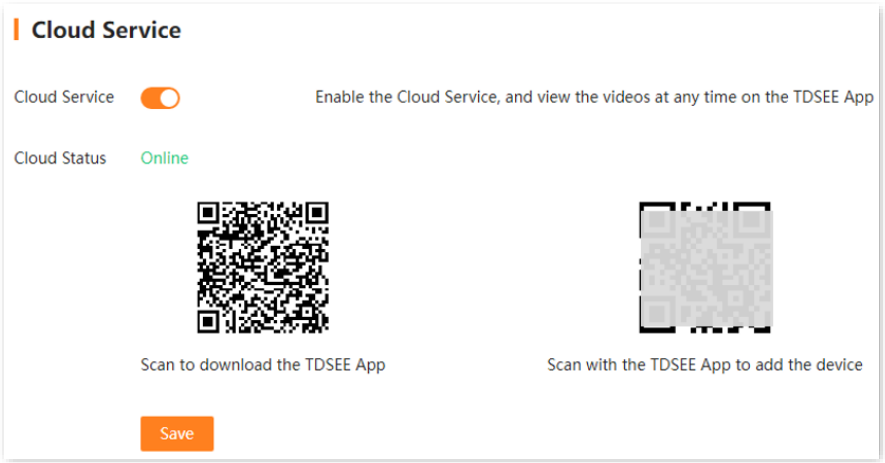
Parameter		Description
Mode	Fixed IP	Used to manually set the IP address and other information of the camera. After ticked it, you can manually specify the IP address, subnet mask, default gateway, and DNS server of the camera.
	DHCP	Specifies whether to enable the function of the camera automatically to obtain an IP address from an upstream device. After the DHCP is ticked, the camera can automatically obtain its IP address, subnet mask, default gateway and DNS server from the DHCP server in the network.
	Auto IP Address	Specifies the IP address of the camera is synchronized with the NVR. Only available when the camera is connected to the Internet through an Ethernet cable. After ticked it, if you search for the camera on the NVR management page in the network, the IP address of the camera will be automatically synchronized to the same network segment as the IP address of the NVR. NOTE • If the IP address of the camera has never been synchronized and there is no NVR in the current network, the IP address of the camera keeps the default (192.168.1.203). • If the IP address of the camera has been synchronized and there is no NVR in the current network, the IP address of the camera keeps the IP address when the latest synchronization was successful. • After the camera is stably connected to the NVR for 24 hours, the IP address acquisition method of the camera will be automatically changed to **Fixed IP**.
	IP Address	Specifies the IP address of the camera is also the management IP address of the camera. Users on the same LAN as the camera can use this IP address to log in to the web UI of the camera. To connect the camera to the internet, the IP address must be set in the same network segment as the IP address of the LAN port of the router.
	Subnet Mask	Specifies the subnet mask of the camera.
	Default Gateway	Specifies the default gateway of the camera. To connect the camera to the internet, the IP address of the camera must be set in the default gateway of the LAN IP address of the router.

Parameter	Description
Auto Obtain DNS	Specifies whether to enable the function of the camera automatically obtaining DNS from an upstream device. After it is enabled, the camera can automatically obtain its DNS from the DHCP server in the network. TIP If the **Auto Obtain DNS** is disabled, you need to manually configure primary DNS and secondary DNS for camera.
MTU	Specifies the largest data packet transmitted by the camera, that is, the maximum transmission unit.
MAC Address	Specifies the LAN MAC address of the camera.

4.4.2 Cloud Service

To access the configuration page, log in to the web UI of the camera, and navigate to **Configuration** > **Network** > **Cloud Service**.

The cloud service function enables the camera to connect to the cloud, and you can add the camera through TDSEE App to preview monitoring videos remotely, play back history recordings and view alarm notifications.



Parameter description

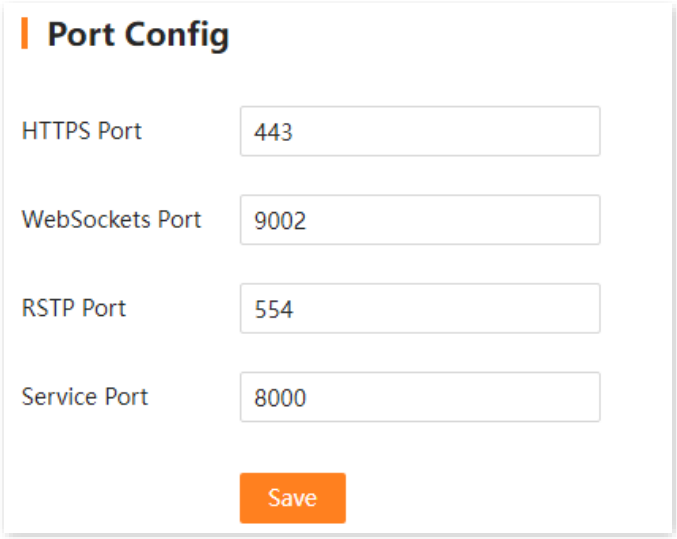
Parameter	Description
Cloud Service	Specifies whether to enable the cloud service function. TIP Disabling the cloud service requires rebooting the camera to enable the settings.

Parameter	Description
Cloud Status	Specifies the status of the camera connected to the cloud. If the cloud status displays Offline, move the mouse to on the top of the page, then follow the on-screen instructions.

4.4.3 Port Configuration

To access the configuration page, log in to the web UI of the camera, and navigate to **Configuration** > **Network** > **Port Config**.

The port number indicates different network services. You can view or modify each service port number here.



Parameter description

Parameter	Description
HTTPS Port	Specifies the port of the HTTPS protocol. You are recommended to keep the default settings. After the HTTPS port number is modified, when you log in to the web UI of the camera, you can manually enter this port number behind the IP address of the camera. The access format is HTTPS://camera IP address: HTTPS port.
WebSockets Port	Specifies the port of the WebSockets protocol. You are recommended to keep the default settings. You can realize two-way communication between the browser and the server, and allow the server to push data to the browser through the WebSockets protocol.

Parameter	Description
RTSP Port	Specifies the port number for the Real Time Streaming Protocol (RTSP). The default settings are recommended. RTSP is used to transmit and control the audio and video, and it is responsible for the request and response between the server and the client. URL format: rtsp://IP Address of the camara:RTSP port/ch=1&subtype=0 or 1. For example, rtsp://192.168.1.203:554/ch=1&subtype=0 TIP Subtype=0 means main stream and subtype=1 means sub-stream.
Service Port	Specifies the port number for the Tenda protocol. The default settings are recommended. When the camera is added to the NVR through the Tenda protocol, this port number is required.

4.5 Storage Management

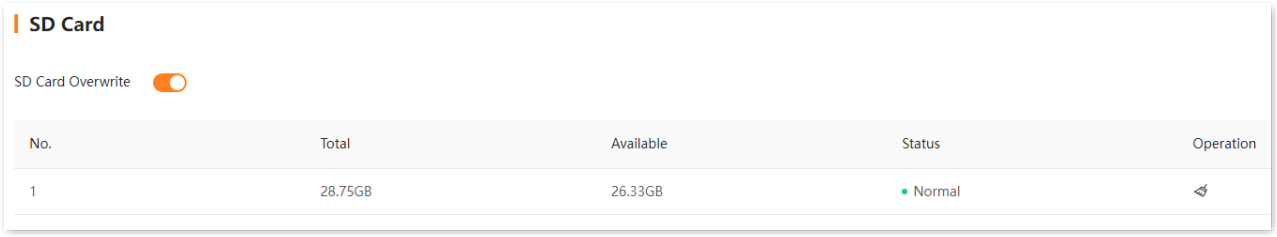
On the storage management page, you can manage the SD card and set the recording schedule.

4.5.1 SD Card Management

Overview

To access the configuration page, log in to the web UI of the camera, and navigate to **Configuration** > **Storage** > **SD Card**.

You can view the status of the SD card, format SD card and set the storage policy when the SD card is full.



Parameter description

Parameter	Description
SD Card Overwrite	Specifies the storage policy when the SD card is full. After enabled, if the SD card is full, the earliest recording files will be overwritten circularly.
No.	Specifies the number of the SD card.
Total	Specifies the total capacity of the SD card.
Available	Specifies the available capacity of the SD card.
Status	Specifies the status of the SD card. If the SD card is abnormal. Try the following solutions: • Shut down the camera first, reinstall the SD card and start up the camera. • If the problem persists, format the SD card.

Parameter	Description
Operation	Used to format the SD card. NOTE • All data on the SD card will be cleared and cannot be recovered after the SD card is formatted. Please operate with caution. • If the formatting fails, try again. If the problem persists, shut down the camera first, replace the SD card and start up the camera.

Format the SD Card

If the **Status** of the SD card is unformatted, or you want to clear the data of the SD card, you can format the SD card.

NOTE

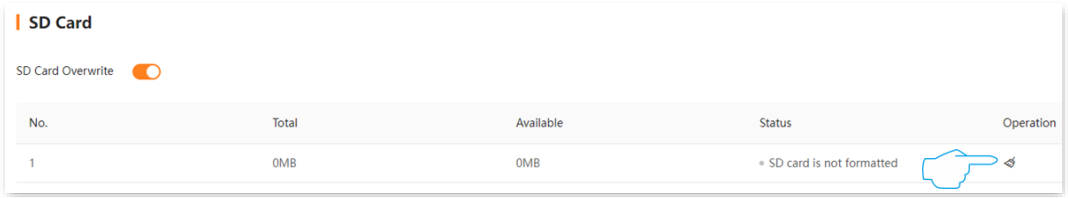
- All data will be cleared and cannot be restored after the SD card is formatted. Operate with caution.
- If the formatting fails, try again. If the problem persists, shut down the camera first, replace the SD card and start up the camera.

Procedure:

Step 1 Log in to the web UI of the camera.

Step 2 Navigate to **Configuration** > **Storage** > **SD Card**.

Step 3 Click the format button .



Step 4 Read the prompt message, and click **OK**.

---End

The system will format the camera.

4.5.2 Recording Schedule (Example: CH9-WCA)

Overview

To access the configuration page, log in to the web UI of the camera, and navigate to **Configuration** > **Storage** > **Schedule**.

After the schedule is set, the system will record according to the schedule. By default, the system presets the schedule of 7*24 hours continuous alarm recording for camera, and you can modify the recording time and recording type as required.

Parameter & button description

Parameter	Description
Recording	Specifies whether the recording function is enabled.

Parameter	Description
Normal	Specifies the camera always records. Click this button to draw the recording time in the timetable below. Set normal recording time: • When there is a normal recording time in the timetable, click any normal recording time and set it in the pop-up window. Or put the mouse on the far left or the last side of the normal recording time area, and then hold down the left mouse button to drag. • When the recording time is not set in the timetable. In the timetable, hold down the left mouse button to draw the normal recording time, and release the mouse after the arming schedule is drawn. TIP Green means normal recording, and the gray area means not recording time.
Alarm	Specifies the camera will record only when the camera triggers an alarm. Click this button to draw the recording time in the timetable below. Set alarm recording time: • When there is a recording time in the timetable, click any recording time and set it in the pop-up window. Or put the mouse on the far left or the last side of the alarm recording time area, and then hold down the left mouse button to drag. • When the recording time is not set in the timetable. In the timetable, hold down the left mouse button to draw the alarm recording time, and release the mouse after the arming schedule is drawn. TIP Red means alarm recording time, and the gray area means not recording time.
All Normal Recording	Used to set a 24-hour normal recording from Monday to Sunday with one click.
All Alarm Recording	Used to set a 24-hour alarm recording from Monday to Sunday with one click.
	Used to synchronize the set arming schedule to other dates.
Clear All	Used to clear the time that has been set in the timetable below.
Pre-record(longest)	Specifies the recording time before the alarm starts. Click **Advanced Settings** to enter the page.
Post-record	Specifies the time of continuous recording after an alarm is finished. Click **Advanced Settings** to enter the page.

Configure Schedule

Assume that you want to set a schedule for the camera as shown in the table below:

Recording	Recording Time	Recording Type
Monday to Sunday	00:00 to 8:00	Not recording
Monday to Sunday	8:00 to 12:00	Normal recording
Monday to Sunday	12:00 to 14:00	Alarm recording
Monday to Sunday	14:00 to 18:00	Normal recording
Monday to Sunday	18:00 to 24:00	Alarm recording

NOTE

After an alarm recording plan is set for the camera, the alarm event also needs to be set for the channel in the Alarm Management.

Procedure:

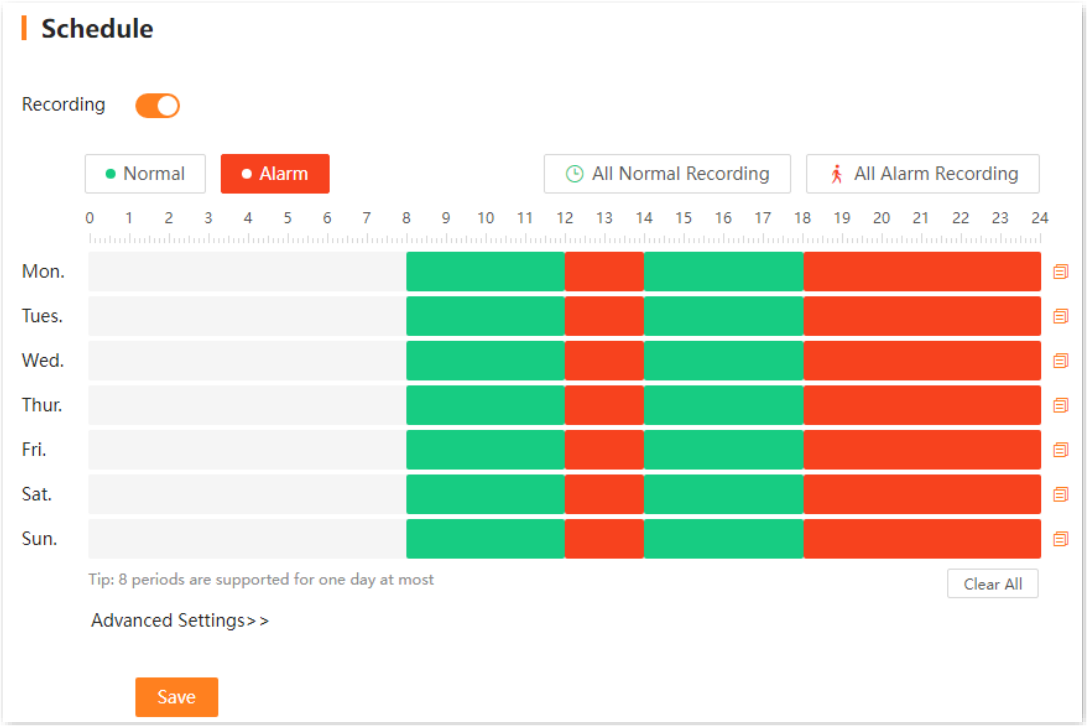
Step 1 Log in to the web UI of the camera.

Step 2 Navigate to **Configuration** > **Storage** > **Schedule**.

Step 3 Click Normal, then hold down the left mouse and drag to draw the normal recording period, which is **8:00** to **12:00** and **14:00** to **18:00** from Monday to Sunday in this example.

Step 4 Click Alarm, then hold down the left mouse and drag to draw the alarm recording period, which is **12:00** to **14:00** and **18:00** to **24:00** from Monday to Sunday in this example.

Step 5 Click **Save**.



---End

After the setting completes, the system will enable the camera to record according to the above schedule.

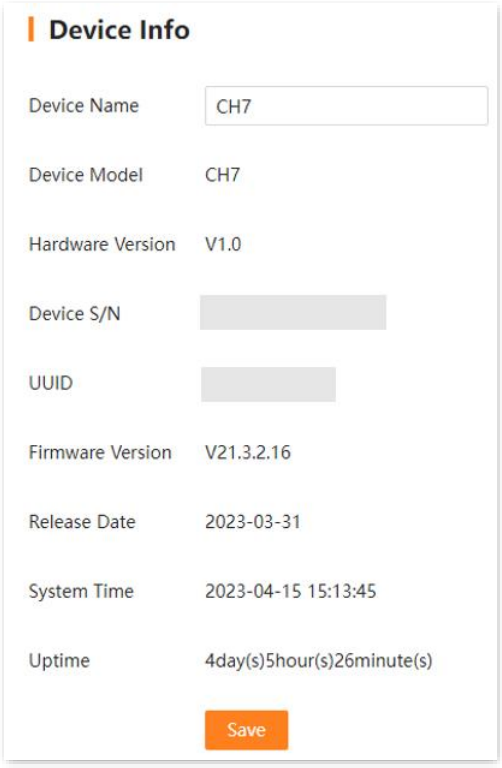
5 System Management

This guide is for reference only and does not imply that the product supports all functions in the guide. The functions may differ with product models or versions. The actual product prevails.

5.1 Devie Info

To access the configuration page, log in to the web UI of the camera, and navigate to **System Management** > **Device Info**.

You can modify the name of the camera and view such basic information as device model, hardware version, serial number, UUID and system time of the camera.



Parameter description

Parameter	Description
Device Name	Specifies the name of the camera. To quickly locate the camera by name, you are recommended to modify the camera name.
Device Model	Specifies the model of the camera.
Hardware Version	Specifies the hardware version of the camera.
Device S/N	Specifies the S/N of the camera.
UUID	Universal Unique Identifier (UUID), which identifies the uniqueness of the camera. When a camera is added through the TDSEE App, you can use the UUID number to add it.
Firmware Version	Specifies the firmware version of the camera.
Release Date	Specifies the release time of the current system firmware of the camera.
System Time	Specifies the current system time of the camera.
Uptime	Specifies the time during which the camera is operating since the last start.

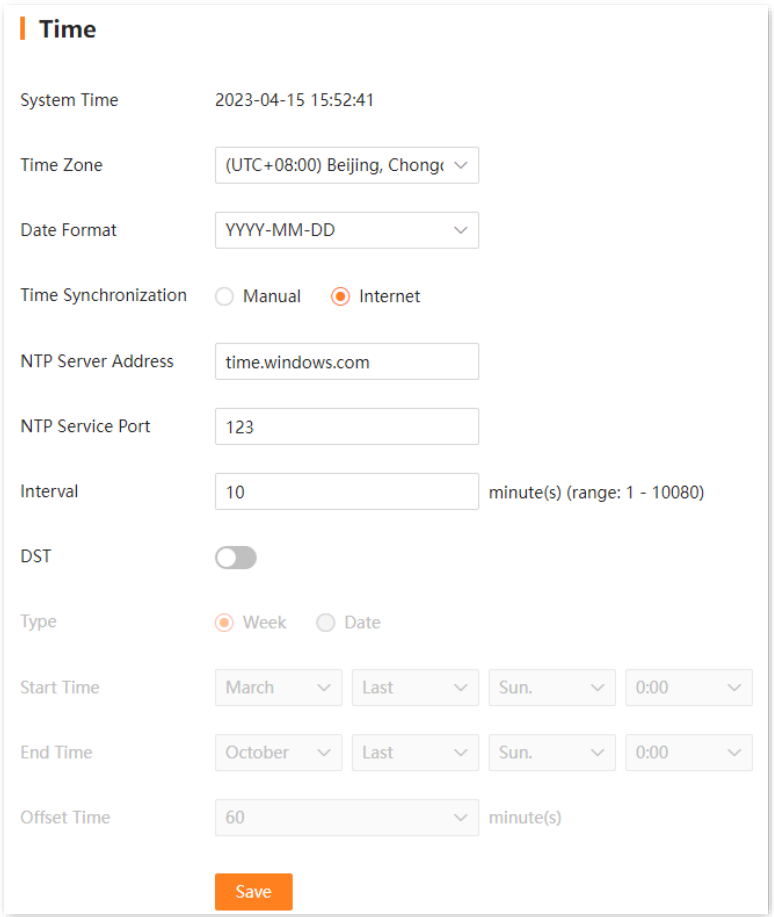
5.2 Time Settings

5.2.1 Overview

To access the configuration page, log in to the web UI of the camera, and navigate to **System Management** > **Time Settings**.

You can set the system time of the camera here. To ensure that the time-based functions of the camera take effect normally, it is necessary to ensure that the system time of the camera is accurate.

The camera supports two time-setting methods: Synchronize with the internet and Manual. The default is synchronizing with the internet.



Parameter description

Parameter	Description
System Time	Specifies the current system time of the camera.
Time Zone	Specifies the standard time zone in which the camera locates.

Parameter	Description
Date Format	Specifies the format of the camera system time.
Time Synchronization	Specify the synchronization mode of the camera system time. • **Manual:** Set the date and time manually. • **Internet:** Synchronize the time of the NTP server according to the interval.
Date	Displayed when **Time Synchronization** is set to **Manual**. They are used to manually set the date and time of the camera.
Time	
NTP Server Address	Displayed when **Time Synchronization** is set to **Internet**. Specify the address or port of the time server.
NTP Service Port	Network Time Protocol (NTP) is used to synchronize the time between the client and the network time server. After the **Internet** function is enabled, the camera will synchronize the system time through this NTP server according to the **Interval**.
Interval	Displayed when **Time Synchronization** is set to **Internet**. Specifies the time interval of the camera to synchronize the system time to the NTP server.
DST	Specifies whether to enable the DST function. DST is a time system to save energy. The unified time adopted during the implementation of this system is called **DST**. If the country or region where the camera is located implements the DST system, enable the DST function.
Type	Specifies the type of DST. Select according to the local DST system.
Start Time	Specify the start time and end time of the DST.
End Time	
Offset Time	Specifies the time bias during the DST period. For example, if the DST system implemented in a country or region is to move the time forward by one hour, the **Offset Time** should be set to 60 minutes.

5.2.2 Manually Synchronize the System Time

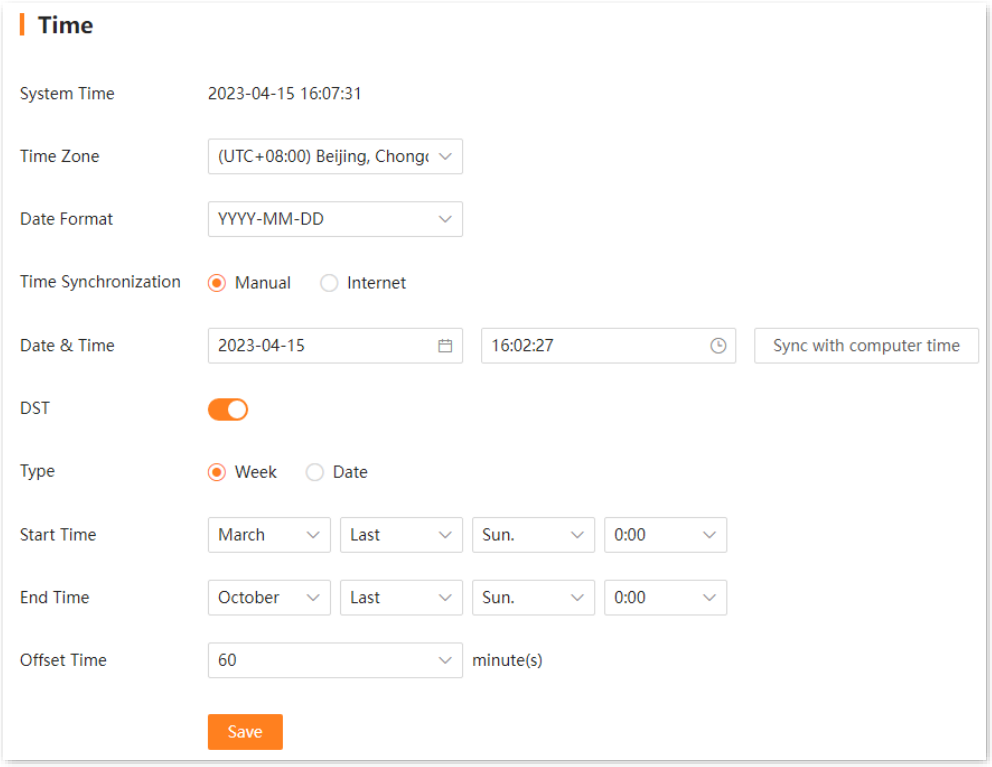
Manually setting the system time of the camera is generally used when the camera is disconnected from the internet.

Step 1 Log in to the web UI of the camera.

Step 2 Navigate to **System Management** > **Time**.

Step 3 Set date and time. The following figure is for reference only.

Step 4 Click **Save**.



---End

After the setting completes, you can check whether the **System Time** on the page is accurate.

5.2.3 Synchronize the System Time Through Internet

After the camera is successfully connected to the internet, without settings again, the system time will automatically synchronize with the NTP server according to the **Interval.** You can modify the NTP server and time synchronization as required.

Refer to Internet Basics Settings to connect the camera to the internet.

Procedure:

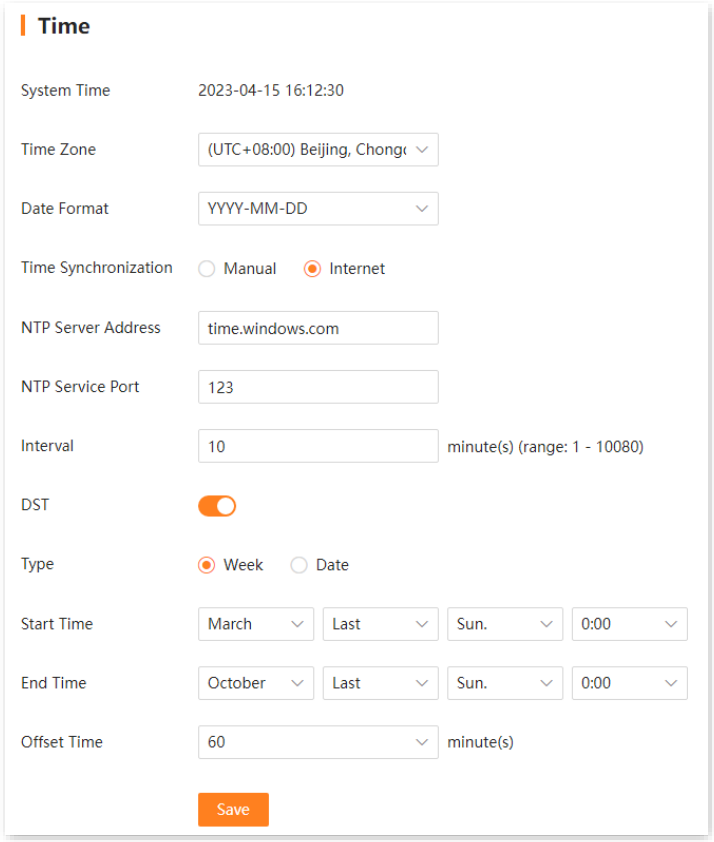
Step 1 Log in to the web UI of the camera.

Step 2 Navigate to **System Management** > **Time**.

Step 3 Select the time zone in which the camera locates.

Step 4 Set **Time Synchronization** to **Internet**.

Step 5 Click **Save**.



---End

After the setting completes, you can check whether the **System Time** on the page is accurate.

5.3 System Maintenance

5.3.1 Device Upgrade

To access the configuration page, log in to the web UI of the camera, and navigate to **System Management** > **System Maintenance** > **Firmware Upgrade**.

The firmware upgrade function enables the camera to get new or more stable performance.

NOTE

- To avoid damage to the camera, use the correct upgrade file. Generally, the firmware upgrade file is suffixed with **.bin**.
- During upgrading, do not directly cut off the power supply of the camera. Otherwise, it may cause upgrade failure or camera damage.

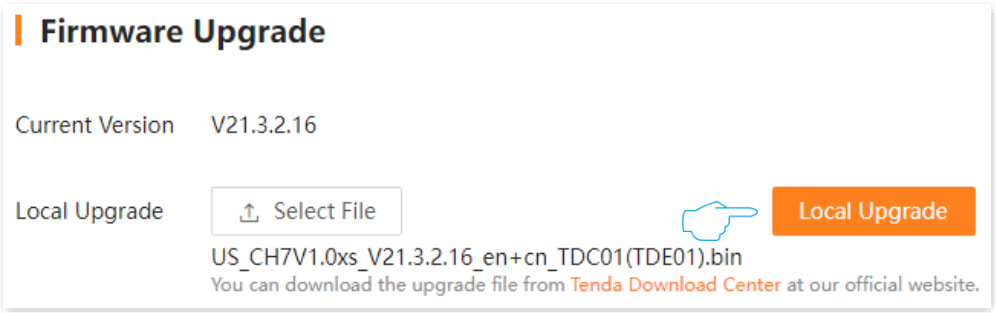
Procedure:

Step 1 Visit www.tendacn.com to download the latest upgrade firmware of the corresponding camera model, and save it to the root directory of the USB storage device.

Step 2 Log in to the web UI of the camera, and navigate to **System Management** > **System Maintenance** > **Firmware Upgrade**.

Step 3 Click **Select File**, find and select the upgrade file (suffixed with **.bin**.).

Step 4 Click **Local Upgrade**.



Step 5 Confirm the prompt message, and click **OK**.

---End

The indicator of the camera blinks blue slowly, and the upgrade progress prompt will appear on the page, please wait with patience. After the progress bar is finished, you can log in to the web UI of the camera, check the **Current Version** of the camera on the **Firmware Upgrade** page, and confirm that it is the same as the software version you just upgraded.

TIP

For better performance of the new firmware of the camera, you are recommended to reset the camera to factory default settings and re-configure the camera when the upgrading is completed.

5.3.2 Restore Settings

If the camera is running slowly, or a configuration error occurs, you can try to restore the camera.

- Restore the default settings: Except for the Network Configuration and user management-related configuration, all other settings are restored to the factory settings.
- Restore factory settings: Restore all settings of the camera to the factory settings.

NOTE

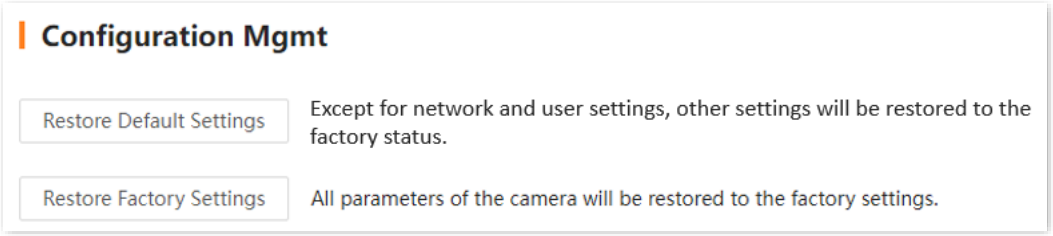
- When the camera restores its settings, it will disconnect all current connections.
- To avoid damaging the camera, ensure that the camera is powered on properly during the process of restoring the factory settings.
- After restoring the factory settings, all the settings of the camera will be restored to the factory status, and you need to re-configure. Before restoring factory settings, you are recommended to back up the configuration first.

Procedure:

Step 1 Log in to the web UI of the camera.

Step 2 Navigate to **System Management** > **System Maintenance** > **Configuration Mgmt**.

Step 3 Click **Restore Default Settings** or **Restore Factory Settings** as required.



Step 4 Confirm the prompt message, and click **OK**.

---End

Wait until the progress bar completes. If the camera is reset, refer to the quick installation guide of the corresponding model camera to re-configure the network.

5.3.3 Auto Maintenance

The reboot can prevent performance decrease and instability of the camera due to long-time running. You can reboot the camera or set the camera to automatically reboot periodically during idle time.

TIP

To ensure that the camera works properly, you are recommended to set the camera to reboot in idle time.

Assume that you want to automatically reboot the camera at 3:00:00 from Monday to Friday.

Procedure:

Step 1 Log in to the web UI of the camera.

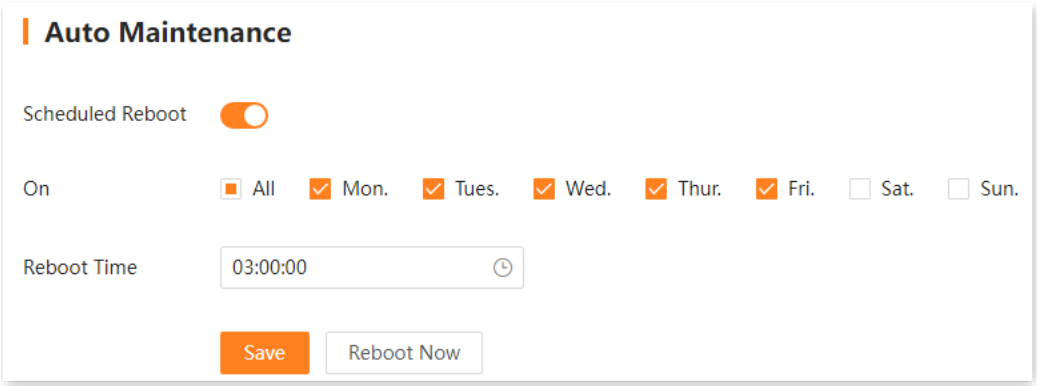
Step 2 Navigate to **System Management** > **System Maintenance** > **Auto Maintenance**.

Step 3 Enable the **Scheduled Reboot**.

Step 4 Select the reboot date, which is **Mon.** to **Fri.** in this example.

Step 5 Set the reboot time, which is **03:00:00** in this example.

Step 6 Click **Save**.



---End

After the setting completes, the camera will automatically reboot from Monday to Friday at 3:00.

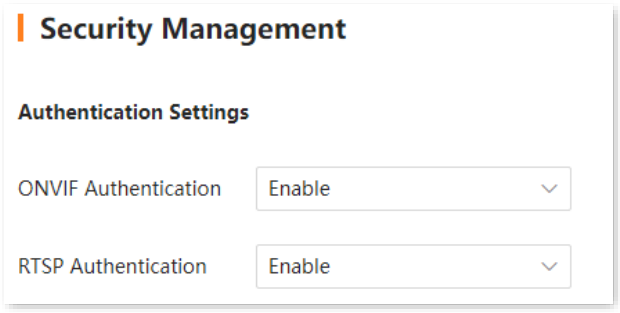
5.3.4 Security Management

Authentication Settings

To access the configuration page, log in to the web UI of the camera, and navigate to **System Management** > **System Maintenance**> **Security Management**.

You can enable or disable ONVIF authentication and RTSP authentication here.

- When ONVIF authentication is enabled and a device accesses the camera through the ONVIF protocol, the authentication information (username and password) needs to be verified.
- When RTSP authentication is enabled and a device accesses the camera through the RTSP protocol, the authentication information (username and password) needs to be verified.



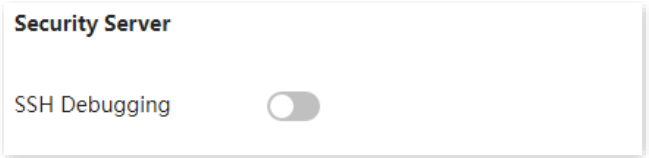
SSH Debugging

Secure Shell (SSH) is a protocol used to realize secure remote access and file transfer services through encryption mechanisms and authentication mechanisms. This camera supports the SSH server function and accepts SSH client connections.

To access the configuration page, log in to the web UI of the camera, and navigate to **System Management** > **System Maintenance**> **Security Server**.

By default, SSH debugging is disabled.

After SSH debugging is enabled, you can log in to the camera through the SSH client. SSH debugging is only used by professionals to debug the camera. For security, do not enable this function unless in special situation.

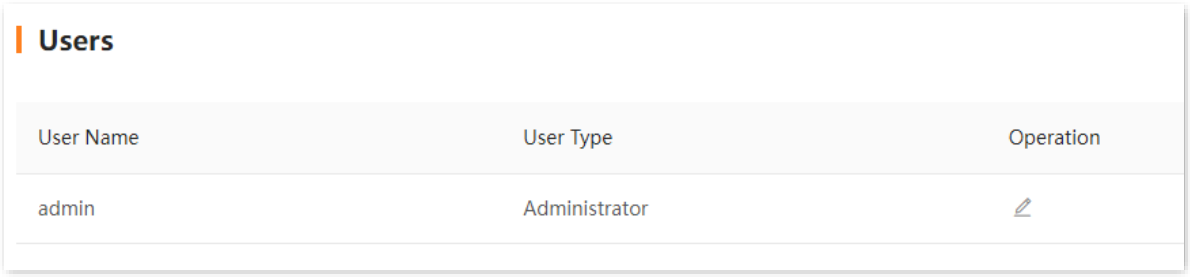


5.4 User Management

5.4.1 Overview

To access the configuration page, log in to the web UI of the camera, and navigate to **System Management** > **Users**.

You can modify the login account information of the camera to prevent unauthorized users from entering the web UI of the camera to change settings and affect normal use.



5.4.2 Modify the Login Password

Method 1:

Available when the default login password of the camera is unmodified.

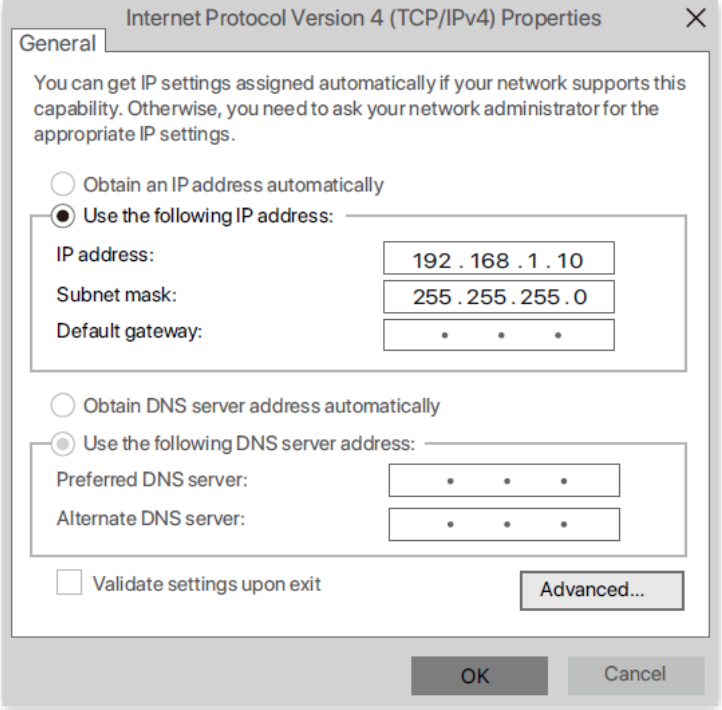
Procedure:

Step 1 Connect the computer or tablet to a router that is connected to the camera.

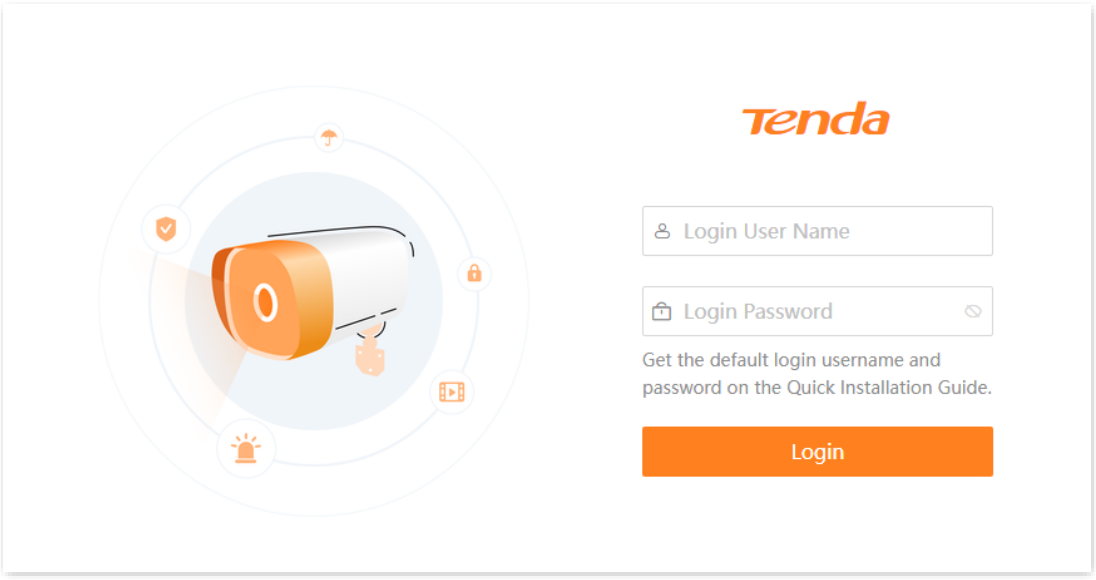
You can connect the computer to the LAN port of the router by using an Ethernet cable, or connect the tablet to the Wi-Fi network of the router.

Step 2 Set the IP address of the computer to an unused one belonging to the same network segment as the IP address of the camera but different from the IP address of the camera. The following figure is for reference only.

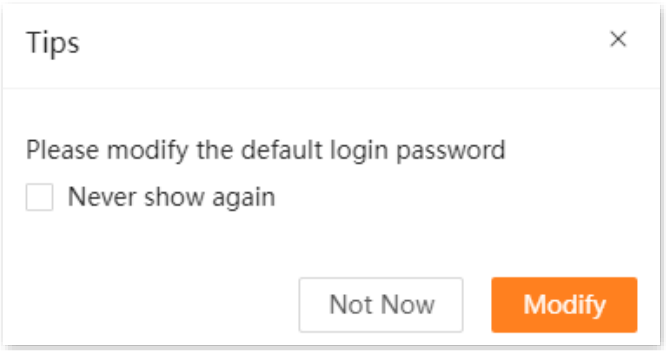
The default login IP address of the camera is **192.168.1.203**, and the DHCP function is enabled. If there is a DHCP server in the network, the IP address of the camera may be changed. Refer to the actual IP address assigned to the camera by the DHCP server.



Step 3 Start a browser and enter the IP address of the camera in the address bar to access the login page. Enter the **Login User Name** (default: admin) and **Login Password** (default: admin123456), and click **Login**.

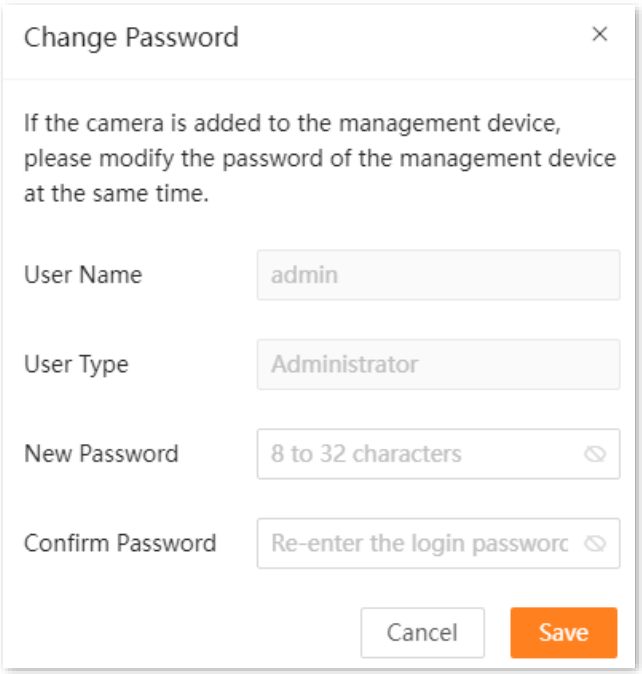


Step 4 Read the prompt messages, and click **Modify**.



Step 5 Set the **New Password**.

Step 6 Click **Save**.



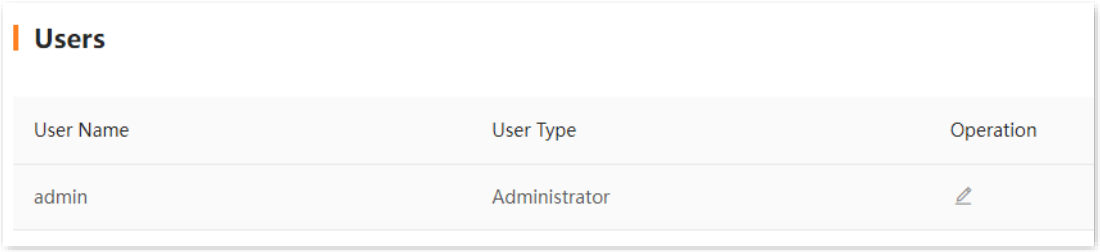
---End

You will be redirected to the login page. Enter the password you set, and then click **Login** to log in to the web UI of the camera.

Method 2:

Step 1 Log in to the web UI of the camera, and navigate to **System Management** > **Users**.

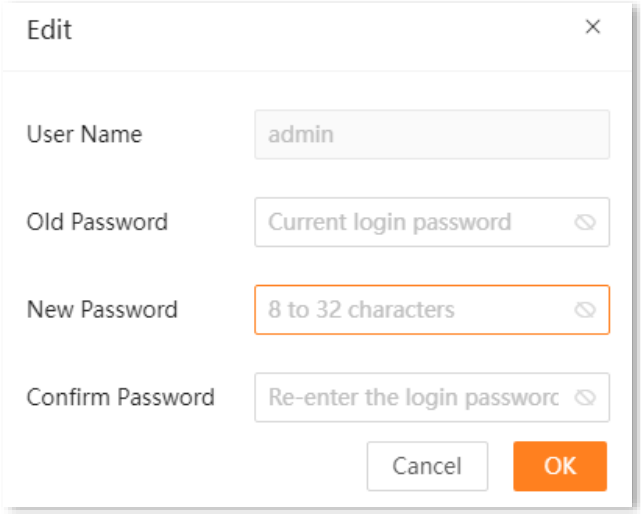
Step 2 Click .



Step 3 Enter the **Old Password**.

Step 4 Set the **New Password**.

Step 5 Click **OK**.



---End

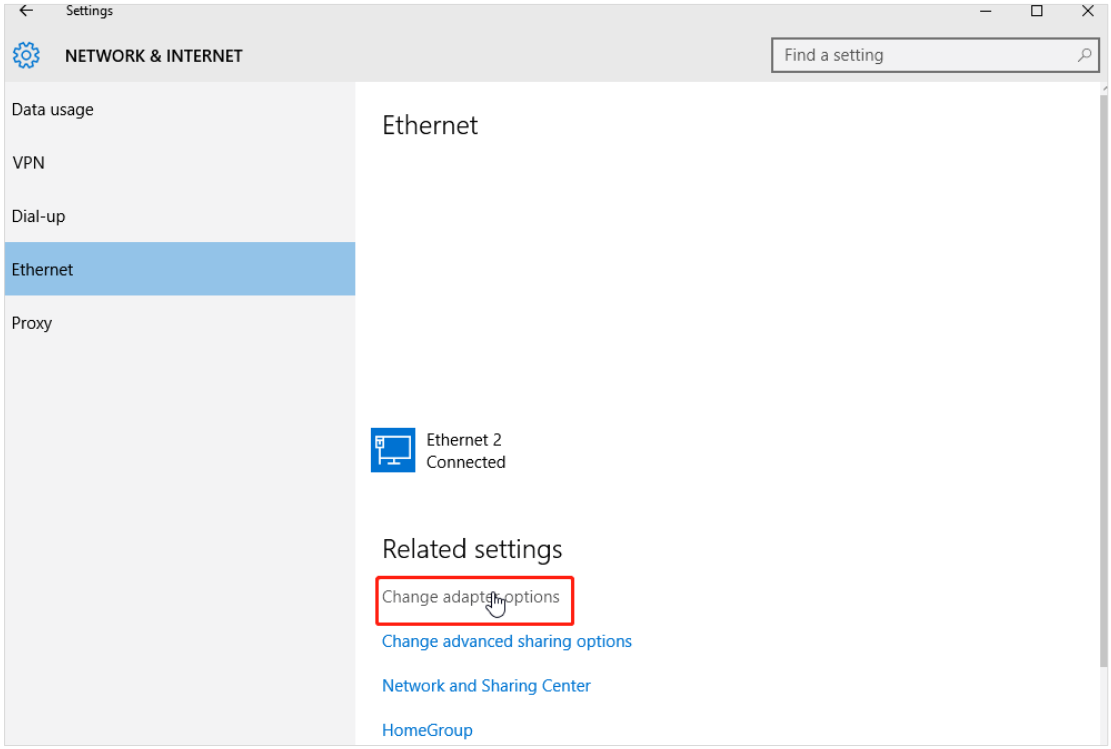
When logging in to the web UI of the camera again, enter the new login password you set.

Appendix

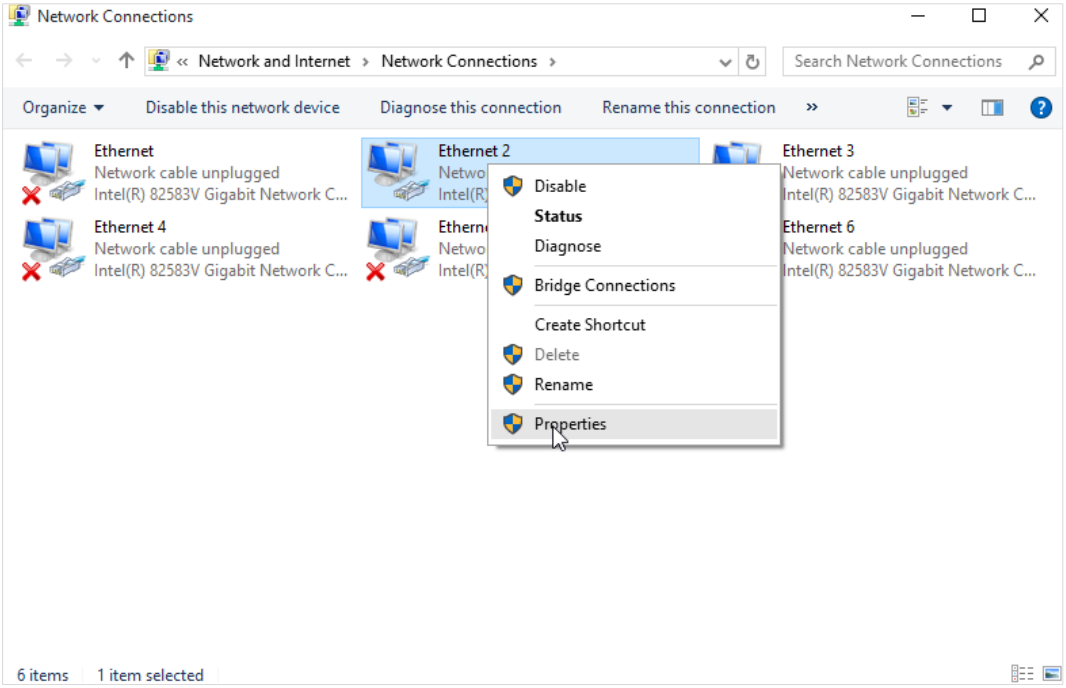
A.1 Configure the computer to obtain an IPv4 address automatically (Example: Windows 10)

Step 1 Click  in the bottom right corner of the desktop and choose **Network settings**.

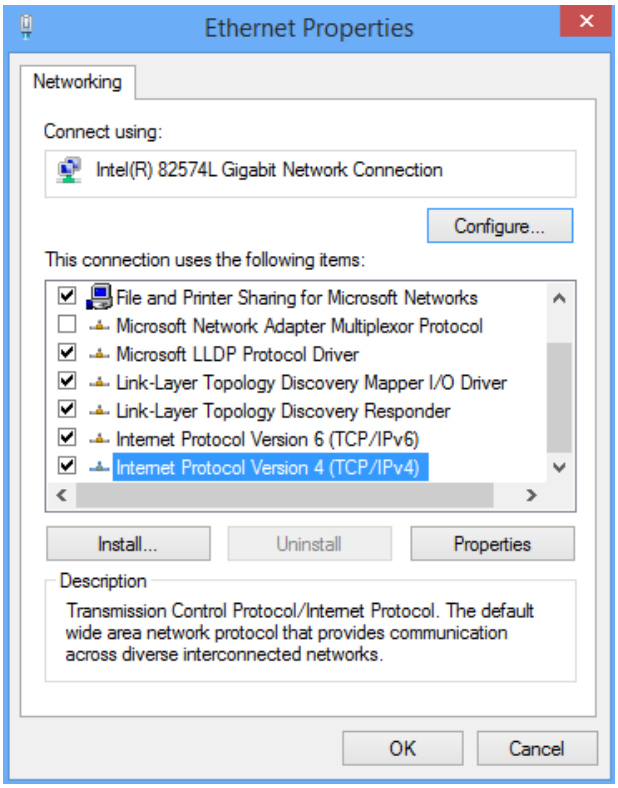
Step 2 Click **Change adapter options**.



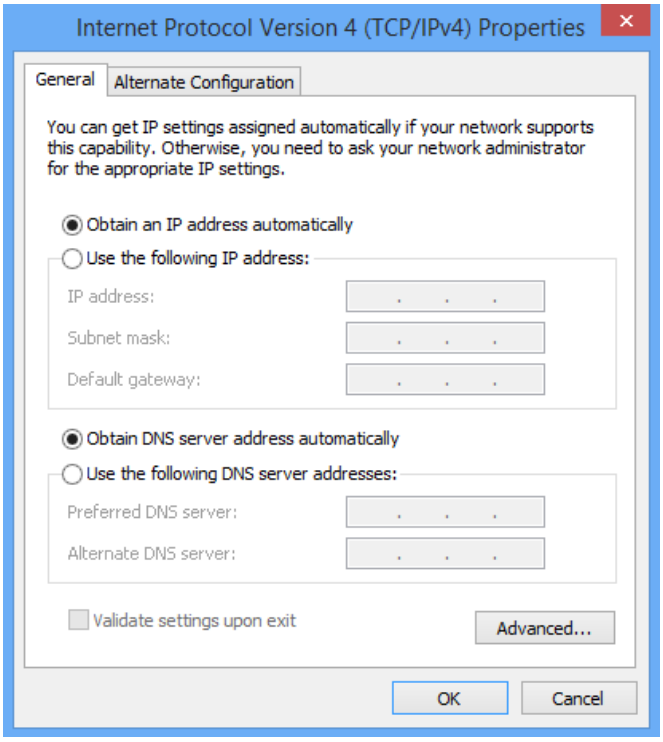
Step 3 Right-click on the connection which is being connected, and then click **Properties**.



Step 4 Double-click **Internet Protocol Version 4 (TCP/IPv4)**.



Step 5 Select **Obtain an IP address automatically** and **Obtain DNS server address automatically**, and click **OK**.



Step 6 Click **OK** in the **Ethernet Properties** window.

---End

A.2 Default Parameters

The default settings of the main parameters of the camera are as follows.

Parameter	Default Settings
Login Username	admin
Login Password	admin123456
IP Address	192.168.1.203 - If there is an NVR in the network, the IP address of the camera may be automatically synchronized to the same network segment as the IP address of the NVR. - If there is a DHCP server in the network, the camera IP address may automatically obtain the IP address from the DHCP server.
Subnet Mask	255.255.255.0

A.3 Acronyms and Abbreviations

Acronym or Abbreviation	Full Spelling
AAC	Advanced Audio Coding
BLC	Back Light Compensation
CCD	Charge-Coupled Device
DHCP	Dynamic Host Configuration Protocol
DNS	Domain Name System
DST	Daylight Saving Time
GUI	Graphical User Interface
HLC	Highlight Compensation
HTTP	HyperText Transfer Protocol
IP	Internet Protocol
IPv4	Internet Protocol version 4
ITU-T	International Telecommunication Union
LAN	Local Area Network
MAC	Medium Access Control
MTU	Maximum Transmission Unit
NTP	Network Time Protocol
NTSC	National Television System Committee
NVR	Network Video Recorder
ONVIF	Open Network Video Interface Forum
OSD	On-screen Display
PAL	Phase Alteration Line
RTSP	Real Time Streaming Protocol
SSH	Secure Shell

Acronym or Abbreviation	Full Spelling
SSL	Secure Sockets Layer
TCP	Transmission Control Protocol
UDP	User Datagram Protocol
URL	Uniform Resource Locator
UTC	Universal Time Coordinated
UUID	Universally Unique Identifier
VBR	Variable Bit Rate
WDR	Wide Dynamic Range