



User Guide

Wired Camera Web Interface

This guide uses the InSight S345ZI web page for demonstration.
Features and pictures may differ from your actual product.

Contents

About This Guide	1
Login	2
1.1 Connect the Camera to Network.....	3
1.2 Log in to the Web Interface.....	3
Live View	6
View Device Information	9
3.1 View System Logs.....	10
3.2 View Device Information.....	11
Change Camera Settings	12
4.1 Camera Display Settings	13
4.1.1 Image Settings.....	13
4.1.2 OSD Settings.....	17
4.1.3 Privacy Mask.....	18
4.2 Camera Stream Settings.....	19
4.2.1 Video Settings.....	19
4.2.2 Audio Settings (Only for some models)	20
4.2.3 ROI.....	21
4.2.4 Advanced Settings	21
Events.....	23
5.1 Arming Schedule and Linkage Method	24
5.2 Motion Detection	25
5.3 Camera Tampering	26
5.4 Scene Change Detection	27
5.5 Line Crossing Detection	28
5.6 Intrusion Detection	30
5.7 Region Entering Detection.....	32
5.8 Region Exiting Detection	34
5.9 Loitering Detection	36
5.10 Object Abandoned/Removal Detection.....	38

5.11	Abnormal Sound Detection	40
5.12	Vehicle Detection	40
5.13	Human Detection	41
5.14	LPR (Only for some models)	42
5.15	Exception Event	43
5.16	Smart Frame	44
5.17	Light Alarm (Only for some models)	44
5.18	Sound Alarm (Only for some models)	45
5.19	Alarm Server	45
5.20	Alarm Input	46
5.21	Alarm Output	47
Smart Settings		48
6.1	Configuration.....	49
6.2	Object Attribute Analysis.....	49
Recording and Storage		50
7.1	Recording Schedule	51
7.2	Storage Management	52
Network Management		54
8.1	Internet Connection.....	55
8.2	Port.....	56
8.3	Platform Access.....	57
8.4	Email.....	58
8.5	Port Forwarding.....	59
8.6	IP Restriction	60
8.7	Multicast.....	60
8.8	Server	61
8.9	Upload	62
8.10	ONVIF	63
8.11	SNMP.....	63
8.12	DDNS	64
Cloud Service		66
System Settings		68
10.1	Configure Basic Settings	69

10.2	Modify System Time	69
10.3	Manage User Accounts	70
10.4	System Management	73
10.5	Upgrade Firmware	74
10.5.1	Online Upgrade	74
10.5.2	Local Upgrade	74
10.6	Reboot Device Regularly	75

About This Guide

This User Guide provides information for using and managing VIGI cameras via a web browser. It explains functions of VIGI cameras and shows you how to configure them.

Conventions

When using this guide, notice that:

- Features available in VIGI cameras may vary due to your region, device model, and firmware version. All images, steps, and descriptions in this guide are for demonstration purposes only and may not reflect your actual experience.
- The information in this document is subject to change without notice. Every effort has been made in the preparation of this document to ensure accuracy of the contents, but all statements, information, and recommendations in this document do not constitute the warranty of any kind, express or implied. Users must take full responsibility for their application of any products.
- This guide uses the specific formats to highlight special messages. The following table lists the conventions that are used throughout this guide.

<u>Underlined</u>	Indicates hyperlinks. You can click to redirect to a website or a specific section.
Teal	Indicates contents to be emphasized and texts on the web page, including the menus, tabs, buttons and so on.
>	The menu structures to show the path to load the corresponding page.
ⓘ Caution	Reminds you to be cautious, and ignoring this type of note might result in device damage or data loss.
Note	Indicates information that helps you make better use of your device.

More Information

- For technical support, the latest version of the User Guide and other information, please visit <https://www.vigi.com/us/support>.
- The Quick Installation Guide can be found where you find this guide or inside the package of the product.
- To ask questions, find answers, and communicate with TP-Link users or engineers, please visit <https://community.tp-link.com> to join TP-Link Community.



Login

This chapter guides you on how to log in to the web UI of the VIGI camera:

- [Connect the Camera to Network](#)
- [Log in to the Web Interface](#)

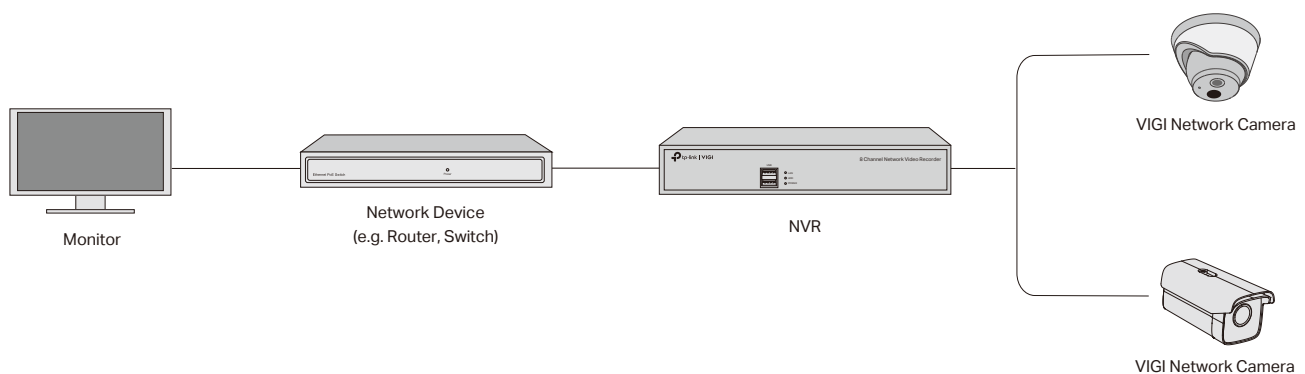
After the cameras are added to network, multiple methods are provided for you to monitor and manage cameras. You can manage and monitor the cameras remotely via the VIGI app, and you can also directly monitor and manage your camera via a web browser. Check the support page of the product for more manuals at <https://support.vigi.com/>.

♥ 1.1 Connect the Camera to Network

The camera works with an NVR for easier batch access and management. You can add cameras to network via an NVR.

1. Connect your cameras to the same network as your NVR (as shown below).
2. Power on your cameras.
3. Follow the NVR manual to add and activate your cameras.

Note: You can follow the Quick Start Guide included in the package to mount and add cameras to your network.

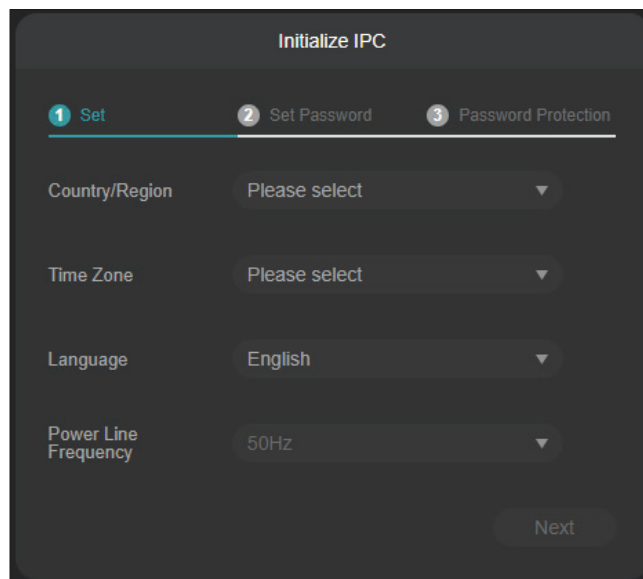


♥ 1.2 Log in to the Web Interface

With an intuitive user interface, it is easy to configure and manage the camera via a web browser. Follow the steps below to log in to the web UI of the camera for the first time.

1. Find the camera's IP address on your router's client page.
2. On your local computer, open a web browser and enter `https://camera's IP address` (`https://192.168.0.60` by default).

3. Select your **Country/Region** and **Time Zone**.



Initialize IPC

1 Set 2 Set Password 3 Password Protection

Country/Region Please select ▼

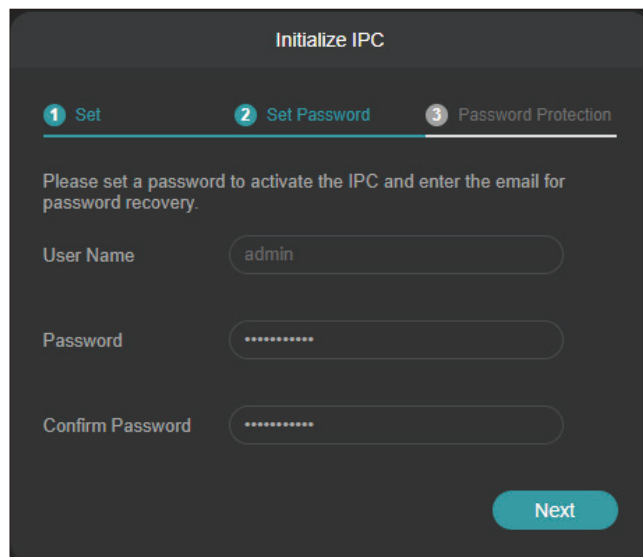
Time Zone Please select ▼

Language English ▼

Power Line Frequency 50Hz ▼

Next

4. Set a password to activate the camera. Click **Next**.



Initialize IPC

1 Set 2 Set Password 3 Password Protection

Please set a password to activate the IPC and enter the email for password recovery.

User Name admin

Password

Confirm Password

Next

Now, you can log in to the camera using the password set here.

5. Set Password Protection. If you forget password, you can reset it with your security questions or recovery email.
Select your security questions and input your answer.

Enter your email address to receive the verification code during the recovery operation process.

Initialize IPC

1 Set 2 Set Password 3 Password Protection

Security Question

Security Question 1 Your father's name ▼

Answer

Security Question 2 Your mother's name ▼

Answer

Security Question 3 Your head teacher's name in s... ▼

Answer

Recovery Email

Recovery Email

Skip Next

Note:

1. For future logins, use the default username **admin** and the password you set for this camera.
2. If you forgot the password, click **Forgot password?** and follow the web instructions to reset the password.



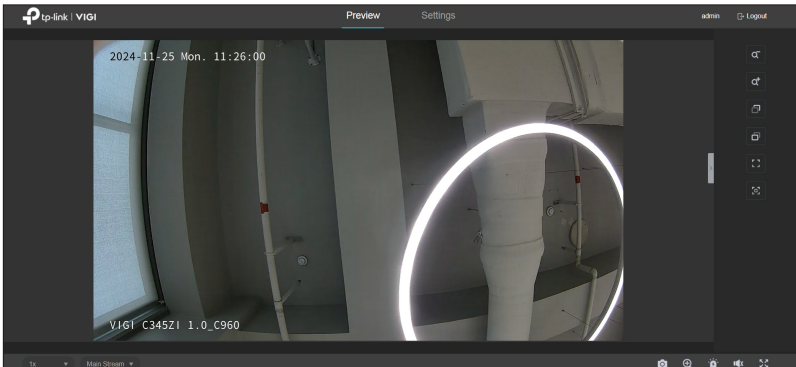
Live View

You can monitor the camera in real time and respond to abnormal conditions with quick operations, such as zooming in the image and capturing screenshots.

This chapter introduces the live view parameters and function icons.

1. Find the camera’s IP address on your gateway’s client page.
2. On your local computer, open a web browser and enter https://camera’s IP address (https://192.168.0.60 by default).
3. Log in with the default username **admin** and the password you set for this camera.
4. You can view the live video on the Preview page.

Note: This is for demonstration only.



Select the aspect ratio.



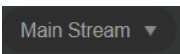
1x refers to the original window size.

4:3 refers to 4:3 window size.

16:9 refers to 16:9 window size.

100% refers to self-adaptive window size.

Click to change the stream type.



Main Stream stands for the best stream performance the device supports. It usually offers the best resolution and frame rate the device can do. But high resolution and frame rate usually means larger storage space and higher bandwidth requirements in transmission.

Substream usually offers comparatively low-resolution options, which consumes less bandwidth.



Screenshot: Click to capture a screenshot.



Digital Zoom: Click to see more details of any area in the image.



Alarm: (Only for certain cameras) Click to trigger the sound alarm and lasts about 10 seconds.



Volume: (Only for certain cameras) Click to adjust the volume of the speaker.

	Full Screen: Click to change the live view image to the entire screen.
	Zoom Out: (Only for certain cameras) Click to zoom out the live image.
	Zoom In: (Only for certain cameras) Click to zoom in the live image.
	Focus -: (Only for certain cameras) Shorten the focal length.
	Focus +: (Only for certain cameras) Increase the focal length.
	Lens Initialization: (Only for the camera with motorized lens) Click to reset lens when long time zoom or focus results in blurred image.
	Auxiliary Focus: (Only for the camera with motorized lens) Click to focus automatically.

3

View Device Information

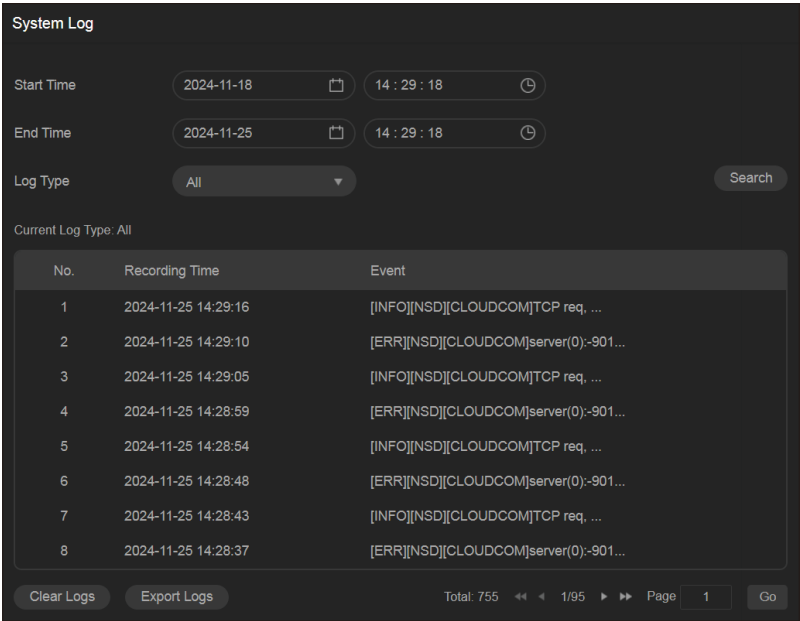
This chapter introduces how to check the system logs and view your device information on the web UI. This chapter contains the following sections:

- [View System Logs](#)
- [View Device Information](#)

♥ 3.1 View System Logs

The camera uses logs to record, classify, and manage system and device messages. You can search, view, and export the logs.

- 1. Go to **Settings > Information > System Log > System Log**.
- 2. Specify search conditions, including the Start Time, End Time, and Log Type, and click **Search**. The filtered logs that match the search conditions will appear in the table.



Start/End Time

Specify a time range to filter the logs based on the recording time.

Log Type

Select a type from the drop-down list to filter the logs.

All: All types of logs.

Alarm: Alarms triggered by events, such as tampering, line crossing, and area intrusion.

Exception: Abnormal events that may influence the camera’s functions, such as video signal loss and hard drive errors.

Operation: Actions that take place on the camera, such as login and upgrade.

Information: Informational messages, such as device information.

Clear Logs

Click to delete all logs.

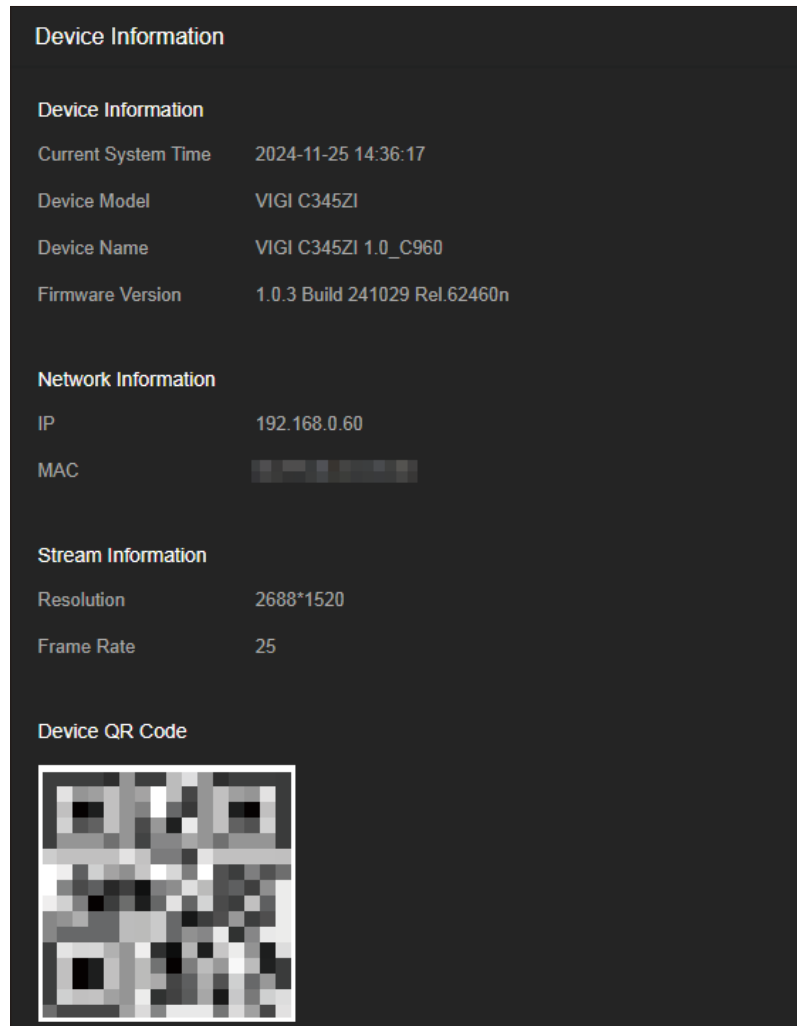
Export Logs

Click to save log files to your computer.

♥ 3.2 View Device Information

You can view basic information about the camera, including device model, firmware version, network information, stream information, and device QR code.

Go to **Settings > Information > Device Information > Device Information**.



4

Change Camera Settings

This chapter introduces how to change the camera display settings and camera streams settings. It contains the following sections:

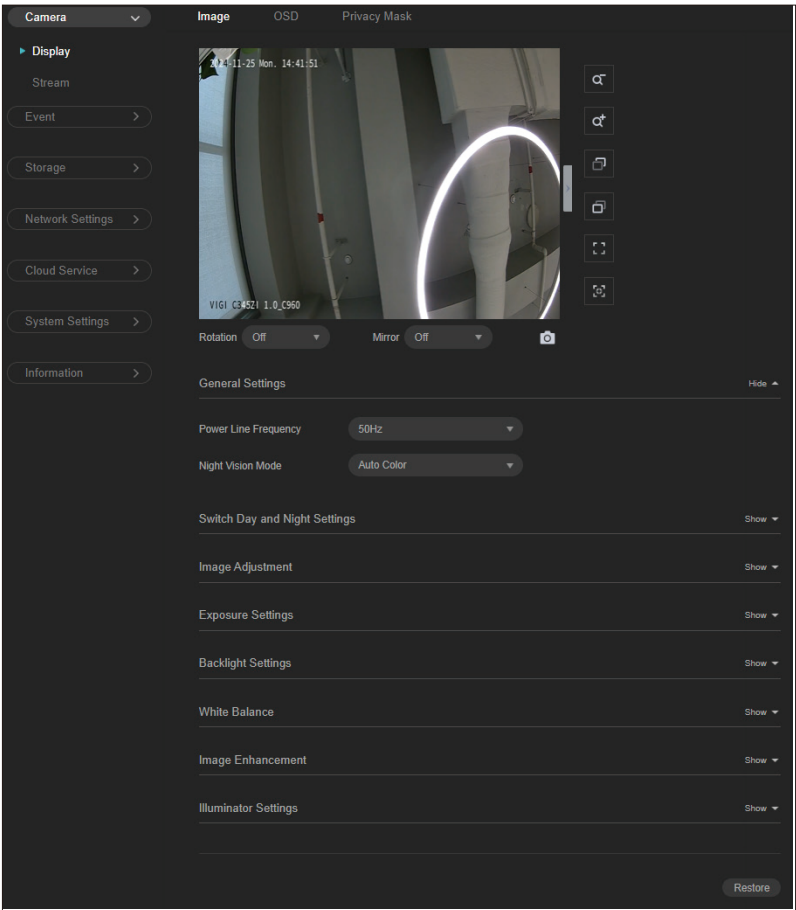
- [Camera Display Settings](#)
- [Camera Stream Settings](#)

♥ 4. 1 Camera Display Settings

You can adjust image features according to your needs.

4. 1. 1 Image Settings

1. Go to **Settings > Camera > Display > Image**.
2. Configure the following parameters.



Rotation Choose to turn the live view image by 0, 90 or 270 degrees on your display.
When you select **Off**, the image displays normally.

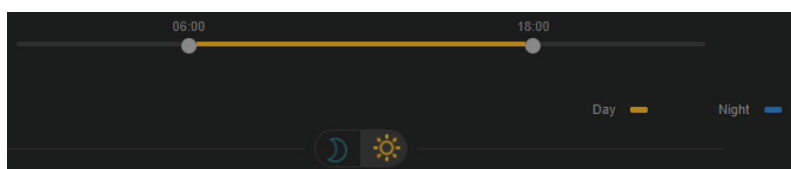
Mirror Select the mirror mode as needed.
When you select **Off**, the image displays normally.
By choosing **Left-Right**, you mirror the image on the vertical axis.
By choosing **Up-Down**, you flip the image on the horizontal axis.
By choosing **Central**, you rotate the image by 180 degrees around its center.

General Settings

Power Line Frequency	Set the Power line frequency consistent with local utility settings to eliminate image flickering associated with fluorescent lights.
Night Vision Mode	Human/Vehicle Triggered Full-Color: The camera switches to the full-color mode once it detects a person or vehicle. Auto Color: The camera turns on or off the white supplement light according to the light condition of the environment. Auto IR: The camera turns on or off the IR supplement light according to the light condition of the environment. White LED Always On: White supplement light is on. IR Always On: IR supplement light is on. Off: Supplement light is off. Custom: Select it to configure Day/Night Switch and Illuminator.

Switch Day and Night Settings

Day/Night Switch	Select a method to switch the image settings of day and night. Unified: The camera applies the same image settings throughout a day. Scheduled: The camera switches the image mode of day and night at your specified time. If you select this method, adjust the slide bar to specify the switch time.
-------------------------	--



Auto: The camera switches the image mode of day and night automatically according to the light condition of the environment.

Image Adjustment

Brightness	Increasing the value will lighten the image.
Contrast	Increasing the value will increase the difference between the brighter and darker parts.
Saturation	Increasing the value will enrich the color of the image.
Sharpness	Increasing the value will sharpen the image.

Exposure Settings

Exposure

Select the exposure mode as needed.

Auto: The camera adjusts the exposure automatically.

Manual: The image exposure is fixed. If you select **Manual**, adjust the slide bar of Gain to specify its value, and select a shutter speed. Higher gain and slower shutter speed result in brighter images.

Anti-flicker: This function minimizes influences caused by flickering.

Backlight Settings

BLC Area

BLC (Backlight Compensation) optimizes the camera to increase light exposure for darkened areas and helps you to see details more clearly.

Select an area to compensate light.

If you select **Custom**, draw a blue rectangle on the live view image as the BLC area.

WDR

WDR (Wide Dynamic Range) can improve the image quality under high-contrast lighting conditions where both dimly and brightly lit areas are present in the field of view.

If you select **On**, the camera balances the light of the brightest and darkest areas automatically. You may set the gain value, or the sensor's sensitivity, manually.

HLC

HLC (Highlight compensation) can compensate for brighter parts of your image, maintaining detail in brighter parts of the image that would otherwise be blown out.

White Balance

White Balance

White balance is a process of removing unrealistic color casts, so that objects which appear white in person are rendered white in the image.

Auto: The camera adjusts the color temperature automatically.

Locked: The camera keeps the current color settings all the time.

Daylight/Natural Light/Incandescent/Warm Light: The camera adjusts the color temperature to remove the color casts caused by the corresponding light.

Custom: Drag the slide bar to configure the color temperature, and the camera keeps the settings all the time. You may specify the red/blue gain values separately. The higher the value is, the more intense the red/blue color is.

Image Enhancement

Prevent overexposure to infrared light

Select the standard mode or enhanced mode or manually adjust the brightness of image.

Standard Mode: In this mode, the brightness of the infrared light will be automatically adjusted to prevent overexposure. The brighter the environment, the dimmer the infrared supplement light.

Enhanced Mode: This mode intensifies its protection against overexposure, by darkening the bright areas of the image.

Manual: Manually adjust the brightness of image. The higher the value is, the dimmer the image gets.

Illuminator Settings

Illuminator

Select a mode to decide the usage of white supplement light. The available options vary due to the mode set in **Night Vision Mode** and **Day/Night Switch**.

Auto: The camera turns on the white light once it detects the environment gets dark, and keeps the light off in a sufficiently lit environment. You can customize the values in **Sensitivity** and **Delayed Switch**.

Scheduled: Specify the time to turn on and off the white light.

Always On/Off: The white light is on/off all the time.

Sensitivity

Decide the ambient light intensity that can trigger the switch of the white light. The lower the value is, the easier it is to trigger the white light.

Delayed Switch

Decide how long the camera waits to turn on or off the white light when the ambient light reaches the threshold to trigger the switch.

Lighting Mode

Infrared Lighting: The infrared supplement light is on all the time.

Human/Vehicle Trigger Full-Color: The camera turns on the full-color mode once it detects a person or vehicle.

White Light Illumination: The white supplement light is on all the time. With this selected, you may customize **White Light Intensity** parameters.

White Light Intensity

Smart White Light-Standard: The camera illuminates a white light when detecting a target.

Smart White Light-Soft: The camera illuminates a warmer white light when detecting a target.

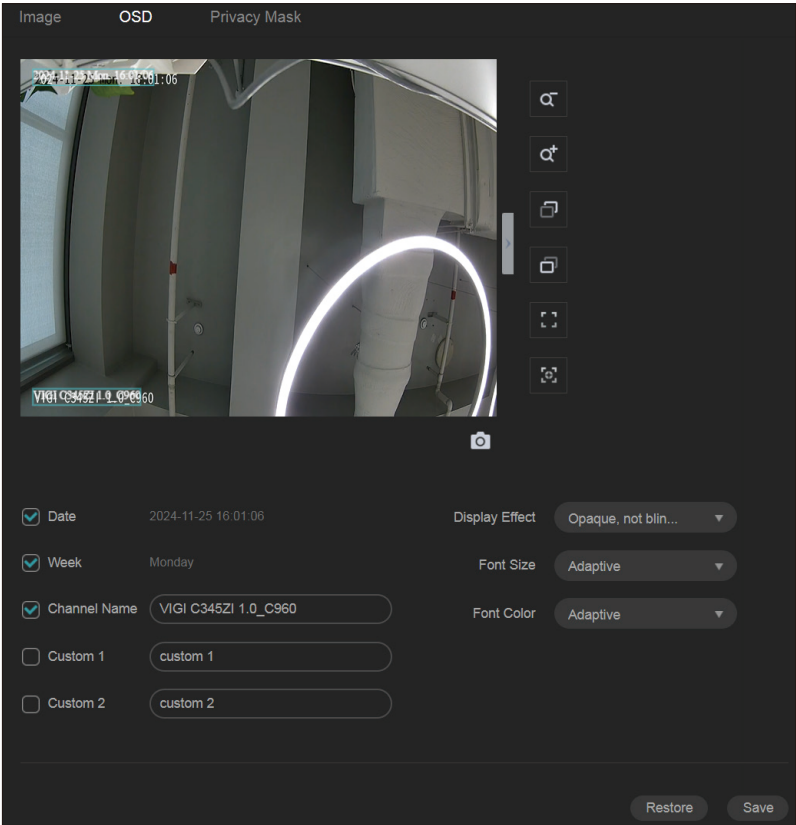
Manual: Drag the slide bar to manually adjust the intensity of the white light. The light gets brighter when the value increases.

Always Color at Live View	Full-Live The camera will automatically turn on Full-Color Night Vision when you stream Live Video.
Restore	Click to restore to factory default settings.

4. 1. 2 OSD Settings

You can configure OSD (On Screen Display) to edit the information displayed in Live View and recordings. Follow the steps below to configure OSD settings.

- 1. Go to **Settings > Camera > Display > OSD**.
- 2. Configure the following parameters, and click **Save** to save your settings.



Date	Check to display the date on the image.
Week	Check to display the week on the image.
Channel Name	Check to display the channel name on the image. You can also check Custom and specify a text to display.
Display Effect	Set the display effect of the image.

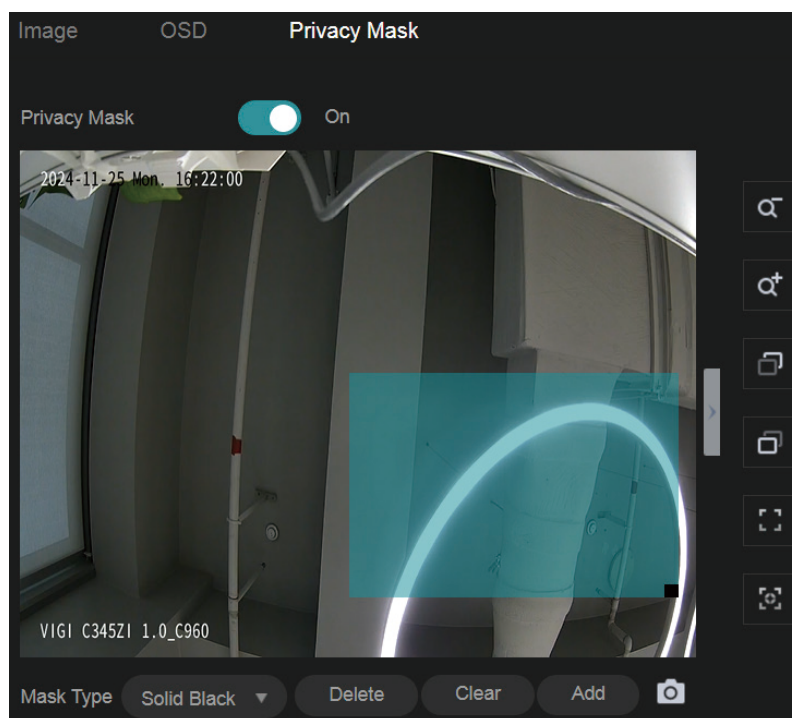
Font Size	Set the font size.
Font Color	Set the font color.
Restore	Click to restore to factory default settings.

4.1.3 Privacy Mask

Privacy Mask conceals parts of the image from view and protects your privacy. The area you set cannot be recorded and monitored.

Follow the steps below to configure Privacy Mask.

1. Go to **Settings > Camera > Display > Privacy Mask**.
2. Enable **Privacy Mask**. Draw the privacy area on the preview screen (the blue square in the picture below). Drag the area to adjust its size and location. For Mask Type, you may choose **Solid Black** or **Mosaic**, which determines the display effect of the area.



3. To remove a certain privacy area, select it and click **Delete**.
4. To remove all privacy areas, click **Clear**.
5. Click **Add** to automatically add an area on the center of the screen.
6. Click **Save**.

♥ 4.2 Camera Stream Settings

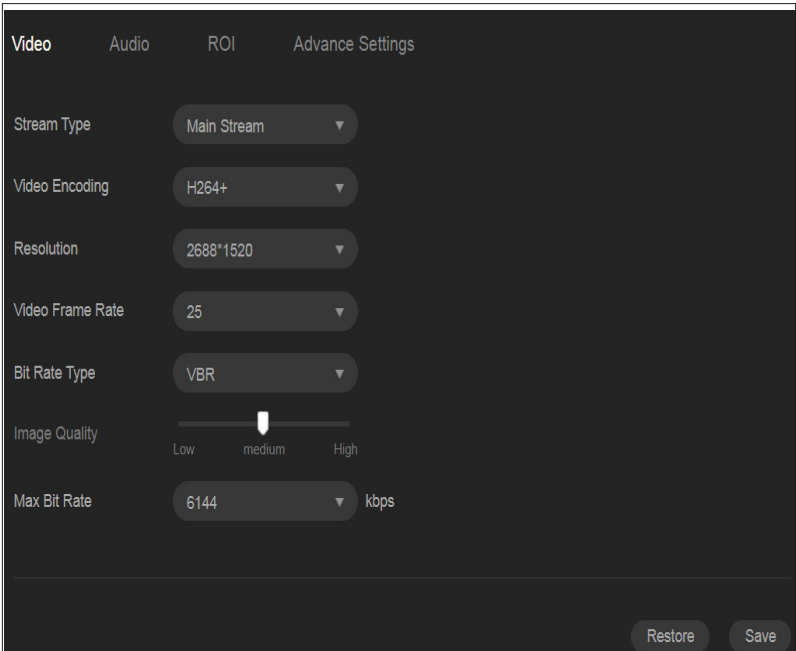
In Stream Settings, you can configure video stream levels, change the audio output settings and ROI (Region of interest) level.

Video stream levels decide the video quality in Live View and recording, and you can adjust the video quality of certain area by specifying the ROI level.

4.2.1 Video Settings

Follow the steps below to configure video settings.

1. Go to **Settings > Camera > Stream > Video**.
2. Configure the following parameters, and click **Save**.



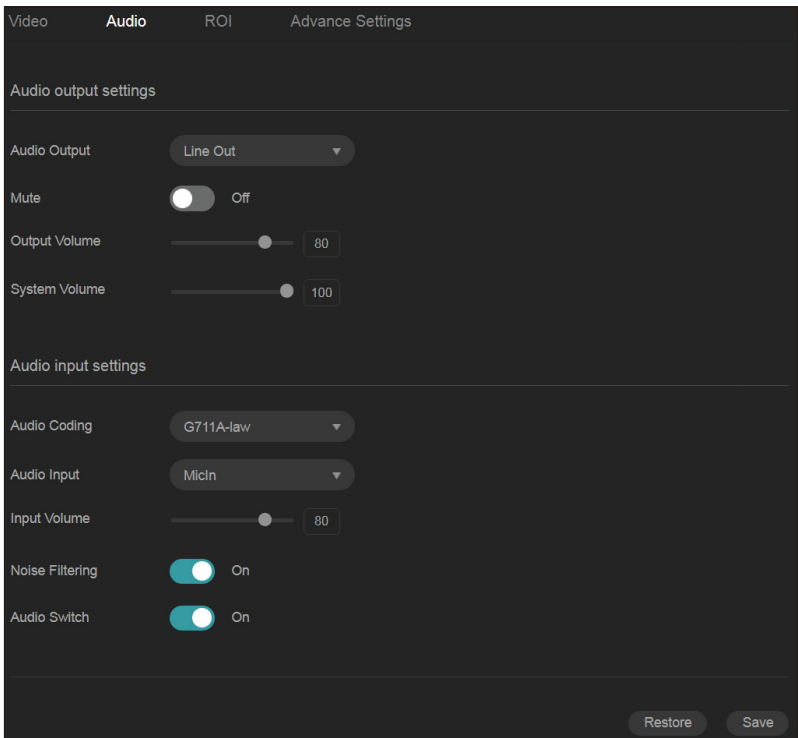
Stream Type	Main Stream is the primary video feed used for recording and provides the highest video quality. It has higher definition and higher bandwidth than substream. Substream is a secondary video feed that is used mainly for remote viewing from computers from outside the network.
Video Encoding	Select the encoding type of the stream. H.265 reduces the file size and saves the bandwidth better than H.264.
Resolution	The screen displays images more clearly when the resolution increases.
Video Frame Rate	The video is more fluent when the rate increases.

Bite Rate Type	VBR: The bit rate changes with the image within Maximum Bit Rate.
	CBR: The bit rate is Maximum Bit Rate all the time.
Image Quality	When VBR selected as the bit rate type, set the video quality as high, medium, or low.
Max Bit Rate	When VBR selected as the bit rate type, specify the upper limit of bit rate.
	When CBR selected as the bit rate type, specify the bit rate.
Restore	Click to restore to factory default settings.

4. 2. 2 **Audio Settings (Only for some models)**

Follow the steps below to configure video settings.

- 1. Go to **Settings > Camera > Stream > Audio**.
- 2. Configure the following parameters, and click **Save**.



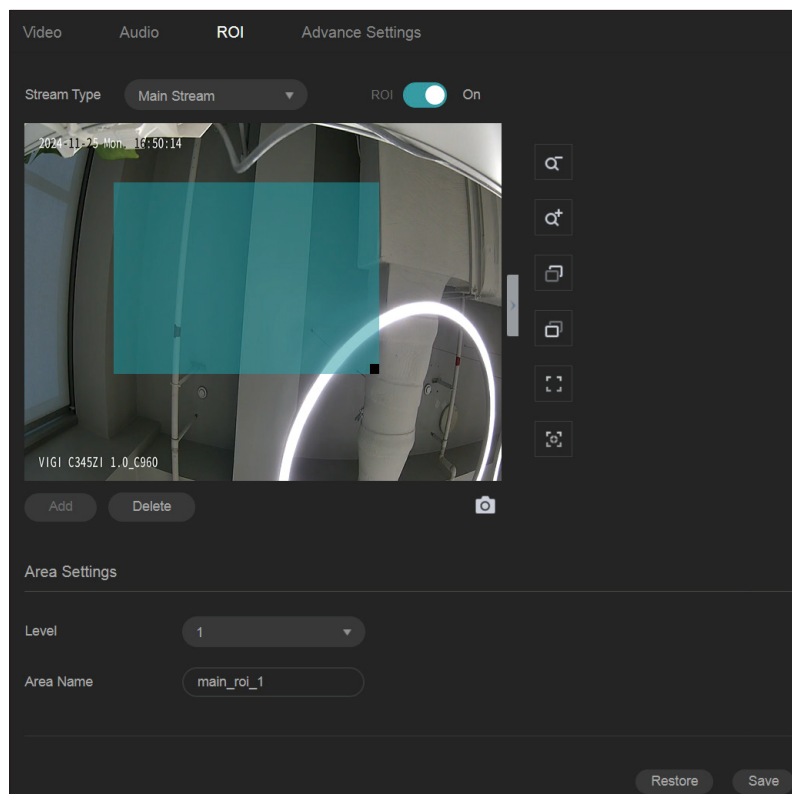
Mute	Toggle to mute the speaker of the camera.
Output Volume	Adjust the volume of the speaker.
System Volume	Adjust the volume of the sound alarm.

Audio Coding	Select the encoding type of the audio.
Audio Input	Select audio input device.
Input Volume	Adjust the volume of the input device.
Noise Filtering	Enable noise filtering to remove the noise from the video.
Audio Switch	Turn on the microphone.
Restore	Click to restore to factory default settings.

4.2.3 ROI

ROI (region of interest) concentrates on delivering high quality video from interested region. In ROI, you can configure the interest level of a specified area in each channel. The level 1–6 is ranked from low to high. The higher the ROI level, the better image quality.

1. Go to **Settings > Camera > Stream > ROI**.
2. Select the stream type and enable ROI. Draw an area on the preview screen (the blue square in the picture below). Drag to adjust its size and location. Specify the ROI level and click **Save**.



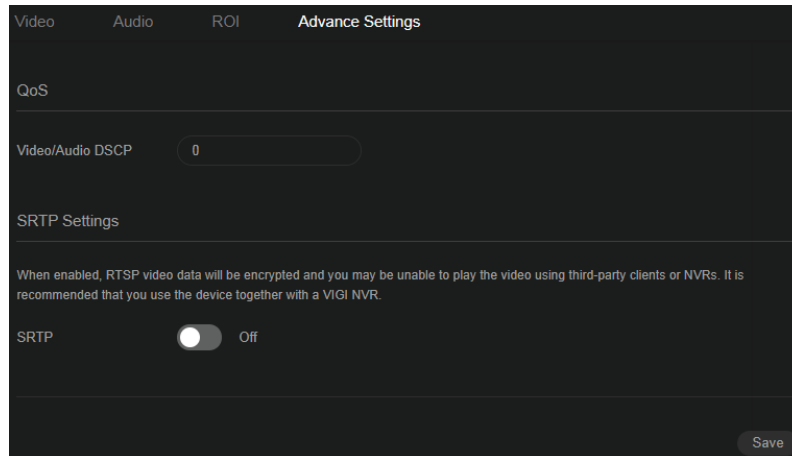
4.2.4 Advanced Settings

In Advanced Settings, you can set QoS and SRTP.

QoS (Quality of Service) can help improve the network delay and network congestion by setting the priority of data sending.

SRTP (Secure Real-time Transport Protocol) is a Real-time Transport Protocol (RTP) internet protocol, intended to provide encryption, message authentication and integrity, and replay attack protection to the RTP data in both unicast and multicast applications.

1. Go to **Settings > Camera > Stream > Advanced Settings**.



2. Set Video/Audio DSCP.
Network can identify the priority of data transmission. The bigger the DSCP value is, the higher the priority is.
3. Enable SRTP if needed. When enabled, RTSP video data will be encrypted and you may be unable to play the video using third-party clients or NVRs. It is recommended that you use the device together with a VIGI NVR.
4. Click **Save**.

5

Events

This chapter guides you on how to configure the event settings and alarm actions when your cameras detect different types of events. VIGI camera monitors your pre-defined areas and you'll be automatically alerted to any suspicious activity in your home and office. This chapter includes the following sections:

- [Arming Schedule and Linkage Method](#)
- [Motion Detection](#)
- [Camera Tampering](#)
- [Scene Change Detection](#)
- [Line Crossing Detection](#)
- [Intrusion Detection](#)
- [Region Entering Detection](#)
- [Region Exiting Detection](#)
- [Loitering Detection](#)
- [Object Abandoned/Removal Detection](#)
- [Abnormal Sound Detection](#)
- [Vehicle Detection](#)
- [Human Detection](#)
- [LPR \(Only for some models\)](#)
- [Exception Event](#)
- [Smart Frame](#)
- [Light Alarm \(Only for some models\)](#)
- [Sound Alarm \(Only for some models\)](#)
- [Alarm Server](#)
- [Alarm Input](#)
- [Alarm Output](#)

♥ 5.1 Arming Schedule and Linkage Method

Arming schedule is a customized time period in which the device performs certain tasks. Linkage is the response to the detected certain incident or target during the scheduled time. This configuration is optional.

1. Go to **Settings > Event**, and locate Arming Schedule and Linkage Method in the related event interface.

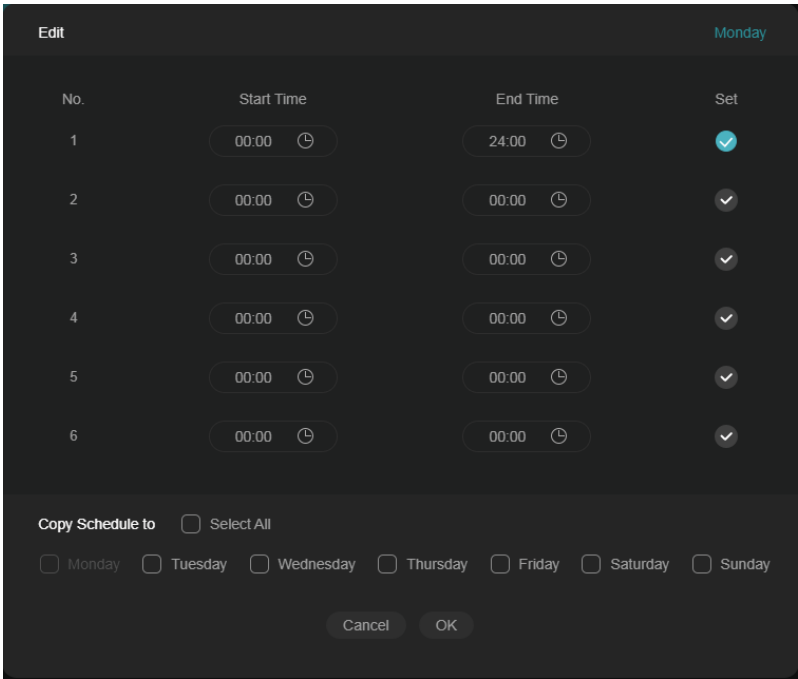


2. Drag the time bar to draw desired valid time.

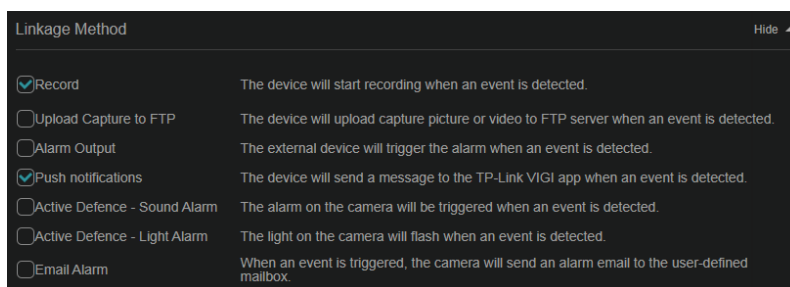
Note:

- Each cell represents one hour.
- The default setting is 24/7.
- Up to six time periods can be configured for a day.

3. Move your mouse to the right of a day's blocks and an edit button will appear. Click  and enter the pop-up window to finetune the Start Time and End Time (with an accuracy of a minute) and check Set. You may copy a schedule for a day to any other days. Click **OK** when you are done.



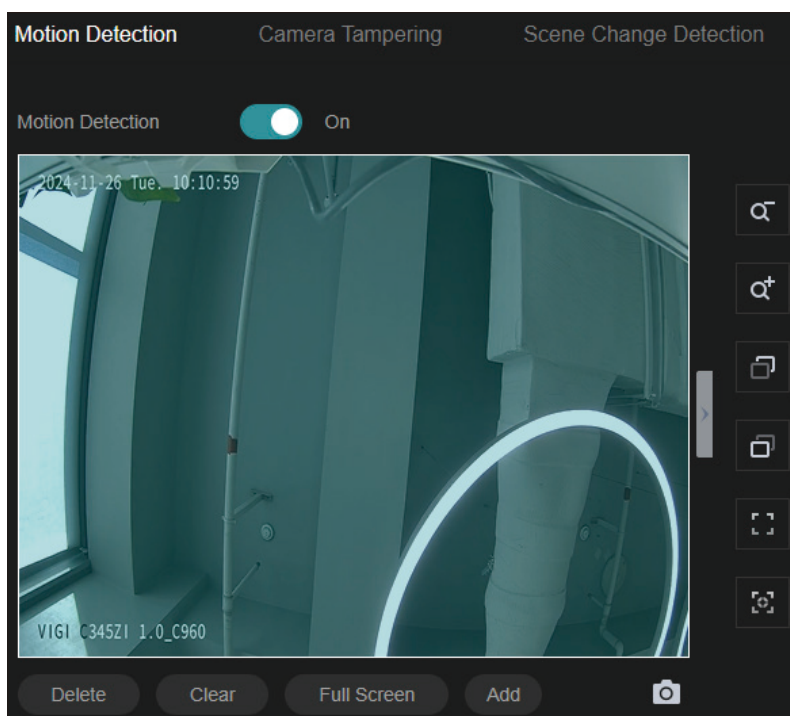
- Set linkage methods as needed.



♥ 5.2 Motion Detection

Motion detection allows cameras to detect the moving objects in the monitored area and triggers alarm actions. You can customize the motion detection settings, set the alarm schedule, and select the triggered actions. Follow the steps below to finish the configuration.

- Go to **Settings > Event > Basic Event > Motion Detection**. Click the toggle to turn on **Motion Detection**.



- Draw quadrilaterals for motion detection on the preview screen. The whole screen is selected by default. You may drag the corners to change the shape of the area and drag the whole area to move it. You may delete a selected area, clear all areas, expand the selected areas to the full screen, or add another area. Then configure the motion detection settings.

Note: You may customize up to four areas.

3. In Area Settings section, you may modify the following parameters:

Area Settings

Sensitivity

50

Object Width Filter

Min.

0

 %,events triggered by narrower object will be filtered.

Max.

100

 %,events triggered by wider object will be filtered.

Object Height Filter

Min.

0

 %,events triggered by shorter object will be filtered.

Max.

100

 %,events triggered by higher object will be filtered.

Object Classification:
Human/Vehicle

☒ Human Detection ☒ Vehicle Detection

An event will be triggered only when a specific object enters the area.

Object Classification
Confidence

Medium

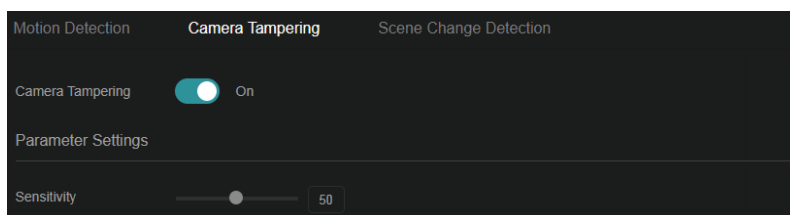
Sensitivity	Adjust the value of sensitivity. The higher the value is, the easier it is to trigger an alarm.
Object Width Filter	Set the minimum and maximum object width to filter the corresponding events.
Object Height Filter	Set the minimum and maximum object height to filter the corresponding events.
Object Classification: Human/Vehicle	Choose whether you want to detect humans only, vehicles only, or both. The function is available only for cameras which support human detection and vehicle detection.
Object Classification Confidence	Select the detection type from High, Medium, and Low. The function is available only for the cameras which support human detection and vehicle detection.

4. Refer to [Arming Schedule and Linkage Method](#) for settings if needed.
5. Click **Save**.

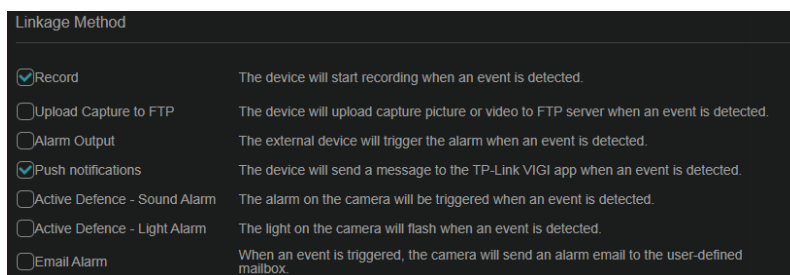
♥ 5.3 Camera Tampering

Camera tampering triggers alarm actions when an area of camera’s lens is purposely blocked, obstructed or vandalized. You can customize the video tampering settings, select the triggered actions and set the alarm schedule for cameras. Follow the steps below to finish the configuration.

1. Go to **Settings > Event > Basic Event > Camera Tampering**.



2. Enable **Camera Tampering**.
3. Set the sensitivity of video tampering. A higher value can trigger the alarm actions more easily.
4. Set the Linkage Method. Note that the options vary by model.

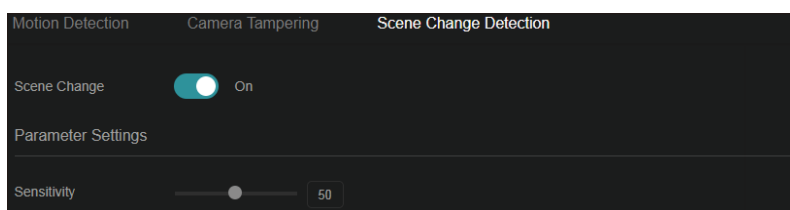


5. Refer to [Arming Schedule and Linkage Method](#) for settings if needed.
6. Click **Save**.

♥ 5.4 Scene Change Detection

Scene change detection function detects the change of video security environment affected by the external factors, such as intentional rotation of the camera. Certain actions can be taken when the alarm is triggered. Follow the steps below to finish the configuration.

1. Go to **Settings > Event > Basic Event > Scene Change Detection**.
2. Click the toggle to turn on **Scene Change**.



3. Specify **Sensitivity**. The higher the value is, the more easily the change of the scene can be detected.

4. Refer to [Arming Schedule and Linkage Method](#) for settings if needed.

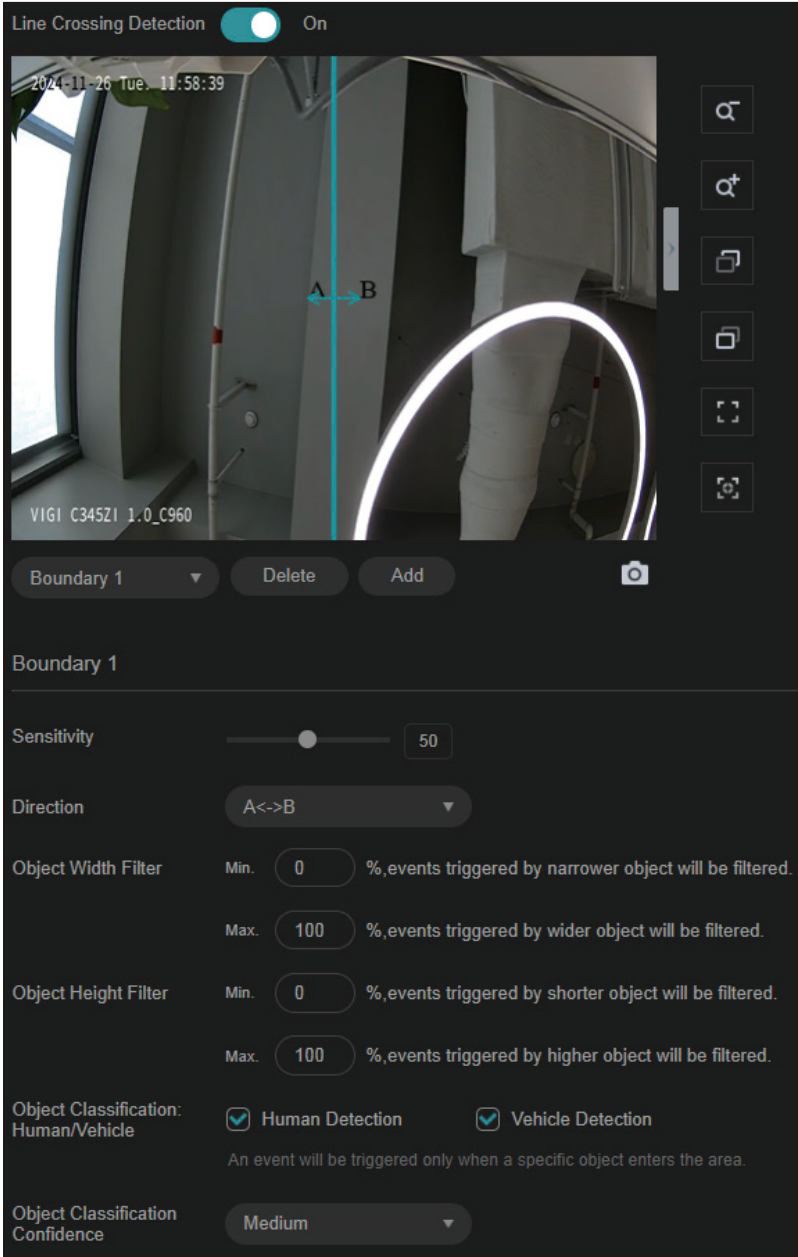
Linkage Method	
☒ Record	The device will start recording when an event is detected.
☐ Upload Capture to FTP	The device will upload capture picture or video to FTP server when an event is detected.
☐ Alarm Output	The external device will trigger the alarm when an event is detected.
☒ Push notifications	The device will send a message to the TP-Link VIGI app when an event is detected.
☐ Active Defence - Sound Alarm	The alarm on the camera will be triggered when an event is detected.
☐ Active Defence - Light Alarm	The light on the camera will flash when an event is detected.
☐ Email Alarm	When an event is triggered, the camera will send an alarm email to the user-defined mailbox.

5. Click **Save**.

♥ 5.5 Line Crossing Detection

Line crossing detection triggers alarm actions when cameras detect that moving objects cross a customized virtual line. Follow the steps below to finish the configuration.

1. Go to **Settings > Event > Smart Event**, select **Line Crossing Detection** from the drop-down list, and click the toggle to turn it on.



2. Draw lines on the preview screen. Select the line and configure its settings.

Note: You can draw up to four lines and need to configure settings for each line.

Sensitivity	The higher the value is, the easier it is to detect a target that crosses the line.
--------------------	---

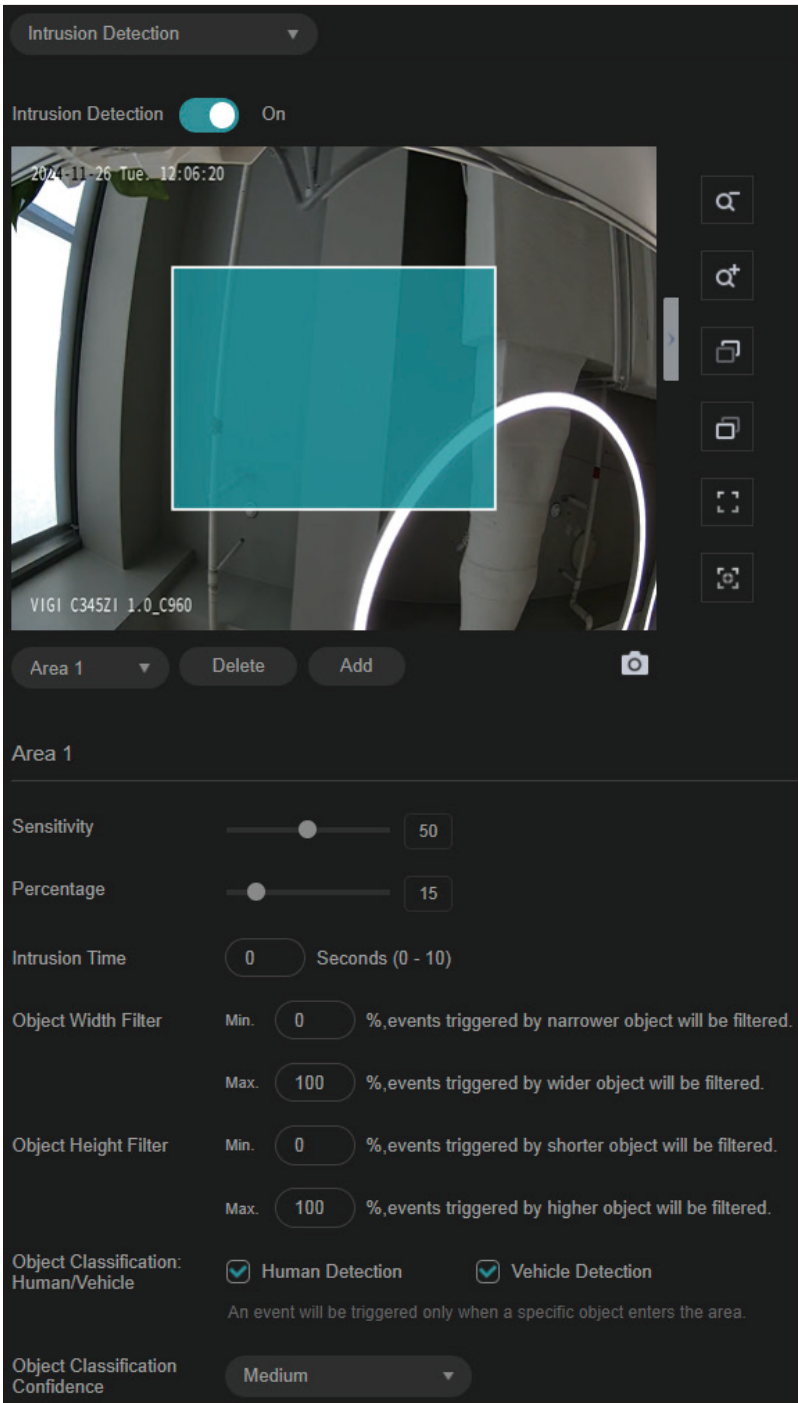
Direction	Choose the direction from which the target crosses the line. A->B: Only the target crossing the configured line from the A side to the B side can be detected. B->A: Only the target crossing the configured line from the B side to the A side can be detected. A<->B: The target going across the line from both sides can be detected and alarms are triggered.
Object Width Filter	Set the minimum and maximum width for the target to be detected. Only targets with sizes between the maximum and minimum value will be detected.
Object Height Filter	Set the minimum and maximum height for the target to be detected. Only targets with sizes between the maximum and minimum value will be detected.
Object Classification: Human/Vehicle	Choose whether you want to detect humans only, vehicles only, or both. The function is available only for cameras which support human detection and vehicle detection.
Object Classification Confidence	Select the detection type from High, Medium, and Low. The function is available only for the cameras which support human detection and vehicle detection.

3. Refer to [Arming Schedule and Linkage Method](#) for settings if needed.
4. Click **Save**.

♥ 5.6 Intrusion Detection

Intrusion detection is used to detect objects entering and loitering in a predefined virtual region. Once it happens, the camera will take linkage actions. Follow the steps below to finish the configuration.

1. Go to **Settings > Event > Smart Event**, select **Intrusion Detection** from the drop-down list, and enable it.



2. Draw intrusion areas on the preview screen. Select the area and configure the settings.

Note: You may draw up to four areas and need to configure settings for each area.

Sensitivity	The higher the value is, the more easily an intrusion action can be detected.
Percentage	Set the percentage of intrusion detection. When an object takes up the specific percentage of the area, the alarm actions will be triggered.

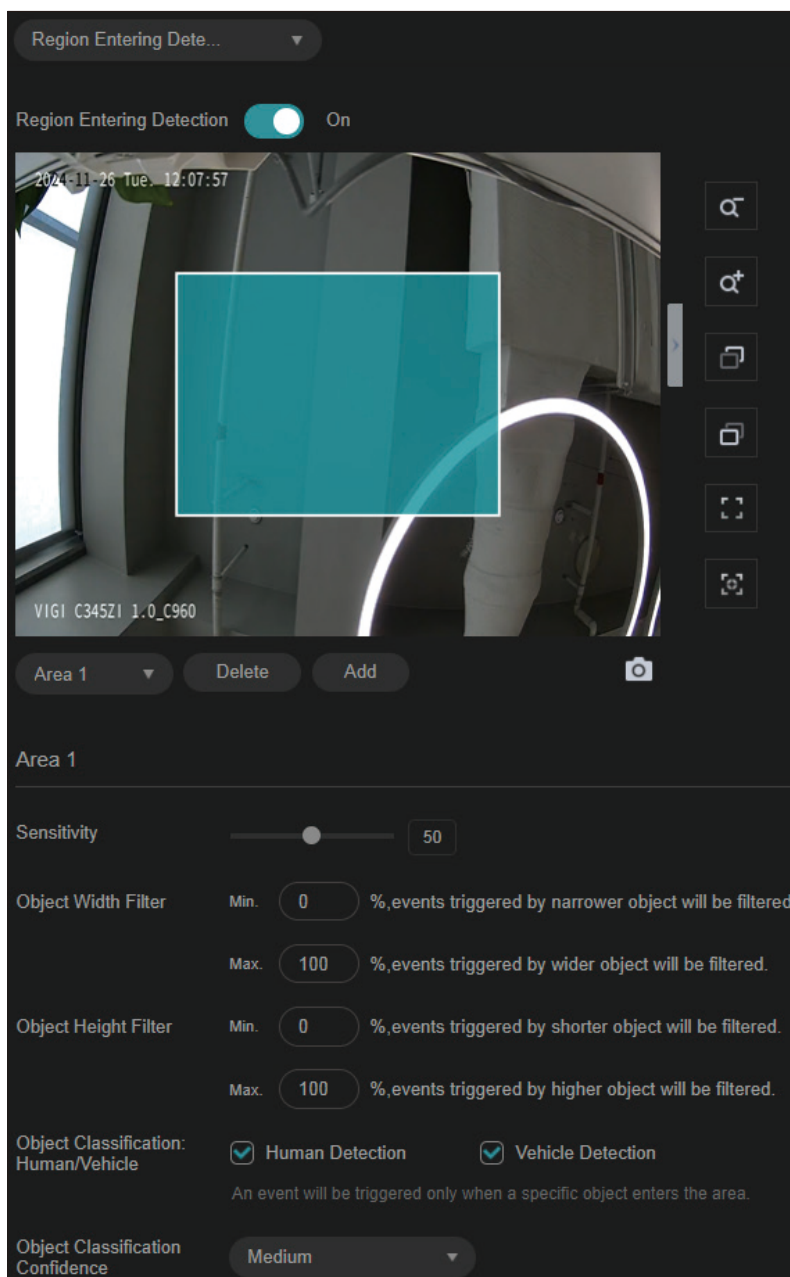
Intrusion Time	Intrusion time stands for the threshold a target loiters in the area. Any stay longer than the intrusion time will trigger the linkage action.
Object Width Filter	Set the minimum and maximum width for the target to be detected. Only targets with sizes between the maximum and minimum value will be detected.
Object Height Filter	Set the minimum and maximum height for the target to be detected. Only targets with sizes between the maximum and minimum value will be detected.
Object Classification: Human/Vehicle	Choose whether you want to detect humans only, vehicles only, or both. The function is available only for cameras which support human detection and vehicle detection.
Object Classification Confidence	Select the detection type from High, Medium, and Low. The function is available only for the cameras which support human detection and vehicle detection.

3. Refer to [Arming Schedule and Linkage Method](#) for settings if needed.
4. Click **Save**.

♥ 5.7 Region Entering Detection

Region entering detection triggers alarm actions when cameras detect moving objects enter the specified regions. You can customize the region settings, select the triggered actions and set the alarm schedule. Follow the steps below to finish the configuration.

1. Go to **Settings > Event > Smart Event**. Select **Region Entering Detection** from the drop-down list and enable it.



2. Draw shapes for area entrance detection on the preview screen.

Note: You may draw up to four areas and need to configure settings for each area.

Sensitivity

Adjust the value of sensitivity. A higher value can trigger alarm actions more easily.

Object Width Filter

Set the minimum and maximum width for the target to be detected. Only targets with sizes between the maximum and minimum value will be detected.

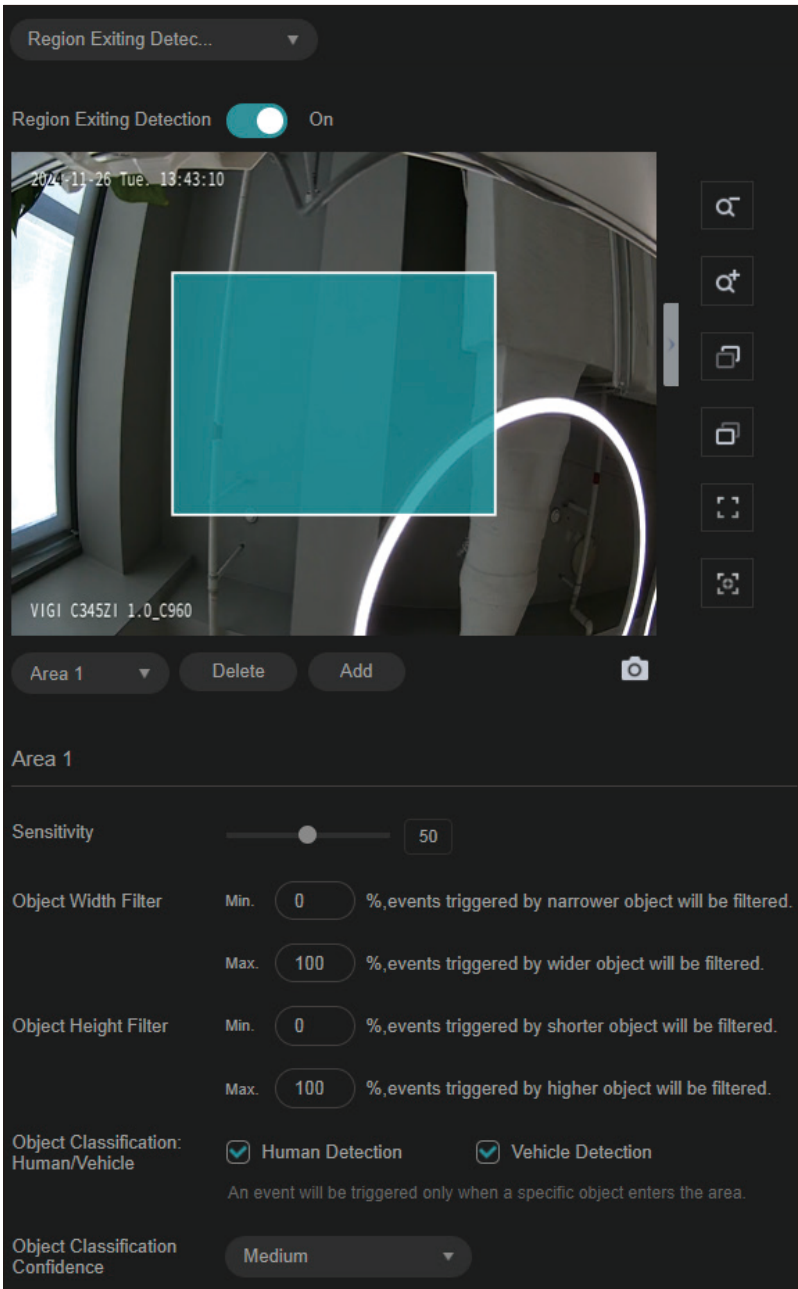
Object Height Filter	Set the minimum and maximum height for the target to be detected. Only targets with sizes between the maximum and minimum value will be detected.
Object Classification: Human/Vehicle	Choose whether you want to detect humans only, vehicles only, or both. The function is available only for cameras which support human detection and vehicle detection.
Object Classification Confidence	Select the detection type from High, Medium, and Low. The function is available only for the cameras which support human detection and vehicle detection.

3. Refer to [Arming Schedule and Linkage Method](#) for settings if needed.
4. Click **Save**.

♥ 5.8 Region Exiting Detection

Region exiting detection triggers alarm actions when cameras detect moving objects exit the specified regions. You can customize the region settings, select the triggered actions and set the alarm schedule. Follow the steps below to finish the configuration.

1. Go to **Settings > Event > Smart Event**, select **Region Exiting Detection** from the drop-down list, and enable it.



2. Draw shapes for area exiting detection on the preview screen.

Note: You may draw up to four areas and need to configure settings for each area.

Sensitivity	Adjust the value of sensitivity. A higher value can trigger alarm actions more easily.
Object Width Filter	Set the minimum and maximum width for the target to be detected. Only targets with sizes between the maximum and minimum value will be detected.

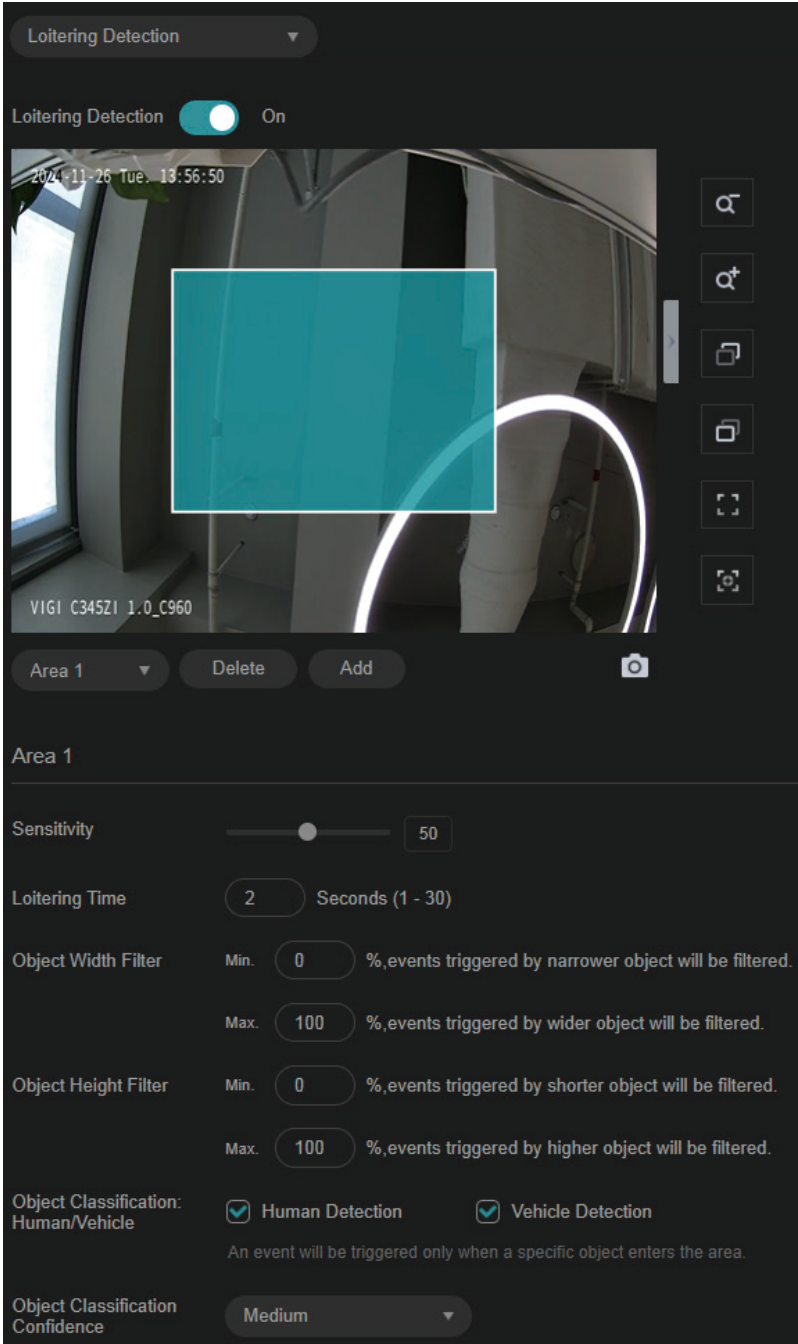
Object Height Filter	Set the minimum and maximum height for the target to be detected. Only targets with sizes between the maximum and minimum value will be detected.
Object Classification: Human/Vehicle	Choose whether you want to detect humans only, vehicles only, or both. The function is available only for cameras which support human detection and vehicle detection.
Object Classification Confidence	Select the detection type from High, Medium, and Low. The function is available only for the cameras which support human detection and vehicle detection.

3. Refer to [Arming Schedule and Linkage Method](#) for settings if needed.
4. Click **Save**.

♥ 5.9 Loitering Detection

Loitering detection triggers alarm actions when a moving object remains in a predefined area for a specific amount of time. You can customize the area settings, select the triggered actions and set the alarm schedule. Follow the steps below to finish the configuration.

1. Go to **Settings > Event > Smart Event**, select **Loitering Detection** from the drop-down list, and enable it



2. Draw shapes for area exiting detection on the preview screen.

Note: You may draw up to four areas and need to configure settings for each area.

Sensitivity	Adjust the value of sensitivity. A higher value can trigger alarm actions more easily.
Loitering Time	It stands for the threshold for the time of the object loitering in the region. If the time that one object stays exceeds the threshold, the alarm is triggered.

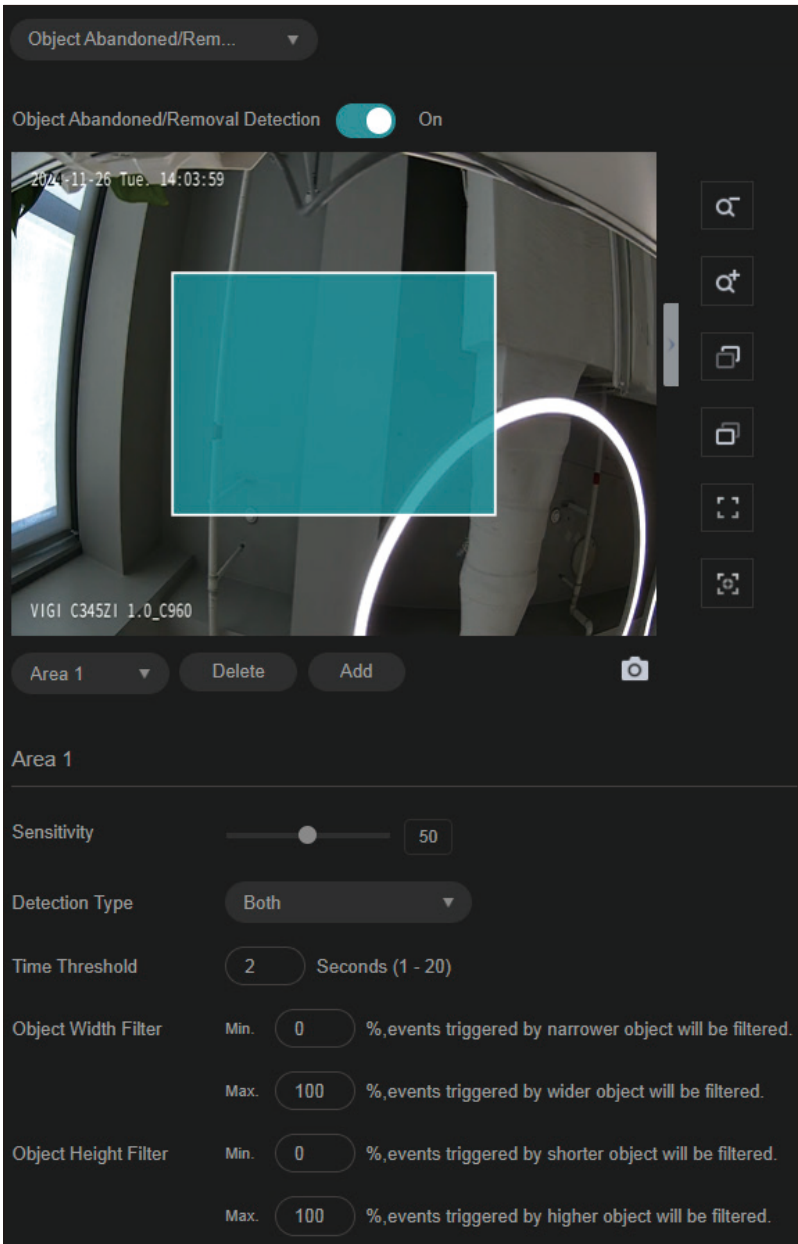
Object Width Filter	Set the minimum and maximum width for the target to be detected. Only targets with sizes between the maximum and minimum value will be detected.
Object Height Filter	Set the minimum and maximum height for the target to be detected. Only targets with sizes between the maximum and minimum value will be detected.
Object Classification: Human/Vehicle	Choose whether you want to detect humans only, vehicles only, or both. The function is available only for cameras which support human detection and vehicle detection.
Object Classification Confidence	Select the detection type from High, Medium, and Low. The function is available only for the cameras which support human detection and vehicle detection.

3. Refer to [Arming Schedule and Linkage Method](#) for settings if needed.
4. Click **Save**.

♥ 5. 10 Object Abandoned/Removal Detection

Object abandoned/removal detection triggers alarm actions when cameras detect objects are left behind or taken away in the specified areas. You can customize the area settings, select the triggered actions and set the alarm schedule. Follow the steps below to finish the configuration.

1. Go to **Settings > Event > Smart Event**, select **Object Abandoned/Removal Detection** from the drop-down list, and enable it.



2. Draw shapes for area exiting detection on the preview screen.

Note: You may draw up to four areas and need to configure settings for each area.

Sensitivity	Adjust the value of sensitivity. A higher value can trigger alarm actions more easily.
Detection Type	Select the detection type.
Time Threshold	Set how long the object is left behind or taken away to trigger the event.
Object Width Filter	Set the minimum and maximum width for the target to be detected. Only targets with sizes between the maximum and minimum value will be detected.

Object Height Filter

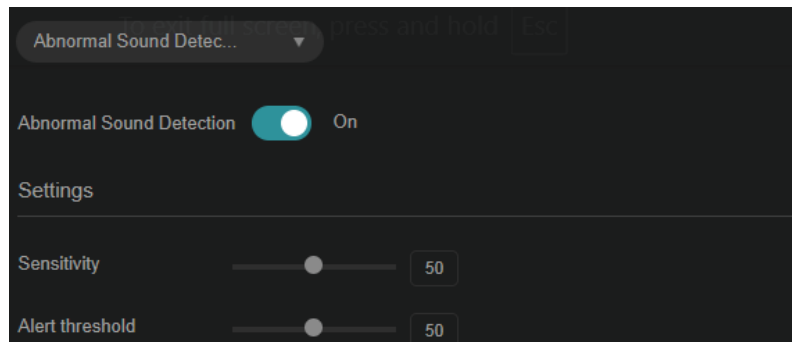
Set the minimum and maximum height for the target to be detected. Only targets with sizes between the maximum and minimum value will be detected.

3. Refer to [Arming Schedule and Linkage Method](#) for settings if needed.
4. Click **Save**.

♥ 5.11 Abnormal Sound Detection

Abnormal sound detection identifies uncommon or irregular sounds and triggers alarm actions. You can select the triggered actions and set the alarm schedule. Follow the steps below to finish the configuration.

1. Go to **Settings > Event > Smart Event**, select **Abnormal Sound Detection** from the drop-down list, and click the toggle to turn it on.

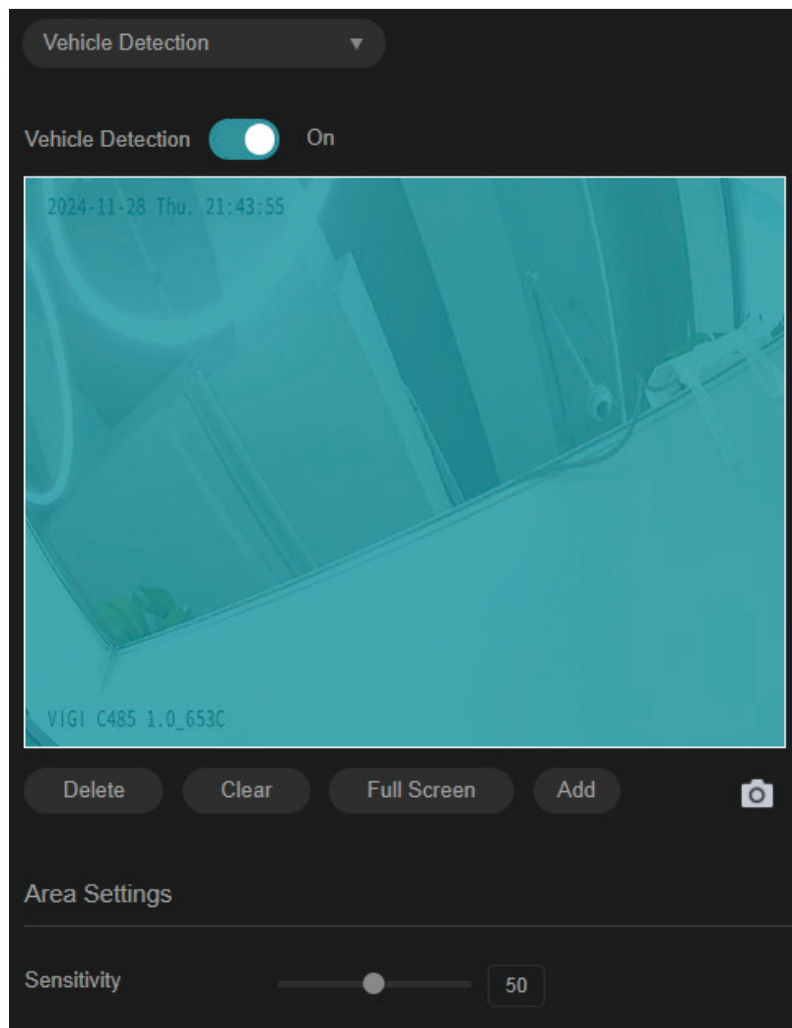


2. Adjust the value of sensitivity and alert threshold. The higher the sensitivity and the lower the threshold, the easier it gets to trigger linkage methods.
3. Refer to [Arming Schedule and Linkage Method](#) for settings if needed.
4. Click **Save**.

♥ 5.12 Vehicle Detection

Vehicle detection triggers alarm actions when cameras detect vehicles are moving in the specified areas. You can customize the area settings, select the triggered actions and set the alarm schedule. Follow the steps below to finish the configuration.

1. Go to **Settings > Event > Smart Event**, select **Vehicle Detection** from the drop-down list, and click the toggle to turn it on.

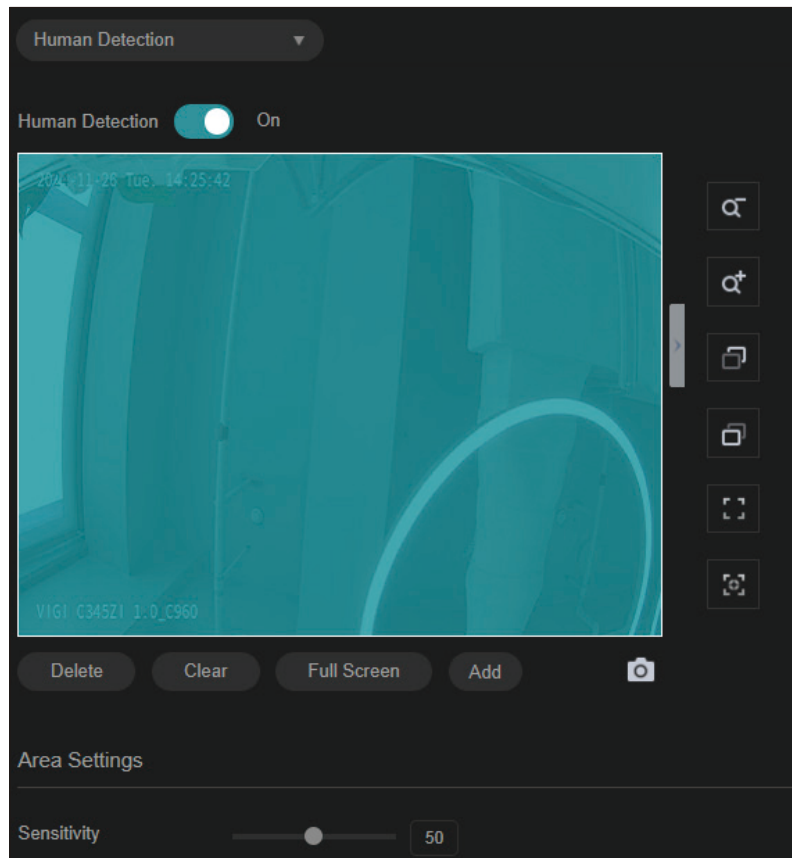


2. Draw shapes for area exiting detection on the preview screen.
Note: You may draw up to four areas.
3. Adjust the value of sensitivity. A higher value can trigger alarm actions more easily.
4. Refer to [Arming Schedule and Linkage Method](#) for settings if needed.
5. Click **Save**.

♥ 5.13 Human Detection

Human detection triggers alarm actions when cameras detect persons are moving in the specified areas. You can customize the area settings, select the triggered actions and set the alarm schedule. Follow the steps below to finish the configuration.

1. Go to **Settings > Event > Smart Event**, select **Human Detection** from the drop-down list, and click the toggle to turn it on.

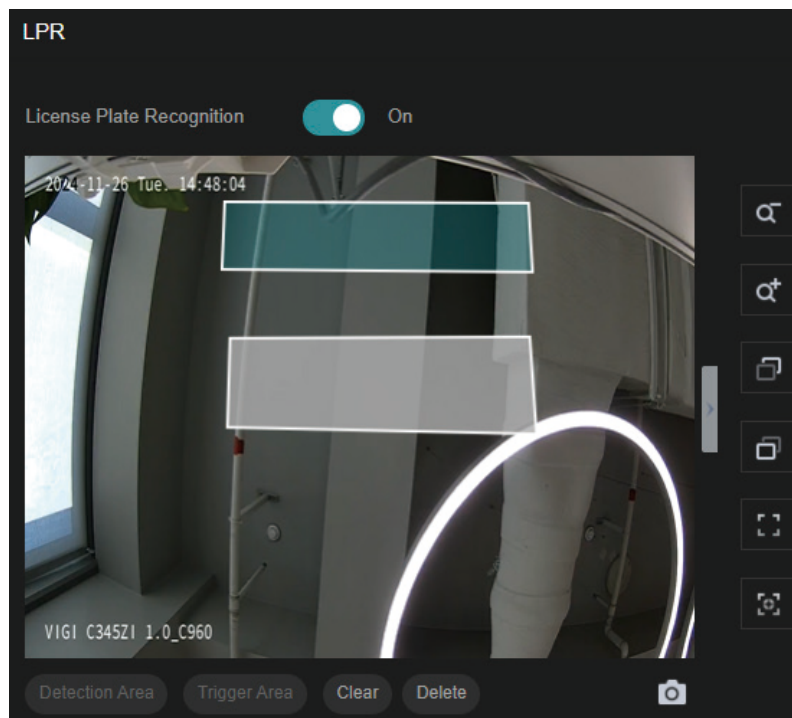


2. Adjust the value of sensitivity. A higher value can trigger alarm actions more easily.
3. Refer to [Arming Schedule and Linkage Method](#) for settings if needed.
4. Click **Save**.

♥ 5.14 LPR (Only for some models)

LPR, or license plate recognition, captures and analyzes vehicle license plates in real time. Follow the steps below to finish the configuration.

1. Go to **Settings > Event > LPR** and click the toggle to turn it on.

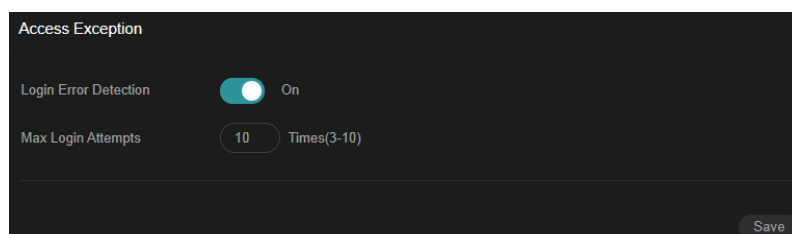


2. Define detection area (marked by blue) and trigger area (marked by white) by drawing shapes. Detection area specifies where you wish to detect motion; trigger area specifies where you wish to trigger alarm responses.
3. Click **Save**.

♥ 5.15 Exception Event

Set the maximum login attempts to protect the security of your camera. The camera will be locked for 30 minutes if you enter the wrong password more than the specified attempts. Follow the steps below to finish the configuration.

1. Go to **Settings > Event > Exception Event**.



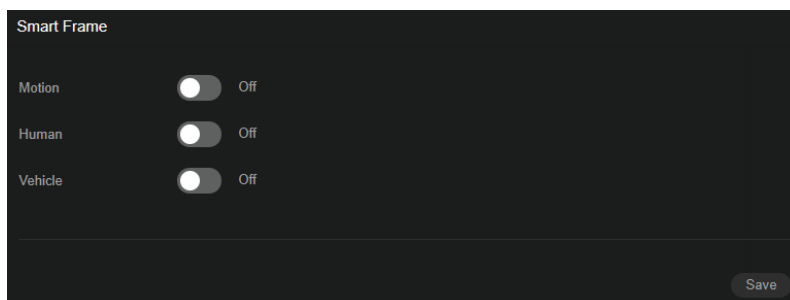
2. Enable **Login Error Detection** to limit the login attempts:
3. Set the maximum login attempts. The number should be between 3 and 10
4. Click **Save**.

Note: To unlock the camera and try to log in again, power the camera off and then power it on.

♥ 5.16 Smart Frame

Smart frame is an AI-powered function that can precisely mark and capture detected movement, people, or vehicle objects on the screen.

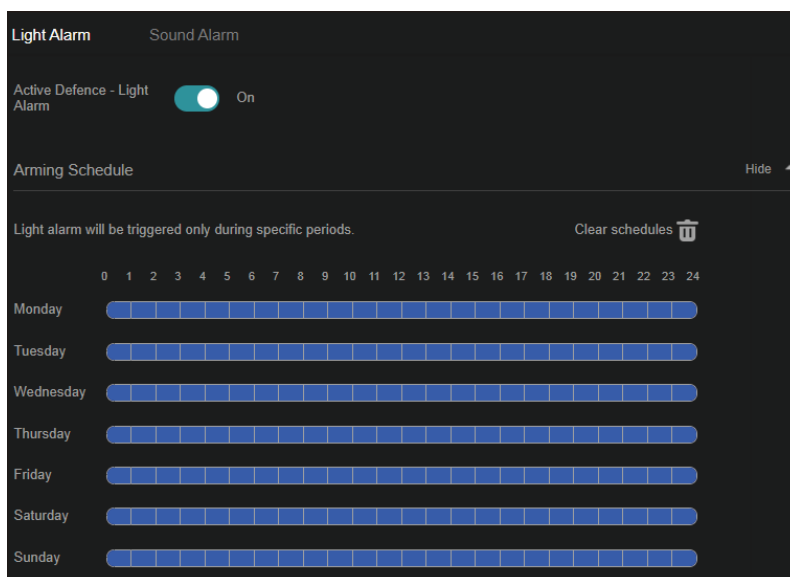
Click the toggles to specify the type of detection: motion, human, or vehicle. You may enable more than one types. Click **Save**.



♥ 5.17 Light Alarm (Only for some models)

With Light Alarm enabled, the light on the camera will flash when an event is detected. Follow the steps below to finish the configuration.

1. Go to **Settings > Event > Active Defence > Light Alarm**.
2. Enable **Active Defence - Light Alarm**.

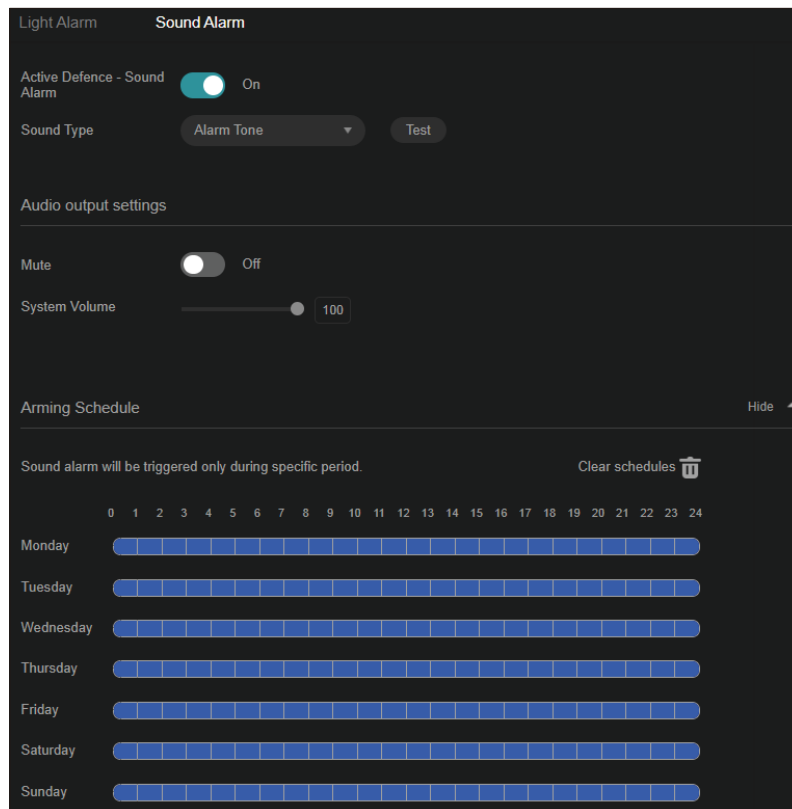


3. Refer to [Arming Schedule and Linkage Method](#) for settings if needed.
4. Click **Save**.

♥ 5.18 Sound Alarm (Only for some models)

Enable Sound Alarm, then the alarm on the camera will be triggered when an event is detected.

1. Go to **Settings > Event > Active Defence > Sound Alarm**.
2. Enable **Active Defence - Sound Alarm**, select the **Alarm Type**, and click **Test**.



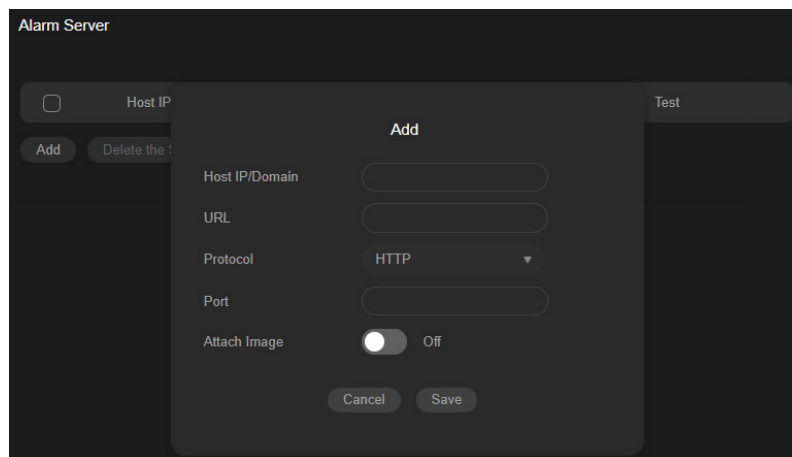
3. Under Audio Output Settings, click the toggle to mute or drag the slide bar to set the system volume.
4. Refer to [Arming Schedule and Linkage Method](#) for settings if needed.
5. Click **Save**.

♥ 5.19 Alarm Server

The device can send alarms to destination IP address or host name through HTTP, HTTPS, or ISUP protocol. The destination IP address or host name should support HTTP, HTTPS, or ISUP data transmission.

1. Go to **Settings > Event > Alarm Server**.

2. Click **Add**.



3. Enter Host IP/Domain, URL, and Port, and select Protocol. Enable Attach Image if needed.

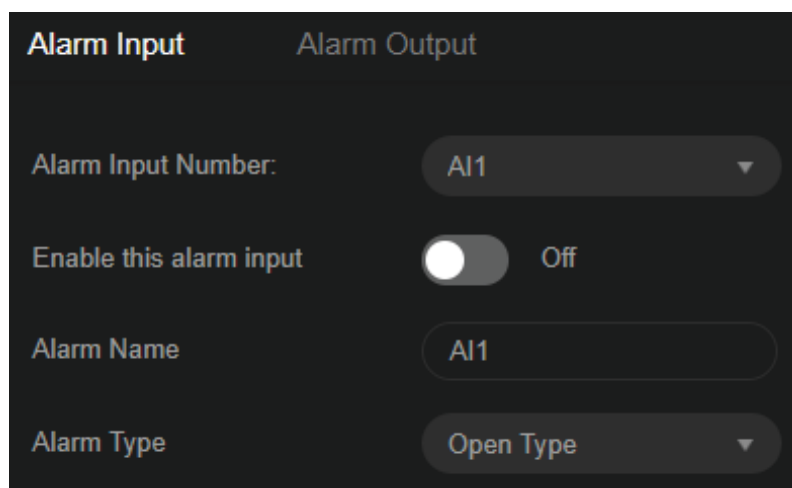
Note: HTTP and HTTPS are selectable. It is recommended to use HTTPS, as it encrypts the data transmission during communication.

4. Click **Save**.

♥ 5.20 Alarm Input

Alarm signal from the external device triggers the corresponding actions of the current device. Before you start, make sure the external alarm device is connected. See <https://www.tp-link.com/hk/support/faq/4227/> for cable connection.

1. Go to **Settings > Event > Alarm Device > Alarm Input**.



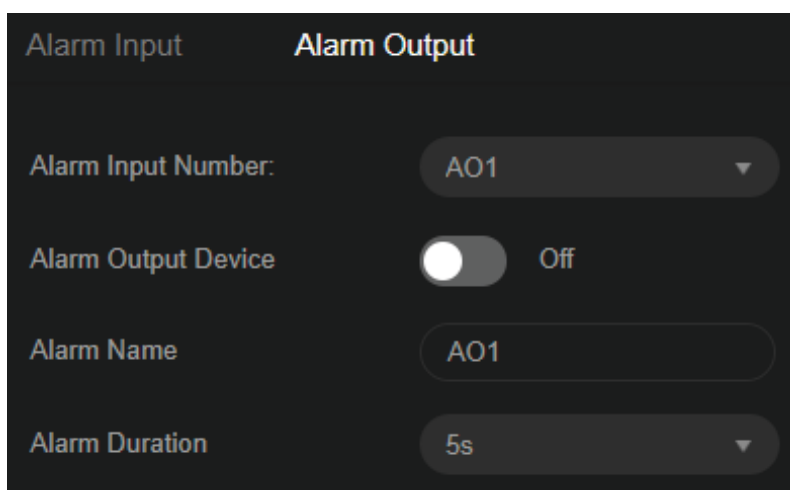
2. Select an Alarm Input Number.
3. Check Enable This Alarm Input.
4. Edit the Alarm Name.

5. Select the Alarm Type from the dropdown list. Open Type means that under normal conditions, the circuit is open and no current passes through the device. When the alarm is triggered, the current passes through the device and the device alarms. Close Type means that normally the circuit is closed, and the device will alarm in case of a circuit fault or alarm trigger.
6. Refer to Set Arming Schedule for setting scheduled time. Refer to Linkage Method Settings for setting linkage method.
7. Click **Save**.

♥ 5.21 Alarm Output

If the device has been connected to an alarm output device, and the alarm output No. has been configured, the device sends alarm information to the connected alarm output device when an alarm is triggered. Before you start, make sure the external alarm device is connected. See <https://www.tp-link.com/hk/support/faq/4227/> for cable connection.

1. Go to **Settings > Event > Alarm Device > Alarm Output**.



Alarm Input	Alarm Output
Alarm Input Number:	AO1
Alarm Output Device	☐ Off
Alarm Name	AO1
Alarm Duration	5s

2. Select the Alarm Output Number according to the alarm interface connected to the external alarm.
3. Enable the Alarm Output Device.
4. Edit the Alarm Name.
5. Select the Alarm Duration from the dropdown list.
6. Click **Save**.

6

Smart Settings

This chapter guides you on how to configure settings about human or vehicle analysis on your camera. Some features require an NVR that has Smart Analysis compatibility. This chapter includes the following sections:

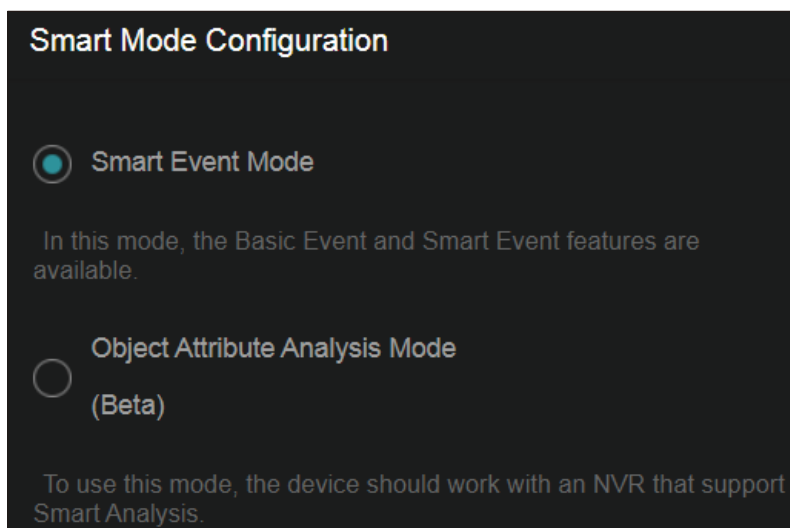
- [Configuration](#)
- [Object Attribute Analysis](#)

♥ 6.1 Configuration

In the Configuration section, you may choose between the Smart Event Mode and Object Attribute Analysis Mode. The former enables the basic event and smart event features, while the latter can capture the human face or vehicle detected in the surveillance video and send it to the NVR for analysis and processing.

Please be advised that the Object Attribute Analysis Mode requires an NVR that supports the feature.

1. Go to **Settings > Smart > Configuration**.

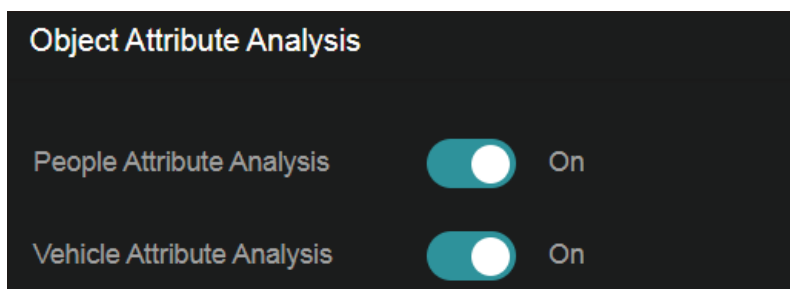


2. Select either Smart Event Mode or Object Attribute Analysis Mode. Note that only when Object Attribute Analysis Mode is enabled can you proceed with the [Object Attribute Analysis](#) feature.
3. Click **Save**.

♥ 6.2 Object Attribute Analysis

In Object Attribute Analysis, you can choose whether to send human or vehicle images to the NVR for analysis.

1. Go to **Settings > Smart > Object Attribute Analysis**.



2. Enable People Attribute Analysis and/or Vehicle Attribute Analysis.
3. Click **Save**.



Recording and Storage

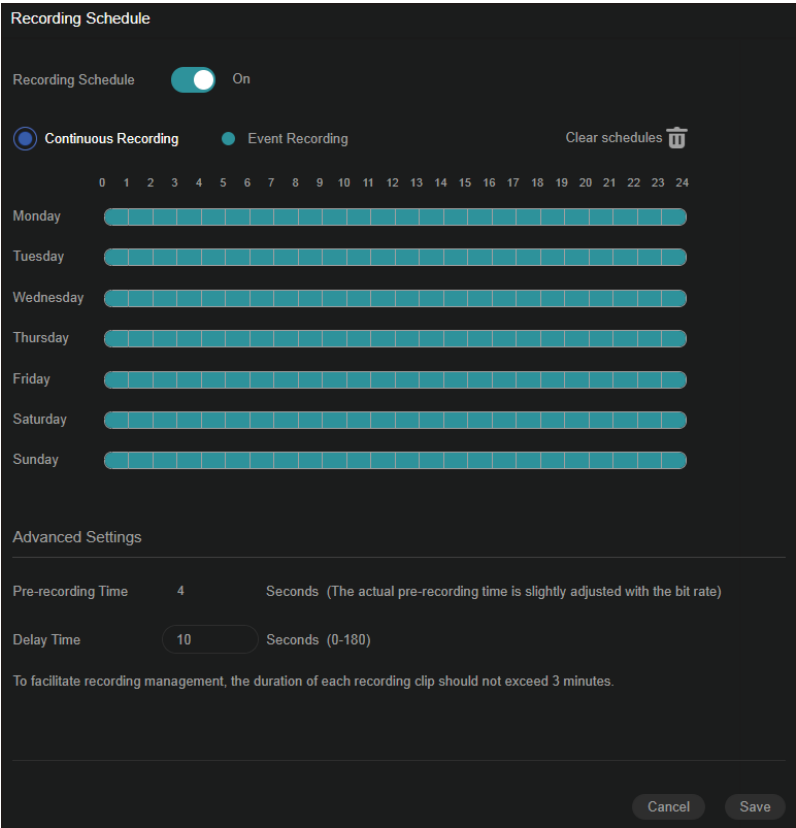
This chapter guides you on how to view and configure recording and storage settings on your camera. VIGI camera allows you to set your own recording schedules and parameters. This chapter includes the following sections:

- [Recording Schedule](#)
- [Storage Management](#)

♥ 7.1 Recording Schedule

Recording schedule section provides convenience and flexibility for the daily monitoring of your camera. You can customize the recording schedules. You can set different schedules for each day. In Advanced Settings page, you can set the pre-recording time and delay time for recording.

- 1. Go to **Settings > Storage > Recording Schedule**.



- 2. Enable **Recording Schedule**, select Continuous Recording or Event Recording, then select the time period.

Continuous Recording	The camera will record continuously.
Event Recording	The camera will record when an event is detected.
Pre-recording Time	The time is set for cameras to record before the scheduled time or event. For example, the schedule for continuous recording starts at 10:00. If you set the pre-recording time as 5 seconds, the camera starts to record at 9:59:55.
Delay Time	The time is set for cameras to record after the scheduled time or event. For example, if you set the post-record time as 5 seconds, it records till 11:00:05 as motion detection ends at 11:00.

- 3. Move your mouse to the right of a day's blocks and an edit button will appear. Click  and enter the pop-up window to finetune the Start Time and End Time (with an accuracy of a minute). Select

Event Recording or Continuous Recording for each time period and check Set. You may copy a schedule for a day to any other days. Click **OK** when you are done.

No.	Start Time	End Time	Type	Set
1	00:00	24:00	Event Recording	☒
2	00:00	00:00	Continuous Recording	☒
3	00:00	00:00	Continuous Recording	☒
4	00:00	00:00	Continuous Recording	☒
5	00:00	00:00	Continuous Recording	☒
6	00:00	00:00	Continuous Recording	☒

Copy Schedule to ☐ Select All

☐ Monday ☐ Tuesday ☐ Wednesday ☐ Thursday ☐ Friday ☐ Saturday ☐ Sunday

Cancel OK

4. Click **Save**.

♥ 7.2 Storage Management

In Storage Management, you can view the parameters and configure the properties and disk group of SD card. You can also enable the camera to overwrite the earlier recording files when the SD card is full.

1. Go to **Settings > Storage > Storage Management**.

Disk Number	Type	Attributes	Capacity/Remaining	Status
1	Local	Read and Write	237.40GB/236.60GB...	Normal Format

Advanced Settings

Record Stream: Main Stream

Circular write of Disk: ☒ On

Record Audio: ☒ On

Recording Expiration: ☐ Off

Expired Time: 7 Day(s)

Save

2. Click **Format** to initialize the memory card.

When the Status of memory card turns from Uninitialized to Normal, the memory card is ready for use.

3. Specify advanced settings.

Record Streams	Select the stream type for recording.
	Main Stream stands for the best stream performance the device supports. It usually offers the best resolution and frame rate the device can do. But high resolution and frame rate usually means larger storage space and higher bandwidth requirements in transmission. Substream usually offers comparatively low resolution options, which consumes less bandwidth
Circular Write of Disk	Enable Circular Write of Disk to overwrite the video records when the storage space is full. Otherwise the camera cannot record new videos.
Record Audio	Enable to record audio and video simultaneously.
Recording Expiration	Enable Recording Expiration to delete recordings when they exceed the expired time. Note that once the recordings are deleted, they cannot be recovered.
Expired Time	Set the time when recordings will be automatically deleted.

5. Click **Save**.

8

Network Management

With proper network configurations, you can connect your camera to the internet, build up mapping between internal and external ports. This chapter contains the following sections:

- [Internet Connection](#)
- [Port](#)
- [Platform Access](#)
- [Email](#)
- [Port Forwarding](#)
- [IP Restriction](#)
- [Multicast](#)
- [Server](#)
- [Upload](#)
- [ONVIF](#)
- [SNMP](#)
- [DDNS](#)

♥ 8.1 Internet Connection

In Internet Connection, you can view the connection status and configure the camera to obtain a dynamic or static IP address.

Follow the steps below to configure the network settings.

1. Go to **Settings > Network Settings > Connect**.

Internet Connection

Status

No Internet

Basic Settings

IPv6 Enable

Off

IPv4 Mode

Static IP

IPv4 Address

192.168.0.60

IPv4 Subnet Mask

255.255.255.0

IPv4 Gateway

192.168.0.1

Preferred DNS

8.8.8.8

Alternative DNS

8.8.4.4

Advanced Settings

MTU

1480

Adaptive IP

Off

Save

Status	Displays the current internet status.
IPv6 Enable	Enable to configure IPv6 settings. IPv4 and IPv6 are both supported. Both versions can be configured simultaneously without conflicting to each other. Three IPv6 modes are available. Router Advertisement: The IPv6 address is generated by combining the route advertisement and the device Mac address. Note that this mode requires the support from the router that the device is connected to. DHCP: The IPv6 address is assigned by the server, router, or gateway. Manual: Input IPv6 Address, IPv6 Subnet Mask, and IPv6 Gateway. Consult the network administrator for required information.

IPv4 Mode	Configure the camera to obtain a dynamic or static IP address.
IPv4 Address	Specify an IP address for the camera. The IP address should be in the same segment as the gateway; otherwise, the camera cannot connect to the internet.
IPv4 Subnet Mask	Enter the subnet mask.
IPv4 Gateway	Enter the IP address of the gateway device to which the data packets will be sent. This IP address should be in the same segment as the camera's IP address.
Preferred / Alternative DNS	Enter the IP address of the DNS server.
MTU	Specify MTU (Maximum Transmission Unit) to decide the largest size of data unit that can be transmitted in the network. A larger unit can improve the efficiency with more data in each packet, but it may increase the network delay because it needs more time to transmit. Therefore, if you have no special needs, it is recommended to keep the default value.
Adaptive IP	Enable this option if you want to set the camera's IP to change according to the network topology.

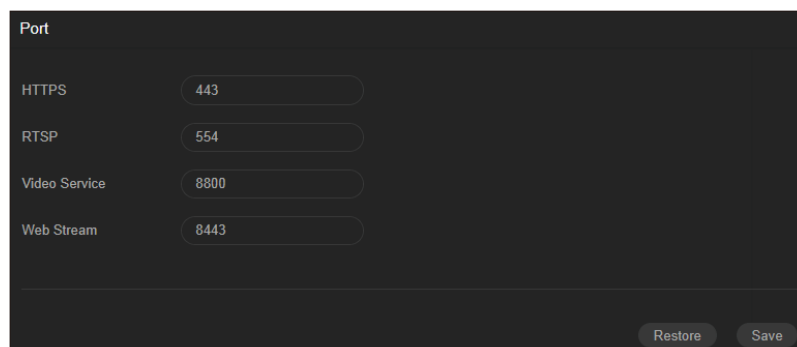
Note: The cameras should be in the same segment with the NVR, so that the NVR can discover and manage them.

2. Click **Save**.

♥ 8.2 Port

In Port, you can configure the HTTPS port and service port of devices that can be used to access the camera through the network. When managing and monitoring the devices via VIGI Security Manager or the VIGI app, the ports configured here are used for communications of corresponding protocols.

1. Go to **Settings > Network Settings > Port**.



The screenshot shows the 'Port' configuration page with a dark background. It contains four rows of settings, each with a label on the left and a text input field on the right:

- HTTPS**: 443
- RTSP**: 554
- Video Service**: 8800
- Web Stream**: 8443

At the bottom right of the interface, there are two buttons: 'Restore' and 'Save'.

2. Specify HTTPS port and service port.

HTTPS	Specify a port for HTTPS protocol.
RTSP	Specify a port for RTSP (Real Time Streaming Protocol) protocol. RTSP is an application layer protocol for connecting, transferring, and streaming media data in real time from IP cameras connected to the network. rtsp://username:password@ip:port/streamNo ip – IP of the Camera. port – Default port is 554. This can be skipped. streamNo – Stream number. Stream1 refers to the main stream; stream2 refers to the substream. Example URL: rtsp://admin:123456@192.168.1.60:554/stream1 This will display the main stream of the camera, where admin is the user name and 12345 is the password.
Video Service	Specify a port for protocols of video services.
Web Stream	Specify a port to access the camera's live streaming web interface.

3. Click **Save**.

♥ 8.3 Platform Access

VIGI VMS is an application that streamlines batch device management via a single interface, integrating real-time video monitoring, an alarm center, and advanced features for effortless, robust security. You can access VIGI VMS with the Platform Access enabled.

1. Enable Access to VIGI VMS.

Platform Access

Access to VIGI VMS

☐

Enabling VMS platform access will disable the connection to TP-Link Cloud.

Connection Status

Disconnected

IP Address

Port

10123

Save

2. Enter the IP Address and the Port number.

3. Click **Save**.

♥ 8.4 Email

When the email is configured and enabled as a linkage method, the device sends an email notification to all designated recipients if an alarm event is detected.

Email Settings

Sender

Sender Email

SMTP Server

SMTP Port

☐ SSL/TLS

☐ Attached Image

Interval

☐ Authentication

Username

Password

☐	No.	Recipient	Recipient Email		
☐	1			Test	Edit
☐	2			Test	Edit
☐	3			Test	Edit

1. Input the sender's email information, including the Sender's name, Sender Email, SMTP Server, and SMTP Port.
2. Enable SSL/TLS if needed and emails will be sent after encrypted.
3. Check Attached Image to receive notification with alarm pictures. The notification email has a certain number of attached alarm pictures about the event with configurable image capturing interval.
4. If your email server requires authentication, check Authentication and input your username and password to log in to the server.
5. Input the recipient's information, including the recipient's name and address.
6. Click **Test** to see if the function is well configured.
7. Click **Save**.

♥ 8.5 Port Forwarding

Port Forwarding is used to establish the mapping between the internal port and external port. When Port Forwarding is enabled, you can access the device and watch the videos when accessing the external port remotely.

Note: The cameras should be connected to the internet, and Port Forwarding should be enabled on the gateway.

Follow the steps below to configure Port Forwarding.

1. Go to **Settings > Network Settings > Port Forwarding**.
2. Enable Port Forwarding and specify a mapping type. If you select **Auto** as the mapping type, the mappings are established automatically. If you select **Manual** as the mapping type, click **Edit** to specify the external port.

Port Forwarding

Port Forwarding

On

Mapping Type

Manual

Port Type	Internal Port	External Port	Internal IP	Status	
HTTPS	443	443	192.168.0.60	Disabled	Edit
RTSP	554	554	192.168.0.60	Disabled	Edit
Video Service	8800	8800	192.168.0.60	Disabled	Edit
Stream	8443	8443	192.168.0.60	Disabled	Edit

Restore

Save

Port Type	Displays the protocol type.
Internal Port	Displays the port of the camera to be converted.
External Port	Displays the external port opened by the gateway.
Internal IP	Displays the IP address of the camera that needs to be converted.
Status	Displays the status of mapping.
Restore	Click to restore the settings to default factory settings.

3. Click **Save**.

With Port Forwarding enabled, you can remotely watch the videos with the URL `rtsp://A.B.C.D:Port/streamN`, for example, `rtsp://10.0.1.47:28736/stream1`. A.B.C.D is the WAN IP address of the gateway, and Port is the number of RTSP external port. N can be number 1 or 2 that indicates the stream, 1 for main stream and 2 for substream.

♥ 8.6 IP Restriction

When IP Restriction is enabled, you can add IP addresses to the deny list or allow list to restrict the access to the camera. The IP address in the deny list cannot access the camera, while only the IP addresses in the allow list can access the camera.

Follow the steps below to configure IP Restriction.

1. Go to **Settings > Network Settings > IP Restriction**.
2. Enable IP Restriction and specify the restriction rule. If you select **Deny List**, the devices with the IP addresses specified in the table will not be able to access the camera. If you select **Allow List**, only the devices with the IP addresses specified in the table can access the camera.

IP Restriction

IP Restriction ☒ On

Restriction Rule

☒ Deny List - Block the IP addresses on the list.

☐ Allow List - Allow only the IP addresses on the list.

Description	IP Address

Delete the Selected Add

Restore Save

3. Click **Add** to add the desired IP address, give a description to identify this IP address, then click **Save**.

Set IP

Description

IP Address

Cancel Save

4. Click **Save**.

♥ 8.7 Multicast

When Multicast is enabled, you can watch videos using the multicast address and port.

Follow the steps below to configure Multicast.

1. Go to **Settings > Network Settings > Multicast**.
2. Select the stream type, then enable **Multicast**.

3. Disable Random IP Port and specify a static address and port, or enable Random IP Port.
4. Click **Save**.

After Multicast enabled, you can watch the video with the URL `rtsp://A:B:C:D/multicastStreamN`, for example, `rtsp://192.168.0.3/multicastStream1`. A.B.C.D is the IP address of the camera, and N can be number 1 or 2 that indicates the stream, 1 for main stream and 2 for substream.

♥ 8.8 Server

You can configure the FTP server to save images which are captured by events.

1. Go to **Settings > Network Settings > FTP Settings > Server**.

2. Check Enable Server. FTP and SFTP are selectable. The files uploading is encrypted by using SFTP protocol.
3. Enter Server Address and Port. They stand for the FTP server address and corresponding port.
4. Set Username and Password and confirm the password. The FTP user should have the permission to upload pictures.

5. If the FTP server supports picture uploading by anonymous users, you can check Anonymous to hide your device information during uploading.

Note: Anonymous login is not supported when SFTP protocol is selected.

6. Select the saving path of images uploaded in the dropdown box of Upload Path and Edit the Name.
7. Click **Test** to verify the FTP server.
8. Click **Save**.

♥ 8.9 Upload

You can configure the parameters of videos and images to be uploaded to the FTP server.

1. Go to **Settings > Network Settings > FTP Settings > Upload**.

2. Enable Recording Schedule and follow the steps in [Recording Schedule](#).
3. Enable Upload Video and Upload Capture as needed.
4. Configure the following parameters:

Stream Type

Select the stream type for recording.

Main Stream stands for the best stream performance the device supports. It usually offers the best resolution and frame rate the device can do. But high resolution and frame rate usually means larger storage space and higher bandwidth requirements in transmission.

Substream usually offers comparatively low resolution options, which consumes less bandwidth

Record Audio	Enable to record audio and video simultaneously.
Pre-recording Time	The time period you set to record before the scheduled time. For example, the schedule for continuous recording starts at 10:00. If you set the pre-recording time as 5 seconds, the camera starts to record at 9:59:55.
Delay Time	The time is set for cameras to record after the scheduled time or event. For example, if you set the post-record time as 5 seconds, it records till 11:00:05 as motion detection ends at 11:00.
Max Size of a Single File	Set the size limit of a single file.
Capture Interval	The camera takes the capture when it reaches the capture interval.
Capture Number	The number of captures taken during one interval.

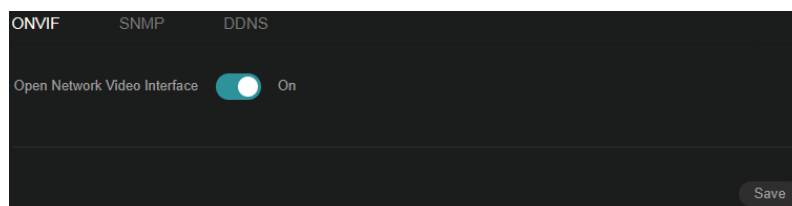
5. Click **Save**.

♥ 8.10 ONVIF

ONVIF, or Open Network Video Interface Forum, aims to provide a standard for the interface between different IP-based physical security devices. ONVIF specifications provide a consistent way for devices from multiple manufacturers to work together

Enable ONVIF if you need to use third-party management devices. Go to **Settings > Network Settings > Advanced > ONVIF**.

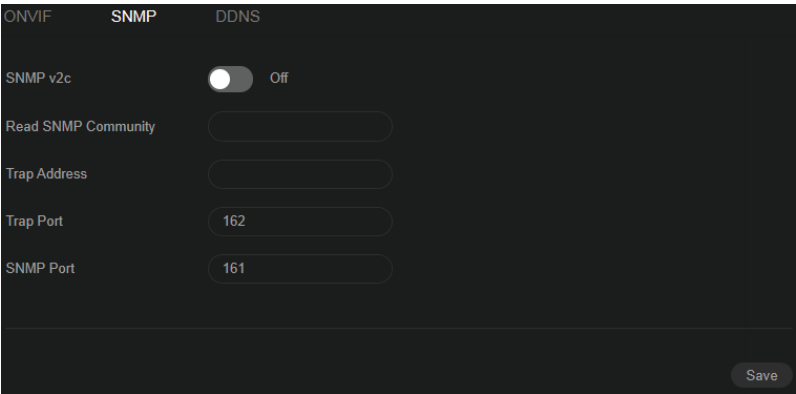
For firmware version 1.6 and onwards, ONVIF uses port 80 and 2020 by default for communication; for earlier versions, the default port for ONVIF is 2020.



♥ 8.11 SNMP

You can set the SNMP, or Simple Network Management Protocol, to get device information in network management.

1. Go to **Settings > Network Settings > Advanced > SNMP**.



2. Enable SNMP v2c.
3. Enter the SNMP community name. Note that the access is Read only, meaning that the network management system can only view but not modify parameters of the specified view.
4. Configure the following parameters.

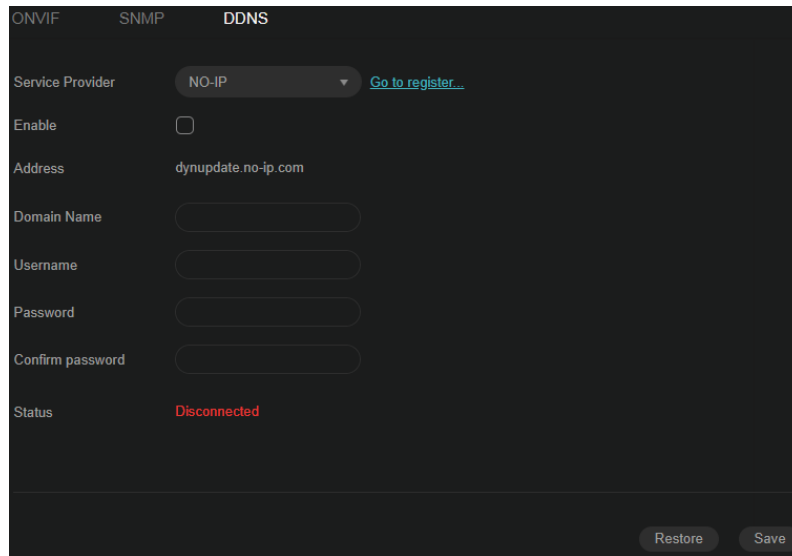
Trap Address	IP Address of SNMP host.
Trap Port	Port of SNMP host. The value is by default 162 and can range from 1 to 65535.
SNMP Port	An SNMP communication endpoint that identifies SNMP data transfers. By default the SNMP port is 161.

5. Click **Save**.

♥ 8.12 DDNS

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

1. Go to **Settings > Network Settings > Advanced > DDNS**.



The screenshot shows the DDNS configuration page. At the top, there are three tabs: ONVIF, SNMP, and DDNS. The DDNS tab is selected. Below the tabs, there are several fields and a status indicator. The 'Service Provider' is set to 'NO-IP' with a dropdown arrow and a link 'Go to register...'. The 'Enable' checkbox is unchecked. The 'Address' field contains 'dynupdate.no-ip.com'. There are four empty input fields for 'Domain Name', 'Username', 'Password', and 'Confirm password'. The 'Status' is 'Disconnected' in red text. At the bottom right, there are 'Restore' and 'Save' buttons.

Field	Value
Service Provider	NO-IP
Enable	☐
Address	dynupdate.no-ip.com
Domain Name	
Username	
Password	
Confirm password	
Status	Disconnected

2. Select the type of Service Provider for domain name resolution.
3. Enter the domain name information, and click **Save**.



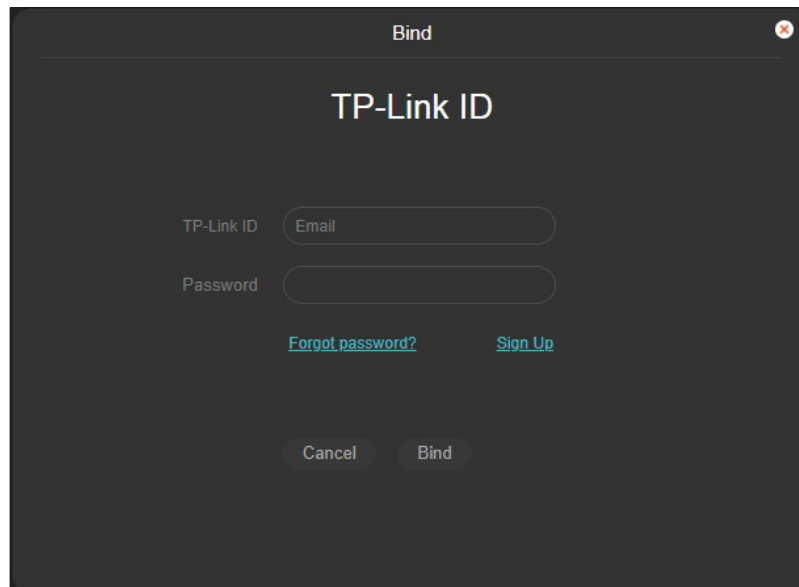
Cloud Service

After connecting your camera to the internet, you can manage it remotely via Cloud Services.

The camera supports remote management with the support of TP-Link Cloud Services. With a TP-Link ID bound, you can remotely monitor your areas on multiple platforms, including computers and mobile phones.

Follow the steps below to bind your TP-Link ID to the camera and download the VIGI app.

1. Go to **Settings > Cloud Service**.
2. Click **Go to Bind**. Enter your TP-Link ID and password and click **Bind**. If you do not have a TP-Link ID, click **Sign Up** to register.

A screenshot of a web interface titled "Bind" with a close button in the top right corner. The main heading is "TP-Link ID". Below it, there are two input fields: "TP-Link ID" with a placeholder "Email" and "Password". Below the password field are two links: "Forgot password?" and "Sign Up". At the bottom are two buttons: "Cancel" and "Bind".

3. After binding your TP-Link ID, download the VIGI app on your mobile phone by scanning the QR code below. Log in with your TP-Link ID. Then you can monitor the live view and manage the camera remotely on your computer or mobile phone.



10

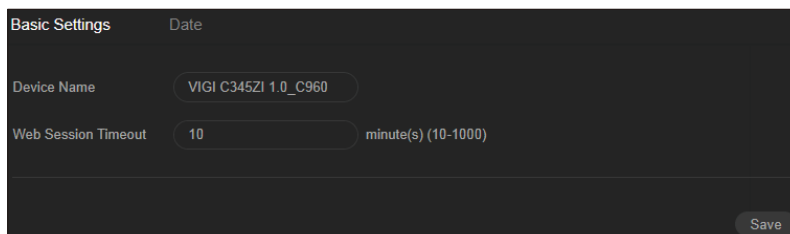
System Settings

This chapter guides you to configure the basic and advanced settings of your camera, export and import settings. You can create and modify administrator accounts based on your needs. This chapter includes the following sections:

- [Configure Basic Settings](#)
- [Modify System Time](#)
- [Manage User Accounts](#)
- [System Management](#)
- [Upgrade Firmware](#)
- [Reboot Device Regularly](#)

♥ 10.1 Configure Basic Settings

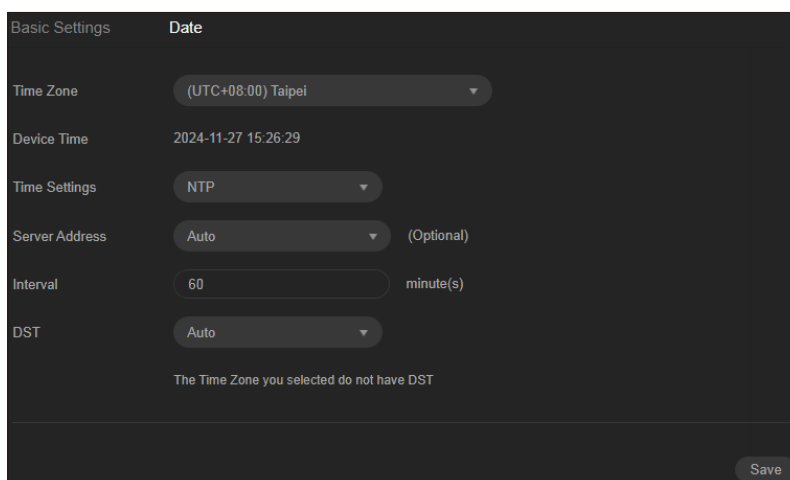
1. Go to **Settings > System Settings > Basic Settings**.
2. View and change the name of your camera.
3. Specify the Web Session Timeout. You will be logged out when you make no operation (not including viewing live image) to the device via web browser within the set timeout period.



♥ 10.2 Modify System Time

You can select the time zone and set the time synchronization mode to Manual or NTP mode for the camera.

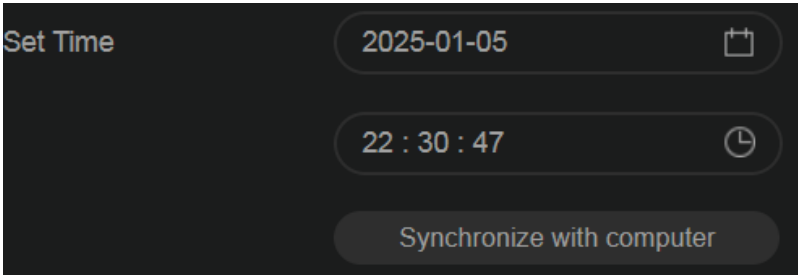
1. Go to **Settings > System Settings > Basic Settings > Date**.



2. Select your time zone.
3. Configure your time settings.

Network Time Protocol (NTP) is a protocol designed to time-synchronize a network of machines. NTP runs on User Datagram Protocol (UDP), which in turn runs on IP, or you can manually set the system time. If you do not want to expose your camera to the network, you can choose Manual. You

may also click **Synchronize with computer** to synchronize the time settings of your camera with that of your PC.



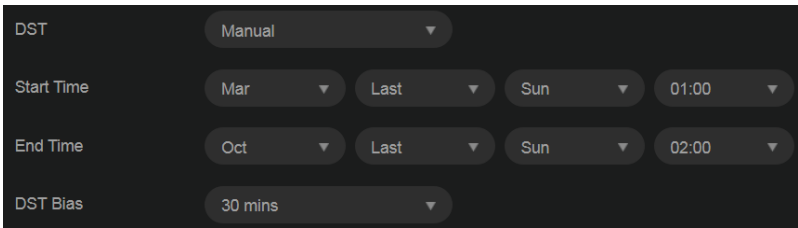
Server address	Enter the IP address of the NTP server.
Interval	Time interval between the two synchronizing actions with NTP server. Note: The interval can be set from 1 to 10080 minutes, and the default value is 60 minutes.

4. (Optional) Set DST (daylight saving time) parameters.

DST is the practice of setting the clocks forward one hour from standard time during the summer months, and back again in the fall. DST Bias is the difference in minutes between standard time and daylight-saving time for a specific time zone.

You can select Auto at the dropdown list. Note that to update the time automatically with the DST, internet connection is required.

Or you can select Manual and specify the date/time of the DST period.



Note:

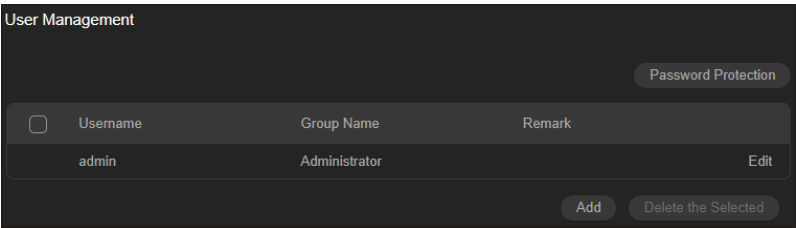
- 1. In some time zones, DST is not observed.
- 2. If the camera is connected to an NVR, you only need to configure NTP and DST settings on the NVR, which will be synchronized with the camera.

5. Click **Save**.

♥ 10.3 Manage User Accounts

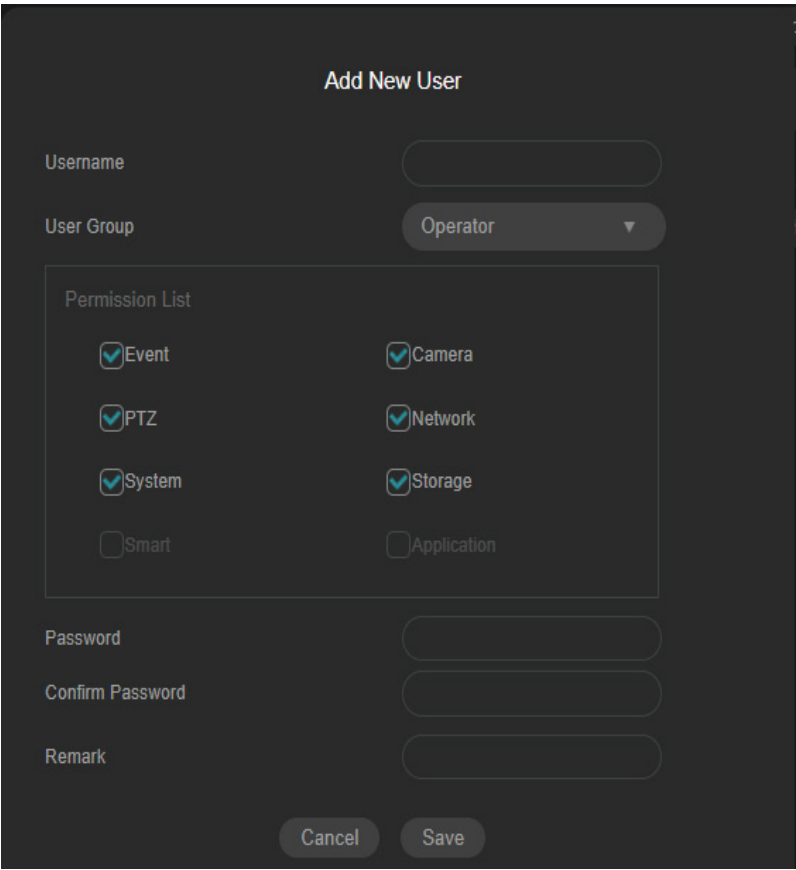
You can modify the default user account (admin) based on your needs. The Administrator user name is admin and the password is set when you set up your camera for the first time.

1. Go to **Settings > System Settings > User Management**.



2. Click **Add**. Enter Username, select User Group, and enter Password. Assign remote permission to users based on needs.

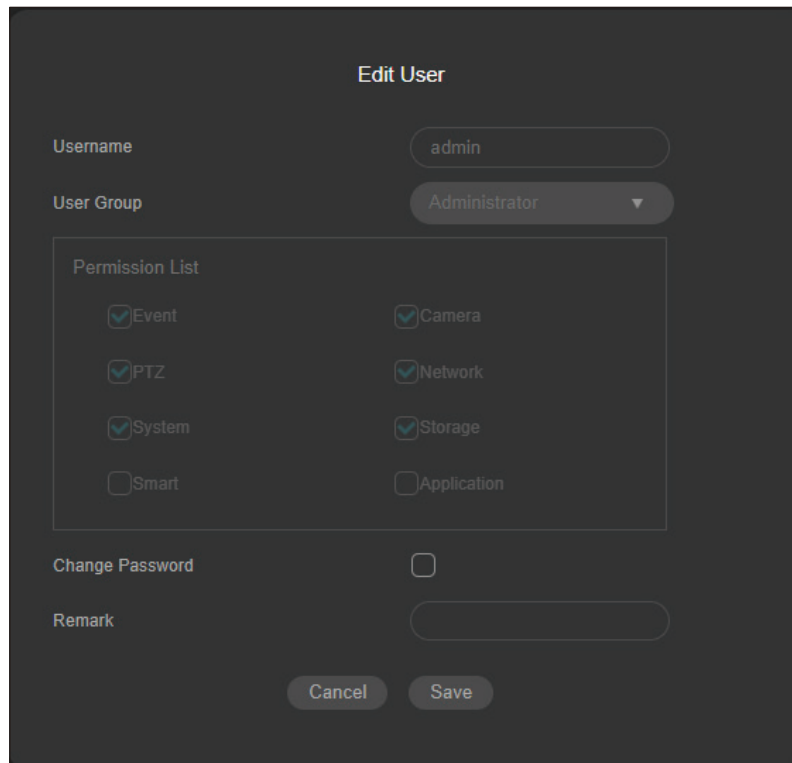
Note: The system pre-defines a default user group: administrator, which has all the permission of the system. You can click Edit to view the details and operations. The permission list of the administrator cannot be edited.



Administrator	The administrator has the authority to all operations and can add users and operators and assign permission.
Operator	Operators can be assigned all permission except for operations on the administrator and creating accounts.
User	Users can be assigned permission of viewing live video, setting PTZ and event parameters, and changing their own passwords, but no permission for other operations.

3. (Optional) After adding the role, you can do one or more of the following:

- Set the permission for the user. Under the Permission List, check the accesses you grant to the user.
- Add a remark for the user. Enter your personalized notes in the Remark field.



The screenshot shows the 'Edit User' form with the following fields and options:

- Username:** admin
- User Group:** Administrator (dropdown menu)
- Permission List:** A table of permissions with checkboxes:

Permission List	
☒ Event	☒ Camera
☒ PTZ	☒ Network
☒ System	☒ Storage
☐ Smart	☐ Application
- Change Password:** ☐
- Remark:** (empty text field)
- Buttons:** Cancel, Save

4. Click **Password Protection** for account security settings. You can reset the password by setting the security question or email. You can click Forget Password and answer the security question

to reset the admin password when access the device via browser. After setting the email, you can receive the verification code during the recovering operation process.

Account Security

Password

Security Question

Security Question 1

Your father's name

Answer

Security Question 2

Your mother's name

Answer

Security Question 3

Your head teacher's name in s...

Answer

Recovery Email

Recovery Email

Cancel

Save

♥ 10.4 System Management

You can reset the camera to factory default settings, import and export the configuration file of your camera. To configure these settings, go to **Settings > System Settings > System Management**.

System Management

Upgrade Firmware

Reboot Device

Reset to Factory Default

Reset

Restore Except Network

Restore

Export configuration file

Export

Import configuration file

Browse

Import

To reset all the parameters to the factory default, click **Reset**.

To reset device parameters, excluding network settings, to the factory default, click **Restore**.

Note: After you click Restore, the port number you set in Network Settings will change.

To export the configuration file, click **Export**.

To import the configuration file, click **Browse** to select your file, then click **Import**.

♥ 10.5 Upgrade Firmware

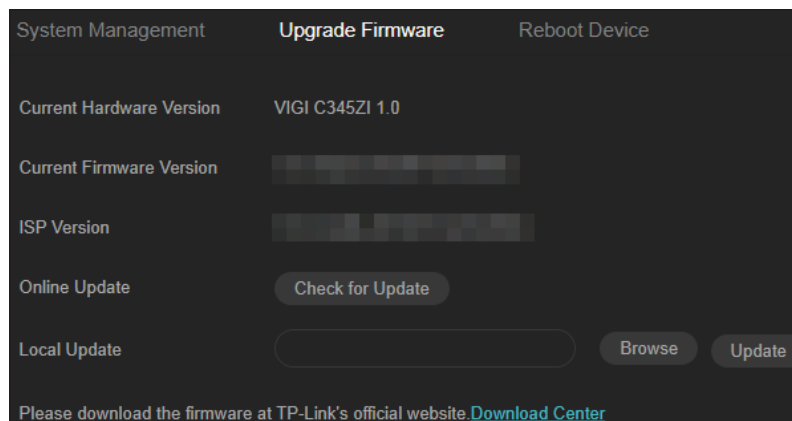
TP-Link aims at providing better network experience for users. We will inform you through the web management page if there's any update firmware available for your camera. Also, the latest firmware will be released at the TP-Link official website www.tp-link.com, and you can [download](#) it for free.

Note:

1. Backup your camera configuration before firmware upgrade.
2. Do NOT power off the camera during the firmware upgrade.

10.5.1 Online Upgrade

1. Go to **Settings > System Settings > System Management > Upgrade Firmware**.
2. Click **Check for Update** to see whether the latest firmware is released.



3. Navigate to the **Online Upgrade** section, and click **Upgrade** if there is new firmware.
4. Wait a few minutes for the upgrade and reboot to complete.

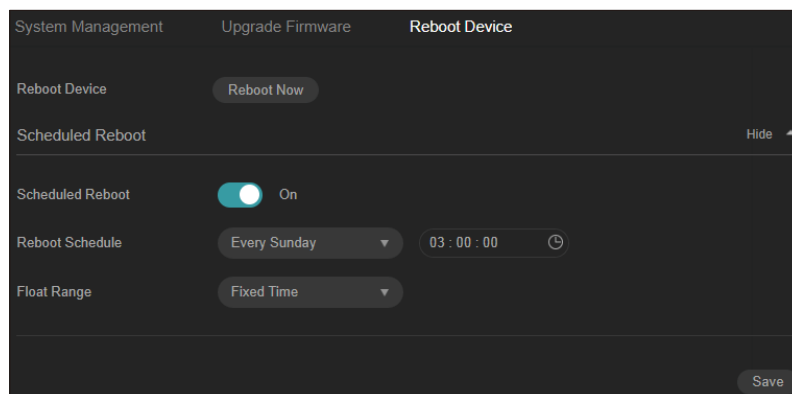
10.5.2 Local Upgrade

1. Download the latest firmware file for the camera from www.tp-link.com.
2. Go to **Settings > System Settings > System Management > Upgrade Firmware**.
3. Click **Browse** to locate the downloaded new firmware file, and click **Update**.
4. Wait a few minutes for the upgrade and reboot to complete.

♥ 10.6 Reboot Device Regularly

The Scheduled Reboot feature cleans the cache to enhance the running performance of the camera.

1. Go to **Settings > System Settings > System Management > Reboot Device**.
2. Enable **Scheduled Reboot**.
3. Select the day and time and specify the Float Range. When Fixed Time is selected, the camera will reboot at exactly the time you set in the Reboot Schedule. You may select 1 to 60 minutes. Then your camera will reboot some time before or after the time you set in the Reboot Schedule.
4. Click **Save**.



Note: You can click **Reboot Now** to reboot the camera immediately.