CP PLUS

VEDAAN
Intelligent Network Series

Network Camera

Web Operation Manual

Version 1.0.3

Important

The following cybersecurity recommendations are for reference only. Some series of the products may not support all the recommendations that are listed below.

Cybersecurity Recommendations

1. **Change Passwords and Use Strong Passwords**

   The foremost reason why our systems get hacked is due to weak or default passwords. It is strongly recommended to change the default password immediately and choose a strong password whenever possible. A strong password must have at least 8 characters long that contains a special character, numbers, an upper-case, and lower-case letters.

2. **Update Firmware**

   As per the standard procedure in the tech-industry, we recommend you keep NVR, DVR, and IP camera firmware updated to ensure the system is up to date with the latest security patched and fixes.

“Nice to have” recommendations to improve your network security.

1. **Change Passwords Regularly:**

   Regularly change the passwords to your devices to ensure that only authorized users can access the system.

2. **Change Default HTTP and TCP Ports:**

   - Change default HTTP and TCP ports for systems. These are the two ports used to communicate and view video feed remotely.
   - These two ports can be changed to any set of numbers between 1025-65535. Avoid the default port numbers that can reduce the risk of unauthorized being able to guess which ports you’re using.

3. **Enable HTTPS/SSL:**

   Set up an SSL Certificate to enable HTTPS. This will encrypt all communication between your devices and recorder.

4. **Enable IP Filter:**

   Enabling IP filter will prevent everyone, except those with specified IP addresses, from accessing the system.

5. **Change ONVIF Password:**

   On older IP Camera firmware, the ONVIF password does not change when you change the system’s credentials. You will need to either update the camera’s firmware to the latest revision or manually change the ONVIF password.

6. **Forward Only Ports You Need:**

   Only forward the HTTP and TCP ports that you need to use. Do not forward a huge range of numbers to the device. Do not DMZ the device's IP address.

   You do not need to forward any ports for individual cameras if they are all connected to a recorder on site, just the NVR is needed.

7. **Disable Auto-Login on KVMS Pro Lite:**

   Users using KVMS Pro Lite to view their system and on a computer that is used by multiple people should disable auto-login. This adds an extra layer of security to prevent users without the appropriate credentials from accessing the system.

8. **Use a Different Username and Password for KVMS Pro Lite:**

   If your social media, bank, email, etc. account is compromised, you would not want someone collecting those passwords and trying them out on your video surveillance system. Using a different username and password for your security system will make it more difficult for someone to guess their way into your system.

9. **Limit Features of Guest Accounts:**

   If your system is set up for multiple users, ensure that each user only has rights to features and functions they need to use to perform their job.

10. **Illegal Access:**

    Illegal access compromises the confidentiality and integrity of video surveillance data. It may allow malicious actors to view, manipulate, or delete video footage, disable camera functionality, or gain control over system settings.

11. **Security Exception:**

    Security exceptions may be triggered by unauthorized access attempts, invalid user roles, incorrect encryption protocols, or connection requests from untrusted devices.

12. **Restricted Login:**

    Restricted Login ensures that only authorized personnel can access specific functions such as viewing live feeds, reviewing recorded footage, or altering system settings. Access control may be role-based (e.g., administrator, user) and enforced through strong authentication methods.

13. **Multicast:**

    Multicast allows video streaming between the two recorders. Currently, there are no known issues involving multicast, but if you're not using this feature, deactivation can enhance your network security.

14. **Check the Log:**

    If you suspect unauthorized user access to your system, check the system log. The log will display the IP addresses used for login and what was accessed.

15. **Physically Lock Down the Device:**

    Ideally, you want to prevent any unauthorized physical access to your system. The best way to achieve this is to install the recorder in a lockbox, locking server rack, or in a room that is behind a lock and key.

16. **Connect IP Cameras to PoE Ports on the Back of an NVR:**

    Cameras connected to the PoE ports on the back of an NVR are isolated from the outside world and cannot be accessed directly.

17. **Isolate NVR and IP Camera Network:**

    The network your NVR and IP camera reside on should not be the same network as your public computer network. This will prevent any visitors or unwanted guests from getting access to the same network the security system needs to function properly.

Electrical safety

- All installation and operation should conform to your local electrical safety codes.
- The power source shall conform to the requirement of the Safety Extra Low Voltage (SELV) standard, and supply power with voltage rated by DC 12 V or AC 24 V according to the limited power source requirement of IEC60950-1. Please note that the power supply requirement is subject to the device label.
- Ensure the power supply is correct before operating the device.
- A readily accessible disconnect device shall be incorporated into the building installation wiring.
- Prevent the power cable from being trampled or pressed, especially the plug, power socket and the junction extruded from the device.
- We assume no liability or responsibility for all the fires or electrical shock caused by improper handling or installation.

Environment

- Do not aim the device at strong light to focus, such as lamp light and sun light, otherwise it might cause over brightness or light marks, which are not the device malfunction, and affect the longevity of Charge Coupled Device (CCD) or Complementary Metal-Oxide Semiconductor (CMOS).
- Do not place the device in a damp or dusty environment, extremely hot or cold temperatures, or the locations with strong electromagnetic radiation or unstable lightning.
- Keep the camera away from water or other liquid to avoid damage to the internal components.
- Keep the indoor device away from rain or damp to avoid fire or lightning.
- Keep sound ventilation to avoid heat accumulation.

- Transport, use and store the device within the range of humidity and temperature.
- Heavy stress, violent vibration or water splashes are not allowed during transportation, storage and installation.
- Pack the device with standard factory packaging or the equivalent material when transporting the device.

Privacy Protection Notice

As the device user or data controller, you might collect personal data of others such as face, fingerprints, car plate numbers, Email address, phone numbers, GPS, and so on. You need to follow the local privacy protection laws and regulations to protect the legitimate rights and interests of other people by implementing measures including but not limited to providing clear and visible identification to inform data subject the existence of surveillance area and providing related contact.

About the Manual

- The Manual is for reference only. If there is any inconsistency between the Manual and the actual product, the actual product shall govern.
- We are not liable for any loss caused by the operations that do not comply with the manual.
- The Manual would be updated according to the latest laws and regulations of related regions. For detailed information, see the paper User's Manual, CD-ROM, QR code or our official website. If there is inconsistency between paper User's Manual and the electronic version, the electronic version shall prevail.
- All the designs and software are subject to change without prior written notice. The product updates might cause some differences between the actual product and the Manual. Please contact customer service for the latest program and supplementary documentation.
- There still might be deviation in technical data, functions and operations description, or errors in print. If there is any doubt or dispute, please refer to our final explanation.
- Upgrade the reader software or try other mainstream reader software if the Guide (in PDF format) cannot be opened.
- All trademarks, registered trademarks and the company names in the Manual are the properties of their respective owners.
- Please visit our website, contact the supplier or customer service if there is any problem occurring when using the device.
- If there is any uncertainty or controversy, please refer to our final explanation.

Table of Contents

1. Overview of the Product

An IP (Internet Protocol) camera is a digital surveillance device that connects to a network using a network cable. It can also be connected through a router or switch, allowing real-time video transmission over the network or local network. The networking mode for IP camera is to connect IP camera to PC via router or switch or using a network cable. The network mode is shown in Figure 1-1.

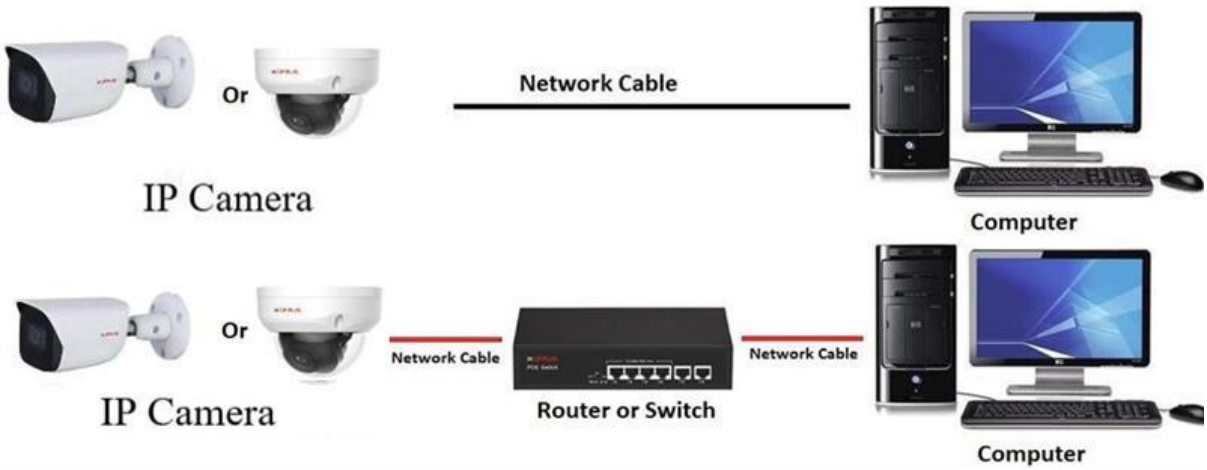


Figure 1-1

Before you access a network camera via internet, you need to obtain its IP address. Users can search for the IP address of the network camera via an *IP finder* tool.

2. Initial Config

In this chapter, it describes the device initial config operation that includes Device Initialization, Device Login, and Reset Password in a WEB interface.

2.1 Device Initialization

Device initialization is required for first-time use only. This manual is focused on the operation on the web page. You can also initialize the device through IP Finder tool, NVR (Network Video Recorder), or other platforms such as EVMS Pro.

Note:

- To ensure device security, protect your password after device initialization and update it regularly.
- During initialization, make sure the PC IP and camera IP are on the same network.
- We recommend using Internet Explorer or Google Chrome.

1. Open the web browser, enter the IP address of the device in the address bar, and then press **Enter**.
   Note: By default, the IP address is 192.168.1.250.
2. Select the appropriate **Region**, **Language**, and **Video Standard** from the drop-down menu based on your location, and then click **Next**.

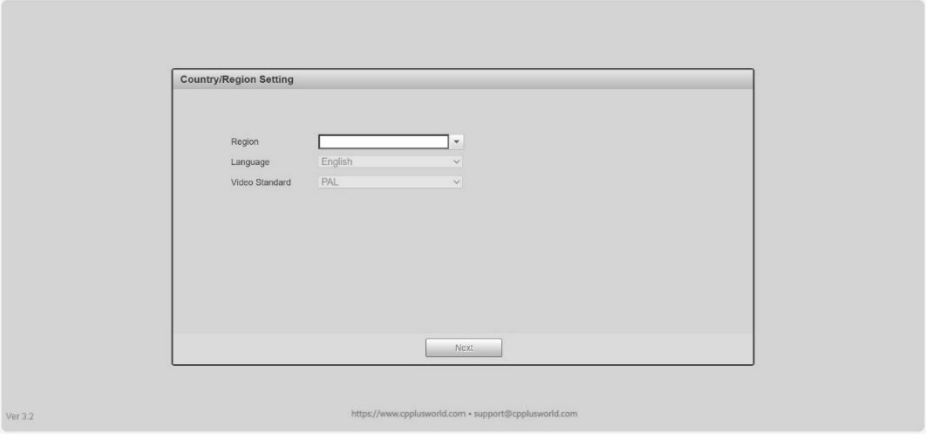


Figure 2-1

3. Set the time zone such as **Date Format**, **Time Zone**, **Current Time**, and then click **Next**.

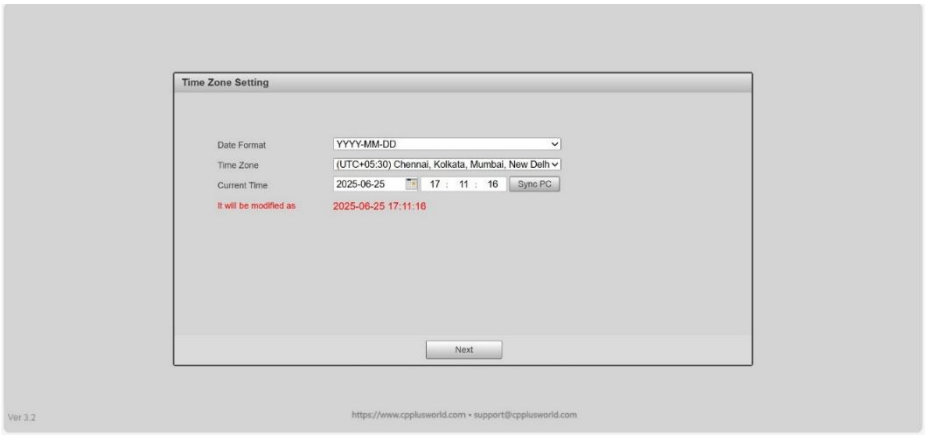


Figure 2-2

Note: You can sync the time zone by clicking on **Sync PC**.

4. Under device initialization, Set the password.

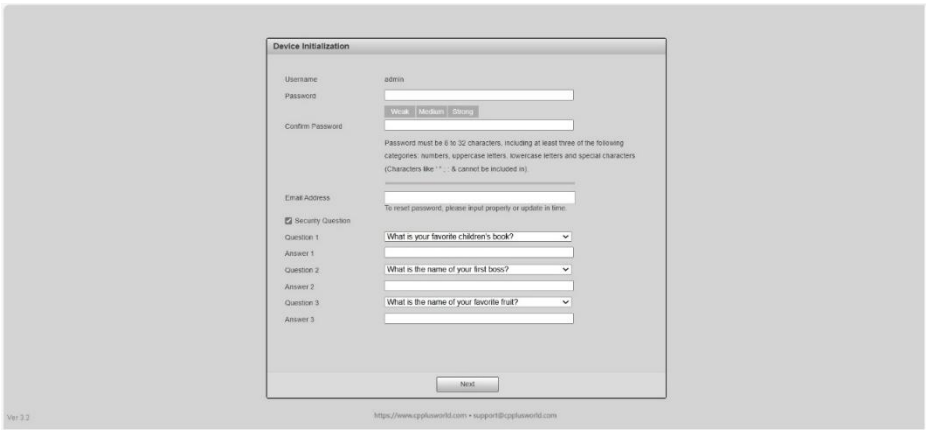


Figure 2-3

To set the device initialization for an admin account, please refer to the following table for more details about this setting.

Table 2-1

Parameter	Description
Username	By default, the username is admin.
Password	Enter the password. Password must be 8 to 32 characters, including all of the following categories: numbers, uppercase letters, lowercase letters and special characters (Characters like ' " ; : & cannot be included in).
Confirm Password	Re-enter to confirm the password.
Email Address	Enter a valid email address for password reset. It is selected by default. To reset the admin account password, a security code will be sent to the registered email address.

Security Question	Set the security questions and answers. If you forget the password, provide the answers to the questions, and it allows you to reset the password.

5. Click **Next**, an **InstaOn** page is displayed on the screen.
   Note: Make sure to enable InstaOn to remotely manage your devices.

Figure 2-4

6. Click **Next**, an **Online Upgrade** page is displayed on the screen.
7. Enable **Auto-check for updates** to ensure the device is always updated with the latest features and security patches.

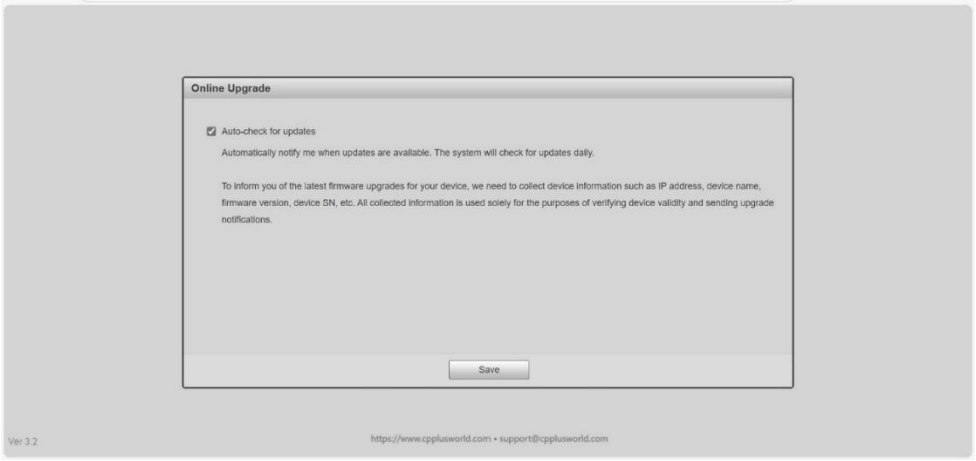


Figure 2-5

8. Click **Save**, and then the device initialization is completed.
   Note: You can also make changes after logging in by navigating to **Setting** > **System** > **Upgrade** > **Upgrade**.

2.2 Device Login

Log in to the device page through a web browser.

Pre-requisites:

- You need to initialize the camera before logging in to the web page. for device initialization see Device Initialization.
- When logging in to the web page, keep the PC IP and device IP on the same network.

1. Open the web browser, enter the device IP address in the address bar, and then click **Enter**.
   Note: By default, the IP address is 192.168.1.250.
2. Enter the username and password which is shown in Figure 2-6.
   Note: By default, the Username is admin.

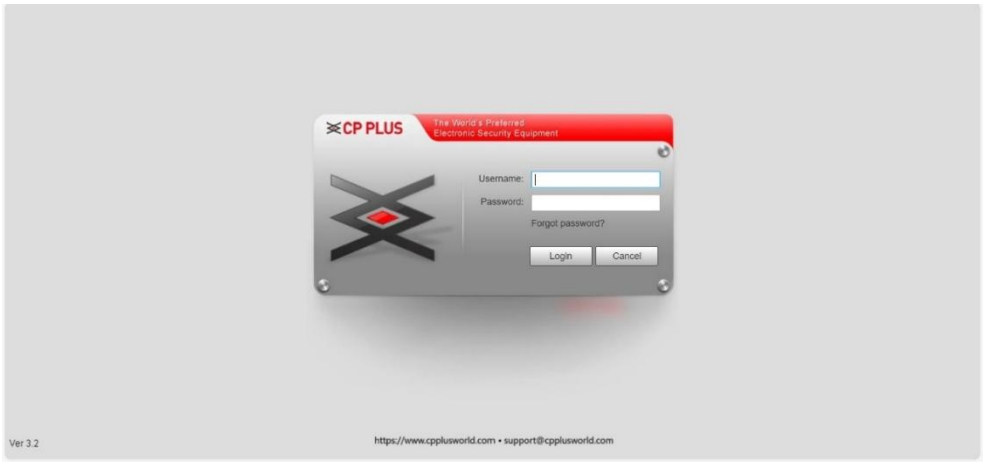


Figure 2-6

3. Click **Login**, it displays the **Live** interface after you logged in successfully as shown in Figure 2-7.

Figure 2-7

2.3 Reset Password

You can reset the password using registered email when you forget the password of an admin (user).

1. Open the Internet Explorer, enter the camera IP address in the address bar, and then click **Enter**.

   The system displays the login interface after it is connected successfully as shown in Figure 2-8.

   Note: Click **Forgot password?** to reset the password through the registered email address that is set during the device initialization.

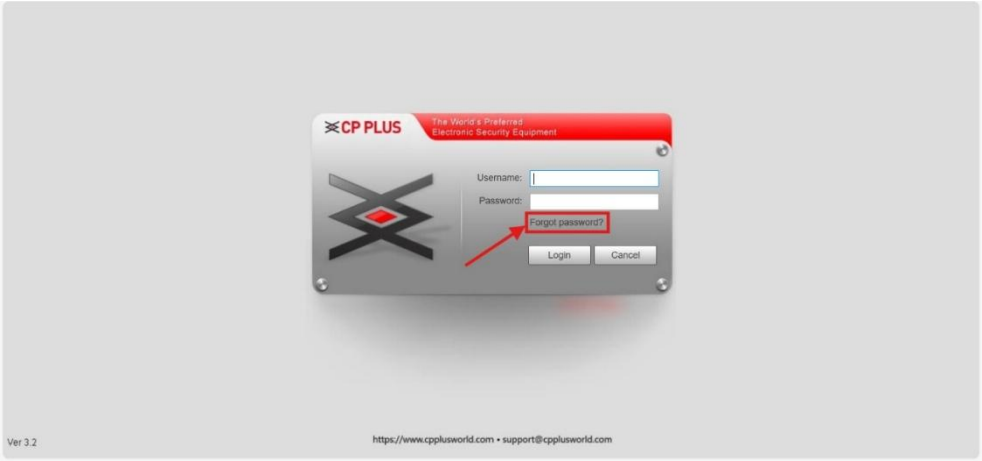


Figure 2-8

2. Click **Forgot password?** the system displays the Prompt interface as shown in Figure 2-9.

Figure 2-9

3. Click **OK**, the system displays **Reset the password(1/2)** interface, as shown in Figure 2-10.

Figure 2-10

4. Scan the QR code that is displayed on the screen and get the security code and then enter or paste the security code which is received via your registered email address.

   Caution:

   - Please use the security code to reset the password within **24** hours after you receive it via registered email. Otherwise, the security code will be invalid.
   - If you fail to use security code twice continuously, then the system will prompt that it fails to acquire security code for the third time. It needs hardware to restore device default setting to get security code again or wait for 24 hours to try again.

5. Click **Next**, the system displays **Reset the password(2/2)** as shown in Figure 2-11.

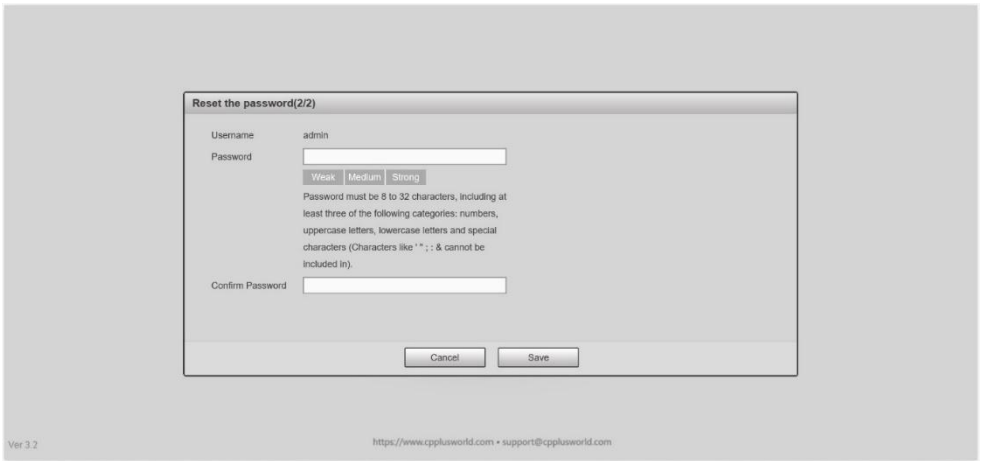


Figure 2-11

6. Enter the password and confirm it.
7. Click **Save** to complete resetting the password. The system again displays the Login interface as shown in Figure 2-12.


CP PLUS
The World's Preferred
Electronic Security Equipment
Username:
admin
Password:
Forgot password?
Login
Cancel
Ver 3.2
https://www.cpplusworld.com • support@cpplusworld.com

Figure 2-12

3. Live

After logging in, you see the Live view as shown in Figure 3-1.

Figure 3-1

In this section, there are four sections:

- Section 1: System Menu
- Section 2: Encode Setup bar
- Section 3: Video Window Function Option bar
- Section 4: Video Window Setup bar

3.1 System Menu

The system menu interface is shown in Figure 3-2.

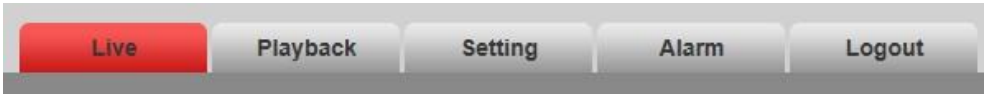


Figure 3-2

3.2 Encode Setup bar

The encode setup bar interface is shown in Figure 3-3.

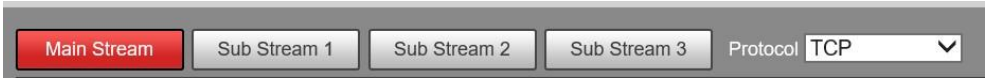


Figure 3-3

To set the encode setup bar, please refer to the following table for more detail about this setting.

Table 3-1

Parameter	Function
Main Stream	By default, **Main Stream** is enabled for video monitoring, and click again to disable it. Generally used for storage and monitor.
Sub Stream 1	Click it to enable **Sub Stream 1** video monitoring and click again to disable it. When network bandwidth is insufficient, it substitutes Main Stream for monitoring.
Sub Stream 2	Click it to enable **Sub Stream 2** video monitoring and click again to disable it. When network bandwidth is insufficient, it substitutes Main Stream for monitoring.
Sub Stream 3	Click it to enable **Sub Stream 3** video monitoring and click again to disable it. When network bandwidth is insufficient, it substitutes Main Stream for monitoring.
Protocol	Select stream media protocol from the dropdown list. Three protocols are available: **TCP**/**UDP**/**Multicast**. By default, **TCP** is selected.

3.3 Video Window Function Option bar

The Video Window Function Option bar interface is shown in Figure 3-4.

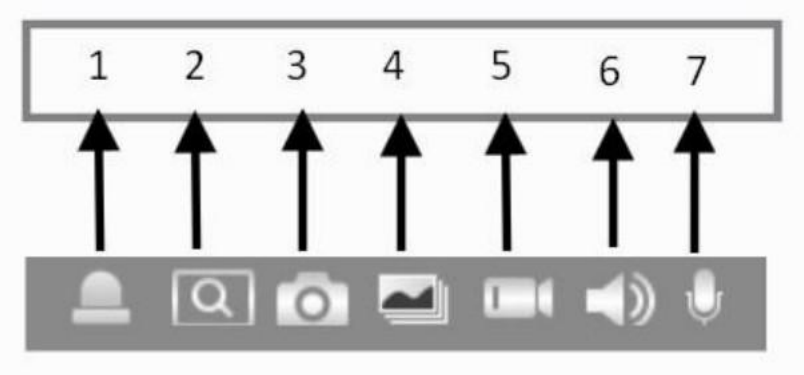


Figure 3-4

To set the video window function option bar, please refer to the following table for more detail about this setting.

Table 3-2

SN	Parameter	Function
1	Relay-out	It activates when there is any alarm output, the status description is as follows: • **Red**: It means there is an alarm output. • **Grey**: It means there is no alarm. Click **Relay-out** to force the alarm to be on or off.
2	Digital Zoom	Select **Digital Zoom** icon, then click and drag to choose the area you want to zoom-in, use the scroll bar to zoom-in or out further as needed. Right-click on it to return to the original view.
3	Snapshot	Click **Snapshot** icon to capture and save picture in a path.

4	Triple snapshot	Click **Triple Snapshot** icon to capture a snapshot upon the video at the frequency of one picture per second. All images are saved to path.
5	Record	Click **Record** icon to record the video. All videos are saved to path.
6	Audio	Click **Audio** icon to turn on or off the audio output.
7	Talk	Click **Talk** icon to start or end the bi-directional talk.

3.4 Video Window Setup bar

The video window setup bar interface is shown in Figure 3-5.

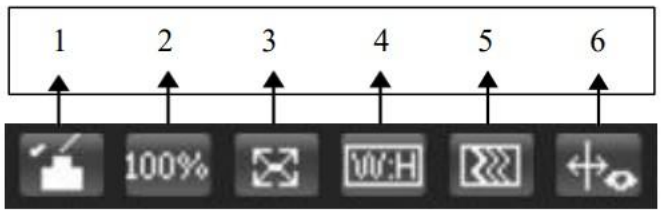


Figure 3-5

3.4.1 Image Adjustment

See Figure 3-6 for image adjustment.

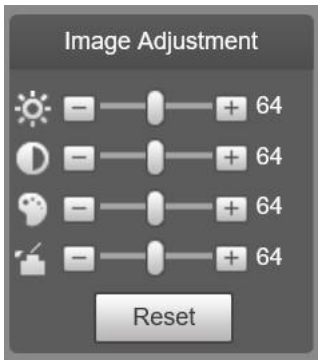


Figure 3-6

Click  **Image Adjustment** icon to show/hide the image adjustment toolbox. This interface is on the top-right pane.

To set the image adjustment function, please refer to the following table for more detail information about this setting.

Table 3-3

Parameter	Icon	Function
Video setup	(Brightness)	It is to adjust the overall brightness of the view.
	(Contrast)	It is to adjust the contrast of the view.
	(Hue)	It is to adjust the color hue of the view.
	(Saturation)	It is to adjust the image saturation
	Reset	Restore brightness, contrast, hue, and saturation to system default setup.
Note: • All the settings apply to the WEB page only. • Please go to **Setting** > **Camera** > **Conditions** to adjust further corresponding items.		

3.4.2 Original size

Click **Original Size** icon to view the monitor to 100%. By default, it displays the actual size, and it depends upon the resolution of the bit stream.

3.4.3 Full screen

Click **Full Screen** icon to view in full screen mode. Double-click the mouse or press **Esc** key to exit the full-screen mode.

3.4.4 Width and Height ratio

Click **W:H** icon, you see two options:

- **Original**: Select to view in original ratio of window
- **Adaptive**: Select to view in full ratio of window

3.4.5 Fluency

Click **Fluency** icon, you can see three options (Realtime, General, and Fluent). The default is **General**.

3.4.6 Rules Info

Click **Rules Info** icon, to display the intelligent rules. It is enabled by default.

4. Playback

Web client playback supports video playback and picture playback.

Note: Before using the playback, you need to set the storage management.

4.1 Playback

The Playback page is displayed as shown in Figure 4-1.

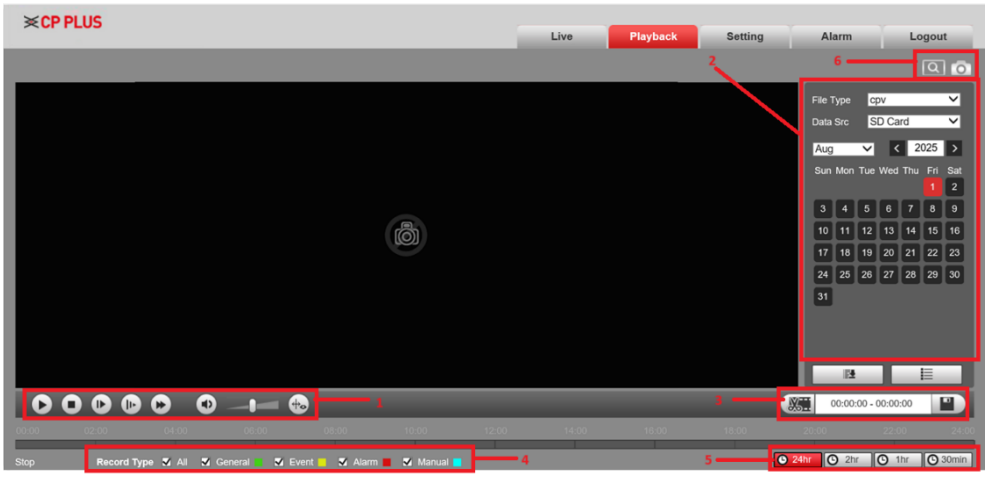


Figure 4-1

There are six sections:

- Section 1: Function of Play
- Section 2: Playback File
- Section 3: Playback Cut
- Section 4: Record Type
- Section 5: Progress Bar
- Section 6: Assistant Function

4.1.1 Function of Play

The function of the play is shown as in Figure 4-2 and Figure 4-3.

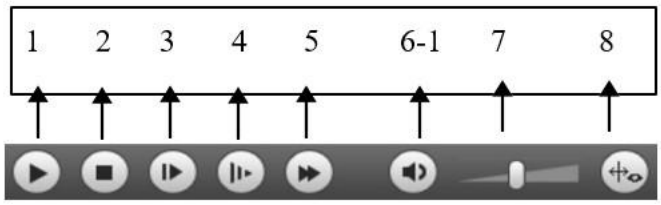


Figure 4-2

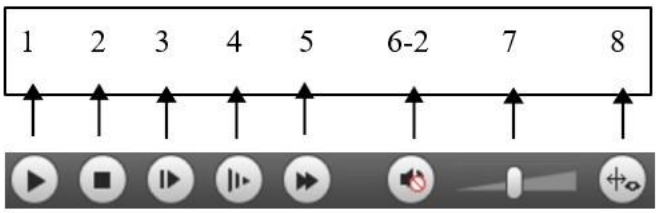


Figure 4-3

Table 4-1

S. No	Parameter	Function
1	Play	Click **Play** icon to play the playback and click again to pause it.
2	Stop	Click **Stop** icon to stop playing the playback.
3	Next Frame	Click **Next Frame** icon to go to the next frame. **Note:** You should pause recording while using this function.
4	Slow	Click **Slow** icon to play the video slowly.
5	Fast	Click **Fast** icon to play the video quickly.
6-1	Unmute	Click **Unmute** to turn on the microphone and resume audio transmission.
6-2	Mute	Click **Mute** to turn off the microphone and stop audio transmission.
7	Volume	Drag either left or right to adjust the volume.
8	Rules Info	Click **Rules Info** icon to display intelligent rules, it is off by default.

4.1.2 Playback File

In calendar, blue date represents data currently has video recordings or snapshots. See Figure 4-4.

Figure 4-4

Table 4-2

Parameter	Function
File Type	• Select “**cpv**” as video playback. • Select “**jpg**” as image playback.
Data Src	By default, the data source is SD card.

1. Click on data in blue, time axis displays the record file progress bar in color. While green represents normal record, yellow represents motion detect record, red represents alarm record, and blue represents manual record.
2. Click on the specific time on progress bar, playback starts from this time. See Figure 4-5.

Figure 4-5

3. Optionally, click on  **Batch Download** icon, to download the selected playback.
4. Click on  **File list** icon, selected date file will be displayed in the list.

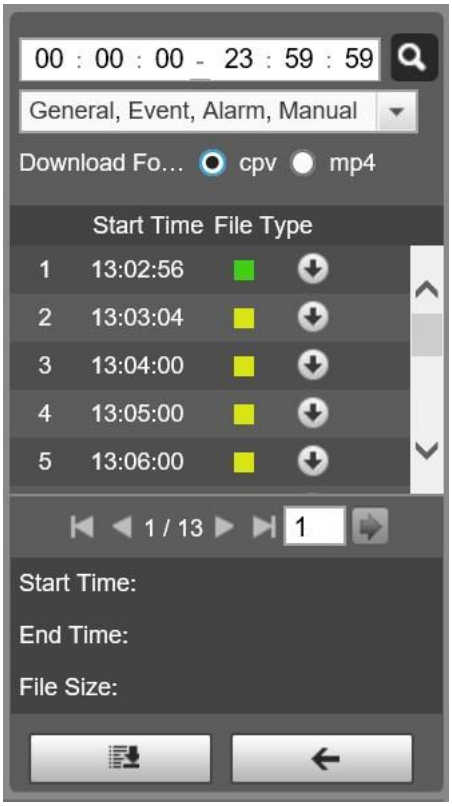


Figure 4-6

4.1.3 Playback Cut

Click **Playback Cut** icon, it displays two vertical bars to cut the video in the playback.

Figure 4-7

4.1.4 Record Type

After enabling the record file type, only the selected file types will appear in the file list and progress bar, and users can choose the desired type from the dropdown menu. See Figure 4-8.

Figure 4-8

4.1.5 Progress Bar

It plays the video in the past for a selected time as shown in Figure 4-9.

Figure 4-9

4.1.6 Assistant Function

Video playback assistant function is shown in Figure 4-10.

Figure 4-10

Table 4-3

Parameter	Function
	• Click **Digital Zoom** icon, to zoom in any area. • Right-click on it to restore its original state.
	Click **Snapshot** icon to capture an image from video under playback status. Snapshots will be saved to path.

4.2 Picture Playback

Web client picture playback interface has the following three functions. See Figure 4-11.

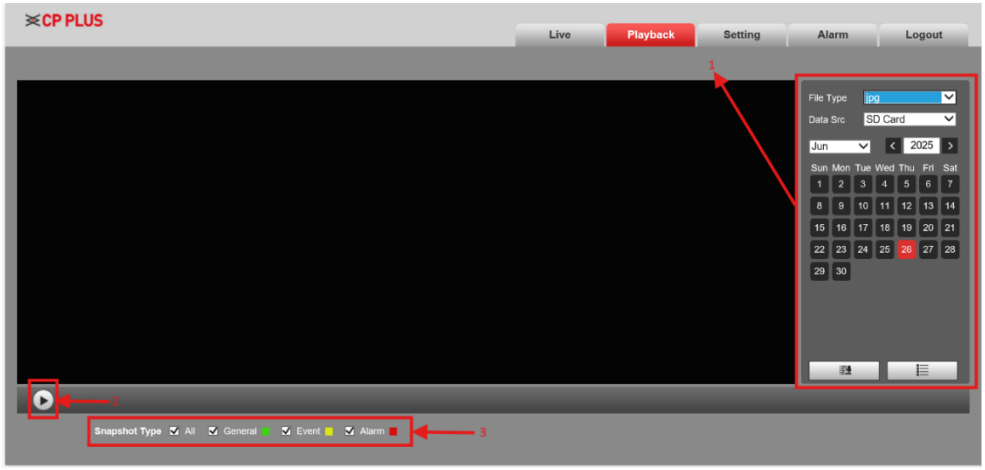


Figure 4-11

4.2.1 Playback File bar

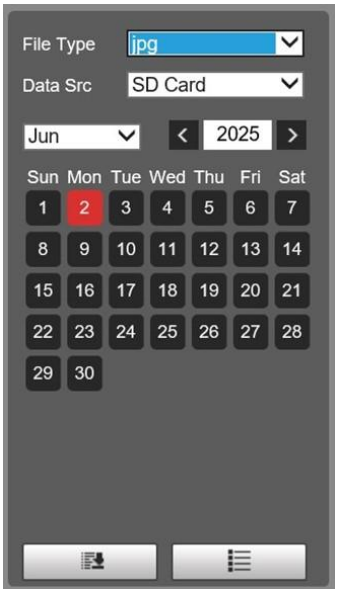


Figure 4-12

1. Click on  **file list** icon, select snapshot file of the date.
2. Double-click on file in list, to play this snapshot.

Table 4-4

Parameter	Function
	Click **Search** icon, to search all snapshot files within the start time and end time of the selected date.
	Click **download** icon, to open snapshot file or directly download locally according to the browser types.
	Click **Back** icon, to return to the calendar interface and re-select time.

4.2.2 Play

Figure 4-13

Default icon is  and it means pause or not played picture.

Click on Play button to switch to normal play status. Icon becomes  .

4.2.3 Snapshot Type

After selecting a snapshot file type, only those selected file types will be shown in the file list. Users can choose which snapshot type to display using the dropdown menu. See Figure 4-14.

Figure 4-14

5. Setting

Web client setup supports Camera, Network, Event, Storage, System, and Information settings.

5.1 Camera

The camera setting includes Conditions, Video, and Audio.

5.1.1 Conditions

The Conditions setting include two tabs: Conditions, and Profile Management. Set the profile as per the requirements that includes **General**, **Day**, and **Night**.

5.1.1.a Conditions

In Conditions tab, it includes settings such as Picture, Exposure, Backlight, WB, Day & Night, Illuminator, and Defog.

5.1.1.a.i Picture

It is to set the Picture parameter setting on the camera.

1. Select **Setting** > **Camera** > **Conditions** > **Picture** and it displays the Picture setting interface as shown in Figure 5-1.

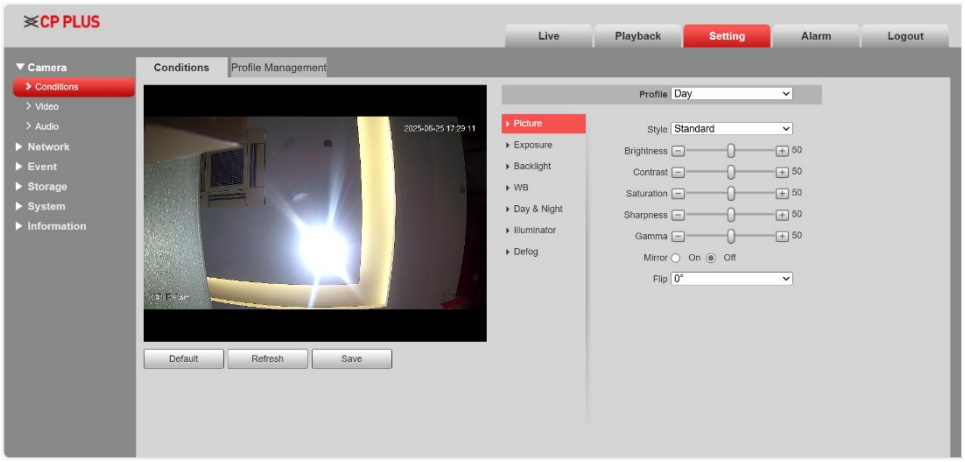


Figure 5-1

To set the Picture parameters, please refer to the following table for more details about this parameter setting.

Table 5-1

Parameter	Function
Style	It is to set the **Picture** style, which includes **Soft**, **Standard**, and **Vivid**. By default, it is in **Standard** style.
Brightness	It is to adjust the overall brightness of an image. The bigger the value is, the brighter it becomes and vice versa.
Contrast	It is to adjust the picture contrast. The bigger the value is, the brighter the contrast. The dark area becomes darker, and the bright area becomes overexposed and vice versa.
Saturation	It is to adjust the color darkness and light value. The bigger the value is, it becomes black & white; on the contrary, it becomes brighter.
Sharpness	It is to adjust the sharpness of an image. The bigger the value is, the sharper the image and more likely to generate noise easily.
Gamma	It is to change the image brightness and improve the dynamic display range of an image via non-linear adjustment mode. The bigger the value is, the brighter the picture becomes, and vice versa.
Mirror	Turn **On** the mirror, the monitoring image gets inverted.
Flip	It is to change the display direction of the monitoring image. It includes the following options: • **Normal 0°:** The monitoring picture is normally displayed. • **Flip Mode 90°**: The monitoring picture is displayed with clockwise rotation of 90°. • **Flip Mode 180°:** The monitoring picture is displayed upside down of 180°. • **Flip Mode 270°**: The monitoring picture is displayed with anticlockwise rotation of 90°. **Note:** Please set the video resolution as 1080p or lower when applying flip mode for some devices.

2. Click **Save** to complete the Picture parameter setting on the camera.

   Note: Click **Default** to restore the device to default setting, click **Refresh** to check the latest config file of the device.

5.1.1.a.ii Exposure

It is to set the Exposure parameter setting on the camera.

1. Select **Setting** > **Camera** > **Conditions** > **Exposure** and it displays the Exposure interface as shown in Figure 5-2.

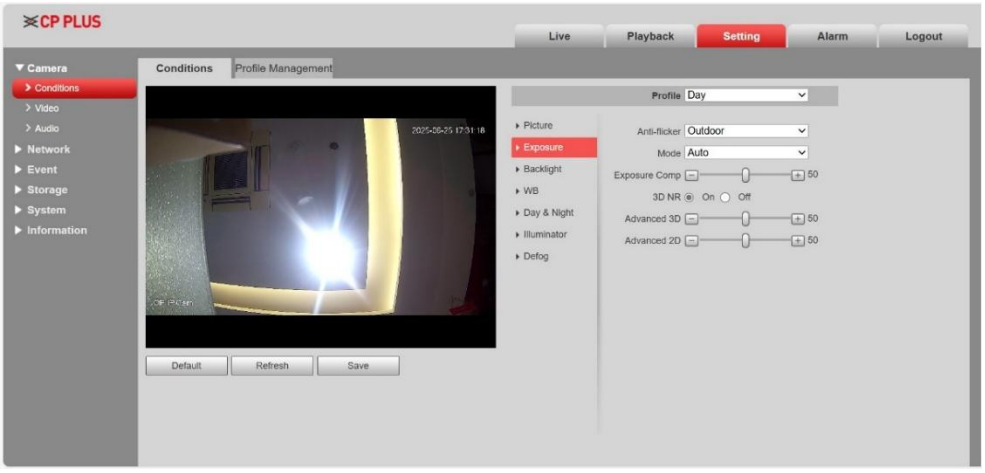


Figure 5-2

To set Exposure parameters, please refer to the following table for more details about this parameter setting.

Table 5-2

Parameter	Function
Anti-flicker	• **Outdoor**: You can switch to exposure mode when it is outdoor mode, it considers the result in the corresponding exposure mode. • **50Hz**: When the frequency is 50Hz, the system automatically adjusts the camera's exposure based on ambient light to maintain clear image quality and prevent flickering or stripes. • **60Hz**: When the frequency is 60Hz, the system automatically adjusts the camera's exposure based on ambient light to maintain clear image quality and prevent flickering or stripes.
Mode	It is to set the camera exposure mode. **Note:** When Anti-flicker is **Outdoor**, the Exposure mode can be set as **Gain Priority** or **Shutter Priority** mode. It includes the following options: • **Auto**: It automatically adjusts the image brightness according to the environment. • **Gain Priority**: The device automatically adjusts the gain range within the configured range based on ambient light. If the image brightness is still not sufficient and the gain value reaches its upper or lower limit, it automatically adjusts the shutter value to maintain optimal image brightness. • **Shutter Priority:** The device automatically adjusts the shutter range within the configured range based on ambient light. If the image brightness is still not sufficient and the shutter value reaches its upper or lower limit, it automatically adjusts the gain value to maintain optimal image brightness. • **Manual**: It is to manually set the gain value and shutter value,

	to adjust the display brightness of an image.
Exposure Comp	Exposure compensation allows for fine-tuning of the exposure levels in an image. The bigger the value, the brighter the image will be displayed.
3D NR	It is used to process the image with multi frame (at least two frames), and it reduces the noise of an image by using the frame information between the previous and latter frames.
Advanced 3D	It is used to enhance the video clarity by reducing noise across multiple frames, delivering smoother and more detailed images in low-light or dynamic scenes.
Advanced 2D	It is used to reduce noise from each video frame to deliver clearer, sharper images in low-light conditions.

2. Click **Save** to complete the Exposure parameter setting on the camera.

   Note: Click **Default** to restore the device to default setting, click **Refresh** to check the latest config file of the device.

5.1.1.a.iii Backlight

It is to set the Backlight parameter setting on the camera.

1. Select **Setting** > **Camera** > **Conditions** > **Backlight** and it displays the Backlight setting section as shown in Figure 5-3.

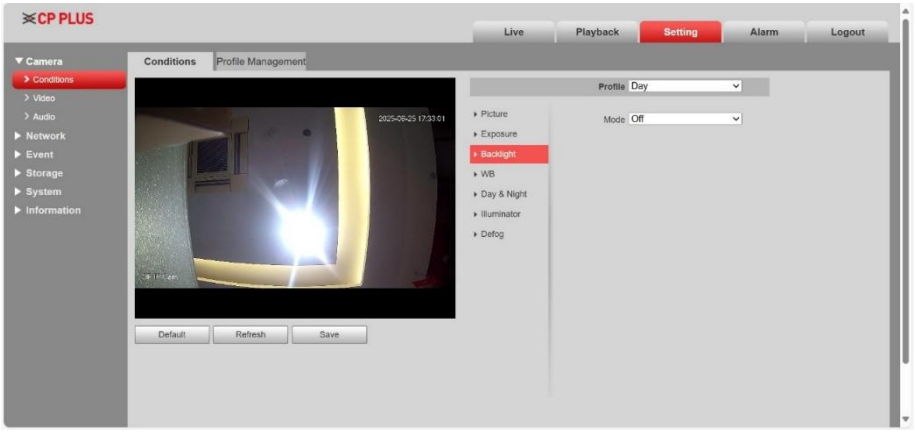
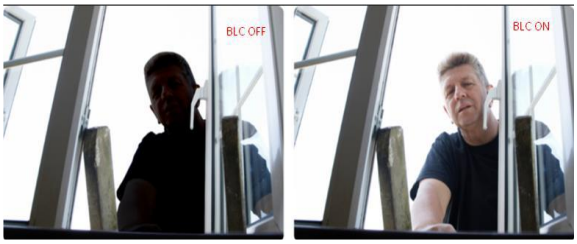


Figure 5-3

To set Backlight parameters, please refer to the following table for more details about this parameter setting.

Table 5-3

Parameter	Function	Function
Mode	Off	Disabling the backlight parameter can cause foreground subjects to appear dark in high-contrast lighting conditions.
	BLC	**Default**: Automatically adjusts the exposure to balance bright and dark areas, ensuring subjects remain visible. **Customized**: Manually define specific zones for compensation, allowing better control in complex lighting environments. 
	HLC	It is used to suppress intense light sources, such as headlights or flashlights, in a scene to improve visibility of darker areas. 
	WDR	It enables the camera to capture clear images in scenes with both very bright and very dark areas by balancing exposure levels. 

2. Click **Save** to complete the Backlight parameter setting on the camera.

   Note: Click **Default** to restore the device to default setting, click **Refresh** to check the latest config file of the device.

5.1.1.a.iv WB

It is to set the white balance parameter setting on the camera.

1. Select **Setting** > **Camera** > **Conditions** > **WB** and it displays the WB interface as shown in Figure 5-4.

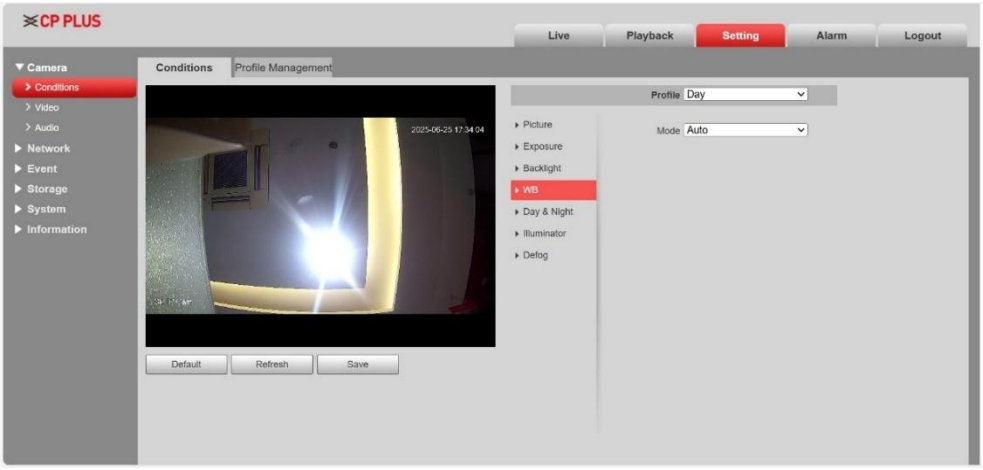


Figure 5-4

To set the WB parameter, please refer to the following table for more details about this parameter setting.

Table 5-4

Parameter	Mode Type	Function
Mode	Auto	System automatically compensates white balance (WB) based on color temperature to ensure clear and accurate color images.
	Natural	System naturally compensates WB to maintain clear and true-to-life color images.
	Street Lamp	System compensates WB based on street lamp lighting conditions to ensure clear color images.
	Outdoor	System compensates WB based on outdoor lighting conditions to ensure clear color images.
	Manual	Manually set the red and blue gain levels, and the system compensates WB accordingly.
	Regional Custom	System compensates WB only for a specified area based on its color temperature to ensure clear color images.

2. Click **Save** to complete the WB parameter setting on the camera.

   Note: Click **Default** to restore the device to default setting, click **Refresh** to check the latest config file of the device.

5.1.1.a.v Day & Night

It is to set the Day & Night parameter setting on the camera.

1. Select **Setting** > **Camera** > **Conditions** > **Day & Night** and it displays the Day & Night interface as shown in Figure 5-5.

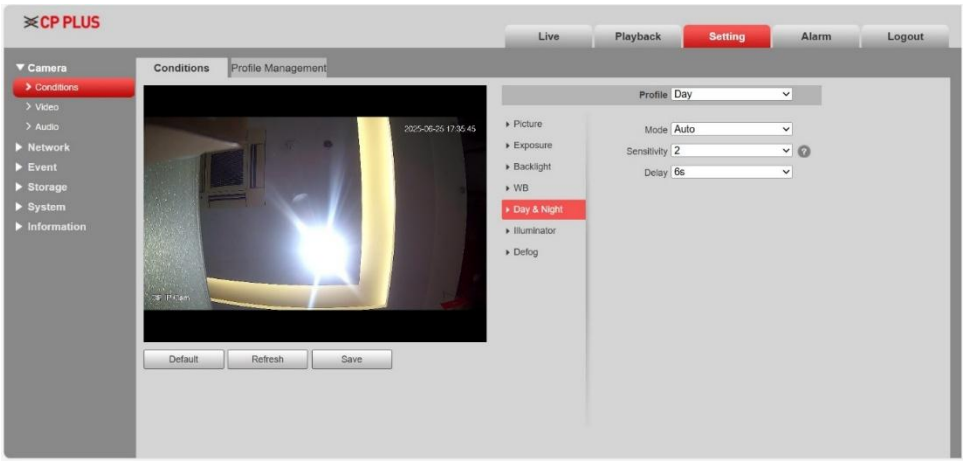


Figure 5-5

To set the Day & Night parameters, please refer to the following table for more details about this parameter setting.

Table 5-5

Parameter	Function
Mode	It is to set the camera image displayed as a color or black & white mode. **Note:** **The setting of Day & Night mode is not affected by the setting of Profile Management.** It includes the following options: • **Color**: The camera displays color image. • **Auto**: The camera automatically adjusts the image as per the environmental brightness. • **B/W**: The camera displays black & white image.
Sensitivity	The parameter is enabled when the **Day & Night** mode is set to **Auto**. It is to set the sensitivity of the switch between image color display and B/W display.
Delay	The parameter is enabled when the **Day & Night** mode is set to **Auto**. It is to set the switch delay between image color display and B/W display. The smaller the delay is, the faster the switch becomes between color display and black & white display.

2. Click **Save** to complete the Day & Night parameter setting on the camera.

   Note: Click **Default** to restore the device to default setting, click **Refresh** to check the latest config file of the device.

5.1.1.a.vi Illuminator

It is to set the Illuminator parameter setting on the camera.

1. Select **Setting** > **Camera** > **Conditions** > **Illuminator** and it displays the Illuminator interface as shown in Figure 5-6.

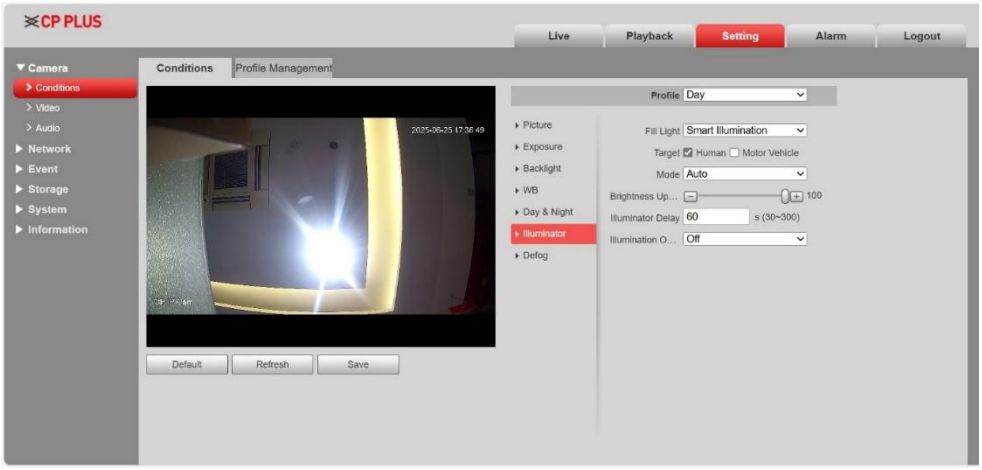


Figure 5-6

To set the Illuminator parameters, please refer to the following table for more details about this parameter setting.

Table 5-6

Parameter	Note
Fill Light	Four modes are available, that are **IR Mode**, **Warm Light Mode**, **Smart Illumination**, and **Schedule**. • **IR Mode**: It automatically activates when the light condition is low, enabling the camera to see in the dark by switching to black-and-white imaging. • **Warm Light Mode**: It uses built-in warm-colored LED lights to illuminate the area at night, allowing the camera to record full-color video in low-light or dark conditions. • **Smart Illumination**: It automatically turns on the smart light to display the colored image even in low-light conditions. • **Schedule**: Click **Setting**, to set specific times for recording, motion detection, or alerts. This helps manage storage and reduce unnecessary notifications. Click **Setting** to set the time and week settings to record in that time.
Target	Enable the target based on the requirement (eg: Human, Vehicle).
Mode	By default, it is set to “**Auto**”.
Brightness Upper Limit	It is to set the brightness of the light.
Illuminator Delay	It refers to the time interval between when a CCTV camera detects low light and when it activates (IR) illuminator or external lighting.
Illumination Overexposure Remover	It is used to automatically detect and suppress regions of a video frame that are excessively bright to maintain image clarity, ensuring critical scene details remain visible.

2. Click **Save** to complete the Illuminator parameter setting on the camera.

   Note: Click **Default** to restore the device to default setting, click **Refresh** to check the latest config file of the device.

5.1.1.a.vii Defog

The image quality becomes weak when the device is in the environment with fog or haze, users can enable defog function to adjust the image definition.

It is to set the Defog parameter setting on the camera.

1. Select **Setting** > **Camera** > **Conditions** > **Defog** and it displays the Defog interface as shown in Figure 5-7.

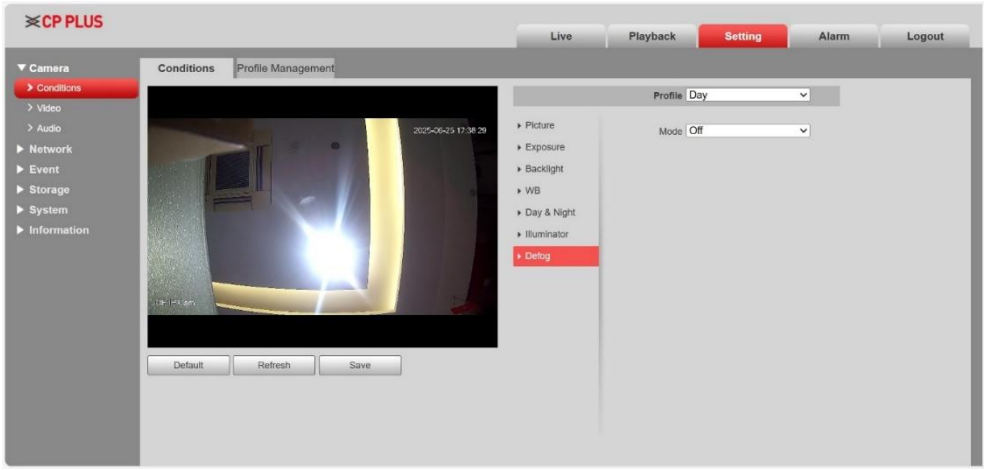


Figure 5-7

To set Defog parameter, please refer to the following table for more details about this parameter setting.

Table 5-7

Parameter	Mode Type	Function
Mode	Off	The defog parameter function is disabled.
	Auto	The system automatically adjusts the image clarity according to the environmental condition.
	Manual	Manually adjust the intensity to Low, Medium, or High and then image quality adjusts accordingly.

2. Click **Save** to complete the Defog parameter setting on the camera.

   Note: Click **Default** to restore the device to default setting, click **Refresh** to check the latest config file of the device.

5.1.1.b Profile Management

It is to set the Profile Management parameter setting on the camera.

1. Select **Setting** > **Camera** > **Conditions** > **Profile Management** and it displays the Profile Management interface as shown below.

2. **Set Profile Management:**

- When it is set to **General**, it will monitor a general config.

Figure 5-8

- When it is set to **Full Time**, you can set **Always Enable** to either Day or Night and it will monitor accordingly.

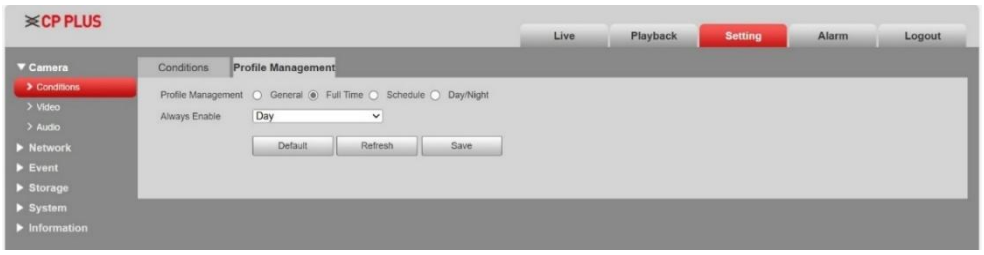


Figure 5-9

- When it is set to Schedule, you can set some period as Day and another period as Night.

  for example, if it sets 00:00~12:00 as day, 12:00~24:00 as night, then the system will monitor by considering corresponding config in different periods.

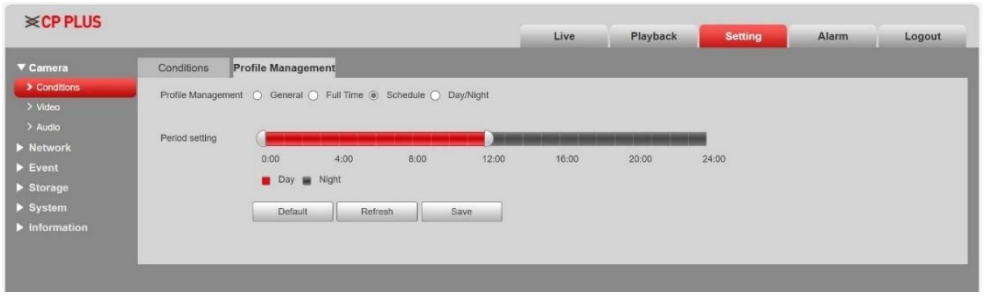


Figure 5-10

- When it is set to **Day/Night**, it automatically switches modes for optimal image quality in varying light conditions.

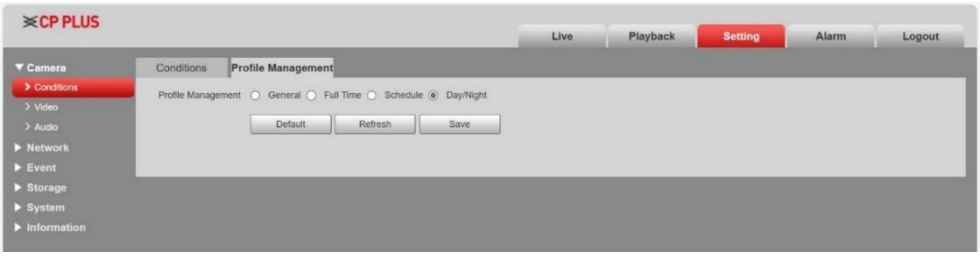


Figure 5-11

3. Click **Save** to complete the Profile Management setting on the camera.

   Note: Click **Default** to restore the device to default setting, click **Refresh** to check the latest config file of the device.

5.1.2 Video

It contains five tabs: Video, Snapshot, Overlay, ROI, and Path.

5.1.2.a Video

It is to set the video parameter setting on the camera.

1. Select **Setting** > **Camera** > **Video** > **Video** and it displays the Video tab interface as shown in Figure 5-12.

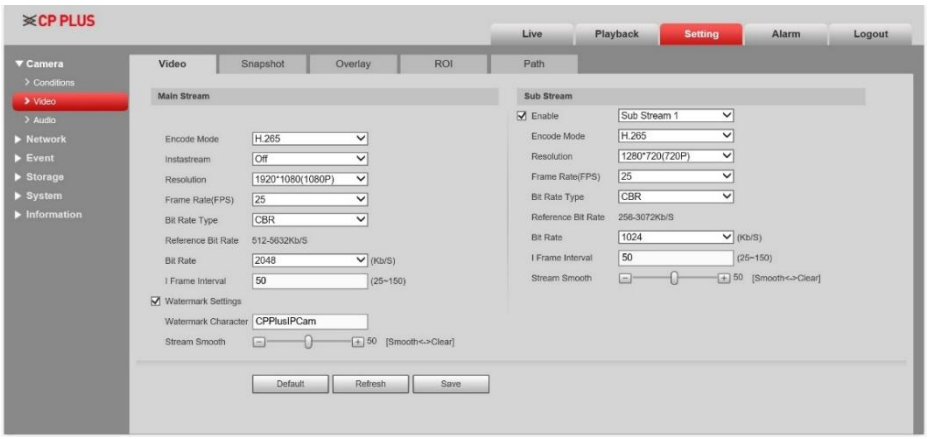


Figure 5-12

To set the video parameter, please refer to the following table for more details about this parameter setting.

Table 5-8

Parameter	Function
Enable Sub Stream	Select **Enable** to enable the sub stream. The device supports enabling Sub Streams at the same time.
Encode Mode	There are five options: **H.264B** (Baseline Profile), **H.264** (main profile standard, **H.264H** (high profile standard), **H.265** (main profile standard) and **MJPEG** encode. • The H.264, H.264H both are H.264-bit stream. H.264 is the main profile encode, and you need to enable the sub stream function in your camera and set

	the resolution as **CIF**. Then, you can monitor using the Blackberry cell phone. • The H.265 is the main profile encode mode. • **MJPEG**: In this encode mode, the video needs to be a large bit streamed to guarantee the video definition. You can use the max bit stream value in the recommended bit rate to get the better video output quality.
Instastream	It refers to a smart streaming technology designed to optimize video streaming performance by dynamically adjusting the video stream based on real-time conditions and requirements.
Resolution	Select the resolution from the drop-down list. For each resolution, the recommended bit stream value is different. **Note:** When the video is under rotating status, you cannot set resolution higher than 1080p.
Frame Rate (FPS)	**PAL**: 1～25f/s, **NTSC**: 1～30f/s or 1~60f/s. The frame rate may vary due to different resolutions.
Bit Rate Type	Two options are available: **CBR** (Constant Bit Rate) and **VBR** (Variable Bit Rate). **Note:** **Set the video quality in VBR mode. Under MJPEG mode, only CBR is available.**
Reference Bit Rate	Refer to the minimum and maximum kb/S
Bit Rate	• In CBR, the bit rate is the max value. In dynamic video, the system needs to have a low frame rate or video quality to guarantee the value. • The value is null in VBR mode. Please refer to the recommended bit rate for more detailed information.
I Frame Interval	It refers to how frequently a full image frame (called an I-frame, or intra-frame) is sent within a video stream. It's a key setting that affects video quality, bandwidth usage, and storage requirements. **I-frame interval** = The number of frames between two I-frames. **For example**: If the I-frame interval is 30, then an I-frame appears once every 30 frames. At 30 FPS (frames per second), this means one I-frame per second.
Watermark Settings	Enable **Watermark Settings** and when this function is enabled, check the video is tampered via verifying watermark character.
Stream Smooth	Drag to either left or right to set the value of Stream Smooth. The higher the value is, the less smooth the stream becomes but the higher the image definition and lower the value is, the smoother the stream but lower the image definition.

2. Click **Save** to complete the video setting parameter on the camera.

   Note: Click **Default** to restore the device to default setting, click **Refresh** to check the latest config file of the device.

5.1.2.b Snapshot

It is to set the snapshot parameter setting on the camera. The snapshot interface is shown in Figure 5-13.

Figure 5-13

To set Snapshot parameter, please refer to the following table for more details about this parameter setting.

Table 5-9

Parameter	Function
Snapshot Type	There are two modes: **General** (schedule) and **Event** (activation).
Image size	It is the same as the resolution of main stream. It cannot be editable.
Quality	It is to set the image quality. There are six levels, and the best level is **six**.
Interval	It is to set the snapshot frequency. Optionally, 1~7s/picture, and you can customize the snapshot frequency up to (1-50000)S.

Click **Save** to complete the Snapshot parameter setting on the camera.

Note: Click **Default** to restore the device to default setting, click **Refresh** to check the latest config file of the device.

5.1.2.c Overlay

In overlay, there are six sections: Privacy Masking, Channel Title, Time Title, Text Overlay, Font Attribute, and Custom Overlay.

5.1.2.c.i Privacy Masking

- Users can mask the specific area in the specified video on the monitor.
- The system supports four privacy zones.
- The privacy masking interface is shown in Figure 5-14.

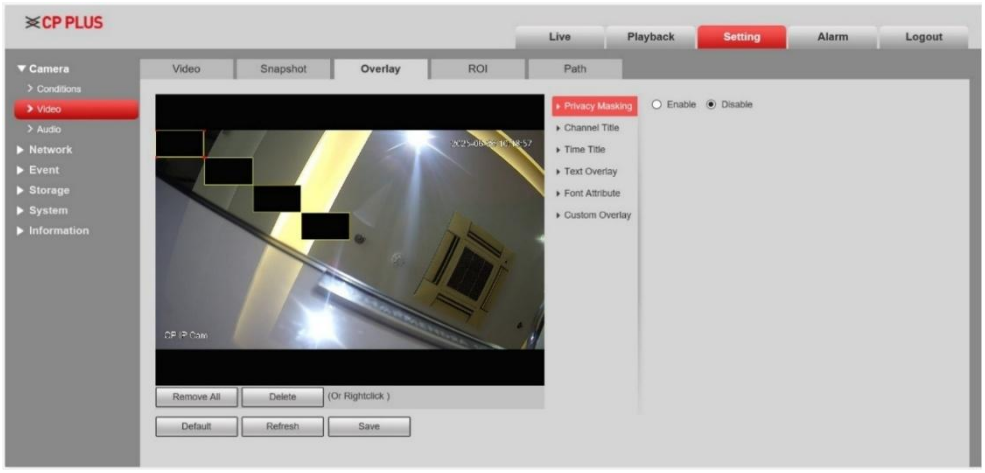


Figure 5-14

Click **Save** to complete the privacy masking parameter setting on the camera.

Note: Click **Default** to restore the device to default setting, click **Refresh** to check the latest config file of the device.

5.1.2.c.ii Channel Title

- Enable this function to input channel title to your video window as shown in Figure 5-15.
- Use the mouse and drag the channel title position (if required).

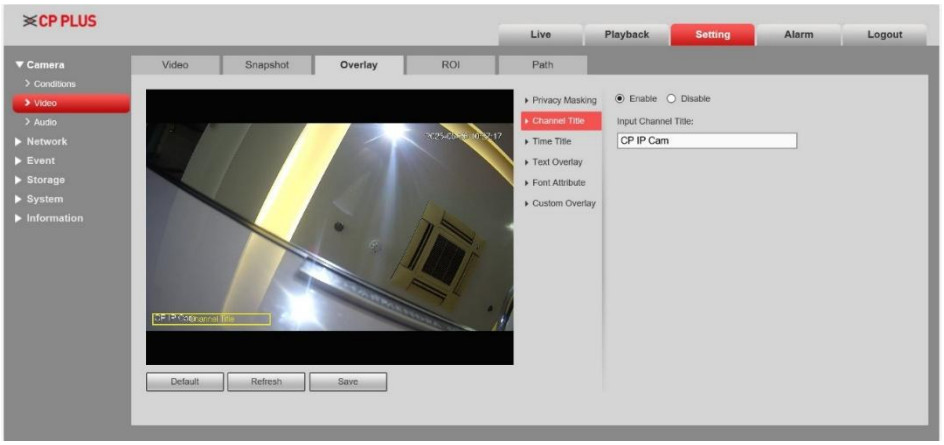


Figure 5-15

Click **Save** to complete the Channel Title setting on the camera.

Note: Click **Default** to restore the device to default setting, click **Refresh** to check the latest config file of the device.

5.1.2.c.iii Time Title

- Enable this function to input time title to your video window as shown in Figure 5-16.
- Use the mouse and drag the time title position (if required).

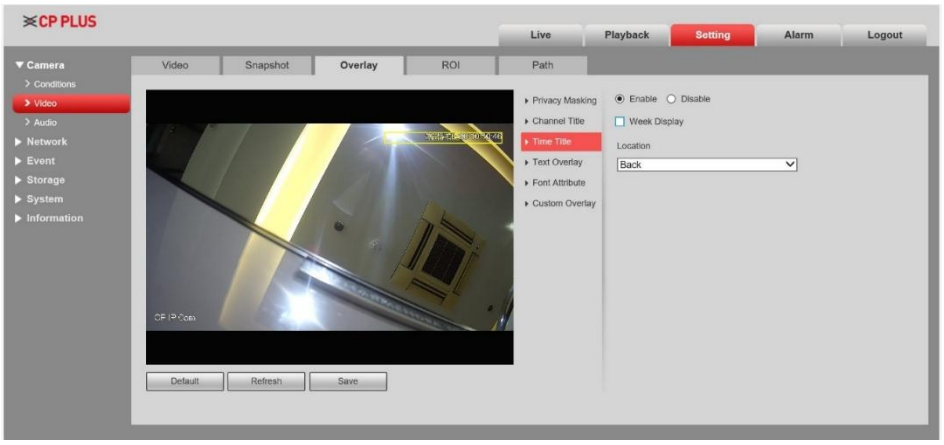


Figure 5-16

Click **Save** to complete the time title setting on the camera.

Note: Click **Default** to restore the device to default setting, click **Refresh** to check the latest config file of the device.

5.1.2.c.iv Text Overlay

- Enable this function to overlay the text to your video window as shown in Figure 5-17.
- Use the mouse and drag the text overlay position (if required).
- Text align includes either Left or Right.

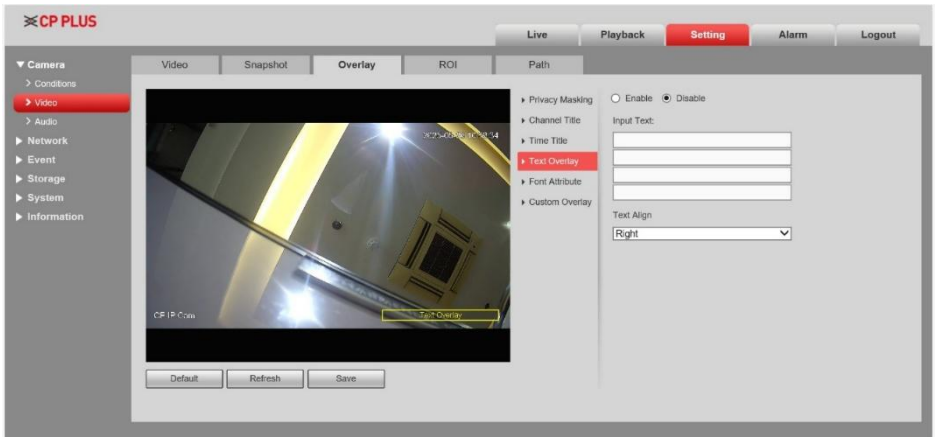


Figure 5-17

Click **Save** to complete the time title setting on the camera.

Note: Click **Default** to restore the device to default setting, click **Refresh** to check the latest config file of the device.

5.1.2.c.v Font Attribute

It controls the appearance of text displayed on the video stream or recordings. This is a part of the On-Screen Display (OSD) settings in a CCTV camera.

The font attribute interface is shown in Figure 5-18.

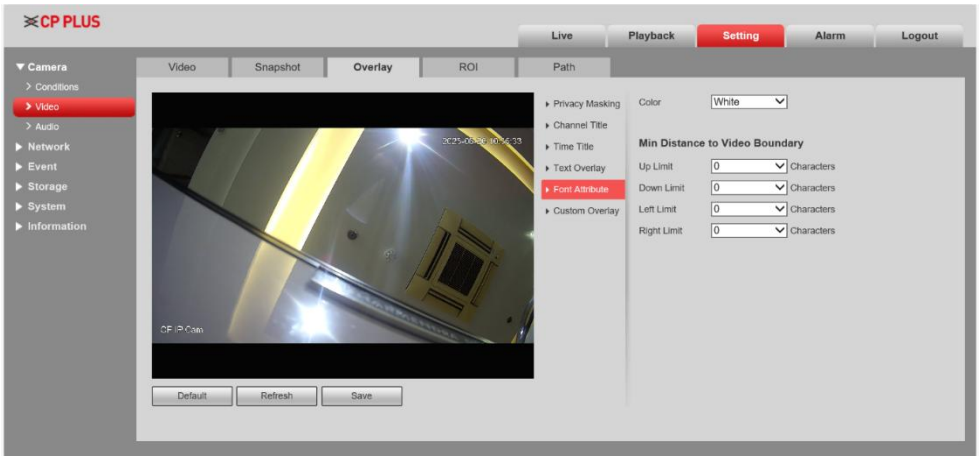


Figure 5-18

To set Font Attribute parameter, please refer to the following table for more details about this parameter setting.

Table 5-10

Parameter	Function
Up Limit	Set the top boundary or positioning margins for on-screen text (like timestamps or camera names) within the video frame.
Down Limit	Set the bottom boundary or positioning margins for on-screen text (like timestamps or camera names) within the video frame.
Left Limit	Set the left boundary or positioning margins for on-screen text (like timestamps or camera names) within the video frame.
Right Limit	Set the right boundary or positioning margins for on-screen text (like timestamps or camera names) within the video frame.

Click **Save** to complete the font attribute parameter setting on the camera.

Note: Click **Default** to restore the device to default setting, click **Refresh** to check the latest config file of the device.

5.1.2.c.vi Custom Overlay

A custom overlay is an On-Screen Display (OSD) feature that lets you add customized visual elements to the video output. This is beyond the default overlays like time, date, or camera name.

The Custom Overlay interface is shown in Figure 5-19.

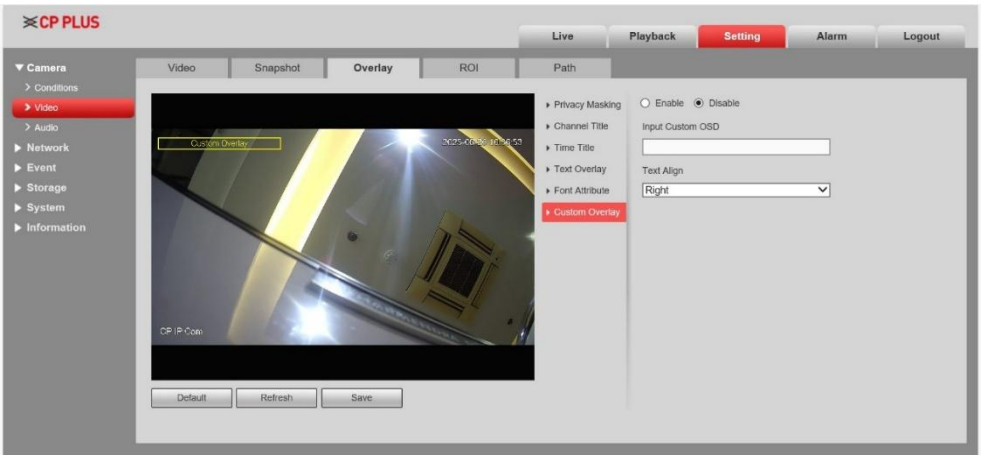


Figure 5-19

To set the parameters of the custom overlay, please refer to the following table for more details about this setting.

Table 5-11

Parameter	Function
Input Custom OSD	Enter the text provided in the text box to display in OSD.
Left	Set the boundary text align to left.
Right	Set the boundary text align to right.

Click **Save** to complete the custom overlay parameter setting on the camera.

Note: Click **Default** to restore the device to default setting, click **Refresh** to check the latest config file of the device.

5.1.2.d ROI

Region of Interest (ROI) enables the camera to focus on providing high quality image for a selected region only. The ROI interface is shown in Figure 5-20.

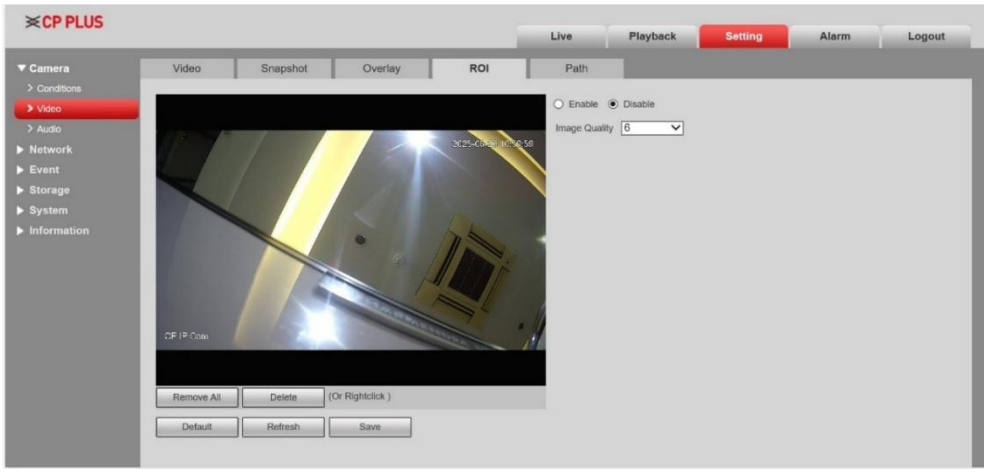


Figure 5-20

5.1.2.e Path

Path is used to store the snapshots, recordings, Playback snapshots, Playback records, and video clips to the default or at a specified storage path.

The storage path interface is shown in Figure 5-21.

Figure 5-21

Here, you can set a snapshot saved path and the recorded storage path.

- The default monitor image path is C:\Users\admin\WebDownload\LiveSnapshot.
- The default monitor record path is C:\Users\admin\WebDownload\LiveRecord.
- The default playback snapshot path is C:\Users\admin\WebDownload\PlaybackSnapshot.
- The default playback download path is C:\Users\admin\WebDownload\PlaybackRecord.
- The default playback cut path is: C:\Users\admin\WebDownload\VideoClips.

Note: Admin is locally logged in PC account.

Please click on the **Save** button to save the current setup.

5.1.3 Audio

It is to set the audio parameter setting on the camera.

5.1.3.a Audio

The audio interface is shown in Figure 5-22.

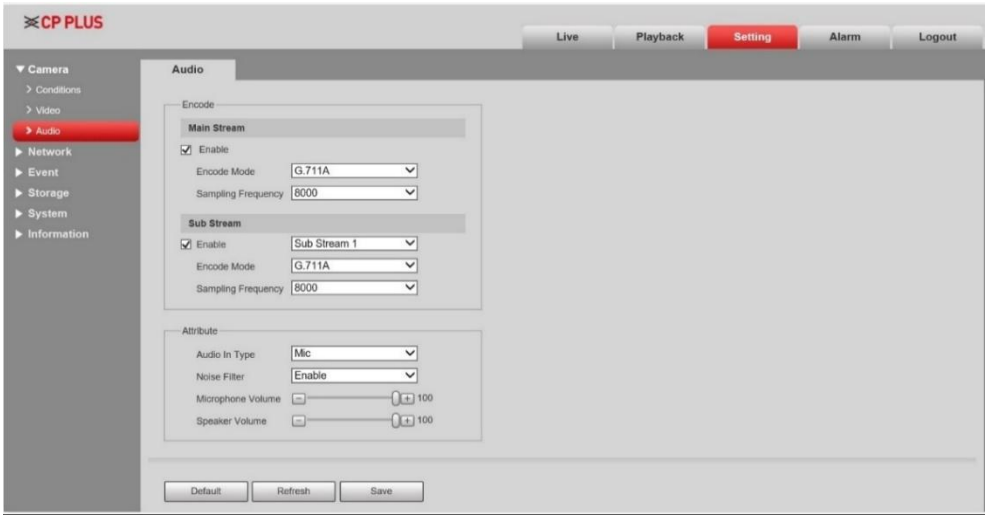


Figure 5-22

To set the Audio parameter, please refer to the following table for more details about this parameter setting.

Table 5-12

Parameter	Function
Enable	Enable **Audio** when the video is enabled. After selecting **Enable** of Main Stream or Sub Stream, the network transmission stream is the audio/video composite stream, otherwise it only includes video image.
Encode mode	The encode mode of the Main stream and extra stream include **PCM**, **G.711A**, **G.711Mu**, **G.726** and **AAC**. The default mode is **G.711A**. The setup here is for audio encode mode and the two-way talk encode both.
Sampling Frequency	It is to set the sampling frequency for audio.
Audio In Type	Select any **one** mode. **LineIn**: Device needs to connect to the external audio input source. **Mic**: Device doesn't need to connect to the external audio input source.
Noise Filter	Enable **Noise Filter** to filter only relevant noise.
Microphone Volume	Adjust microphone volume from 0～100.
Speaker Volume	Adjust speaker volume from 0～100.

Click **Save** to complete the audio parameter setting on the camera.

Note: Click **Default** to restore the device to default setting, click **Refresh** to check the latest config file of the device.

5.2 Network

In Network, there are ten sections: TCP/IP, Port, PPPoE, SMTP(Email), SNMP, Multicast, Auto Connect, 802.1x, QoS, Access Platform.

5.2.1 TCP/IP

It supports IPv4 and IPv6. IPv4 supports static IP and DHCP. IPv6 supports static IP only. When users manually modify IP address, WEB will automatically jump to the new IP address.

5.2.1.a TCP/IP

The TCP/IP interface is shown in Figure 5-23.

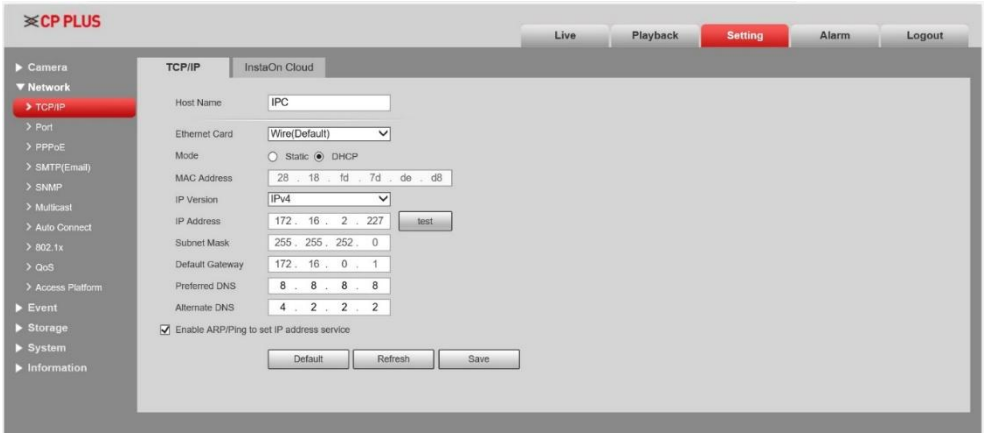


Figure 5-23

To set the TCP/IP parameter, please refer to the following table for more details about this parameter setting.

Table 5-13

Parameter	Function
Host Name	It is to set up the current host device name. It supports max up to 30 characters.
Ethernet Card	Select the Ethernet port. By default, it is **Wire**. **Note:** Users can modify the default Ethernet card, if there is more than one card.
Mode	There are two modes: **Static** mode and **DHCP** mode. Select **Static** mode, you should manually set IP/subnet mask/gateway. Select **DHCP** mode, it auto searches IP, and you cannot set IP/subnet mask/gateway.

Mac Address	It is to display device Mac address.
IP Version	It is to select the IP version. Either **IPV4** or **IPV6**. You can access the IP address of these two versions.
IP Address	Enter the corresponding number to modify the IP address and then set the corresponding subnet mask and the default gateway. **Note:** IPv6 does not support subnet mask.
Subnet Mask	
Default Gateway	The default gateway must be in the same network segment as the IP address.
Preferred DNS	Preferred DNS refers to the primary Domain Name System (DNS) server that your device or network uses to resolve domain names into IP addresses.
Alternate DNS	In IP cameras the Alternate DNS is the secondary DNS server used when the Preferred DNS is unavailable or fails to respond. It acts as a backup to ensure continuous name resolution converting domain names into IP addresses.
Enable ARP/Ping to set IP address service	Users use ARP/Ping command to modify or set the device IP address if you know the device MAC address. Before the operation, ensure the network camera and the PC are in the same LAN. This function is enabled by default. You can refer to the steps listed below. 1. Get an IP address. Set the network camera and the PC in the same LAN. 2. Get the physical address from the label of the network camera. 3. Go to the **Run** interface and then input the following commands. arp –s <IP Address> <MAC> ping –l 480 –t <IP Address> Such as : arp -s 192.168.0.125 11-40-8c-18-10-11 ping -l 480 -t 192.168.0.125 4. Reboot the device. 5. You can see the setup is **OK** if you can see there are output information such as “Reply from 192.168.0.125 …” from the command output lines. Now, you can close the command line. 6. Open the browser and then input http://<IP address>. Click on the **Enter** button, you can access it now.
test	Click on the **Test** option to verify whether the operation is succeeded or failed.

Click **Save** to complete the TCP/IP parameter setting on the camera.

Note: Click **Default** to restore the device to default setting, click **Refresh** to check the latest config file of the device.

5.2.1.b InstaOn Cloud

Click **Enable** to connect the device to network, and then you can connect to the device via mobile client of **gCMOB/iCMOB** after **Online** is

displayed on the interface (connection mode: add device serial number or scan QR code). See Figure 5-24.

Figure 5-24

Click **Save** to complete the InstaOn setting on the camera.

Note: Click **Default** to restore the device to default setting, click **Refresh** to check the latest config file of the device.

5.2.2 Port

Ports define how the camera communicates over the network. The Port interface is shown in Figure 5-25.

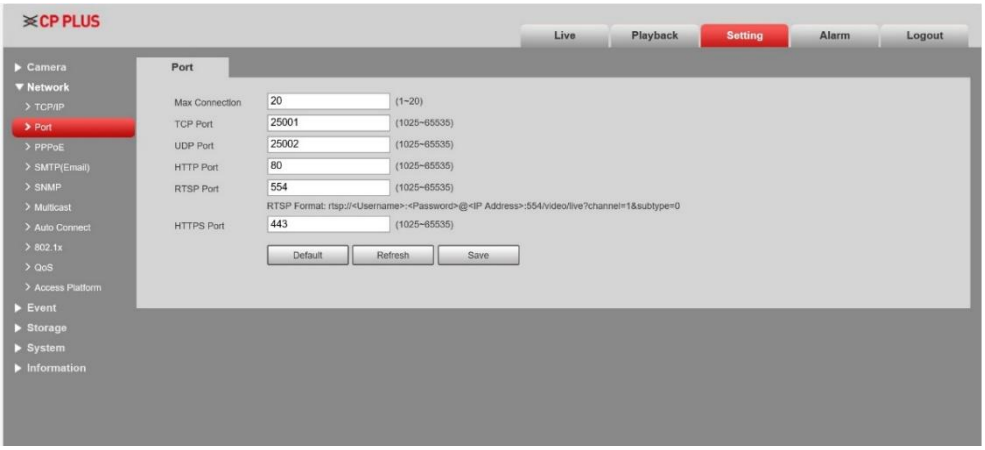


Figure 5-25

To set the Port parameter, please refer to the following table for more details about this parameter setting.

Table 5-14

Parameter	Function
Max Connection	It is the max web connection for the same device. The value ranges from 1 to 20. By default, the connection range is 20.
TCP Port	The port range is from 1025~65535. The default value is **25001**. You can input the actual port number (if necessary).
UDP Port	The port range is from 1025~65535. The default value is **25002**. You can input the actual port number (if necessary).
HTTP Port	The port range is from 1025~65525. The default value is **80**. You can input the actual port number (if necessary).
RTSP Port	RTSP (Real-Time Streaming Protocol) is a network protocol used to stream audio and video in real time, commonly from IP cameras to clients such as video management software (VMS), mobile apps, or media players like VLC. The default value is 554. Please leave blank if use default. **Note:** User uses BlackBerry need to set encode mode to H.264B, resolution to CIF and turn off audio. URL format is: **rtsp://username:password@ip:port/video/live?channel=1"&"subtype=0** username – camera username. password – camera password. ip – the camera ip. port – the port default value is **554**.
HTTPS Port	HTTPS communication port range is from 1025~65535, By default, it is **443**.

Click **Save** to complete the Port setting on the camera.

Note: Click **Default** to restore the device to default setting, click **Refresh** to check the latest config file of the device.

Notes:

- 0～1024, 37780～37880, 1900, 3800, 5000, 5050, 9999, 37776, 39999, 42323 are all special ports. Users cannot modify them.
- Avoid using default port value of other ports.

5.2.3 PPPoE

Enable PPPoE (Point-to-Point Protocol over Ethernet) that allows an IP camera to connect directly to the internet via a DSL modem using ISP (Internet Service Provider) credentials.

The PPPoE interface is shown in Figure 5-26.

Note: After PPPoE dial-up is successful, it needs to log in the device via the IP which is set before dial-up; in the PPPoE setup interface, it displays the registered IP address, and then it can visit the IP address via client.

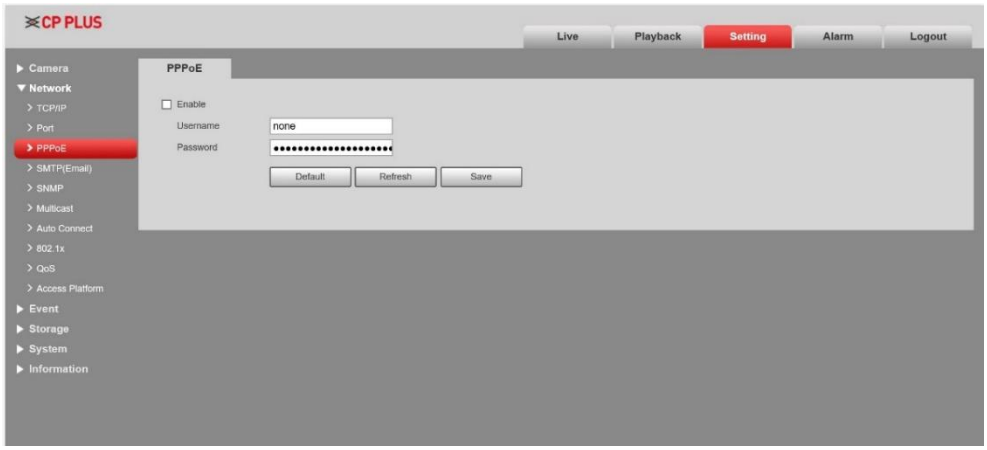


Figure 5-26

To set the PPPoE parameter, please refer to the following table for more details about this parameter setting.

Table 5-15

Parameter	Function
Enable	Enable it to allow direct internet access via DSL connection.
Username	Enter the username.
Password	Enter the password.

Click **Save** to complete the PPPoE parameter setting on the camera.

Note: Click **Default** to restore the device to default setting, click **Refresh** to check the latest config file of the device.

5.2.4 SMTP(Email)

The SMTP(Email) interface is shown in Figure 5-27.

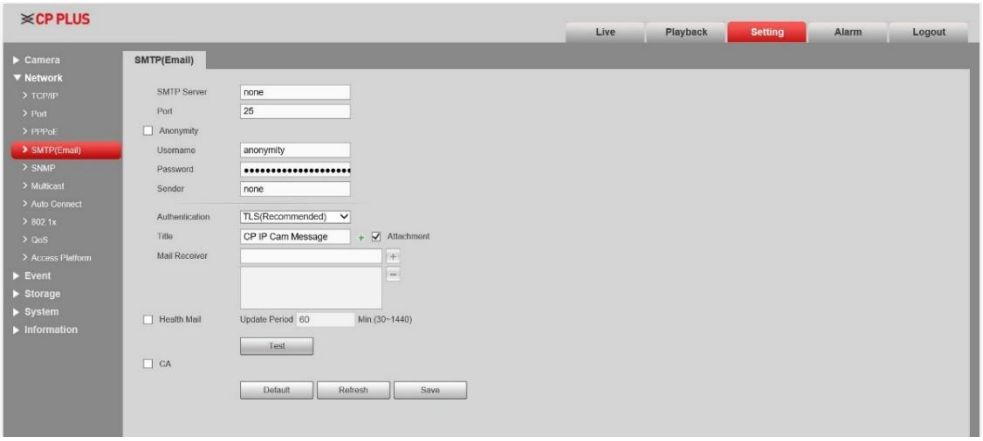


Figure 5-27

To set the SMTP(Email) parameter, please refer to the following table for more details about this parameter setting.

Table 5-16

Parameter	Function
SMTP Server	Input server address and then enable this function.
Port	By default, the value is **25**. You can modify it (if necessary).
Anonymity	For the server which supports the anonymity email function, it won't display the information of the sender.
Username	The username of the sender email account.
Password	The password of sender email account.
Sender	Sender email address.
Authentication	You can select **SSL**, **TLS** or **None**.
Title (Subject)	Input email subject.
Attachment	System can send out the email of the snapshot picture once you enable the check box.
Mail receiver	Input receiver email address here. It supports three addresses.
Health Mail	The system sends test mail to check if the connection is successfully configured. Select **Health Mail**, configure the Update Period, and then the system sends test mail as the set interval.
Test	Click on the **Test** option to verify whether the operation is succeeded or failed.
CA	A **Certificate Authority** is a trusted organization that issues **digital certificates** used to verify the identity of secure servers. for example, when sending email via **SMTP** over **SSL/TLS**.

Click **Save** to complete the SMTP(Email) parameter setting on the camera.

Note: Click **Default** to restore the device to default setting, click **Refresh** to check the latest config file of the device.

5.2.5 SNMP

A standard protocol used for monitoring and managing network devices, including IP-based cameras. The SNMP interface is shown in Figure 5-28 & Figure 5-29.

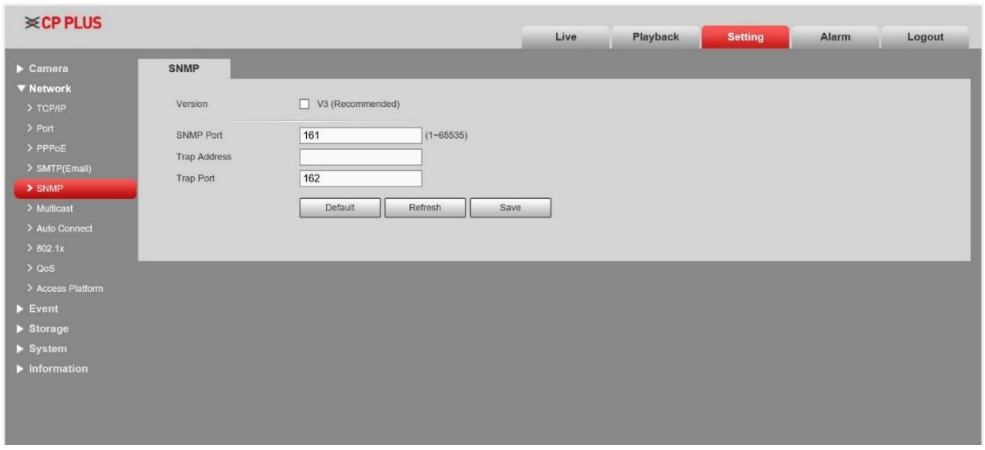


Figure 5-28

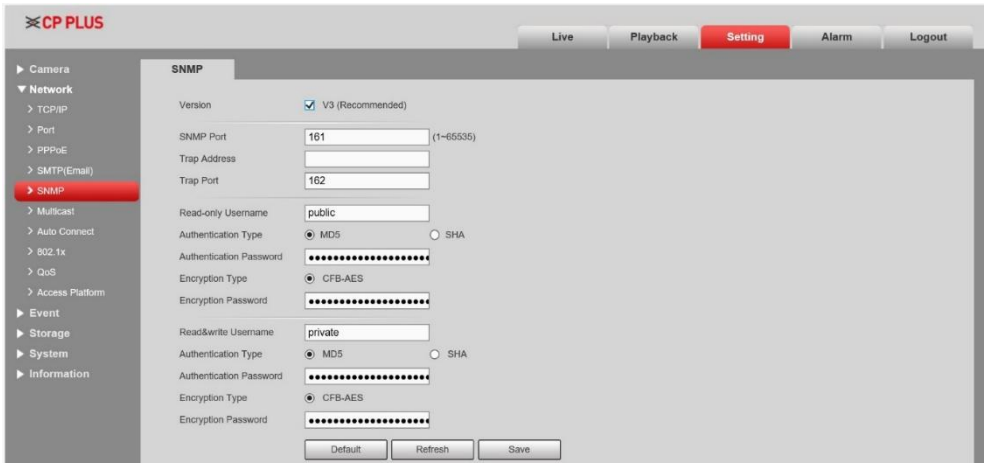


Figure 5-29

To set the SNMP parameter, please refer to the following table for more details about this parameter setting.

Select V3 to process the information.

Table 5-17

Parameter	Function
SNMP Port	The port is used by the device's software agent to receive SNMP requests. By default, the SNMP port is 161.
Trap Address	The target IP address of the server where SNMP traps (alerts) are sent from the device.
Trap Port	The target network port used by the server to receive SNMP trap messages from the devices. By default, it is 162.
Read-only Username	Set the username. By default, it is public. **Note:** Enter the name, it can be number, letter and underline.
Read&write Username	Set the username. By default, it is public. **Note:** Enter the name, it can be number, letter and underline.
Authentication Type	Select **MD5** or **SHA**. By default, it is **MD5**.
Authentication Password	The password should not be less than 8 digits.
Encryption Type	By default, it is **CFB-AES.**
Encryption Password	The password should not be less than 8 digits.

Click **Save** to complete the SNMP setting on the camera.

Note: Click **Default** to restore the device to default setting, click **Refresh** to check the latest config file of the device.

5.2.6 Multicast

Multicast is a network method that allows the camera to send a single video stream to multiple users or devices simultaneously, reducing bandwidth consumption.

The Multicast interface is shown in Figure 5-30.

Note:

- Open preview, streaming media protocol, select multicast, and monitor via multicast format.
- Here, you can set multicast address and port. You also need to go to Live interface to set the protocol as Multicast.

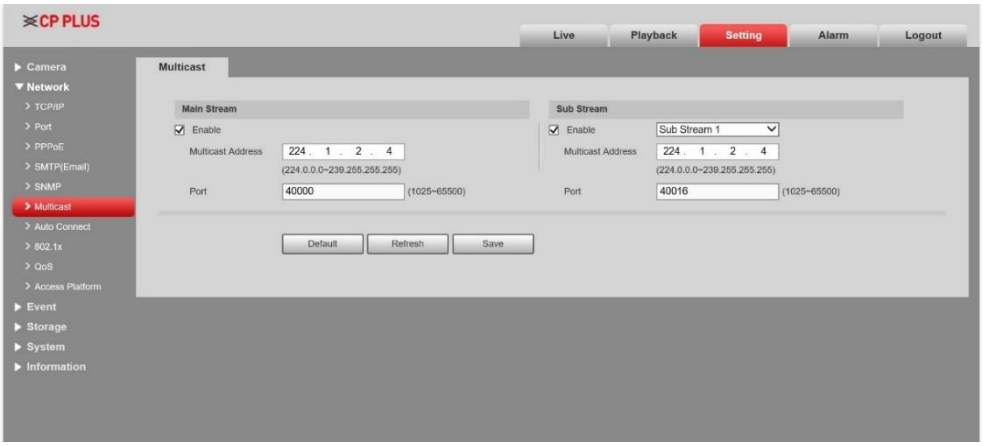


Figure 5-30

To set the Multicast parameter, please refer to the following table for more details about this parameter setting.

Table 5-18

Parameter	Function
Enable	Select to enable multicast function. **Note:** Main Stream and Sub Stream cannot be used at the same time.
Multicast Address	Main/Sub stream multicast default address is 224.1.2.4 and its range is 224.0.0.0～239.255.255.255.
Port	Multicast port. Main Stream is 40000, Sub Stream 1 is 40016, Sub Stream 2 is 40032, Sub Stream 3 is 40048 and the range is 1025～65500.

Click **Save** to complete the Multicast setting on the camera.

Note: Click **Default** to restore the device to default setting, click **Refresh** to check the latest config file of the device.

5.2.7 Auto Connect

Auto Connect helps you to reconnect automatically to the network or NVR after a disconnection. This helps maintain continuous monitoring without manual intervention.

The Auto Connect interface is as shown in Figure 5-31.

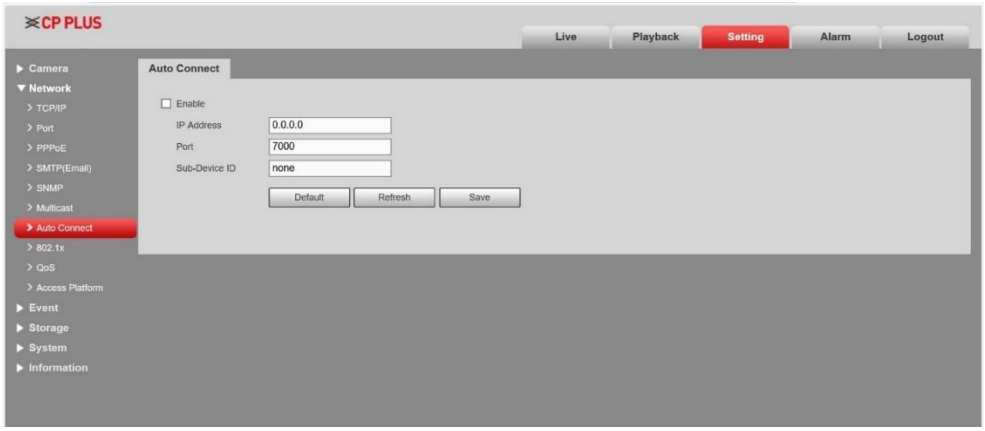


Figure 5-31

To set the Auto Connect parameter, please refer to the following table for more details about this parameter setting.

Table 5-19

Parameter	Function
Enable	Enable it to automatically reconnect when there is any disconnection or reboot.
IP Address	Enter the IP address.
Port	Enter the port.
Sub-Device ID	Enter the sub-device ID.

Click **Save** to complete the Auto Connect setting on the camera.

Note: Click **Default** to restore the device to default setting, click **Refresh** to check the latest config file of the device.

5.2.8 802.1x

802.1x (port-based network access control protocol) provides secure network access control through authentication of devices before they connect to the network.

The 802.1x interface is shown in Figure 5-32.

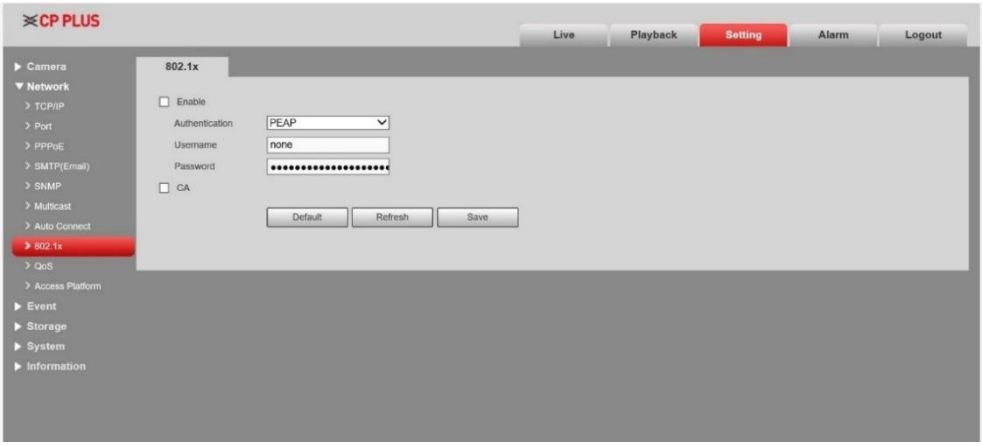


Figure 5-32

To set the 802.1x parameter, please refer to the following table for more details about this parameter setting.

Table 5-20

Parameter	Function
Enable	Enable it to ensure only authenticated devices can access the network.
Authentication	There are two authentications: PEAP (Protected EAP protocol) and TLS (Transport Layer Security) By default, the authentication is **PEAP**.
Username	It needs the username to login, which is authenticated by the server.
Password	Please input the password.
CA	A **Certificate Authority** is a trusted organization that issues **digital certificates** used to verify the identity of secure servers. for example, when sending email via **SMTP** over **SSL/TLS**.

Click **Save** to complete the 802.1x parameter setting on the camera.

Note: Click **Default** to restore the device to default setting, click **Refresh** to check the latest config file of the device.

5.2.9 QoS

QoS (Quality of Service) prioritizes video data over other network traffic to ensure smooth streaming and reduce latency or packet loss.

The QoS interface is shown below. See Figure 5-33.

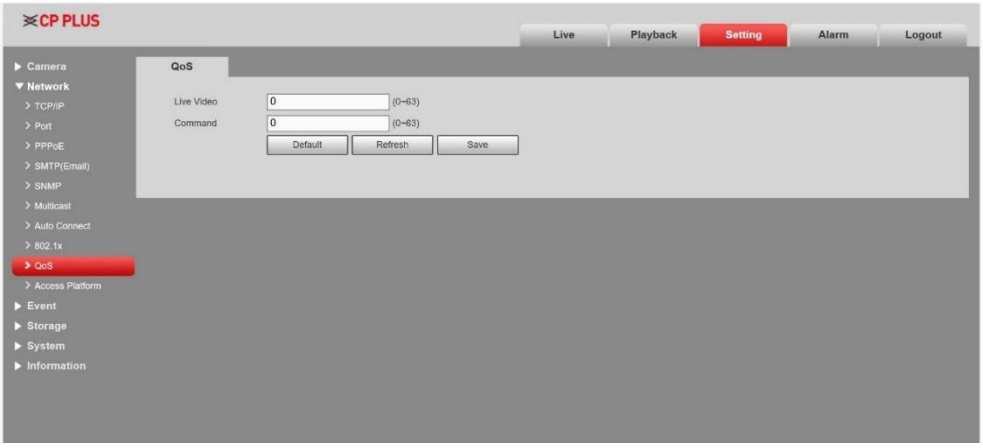


Figure 5-33

Ensure that the video format is H.264, H.264B, and H.264H, and the audio format is AAC.

To set the QoS parameter, please refer to the following table for more details about this parameter setting.

Table 5-21

Parameter	Function
Live Video	It refers to live video streaming traffic, a real-time transmission of video from the camera to an NVR, monitoring client, or remote viewer.
Command	It refers to controlling signals and management commands between the camera and the client/NVR/software.

Click **Save** to complete the QoS setting on the camera.

Note: Click **Default** to restore the device to default setting, click **Refresh** to check the latest config file of the device.

5.2.10 Access Platform

In access platform, you see two tabs: ONVIF and RTMP.

5.2.10.a ONVIF

ONVIF is a standard that allows IP cameras and other security devices from different brands to work together easily. The ONVIF interface is shown in Figure 5-34.

Figure 5-34

Click **Save** to complete the ONVIF parameter setting on the camera.

Note: Click **Default** to restore the device to default setting, click **Refresh** to check the latest config file of the device.

5.2.10.b RTMP

RTMP (Real-Time Messaging Protocol) allows an IP camera to stream live video to a streaming server or platform, such as YouTube Live, Facebook Live, or a custom RTMP server. It can be configured by admin only.

RTMP supports H.264, H.264B and H.264H video formats, and the AAC audio format only.

1. Select **Setting** > **Network** > **Access Platform** > **RTMP**. See Figure 5-35.
2. Enable the check box.

   Note: Ensure that the IP address is trustable when enabling RTMP
3. Configure RTMP parameters.

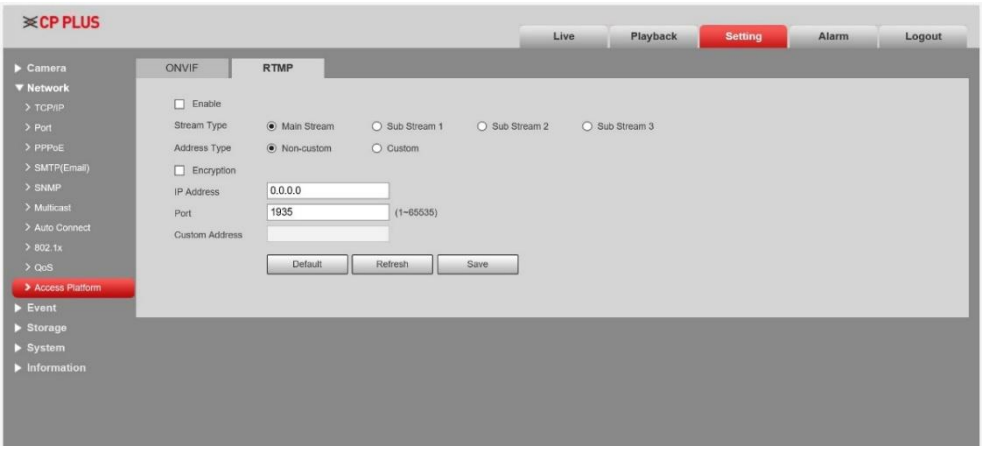


Figure 5-35

To set the RTMP parameter, please refer to the following table for more details about this parameter setting.

Table 5-22

Parameter	Function
Enable	Enable it to stream the live video from the IP camera directly to online platforms.
Stream Type	The stream for live view. Ensure that the video format is **H.264**, **H.264B** and **H.264H**, and the audio format is **AAC**.
Address Type	There are two types: **Non-custom** and **Custom**. **Non-custom**: Enter the server IP and domain name. **Custom**: Enter the path allocated by the server.
Encryption	Enable encryption to allow secure streaming.
IP Address	When selecting **Non-custom**, you need to enter server IP address and port. **IP address:** Support IPv4 or domain name.
Port	**Port:** We recommend you use the default one.
Custom Address	When selecting **Custom**, you need to enter the path allocated by the server.

Click **Save** to complete the RTMP parameter setting on the camera.

Note: Click **Default** to restore the device to default setting, click **Refresh** to check the latest config file of the device.

5.3 Event

5.3.1 Video Detection

5.3.1.a Motion Detection

1. Select **Setting** > **Event** > **Video Detection** > **Motion Detection** and the system will display the Motion Detection interface as shown in Figure 5-36.

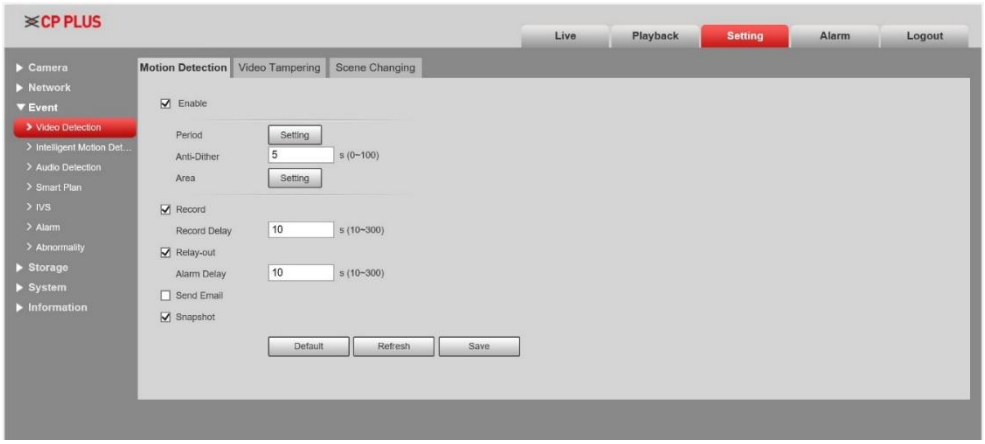


Figure 5-36

2. Select Enable to allow motion detection function.
3. Set motion detection area.
    1. Click **Setting** and the system will pop-up the **Area** interface as shown in Figure 5-37.

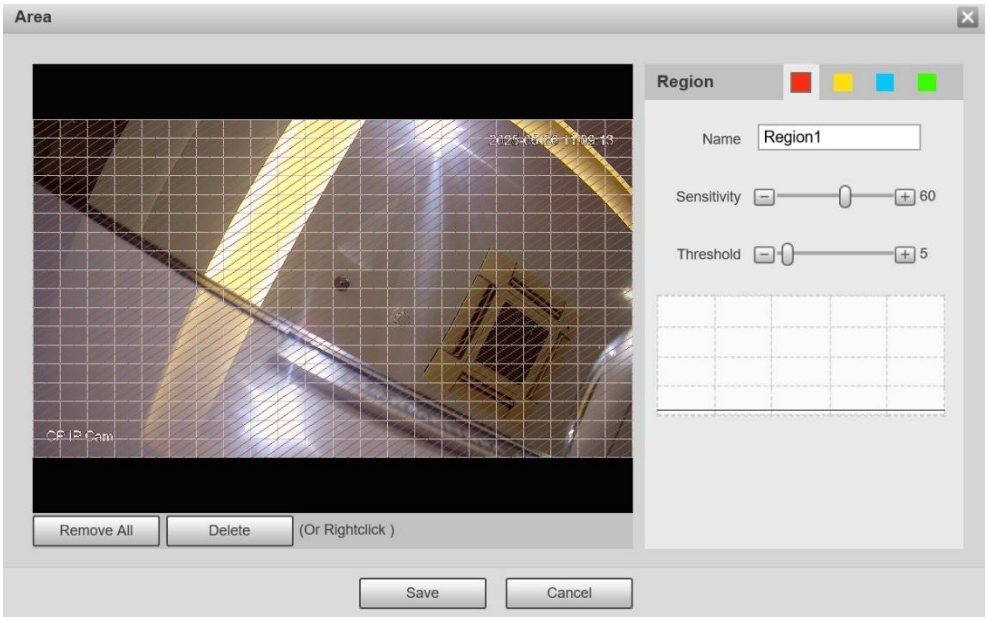


Figure 5-37

2. Set area name, it is to set valid area of motion detection according to the actual situation, and it can set the value of sensitivity and threshold respectively.
3. The bigger the sensitivity is, the easier it is to generate motion detection, the smaller the threshold is, the easier it is to generate motion detection; the entire video image is the valid area of motion detection by default.
4. Click **Save** to complete Area setting.

To set the other parameters of motion detection, please refer to the following table for more details about this parameter setting.

Table 5-23

Parameter	Function
Enable	Enable it to automatically trigger alerts or recordings when movement is detected in the monitored area.
Period	**Note:** It is to set the alarm period, it can enable an alarm event only during the period range which has been set. 1. Click **Setting** and the system will pop-up the **Period** interface. 2. It is to set the period according to the following methods: • You can input time numerical value or press the left mouse button to drag on the setup interface to set. • There are **six** periods to be set every day, select the check box in front of the period, and then the period is valid. • Select week number (it selects **Sunday** by default, if it selects the whole week that means the setup can be applied to the whole week, you can also select the check box in front of the week number to implement an independent setting for some days). 3. Click **Save** to complete the setup of period.
Anti-Dither	System only memorizes one event during the anti-dither period. The value ranges from 0s to 100s.
Area	1. Click **Setting** and the system will pop-up the **Area** interface. 2. Set the area name, it is to set the valid area of motion detection according to the actual situation, and it can set its sensitivity and threshold respectively. The higher the sensitivity is, the easier it is to trigger motion detect, the smaller the area threshold is, the easier it is to generate motion detect, the whole video image is the valid area of the motion detect by default. **Note:** Different colors represent different areas; each area can set different detection areas. The red line in the Oscillogram means triggering motion detect, the green line means not triggering motion detect. 3. Click "**Save**" to complete setup of the area.
Record	Enable it and so when alarm occurs, the system will auto record. You should set the record period in **Storage** > **Schedule** and select auto record in record control interface.
Record Delay	System can delay the record for a specified time after an alarm ends. The value ranges from 10s ~ 300s.
Relay out	Enable alarm activation function. You need to select alarm output port so that the system can activate corresponding alarm device when alarm occurs.
Alarm Delay	System can delay the alarm output for specified time after an alarm ends. The value ranges from 10s ~ 300s.
Send Email	Enable this function, the system sends out email to alert you when an alarm occurs and ends. Users can set email address in **Network** > **SMTP(Email).**
Snapshot	You need to enable the check box so that the system can backup motion detection snapshot file. You shall set a snapshot period in **Storage** > **Schedule**.

4. Click **Save** to complete the motion detection parameter setting on the camera.

   Note: Click **Default** to restore the device to default setting, click **Refresh** to check the latest config file of the device.

5.3.1.b Video Tampering

It is to detect the video tampering setting on the camera.

1. Select **Setting** > **Event** > **Video Detection** > **Video Tampering** and the system displays the video tampering interface as shown in Figure 5-38.

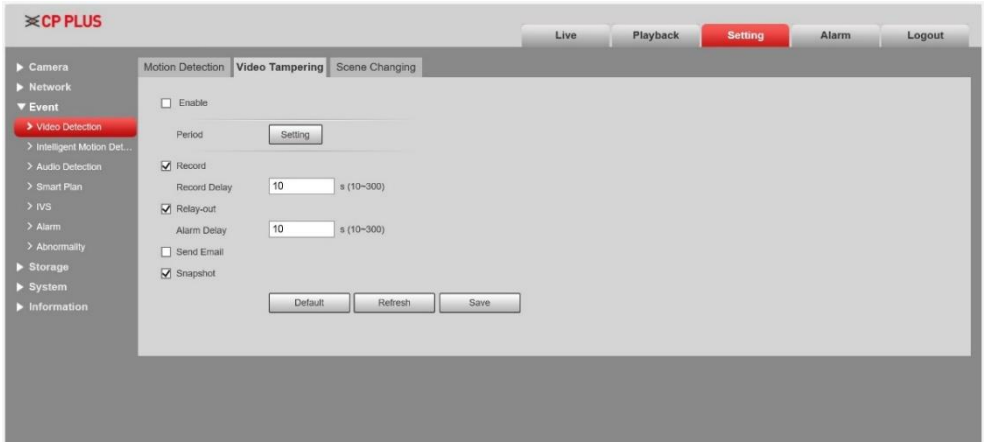


Figure 5-38

To set the parameters of Video Tampering, please refer to the following table for more details about this parameter setting.

Table 5-24

Parameter	Function
Enable	Enable the check box for video mask detection alarm.
Period	**Note:** It is to set the alarm period; it can enable an alarm event only during the period range which has been set. 1. Click **Setting** and the system will pop-up the **Period** interface. 2. It is to set the working period according to the following methods: • Enter a numerical value or press the left mouse button to drag on the setup interface to set. • There are **six** periods to be set every day, select the check box in front of the period, and then the period is valid. • Select week number (it selects **Sunday** by default, if it selects the whole week, then it means the setup can be applied to the whole week, you can also select the check box in front of the week number to implement independent setting for some days). 3. Click **Save** to complete the setup of period.

Record	Enable **Record**, and when an alarm occurs, the system will auto record. You should set the record period in **Storage** > **Schedule** and select auto record in record control interface.
Record Delay	System can delay the record for a specified time after an alarm ends. The value ranges from 10s ~ 300s.
Relay-out	Enable alarm activation function. Users need to select alarm output port so that the system can activate corresponding alarm device when alarm occurs.
Alarm Delay	The system can delay the alarm output for a specified time after the alarm ends. The value ranges from 10s ~ 300s.
Send Email	Enable this function, the system sends out email to alert you when an alarm occurs and ends. Users can set email address in **Network** > **SMTP(Email)**.
Snapshot	You need to select the check box so that the system can backup motion detection snapshot file. You shall set a snapshot period in **Storage** > **Schedule**.

2. Click **Save** to complete the Video Tampering setting on the camera.

   Note: Click **Default** to restore the device to default setting, click **Refresh** to check the latest config file of the device.

5.3.1.c Scene Changing

It is to set the scene changing setting on the camera.

1. Select **Setting** > **Event** > **Video Detection** > **Scene Changing** and the system will display the interface of Scene Changing interface as shown in Figure 5-39.

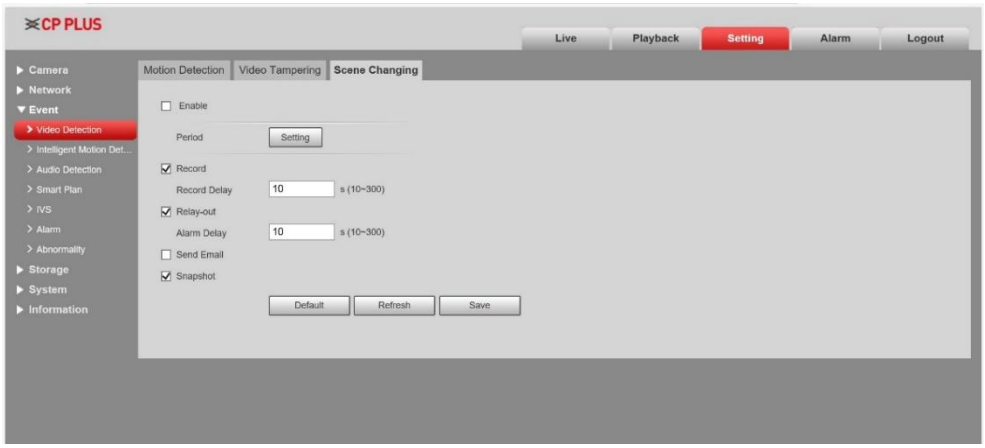


Figure 5-39

2. Check **Enable** to allow the function of scene changing.

To set the parameters of Scene Changing, please refer to the following table for more details about this parameter setting.

Table 5-25

Parameter	Function
Enable	Enable it to alert or record when there is a sudden change in the camera's view.
Period	**Note:** It is to set the alarm period; it can enable an alarm event only during the period range which has been set. 1. Click **Setting** and the system will pop-up **Period** interface. 2. It is to set the period according to the following methods: • Enter the time numerical value or press the left mouse button to drag on the setup interface to set. • There are **six** periods to be set every day, select the check box in front of the period, and then the period is valid. • Select week number (it selects **Sunday** by default, if it selects the whole week, then it means the setup can be applied to the whole week, you can also enable the check box in front of the week number to implement an independent setting for some days). 3. Click "**Save**" to complete the setup of period.
Record	Enable **Record**, and when an alarm occurs, the system will auto record. You shall set the record period in **Storage** > **Schedule** and select auto records in record control interface.
Record Delay	System can delay the record for a specified time after alarm ends. The value ranges from 10s ~ 300s.
Relay-out	Enable alarm activation function. You need to select an alarm output port so that the system can activate corresponding alarm device when alarm occurs.
Alarm Delay	The system can delay the alarm output for a specific time after the alarm ends. The value ranges from 10s ~ 300s.
Send Email	Enable this function, the system sends out email to alert you when an alarm occurs and ends. Users can set email address in **Network** > **SMTP(Email)**.
Snapshot	Enable the check box so that the system can backup motion detection snapshot file. You should set a snapshot period in **Storage** > **Schedule**.

3. Click **Save** to complete the Scene Changing setting on the camera.

   Note: Click **Default** to restore the device to default setting, click **Refresh** to check the latest config file of the device.

5.3.2 Intelligent Motion Detection

The system triggers an alarm linkage when human, non-motorized vehicles, or motor vehicles appear on the image, and its moving speed reaches the preset sensitivity. Enabling Intelligent motion detection can avoid the alarms triggered by the environment changes, and the function is enabled by default.

Pre-requisites:

- Select **Setting** > **Event** > **Video Detection** > **Motion Detection** to enable the motion detection function.
- You must set Period and Area in Motion Detection and ensure that the sensitivity value is larger than 0, and the threshold value is smaller than 100.

1. Select **Setting** > **Event** > **Intelligent Motion Detection** > **Intelligent Motion Detection**.

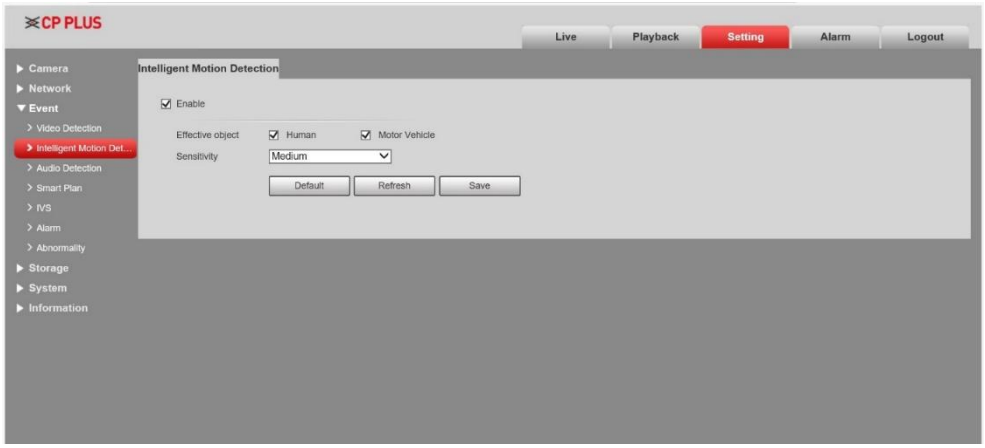


Figure 5-40

To set the parameters of Intelligent Motion Detection, please refer to the following table for more details about this parameter setting.

Table 5-26

Parameter	Function
Enable	Enable it to activate IMD technology, the camera intelligently detects and differentiates humans and vehicles. Thus, it helps reduce false alarms and ensures more accurate motion triggered recording and alerts.
Effective object	It refers to the specific targets like humans and vehicles that the IMD system is designed to recognize and respond to.
Sensitivity	It controls how the camera easily detects humans or vehicles. A high sensitivity detects small or distant movements, while a lower sensitivity detects more noticeable or close movements. By adjusting this helps avoid false alerts.

2. Click **Save** to complete the Intelligent Motion Detection parameter on the camera.

   Note: Click **Default** to restore the device to default setting, click **Refresh** to check the latest config file of the device.

5.3.3 Audio Detection

It is to set the audio detection setting on the camera.

1. Select **Setting** > **Event** > **Audio Detection** > **Audio Detection** and the system will display the interface of Audio Detection as shown in Figure 5-41.

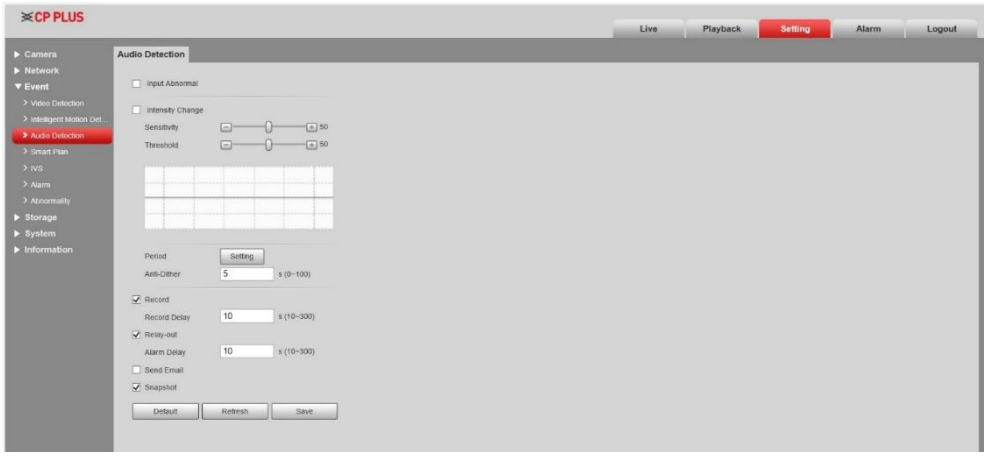


Figure 5-41

To set the parameters of Audio Detection, please refer to the following table for more details about this parameter setting.

Table 5-27

Parameter	Function
Input abnormal	Enable **Input Abnormal** and it will trigger alarm when it detects audio input abnormity.
Intensity change	Enable **Intensity Change** and it will trigger alarm when it detects that audio intensity change exceeds the threshold.
Sensitivity	It can be judged as audio abnormity when the input volume change exceeds continuous environment volume, users need to adjust according to the actual environment test.
Threshold	It is to set the filtered environment volume intensity, if the environmental noise is too big, then the value needs to be set higher, users can adjust according to the actual environment test.
Period	**Note:** It is to set the alarm period; it can enable an alarm event only during the period range which has been set. 1. Click **Setting** and the system will pop-up the **Period** interface. 2. It is to set the period according to the following methods: • Enter the time numerical value or press the left mouse button to drag on the setup interface to set. • There are **six** periods to be set every day, select the check box in front of the period, and then the period is valid. • Select week number (it selects **Sunday** by default, if it selects the whole week, then it means the setup can be applied to the whole week, you can also select the check box in front of the week number to implement independent setting for some days). 3. Click **Save** to complete the setup of period.

Anti-Dither	System only memorizes one event during the anti-dither period. The value ranges from 0s ~ 100s.
Record	Enable **Record**, and when an alarm occurs, the system will auto record. You should set the record period in **Storage** > **Schedule** and select auto records in record control interface.
Record Delay	System can delay the record for a specified time after an alarm ends. The value ranges from 10s ~ 300s.
Relay-out	Enable alarm activation function. You need to select the alarm output port so that the system can activate corresponding alarm device when alarm occurs.
Alarm Delay	The system can delay the alarm output for a specific time after the alarm ends. The value ranges from 10s ~ 300s.
Send Email	Enable this function, the system sends out email to alert you when an alarm occurs and ends. Users can set email address in **Network** > **SMTP(Email).**
Snapshot	You need to enable the check box so that the system can backup motion detection snapshot file. You should set a snapshot period in **Storage** > **Schedule**.

2. Click **Save** to complete the Audio Detection setting on the camera.

   Note: Click **Default** to restore the device to default setting, click **Refresh** to check the latest config file of the device.

5.3.4 Smart Plan

Smart Plan is the master switch for intelligent analysis like IVS such as Tripwire and Intrusion. These corresponding intelligent functions can be valid after smart plan is enabled.

Note: Some series of the products supports Face detection, Heat map, People counting, and so on. You can select only one at a time.

1. Select **Setting** > **Event** > **Smart Plan**. The system displays the Smart Plan interface as shown in Figure 5-42.

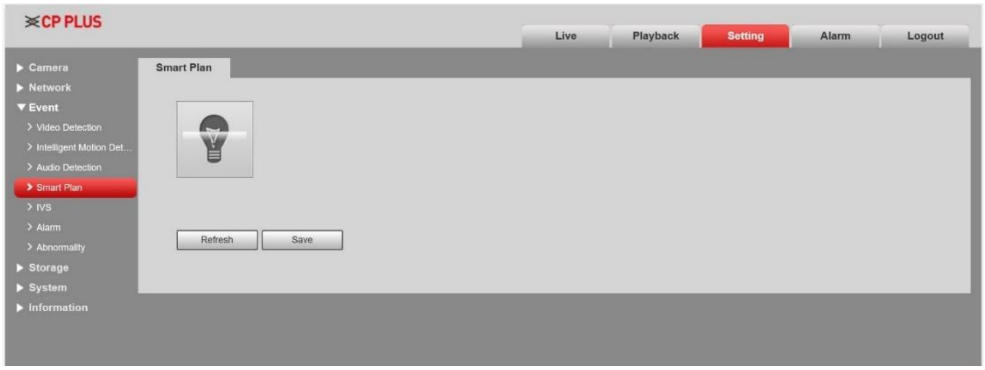


Figure 5-42

2. Click **Save** to complete the config of smart plan.

   Note: Click **Refresh** to check the latest config file of the device.

5.3.5 IVS

IVS is a technology that helps you to capture the important moments on your video surveillance system.

5.3.5.a Tripwire

An alarm is triggered when the target crosses the warning line based on the set movement direction. Since there is a delay between target detection and confirmation, leave the space on both sides of the warning line and avoid placing it near obstructions.

Application scene: It can be applied to the scene with sparse target and there are barely any blocks between the targets, such as the unmanned perimeter protection.

1. Select **Setting** > **Event** > **IVS** > **Rule Config** and the system displays the IVS interface.

2. Click  to set rule name and select the rule type as Tripwire as shown in Figure 5-43.

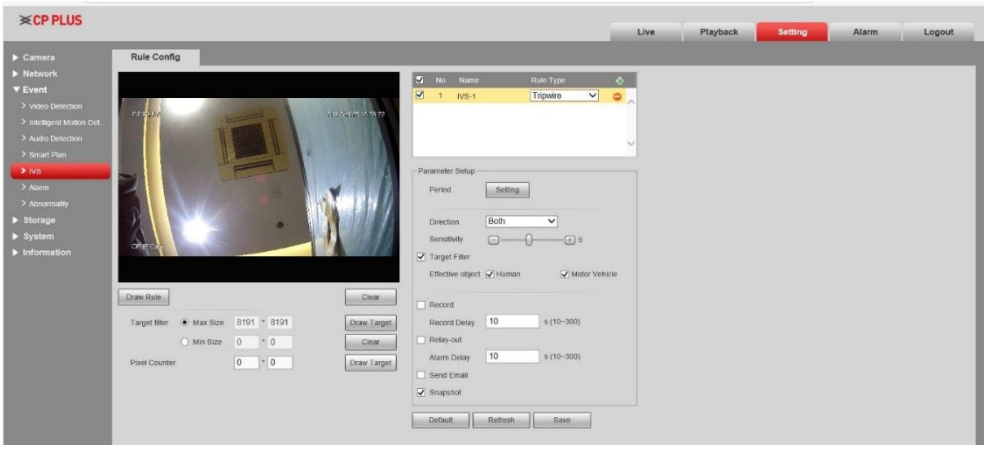


Figure 5-43

3. Click **Draw Rule** to draw lines in the monitoring scene, and right-click the mouse to complete the tripwire setting.

4. Click **Draw Target** to draw a rectangle size model of filtered target in the video image.

5. Click **Draw Target** behind Pixel Counter, then press and hold the left mouse button to draw a rectangular, and then the size of the rectangular would display in the counter.

To set the parameters of Tripwire, please refer to the following table for more details about this parameter setting.

Table 5-28

Parameter	Function
Period	**Note:** It is to set the alarm period; it can enable an alarm event only during the period range which has been set. 1. Click **Setting** and the system will pop-up the **Period** interface. 2. It is to set the period according to the following methods: • Enter the time numerical value or press the left mouse button to drag on the setup interface to set. • There are **six** periods to be set every day, select the check box in front of the period, and then the period is valid. • Select week (it selects **Sunday** by default, if it selects **All**, then it means the setup can be applied to the whole week, you can also select the check box in front of the week number to implement an independent setting for some days). 3. Click **Save** to complete the setup of period.
Direction	It is to set the direction of tripwire, you can select **A to B**, **B to A**, or **Both**.
Sensitivity	The higher sensitivity detects smaller or fast-moving objects, while lower sensitivity reduces false alarms by ignoring minor movements.
Target filter	Enable the **Target Filter**, and then select the required object. • Select **Human**, and then the alarm will be triggered if any target that fits for the human, trigger rule in the system is detected. • Select **Motor Vehicle**, and then the alarm will be triggered if any target that fits for the motor vehicle, trigger rule in the system is detected. • Disable Target filter, and then the alarm will be triggered if any moving object such as humans, vehicles, cats, or dogs are detected.
Record	Enable **Record**, and when an alarm occurs, the system will auto record. You should set the record period in **Storage** > **Schedule** and select auto records in record control interface.
Record Delay	System can delay the record for a specified time after an alarm ends. The value ranges from 10s ~ 300s.
Relay-out	Enable alarm activation function. You need to select alarm output port so that the system can activate corresponding alarm device when alarm occurs.
Alarm Delay	The system can delay the alarm output for a specific time after the alarm ends.
Send Email	Enable this function, the system sends out email to alert you when an alarm occurs and ends. Users can set email address in **Network** > **SMTP(Email)**.
Snapshot	Select **Snapshot** and the system will auto trigger alarm and snapshot when alarm occurs.

6. Click **Save** to complete the Tripwire setting on the camera.

Note: Click **Default** to restore the device to default setting, click **Refresh** to check the latest config file of the device.

5.3.5.b Intrusion

Intrusion includes appears and cross.

- **Appears:** It will trigger an alarm when the target appears in the area.
- **Cross:** It will trigger an alarm when the target enters or exits the area.

As for the report interval of the IVS function in the area, the system will trigger an alarm if it detects the same event that happened during the interval, the alarm counter will become zero if there is no same event happening in the interval.

It needs to leave some space for target movement for the area periphery if it is to detect **Enter&Exit** event, which is like a warning line.

Application scene: It can be applied to the scene where the target is sparse and there is barely any obstruction between the targets, such as unmanned perimeter protection.

1. Select **Setting** > **Event** > **IVS** > **Rule Config** and the system displays the IVS interface.
2. Click  to set rule name, select the rule type as Intrusion which is shown in Figure 5-44.

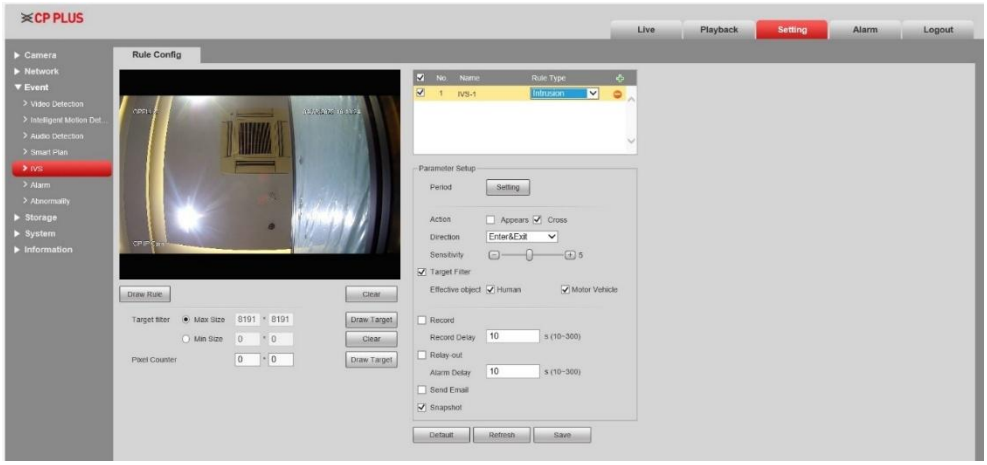


Figure 5-44

3. Click **Draw Rule** to draw an area in the monitoring image and right-click the mouse to complete the drawing.
4. Click **Draw Target** to draw the size model of filtered target in the video image.
5. Click **Draw Target** behind Pixel Counter, then press and hold the left mouse button to draw a rectangular, and then the size of the rectangular would display in the counter.

To set the parameters of an Intrusion, please refer to the following table for more details about this parameter setting.

Table 5-29

Parameter	Function
Period	**Note:** It is to set the alarm period; it can enable an alarm event only during the period range which has been set. 1. Click **Setting** and the system will pop-up the **Period** interface. 2. It is to set period according to the following methods: • Enter the time numerical value or press the left mouse button to drag on the setup interface to set. • There are **six** periods to be set every day, enable the check box in front of the period, and then the period is valid. • Select week (it selects **Sunday** by default, if it selects **All**, then it means the setup can be applied for the whole week, you can also select the check box in front of the week number to implement an independent setting for some days). 3. Click **Save** to complete the setup of period.
Action	It is to set the action of intrusion, you can select appears and cross.
Direction	It is to set the direction of intrusion, you can select **Enters**, **Exits**, and **Enter&Exit**.
Sensitivity	The higher sensitivity detects smaller or fast-moving objects, while lower sensitivity reduces false alarms by ignoring minor movements.
Target filter	Enable the Target filter and then select the required object. • Select **Human**, and then the alarm will be triggered if any target that fits for the human trigger rule in the system is detected. • Select **Motor Vehicle**, and then the alarm will be triggered if any target that fits for the motor vehicle trigger rule in the system is detected. • Disable the function, and then the alarm will be triggered if any moving object such as humans, vehicles, cats, or dogs are detected.
Record	Enable **Record**, and when an alarm occurs, the system will auto record. You should set the record period in **Storage** > **Schedule** and select auto records in record control interface.
Record Delay	System can delay the record for a specified time after the alarm ends.
Relay-out	Enable alarm activation function. You need to select alarm output port so that the system can activate corresponding alarm device when alarm occurs.
Alarm Delay	System can delay the alarm output for a specified time after the alarm ends.
Send Email	Enable this function, the system sends out email to alert you when an alarm occurs and ends. Users can set email address in **Network** > **SMTP(Email)**.

Snapshot	Select **Snapshot** and the system will auto trigger alarm and snapshot when alarm occurs.

6. Click **Save** to complete the Intrusion setting on the camera.

   Note: Click **Default** to restore the device to default setting, click **Refresh** to check the latest config file of the device.

5.3.6 Alarm

It is to set the alarm parameter setting on the camera.

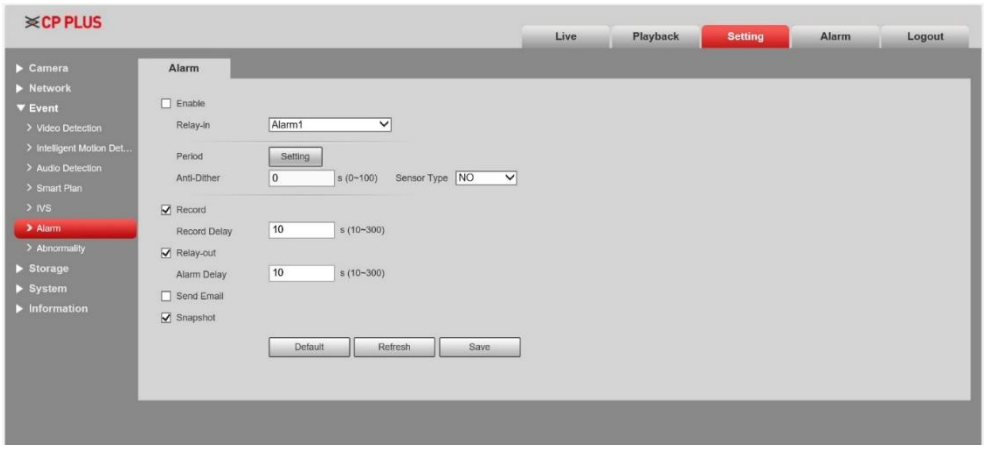


Figure 5-45

To set the parameters of Alarm, please refer to the following table for more details about this parameter setting.

Table 5-30

Parameter	Function
Enable	**Relay-in:** It allows external alarm devices (such as door sensors, motion detectors) to trigger an alarm event within the CCTV system. Upon receiving an alarm it starts recording, sends alerts to users, shows real-time warning on the monitoring interface, and activate alarm outputs or other connected devices.
	Period: It allows the user to set specific hours or days when the system should respond to signals from the Relay In devices.
	Anti-Dither: By enabling Anti-Dither, the system avoids repeated alarms within a short period, ensuring that alerts are meaningful and manageable.
Record	**Record Delay**: It allows continued recording after triggers stop, to ensure nothing is missed.
Relay-out	**Alarm Delay**: The time interval between the alarm trigger and relay activation helps prevent false alarms by ensuring the event lasts for a set duration (e.g., 10 seconds) before triggering the output.
Send Email	Enable this function, the system sends out email to alert you when an alarm occurs and ends. Users can set email address in **Network** > **SMTP(Email)**.
Snapshot	Select **Snapshot** and the system will auto trigger alarm and snapshot when alarm occurs.

Click **Save** to complete the Alarm setting on the camera.

Note: Click **Default** to restore the device to default setting, click **Refresh** to check the latest config file of the device.

5.3.7 Abnormality

Abnormality includes No SD Card, SD Card Error, and Capacity Warning.

Note:

- In some series of the products may include other options like Disconnection, IP Conflict and Unauthorized Access.
- Only devices with SD card function have these three statuses: No SD Card, SD Card Error, Capacity Warning, and device without SD card function does not have the above three statuses. See Figure 5-46.

5.3.7.a SD Card

It is to set the SD Card parameter setting on the camera.

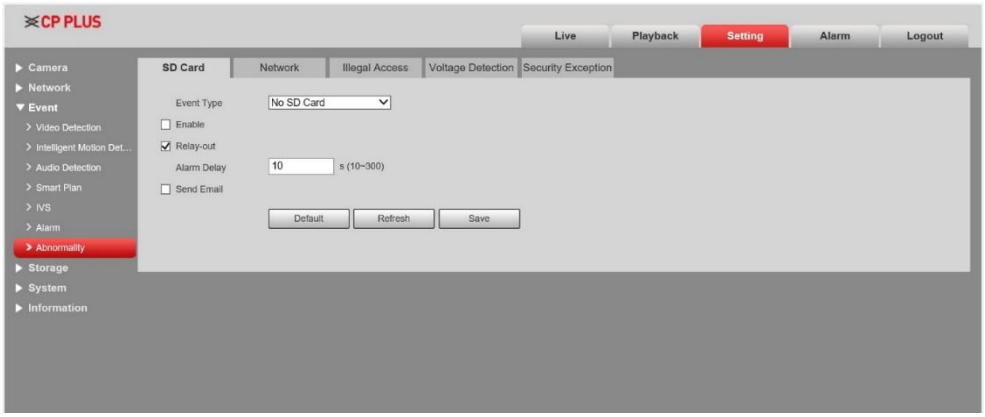


Figure 5-46

To set the parameters of the SD Card, please refer to the following table for more details about this parameter setting.

Table 5-31

Parameter	Function
Enable	Enable it when the SD card is abnormal.
Relay-out	Enable relay-out alarm. By default, this option is enabled.
Relay-out Alarm Delay	The alarm output can be delayed at the specified time after an alarm stops. The value ranges from 10s ~ 300s. **Note:** No SD Card, Capacity Warning, SD Card Error, Relay-out delay all start from alarm occurs.
Send Email	Enable this function, the system sends out email to alert you when an alarm occurs and ends. Users can set email address in **Network** > **SMTP(Email)**.
SD Card Capacity Limit	Users can set SD card capacity that is left free. When the SD card space left is smaller than this limit, an alarm occurs.

Click **Save** to complete the SD Card parameter setting on the camera.

Note: Click **Default** to restore the device to default setting, click **Refresh** to check the latest config file of the device.

5.3.7.b Network

It is to set the Network parameter setting on the camera.

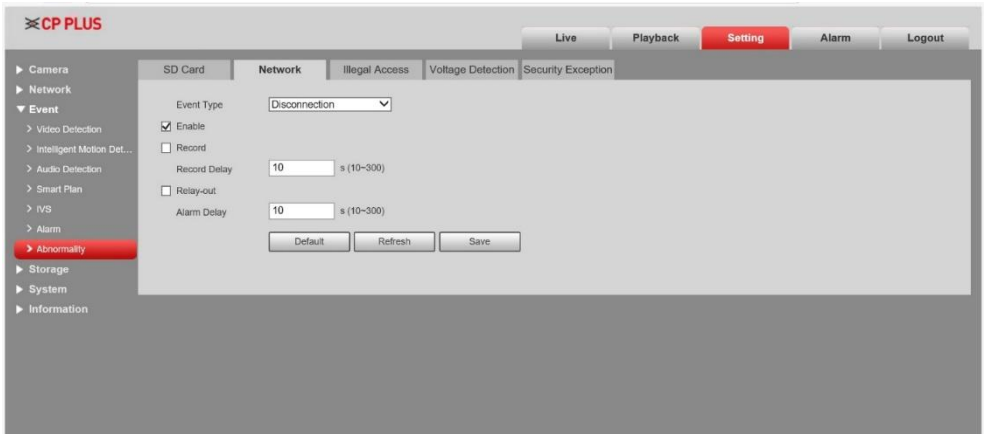


Figure 5-47

To set the parameters of a Network, please refer to the following table for more details about this parameter setting.

Table 5-32

Parameter	Function
Event Type	It is a network-related activity, such as Disconnection, IP conflict, or illegal access, that triggers an alert or action.
Enable	Enable it to detect the network.
Record	Enable **Record**, and when an alarm occurs, the system will auto record. You should set the record period in **Storage** > **Schedule** and select auto records in record control interface.
Record Delay	System can delay the record for a specified time after an alarm ends. The value ranges from 10s ~ 300s.
Relay-out	It triggers external devices when specific network events, like disconnection or illegal access occurs.
Alarm Delay	Sets the time interval before triggering an alarm after detecting a network-related event.

Click **Save** to complete the Network parameter setting on the camera.

Note: Click **Default** to restore the device to default setting, click **Refresh** to check the latest config file of the device.

5.3.7.c Illegal Access

It is to set the Illegal Access parameter setting on the camera.

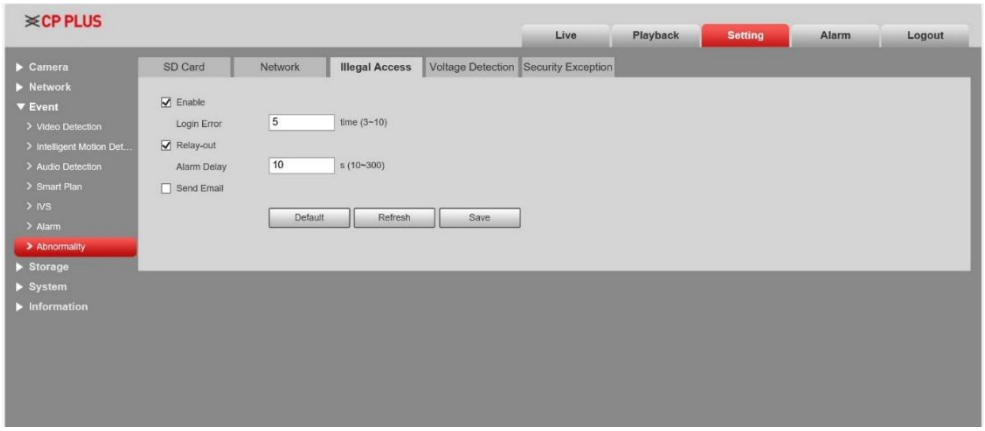


Figure 5-48

To set the parameters of an Illegal Access, please refer to the following table for more details about this parameter setting.

Table 5-33

Parameter	Function
Enable	Enable it to detect the Illegal access.
Login Error	It occurs when unauthorized access attempts are detected.
Relay-out	It triggers external devices, such as alarms or sirens, when unauthorized access is detected.
Alarm Delay	It sets a time interval before triggering the alarm after detecting unauthorized access.
Send Email	Enable this function, the system sends out email to alert you when an alarm occurs and ends. Users can set email address in **Network** > **SMTP(Email)**.

Click **Save** to complete the Illegal Access parameter setting on the camera.

Note: Click **Default** to restore the device to default setting, click **Refresh** to check the latest config file of the device.

5.3.7.d Voltage Detection

It is to set the voltage detection parameter setting on the camera.

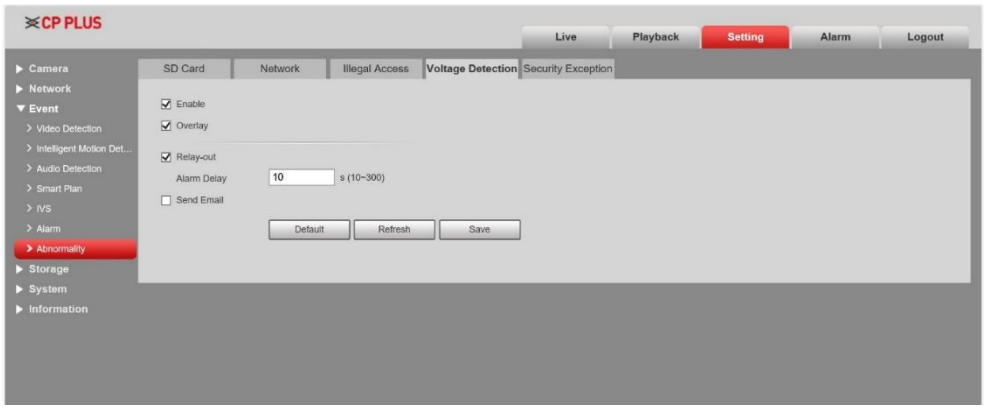


Figure 5-49

To set the parameters of Voltage Detection, please refer to the following table for more details about this parameter setting.

Table 5-34

Parameter	Function
Enable	Enable it to detect the voltage.
Overlay	Select **Overlay** to display undervoltage and overvoltage alarm icons when triggered.
Relay-out	It triggers the external devices when undervoltage or overvoltage is detected.
Alarm Delay	It is the delay between voltage detection and alarm activation.
Sent Email	Enable this function, the system sends out email to alert you when an alarm occurs and ends. Users can set email address in **Network** > **SMTP(Email)**.

Click **Save** to complete the Voltage detection parameter setting on the camera.

Note: Click **Default** to restore the device to default setting, click **Refresh** to check the latest config file of the device.

5.3.7.e Security Exception

It is to set the security exception parameter setting on the camera.

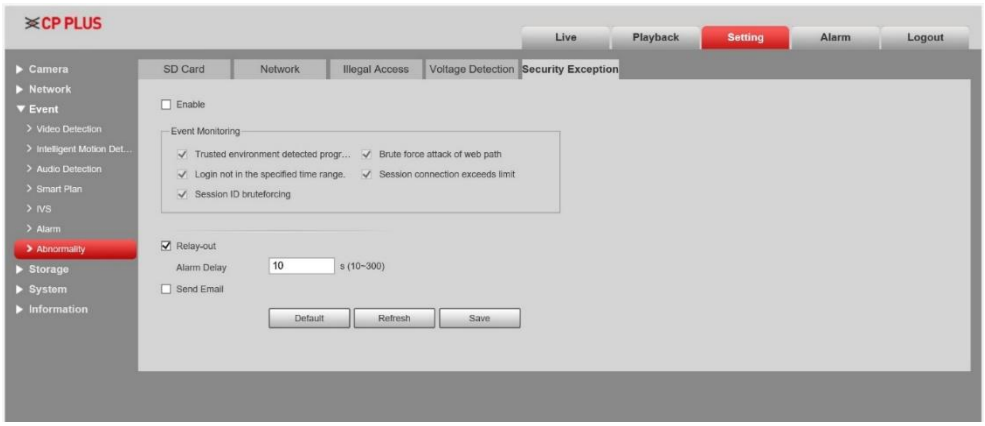


Figure 5-50

To set the parameters of Security Exception, please refer to the following table for more details about this parameter setting.

Table 5-35

Parameter	Function
Enable	Enable the checkbox to allow specific security related actions or events.
Event Monitoring	Enable the event to be monitored.
Relay-out	Enable Relay-out to activate the external devices when a security exception occurs.
Alarm Delay	Enable it to set a time interval before the alarm activates during a security exception.
Sent Email	Enable this function, the system sends out email to alert you when an alarm occurs and ends. Users can set email address in **Network** > **SMTP(Email)**.

Click **Save** to complete the security exception parameter setting on the camera.

Note: Click **Default** to restore the device to default setting, click **Refresh** to check the latest config file of the device.

5.4 Storage

5.4.1 Schedule

Before the schedule setup, the user must set record mode to **Auto** or **Manual**.

Note: In Record Control, if the Record Mode is Off, then the device will not snapshot as per the schedule.

5.4.1.a Record

1. Click on **Record**, see Figure 5-51.

Figure 5-51

2. From Monday to Sunday select record time, click on Setting on the right, see Figure 5-52.

- Set period according to actual need. There are six periods available each day.
- By enabling or disabling, you can add or delete three types of record: **General**, **Event**, and **Alarm**.

  Note: Period setup can be done by dragging in record schedule interface while not releasing left mouse.

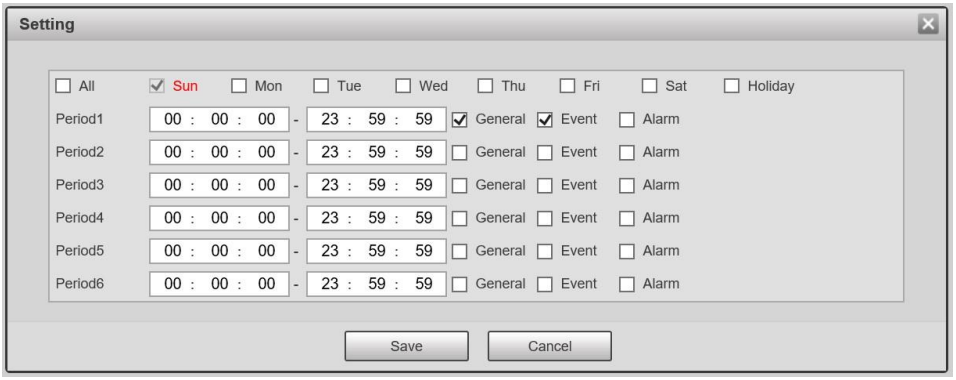


Figure 5-52

3. Click **Save**, to return to the record interface. See Figure 5-51.
   - Green color indicates general record/snapshot.
   - Yellow color indicates event record/snapshot.
   - Red color indicates alarm record/snapshot.
4. In the record interface, click on **Save**. The system prompts it to be successfully saved.

   Note: Click **Default** to restore the device to default setting, click **Refresh** to check the latest config file of the device.

5.4.1.b Snapshot

The Snapshot setup is as follows:

1. Click on **Snapshot** tab, see Figure 5-53.

Figure 5-53

2. From Monday to Sunday select snapshot time, click on Setting on the right. See Figure 5-54.

   - Set snapshot period according to actual need. There are six periods available each day.
   - By enabling or disabling, users can add or delete three types of snapshot schedule: **General**, **Event**, and **Alarm**.

     Note: Period setup can be done by dragging in snapshot schedule interface while not releasing left mouse.

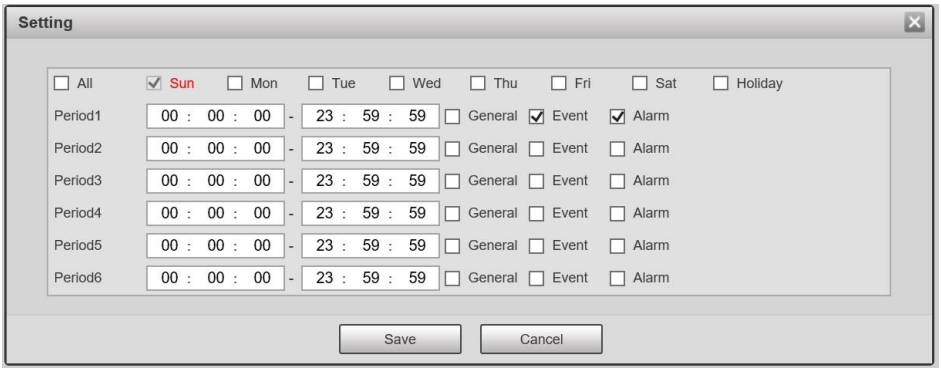


Figure 5-54

3. Click **Save** to complete the Snapshot setting on the camera.

5.4.1.c Holiday Schedule

It is to set the holiday schedule parameter setting on the camera, which is as shown in Figure 5-55.

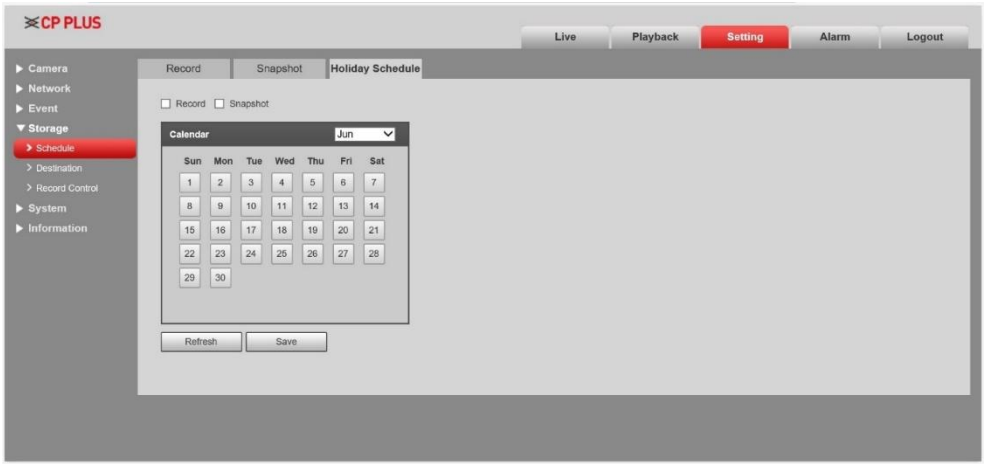


Figure 5-55

Click **Save** to complete the Holiday Schedule parameter setting on the camera.

Note: Click **Refresh** to check the latest config file of the device.

5.4.2 Destination

There are three tabs: Path, Local, and FTP.

5.4.2.a Path

The destination interface is shown in Figure 5-56.

Path can config record and snapshot storage paths. You can only select one mode. System can save according to the event types. It corresponds to the three modes (General/Event/Alarm) in the Schedule interface. Please select the check box to enable the saving functions.

Note: Only the device that supports SD card has Local.

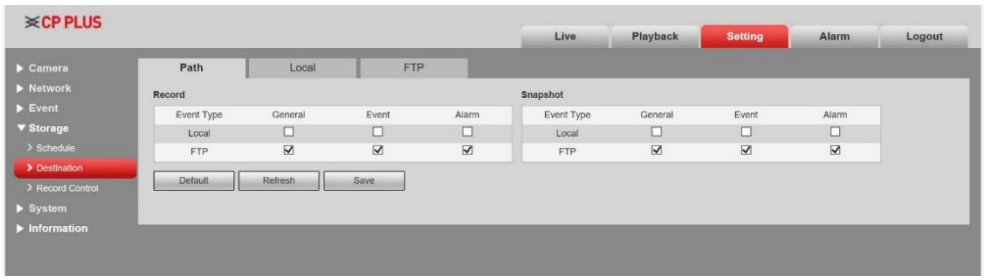


Figure 5-56

To set the parameters of the Path, please refer to the following table for more details about this parameter setting.

Table 5-36

Parameter	Function
Event Type	It includes scheduled, motion detect and alarm.
Local	It saves the recordings in the SD Card.
FTP	It saves the recordings in the FTP server.

Click **Save** to complete the path parameter setting on the camera.

Note: Click **Default** to restore the device to default setting, click **Refresh** to check the latest config file of the device.

5.4.2.b Local

The local interface is shown in Figure 5-57.

Here, you can view local Micro SD card or NAS disk information. You can also operate Read-Only, Read & Write, Hot Swap, and other format operations.

Figure 5-57

5.4.2.c FTP

The FTP interface is shown in Figure 5-58.

You need to select the check box to enable the FTP/SFTP function. When network disconnect occurs or if there is malfunction. Emergency storage can save the record/snapshot picture to the local SD card.

Click on the **test** button to check if the FTP server can be connected for test.

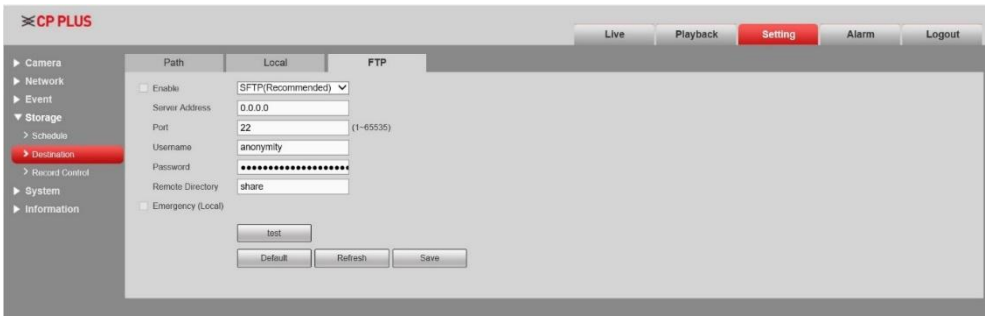


Figure 5-58

Table 5-37

Parameter	Function
Enable	Enable it to automatically upload snapshots or recordings to a remote FTP server for storage and backup.
Server Address	Provide the server address to define where the camera uploads files via FTP.
Port	Provide the port to establish a proper connection between the camera and the FTP server.
Username	Provide the username to authenticate and grant the camera access to upload files to the server.
Password	Provide the password to securely authenticate the camera's access to the FTP server.
Remote Directory	Provide the directory to store the specific folder to upload files.
Emergency (Local)	Enable it to allow the camera to save recordings locally when the network or remote storage fails.

Click **Save** to complete the FTP parameter setting on the camera.

Note: Click **Default** to restore the device to default setting, click **Refresh** to check the latest config file of the device.

5.4.3 Record Control

The record control interface is shown in Figure 5-59.

Figure 5-59

To set the parameters of the Record Control, please refer to the following table for more details about this parameter setting.

Table 5-38

Parameter	Function
Pack Duration	Here, you can select file size within 1min ~ 120min. Default setup is 8 min.
Pre-event Record	Please input pre-event record value here. For example, the system can record the four seconds video in the buffer. The record begins from the fifth second. **Note:** Configure pre-record time, when alarm or motion detection occurs, if there is no record, system will record the preceding in seconds'.
Disk Full	There are two options: Stop recording or overwrite the previous files, when HDD is full. • **Stop**: If the current working HDD is overwritten, or current HDD is full, it will stop recording. • **Overwrite**: If the current working HDD is full, it will overwrite the previous file.
Record Mode	There are three modes: **Auto**/**Manual**/**Off**. **Auto**: Recording starts automatically based on schedule or events. **Manual**: Recording starts only when manually triggered by the user. **Off**: Recording is disabled.
Record Stream	There are two record stream options: **Main Stream** and **Sub Stream**. **Main Stream**: High-resolution video used for recording and playback with full detail. **Sub Stream**: Lower-resolution video optimized for remote viewing or saving bandwidth and storage.

Click **Save** to complete the Record Control parameter setting on the camera.

Note: Click **Default** to restore the device to default setting, click **Refresh** to check the latest config file of the device.

5.5 System

5.5.1 General

There are two tabs: General, Date & Time.

5.5.1.a General

The General interface is shown in Figure 5-60.

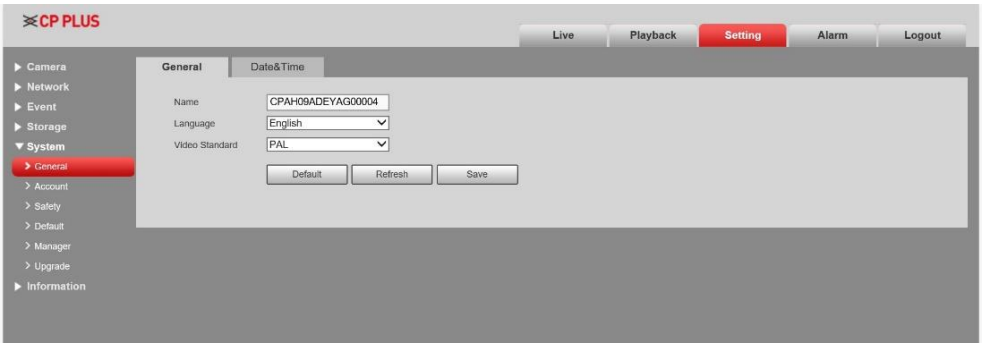


Figure 5-60

To set the general parameters, please refer to the following table for more details about this parameter setting.

Table 5-39

Parameter	Function
Name	It is to set device name. **Note:** Different devices have different names.
Language	Select the language from the dropdown list.
Video Standard	Two options are available, **PAL** and **NTSC**. PAL displays a standard video.

Click **Save** to complete the General parameter setting on the camera.

Note: Click **Default** to restore the device to default setting, click **Refresh** to check the latest config file of the device.

5.5.1.b Date & Time

The date & time interface is shown in Figure 5-61.

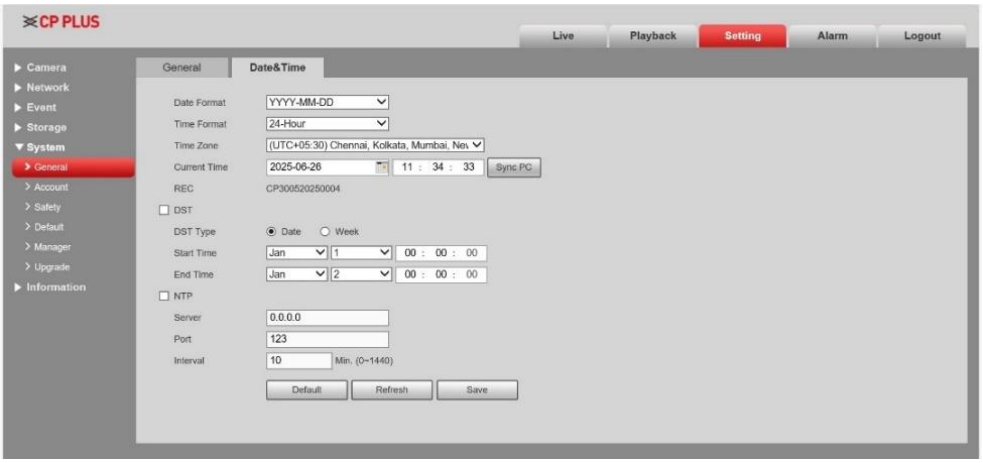


Figure 5-61

To set the parameters of Date & Time, please refer to the following table for more details about this parameter setting.

Table 5-40

Parameter	Function
Date format	Select the date format from the drop-down list.
Time Format	Select the time format from the drop-down list.
Time zone	Select the time zone of the device.
Current Time	It is to set system time. It becomes valid after you set.
Sync PC	Click **Sync PC** to save the system time as your current PC.
DST enable	Enable DST to set both start time and end time as per date or week format.
DST Type	There are two options: Enable **Date** or **Week**.
Start Time	Set the start time.
End Time	Set the end time.
NTP Server	Set the time server address.
Port	Set the time server port.
Interval	Set the time gap between consecutive synchronization requests to the NTP server.

Click **Save** to complete the Date & Time parameter setting on the camera.

Note: Click **Default** to restore the device to default setting, click **Refresh** to check the latest config file of the device.

5.5.2 Account

There are two tabs in the Account section: Account and ONVIF User.

5.5.2.a Account

- For Username and Group Name, the max length is 31 characters, which includes digits, letters, underline, hyphen, dot, and @.
- Password can be 0 ~ 32 characters in number and letter only. Users can modify another user's password.
- User and group can be manually added to 18 and 8 respectively.
- User management adopts group/user modes. The username and the group name shall be unique. One user shall be included in only one group.
- Currently logged in user cannot change his/her own rights.

5.5.2.a.i Username

In this interface you can enable anonymous login, add/remove user and modify username. See Figure 5-62.

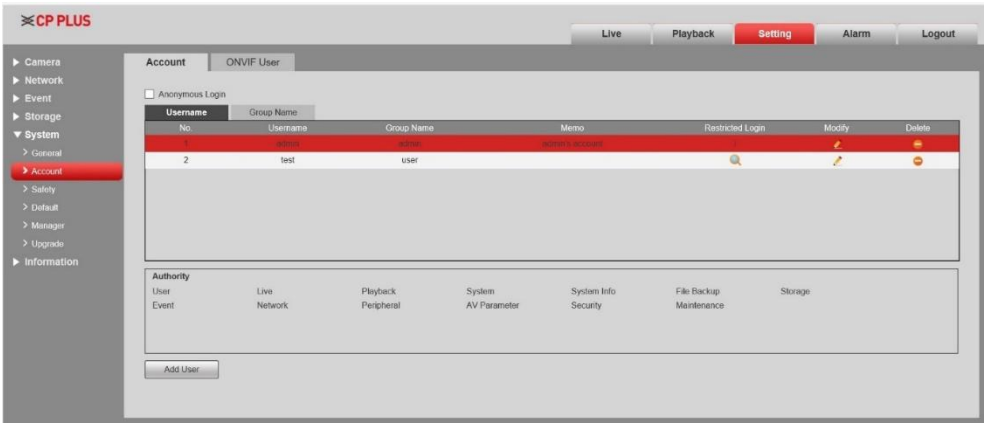


Figure 5-62

Enable anonymous login: Enable Anonymous Login, and input IP. No username or password is required; you can log in by anonymity (with limited rights). You can click Logout to end your session.

Add User: It is to add a name to group and set the user rights. See Figure 5-63.

Hidden user “default” is for system interior use only and cannot be deleted. When there is no login user, hidden user “default” automatically login. You can set some rights such as monitor for this user so that you can view some channel view without logging in.

Here, you can input the username and password and then select one group for current user. Please note the user rights shall not exceed the group right setup.

For convenient setup, ensure that the general user has the lower rights setup than the admin.

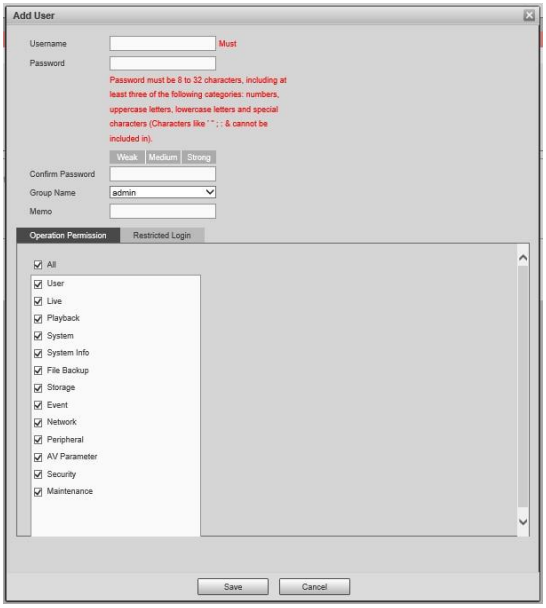


Figure 5-63

Click **Save** to complete the Add User parameter setting on the camera.

Modify User:

It is to modify the user property, belonging group, password and rights. See Figure 5-64.

Modify Password:

It is to modify the user password. You need to type the old password and then re-type the new password twice to confirm the new setup. Please click on the Save button to modify the user.

Please note, the password ranges from 0-digit to 32-digit. It should include the numbers and letters only. For the user who has the account rights, he/she can modify the password of other users.

Figure 5-64

Click **Save** to complete the Modify User parameter setting on the camera.

5.5.2.a.ii Group Name

The group name interface is used to add/remove group, modify group password etc. The Group Name interface is shown in Figure 5-65.

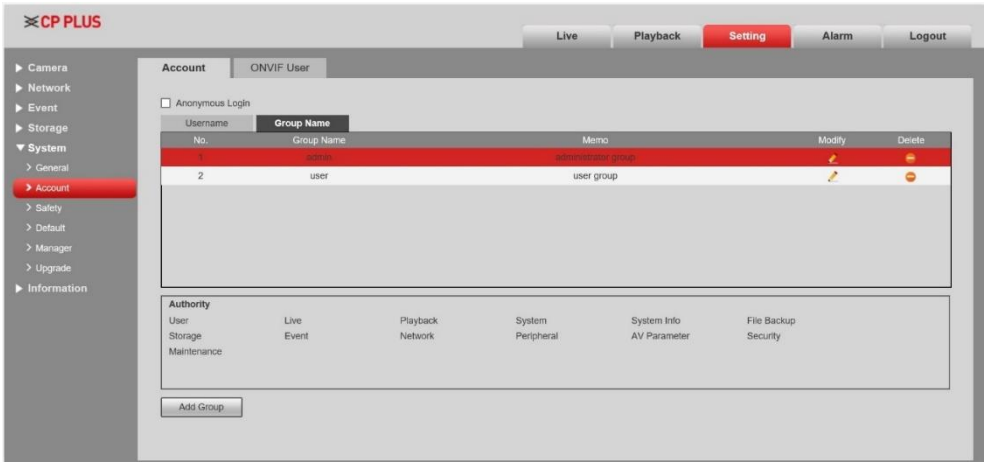


Figure 5-65

Add Group: It is to add group and set its corresponding rights. See Figure 5-66.

Please type the group name and then enable the check box to select the corresponding rights. It includes preview, playback, record control, PTZ control, etc.

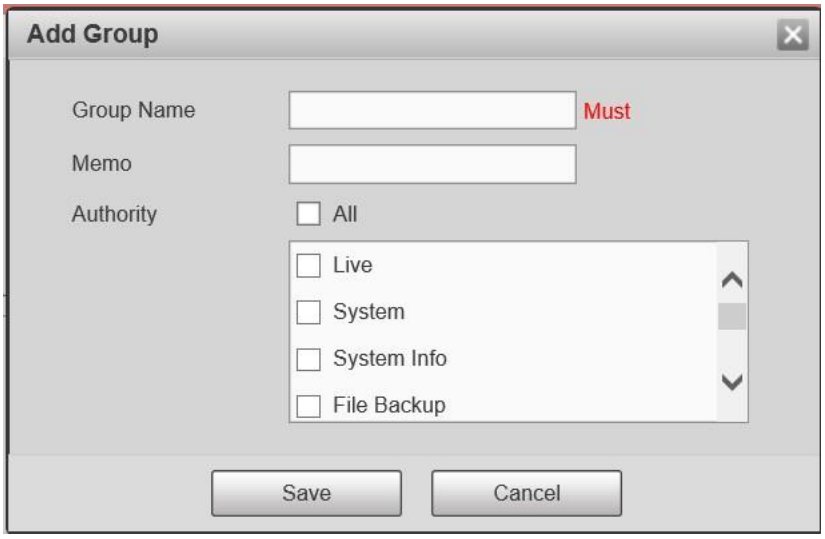


Figure 5-66

Click **Save** to complete the Add Group parameter setting on the camera.

Modify Group: Click the Modify Group icon, a modify group interface is shown in Figure 5-67. Here, you can modify group information such as remarks and rights.

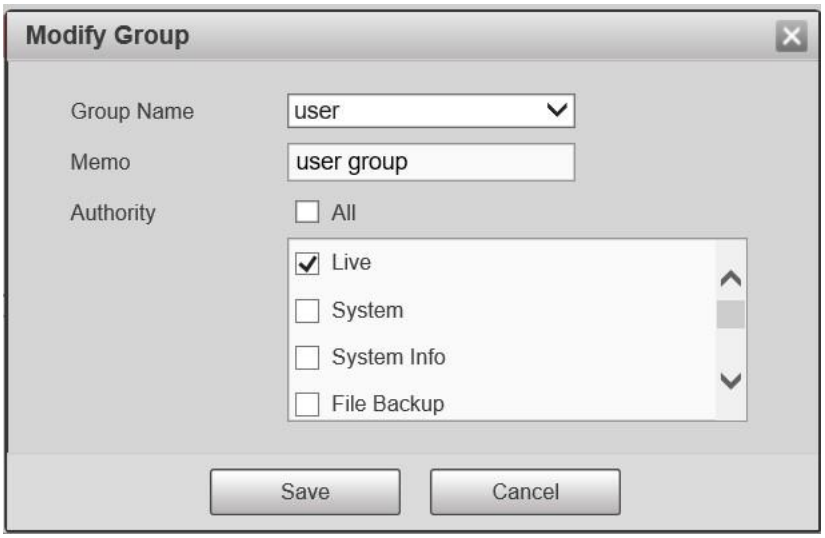


Figure 5-67

Click **Save** to complete the Modify Group parameter setting on the camera.

5.5.2.b ONVIF User

The ONVIF User interface is shown in Figure 5-68.

Figure 5-68

Add User: It is to add a user and set the user rights. See Figure 5-69.

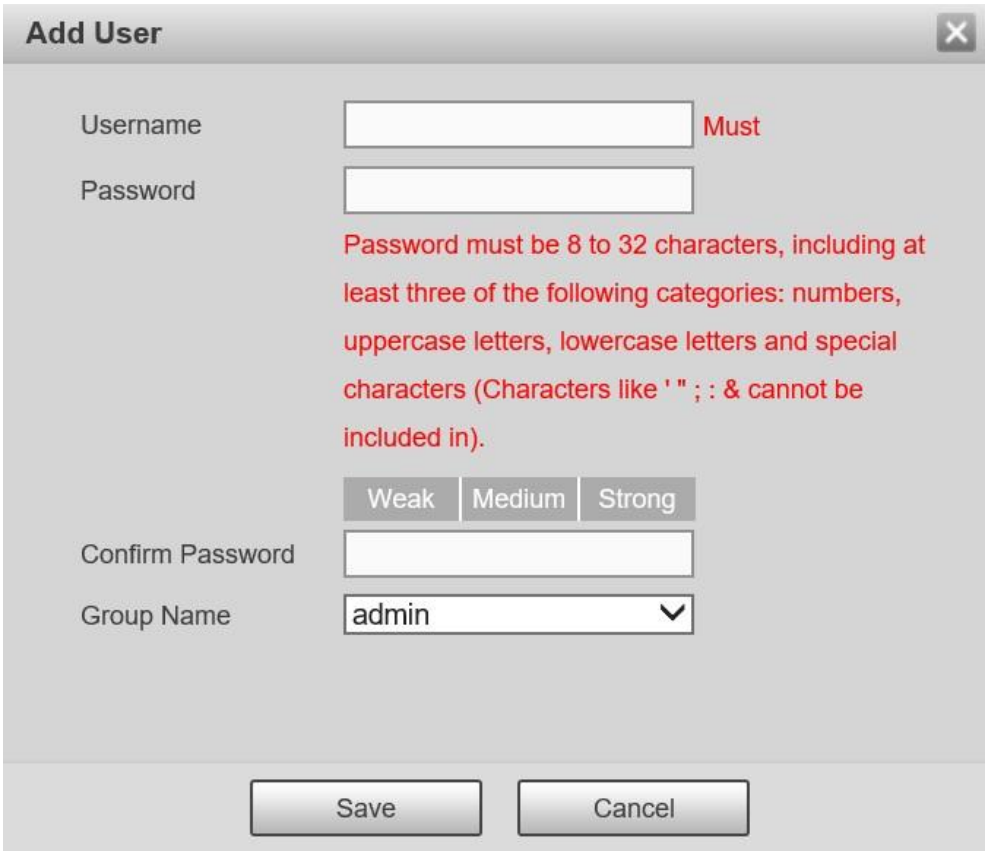


Figure 5-69

Click **Save** to complete the Add User parameter setting on the camera.

Modify User:

It is to modify the user property, belonging group, password and rights. See Figure 5-70.

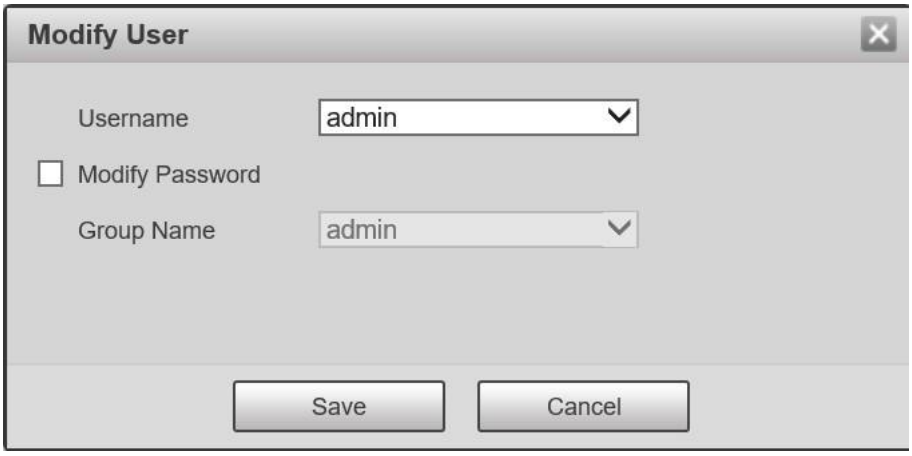


Figure 5-70

Click **Save** to complete the Modify User parameter setting on the camera.

5.5.3 Safety

There are five tabs under the safety interface: System Service, HTTPS, Firewall, Certificate Management, Digest Algorithm for Authentication.

5.5.3.a System Service

Set the system service for system security.

1. Select **Setting** > **System** > **Safety** > **System Service** and the system displays the System Service interface. See Figure 5-71.

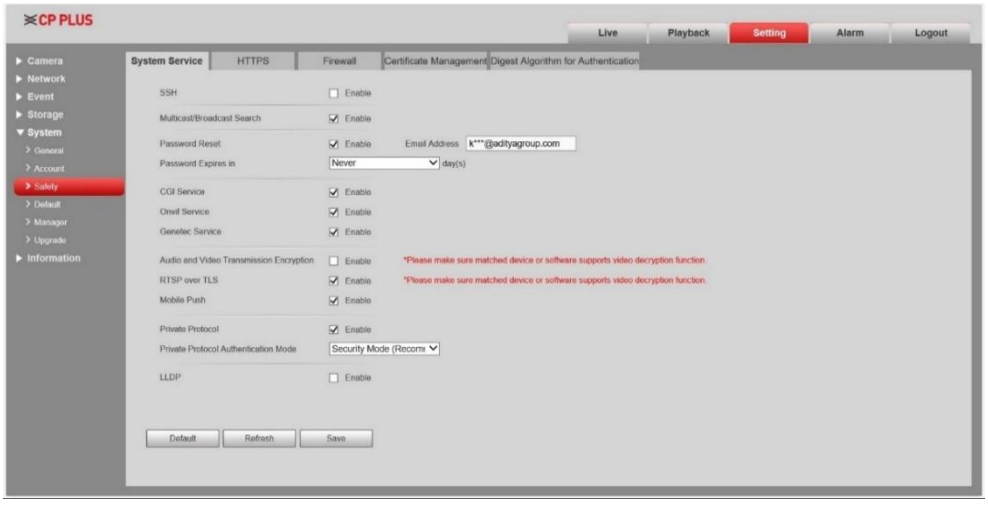


Figure 5-71

To set the parameters of System Service, please refer to the following table for more details about this parameter setting.

Table 5-41

Parameter	Description
SSH	Enable the check box to allow SSH for security management. It is disabled by default.
Multicast/ Broadcast Search	If the function is enabled and when several users are viewing the live image through network at the same time, multicast/broadcast protocol is adopted to search the device.
Password Reset	The function is enabled by default. You can reset the password if you forget the password. **Note:** If you disable the function, you can only restore the device to the factory default through hardware restore and then reset the password.
Password Expires in	Set the duration after which the user's password becomes invalid.
CGI Service	CGI service is enabled by default. **Note:** When CGI service is enabled: If https is enabled, CGI can only communicate with the device through https. If https is disabled, CGI can only communicate with the device through http. When CGI is disabled, visiting the device through CGI is not supported.
Onvif Service	Onvif service is enabled by default. **Note:** When Onvif service is enabled: If https is enabled, Onvif can only communicate with the device through https. If https is disabled, Onvif can only communicate with the device through http. When Onvif is disabled, visiting the device through Onvif is not supported.
Genetec Service	Genetec service is enabled by default. **Note:** When Genetec service is enabled: If https is enabled, Genetec can only communicate with the device through https. If https is disabled, Genetec can only communicate with the device through http. When Genetec is disabled, visiting the device through Genetec is not supported.

Audio and Video Transmission Encryption	You can select the check box to enable the audio and video transmission encryption function. **Note:** If you enable the function, ensure the matched device and software support decryption function. Encryption function is not supported when transmitting audio and video date between the speed dome and the third-party platform and device. To ensure data security, we highly recommend you disable CGI service, Onvif service, and Genetec service.
RTSP over TLS	Enables secure video streaming by encrypting RTSP data using TLS.
Mobile Push	Mobile push function is enabled by default. If the function is enabled, the alarm capture can be sent from the speed dome to the mobile phone. **Note:** If you disable the function, the speed dome cannot sent the alarm, picture, and video record to the mobile phone.
Private Protocol	Enables secure, proprietary communication between the IP camera and compatible devices.
Private Protocol Authentication Mode	Enables authentication for secure access when using the camera's proprietary communication protocol.
LLDP	Allows the IP camera to share its information with other devices on the network, making it easier to identify and manage.

2. Click **Save** to complete the System Service parameter setting on the camera.

   Note: Click **Default** to restore the device to default setting, click **Refresh** to check the latest config file of the device.

5.5.3.b HTTPS

HTTPS Create a certificate or upload an authenticated certificate, and then you can log in through HTTPS with your PC. The HTTPS can protect page authenticity on all types of websites, secure accounts, and keep user communications, identity, and web browsing private.

1. Select **Setting** > **System** > **Safety** > **HTTPS**.
2. Create a certificate or upload an authenticated certificate. For creating a certificate, click **Create**.

   The HTTPS interface is shown in Figure 5-72.

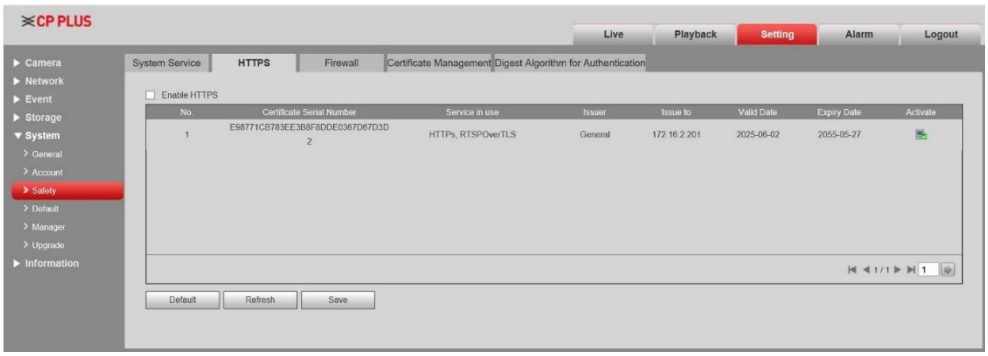


Figure 5-72

3. Click **Save** to complete the HTTPS parameter setting on the camera.

   Note: Click **Default** to restore the device to default setting, click **Refresh** to check the latest config file of the device.

5.5.3.c Firewall

The firewall interface is shown in Figure 5-73.

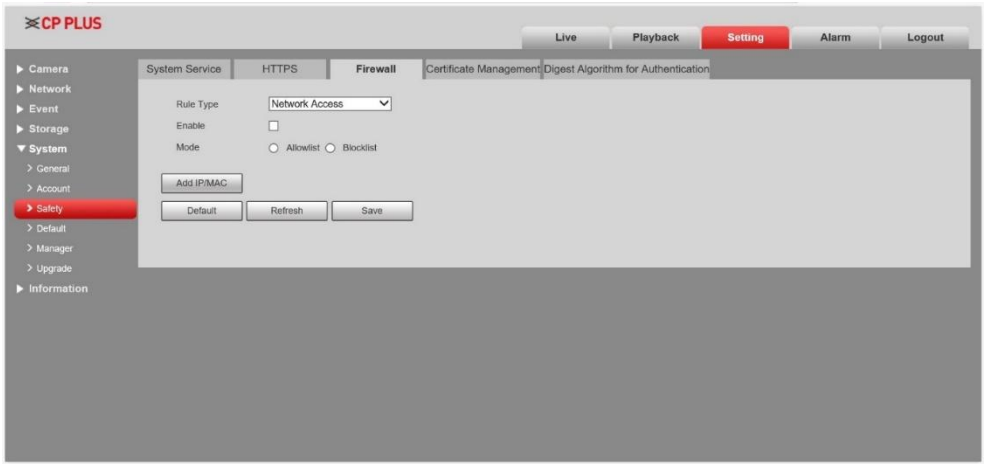


Figure 5-73

To set the parameters of Firewall, please refer to the following table for more details about this parameter setting.

Table 5-42

Parameter	Function
Rule Type	Set the rule type to allow or block specific network traffic based on security needs.
Enable	Enable it to protect the camera from unauthorized access and control incoming and outgoing network traffic.
Mode	Set the mode with Allowlist and Blocklist options to control which devices or IP addresses can or cannot access the camera.

Click **Save** to complete the Firewall parameter setting on the camera.

Note: Click **Default** to restore the device to default setting, click **Refresh** to check the latest config file of the device.

5.5.3.d Certificate Management

The certificate management interface is shown in Figure 5-74.

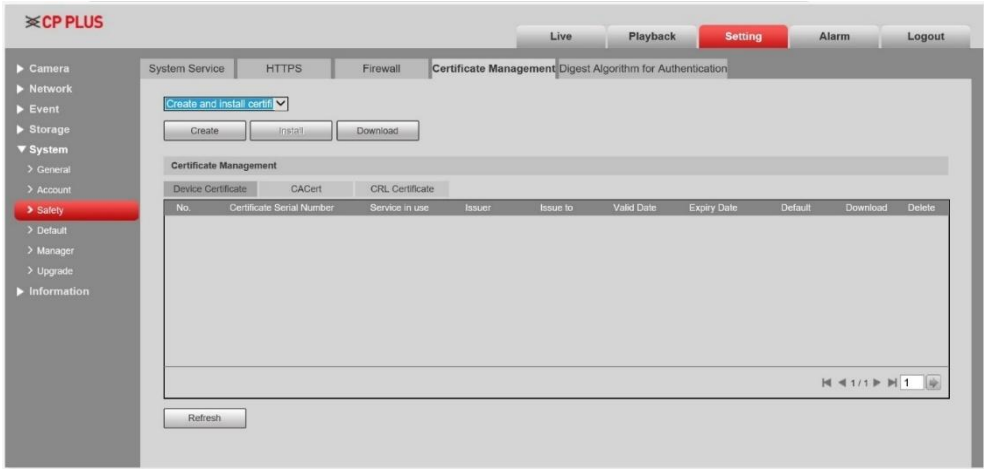


Figure 5-74

To set the parameters of Certificate Management, please refer to the following table for more details about this parameter setting.

Table 5-43

Parameter	Function
Create	Generate a new digital certificate for secure communication.
Install	Upload and apply an existing certificate to the IP camera.
Download	Save the current certificate from the IP camera for backup or external use.

Click **Save** to complete the Certificate Management parameter setting on the camera.

Note: Click **Refresh** to check the latest config file of the device.

5.5.3.e Digest Algorithm for Authentication

The Digest Algorithm for Authentication interface is shown in Figure 5-75.

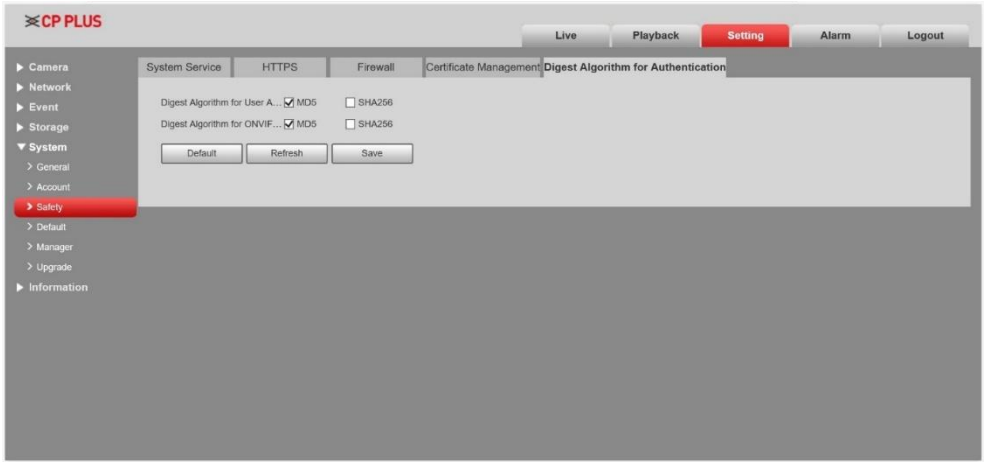


Figure 5-75

To set the parameters of Digest Algorithm for Authentication, please refer to the following table for more details about this parameter setting.

Table 5-44

Parameter	Function
Digest Algorithm for User Authentication	Allows you to securely verify a user's login credentials.
Digest Algorithm for ONVIF	It ensures secure communication and login verification when using the ONVIF protocol.

Click **Save** to complete the Digest Algorithm for Authentication parameter setting on the camera.

Note: Click **Default** to restore the device to default setting, click **Refresh** to check the latest config file of the device.

5.5.4 Default

The default setup interface is shown in Figure 5-76.

Note: System cannot restore some information like network IP addresses, account details, and so on.

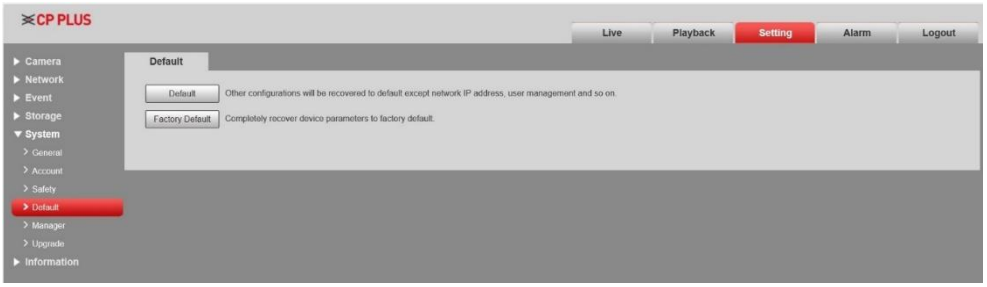


Figure 5-76

To set the parameters of Default, please refer to the following table for more details about this parameter setting.

Table 5-45

Parameter	Function
Default	It restores the device to default setting, except network IP address, user management, and so on.
Factory Default	It recovers complete device parameters to factory default.

5.5.5 Manager

The Auto Maintain tab is available under the Manager interface.

5.5.5.a Auto Maintain

Here you can select auto reboot and auto delete old files interval from the dropdown list. If you want to use the auto delete old files function, you need to set the file period.

The Auto Maintain interface is as shown in Figure 5-77.

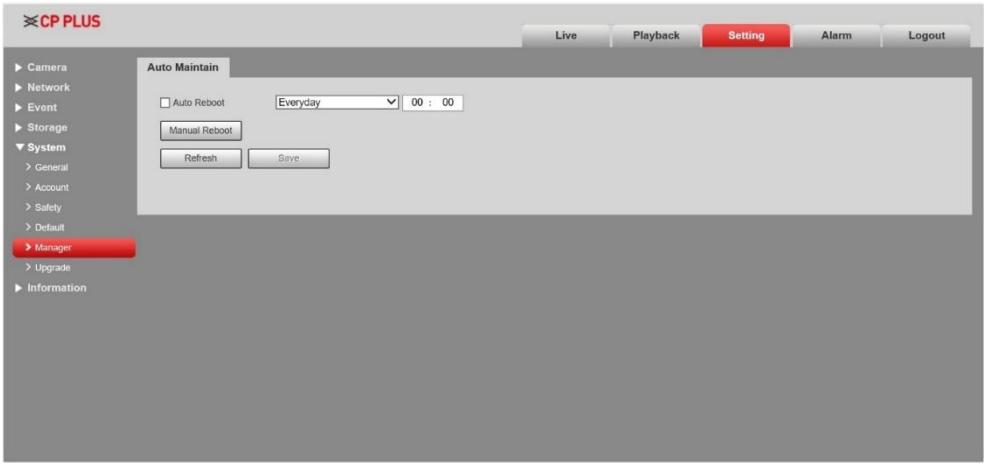


Figure 5-77

To set the parameters of the Auto Maintain, please refer to the following table for more detail about this parameter setting.

Table 5-46

Parameter	Function
Auto Reboot	Select the **Auto Reboot** time from the drop-down to set auto reboot time.
Manual Reboot	Click **Manual Reboot** and confirm it to start rebooting.

Click **Save** to complete the Auto Maintain parameter setting on the camera.

Note: Click **Refresh** to check the latest config file of the device.

5.5.6 Upgrade

The Upgrade interface is shown in Figure 5-78.

File Upgrade

Browse and open the upgrade file (file extension is ".bin") and then click the **Upgrade** button to begin firmware update.

Important: Improper upgrade program may result in device malfunction.

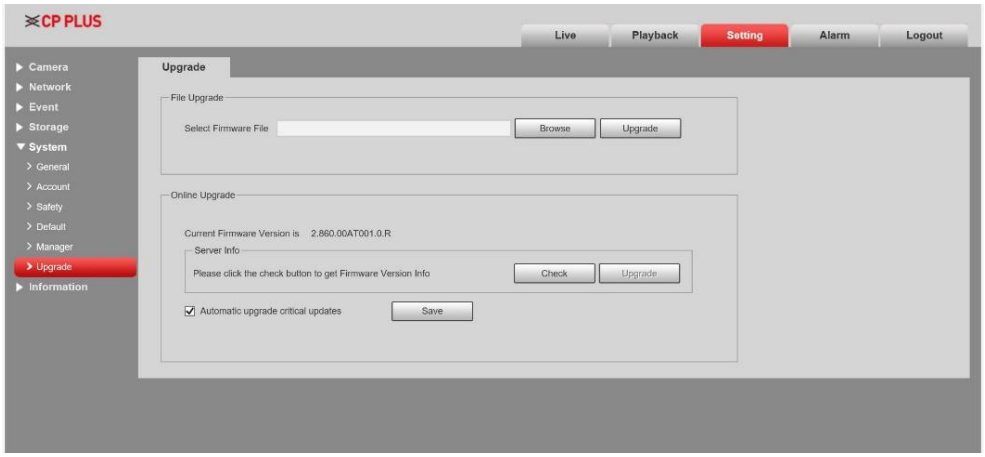


Figure 5-78

Online Upgrade

Check and upgrade the update to ensure that you're up to date.

Click **Save** to complete the Upgrade parameter setting on the camera.

5.6 Information

There are four sections under Information section: Version, Log, Online User, and Legal Info.

5.6.1 Version

The Version interface is shown in Figure 5-79.

Here, you can view system hardware features, software version, release date etc. Please note that the following information is for reference only.

Figure 5-79

5.6.2 Log

In the Log section, you see two tabs: Log, and Remote Log.

5.6.2.a Log

Here you can view the system log. See Figure 5-80.

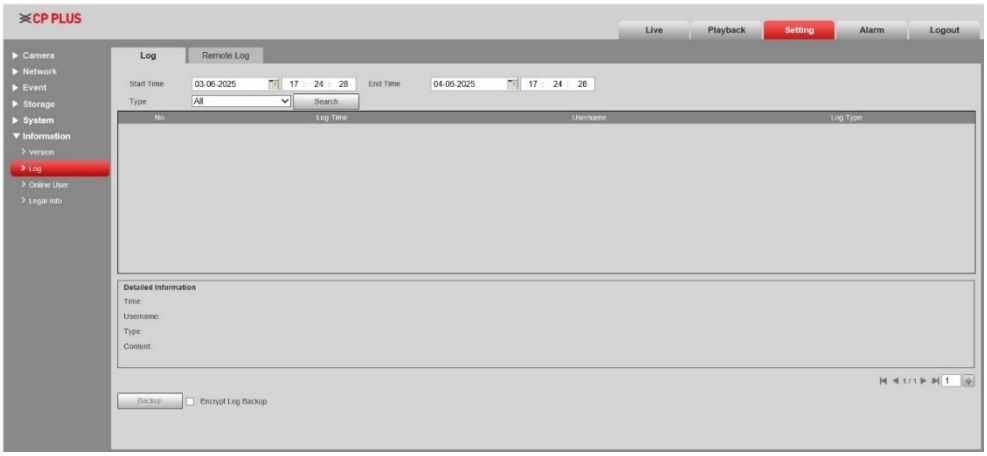


Figure 5-80

To set the parameters of the Log, please refer to the following table for more details about this parameter setting.

Table 5-47

Parameter	Function
Start time	Set the start time of the requested log. (The earliest time is 2000/1/1)
End time	Set the end time of the requested log. (The latest time is 2037/12/31)
Type	Select the type of log from the drop-down list.
Search	Click **Search** to search for the requested log type information. You can click the stop button to terminate the current search operation.
Log information	You can select one item to view the detailed information.
Clear	Select **Clear** to delete all displayed log files. Please note the system does not support clear by type.
Backup	Click **Backup** button to back up the log files to your current PC.

5.6.2.b Remote Log

The Remote Log interface is shown in Figure 5-81.

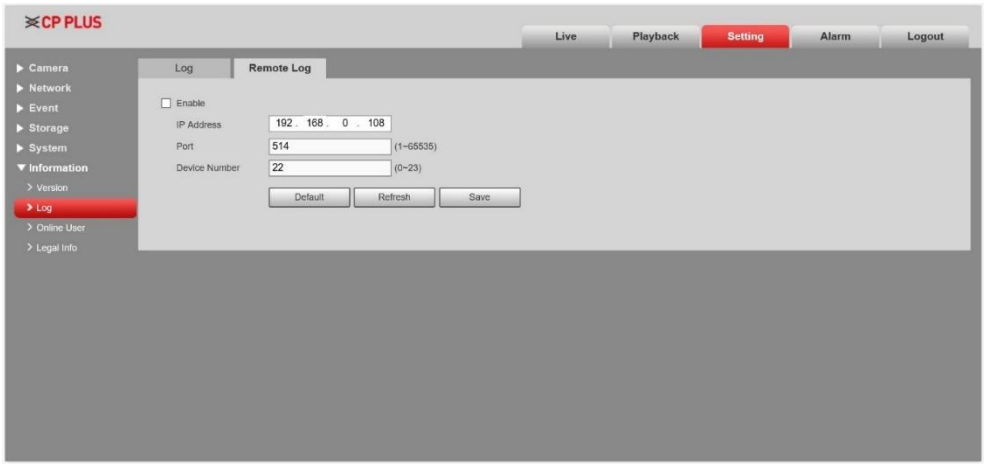


Figure 5-81

To set the parameters of the Remote Log, please refer to the following table for more detail about this parameter setting.

Table 5-48

Parameter	Function
Enable	Enable it to record and access the camera logs onto a remote server.
IP Address	Provide IP address to connect the device within a network.
Port	Provide the port to define the communication channel between the device and the network.
Device Number	Provide the device number to identify and manage the device within the system.

Click **Save**, to complete the remote log parameter setting on the camera.

Note: Click **Default** to restore the device to default setting, click **Refresh** to check the latest config file of the device.

5.6.3 Online User

The Online User interface is shown in Figure 5-82.

Here, you can view current online usernames, group names, IP addresses and login time.

Figure 5-82

5.6.4 Legal Info

The Legal Info interface is shown in Figure 5-83.

Here, you can view the Software notice, Warranty information, Copyrights, and more.

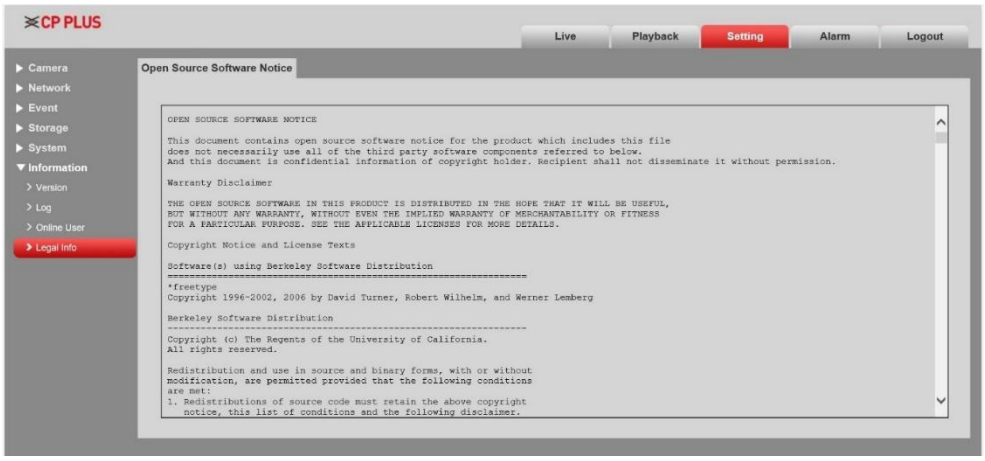


Figure 5-83

6. Alarm

Click **Alarm**, you can see an alarm interface is shown in Figure 6-1. Here, you can set device alarm type and alarm sound setup.

Figure 6-1

To set the parameters of an Alarm, please refer to the following table for more details about this parameter setting.

Table 6-1

Type	Parameter	Function
Alarm Type	Motion detection	System alarm occurs when it detects the motion.
	Disk full	System alarm occurs when the disk is full.
	Disk Error	System records alarm info when disk error happens.
	Video Tampering	System alarm occurs when the video is tampering.
	External Alarm	Alarm input device sends out alarm.
	Illegal Access	System alarm occurs when there is illegal access.
	Audio Detection	System alarm occurs when there is any detection in audio.
	IVS	System alarms occur when IVS event is triggered.
	Scene Changing	System detects sudden changes in the camera's view and triggers an alert or recording.
	Voltage Detection	It helps detect and prevent malfunction or damage caused by overvoltage or undervoltage conditions.
	Security Exception	It helps to prevent unauthorized access to the system that violate security policies.
Operation	Prompt	Enable Prompt to get the notifications according to the environmental condition.
Alarm Tone	Play Alarm Tone	Enable **Play Alarm Tone**, Browse the path and set the alarm tone.
	Tone Path	Click **Browse** to customize the storage path of the alarm tone.

7. Logout

Click **Logout** button, system goes back to login interface. See Figure 7-1.

Figure 7-1

Notes:

- This manual is for reference only. Slight differences may be found in the user interface.
- All the designs and software here are subject to change without prior written notice.
- All trademarks and registered trademarks mentioned are the properties of their respective owners.
- If there is any uncertainty or controversy, please refer to the final explanation of us.
- Please visit our website for more information.

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