KEDACOM

User Manual for HD IP Camera of IPC Series

V2R2 (October, 2016)

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Target Audience

Administrators and Operators of Video Surveillance Products

Document Version

V2R2

Applicable Models

IPC113, IPC123, IPC143 series

IPC2251, IPC2451 series

IPC2152, IPC2252, IPC2452 series

IPC2110, IPC2210 series

IPC2131, IPC2132, IPC2231, IPC2431 series

IPC2111, IPC2211, IPC2411 series

Related Document

Quick Start Guide

Convention

Icon	Convention
	Notes
italic	Book or document name; Filling content
>	Connector between menus of different level
BOLD	Menu; Button; Option

UL Safety Instruction

CAUTION: Risk of Explosion if Battery is replaced by an Incorrect Type. Dispose of Used Batteries According to the Instructions.

Suitable for Mounting on Concrete or Other Non-Combustible Surface Only.

This product is intended to be supplied by a Listed Power Unit, output rated minimum 24Vac, 50/60HZ, 0.5A or 12Vdc, 0.8A or POE,0.5A,non-energy hazards and Tma=60Deg.C. complied with LPS.

a. the function of the ITE being investigated to IEC 60950-1 is considered not likely to require connection to an Ethernet network with outside plant routing, including campus environment; and

b. the installation instructions clearly state that the ITE is to be connected only to PoE networks without routing to the outside plant.

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1. Product Brief

HD IP Camera (hereinafter referred to as Camera) is a remote video surveillance device based on IP network technology. It encodes and transmits HD video.

Some features of the HD IP camera:

Live View

Apply high-performance progressive scan sensor, with clear image and vivid color;

High-performance video processing chip and efficient video encoding, providing HD video image;

Dual-stream to fit different network bandwidth;

Configurable text overlay on video image;

Alarm

With audio and alarm connectors, realize functions of talkback and alarm;

Motion detection and alarm linkage, make video surveillance intelligent;

Support alarm linkage edit: Alarm Text Overlay, Device Output, Live View Display and etc.

Networking

Static address, DHCP or PPPoE;

NAT traversal, DNS and multicast technology

Storage

With SD card slot, when the network breaks down, video can be stored in local SD card;

Support local snapshot, default format is .JPG;

Support local recording, user can query and playback recording on PC.

2. Appearance

Picture 2-1 IPC113 / IPC123 / IPC143 series

Picture 2-2 IPC2251 series

Picture 2-3 IPC2451 series

Picture 2-4 IPC2152 / IPC2252 / IPC2452 series

Note: Different sub-models may have some difference in their appearance. Device appearance is subject to the actual model.

Picture 2-5 IPC2110 / IPC2210 series

Picture 2-6 IPC2232 / IPC2431 series

Picture 2-7 IPC2111 / IPC2211 / IPC2411 series

3. Start Up

Please refer to the Quick Start Guide in the packing for device installation and wiring.

3.1 Client Installation Conditions

Requirements of PC for installing the client:

- Operating System: Windows XP or newer versions
- Browser: IE7.0 and above versions, Firefox, Google Chrome (41 and below)
- Processor: 3.3 GHz CORE®i3 series or other equivalent processors
- RAM Memory: 4GB or above
- DirectX：9.0c

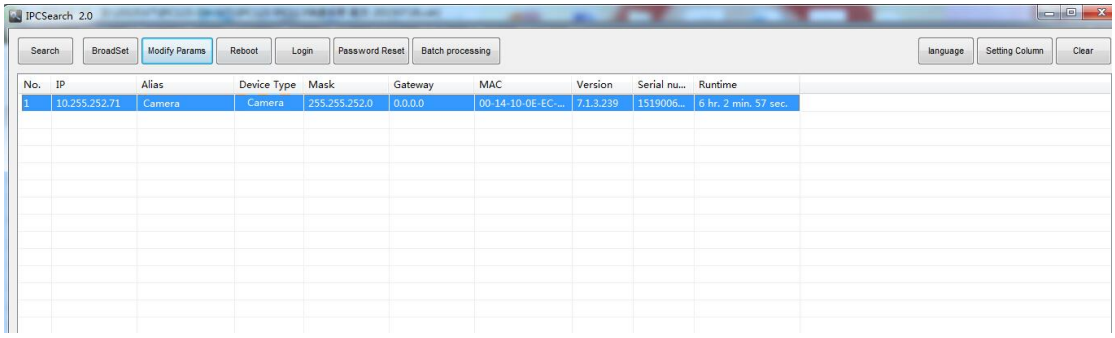
We will take IE7.0 as an example.

3.2 Initial Configuration

After installation and wiring, electrify the camera.

3.2.1 Modify Parameter

1) Get IPCSearch from the attached CD.

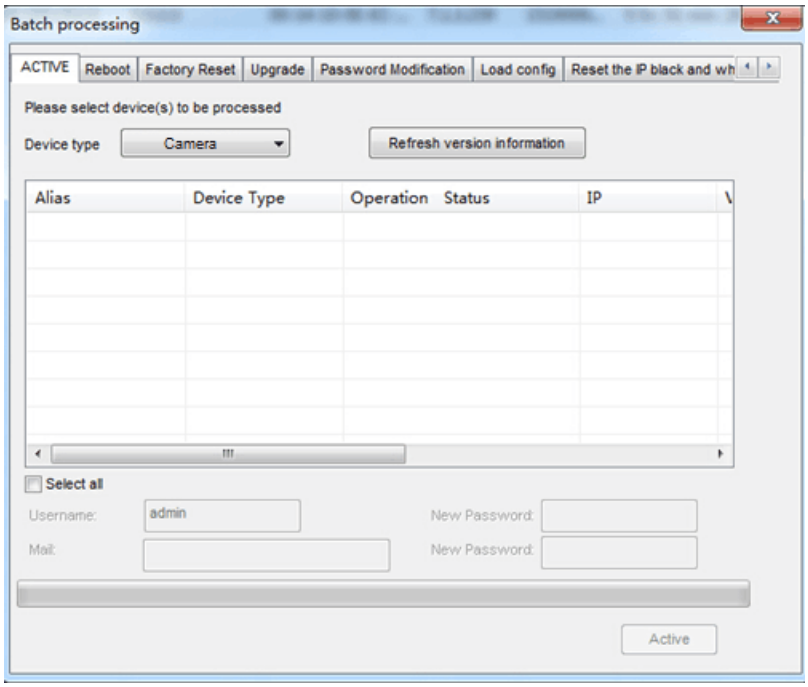


Picture 3-1 IPCSearch

Note: IPCSearch is green software free from installation. Camera name is subject to the search result.

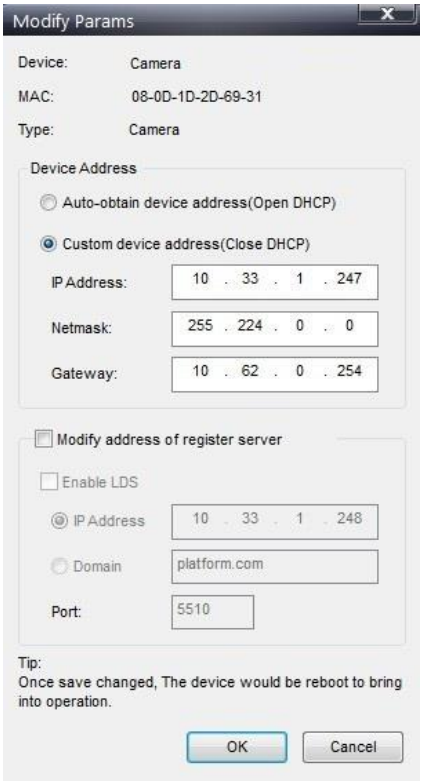
2) Run IPCSearch: it will search devices in LAN automatically and display the list as shown in Picture 3-1.

3) Select the device and click “Batch processing”. In the popup interface, set admin user’s password and the email address to find back the password. Click “Active” and wait for rebooting.



Picture 3-2 Batch processing

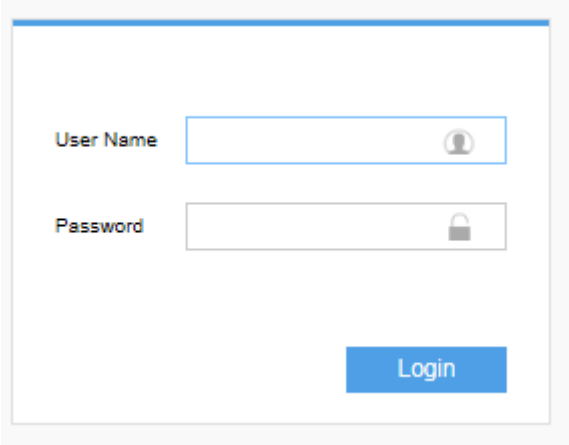
4) Select a camera to be configured, click "**Modify Params**" or right click the mouse. Interface is shown in Picture 3-3. During the modification, the user name (admin) and the password set before activation should be entered.



Picture3-3 Modify Parameter

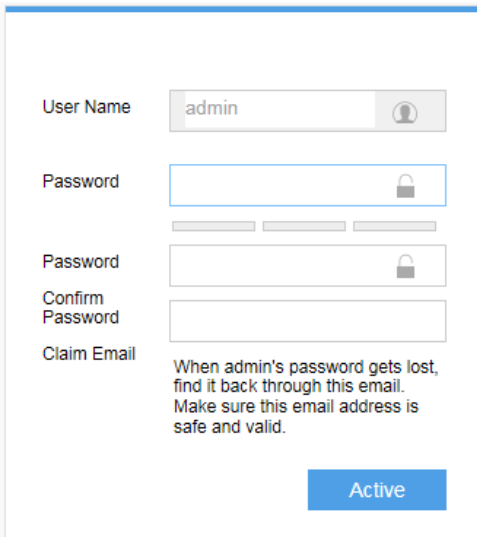
3.2.2 Login Web Client

1) After modification, camera will reboot automatically. Please wait patiently. After reboot, the button will be enabled again. Please select this device again and click “Login” or double click device name to enter web client. Interface is shown in Picture 3-4.



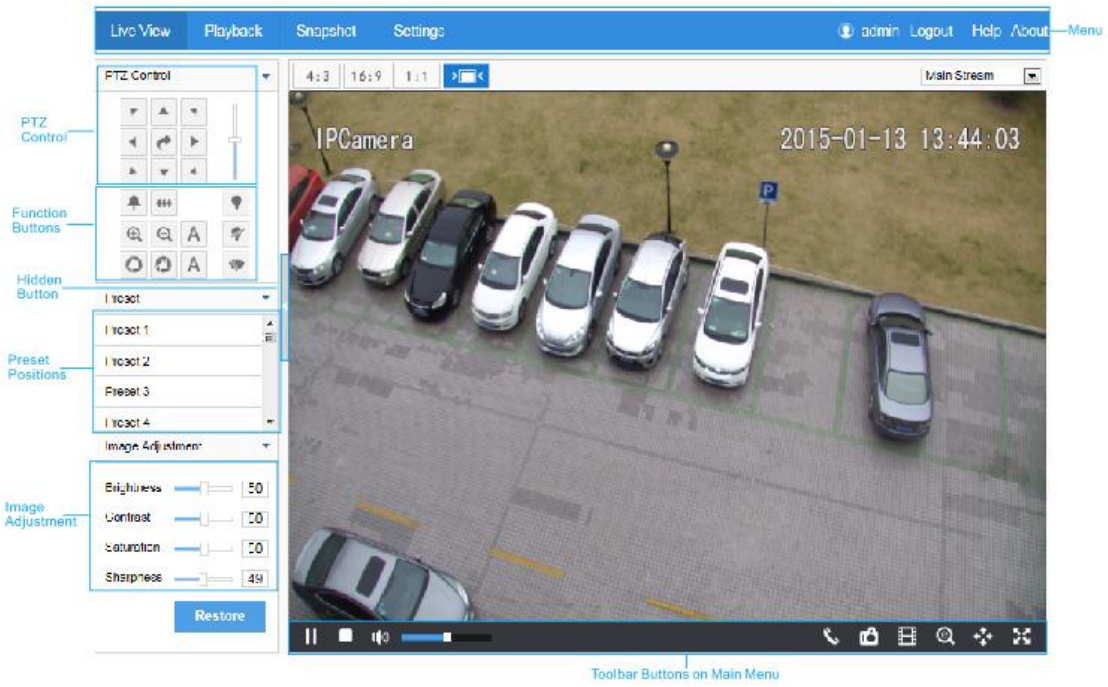
Picture 3-4 Web Client Login Interface

Note: If log in the non-activated device through web client for the first time, user can set admin password and activate the device in the login interface, as shown below. Complicated password is recommended, e.g. combination of letters and digits above 8 bits.



Picture 3-5 First login through web client

2) Enter user name and password: when log in successfully for the first time, download and install the plug-in. Close browser when installing and re-login afterwards. Interface after login is shown in Picture 3-6.



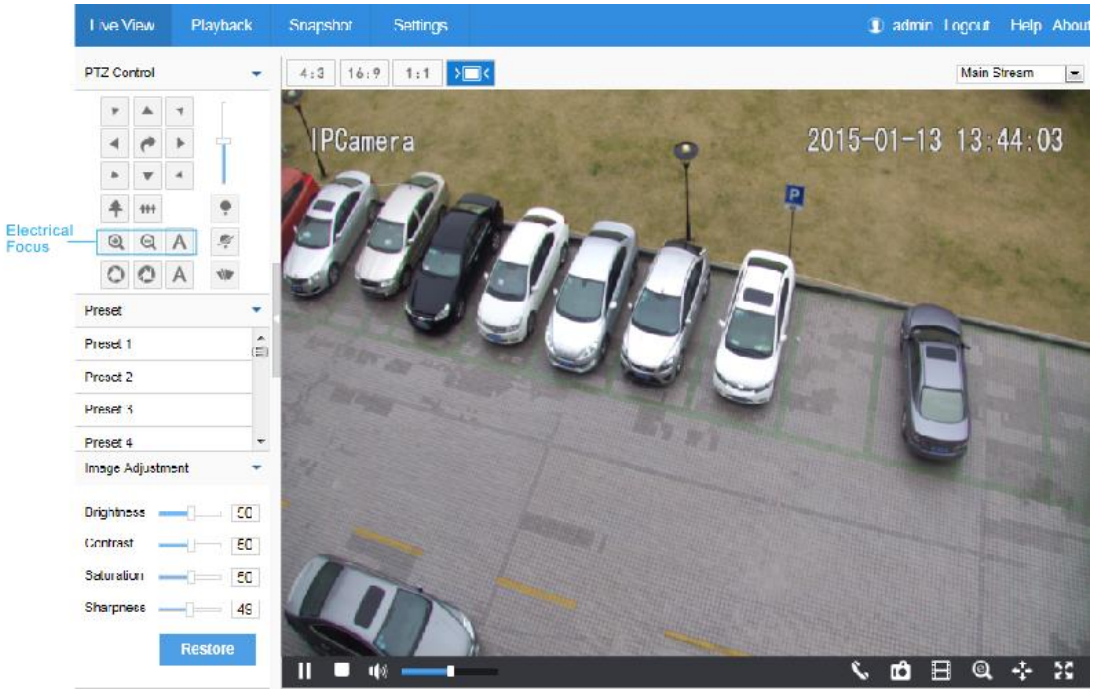
Picture 3-6 Web Client Interface

3.2.3 Focus

It is the process of imaging the target object clearly. Please focus according to the lens type of camera:

Mechanical Focus: View live video on web client and adjust the focus knob on the lens till the image is clear enough.

Electrical Focus: Click A in function buttons area of the web client, as the picture shows. Or click or for near or far focus. View live video on web client and adjust focus till the image is clear.



Picture 3-7 Focus

Note:

Some models adopts electrical focusing lens, which may cause unclear focus at some special scenes. When confronted with such problem, please focus again or focus manually.

4. Product Functions

By the web client, user can not only view live video, but also perform local snapshot and recording.

Note: Functions of different cameras may differ, and this Manual will take camera with more functions as example. User operation is subject to the actual functions of the model. Disabled button in Web Client means the model doesn't support the function.

4.1 Live View

The default interface after user login is live video view, or user can click Live View to enter the interface.

4.1.1 Toolbar Buttons

Picture4-1 Toolbar Buttons

Play/Pause /

Click this button to play or pause a viewing.

Stop

Click this button to stop live view.

Call

Click this button to call camera, and click again to stop calling. Not all cameras support this function.

Snapshot

Click this button to snapshot an image.

Snapshot includes Camera Snapshot and Local Snapshot . User can set in **Settings>Local**.

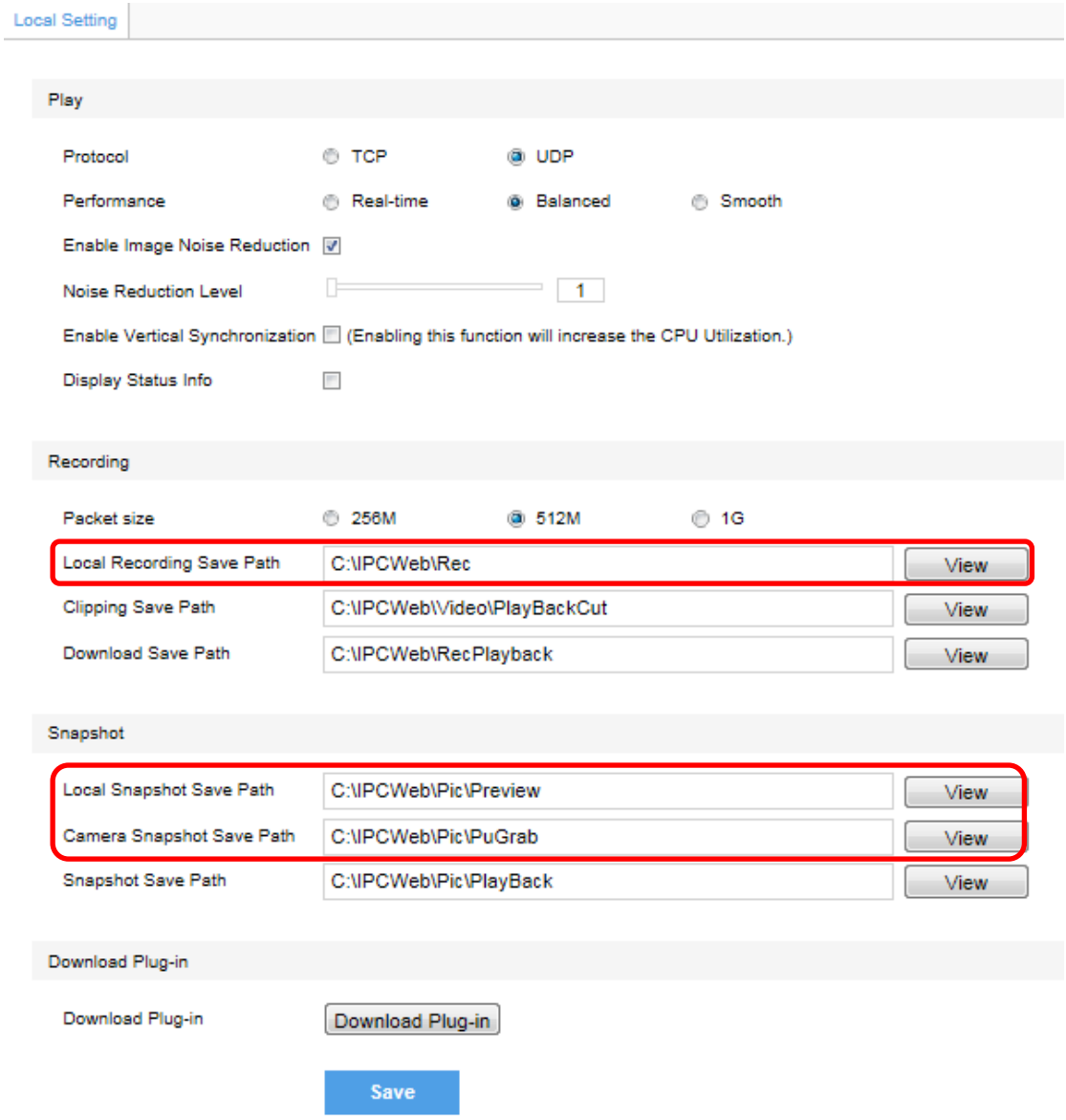
Recording

Click this button to start recording and click again to stop recording. Recording is saved on local PC. User can set or modify save path in **Settings > Local Setting**.

Note:

1) Camera Snapshot: Camera snapshots an image and sends it to local client in .JPG format. The image quality is good, but there is some time delay caused by network.

2) Local Snapshot: Client snapshots an image and save it locally. The image quality is ordinary, but there isn't any time delay.



Picture 4-2 Snapshot Setting

EPTZ

Click this button to enable the e-PTZ function. Left click and drag toward lower right to draw an area. The pixels of this area will be amplified and will cover the whole screen. Left click and drag toward upper left to draw an area, then image will recover.

PTZ

Click the button to zoom. Left click and drag toward lower right to draw an area. The pixels of this area will be amplified and will cover the whole screen. Left click and drag toward upper left to draw an area, then the image will recover. Double click a point in the image and the point will be centered.

Full Screen

Click this button to display full screen. Double click or press Esc to exit.

4.1.2 Image Adjustment

4.1.2.1 Brightness

Due to low light situation, the image will look completely or partially dark and hard to recognize. Web client provides the following functions to increase image brightness and ensure surveillance quality.

***Enable IR Lamp**

In low light situation, IR lamp can be started to get better surveillance images.

Click to enable IR lamp. Click to disable it.

Increase Image Brightness

Go to **Settings > Camera > Image > Image Adjustment**, drag **Brightness** slide bar to adjust image brightness.

Slower Shutter Speed

Camera shutter speed means the cycle of the sensor calculating light input amount. Therefore, the slower the speed is, the brighter the image will be.

Note: If the target object is moving fast, this method is not applicable.

Go to **Settings > Camera > Image > Exposure**, user can set shutter mode as auto or manual, and set **Shutter Lower Limit.**

Increase Gain

Camera gain means the light sensitivity of a sensor. A high gain may reduce light exposure for low light situation.

Note: However, the higher the gain is, the worse the image will be. User is advised to select Auto for default values, or select Auto and set Gain Upper Limit in **Settings > Camera > Image**. If user selects “Manual”, drag the slide bar to adjust gain level.

***Enable WDR**

WDR can provide optimal exposure in intense backlight conditions.

Go to **Settings > Camera > Image > Image Enhancement**, enable WDR in the drop-down list of **Dynamic Adjustment** and drag the **WDR Sensitivity** slide bar to adjust.

4.1.2.2 White Balance Adjustment

The basic conception of White Balance is “to make all colors white regardless of the color temperature of the light source”. It can compensate color rendition in pictures taken in specific light source.

Go to **Settings > Camera > Image > White Balance**, select white balance mode from the drop-down list.

If select “**Manual**”, drag the slide bar of White Balance R Gain (Red Gain) and White Balance B Gain (Blue Gain) to adjust image color.

4.1.2.3 Night Cut

Day (Night) Mode means disabling (enabling) IR lamp (only some models support), and the image switches to color (B/W), thus to get optimal images for day (sufficient light source) and night (insufficient light source) conditions.

Go to **Settings > Camera > Image > Night Cut**, select Night Cut mode.

Day

Select Day mode, disable IR lamp (only some models support), and the image is colored.

Night

Select Night mode, enable IR lamp (only some models support), and the image is black and white.

Auto (Gain Triggered)

Select Auto mode and configure sensitivity and switch time, then the system will switch Day/Night modes automatically.

Scheduled Day / Night

In this mode, camera switches to day / night mode automatically in a specified period of time.

When selecting Scheduled Day / Night mode, click Edit Time, and check Start Time and End Time in the popup interface.

Alarm Triggered Cut

In this mode, night cut is triggered by alarm input.

4.1.2.4 Noise Reduction

When there are many noise points caused by environment and camera lens, Noise Reduction function can be enabled to adjust images.

Go to **Settings > Camera > Image > Image Enhancement**, enable 3D Noise Reduction. When user selects “Disable”, the function will be disabled. When select “Enable”, user can drag the slide bar to adjust 3D noise reduction level.

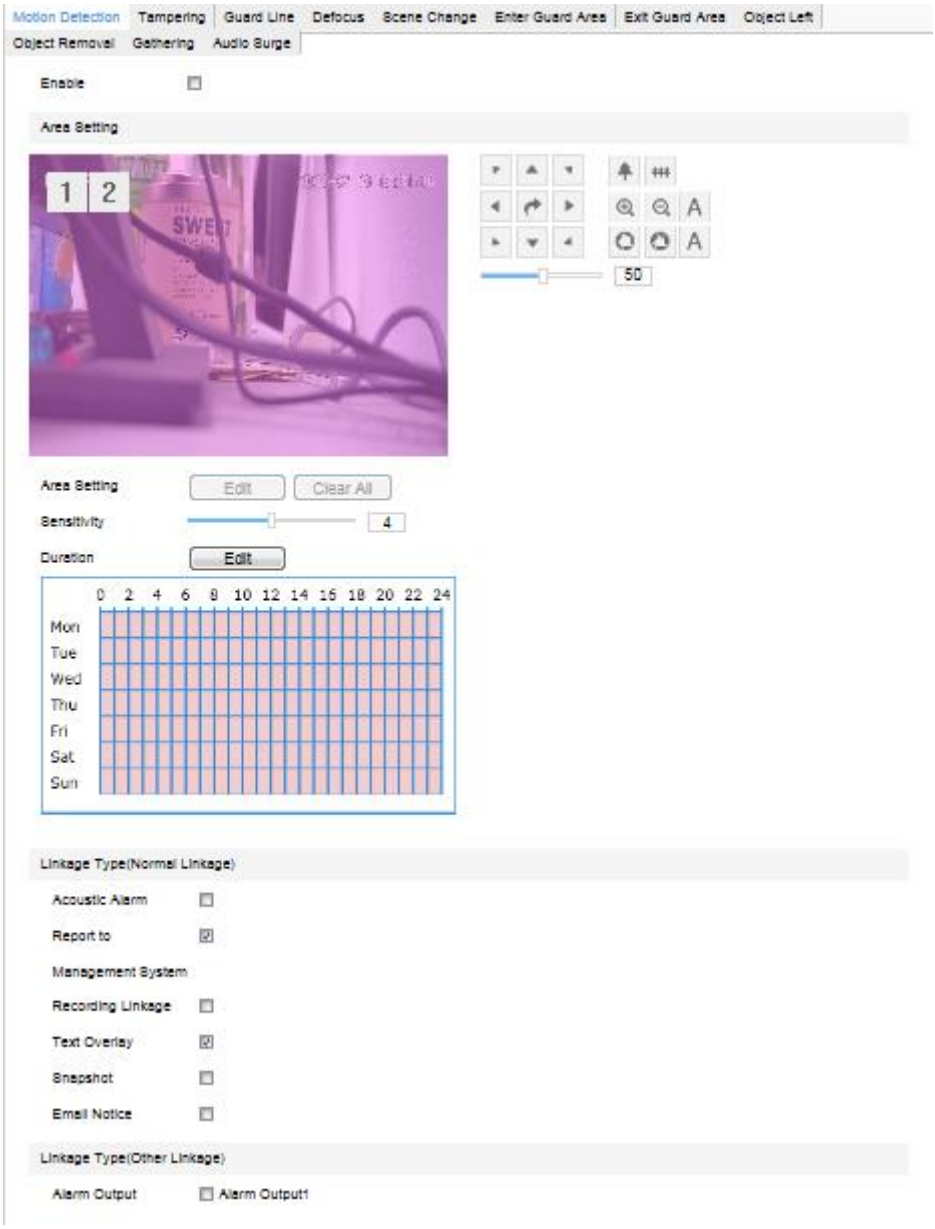
4.1.3 Auxiliary Function

*__Wiper__

Wiper is used to clean the dome housing. In the PTZ control part of the Live View interface, Click to start the wiper. Click again to stop the wiper. The wiper will stop automatically after 10 brushes. Click to enable wiper again if necessary.

4.2 Motion Detection

Detect movements in the defined area. Once the movement exceeds the defined sensitivity, an alarm will be triggered by Web Client.



Picture 4-3 Motion Detection

4.2.1 Set Area

Motion detection supports full area detection and maximum 4 user-defined areas.

1) Go to **Settings > Event > Intelligent Function > Motion Detection**, check "Enable".
2) Click "**Edit**" and the image will be divided into 16 columns and 12 rows of squares. Click a square and drag an area from it, then the area will turn purple and is the motion detection area. A camera can support maximum 4 areas.
3) Drag the slide bar to adjust **Sensitivity**.
4) Click "**Edit**". On the popup page, check durations and set start time and end time.
5) Click "**Copy**" to copy the defined motion detection time to a certain day or the whole week.
6) Select "**Linkage Type**". It is the alarm output method when an alarm is detected in the defined area.
7) Click "**Save**".

4.2.2 Clear Area

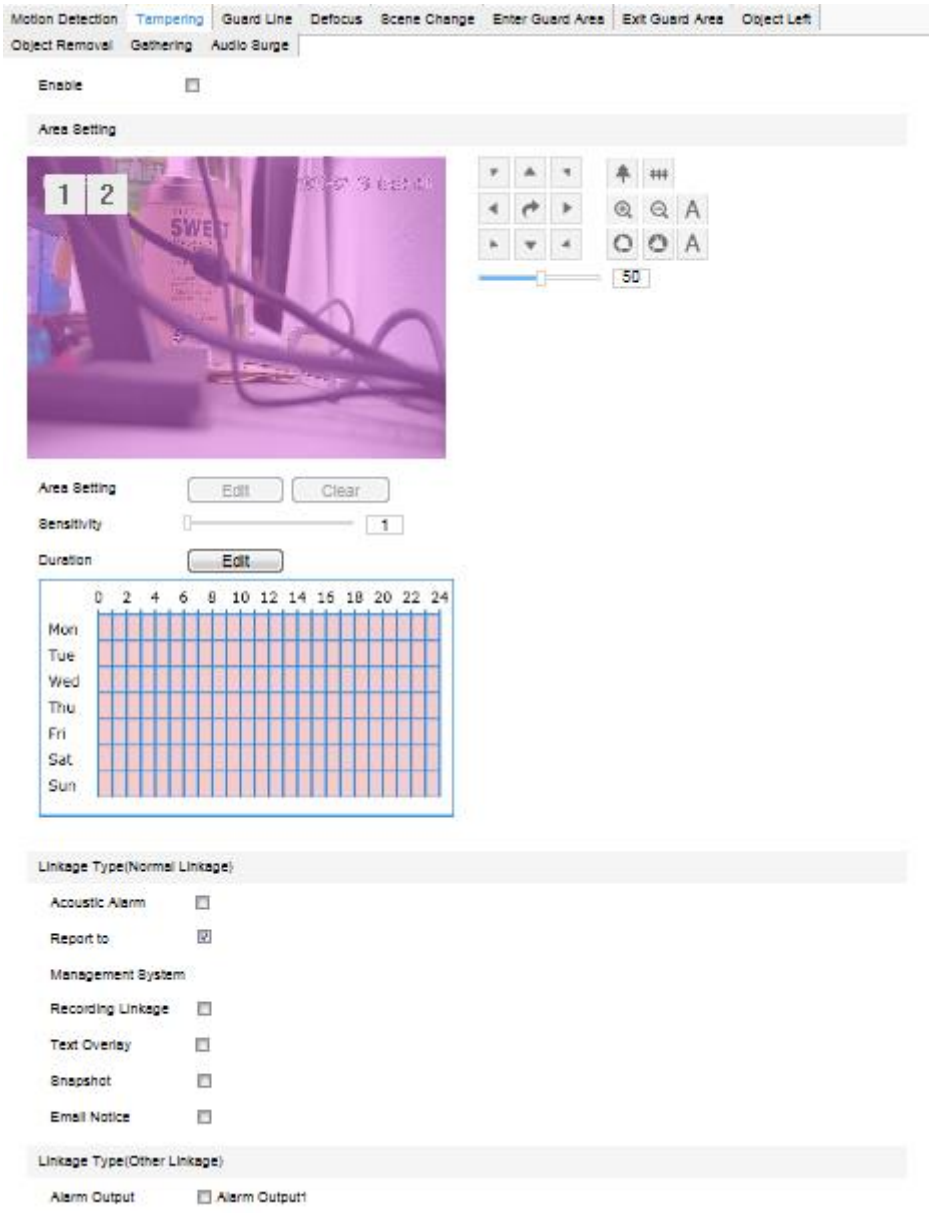
Start from an undefined square and draw an area that contains the defined area, or click the defined squares one by one to clear setting, or click "**Clear**" to clear setting. Save to make settings effective.

4.2.3 Disable Function

To disable this function, uncheck the checkbox ☑ Enable.

4.3 Tampering Alarm

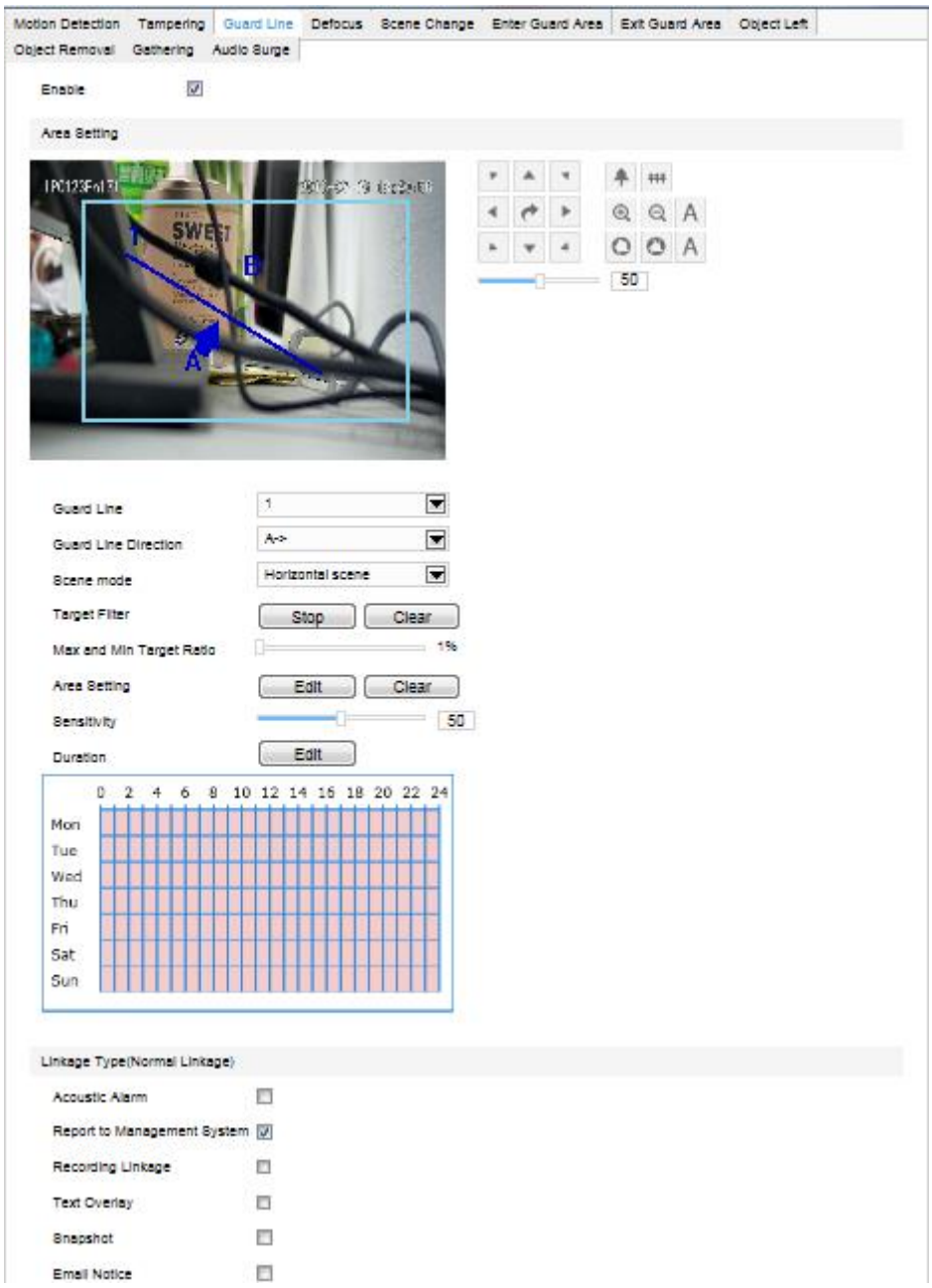
Go to **Settings>Event>Intelligent Function>Tampering Alarm**. Please refer to **4.2 Motion Detection**.



Picture 4-4 Tampering Alarm

4.4 *Guard Line

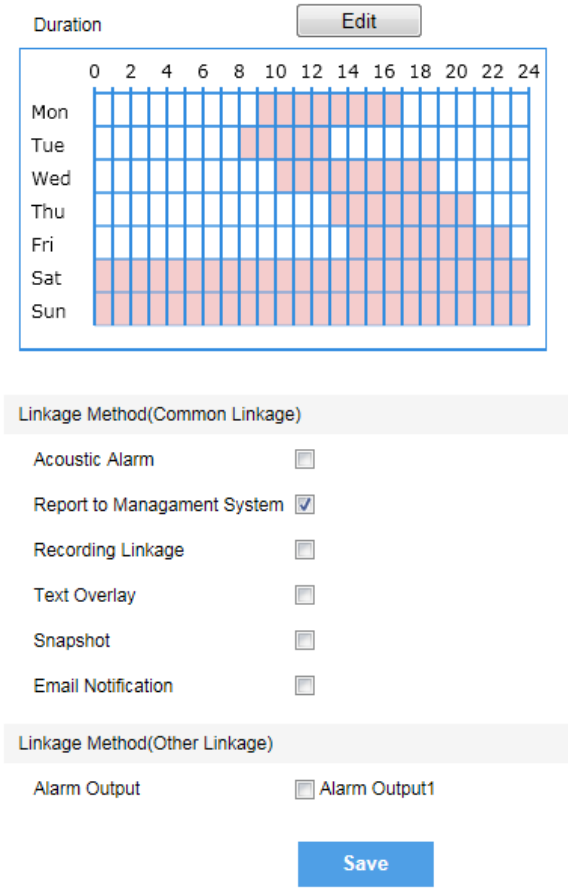
Enable this function in the interface to detect specified area at real time. Once any object enters the guard line, an alarm will be triggered. Go to **Settings** > **Event** > **Intelligent Function** > **Guard Line**.



Picture 4-5 Guard Line

Setting steps:

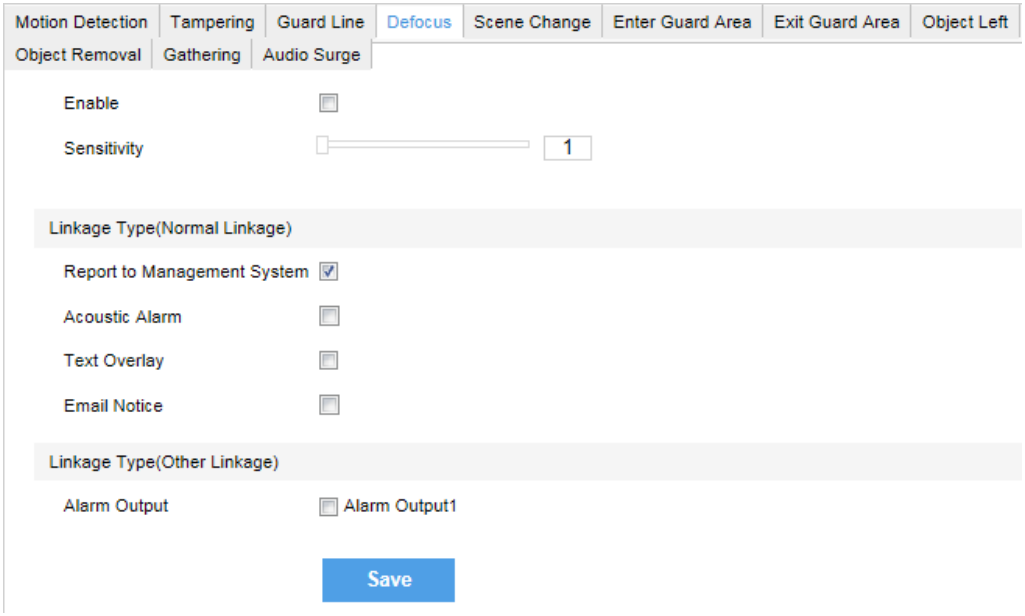
1) Check “**Enable**”;
2) Select a number from the dropdown list of **Guard Line** and once one number only. After saving it, user can set another one and max 4 guard lines are allowed;
3) Select a direction from the dropdown list of **Guard Line Direction,** “A→”, “B→” or “A→&&B→”. Take “A→” as an example, when selecting this direction, only moving objects from A to B will be detected and trigger an alarm;
4) Select a scene from the dropdown list of **Scene Mode,** “Horizontal scene” or “Vertical scene”;
5) **Target Filter**: to set target area. Click “Edit” and drag the mouse in the scene to draw a rectangle. Click “Stop” after finishing and drag the slide bar of “**Max and Min Target Ratio**” (1% by default). Moving objects exceeding max and less than min will not trigger an alarm when they pass the guard line(s);
6) **Area Setting**: to set guard lines. Click “Edit” and drag the mouse in the scene to draw a guard line. User can click its starting point or end point to adjust its length and angle, and drag the slide bar of “**Sensitivity**” to set the guide line’s sensitivity to moving objects;
7) **Duration**: Click “Edit” and set durations in the popup window of “**Edit Time**”. After finishing, the durations in the timetable below will turn white.
8) Check **“Linkage Type”** and **“Save”** to make settings take effect.



Picture 4-6 Guard line duration

4.5 *Defocus

Enable this function to detect if the image is clear and to trigger some alarm linkages. Go to **Settings** > **Event** > **Intelligent Function** > **Defocus**.



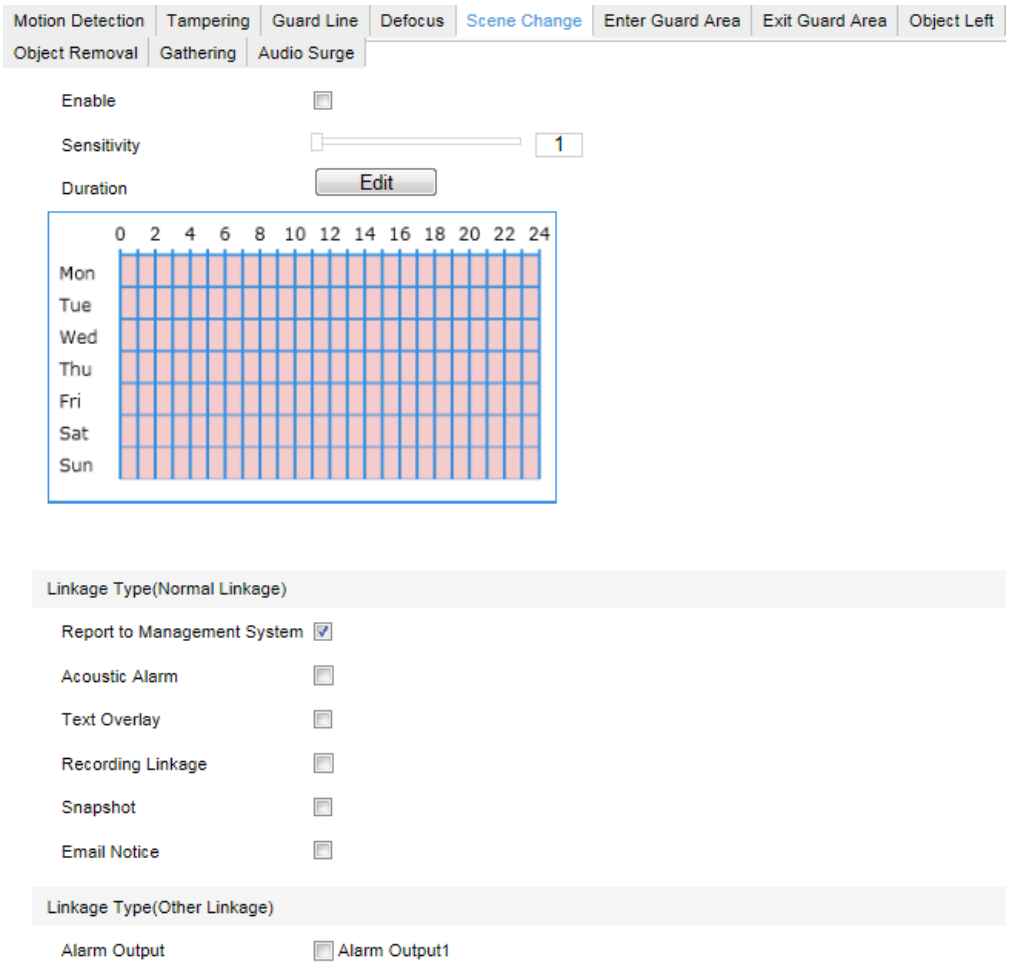
Picture 4-7 Defocus

Setting steps:

1) Check "**Enable**".
2) Drag the slide bar of "**Sensitivity**". The larger the number is, the more sensitive the image is.
3) Check **Linkage Type** and click "**Save**".

4.6 *Scene Change

Enable this function to detect if the image scene is changed and to trigger some alarm linkages. Go to **Settings** > **Event** > **Intelligent Function > Scene Change.**



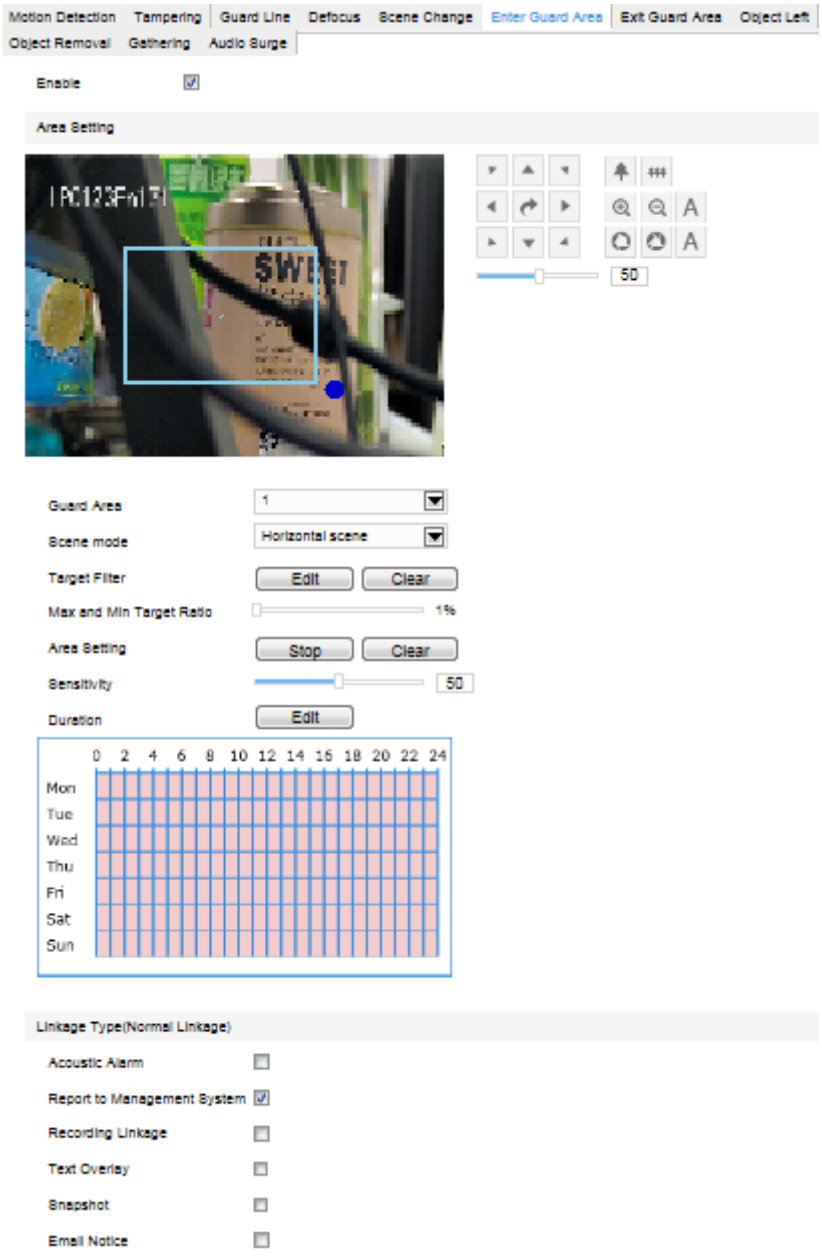
Picture 4-8 Scene Change

Setting steps:

1) Check "**Enable**".
2) Drag the slide bar of "**Sensitivity**" to adjust scene change sensitivity. The larger the number is, the more sensitive the scene change detection is.
3) **Duration**: Click "**Edit**" and set durations in the popup window of "**Edit Time**". After finishing, the durations in the timetable below will turn white.
4) Check **Linkage Type** and click "**Save**".

4.7 *Enter Guard Area

Enable this function and edit guard area. Once any object enters the area, an alarm will be triggered. Go to **Settings** > **Event** > **Intelligent Function** > **Enter Guard Area**.



Picture 4-9 Enter Guard Area

Setting steps:

1) Check “**Enable**”;
2) Select a number from the dropdown list of **Guard Line** and once one number only. After saving it, user can set another one and max 4 guard lines are allowed;
3) Select a scene from the dropdown list of **Scene Mode,** “Horizontal scene” or “Vertical scene”;
4) **Target Filter**: to set target area. Refer to that of **Guard Line**;
5) **Area Setting**: to set guard lines. Click “Edit” and click mouse to draw a closed area made up of 3 to 6 points in the scene. Right click or click the starting point or end

point to close the area, and drag the slide bar of “**Sensitivity**” to set the sensitivity of the guard area to moving objects;

6) **Duration**: Refer to that of **Guard Line;**
7) Check **“Linkage Type”** and **“Save”** to make settings take effect.

4.8 *Exit Guard Area

Enable this function and edit guard area. Once any moving object leaves the area, an alarm will be triggered. Go to **Settings** > **Event** > **Intelligent Function** > **Exit Guard Area**. Setting steps can be referred to in **Enter Guard Area**.

4.9 *Object Left

Enable this function and edit guard area. When any object is left in the area, an alarm will be triggered. Setting steps can be referred to in Trespass.

4.10 *Object Removal

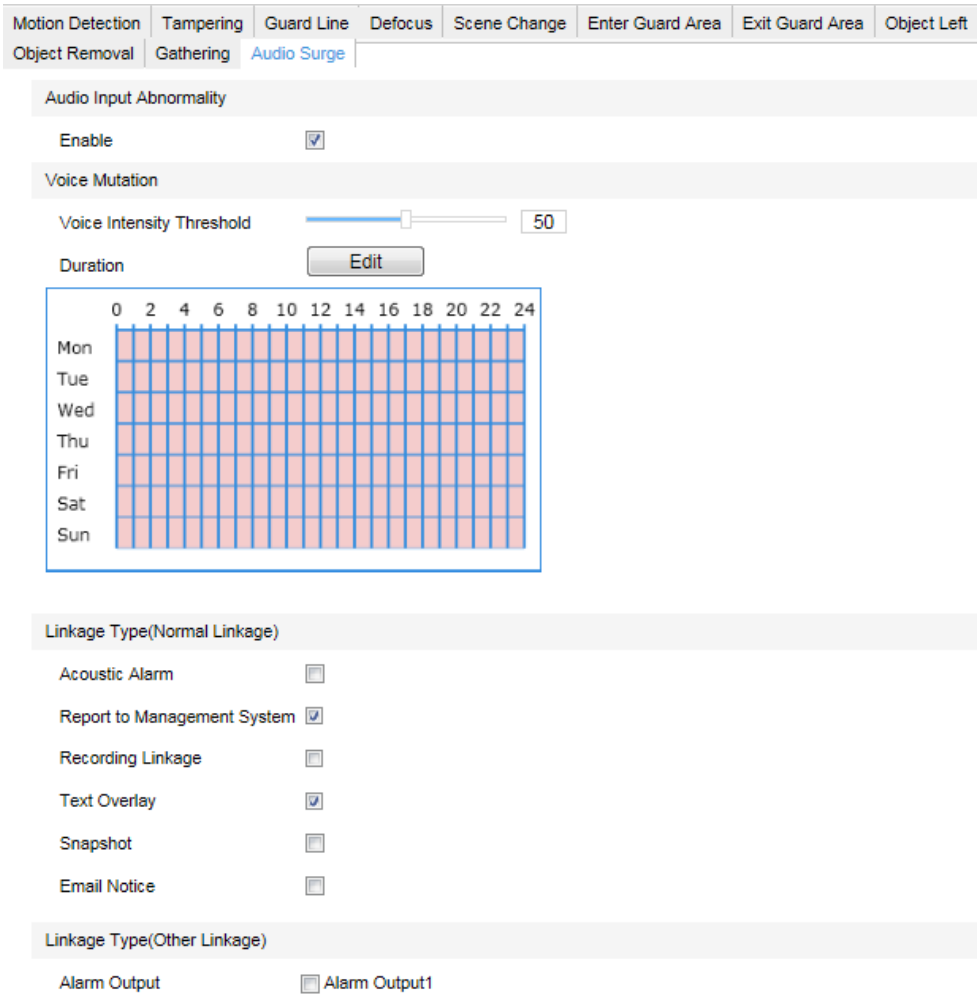
Enable this function and edit guard area. When any object is taken from the area, an alarm will be triggered. Go to **Settings** > **Event** > **Intelligent Function** > **Object Removal**. Setting steps can be referred to in **Enter Guard Area**.

4.11 *Gathering

Enable this function and edit guard area. When moving object exceeds the set sensitivity, an alarm will be triggered. If setting the sensitivity as 50%, when 50% or more of the area is covered by moving objects, an alarm will be triggered. Go to **Settings** > **Event** > **Intelligent Function** > **Gathering**. Setting steps can be referred to in **Enter Guard Area**.

4.12 *Audio Surge

Enable this function and when the voice surges, an alarm will be triggered. The higher the **Voice Intensity Threshold** is, the more sensitive the system is when **Voice Mutation** occurs. Go to **Settings** > **Event** > **Intelligent Function** > **Audio Surge**. Setting steps can be referred to in **Scene Change.**



Picture 4-10 Audio Surge

4.13 *Alarm Linkage

Alarm Linkage is the system reaction after an alarm signal is received. It is to raise watch man's attention to handle the event.

The alarm signal comes from Motion Detection or Alarm Input Device (such as smoke detector) in the surveillance area.

Alarm Linkage reaction includes Alarm Text Overlay, Snapshot or triggering alarm output device (such as alarm bell). Explanations are as follows:

Report to Management System: when alarm is triggered, report to the central surveillance system.

Text Overlay: when alarm is triggered, display alarm text on screen.

Acoustic Alarm: when alarm is triggered, make a warning sound.

Recording Linkage: when alarm is triggered, start to record video automatically.

Snapshot: when alarm is triggered, take a snapshot of the alarm event.

Alarm Output: when alarm is triggered, link to the alarm output device.

4.13.1 Motion Detection Alarm Linkage

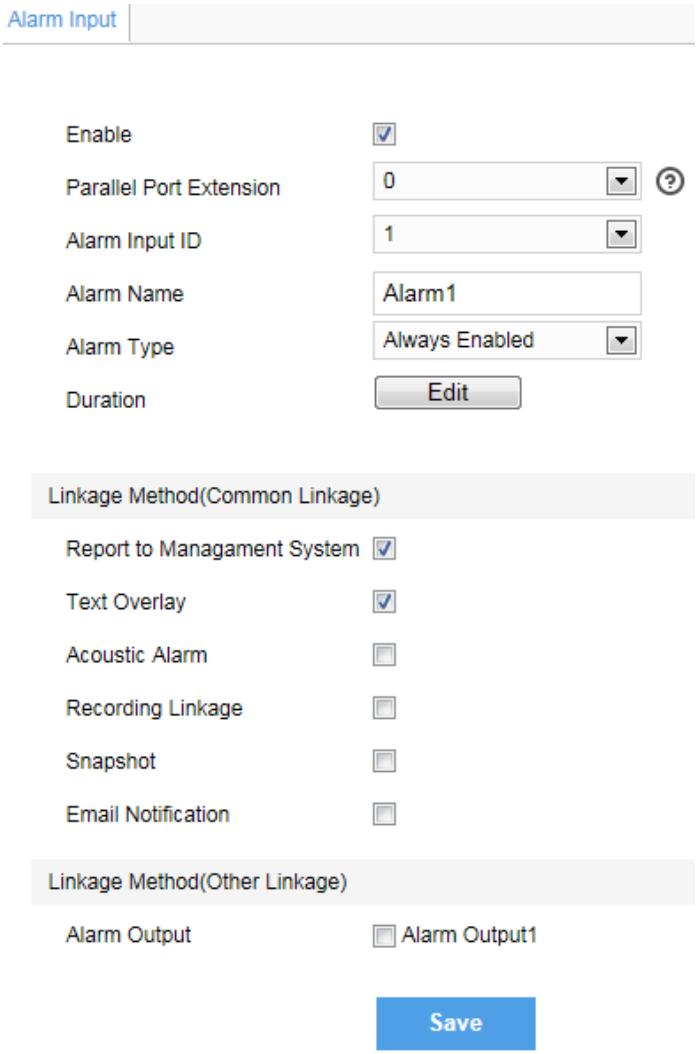
1) Enable Motion Detection, and set the detection area and sensitivity. Please refer to Motion Detection for details.
2) Check the Linkage Type for motion detection. For example, if user checks Snapshot, when alarm is triggered, the system will take a snapshot. In **Settings>Storage>Snapshot** interface, user can set picture format, resolution, interval and quantity.

4.13.2 Tampering Alarm Linkage

1) Enable Tampering Alarm, and set the area and sensitivity. The method is the same as that of Motion Detection.
2) Check Linkage Type.
3) Click "**Save**".

4.13.3 Alarm Input Linkage

The camera supports on/off alarming device.

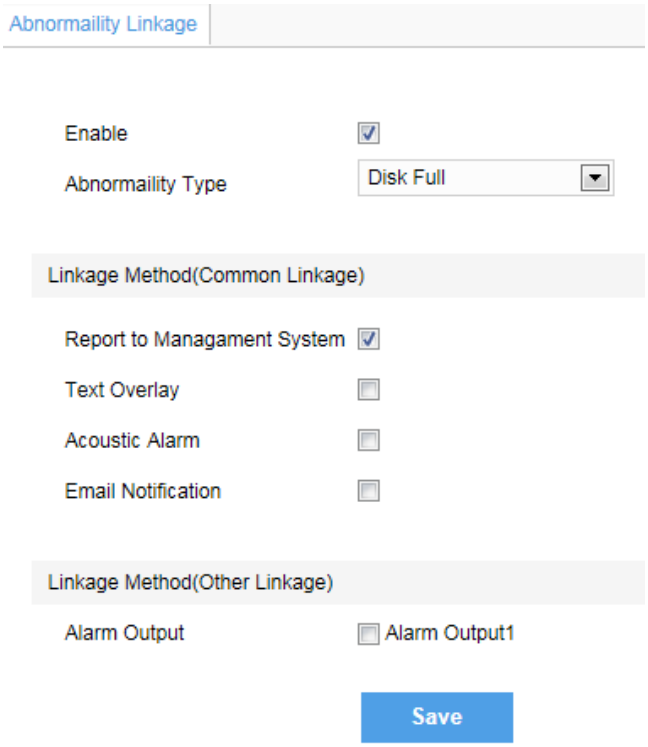


Picture 4-11 Alarm Input

1) Make sure the alarm input device is always enabled or disabled, and that it is rightly connected to the alarm input port of camera.
2) Go to **Settings>Event>Alarm Input**, and select an alarm input ID from the dropdown list (in accordance with the alarm input port).
3) Input alarm name, and select “Always Enabled” or “Always Disabled” from the dropdown list of alarm type.
4) Click “**Edit**” and set durations at the popup interface. Check durations and set “Start Time” and “End Time”. Check the week day(s) to copy the setting to the day(s).
5) Check “**Linkage Type**”.
6) Click “**Save**”.

4.13.4 Abnormality Linkage

It is triggered when something abnormal happens. Abnormality includes Disk Full, Disk Error and Internet Disconnected.

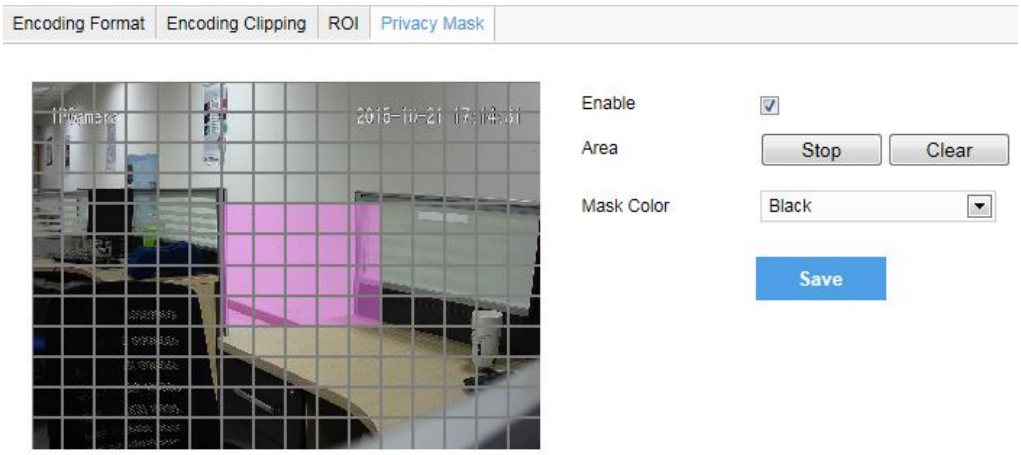


Picture 4-12 Abnormality Linkage

1) Select Abnormality Type from the dropdown list.
2) Check "**Linkage Type**".
3) Click "**Save**".

4.14 Privacy Mask

Mask sensitive and private part of the image so as to keep sensitive information private.



Picture 4-13 Privacy Mask

4.14.1 Set Area

The image is divided into 16 columns and 12 rows of small squares. The maximum number of Privacy Mask area is 4.

1) Go to **Settings > Camera > Video > Privacy Mask**, and check “Enable”.

2) Click “Edit”, and the image is divided into 16 columns and 12 rows of small squares. Click any square and drag an area from this square, then this area is the privacy mask area, which is in purple red.

3) Select Mask Color from the drop-down list.

4) Click “Save” to make settings effective.

4.14.2 Clear Area

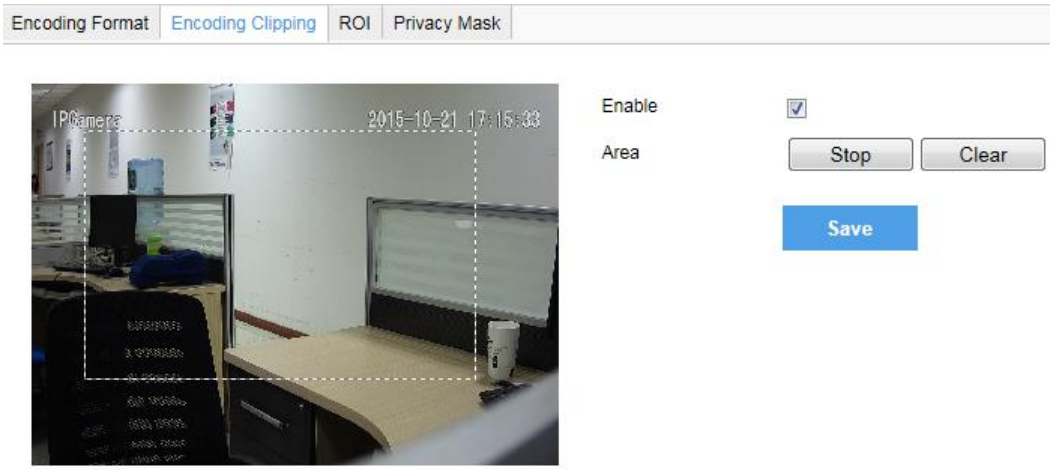
Start from an undefined square and draw an area that contains the defined area, or click the defined squares one by one to clear setting, or click “Clear” directly. Click “Save” to make settings effective.

4.14.3 Disable Function

To disable this function, uncheck ☑Enable.

4.15 Encoding Clipping

After user defines the encoding area, the system will encode and display the clipping area only, so as to save system resources and network bandwidth.



Picture 4-14 Encoding Clipping

4.15.1 Set Area

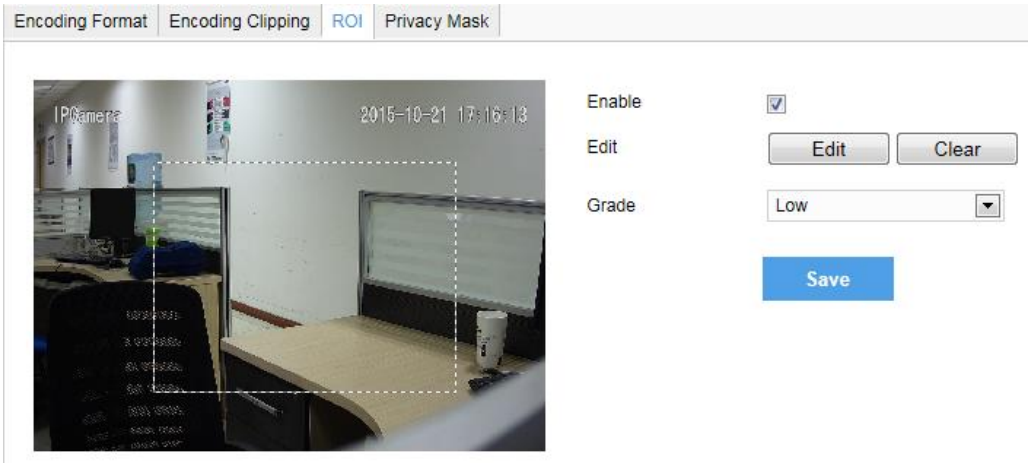
Go to **Settings > Camera > Video > Encoding Clipping**, and check “**Enable**”. Click “**Edit**”, and drag an area as the clipping area. Click “**Save**” to make settings effective.

4.15.2 Clear Area

Click “**Clear**” to clear edition and reset area.

4.16 ROI

Only encode specific area to ensure normal surveillance and constant resolution of key area under poor network.



Picture 4-15 ROI

4.16.1 Set Area

Go to **Settings > Camera > Video > ROI**, and check "**Enable**". Click "**Edit**", and drag an area as the clipping area. Select encoding grade from the dropdown list. Click "**Save**" to make settings effective.

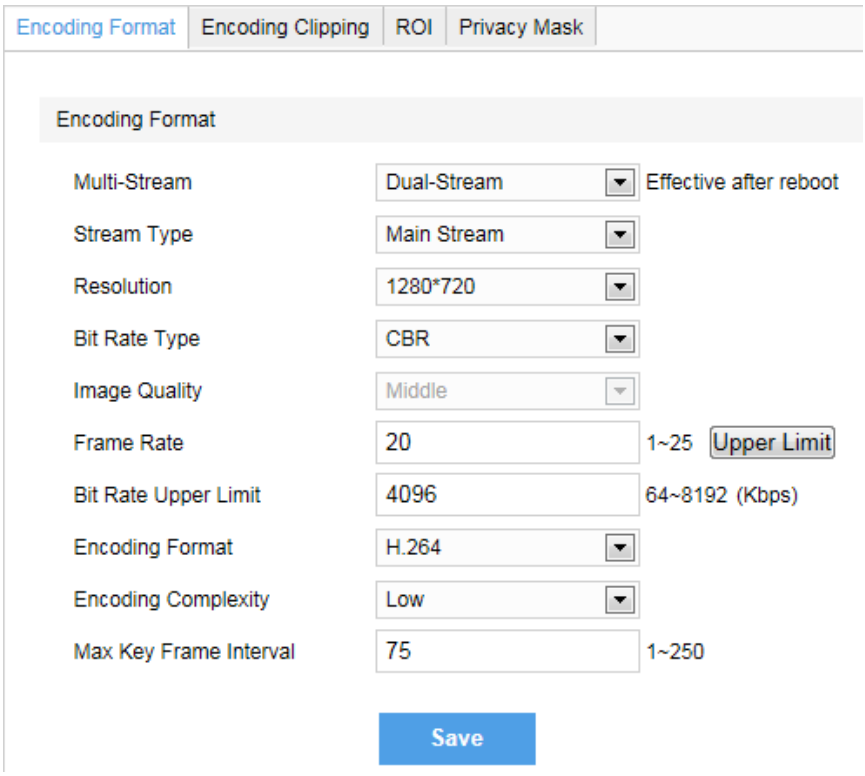
4.16.2 Clear Area

Click "**Clear**" to clear edition and reset area.

Note: When ROI Encode is enabled, if user modifies image resolution or aspect ratio (standard screen/widescreen), the device will quit ROI Encode automatically.

4.17 *SDI Output

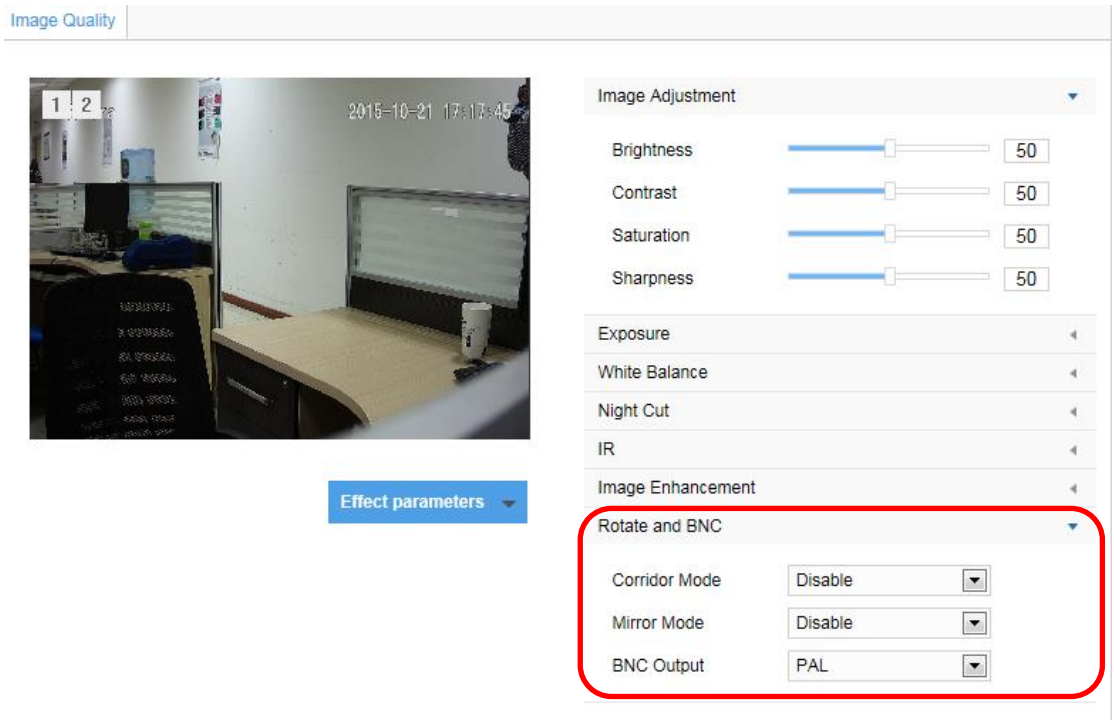
For cameras with HD-SDI output function, when the resolution is 1080P, frame rate supports 25 fps, 30 fps, 50 fps and 60 fps; when the resolution is 1080i, frame rate supports 50 fps and 60 fps; when the resolution is 720P, frame rate supports 50 fps and 60 fps. Go to **Settings > Camera > Video > Encoding Format** and set.



Picture 4-16 Encoding Format

Note: Settings on resolution and frame rate are also effective to SDI output.

When user wants to set resolution as 1080i, please go to **Settings > Camera > Image > Image Quality**, and select “Interlacing (same as main stream resolution)” in **Rotate and BNC** part.



Picture 4-17 Image Quality

4.18 *Snapshot

Click **"Snapshot"** to enter snapshot management interface. User can view or download snapshots in SD card.

Note: If the Snapshot interface is disabled, please confirm the SD card is inserted and then login client again.

Operation Steps

1) Search snapshots: search snapshots in accordance with the duration and format from the SD card.

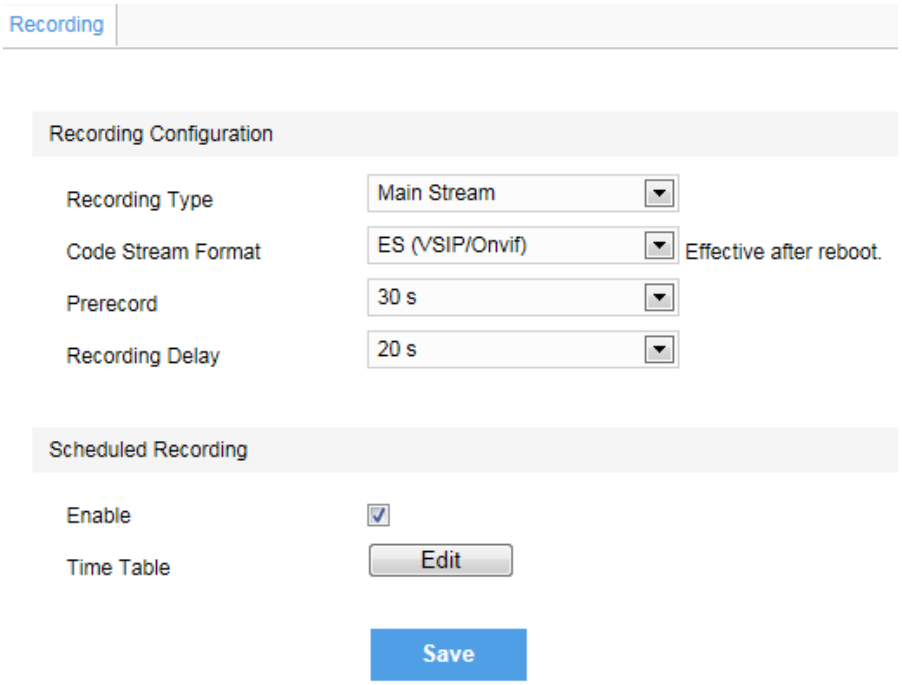
2) On the snapshot list, select searched picture and click to download

4.19 *Playback

Click **"Playback"** to enter recording management interface. User can playback, clip and download recordings in SD card. (A SD card must be inserted in the camera.)

Note: If the Playback interface is disabled, please confirm the SD card is inserted and then login client again.

Note: User can set recording durations in Settings>Storage>Recording. Check “Enable” and click “Edit” to set durations.



Picture 4-18 Recording

4.19.1 Playback

1) Select recording duration from the calendar.

2) If there is background color on a date, it means there is recording on that day. Select duration of the date and the video will be displayed directly in the right window.

4.19.2 Download

Select recording duration from calendar and download recording to local PC. Download path can be configured in **Settings > Local Setting > Local Setting**.

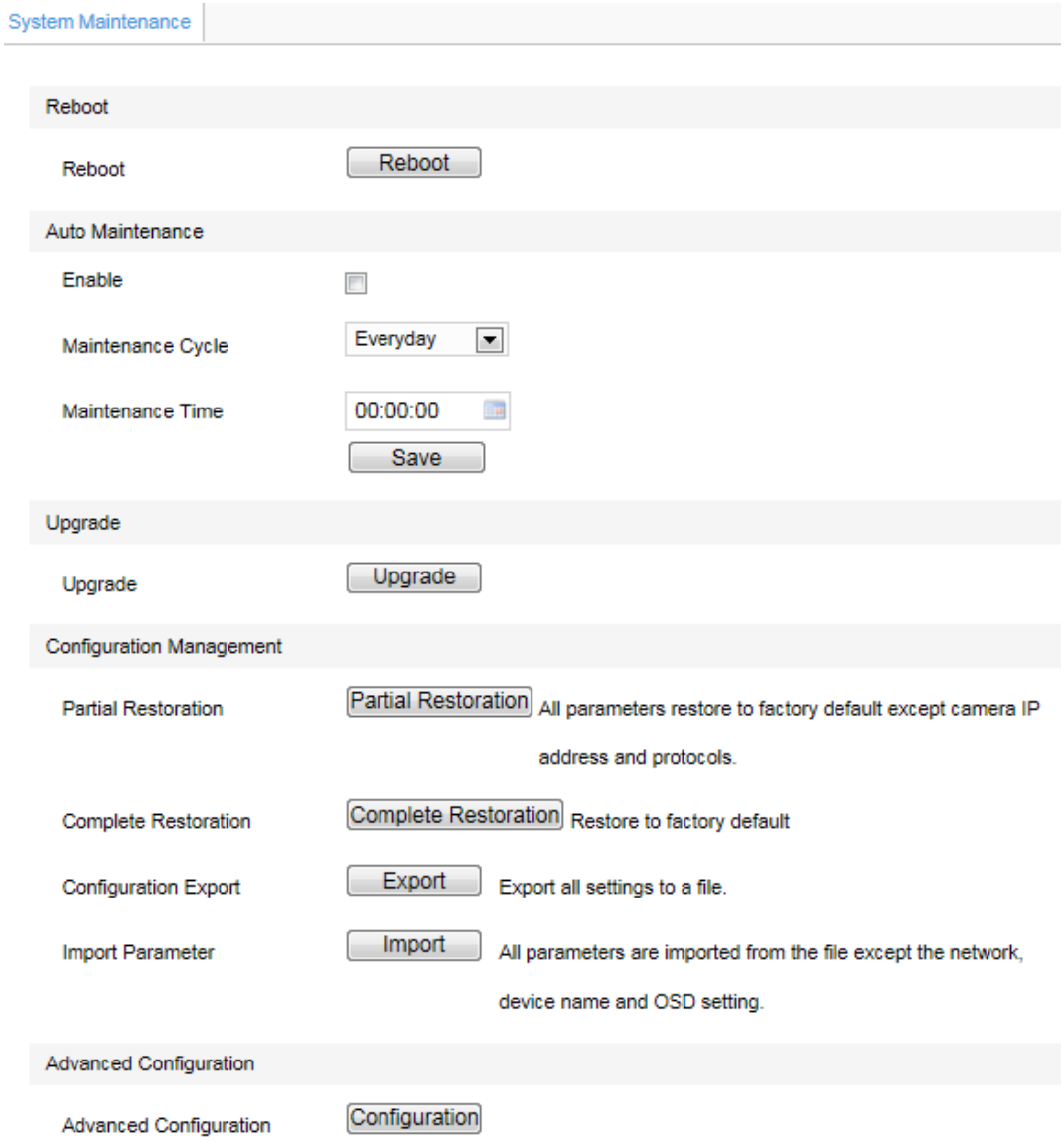
4.20 Upgrade

4.20.1 Firmware Upgrade

Contact dealer for upgrade file.

Method 1

1) Go to **Settings>System>System Maintenance>Upgrade**, as shown below.



Picture 4-19 Firmware Upgrade

2) Select local upgrade file (<*.pkg> or <*.img> format).

3) During upgrading, please do nothing but waiting.

4) After upgrading, please download ActiveX control again. After finishing it, reboot browser.

Note: Please click “Upgrade” when upgrading, and the upgrade file is usually in <*.pkg> format.

Method 2

1) Run IPCSearch.

2) Click “**Upgrade**” to upgrade firmware of cameras of the same model simultaneously.

4.20.2 Web Client Upgrade

After firmware upgrade, please login web client again. The page will prompt to download a new ActiveX control. After downloading it, client upgrade will be completed. Login again to enter the latest Web Client.

Note: For detailed operation instructions of Web Client, please refer to the help document.

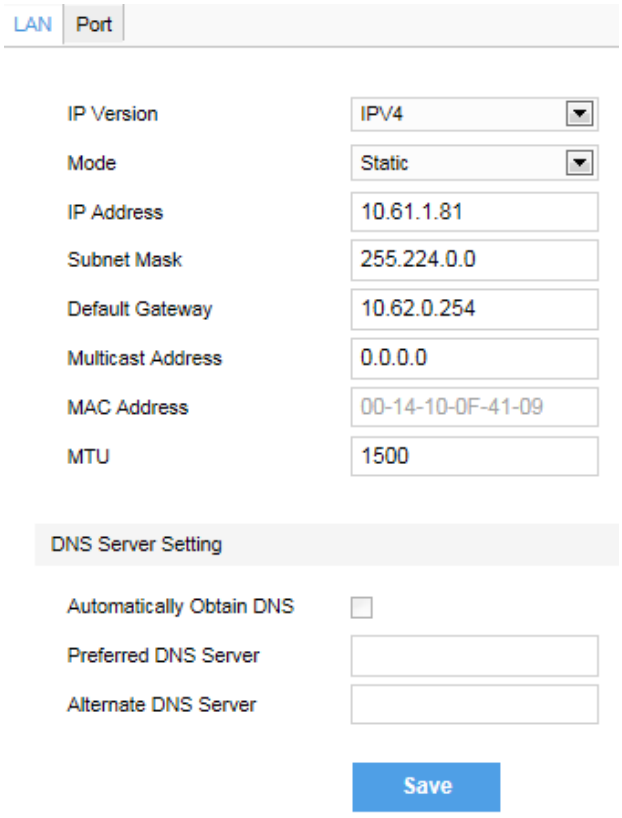
5. Settings

5.1 Network Access

3.2 Initial Configuration has introduced how to modify parameters via IPCSearch to make camera access network. Camera accepts multiple network access methods (via Ethernet and PPPoE). The following introduces how to configure camera network parameters in Web Client.

5.1.1 Ethernet

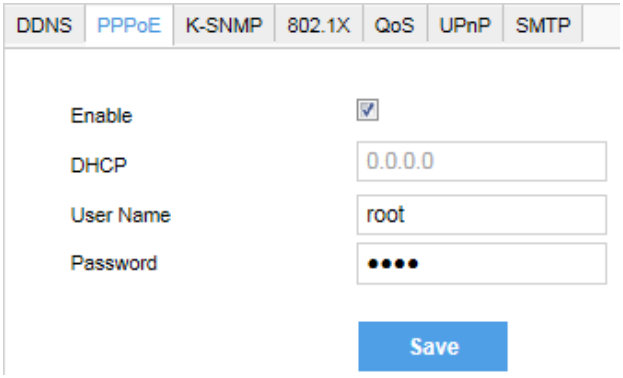
Go to **Settings>Network>IP and Port>IP Address,** as shown in Picture 4-1 to configure IP address, subnet mask and default gateway.



Picture 5-1 Ethernet Parameter

5.1.2 PPPoE

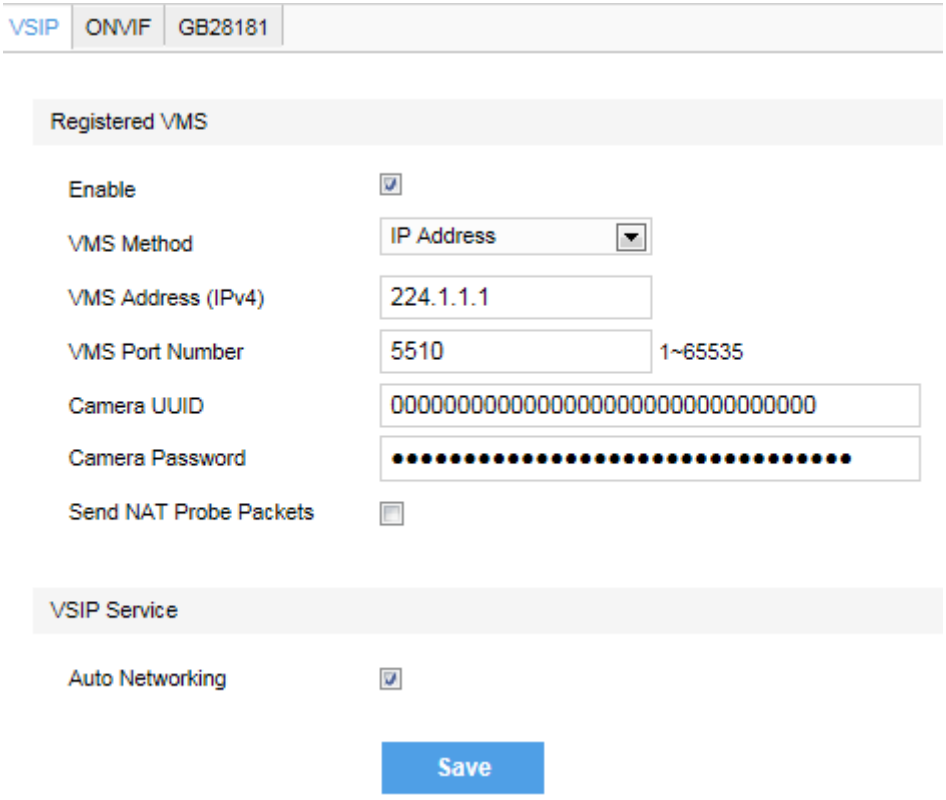
Go to **Settings>Network>Other Protocols>PPPoE**, as shown in Picture 5-2 to enter user name and password, and save.



Picture 5-2 PPPoE Setting

5.2 Register to VMS

Go to **Settings>Network>Access Protocol>VSIP**, as shown in Picture 5-3 to enter VMS address and port. Save settings and reboot device.



Picture 5-3 Register to VMS

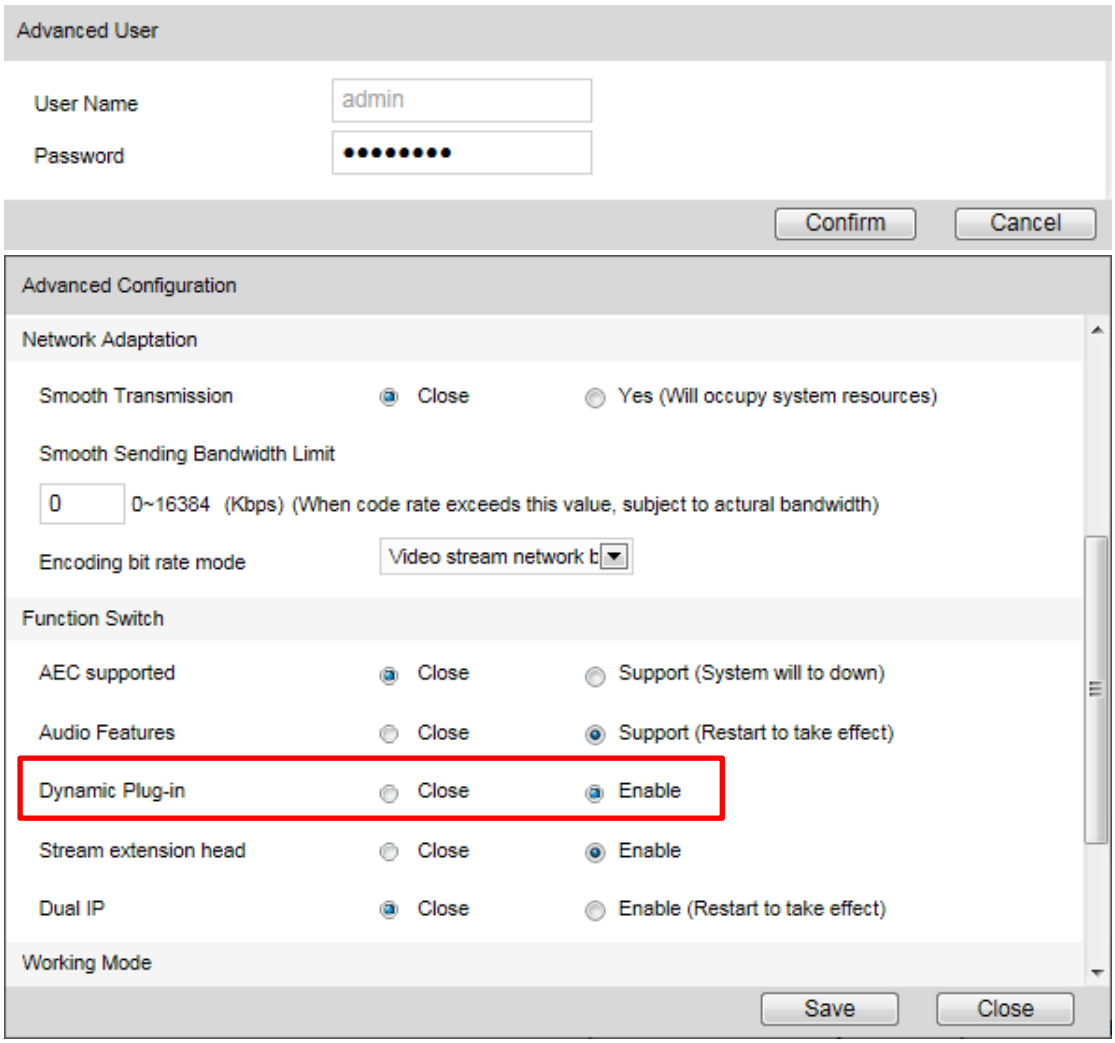
5.3 Car Plate Mode

5.3.1 * Car Plate Mode

Some models support car plate mode. After enabling car plate mode, the camera will adjust shutter and gain automatically to ensure that the plates of the passing cars are clear and recognizable.

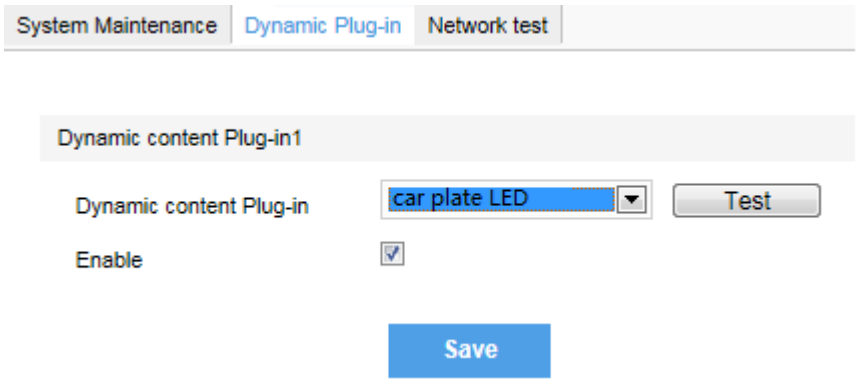
Setting steps:

1) Go to **Settings** > **System** > **System Maintenance** > **Advanced Configuration** and click "**Configuration**". In the popup window, input user name and password to enter the interface of "**Advanced Configuration**". Enable "**Dynamic Plug-in**" and click "**Save**".



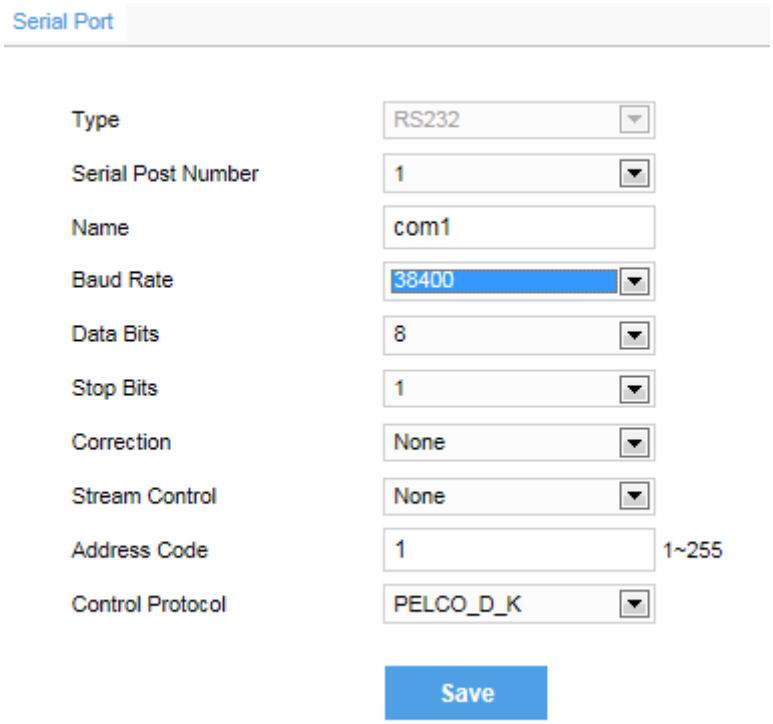
Picture 5-4 Advanced Configuration

2) Go to **Settings** > **System** > **System Maintenance** > **Dynamic Plug-in**. Select "**car plate LED**" from the dropdown list of Dynamic content Plug-in and check "**Enable**". Click "**Save**".



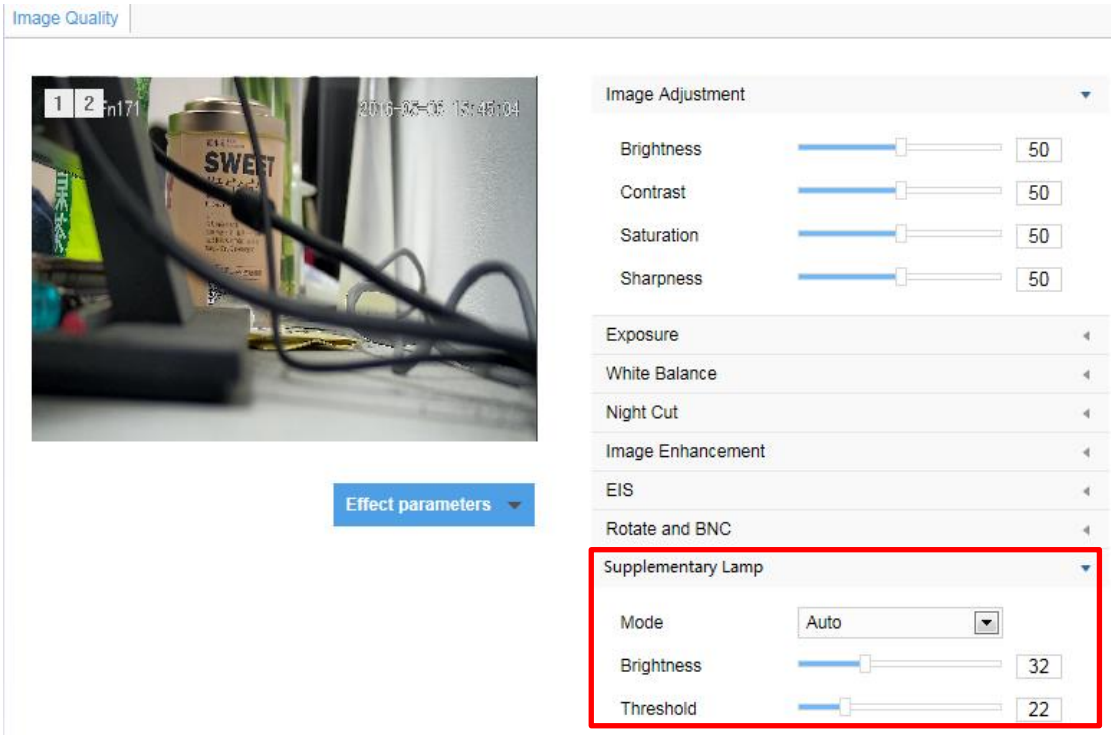
Picture 5-5 Dynamic Plug-in

3) Go to **Settings** > **System** > **Serial Port.** Select "**38400"** from the list of Baud Rate and click "**Save**".



Picture 5-6 Baud Rate

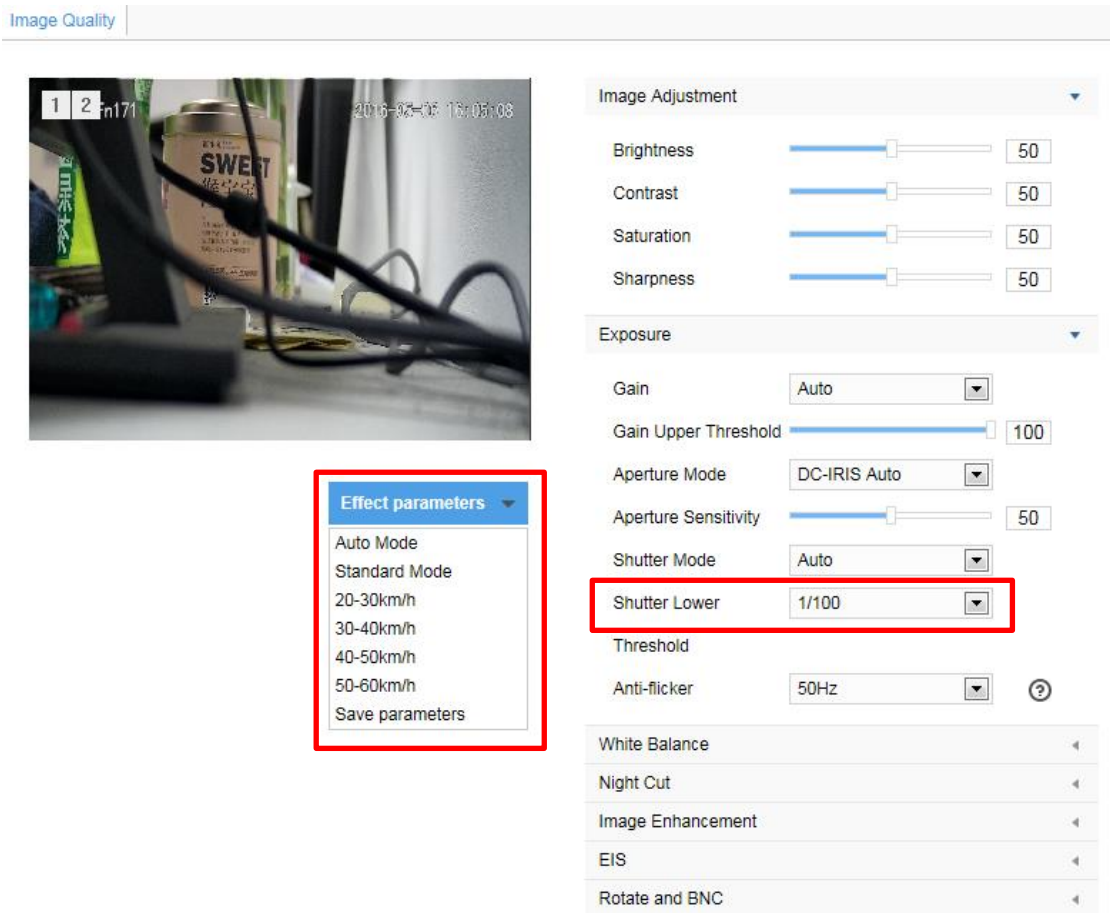
4) Go to **Settings** > **Camera** > **Image** and set parameters in the Supplementary Lamp area. Mode options include **Auto/ Manual/ Disable**. Drag the slide bar of **Brightness** of the supplementary lamp and **Threshold** of triggering supplementary lamp. When the mode is auto, dragging the slide bar of Threshold will not affect supplementary lamp brightness.
Set supplementary lamp brightness: capturing car plate numbers usually needs help of supplementary lamp to ensure image brightness, especially when capturing at night. Default values of **Brightness** and **Threshold** are recommended.



Picture 5-7 Supplementary Lamp setting

5.3.2 *Car Speed

Some models support car speed mode. Set car speed range: select according to the actual car speed range in the scene. Suggest using default values of **Shutter Lower Threshold** and **Gain Upper Threshold**. Adjust parameters when the image is too dim or too bright.

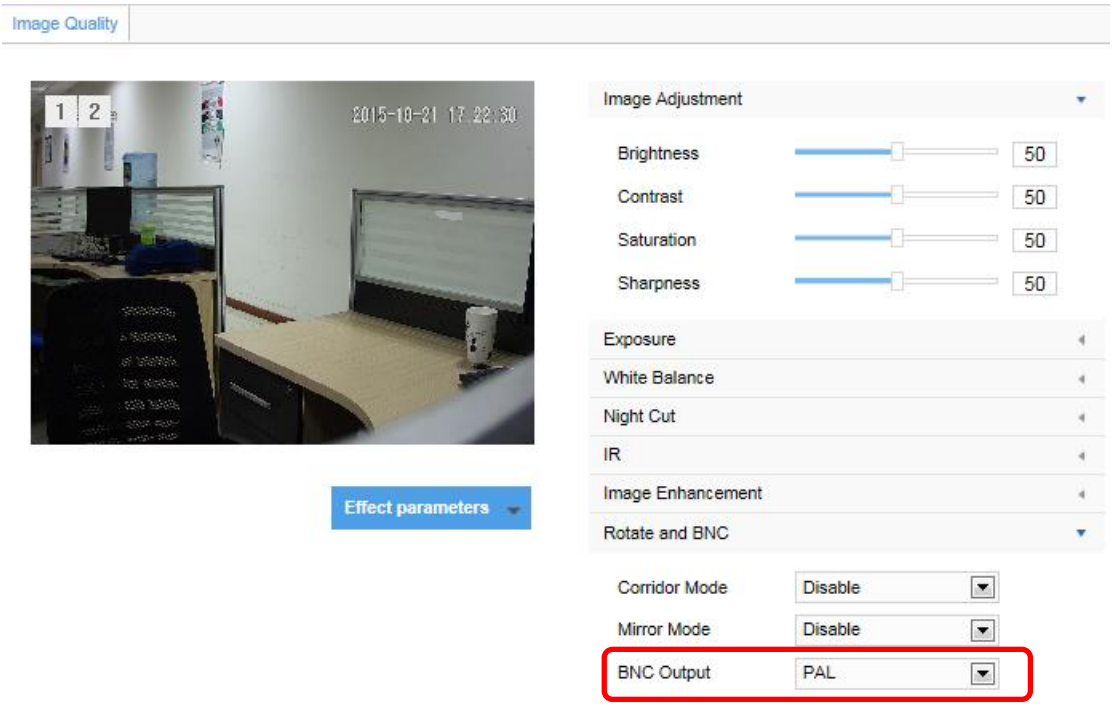


Picture 5-8 Enable car speed mode

5.4 BNC Output

Camera with BNC output can output analog image directly when local display function is enabled.

Go to **Settings>Camera>Image>Rotate and BNC**, select BNC output mode from the drop-down list, as shown below.



Picture 5-9 BNC Output

Note: For cameras with HD-SDI output, when BNC is enabled, the web client will stop image output.

5.5 User Security

5.5.1 User Management

Go to **Settings>System>User Security>User**.

Add:

Click “Add”, and enter user name and password in the popup interface. Select user type from the dropdown list, and assign operation rights to newly added user from the Authorization List. After setting, click “Confirm”.

Delete:

Select user IP and click “Delete” to delete the user.

Modify:

Select user IP and click “Modify” to modify in the popup interface.

5.5.2 IP Filter

By setting IP address filtering, user can manage access limitation to the web client.

White List includes IP addresses able to access to the client, while Black List includes IP addresses unable to access to the client.

Enable IP Filter:

Select filter method from the dropdown list according to request, or select “Disable” to disable IP filter.

Add Black/White List:

After select filter method, click “Add” and input IP address in the popup interface, and click “Confirm”.

Modify Black/White List:

Select the IP address from the list and click “Modify” to modify the IP address in the popup interface, and click “Confirm”.

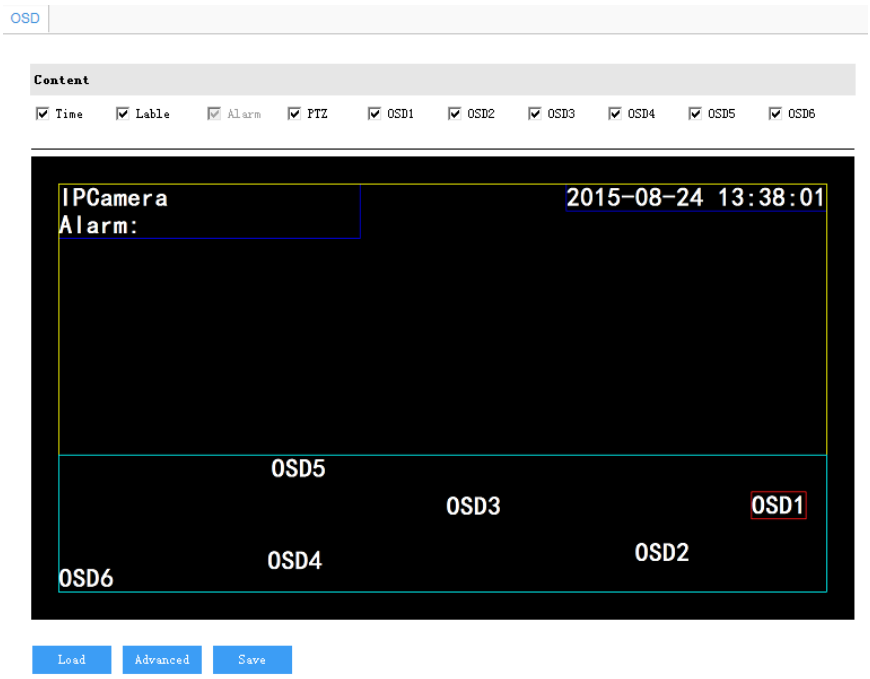
Delete Black/White List:

Select the IP address from the list and click “Delete” to delete the IP address. Click “Delete All” to clear all the IP addresses.

5.6 Text Overlay

Display preset text on the surveillance window, configuration steps as follows:

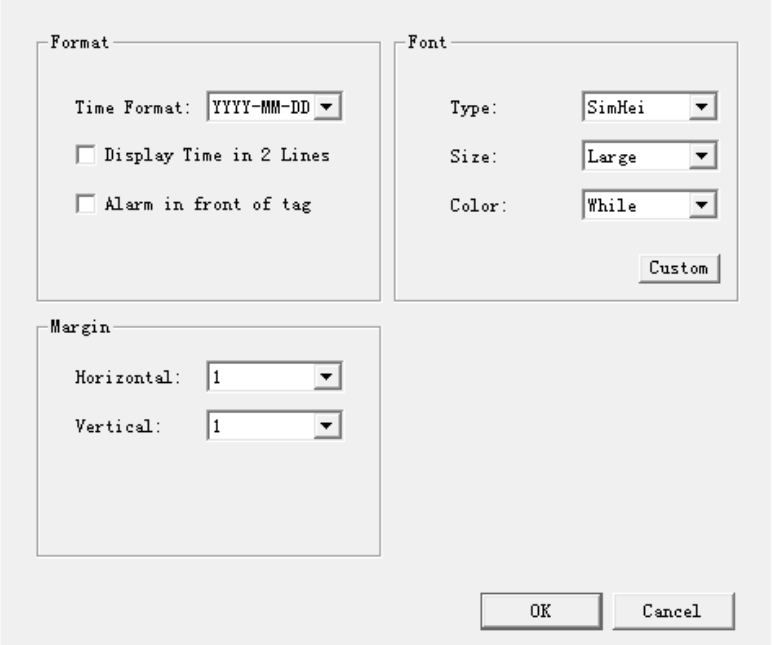
1) Go to **Settings>Camera>OSD**, as shown below.



Picture 5-10 OSD

2) Check the options and preview the result in the window. For example, if user checks “**Time**”, time will be displayed in the window.
3) Edit positions: drag the items in the window with mouse to change their positions.

4) Edit OSD texts: for example, if user checks OSD1, double click OSD1 textbox and input characters in the popup interface. Click “**OK**”.
5) Click “**Save**” to save OSD setting.
6) Click “**Load**” to load default font or China GB font.
7) Click “**Advanced**” to set “Format”, “Font” and “Margin”.



Picture 5-11 Advanced Setting of OSD

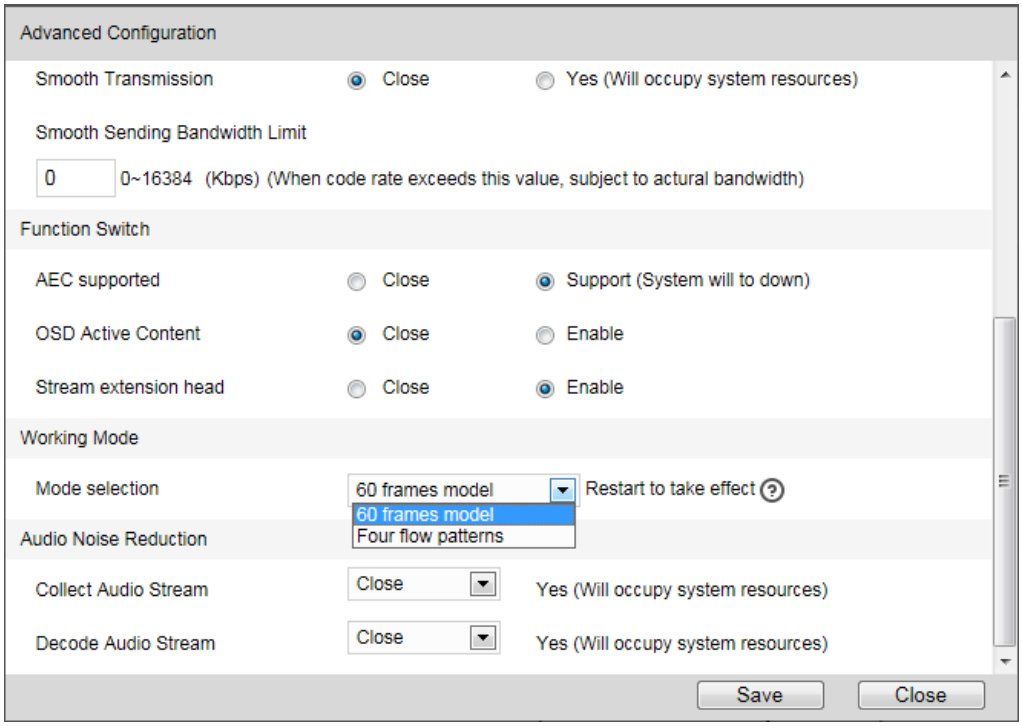
5.7 Multi-stream

Camera supports multiple streams encoding and decoding. Multi-stream means the same video source is encoded into different streams of videos with different resolutions. User can select proper resolution to view or record according to the network bandwidth.

Note: Different camera models may have different numbers of streams.

Operation steps:

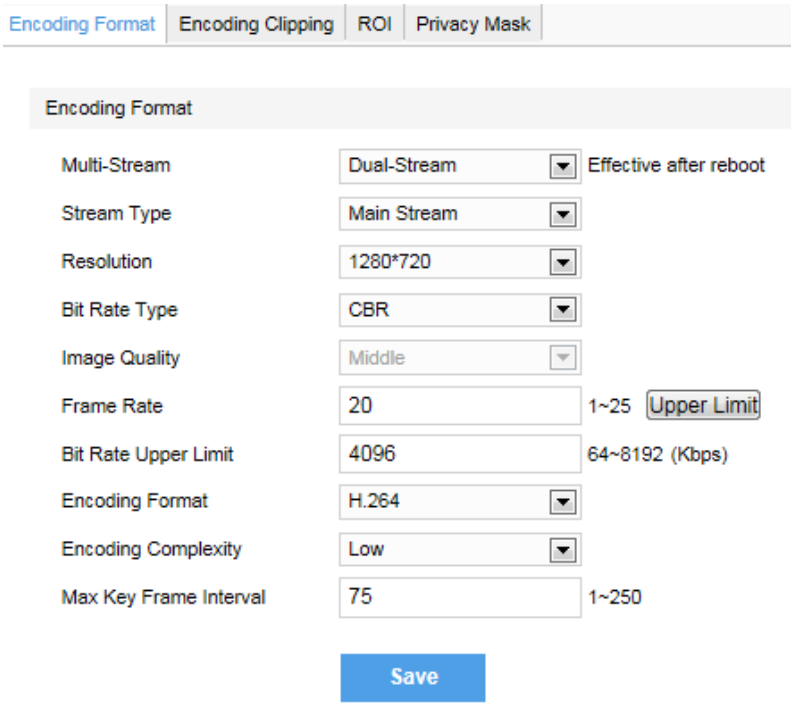
1) Go to Settings>System>System Maintenance; click “Configuration” under “Advanced Configuration”, and input password;
2) Select working mode from the dropdown list;



Picture 5-12 Advanced Configuration

3) Click “Save” and reboot camera to make setting take effect. After reboot, re-login;

4) Go to **Settings > Camera > Video > Encoding Format**, as shown in Picture 5-13. In Multi-stream option, select Single Stream, Dual-stream, Triple-stream or Quad-stream from the dropdown list, and the selection takes effect after reboot. After enable, user can set parameters below the option accordingly.



Picture 5-13 Stream Type

6. Appendix: Glossary of Terms

Term	Explanation
720P	Resolution of 1280*720 pixels
CIF	Resolution of 352*288 pixels
QCIF	Resolution of 176*144 pixels
ROI	Region Of Interest
Key Frame Interval	Key Frame defines the important frame when change happens in a video. This frame will be completely encoded. Key Frame Interval defines the maximum frames during the interval between key frames. If the video changes quite frequently, shorter Key Frame Interval will make video more real, but it will take more bandwidth.
Quantization	Set Min. and Max. Quantization, and image compression quantization will fluctuate in the range. During image compression, larger quantization brings higher compression ratio and higher distortion ratio. On the contrary, smaller quantization brings lower compression ratio and better image recovery, but meanwhile takes more bandwidth.