

# **PoE & WiFi IP Camera**

## **Web Interface User Manual** (Danale P2P)

**Version : V2.20.00**

**Update : Jan 1st, 2018**

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# Welcome

Thank you for purchasing our IP camera!

The user manual is a reference tool for the installation and operation of the camera. This is a general manual for all camera models. For a camera specific feature, please check the datasheet of the specific camera. You can also find information to aid in troubleshooting in case issues occur.

## Important Security Warning



- Always make sure that your camera has the latest firmware.
- Never use the default password for your camera. Always ensure that your password is at least 8-10 characters long and contains a combination of lowercase characters, uppercase characters as well as numbers.

## Important Safeguards and Warning

### 1. Electrical Safety

All installation and operation should conform to your local electrical safety codes.

The product must be grounded to reduce the risk of electric shock.

We assume no liability or responsibility for any fires or electrical shock caused by improper handling or installation.

### 2. Transportation Security

Heavy stress, violent vibrations, and excess moisture should not occur during transportation, storage, and installation of the device.

### 3. Installation

Handle the device with care. Keep the device right side up.

Do not apply power to the camera before completing installation.

Do not place objects on top of the camera.

### 4. Repair Professionals

All the examination and repair work should be done by qualified service engineers.

We are not liable for any problems caused by unauthorized modifications or user-attempted repair.

## **5. Environment**

The camera should be kept in a cool, dry place away from direct sunlight, flammable materials, explosive substances, etc.

This product should be transported, stored, and used only in the specified environments as stated above.

Do not aim the camera at a strong light source, as it may cause overexposure of the picture, and may affect the longevity of the camera's sensors.

Ensure that the camera is in a well-ventilated area to prevent overheating.

## **6. Operation and Maintenance**

Do not touch the camera sensor or lens directly.

To clean dust or dirt off the lens, use an air blower or a microfiber cloth.

## **7. Accessories**

Be sure to use only the accessories recommended by manufacturer.

Before installation, please open the package and check to ensure that all the components are present.

Contact your seller if anything is broken or missing in the package.

# 1 Camera Access Setup

This section of the manual will provide the user with information on how to access the camera through any of the following methods.

## 1.1 Default Information for Accessing

To login to the system for the first time, use one of the following default IP address, username and password combinations. Once you've successfully logged in, it is highly recommended to change the password for security reasons.

Default IP address of the camera: **192.168.1.120** network mask is **255.255.255.0**

**Username: admin**

**Password: 12345**

**NOTE:**

- **You will be prompted to login again using your username and password after 30 minutes of inactivity.**
- **The device will be blocked if the Incorrect user name or password was tried to login 6 times.**

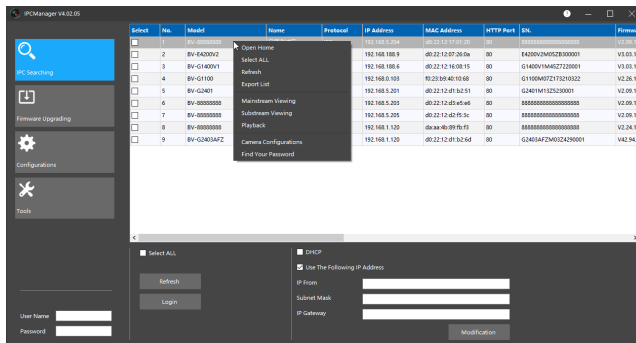
## 1.2 Quick Start using IPCManager Tool

IPCManager Tool is designed for cameras searching and configurations in batch. The user can use IPCManager to search the cameras, and then to make the quick configurations including modifying the IP address, modifying some parameters and playback etc.

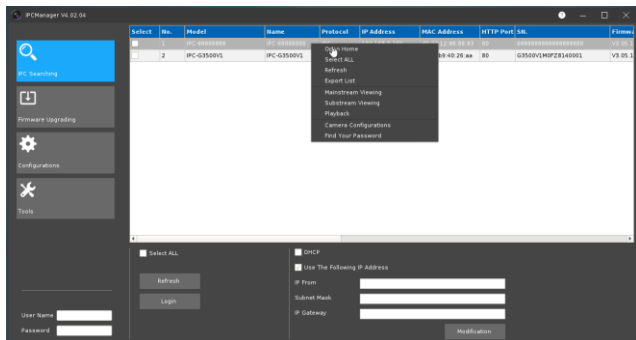
IPCManager Tool can run on Windows/Linux/Apple MAC OS. Please get the software from the website or the CD included in the package, and check the details from the IPCManager User Manual.

1. Run IPCManager Tool on the PC. (Please be sure that the cameras are connected to the same network as the computer). The cameras in the network can be found by the tool and a list will be generated.

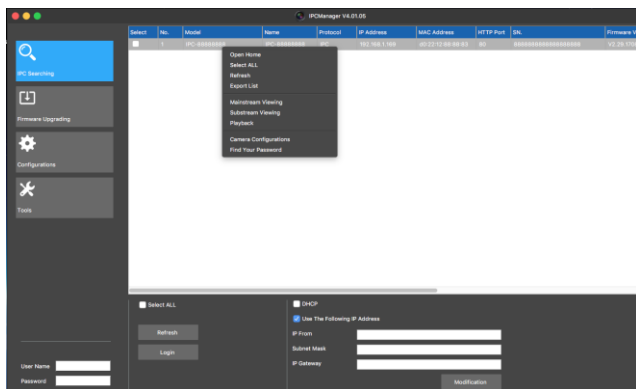
2. Right click on the camera you want to access.



(Windows)



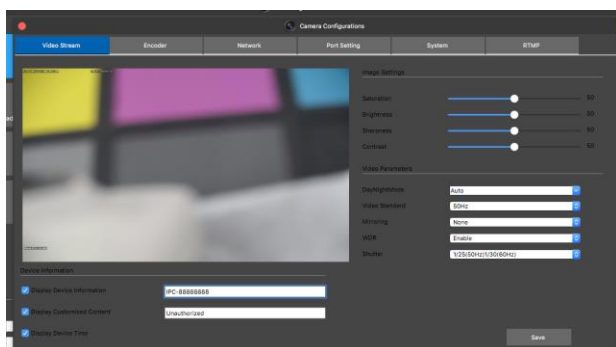
(Linux version)



(Apple macOS version)

3. Please select “Open Home” to open camera’s web interface using the default browser you specified in the computer.

4. You can select “Camera Configurations” to preview the camera’s video and make quick changes to parameter settings like below.



5. You can use the IPCManager tool to modify the cameras’ IP address and other configurations.

## 1.3 Local Web Access Setup

This method of accessing the camera's interface is necessary to setup remote access. Ensure that the following steps are completed.

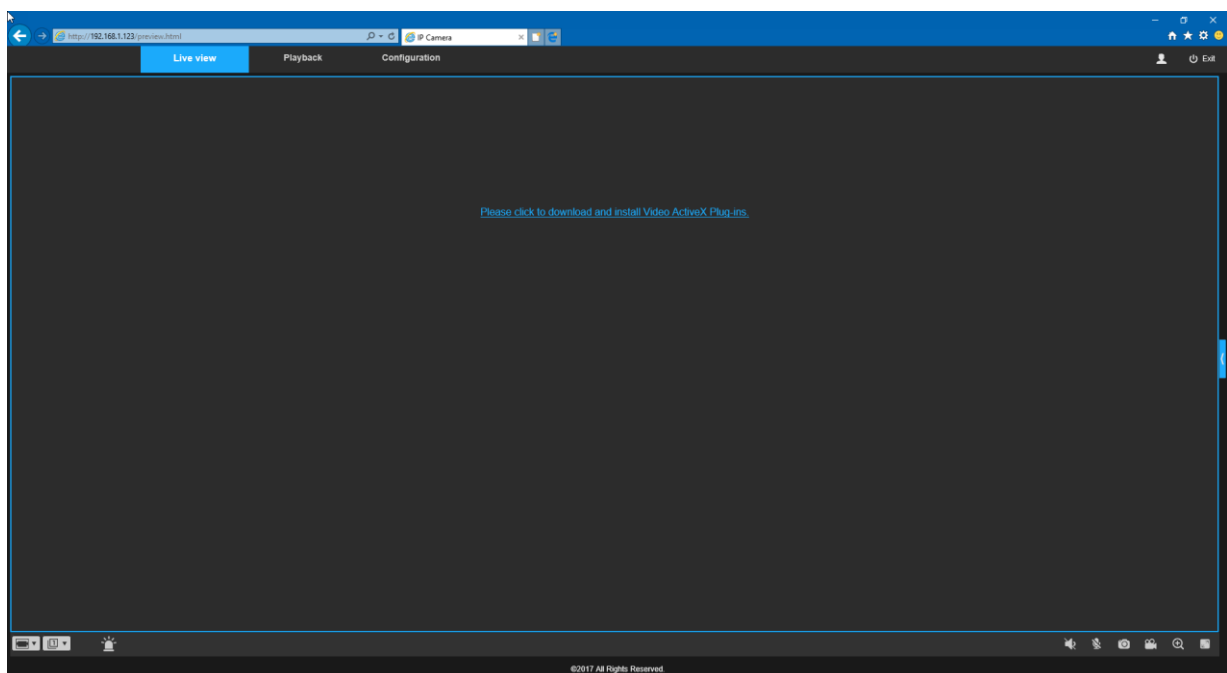
- The camera is connected to the network via an Ethernet cable.
- The camera and the PC are on the same network.
- Use one of the following web browsers:  
Google Chrome, Mozilla Firefox, Safari, Opera, Microsoft Edge or Internet Explorer.

To easily connect to the camera's interface, use the included CD to install and run the IPCManager tool like above. After launching the IPCManager Tool, right click on the found camera, and select "Open Home" to open the camera's interface in a web browser.

If you know the camera's IP address and HTTP port (default is 80), you can open the browser, and fill out the IP address and port in the URL to open the camera's interface, for example:  
`http:192.168.1.120:80`. If you did not change camera's default HTTP port, you can fill out as:  
`http://192.168.1.120`.

### Note:

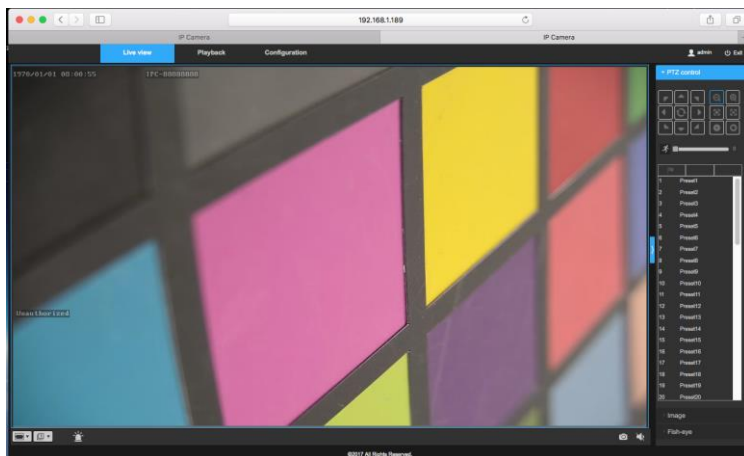
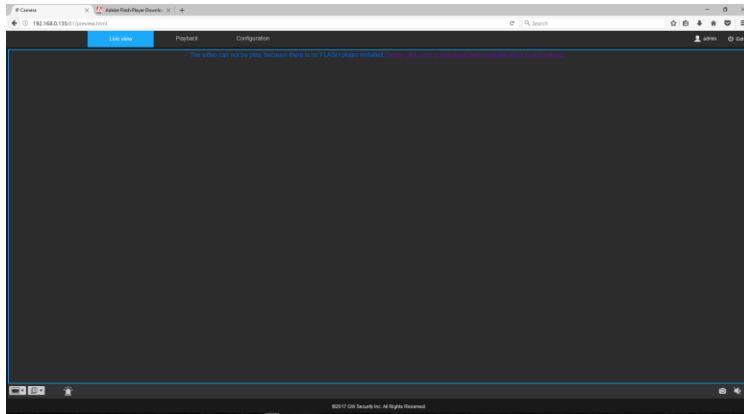
- Internet Explorer: When opening the camera's interface, the browser may prompt you to install a plugin. The plugins are necessary for using the camera's interface. Click the download link to download the plugin, and then click on the plugin installation file to install the plugin. If the browser prompts you to allow the plugin to work on the computer, please allow to ensure the plugin can run successfully.





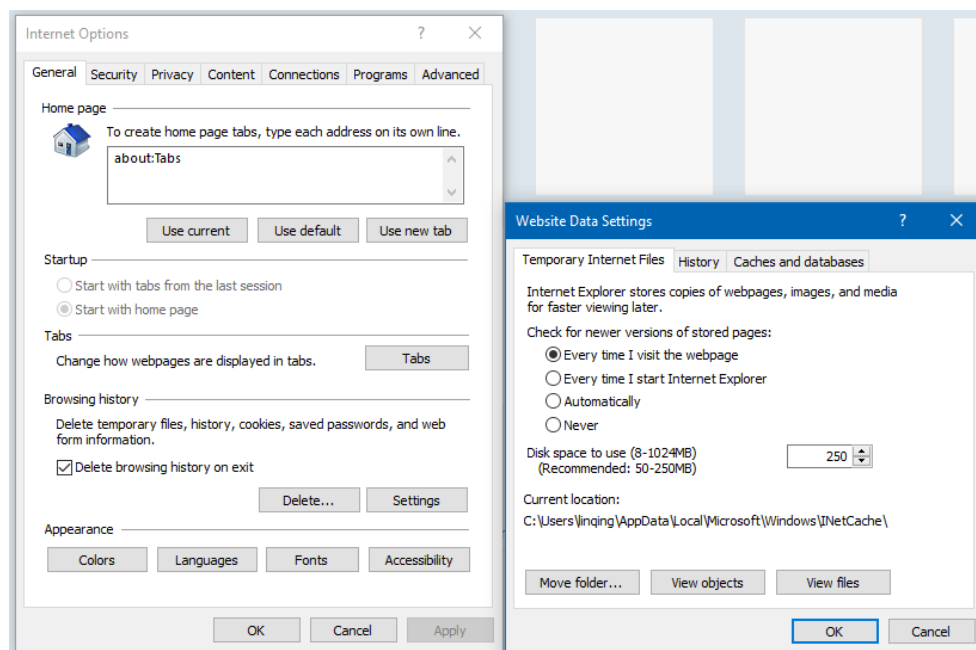
There is notification for the user to update the Plugin in Internet Explorer if the new firmware with new plugin is updated on the camera. Please follow the prompt to upgrade the plugin.

- **Google Chrome, Mozilla Firefox and Apple Safari etc.** When opening the camera's interface, the browser may prompt you to install the Adobe Flash plugin. Please download the Flash plugin and install it. If you already installed the Flash plugin, there is no need to install it again.

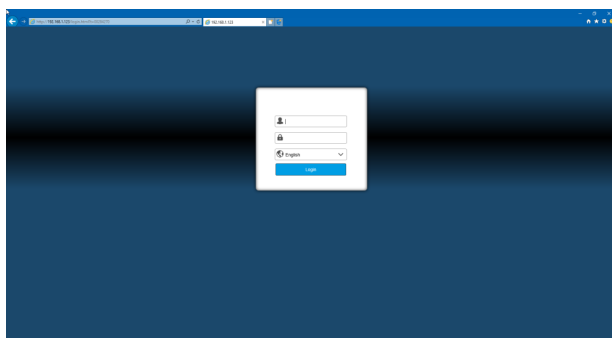


- It's strongly suggested that you change the following settings if you use Internet Explorer, which will help to speed up the IE access.

1. Please select "Internet options";
2. In "General" tab, please click "Settings" in Browsing history item;
3. In "Temporary Internet Files" tab, please select "Every time I visit the webpage" in "Check for newer versions of stored pages:" like the below:



Please fill out the default username and password to log into the camera in the promoted page like below.



## 1.4 Remote Web Access Setup

There are two main methods for setting up remote access: UPnP/DDNS, and Port Forwarding.

### 1.4.1 UPnP/DDNS Remote Web Access Setup

Using Universal Plug and Play (UPnP) and Dynamic Domain Name Server (DDNS) functionality is the easiest way to setup stable remote access. For this method, your router should support the UPnP network protocol and the protocol should be enabled. Please refer to your router manufacturer's documentation to learn how to enable UPnP on your router.

Below is a step-by-step walk-through that details how to set up the camera for remote web access using UPnP and DDNS:

1. Login to your camera's web interface, open the main menu and then go to Configuration->Network.
2. From the left-hand side of the menu, go to the Port table, and change the HTTP port and Server port. It's recommended to ensure the port number is at least 5 digits long to prevent any port conflicts. If needed, change the port to a 5-digit number that is less than 65535, and click Save before proceeding to the next step.
3. The system will prompt you to log into the camera using the new port. Click "Confirm", then use the new PORT to login.
4. Log into the camera, open the "configuration -> Network", go to "Port" to ensure that the HTTP port has changed.
5. Click "DDNS" on the left-hand menu, enable it, and set a preferred DDNS from "3322, Oray, DynDNS, No-IP". Fill out the host domain name along with the username and password from your DDNS provider. Here is an example for the Hostname: *example.ddns.com*.
6. Click the "UPnP" menu on the left-hand menu and click "Add" to add HTTP port and Server port internal port and external port using "TCP" protocol. Please ensure that UPnP status says, "Mapping successful"
7. Open a web browser and enter the DDNS Hostname address from step 5, enter a colon, then type the port number from step 2 on to the end.
  - a. For example, if the DDNS host domain name is <http://example.ddns.com> and your HTTP port is 44444, the URL would be <http://example.ddns.com:44444>.
8. Internet Explorer may prompt you to install a plugin. Click install to download the plugin, and then click on the plugin installation file to install the plugin. Other browsers won't need you to install the plugin if there is FLASH plugin installed.
9. Enter the login details into the username and password fields and click login.

For more information on UPnP, please check the section 2.3.3.6. For more information on DDNS, please check section 2.3.3.7.

## 1.4.2 Port Forwarding Remote Web Access Setup

Port Forwarding is an alternative method to setting up remote access for the camera. This method should only be used if the UPnP/DDNS Remote Access method did not work.

Below is a step-by-step walk-through that details how to setup the camera for Remote Web Access using Port Forwarding:

1. Login to your camera, open the configuration then go to Network -> TCP/IP -> TCP/IP page.
2. By default, the camera has the Static mode, and the default IP address is 192.168.1.120. then go to Network -> Port, the default HTTP port is 80, RTSP port is 554, Server port is 6000 and FLASH port is 1935.

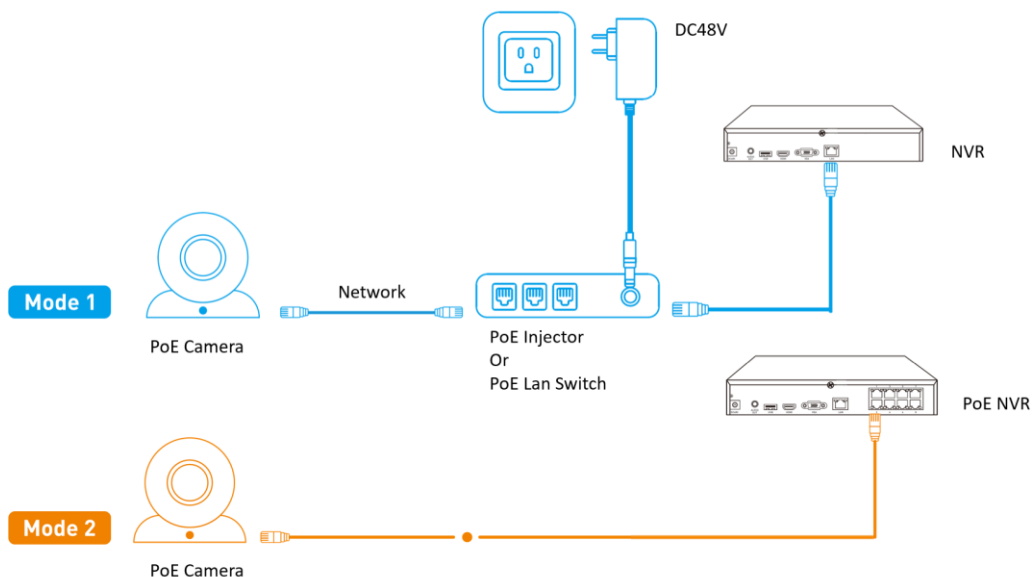
3. Now you can modify HTTP port and Server port number. It's recommended to ensure that these port numbers are at least 5 digits long to prevent any port conflicts. If needed, change each of these port number to a 5-digit number that is less than 65535, then click save it.
  - a. For example, HTTP port changed to 10000, Server port changed to 10001.
4. Login your router through web interface (or its management software), and configure **the port forwarding (mapping)** according to the router's user manual.
  - a. For example, in the router port mapping item, please make the following port mapping table.  
  
TCP: Internal port: 10000    External port: 10000  
  
TCP: Internal port: 10001    External port: 10001
5. In router's DDNS setting, please fill out Hostname, username and password you applied.
  - a. For example, in router's DDNS setting, you use the following DDNS Hostname: example.ddns.com.
6. Open a web browser and enter the DDNS domain name address from step 5, enter a colon, then type the HTTP port number from step 4 on to the end.
  - a. For example, if the DDNS domain name is <http://example.ddns.com> and your HTTP port is 10000, the URL would be <http://example.ddns.com:10000>.
  - b. If you want to use Chrome, Firefox etc., please add one more port mapping:  
TCP Internal: 1935, External: 1935.
7. Enter the login detail into the username and password fields and click login.

## 1.5 NVR access

The camera supports connecting to any NVR that uses the ONVIF standard or connecting to GW NVR through private protocol. This allows the camera to view live playback and save recorded data to a network storage device. To connect to an NVR, use an Ethernet cable to link the camera to the NVR through LAN Switch or connect the camera to the NVR's built-in PoE Switch.

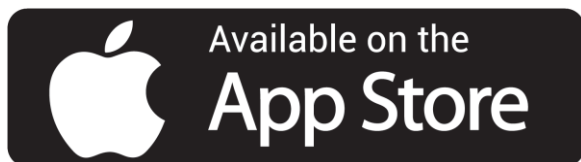
If there is a problem adding the camera, please make sure you have the correct username and password when adding the camera to the NVR.

Please refer to NVR's user manual for the details if there are problems with the NVR.



## 1.6 View Mobile APP Setup

The camera enables access through the use of the mobile APP on either iOS or Android mobile operating systems. The App name is "Danale" in Google Player and iOS APP Store. Please download and install it on your mobile device.



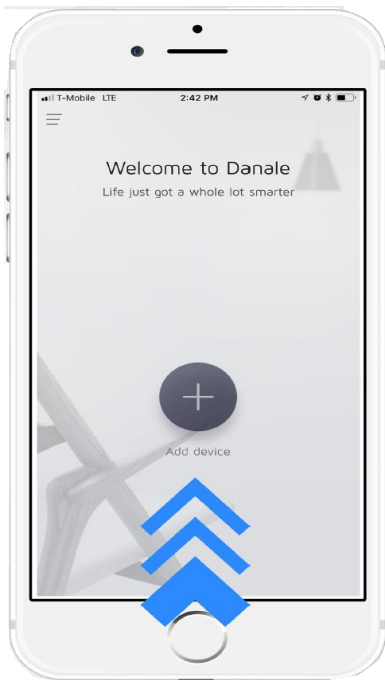
Here we use Android interface in this guide as example, iOS interface is very similar.

Note: The App Interface might be slightly different from the screenshots below. (due to App updates)

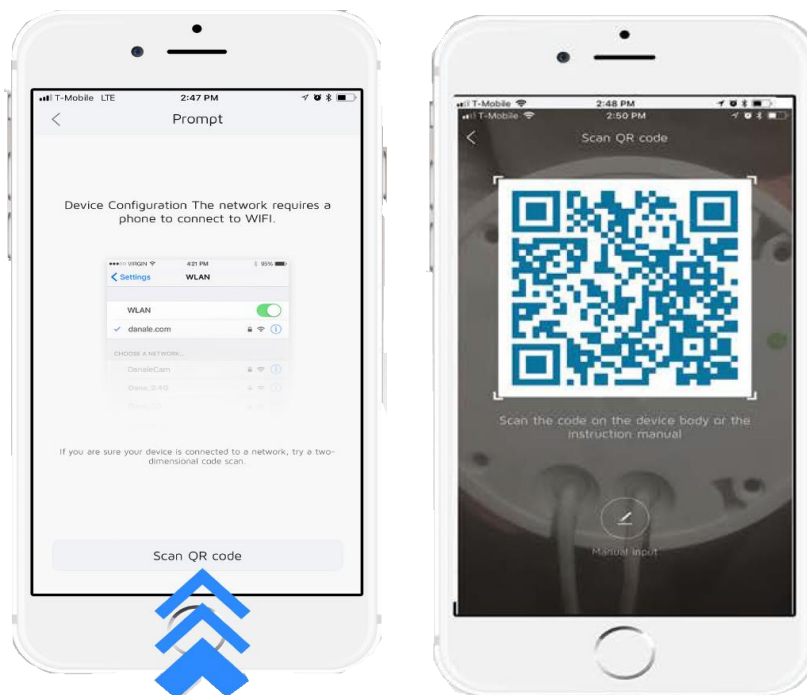
### POE or Wired Cameras:

- 1) To set up the camera to connect to the Internet.
  - a. Router works on DHCP mode: please use the IPCManager tool according to 1.2 to change the camera's TCP/IP configuration to "DHCP mode" from Static mode; or open camera's web interface and go to Configuration -> Network -> TCP/IP -> TCP/IP to change the camera IP configuration to DHCP mode.
  - b. Router works on Static mode: please change the camera's IP address to the number which can be connect to Internet.
- 2) Open the app, register and login the app.

3) From the App, tap the “Plus” sign in the middle.

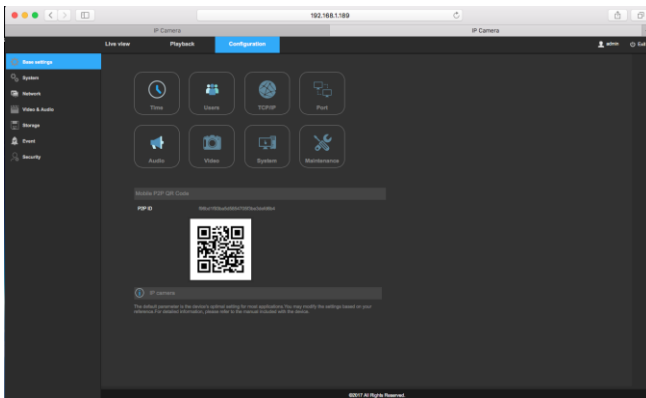


4) Select “Qr code to add” like below.

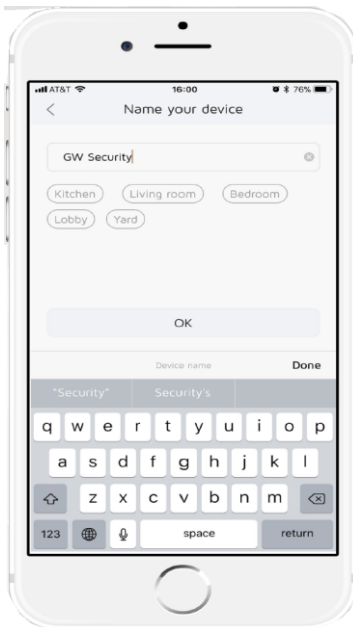


5) Point the phone’s camera at the QR code on the bottom of the camera. Make sure the QR code fits inside of the clear box in the middle of the phone screen. Your phone will take you back to the previous page when the scan is successful.

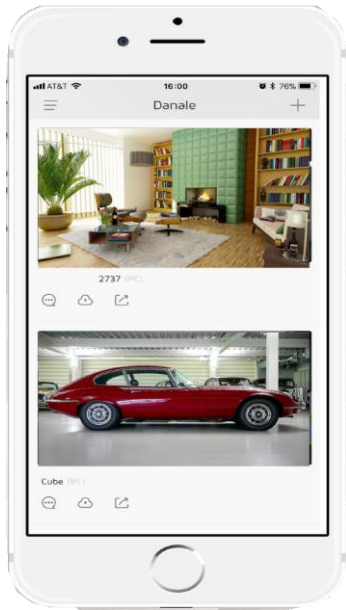
**Note: There is QR code sticker on the camera housing. If it's missing, please log into the camera and find the same QR code in the web interface "Basic settings".**



**6) Enter a name for the camera, then tap OK to continue.**



**7) Video will display after loading is completed, the device is now setup successfully for live viewing.**



**WiFi Cameras: There are different WiFi connection method for the different application, and then using the APP to add the camera.**

#### Quick Method

- ❶ On the Danale welcome screen, press the 'Add device' button.



- ❷ Select "Scan QR" button;

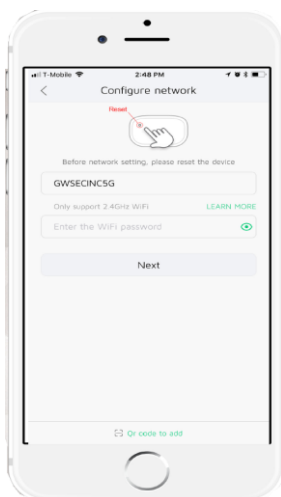




**③ Use the scanner to scan the QR Code located on the camera;**



**④ Enter you WIFI network password and press 'Next'.**



Input the name you want the camera to have. Press 'OK'. Danale should now display the live view of your WIFI camera.


The app also automatically configured your camera's IP address. You will need this IP address when working more advanced configurations.

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#### **Advanced Method**

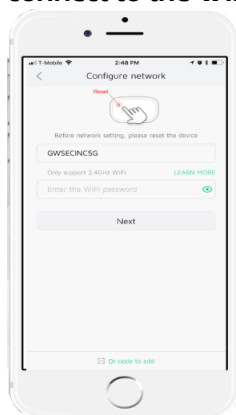
**If there is problem for you to config the camera WiFi and add the camera into your APP, please check the below "Advanced Method".**

**1) Add the several cameras into APP in one time.**

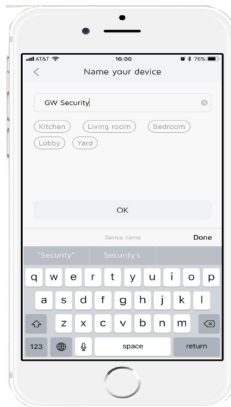
- a. Please run the APP "Danale", and finish the registration, and come to the page to add the devices.
- b. Please power all the cameras using the power adaptors together with the cameras in packages.
- c. Click  to come to the following page.



- d. As default APP will use the WiFi ID the mobile connected to currently, and please fill out the password of the WiFi. Then click "Next". The camera will use the password you filled out to connect to the WiFi.

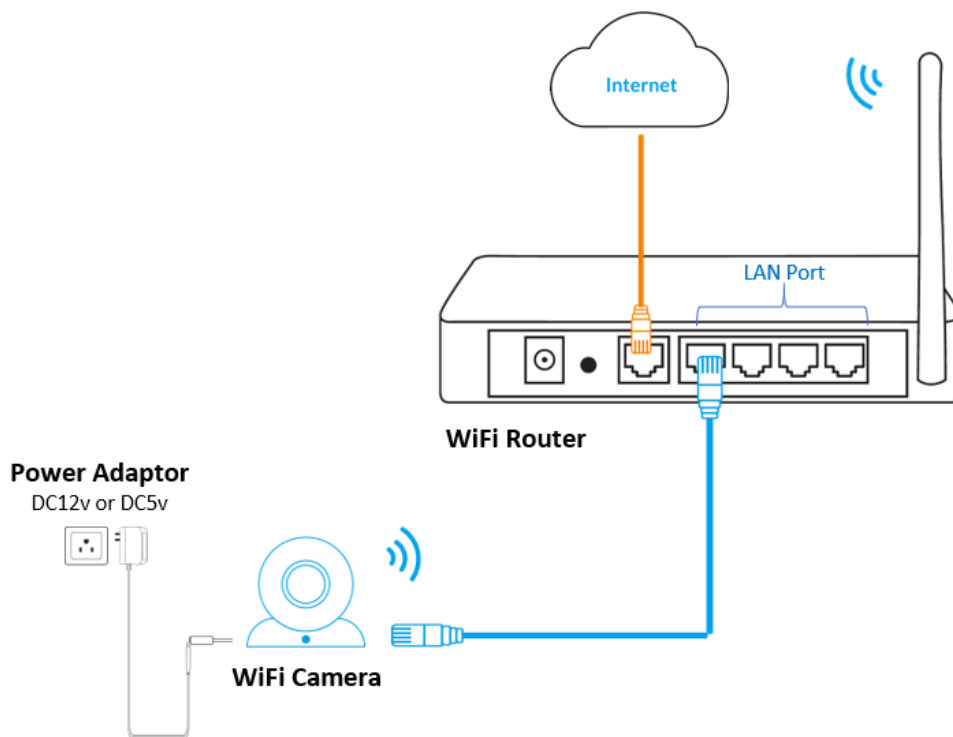


- e. APP will automatically search all the cameras which are successfully connected to the WiFi router.

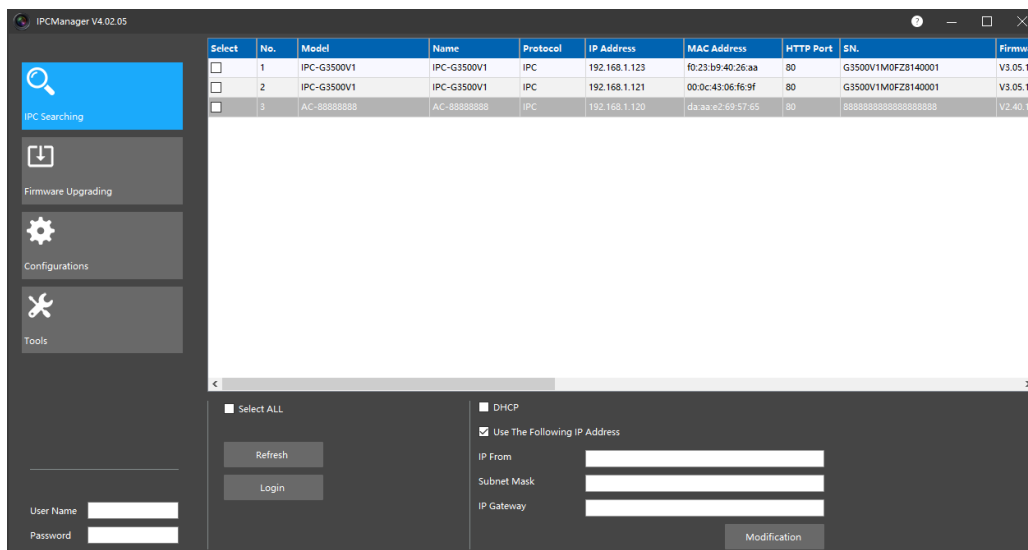


## 2) Config the WiFi using IPCManger tool or Camera's web interface.

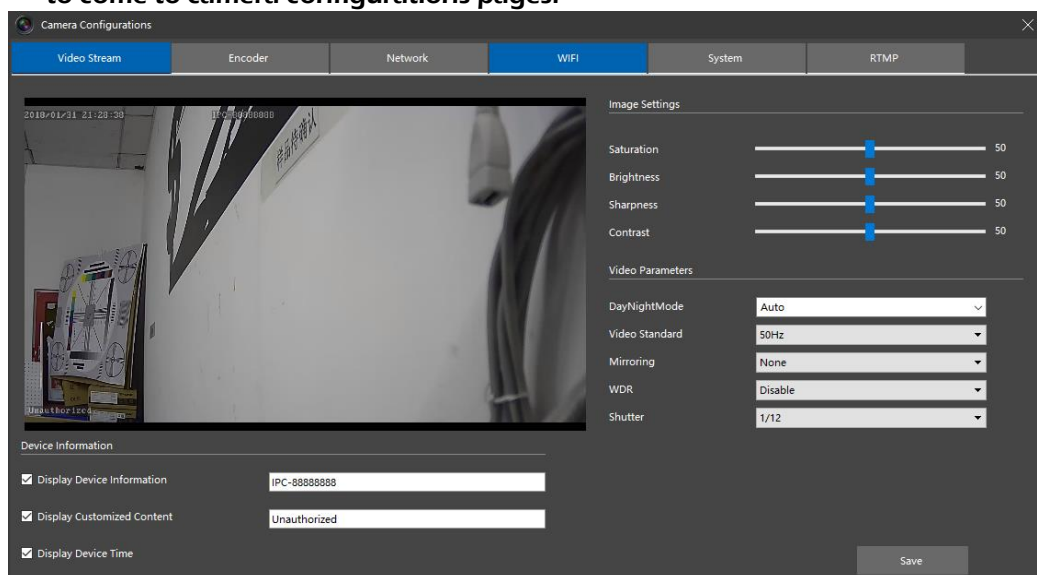
Please connect the WiFi camera to your wireless network according to the following steps.



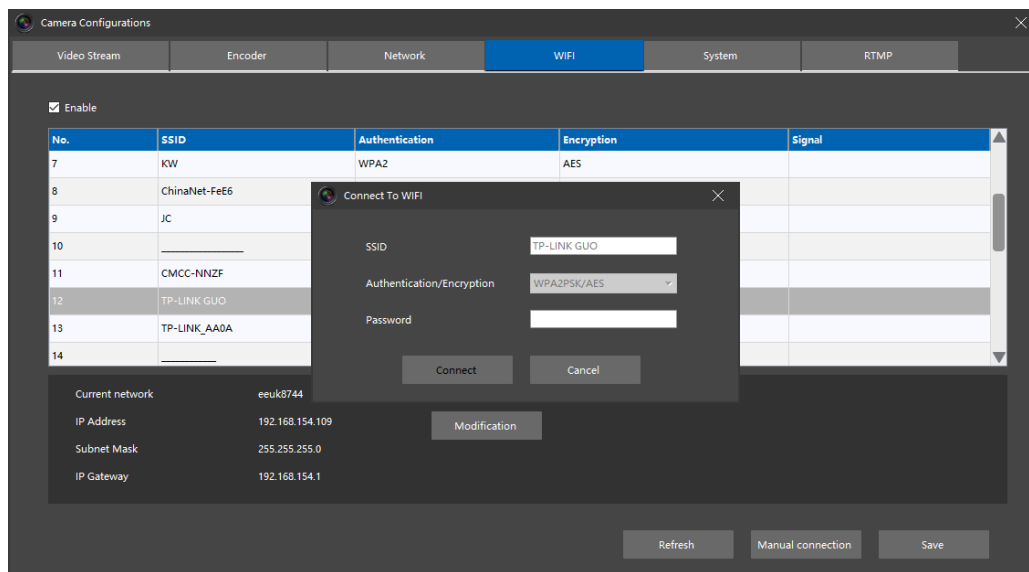
- Connect the camera to a LAN port on your router using the included Ethernet cable and power the camera using the included power supply.
  - Connect your PC/Mac/Linux to your router.
  - Insert the CD-ROM into your PC/Mac/Linux and install the corresponding version of IPCManager
- **Config the WiFi camera using IPCManager Tool**
- Run the IPCManger tool to automatically search the cameras.



- b. Select and double click the camera or right click the camera to select “Camera configuration” to come to camera configurations pages.

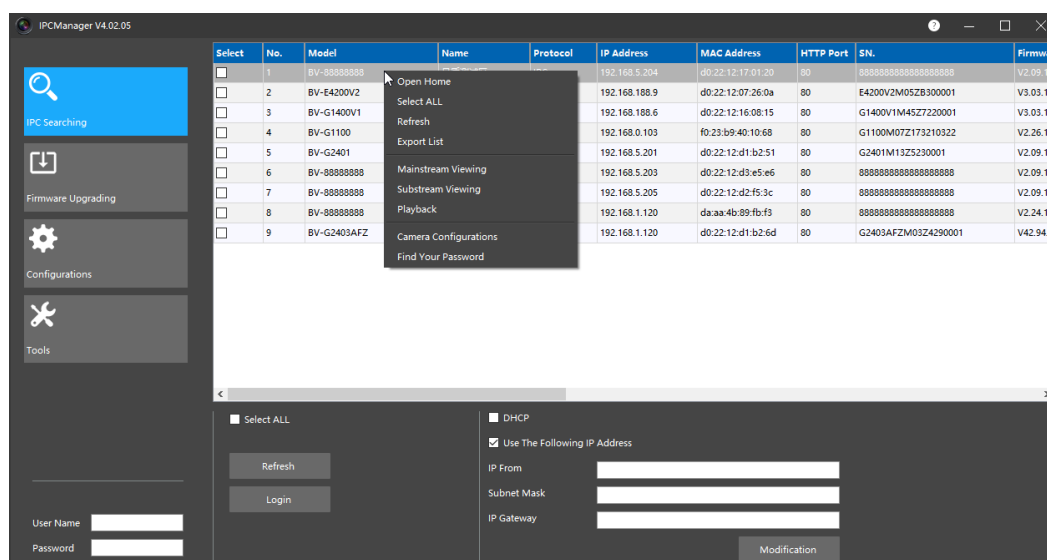


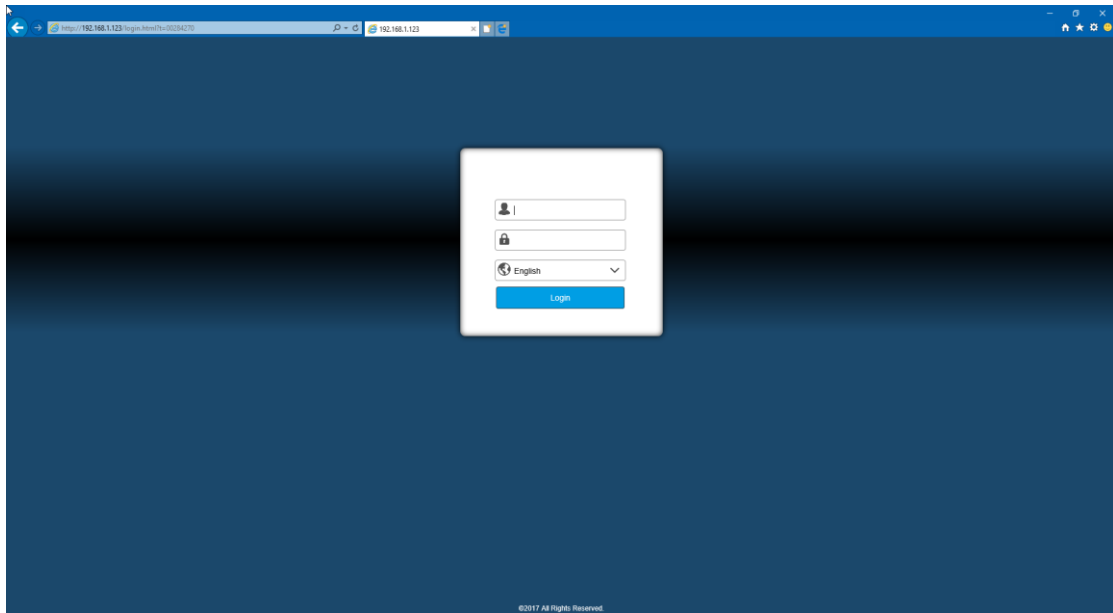
- c. In the “WiFi” sub-page, the current available WiFi ID are automatically searched and listed, and then select and double click the WiFi you want to connect to (if the WiFi you want to use is not searched and listed, please reboot the WiFi router, and then click “Refresh” until the WiFi is searched.), fill out the password, then click “Connect”, wait until the camera connect to the WiFi automatically.



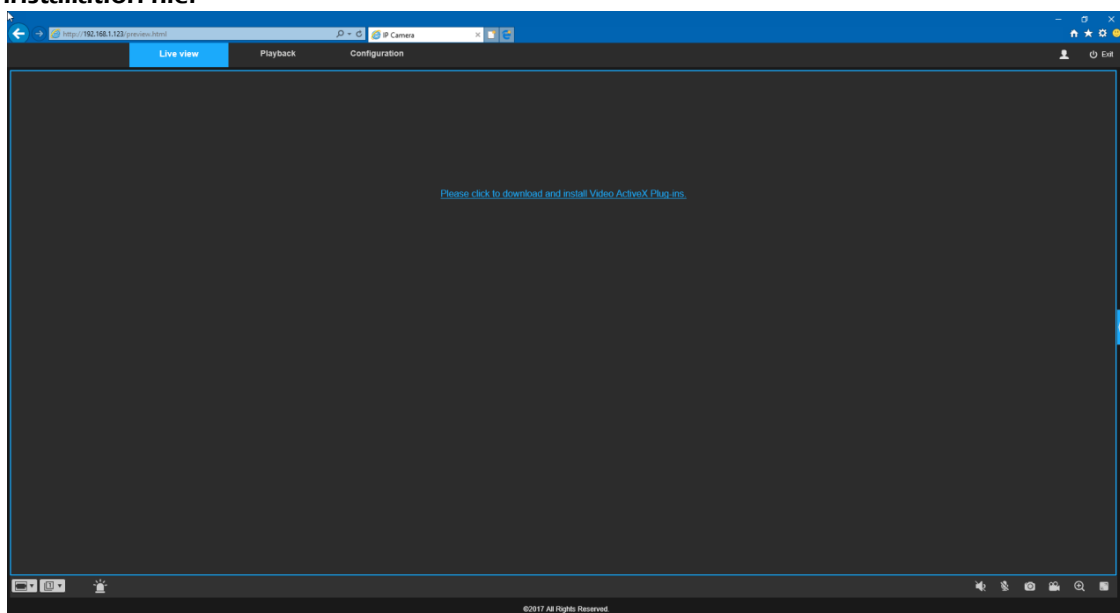
## ▪ Config the WiFi camera through camera's web interface

- In the IPCManager, please enter the camera's default username and password in the bottom left corner. Default username: admin. Default password: admin. Select all the cameras you wish to modify or simply check the "Select All" check box.
- After the cameras are selected, assigned a static IP using the "IP From" box or check the DHCP checkbox for your router to assign an IP to the cameras. Click on "Modification" to apply the change. (Note: The camera's IP will most likely change after a power cycle if the IP setting is left on DHCP. To make it static, you can do so in the router by putting the camera's IP in DHCP reservation or change the IP setting back to static after you are able to access the web interface).
- After applying the change, the IP address of the camera will change. Right click on the camera you wish to access and select "Open Home" to access the camera's login screen, as shown in the picture below:





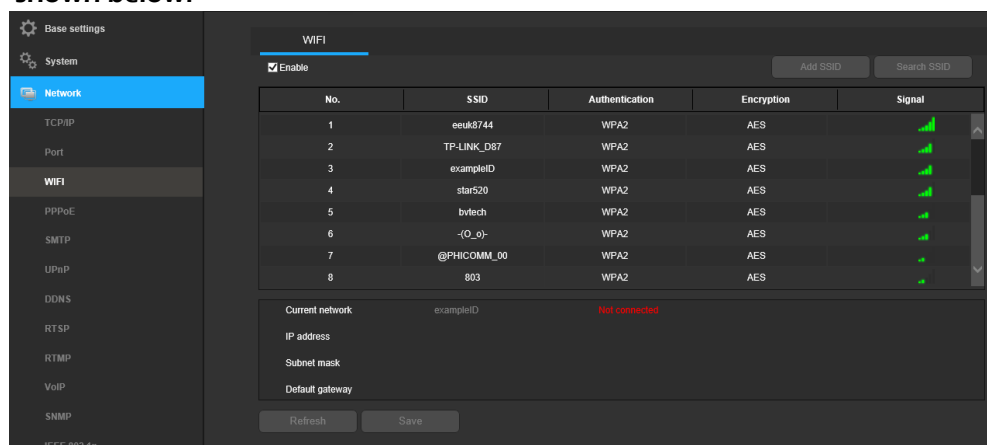
- d. Enter the default username and password to log into the web interface.
- e. For Internet Explorer users, you will be prompted to install a plug-in for the camera. The plugin is necessary for the web interface. After installation, please refresh the page and click on "Allow" to allow the plugin to run. If you are not prompted automatically the first you log into the web interface, please click on the download link to manually download the installation file.



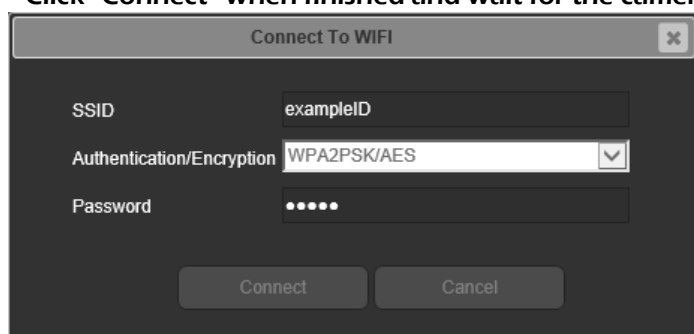
- f. For other browsers, Adobe FlashPlugin is required. Please install Adobe Flash or allow Adobe Flash to run to access the web interface.



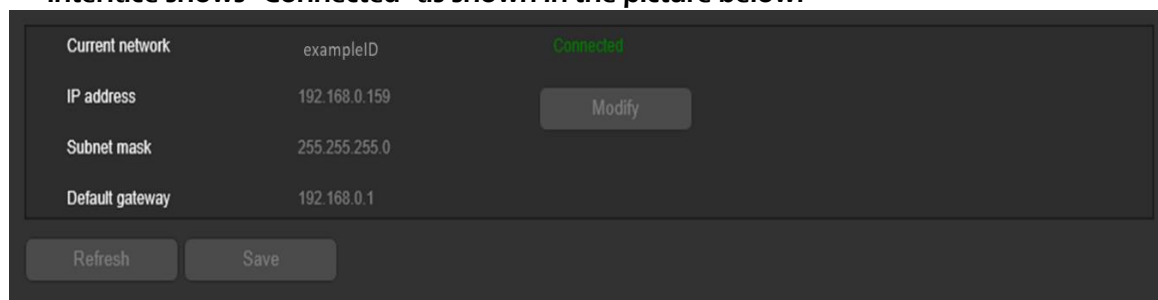
- g. To Configure the wireless setting, navigate to “Configuration -> Network -> Wi-Fi Interface, as shown below:



- h. Check the “Enable” check box to turn on the Wi-Fi feature. Click on “Search SSID” to find all available Wi-Fi Networks. The interface will display the SSID name, authentication type, and signal strength.
- i. Double-click on the Wi-Fi network you wish to connect to and enter your Wi-Fi password. Click “Connect” when finished and wait for the camera to connect to your wireless router.



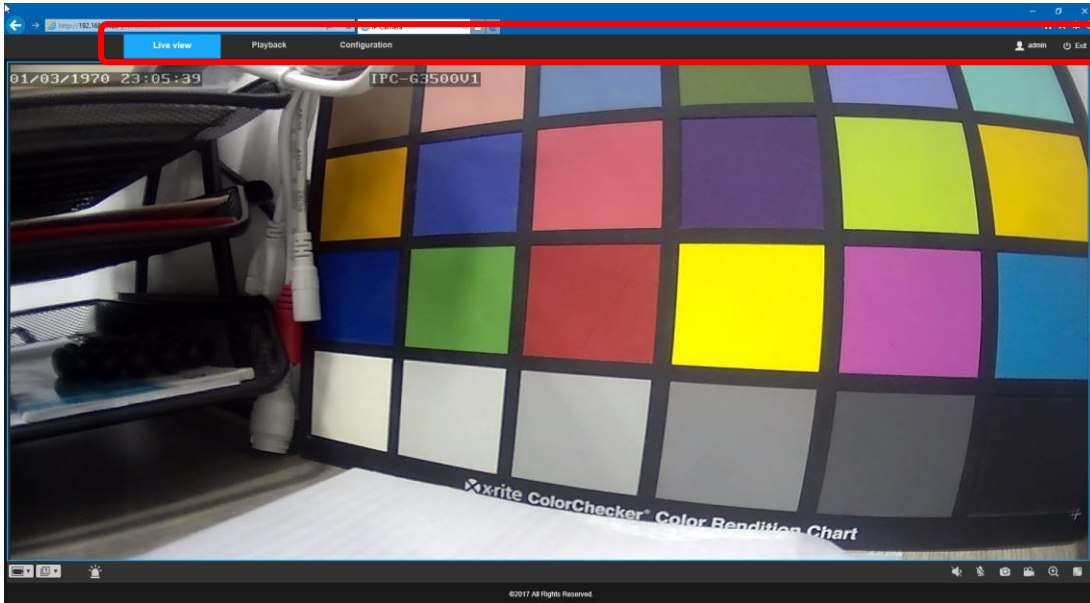
- j. After the connection established, hit “Refresh” on the bottom of the interface and see if the interface shows “Connected” as shown in the picture below:



## 2 Operation and Interface

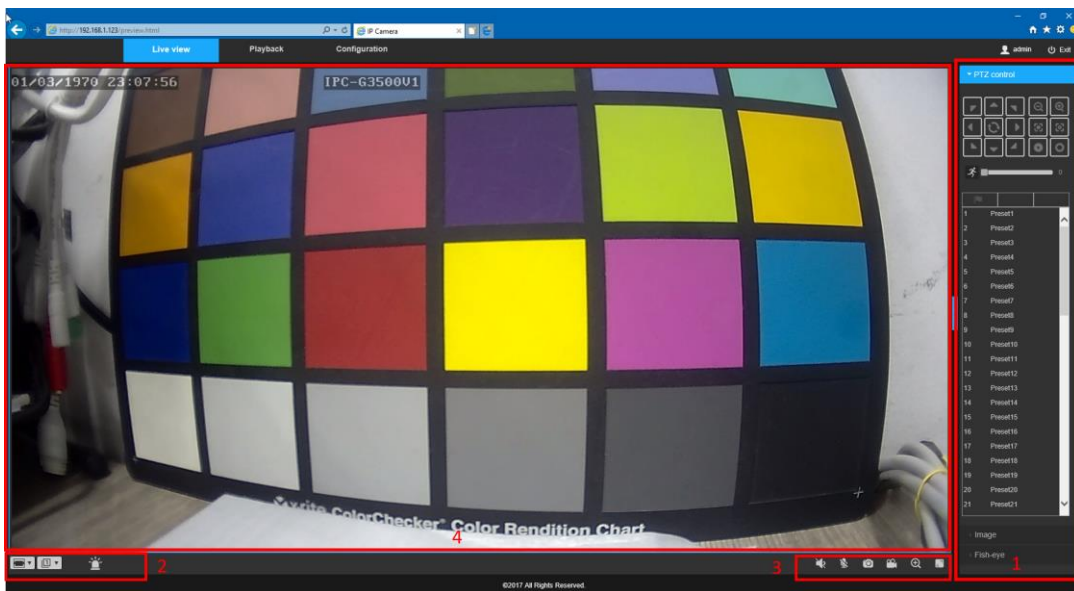
This section of the manual details the camera’s interface, as well as all of the operations the camera can perform.

The main interface of the camera contains 5 major tabs on the top of the screen. By default, the interface opens on the Live view tab.



## 2.1 Live view

The Live view tab allows the user to see a live video feed from the camera. The Live view tab has 4 main sections:



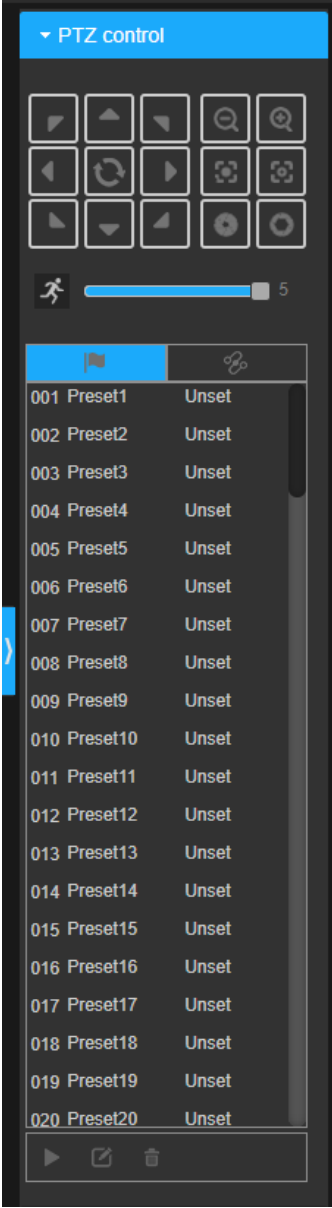






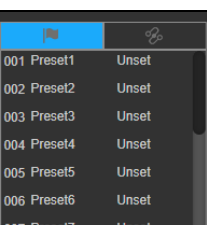

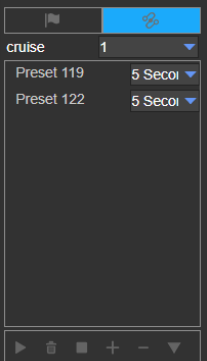


**Section 1:** The functions bar allows the user to perform different functions while in live mode. There are three function zones, see the following table for an explanation of the different features available:



**NOTE:**

Section 1 can be opened and closed manually through click arrow.



**PTZ Control Zone:**






PTZ Control	Button	Function Name	Function Description
		<b>PTZ Control</b>	Click these buttons to control the PTZ camera Left/Right, Upper/Down, Left-Upper/Right-Down, Right-Upper/Left-Down,  (The controls only affect PTZ camera.)
		<b>Zoom in and Zoom Out</b>	Click to zoom in and out on the motorized camera and PTZ camera lens.
		<b>Focus + and Focus -</b>	Click to adjust the Focus of the Auto Focus lens on the motorized camera or PTZ camera.
		<b>IRIS + and IRIS -</b>	Click to adjust IRIS open bigger or smaller on PTZ camera.
		<b>RESET Button</b>	Click to reset the motorized camera and PTZ camera.
		<b>Speed Control</b>	PTZ control speed adjust bar.
		<b>Preset</b>	Define the Preset of PTZ or motorized lens camera. Double click on the preset to define the preset and name the preset.
		<b>Preset control buttons</b>	<ol style="list-style-type: none"> <li>1. To call the defined preset;</li> <li>2. To name the preset;</li> <li>3. To delete the preset;</li> </ol>
		<b>Cruise</b>	<p>Set the cruise of the PTZ or motorized lens camera. You can set maximum 3 cruises each of which can support 32 presets. Each preset waiting time is from 5 seconds to 120 seconds;</p> <p>Click "+" to add the preset into the cruise and click "-" to delete the preset from the cruise.</p> <p> to run the cruise;</p> <p> to delete all of the presets from the cruise;</p>

			 to stop the cruise;  to move down the sequence of the preset;

### PTZ camera and Motorized Camera Control operation description.

- Zoom + / Zoom:** Please click the buttons:  and  to execute the Zooming out and Zooming in.  
 Normally the PTZ or Motorized camera will be automatically focus after zoom controlling, and please be noted:

It's possible that the camera's lens cannot be focus if there is no or less objects in the environment for example it's the sky, open field etc. Please make the following actions to manually make it focus like the below:




- Manual focus: click the buttons  and  to make the focus: Focus + / Focus -.
- If it will take the long time to focus manually or it can not be focus, the user can click the button:  to initialize the lens. After initialization, the lens will be focus.

- Preset**

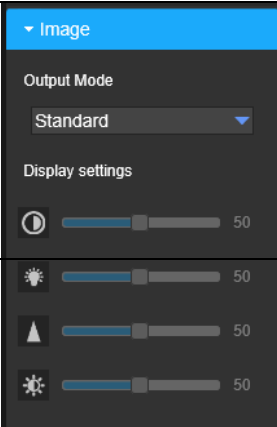
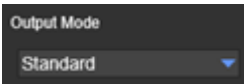
The user can set the presets positions, and then in the next time the user can switch to this position quickly.

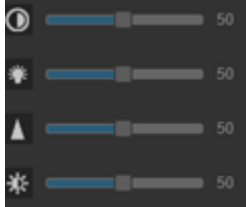
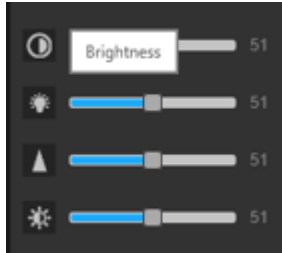
- The user can manually control PTZ (or Zoom) to the specified position, and then double click the preset line in "Preset" menu to define this preset position.



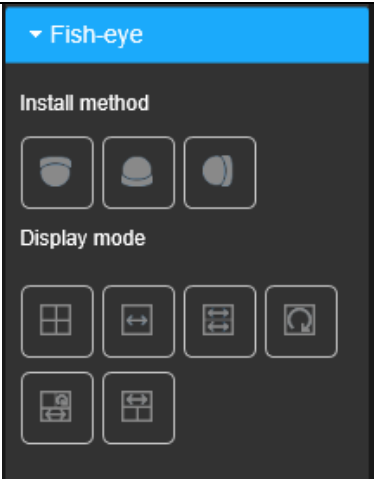

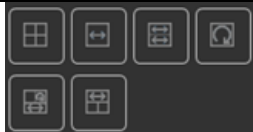
- The user can click the button  to add the preset manually.
- The user can click the button  to call the preset position and control the camera to move to the saved position quickly.
- The user can click the button  to delete the saved position.

### Image Settings

Image Settings	Button	Function Name	Function Description
		<b>Output Mode</b>	Click to select the following mode.  Custom: the user can define it manually.  Standard: default image settings.








			<b>Bright:</b> bright video mode. <b>Vivid:</b> vivid video mode. <b>Gentle:</b> gentle video mode.
		<b>Saturation</b> <b>Brightness</b> <b>Sharpness</b> <b>Contrast</b>	On Custom mode, the user can adjust the value manually.  There are notifications when you hover your mouse over the adjustment bar.
			

#### Fish Eye Settings (special model only)




Fish Eye Settings	Button	Function Name	Function Description
		<b>Camera installed orientation</b>	Click to select the fisheye camera installed method. Each mode will have different de-warpping result.
		<b>De-warped video display mode.</b>	Click to select the de-warped video display mode. <ol style="list-style-type: none"> <li>4 Windows;</li> <li>One de-warped window.</li> <li>2 windows.</li> <li>Original.</li> <li>3 windows with original + de-warped windows.</li> </ol>




			6. 3 windows.

**Section 2:** This bar allows the user to change video settings for the live view. See table below for an explanation of them.

Button	Function Name	Function Description
	<b>Aspect Ratio</b>	<p>This button allows the user to switch the display aspect ratio in its set resolution.</p> <p> Original size of the stream in its set resolution.</p> <p> To show the stream in 4:3 ratio.</p> <p> To show the stream in 16:9 ratio.</p> <p> Stretch the stream to cover the entire window.</p>
	<b>Main stream or sub stream switch.</b>	<p>This button allows the user to switch the stream type in the live view.</p> <p>1: mainstream, 2: sub stream</p>
	<b>Alarm Output</b>	<p>The signal light to show if there is alarm. This icon flashes RED if there is alarm like motion detection, etc.</p>

**Section 3:** This functions bar allows the user to perform different camera functions while in live mode. See table below for an explanation of the different functions available.

Button	Function Name	Function Description
	<b>Close/Open Audio</b>	<p>Click this button to close or open the speaker from the PC side. If someone is speaking from camera side, the user can click this button to open it, and hear the voice from the camera.</p> <p>(for cameras have built-in microphone feature only)</p>
	<b>Close/Open Microphone</b>	<p>Click this button to close or open the microphone from the PC side. The user can use a microphone from the PC to talk through the camera.</p> <p>(for cameras have two-way audio feature only)</p>
	<b>Snapshot</b>	<p>Click this button to take a screenshot of the live feed. The picture is saved here:</p> <p>Internet Explorer: at the path specified in Configuration -&gt; Storage -&gt; Local settings -&gt; Live snapshot path.</p> <p>Other browsers: The snapshot will prompt the user to save it.</p>

	<b>Manual Record</b>	Click this button to manually record video. The video is saved at the path specified in Configuration -> Storage -> Local settings -> Live record path.
	<b>Digital Zoom</b>	Click this button to activate the zone selection function. This allows the user to use the mouse to select a zone to zoom in with.
	<b>Full Screen</b>	This button allows the user to make the live feed go into full screen mode. Double click the mouse or click the ESC button to exit full screen mode.

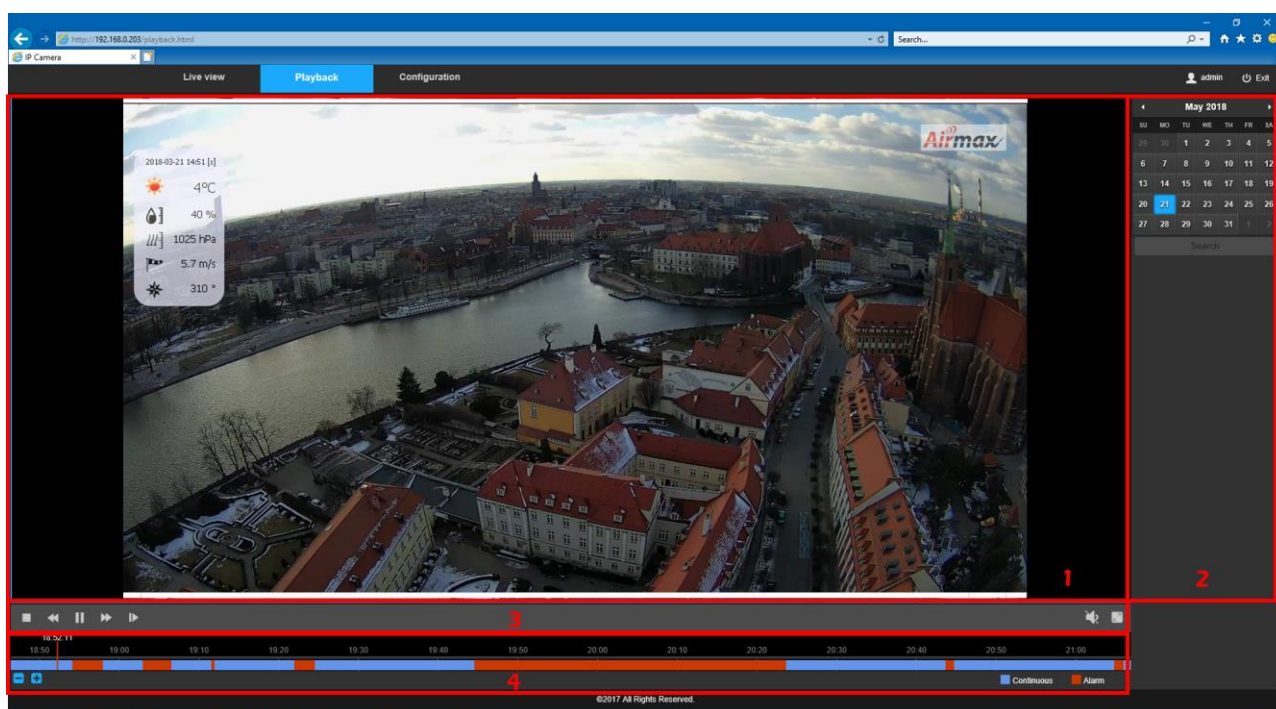
**Section 4:** This section of the live view tab shows the picture that the camera is broadcasting. The time stamp is shown in the top left corner, the camera name is shown in the middle top of the window. These OSD can be customized in configuration -> Video & Audio -> OSD.

## 2.2 Playback

Click "Playback" button and come to playback the records in SD card if the camera supports and has SD card installed.

**Note:**

**ActiveX is required for this feature; Playback is only available using Internet Explorer.**



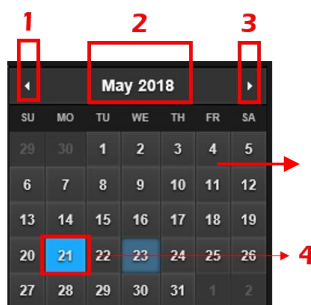
1	<b>Video window</b>	The records will be playing in this window.
2	<b>Searching window</b>	When there's records, the Date will be marked as blue automatically, and select the date, and then click "search" to search the records of the day.

3	<b>Playback Control bar</b>	Click on the "playback control bar" to select different time to play, and enable or disable audio during playback or full screen.
4	<b>TimeLine</b>	<p>The time-line shows the record playing progress, and you can select different position for the record to play from.</p> <p>There are two kinds of records, one is scheduled records with "Blue" color and alarm records with "Red" color.</p>

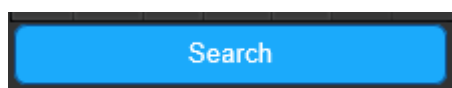
## 2.2.1 Searching Window

The date windows include:

- 1: Previous month of the year. 2: Current Year-Month-Day; 3: Next month of the year;
- 4: The blue marked date means there are records in SD card.



- User can select the blue marked date, and then click the "search" button under the date window to search the records of the day.



## 2.2.2 Playback Control Bar

Here is the playback control bar button definition:

- Stop: stop the playback;
- Slow forward: slower, slowest speed to playback the records through click on the button;
- Play: start playback
- Fast forward: faster, fastest speed to playback the records through click on the button;
- Single frame: playback the records per frame;
- Audio: enable and disable audio when playback if there is audio in the records.
- Full screen: play the records in full screen mode.





## 2.2.3 Timeline of the current playback record

The time-line shows the record playing progress, and you can select different position for the record to play from.

There are two kinds of records, one is scheduled records with “Blue” color and alarm records with “Red” color.

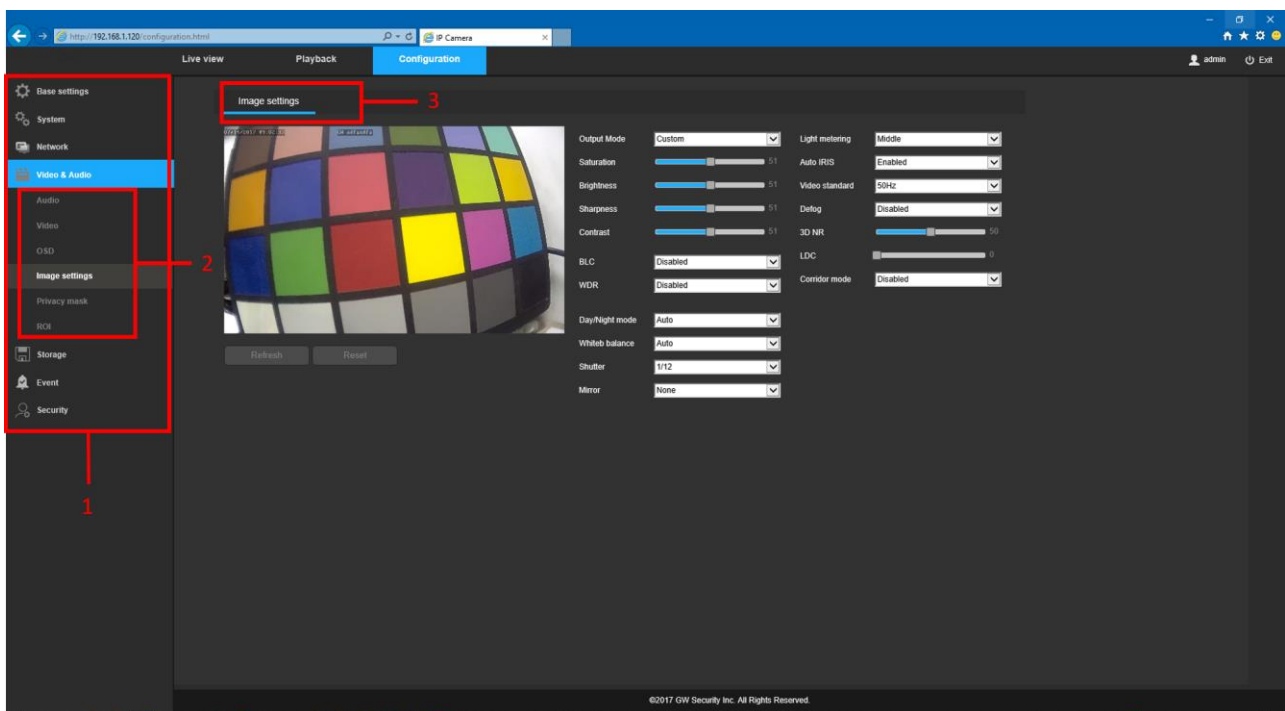
The user can move the mouser on the position of the timeline where the user wants to play from, and scroll the mouse to zoom in and zoom out the timeline’s time segment.

-   : enlarge and shorten the timeline
- Time-bar: the time of the record is now playing.



## 2.3 Configuration

The Configuration tab allows the user to change different camera settings. Below is a screenshot of the configuration tab.



There are 3 main sections in the configuration tab:

1. **Menu Bar:** The menu bar is composed of menu sections, which when clicked will display menu items.
2. **Menu Items:** These menu items each display a different menu that allows the user to change specific settings for the camera.
3. **Menu Tab:** These tabs open up menu options for certain menu items.

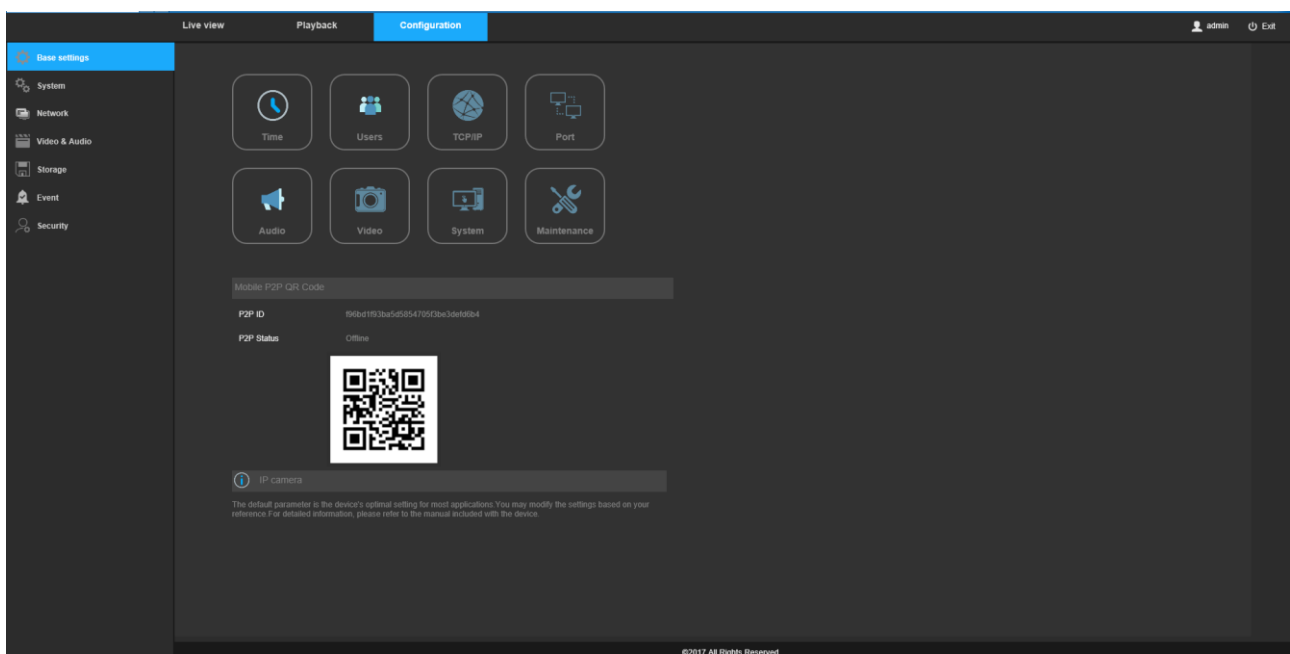
## 2.3.1 Basic settings

This menu section provides shortcuts to the main menu including: Time, Users, TCP/IP, Port, Audio, Video, System and Maintenance. The user can click the icons to access the configuration page quickly.

In this section, P2P ID can be used to manually enter the camera's information on a mobile or tablet device in case the QR code scanning feature does not work properly.

P2P Online status shows the P2P connection status, there are online or offline status.

QR code is shown for the user to add it into the mobile APP by scanning it using the APP built-in scanner.



## 2.3.2 System

This menu section allows the user to change general camera system settings.

### 2.3.2.1 General

This menu controls where general settings are configured. There are two tabs in this menu: Date & Time and General.

#### 1. Date & Time

This tab allows the user to configure the camera's date and time settings. Below is a screenshot of the Date & Time tab:

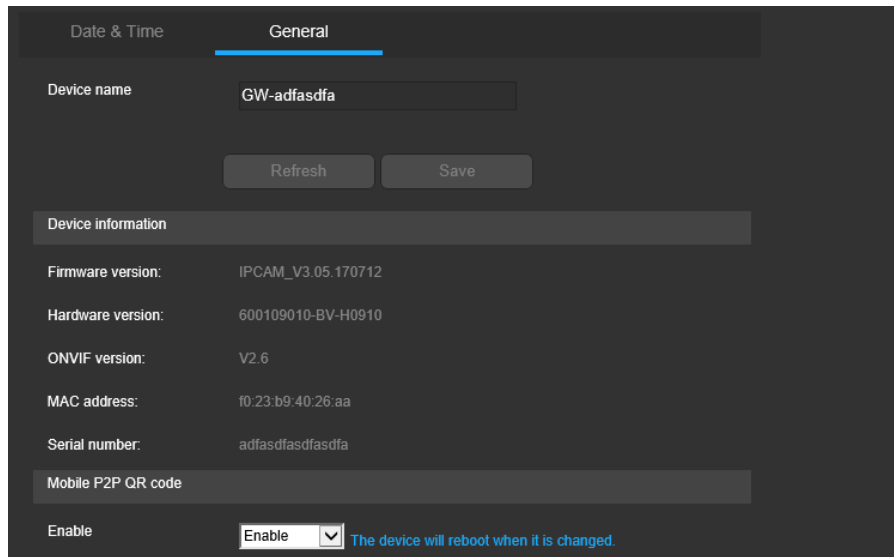


Below is an explanation of the fields on the Date & Time tab:

- **Status:** The camera current date and time, it will be changed after you finish the setting Date & Time.
- **Date Format:** This dropdown box allows the user to change the date format used in the camera.
- **Time Format:** This dropdown box allows the user to change the time format used in the camera.
- **Time Zone** This dropdown box allows the user to change the time zone used in the camera.
- **DST Enable:** This checkbox allows the user to enable daylight savings time.
- **DST bias:** This dropdown box allows the user to change the time bias for DST.
- **Start Time:** This dropdown box and field allow the user to enter in the start time for DST.
- **End Time:** This dropdown box and field allow the user to enter in the end time for DST.
- **Sync with NTP server:** This checkbox allows the user to enable the camera's synchronization with an NTP server.
- **NTP server:** This field allows the user to enter in an NTP server address or use the default server.
- **Port:** This field allows the user to enter in the NTP server port number. **Update Period:** This field allows the user to enter in the update period interval. This number designates how frequently the camera pings the NTP server to ensure it has the correct time. The range is from 1-5 hours.
- **Manually set:** This checkbox allows the user to enter in the date and time manually. Check the checkbox "Sync with PC time" allows the camera to sync with the computer you are using.
- **Restore Default:** Restore the values to default setting.
- **Refresh:** Refresh the display of the settings' value.
- **Save:** Save the settings.

## 2. General

This tab is where the user can configure camera name and enable or disable mobile P2P settings. Below is a screenshot of the General tab:



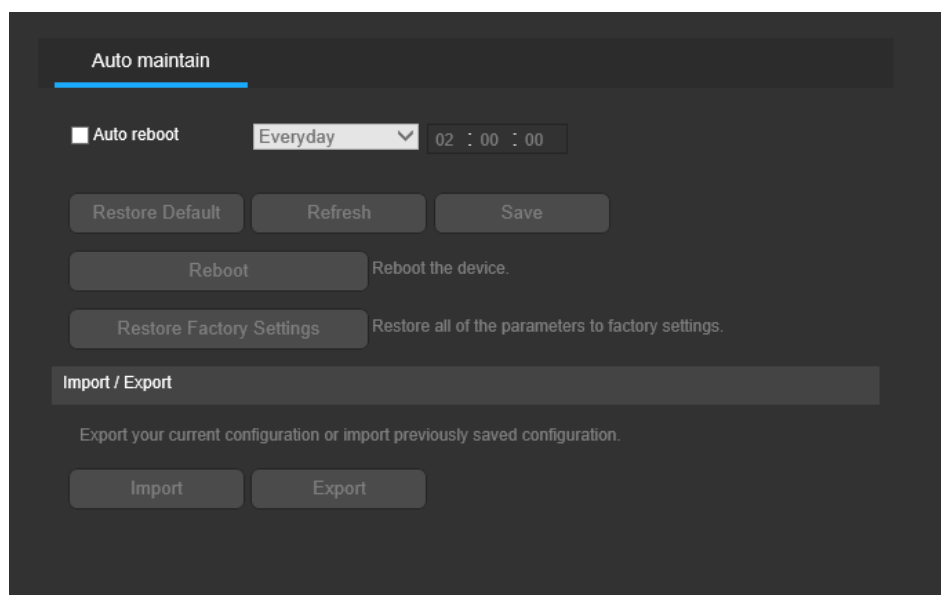
The screenshot shows the 'General' settings tab. At the top, there are two tabs: 'Date & Time' and 'General'. The 'General' tab is active. Below the tabs, there is a 'Device name' field with the value 'GW-adfasdfa'. Below this field are two buttons: 'Refresh' and 'Save'. A section titled 'Device information' contains several fields: 'Firmware version' (IPCAM\_V3.05.170712), 'Hardware version' (600109010-BV-H0910), 'ONVIF version' (V2.6), 'MAC address' (f0:23:b9:40:26:aa), and 'Serial number' (adfasdfasdfasdfa). Below this section is a 'Mobile P2P QR code' section with an 'Enable' dropdown menu set to 'Enable' and a note 'The device will reboot when it is changed.'

Below is an explanation of the fields on the General settings tab:

- **Device Name:** This field allows the user to change the device's name.
- **Refresh:** Refresh the display of the settings' value.
- **Save:** Save the settings.
- **Device information:** There are the device version information.
- **Mobile P2P:** The dropdown box allows the user to enable or disable the P2P feature in the camera. The camera will reboot if it's changed. This feature must be enabled for the camera to connect to a smartphone or tablet via the APP. It's enabled by default.

### 2.3.2.2 Auto maintain

This menu allows the user to set auto maintenance settings for the camera. Below is a screenshot of the Auto Maintain screen.



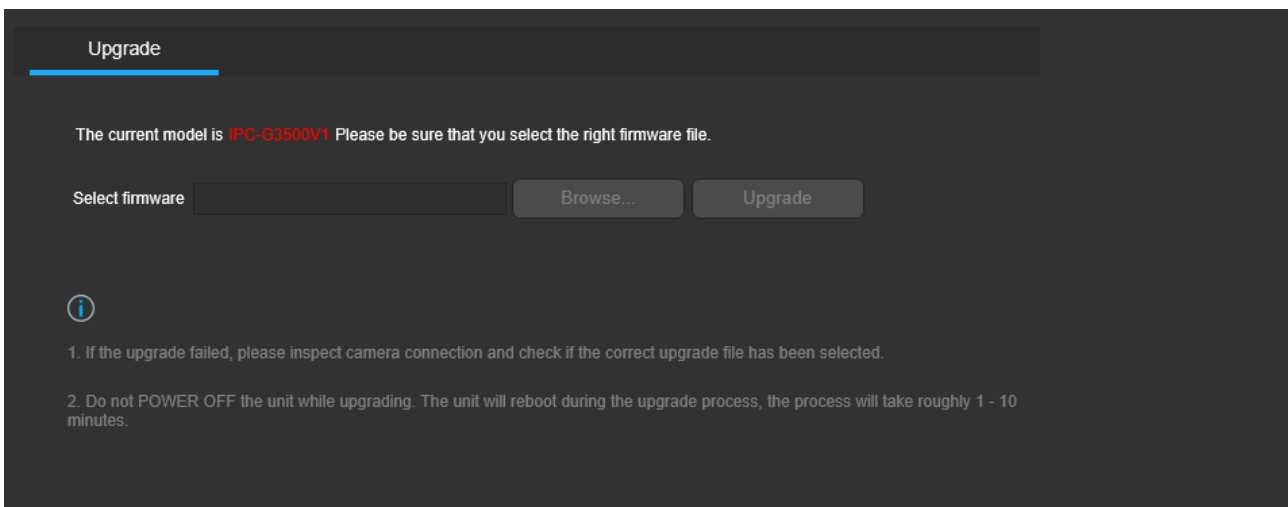
The screenshot shows the 'Auto maintain' settings screen. At the top, there is a tab titled 'Auto maintain'. Below the tab, there is a checkbox labeled 'Auto reboot' which is checked. To the right of the checkbox is a dropdown menu set to 'Everyday' and a time field showing '02 : 00 : 00'. Below these fields are three buttons: 'Restore Default', 'Refresh', and 'Save'. A section titled 'Reboot' contains a button labeled 'Reboot' and a description 'Reboot the device.'. Below this section is a button labeled 'Restore Factory Settings' and a description 'Restore all of the parameters to factory settings.'. A section titled 'Import / Export' contains a description 'Export your current configuration or import previously saved configuration.' and two buttons: 'Import' and 'Export'.

Below is an explanation of the fields on the Auto Maintain screen:

- **Auto Reboot:** This checkbox allows the user to enable the auto reboot function. The dropdown box and field to the right of this checkbox allow the user to specify what date and time of the week the camera will auto reboot.
- **Reboot:** This button allows the user to manually reboot the camera.
- **Restore:** This button allows the user to restore all the camera settings to the factory settings.
- **Import/Export:** These buttons allow the user to import or export settings from the camera. To import settings, click the Import button. To export settings, click the Export button.

### 2.3.2.3 Upgrade

This menu allows the user to upgrade the camera's firmware. Below is a screenshot of the Upgrade screen:



There is model number notifications automatically, please make sure you have the right firmware before you start the upgrade process.

To search the PC for the firmware file, click the Browse button. Click Upgrade button to start the upgrade process once the firmware is selected. Note:

When upgrading the camera's firmware, do not disconnect the connection or power from the camera.

### 2.3.2.4 Information

This menu allows the user to check various information about the camera's software versions, as well as other information. Below is a screenshot of the camera's information screen.

System Information			
System overview		System status	
Firmware version:	IPCAM_V3.05.170712	Video:	Enable
Hardware version:	600109010-BV-H0910	Audio:	Enable
ONVIF version:	V2.6	FTP:	Enable
MAC address:	10.23.b9.40.26.aa	UPnP:	Enable
Serial number:	adfasdfasdfadfa	RTSP:	Enable
IP address:	192.168.1.120	Recording:	Disable
Date & Time:	07-14-2017 T 22:06:15	Snapshot:	Enable
Uptime:	13:14:24	TCP:	Enable
Time mode:	Sync with NTP server time	DDNS:	Disable
CPU load:	18%	ONVIF:	Enable

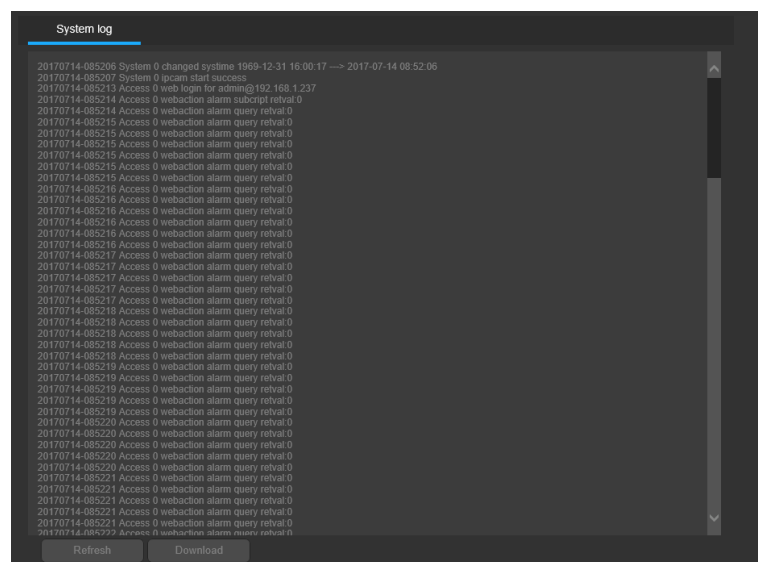
User can check the following information from the system overview:

**Firmware version, hardware version, Onvif version, MAC address, Serial number, IP address, Date & Time, Up time (it means how long the camera has been performed before power cycle.) Time mode and the current camera's CPU load.**

User can check the service status from the camera as well.

## 2.3.2.5 Log

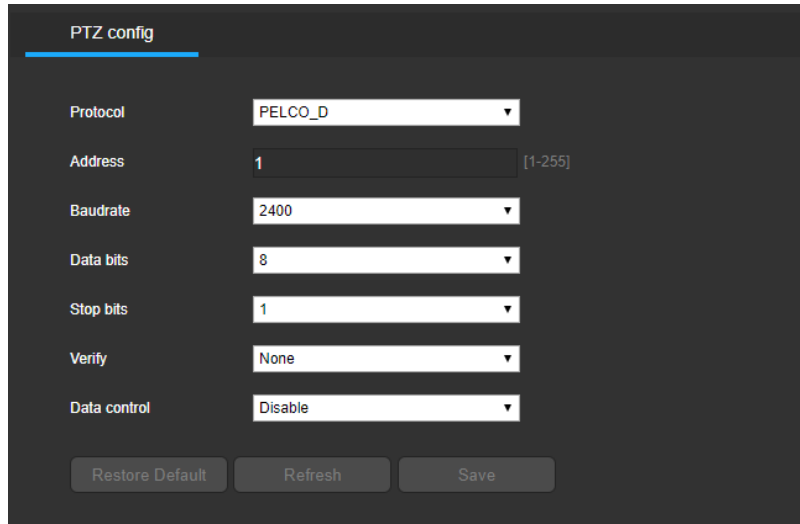
This menu is where the camera's activity log is kept. Below is a screenshot of the Log screen.



- **Refresh:** Refresh the display of the log value.
- **Download:** Download the log.

### 2.3.2.6 PTZ config (Only Available on Specific Model)

This menu allows the user to set PTZ settings for the high speed PTZ camera only. Below is a screenshot of the PTZ config screen.



The screenshot shows the 'PTZ config' menu with the following settings:

Field	Value
Protocol	PELCO_D
Address	1 [1-255]
Baudrate	2400
Data bits	8
Stop bits	1
Verify	None
Data control	Disable

Buttons at the bottom: Restore Default, Refresh, Save.

Below is an explanation of the fields on the PTZ config screen:

- **Protocol:** This dropdown box allows the user to change the RS-485 protocols including PELCO\_D and PELCO\_P.
- **Address:** This field allows the user to enter in the address of the RS-485.
- **Baudrate:** This dropdown box allows the user to change the baudrate value from 2400, 4800, 9600, 57600, 19200 and 115200.
- **Data bits:** This dropdown box allows the user to change the data bits from 6, 7, 8.
- **Stop bits:** This dropdown box allows the user to change the stop bits from 1 or 2.
- **Verify:** This dropdown box allows the user to change the verify value from none, odd verify and even verify.
- **Data control:** This dropdown box allows the user to enable or disable the data control.
- **Restore Default:** Restore the values to default setting.
- **Refresh:** Refresh the display of the settings' value.
- **Save:** Save the settings.

## 2.3.3 Network

This menu section allows the user to change network settings for the camera.

### 2.3.3.1 TCP/IP

The TCP/IP menu item has two tabs: Network status and TCP/IP.

#### 1. Network Status

The tab shows the current network status of the camera including the IPV4, IPV6 and Wireless network status. Below is a screenshot of the Network status tab:

The screenshot shows the 'Network status' tab with two sub-sections: 'Wired network status' and 'WIFI network status'. The 'Wired network status' section lists the following information: IPv4 IP address: 192.168.1.120, IPv4 subnet mask: 255.255.255.0, IPv4 gateway: 192.168.1.1, IPv6 IP address: ::, IPv6 gateway: ::, Domain: , Primary DNS: 202.96.128.166, Secondary DNS: 202.96.134.133, and NTP server: time.windows.com. The 'WIFI network status' section shows the connection status as 'Connected' and the current IP address as 192.168.0.124.

Network status	
TCP/IP	
Wired network status	
IPv4 IP address:	192.168.1.120
IPv4 subnet mask:	255.255.255.0
IPv4 gateway:	192.168.1.1
IPv6 IP address:	::
IPv6 gateway:	::
Domain:	
Primary DNS:	202.96.128.166
Secondary DNS:	202.96.134.133
NTP server:	time.windows.com
WIFI network status	
Connection status:	Connected
Current IP address:	192.168.0.124

## 2. TCP/IP

TCP/IP stands for Transmission Control Protocol/Internet Protocol and it's the language/protocol that allows communication between internet connected devices, whether on a local network, or on the Internet at large. This tab allows for TCP/IP settings to be modified in order for the camera to establish a connection to the network. Below is a screenshot of the TCP/IP settings tab:

The screenshot shows the 'TCP/IP' settings tab with two sub-sections: 'IPv4 network settings' and 'IPv6 network settings'. The 'IPv4 network settings' section has a 'Mode' dropdown set to 'Static' (with 'DHCP' also visible), and fields for IP address (192.168.0.142), Subnet mask (255.255.255.0), Gateway (192.168.0.1), Primary DNS (202.96.128.166), Secondary DNS (202.96.134.133), and MTU (1500). The 'IPv6 network settings' section has a 'Mode' dropdown set to 'DHCP' (with 'Static' also visible), and fields for IP address, Subnet mask, and Gateway. At the bottom, there are buttons for 'Restore Default', 'Refresh', and 'Save'.

Network status	
TCP/IP	
IPv4 network settings	
Mode	<input checked="" type="radio"/> Static <input type="radio"/> DHCP
IP address	192 . 168 . 0 . 142
Subnet mask	255 . 255 . 255 . 0
Gateway	192 . 168 . 0 . 1
Primary DNS:	202 . 96 . 128 . 166
Secondary DNS:	202 . 96 . 134 . 133
MTU	1500 [500-1500]
Restore Default Refresh Save	
IPv6 network settings	
Mode	<input type="radio"/> Static <input checked="" type="radio"/> DHCP
IP address	::
Subnet mask	0
Gateway	::

Below is an explanation of the fields on the TCP/IP settings tab:

IPv4 network settings:

- **Mode: Static vs DHCP:** This radio button allows the user to choose between a static IP address or a dynamic IP address. DHCP stands for Dynamic Host Configuration Protocol, and this enables the camera to automatically obtain an IP address from another network device such as a server or more commonly, a router. When the DHCP function is enabled, the user cannot modify the IP address, Subnet Mask, or IP Gateway, as these values are obtained from the DHCP server. To view the current IP address, DHCP needs to be disabled. Note: When PPPoE is enabled, modification of the IP address, Subnet mask, and Gateway is disabled.
- **IP Address:** This field allows the user to enter a custom IP address.
- **Subnet mask:** This field allows the user to enter a custom subnet mask.
- **Gateway:** This field allows the user to enter a custom gateway address.
- **Primary DNS:** This field allows the user to enter the primary DNS server IP address.
- **Secondary DNS:** This field allows the user to enter the secondary DNS server IP address.
- **MTU:** This field allows the user to enter the MTU value. The user can adjust this value if required by the user's network.

IPv6 network follows the same setting as IPV4. Please be sure that the network device you want to the camera to connect to support IPV6 protocol when you use IPV6 connection.

- **Restore Default:** Restore the values to default setting.
- **Refresh:** Refresh the display of the settings' value.
- **Save:** Save the settings.

### 2.3.3.2 Port

The port tab is where the user can configure port number used by the camera connection. Below is a screenshot of the port settings tab.

Port		
HTTP port	80	[1..65535, Default 80]
RTSP port	554	[1..65535, Default 554]
Server port	6000	[1..65535, Default 6000]
FLASH port	1935	

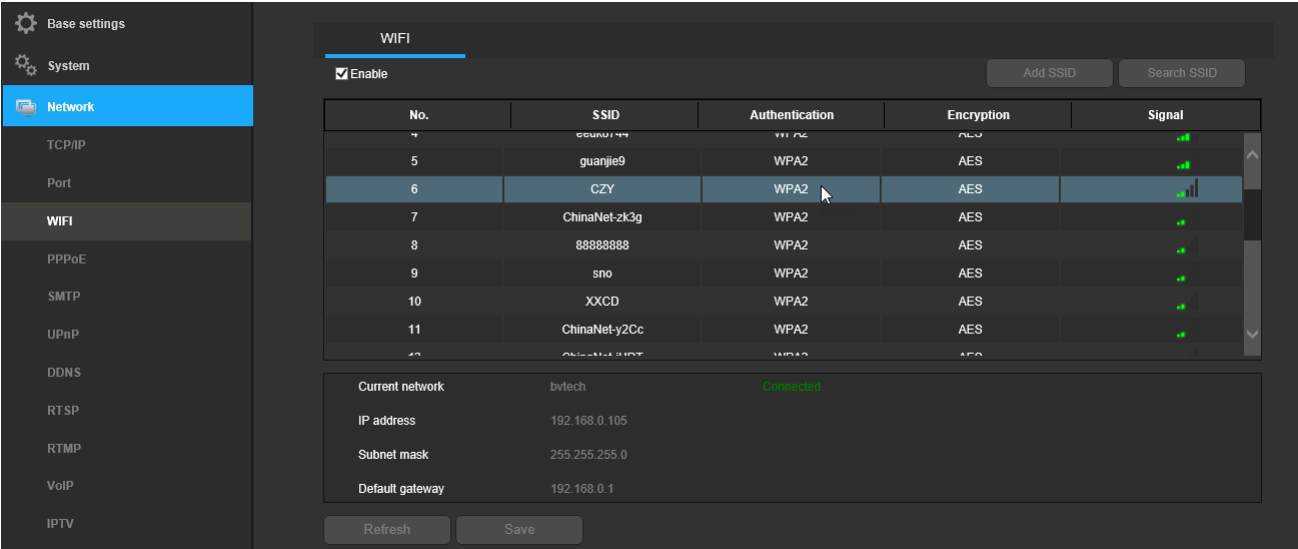
Restore Default Refresh Save

Below is an explanation of the fields in the Port settings tab:

- **HTTP port:** This field designates the Hypertext Transfer Protocol (HTTP) port number. The default value is 80.
- **RTSP port:** This field designates the Real Time Streaming Protocol (RTSP) port number. The default value is 554.
- **Server port:** This field designates the video and audio service port number. The default value is 6000.
- **Flash port:** This field designates the RTMP Flash port number. The default value is 1935.
- **Restore Default:** Restore the values to default setting.
- **Refresh:** Refresh the display of the settings' value.
- **Save:** Save the settings.

### 2.3.3.3 Wi-Fi (Only Available on Specific Model)

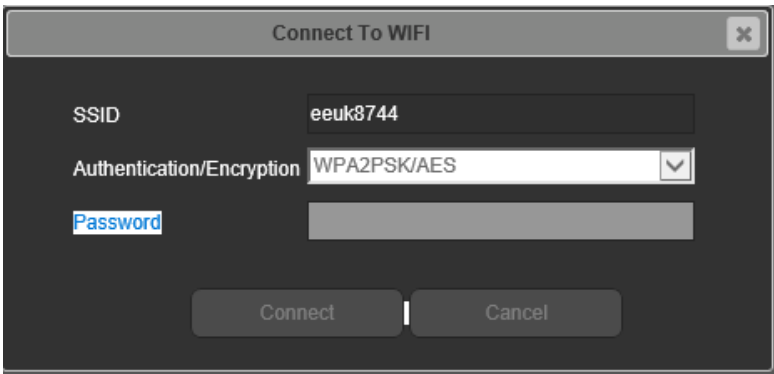
The Wi-Fi menu item has the tab of Wi-Fi settings. The Wi-Fi feature allows a camera to connect to a network wirelessly. Below is a screenshot of the Wi-Fi tab.



Below is an explanation of the fields on the Wi-Fi tab:

- **Enable:** This checkbox allows the user to enable Wi-Fi functionality.
- **Add SSID:** This button allows the user to manually enter an SSID.
- **Search SSID:** This button allows the user to search for more SSIDs.

To connect to a Wi-Fi network, click the line for a specific network, and enter the password if needed like below:



There is the Wi-Fi connection status like the below:



Current network	gwseurwifi	Connected
IP address	192.168.0.124	
Subnet mask	255.255.255.0	
Default gateway	192.168.0.1	

Refresh
Save

- **Refresh:** Refresh the display of the settings' value.
- **Save:** Save the settings.

Note:

If the camera does not have Wi-Fi functionality, there will be a notification: **The device does not support this feature.**

### 2.3.3.4 PPPoE

PPPoE stands for Point-to-Point protocol over Ethernet. This feature allows the user to configure PPPoE connections. Below is a screenshot of the PPPoE screen.

PPPoE

☐ Enable PPPoE

User name

Password

Connection status
Not connected

IP address

Restore Default
Refresh
Save

To enable PPPoE, click the enable checkbox, and fill in the username and password fields, then click Save.

- **Connection status:** PPPoE connection status: connected or not connected.
- **IP address:** The IP address the camera obtained.
- **Restore Default:** Restore the values to default setting.
- **Refresh:** Refresh the display of the settings' value.
- **Save:** Save the settings.

### 2.3.3.5 SMTP

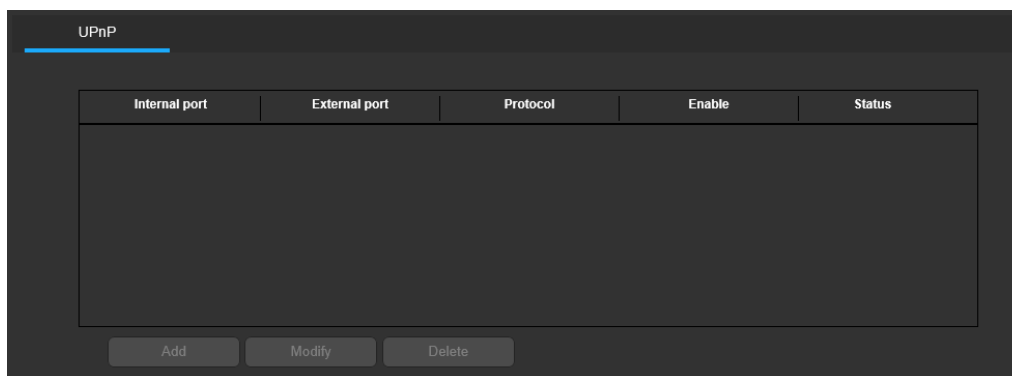
The SMTP menu allows the configuring of email settings in order to send emails when an alarm is triggered. Below is a screenshot of the email settings screen:

Below is an explanation of fields on the SMTP (Email) settings screen:

- **Email shortcuts:** Gmail, Outlook, QQ etc. mail has default values; the user click on the logo to fill out the SMTP server, Authentication, Port etc. Parameters with the default value. The user can select Other to use another mail settings.
- **SMTP Server:** SMTP stands for Simple Mail Transfer Protocol. This field allows the user to enter the SMTP server used by the email service.
- **Authentication:** This dropdown box allows the user to select an encryption type. There are two types of email encryption protocols that are available.
- **SSL:** Secure Socket Layer
- **Port:** This field allows the user to enter the port that corresponds to the selected SMTP server.
- **Username:** This checkbox allows the user to enter the username for the SMTP server.
- **Password:** This field allows the user to enter the password associated with the SMTP username.
- **Sender:** This field allows the user to enter the sender's name. This name will be used to be the sender name. It better use the camera's name, thus it can be easily noted which camera was sent the mail.
- **Recipients:** This field allows the user to enter the receiver email address. These email addresses are the ones that will receive any emails pertaining to alert and alarm emails sent by the camera. Up to 3 email addresses can be entered in this field.
- **Test:** This button allows the system to send out an email to test the connection. Prior to the email test, please save the email setup information.
- **Restore Default:** Restore the values to default setting.
- **Refresh:** Refresh the display of the settings' value.
- **Save:** Save the settings.

### 2.3.3.6 UPnP

The UPnP stands for Universal Plug and Play, and it is a protocol used to easily connect devices to the Internet. It allows the camera to connect to the router in an easy manner to quickly allow for remote access. Below is a screenshot of the UPnP settings screen:

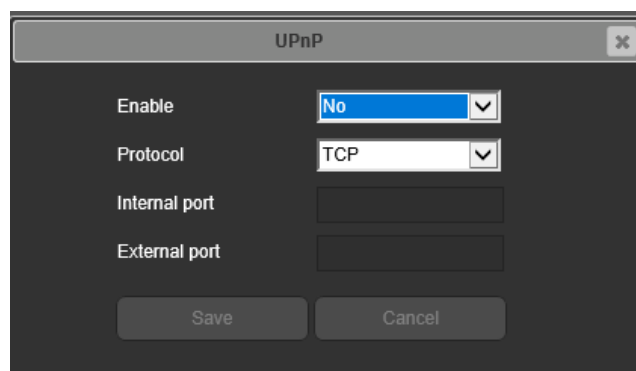


Below is an explanation of fields on the UPnP settings screen:

This table is used to show how the ports for each protocol listed below have been remapped by the UPnP protocol.

- **Internal Port** shows the Internal Port used by that service to establish communication from the router to the camera.
- **External Port** shows the External Port used by that service to establish communication from the router to the internet.
- **Protocol** shows the name of the protocol used by that service.
- **Enable** shows if to enable the corresponding service on the table.
- **Status** shows the status of the protocol. If the protocol was mapped successfully, this field will say "Mapping Succeeded".
- **Add:** Add more port mapping.
- **Modify:** Modify existing port mapping
- **Delete:** Delete the port mapping from the list.

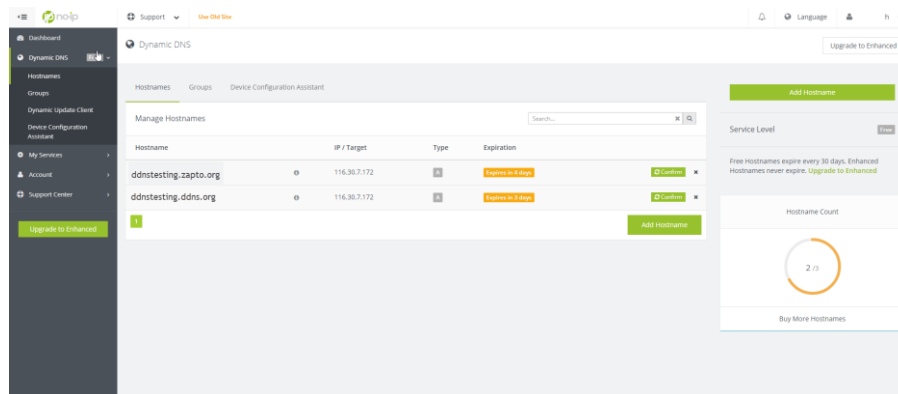
To see how to setup the camera for remote access, see section 1.4.1.



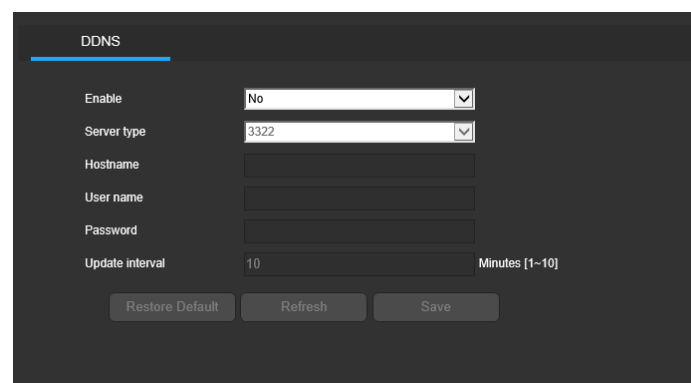
### 2.3.3.7 DDNS

DDNS stands for Dynamic Domain Name Server. This technology is used to automatically update name servers in real time in order to help the camera maintain a persistent address despite changes in location or configuration. What this means is that even when the camera is restarted, moved, or reconfigured, it can keep the same URL address, thus allowing remote users uninterrupted access to the camera, rather than having to request a new IP address to use for remote access anytime a change is made.

To use this feature, users will need to setup an account with a DDNS service. The camera supports a variety of DDNS services such as 3322 DDNS, NO-IP DDNS, Oray DDNS, and DynDNS DDNS. Based on which service is selected, different options may show on this screen. For purposes of this guide, NO-IP DDNS will be used. NO-IP DDNS is a free DDNS service provided by NO-IP like below NO-IP DDNS information in NO-IP website.



Below is a screenshot of the DDNS settings screen, configured to NO-IP DDNS:



- **Enable:** select “YES” to enable DDNS;
- **Server type:** the dropdown box allows the user to select DDNS service provider type.
- **Hostname:** the field allows the user to fill out the DDNS host domain name.
- **Username:** the field allows the user to fill out the DDNS service username.
- **Password:** the field allows the user to fill out the DDNS user’s password.
- **Update interval:** the field allows the user to fill out the DDNS update interval.
- **Restore Default:** Restore the values to default setting.
- **Refresh:** Refresh the display of the settings’ value.
- **Save:** Save the settings.

### 2.3.3.8 RTSP

This tab allows the user to modify the settings for RTSP including RTSP authentication, and RTSP multicasting. Multi-cast is a feature that enables the camera to broadcast its live view to multiple computers on the same network. Below is a screenshot of the RTSP screen:

Below is an explanation of the fields in the RTSP tab:

- **RTSP authentication Enable:** This dropdown box allows the user to enable RTSP authentication.
- **Enable multicast:** This dropdown box allows the user to enable RTSP multicast functionality.
- **Multicast Address:** This field allows the user to enter a multicast address.
- **Port:** This field allows the user to enter a multicast port.
- **TTL:** This field allows the user to enter a multicast TTL value.
- **Restore Default:** Restore the values to default setting.
- **Refresh:** Refresh the display of the settings' value.
- **Save:** Save the settings.

### 2.3.3.9 RTMP

RTMP stands for Real Time Messaging Protocol. This technology is used for media live streaming communication between the stream server and cameras. The user can use RTMP to ask the camera to push the video and audio to the specified RTMP servers, thus the camera's media can be live play in the servers. As an example there are some famous broadcasting public RTMP servers like YOUTUBE, Wowza Live Streaming etc.



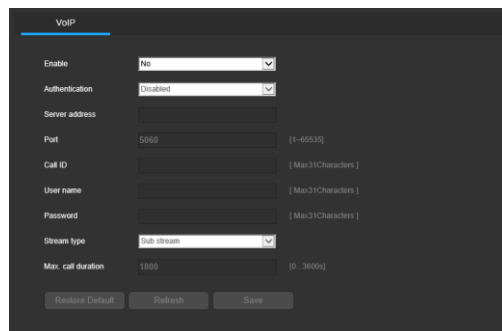
Below is a screenshot of the RTMP tab:

Below is an explanation of the field on the RTMP tab:

- **Enable:** This dropdown box allows the user to enable RTMP functionality.
- **Periods:** This fields allow the user to set the schedule of the RTMP live stream.
- **Push type:** This dropdown box allows the user to select the stream type.
- **Push URL:** This field allows the user to fill out the RTMP server address.
- **Restore Default:** Restore the values to default setting.
- **Refresh:** Refresh the display of the settings' value.
- **Save:** Save the settings.

### 2.3.3.10 VoIP

VoIP stands for Voice over Internet Protocol. This technology is used to transmit the IP video and voice between the VoIP server and the cameras. Below is a snapshot of VoIP tab.



Below is an explanation of the fields on the VoIP tab:

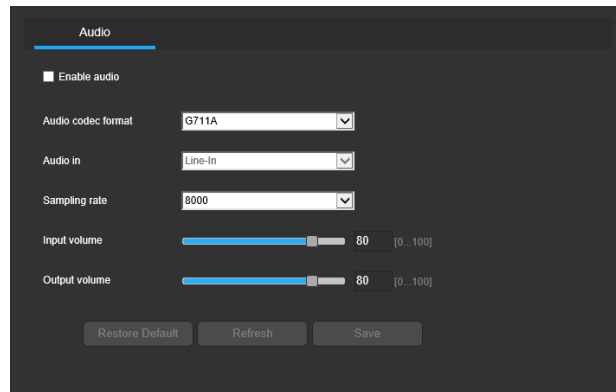
- **Enable:** This dropdown box allows the user to enable VoIP functionality.
- **Authentication:** This dropdown box allow the user to enable VoIP authentication.
- **Server address:** This field allows the user to fill out the VoIP server address.
- **Port:** This field allows the user to fill out the VoIP server port.
- **Call ID:** This field allows the user to fill out the camera call ID number registered.
- **Username:** This field allows the user to fill out the username in the VoIP system.
- **Password:** This field allows the user to fill out the password in the VoIP system.
- **Stream type:** This dropdown box allows the user to select the stream type in the VoIP system.
- **Max. call duration:** This field allows the user to fill out the VoIP call maximum duration time.
- **Restore Default:** Restore the values to default setting.
- **Refresh:** Refresh the display of the settings' value.
- **Save:** Save the settings.

## 2.3.4 Video & Audio

This menu section allows the user to change video and audio settings for the camera's video and audio feed.

### 2.3.4.1 Audio

Below is a screenshot that shows the Audio menu item:

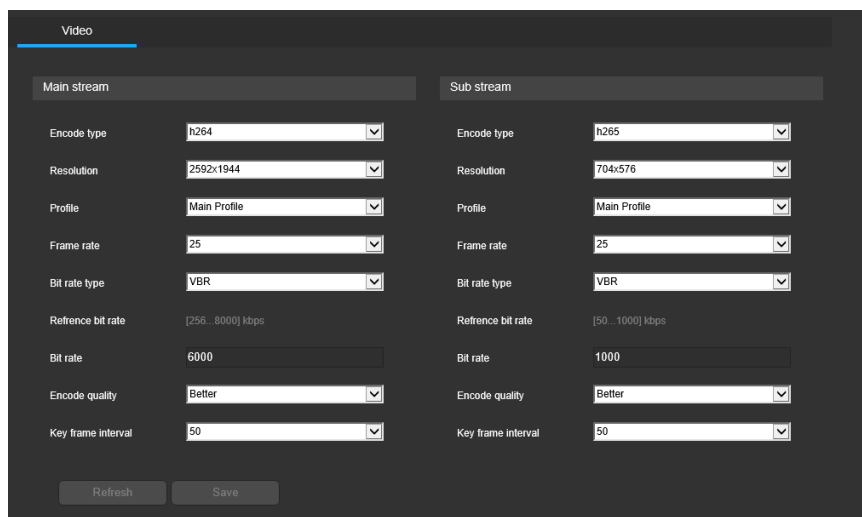


Below is an explanation for each of the fields on the Audio tab in the Audio menu item:

- **Enable audio:** This checkbox allows the user to enable Audio functionality.
- **Audio codec format:** This dropdown box allows the user to select the Audio codec format type. The current camera supports G.711A, G.711U, AAC, PCM etc. audio format.
- **Audio in:** This field allows the user to select the input type of the audio if the camera supports two kinds of audio input including line in and mic in. otherwise it will be automatically selected, the user cannot change it.
- **Sampling rate:** This field allows the user to select the audio sampling rate.
- **Input volume:** This adjustment bar allows the user to adjust the volume of the input audio.
- **Output volume:** This adjustment bar allows the user to adjust the volume of the output audio.
- **Restore Default:** Restore the values to default setting.
- **Refresh:** Refresh the display of the settings' value.
- **Save:** Save the settings.

## 2.3.4.2 Video

Below is a screenshot that shows the Video menu:



Below is an explanation for each of the fields on the Video tab in the Video menu:

- **Encode Type:** This dropdown box allows the user to select a compression protocol.
- **Resolution:** This dropdown box allows the user to set the resolution.
- **Profile:** This dropdown box allows the user to set the profile.

- **Frame Rate (FPS):** This dropdown box allows the user to select a frame rate. Frame rate settings are measured in frames per second (FPS), and can range from 1f/s to 25f/s in PAL mode and 1f/s to 30f/s in NTSC mode.
- **Bit Rate Type:** This dropdown box allows the user to select a bit rate type. The system supports two bit rate types: CBR and VBR. In VBR mode, video quality can be set.
- **Reference bit rate:** This is the recommended bit rate value according to the resolution and frame rate selected.
- **Bit Rate:** This dropdown box allows the user to select a bit rate.
- **Encode quality:** This function allows the user to select the image encode quality.
- **Key frame interval:** This field allows the user to set the P frame amount between two I frames. The value ranges from 1 to 150 seconds. Default value is 50. Recommended value is frame rate \* 2.
- **Restore Default:** Restore the values to default setting.
- **Refresh:** Refresh the display of the settings' value.
- **Save:** Save the settings.

Sub Stream is the lower quality stream that allows the feed to take up less resources and bandwidth when streaming. The Main Stream and the Sub Stream have the same fields.

### 2.3.4.3 Snapshot

Below is a screenshot that shows the Snapshot menu:

Below is an explanation for each of the fields on the Snapshot menu:

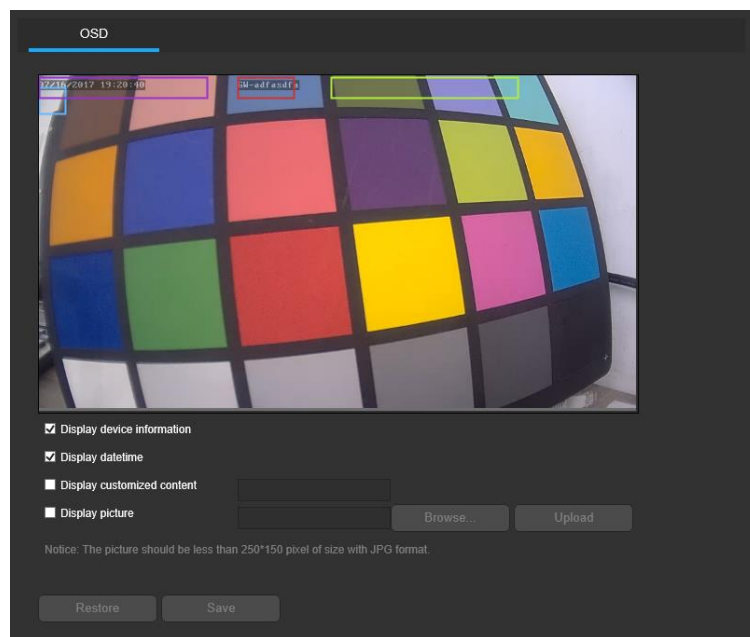
- **Quality:** This dropdown box allows the user to select image quality. Quality is adjusted on a scale of 1-7.
- **Frame rate:** This dropdown box allows the user to select the MJPEG frame rate. Frame rate is adjusted from 1-5 FPS.
- **Interval:** This is to set snapshot frequency. The value ranges from 1 to 600 seconds.
- **Stream:** This dropdown box allows the user to select a snapshot of the stream: mainstream or substream.
- **MJPEG-HTTP:** it shows the MJPEG-HTTP stream URL. For testing object, the user can use the example URL like the below if the user did not login the camera's web interface:  
<http://192.168.1.120/action/stream?subject=mjpeg&user=admin&pwd=12345>



- **Snapshot URL:** it shows the MJPEG snapshot HTTP URL. Normally the user need use the example URL like below if the user did not login the web interface:  
<http://192.168.1.120/action/snap?cam=0&user=admin&pwd=12345>.  
The IP address, User and Password showing in the above URL are factory default. Please use IPC's current IP address, user name and password to replace the content.
- **Restore Default:** Restore the values to default setting.
- **Refresh:** Refresh the display of the settings' value.
- **Save:** Save the settings.

## 2.3.4.4 OSD

Below is a screenshot that shows the OSD menu item:

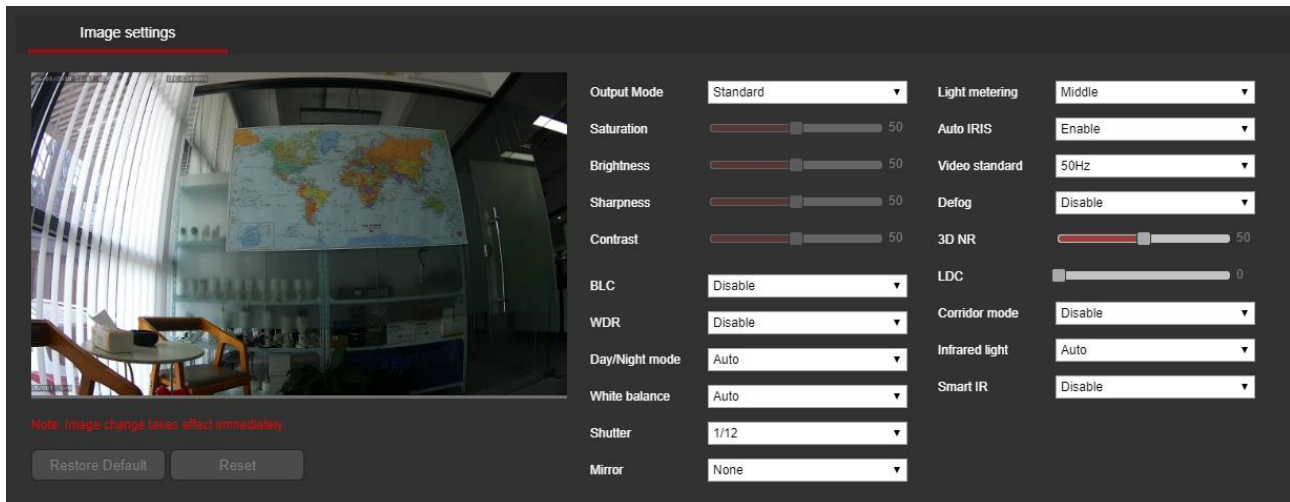


The menu allows the user to select which overlay to modify. Device information, Date Time, and Customized Text and picture can all be modified.

- **Device information**, the checkbox enables / disables the feature. The Input Channel Title field allows the channel title to be modified.
- **Date Time**, the checkbox enables / disables the feature. Clicking the Display Weekdays checkbox will show the weekday at the end of the time-stamp.
- **Customized Text**, the checkbox enables / disables the feature. The Input Text box allows the user to enter text as needed.
- **Picture**, the user can use the browse button to select a picture to display. The size of the picture cannot be bigger than 250\*150 pixel size and has to be in JPG format.
- **Restore Default:** Restore the values to default setting.
- **Refresh:** Refresh the display of the settings' value.
- **Save:** Save the settings.

## 2.3.4.5 Image settings

Below is a screenshot that shows the Image settings tab in the image settings menu item:



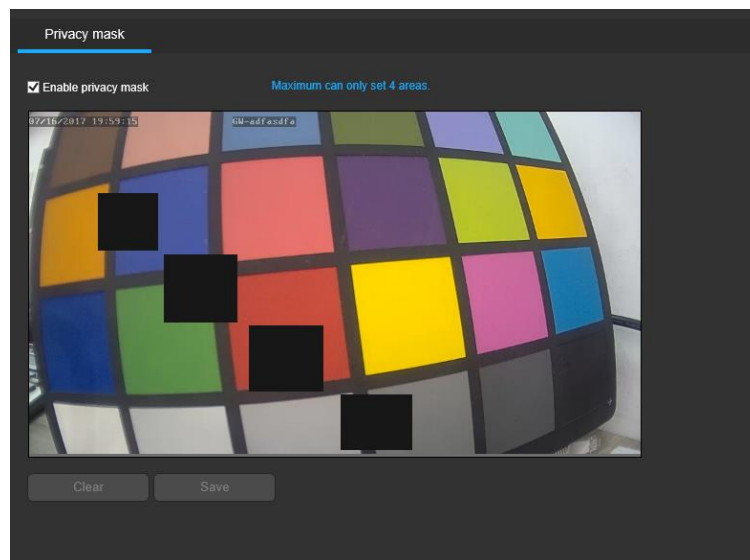
Below is an explanation for each of the fields on the image settings tab:

- **Output mode:** This dropdown box allows the user to select four predefined output mode and one custom mode.
- **User can change the below setting under custom mode:**
  - **Saturation:** This slider is used to adjust video saturation. The value ranges from 0 to 100. The default value is 50. The larger the number, the stronger the video color. This value has no effect on the general brightness of the video. The video color may become too strong if the value is too high. For the gray part of the video, distortion may occur if the white balance is not accurate. Please note the video may not be clear if the value is too low. The recommended value ranges from 40 to 60.
  - **Brightness:** This slider is used to adjust video brightness. The value ranges from 0 to 100. The default value is 50. The larger the number, the brighter the video. When you input the value here, the bright section and the dark section of the video will be adjusted accordingly. You can use this function when the whole video is too dark or too bright. Please note the video may become hazy if the value is too high. The recommended value ranges from 40 to 60.
  - **Sharpness:** This slider is used to adjust the sharpness of the video. The value ranges from 0 to 100. The larger the value, the clearer the edges are and vice versa. Note: The higher the value, the higher the likelihood of picture noise occurring. The default value is 50 and the recommended value ranges from 40 to 60.
  - **Contrast:** This slider is used to adjust video contrast. The value ranges from 0 to 100. The default value is 50. The larger the number, the higher the contrast. You can use this function when the whole video brightness is OK but the contrast is not correct. Please note the video may become hazy if the value is too low. If this value is too high, the dark section may lack brightness while the bright section may over expose. The recommended value ranges from 40 to 60.
- **BLC:** This dropdown box allows the user to enable and disable Black Light Compensation. This feature should only be used in black lit environments.
- **WDR:** This dropdown box allows the user to enable and disable Wide Dynamic Range.
- **Day/Night mode:** This dropdown box allows the user to select which type of picture is displayed. The options are Color, Auto, and Black & White and Timing. When Timing is selected, the time period will show, and the picture will be color during the defined time period.
- **White Balance:** This dropdown box allows the user to select the white balance for the video. The different options are Auto, Outdoor, Indoor, Fluorescent lamp, and Manual. Selecting manual opens a menu that allows the user to set specific red or blue values.
- **Shutter:** This dropdown box allows the user to select the shutter value for the video.
- **Mirror:** This radio button allows the user to turn the mirroring feature on or off. Turning mirroring on will mirror the picture.
- **Light metering:** This dropdown box allows the user to select the light metering way: Global or middle.

- **Auto IRIS:** This dropdown box allows the user to enable or disable the auto iris functionality.
- **Video standard:** These radio buttons allow the user to select what type of video standard should be used for the video feed. The options are 50 Hz and 60 Hz. The desired option should offset any flickering effect caused by the electrical current used in the specific area.
- **Defog:** This dropdown box allows the user to enable or disable the Defog functionality.
- **3D NR Level:** This slider allows the user to specify the 3D Noise Reduction level. The value ranges from 1-100.
- **LDC:** This slider allows the user to specify the LDC (Lens Distortion Compensation) level. The value ranges from 1-100.
- **Corridor mode:** This dropdown box allows the user to enable or disable the corridor mode of the camera. The image will reboot if corridor mode is switched.
- **Infrared light:** This dropdown box allows the user to select the infrared light work mode. There are three work mode: Auto: the infrared light is working by external light sensor triggered; Close: the infrared light is closed by force; Open: the infrared light is opened by force.
- **Smart IR:** The function is designed for the specified model with smart infrared light board. This dropdown box allows the user to enable or disable the Smart IR function;
- **Restore Default:** Restore the values to default setting.
- **Cancel:** Cancel any modification
- **Save:** Save the settings.

### 2.3.4.6 Privacy masking

Below is a screenshot that shows the Privacy masking menu item:

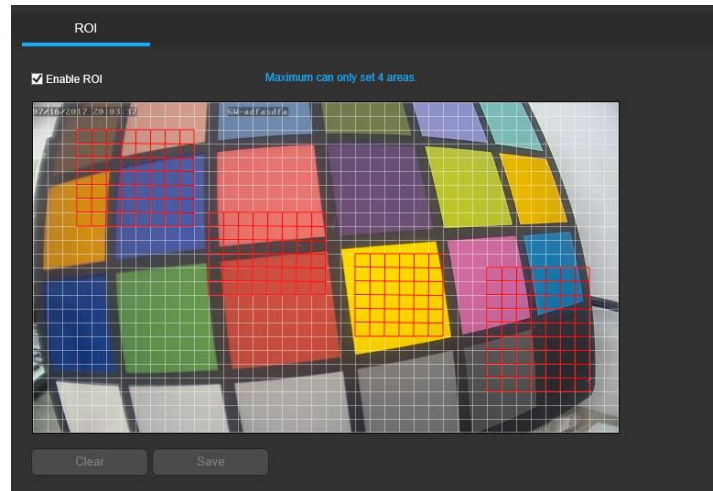


For **Privacy Masking**, the radio button enables or disables the feature.

To set a privacy mask, click one of the boxes in the live view window, and position or resize it as needed. To remove all privacy filter boxes, click the clear button. Maximum 4 areas can be set.

### 2.3.4.7 ROI

Below is a screenshot that shows the ROI (Region of Interest) menu.



For **ROI**, the radio button enables or disables the feature.

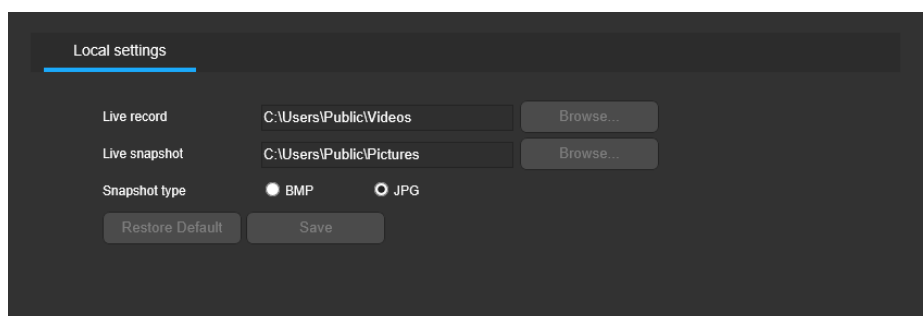
To set a ROI area, click one of the boxes in the live view window, and position or resize it as needed. To remove all regions of interested boxes, click the clear button. Maximum 4 areas can be set.

## 2.3.5 Storage

This menu section allows the user to change storage settings for the camera.

### 2.3.5.1 Local settings

Below is a screenshot that shows the local settings tab.

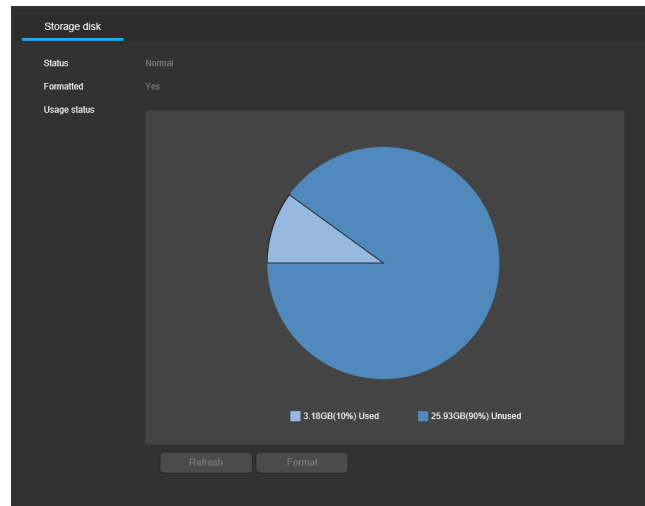


Below is an explanation for each of the fields on the local settings tab:

- **Live Record field:** allows the user to select where to save live recordings to. Click the Browse button to select a different destination folder.
- **Live Snapshot field:** allows the user to select where to save live snapshots to. Click the Browse button to select a different destination folder.
- **Snapshot:** type field allows the user to select the snapshot picture format: BMP or JPG.
- **Restore Default:** Restore the values to default setting.
- **Save:** Save the settings.

### 2.3.5.2 Disk

Below is a screenshot that shows the Storage disk tab in the Disk menu.



Below is an explanation for each of the fields on the storage disk tab:

- **Status** field shows the status of the current storage the camera is using.
- **Formatted** shows the storage formatting status: Unformatted, or formatted.
- **Usage status** shows the diagram of the storage usage status.
- **Refresh:** Refresh the display of the settings' value.
- **Format:** Format the Disk

### 2.3.5.3 FTP

This tab is where the user can change FTP settings. Below is a screenshot of the FTP tab:

The screenshot shows the 'FTP' settings tab. It contains several input fields: 'Server address', 'Port' (set to 21 with a hint '(1-65535)'), 'User name', 'Password', 'Remote path', and 'Breakpoint resume' (set to 'Disabled' with a dropdown arrow). At the bottom, there are three buttons: 'Restore Default', 'Test FTP', and 'Save'.

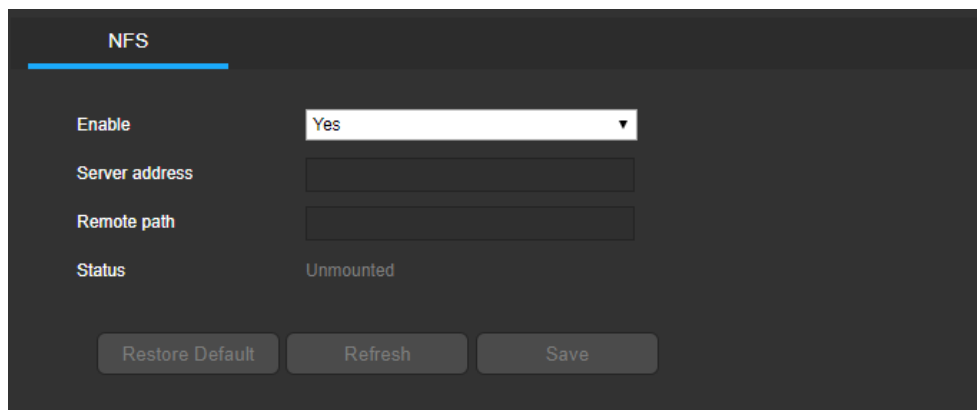
Below is an explanation of the fields on the FTP settings tab:

- **Server Address:** This field allows the user to designate a DDNS address or IP address of the FTP server.
- **Port:** This field allows the user to designate the FTP server's port number.
- **User Name:** This field allows the user to input the username used to log into the FTP server.
- **Password:** This field allows the user to input the password used to log into the FTP server.

- **Remote path:** This field allows the user to specify a remote directory on the FTP to send the recorded media to.
- **Breakpoint resume:** This dropdown box allows the user to enable or disable FTP upload breakpoint resume functionality.
- **Restore Default:** Restore the values to default setting.
- **Test FTP:** Test the FTP setting.
- **Save:** Save the settings.

#### 2.3.5.4 NFS

This tab is where the user can change NFS settings. Below is a screenshot of the NFS tab:



Below is an explanation of the fields on the NFS settings tab:

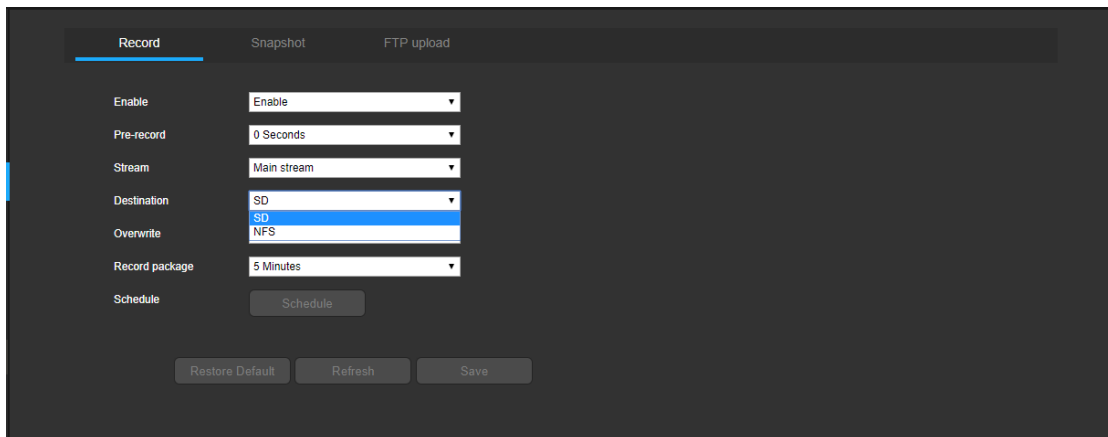
- **Enable:** This dropdown box allows the user to enable/disable record functionality.
- **Server address:** This field allows the user to designate the NAS server's IP address.
- **Remote path:** This field allows the user to input the storage path which should be created in the NAS device.
- **Status:** It's the NAS device connection and work status.

#### 2.3.5.5 Schedule

This tab is where the user can change recording Schedule settings.

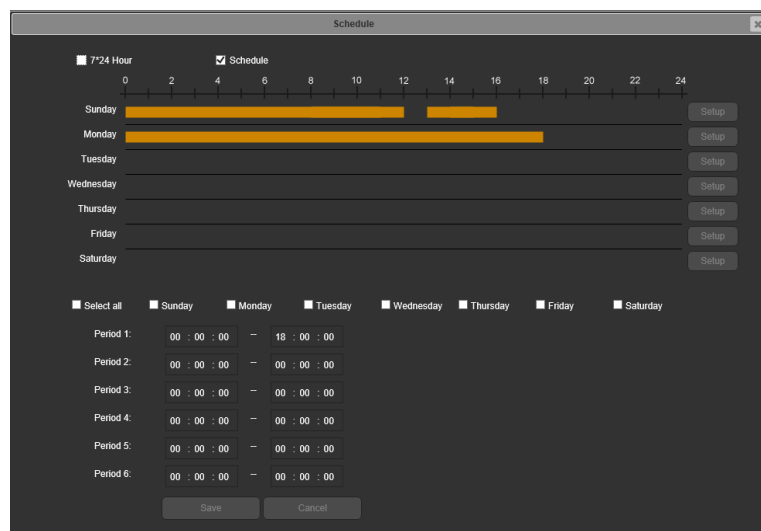
##### 1. Record

This tab is where the user can change Record parameter settings. Below is a screenshot of the record tab in Schedule menu.



Below is an explanation of the fields on the Record settings tab:

- **Enable.** This dropdown box allows the user to enable/disable record functionality.
- **Pre-Record:** This field allows the user to specify how many seconds before an event should be recorded.
- **Stream:** This dropdown box allows the user to specify which stream to record. The options are main stream and sub stream.
- **Destination:** This dropdown box allows the user to select the record path: SD or NFS.
- **Overwrite:** This dropdown box allows the user to designate what the camera should do when the disk is full.
- **Record package:** This dropdown box allows the user to select the archives package time segment from 3, 5, 10 minutes.
- **Schedule:** The Schedule button allows the user to define the recording schedule. Below is the schedule settings screenshot.

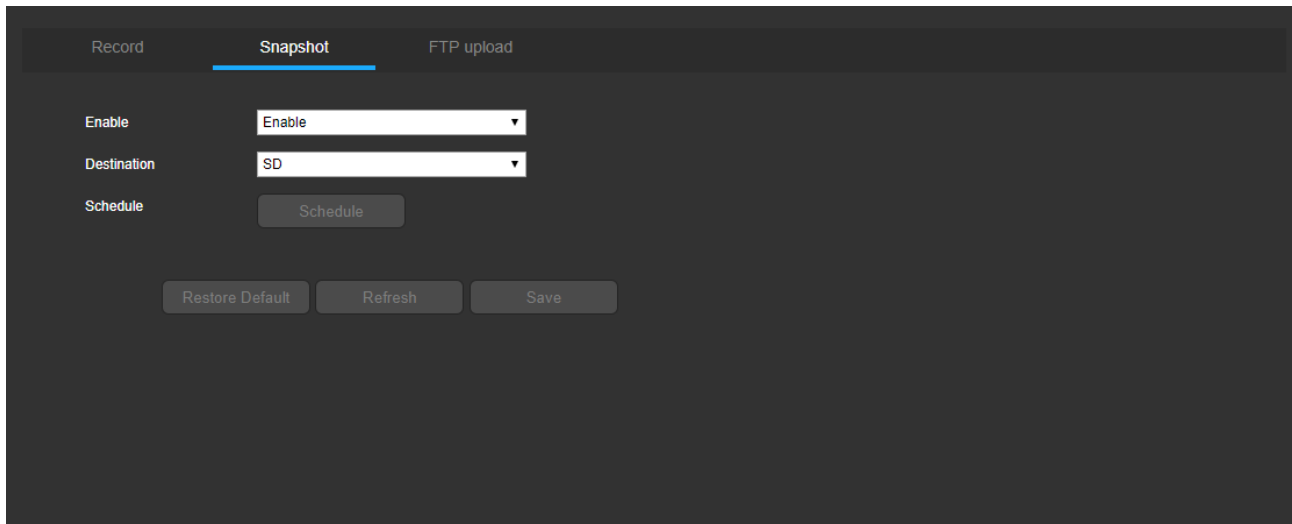


- **Recording Schedule:** To specify a video recording range, first select the type of recording desired: 7\*24 hours or schedule.
- If Schedule is selected, then click and drag on time bar for the desired date. To edit multiple days at once, drag the cursor further up or down to cover the other days.
- **Setup:** Clicking this button opens a screen that allows for recording periods to be set for each day and for each recording type. There is a total of 6 periods that can be set.
  - **Restore Default:** Restore the values to default setting.
  - **Refresh:** Refresh the display of the settings' value.

- **Cancel:** Cancel the setting and go back to the previous screen
- **Save:** Save the settings.

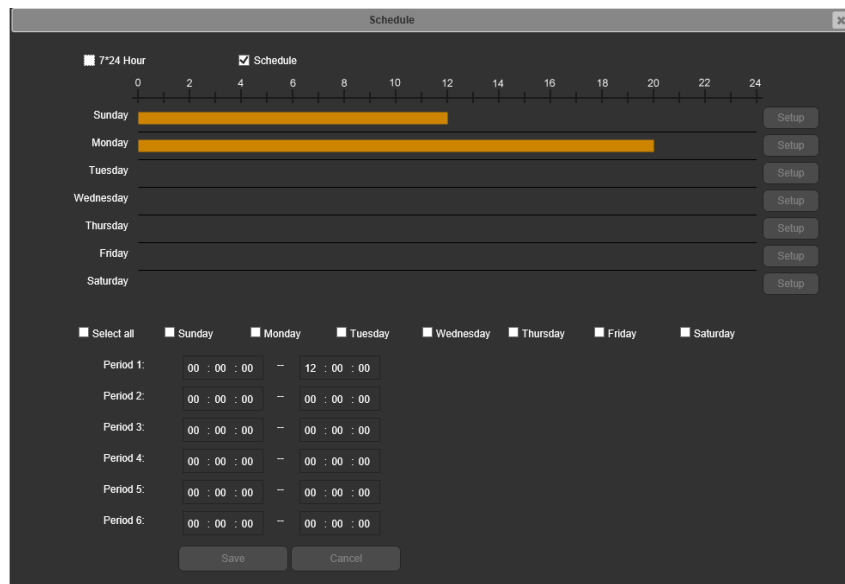
## 2. Snapshot

Below is a screenshot that shows the Snapshot tab in the Schedule menu.



Below is an explanation for each of the fields on the Snapshot tab:

- **Enable:** This dropdown box allows the user to enable/disable the snapshot functionality.
- **Destination:** This dropdown box allows the user to select snapshot file position: SD or NAS server.
- **Schedule:** The Schedule button allows the user to define the snapshot schedule. Below is the schedule settings screenshot.



- **Snapshot Schedule:** To specify a video recording range, first select the type of recording desired: 7\*24 hours or schedule.

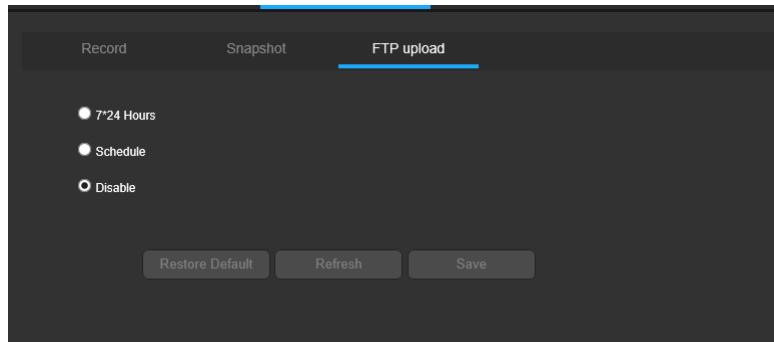
If Schedule is selected, then click and drag on time bar for the desired date. To edit multiple days at once, drag the cursor further up or down to cover the other days.



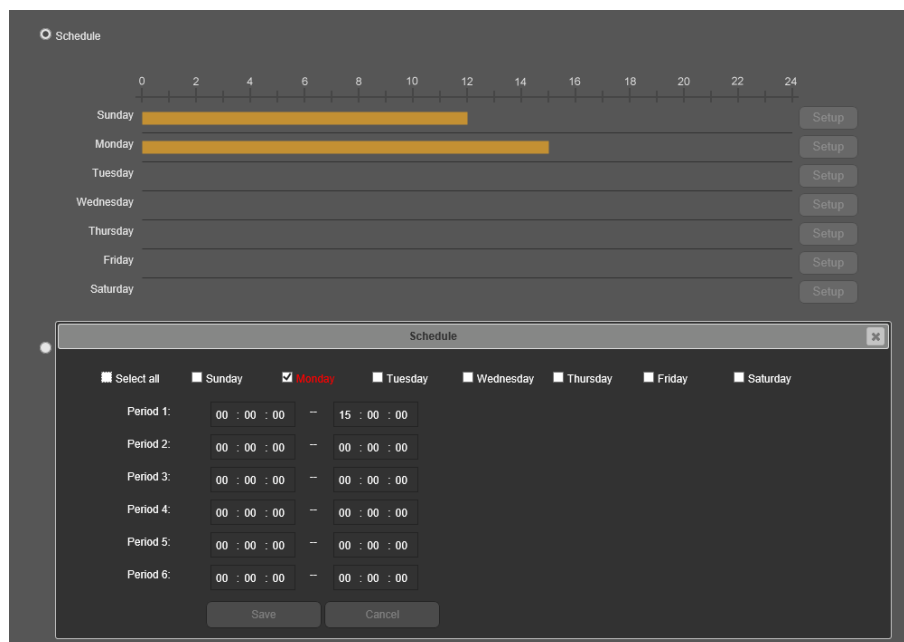
- **Setup:** Clicking this button opens a screen that allows for recording periods to be set for each day and for each recording type. There is a total of 6 periods that can be set.
- **Restore Default:** Restore the values to default setting.
- **Refresh:** Refresh the display of the settings' value.
- **Cancel:** Cancel the setting and go back to the previous screen
- **Save:** Save the settings.

### 3. FTP Upload

Below is a screenshot that shows the FTP Upload tab in the Schedule menu.



- **7\*24 Hour:** This checkbox allows the user to enable the FTP upload working on 7\*24 hours.
- **Schedule:** This checkbox allows the user to enable the FTP upload working on the specified schedule like below:



If Schedule is selected, then click and drag on time bar for the desired date. To edit multiple days at once, drag the cursor further up or down to cover the other days.

- **Setup:** Clicking this button opens a screen that allows for recording periods to be set for each day and for each recording type. There is a total of 6 periods that can be set.
- **Disable:** This checkbox allows the user to disable the FTP upload functionality.
- **Restore Default:** Restore the values to default setting.

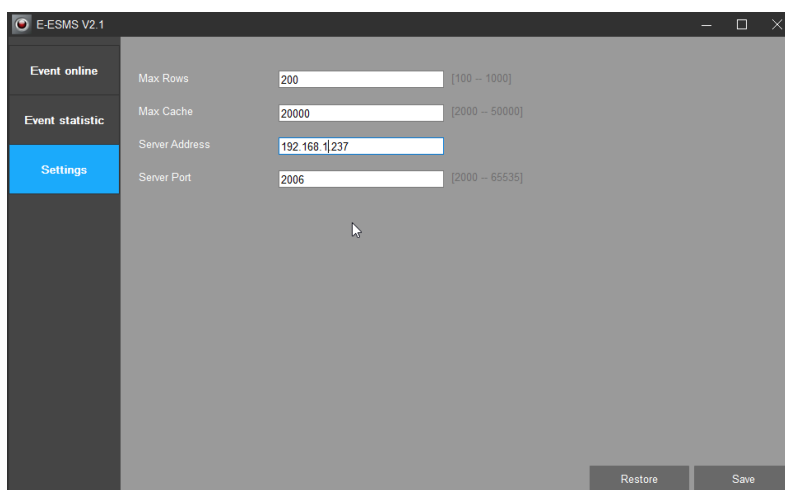
- **Refresh:** Refresh the display of the settings' value.
- **Save:** Save the settings.

## 2.3.6 Event

This menu section allows the user to change different settings for triggering events.

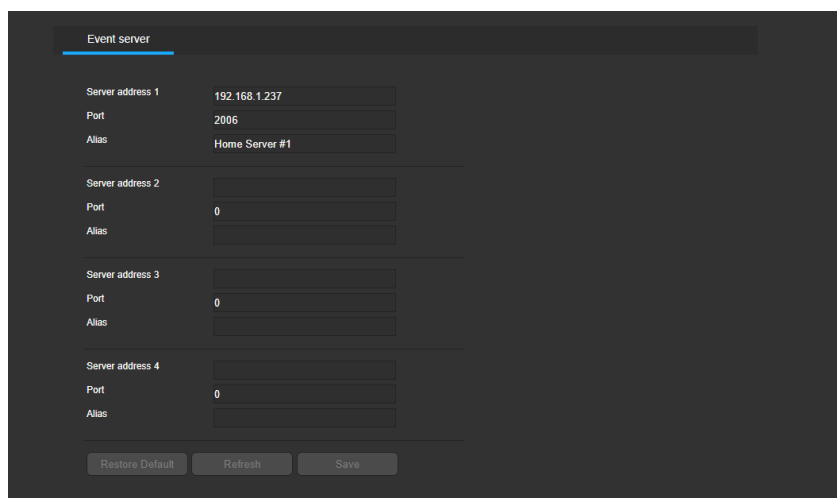
### 2.3.6.1 Event Server

This tab is where the user can fill out the Event servers' parameters. Event server features allows the camera to send a event to four specified PCs running E-ESMS V2.0 software (Event Server Management System). E-ESMS V2.0 Software can be found in the CD that comes in the same box with the camera. Please refer to the User manual of E-ESMS V2.0 for the details.



As an example, in the above E-ESMS V2.0 screenshot, the user defined the server address:192.168.1.237, port: 2006.

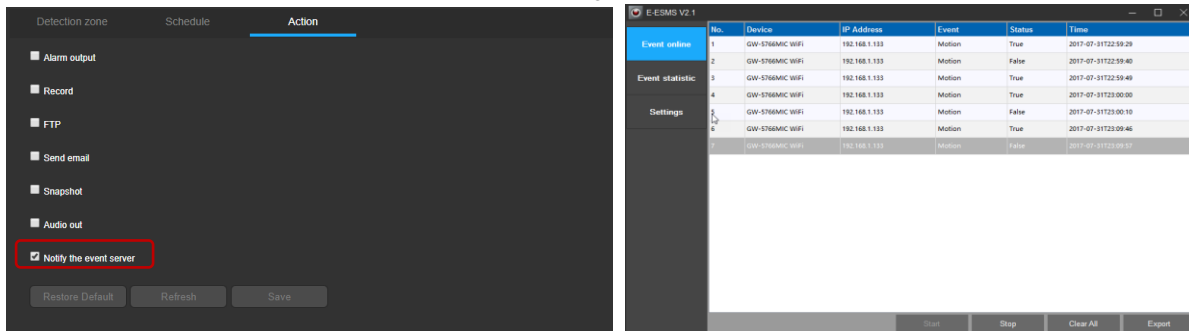
Below is an explanation for each of the fields on the Event server tab:



- **Server address 1:** This field allows the user to fill out the specified server address in E-ESMS V2.0 software.
- **Port:** This field allows the user to fill out the specified server address.
- **Alias:** This field allows the user to define the server's name.
- **Restore Default:** Restore the values to default setting.
- **Refresh:** Refresh the display of the settings' value.
- **Save:** Save the settings.

The camera can support at least 4 servers, others are similar to above.

If all information is right, then the E-ESMS software will receive the event notifications from the camera if the action of the event was set "Notify the event server" like below.

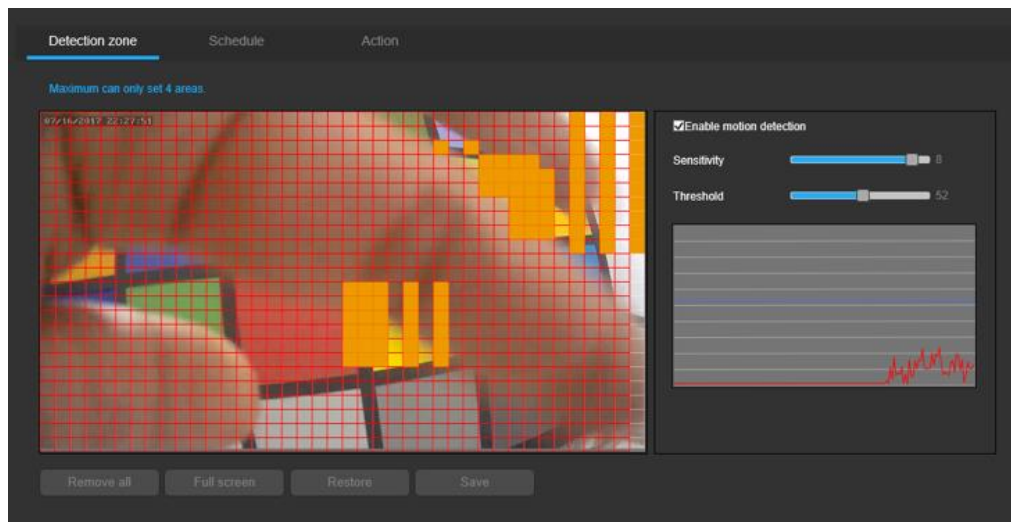


## 2.3.6.2 Motion detection

The motion detection menu has three tabs: Detection zone, Schedule and Action.

### 1. Detection zone

This tab allows the user to modify detection zone settings. Below is a screenshot of the Detection zone tab:



Below is an explanation of the fields on the Detection zone tab:

- **Enable:** This checkbox enables detection zone settings for the camera.
- **Detection Area:** Clicking this button opens a pop up screen that can be used to set detection areas.

Live stream of the video is shown in the detection area. The user can then set up to 4 regions. The sensitivity level range from 1 to 10, and threshold level from 1 to 100.

- **Sensitivity** is the amount of change required to increase the motion detected by a percentage. The lower the sensitivity, the more movement is required to trigger an alarm.
- **Threshold** is the level that the motion detection needs to reach in order to trigger an alarm. The lower the threshold, the more likely that motion will trigger an alarm.

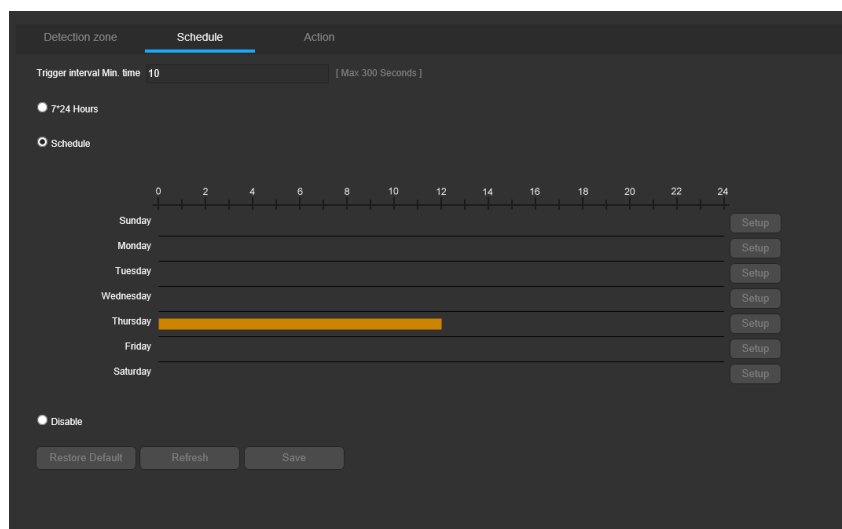
To designate a zone, click and drag the mouse over the area desired. The area is enabled for motion detection when a colored box is displayed over the live feed.

After the motion detection zone is set, click the enter button to exit the motion detection screen.

Remember to click the save button on the motion detection settings screen, otherwise the motion detection zones will not go into effect. Clicking the cancel button to leave the motion detection zone and will not save the zone setup.

## 2. Schedule

This tab allows the user to modify detection schedule settings. Below is a screenshot of schedule settings tab.



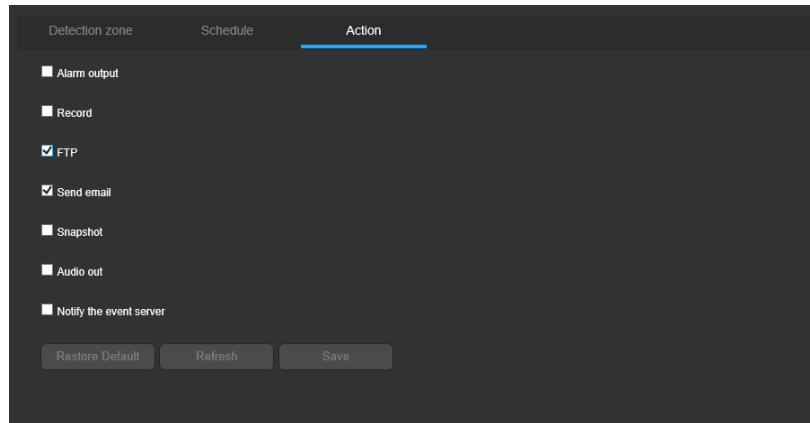
- **7\*24 Hour:** This checkbox allows the user to enable the motion detection working on 7\*24 hours mode.
- **Schedule:** This checkbox allows the user to enable the motion detection on the specified schedule.

If Schedule is selected, then click and drag on time bar for the desired date. To edit multiple days at once, drag the cursor further up or down to cover the other days.

- **Setup:** Clicking this button opens a screen that allows for recording periods to be set for each day and for each recording type. There is a total of 6 periods that can be set.
- **Disable:** This checkbox allows the user to disable the motion detection functionality.
- **Restore Default:** Restore the values to default setting.
- **Refresh:** Refresh the display of the settings' value.
- **Save:** Save the settings.

## 3. Action

This tab allows the user to modify detection action settings. Below is a screenshot of action settings tab.



Below is an explanation of the fields on the Action tab:

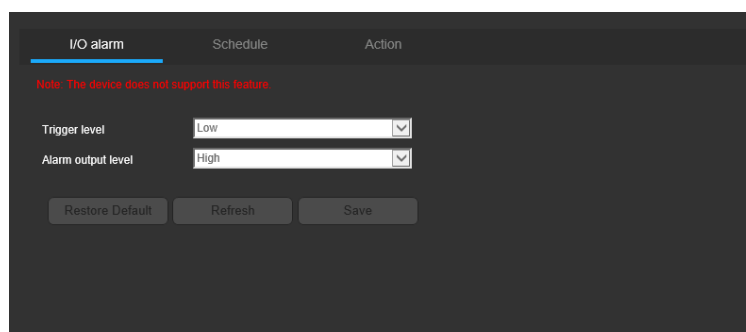
- **Alarm output:** This checkbox allows the user to enable the camera to send the alarm notification output when a motion detection alarm is triggered.
- **Record:** This checkbox allows the user to enable the camera to record video when a motion detection alarm is triggered.
- **FTP:** This checkbox allows the user to enable the camera to upload the video and snapshot to the FTP server when a motion detection alarm is triggered.
- **Send Email:** This checkbox allows the user to enable the camera to send an email when a motion detection alarm is triggered.
- **Snapshot:** This checkbox allows the user to enable the camera to take a snapshot when a motion detection alarm is triggered.
- **Audio out:** This checkbox allows the user to enable the camera to activate speaker sounds when a motion detection alarm is triggered.
- **Notify the event server:** This checkbox allows the user to enable the camera to send the alarm notification to the specified event server when a motion detection alarm is triggered.
- **Restore Default:** Restore the values to default setting.
- **Refresh:** Refresh the display of the settings' value.
- **Save:** Save the settings.

### 2.3.6.3 I/O alarm

The I/O Alarm menu has three tabs: Detection zone, Schedule and Action. If the camera has no I/O alarm hardware interfaces, there is a notification: **Note: The device does not support this feature.**

#### 1. I/O Alarm

This tab allows the user to modify I/O Alarm parameter settings. Below is a screenshot of the I/O Alarm tab:

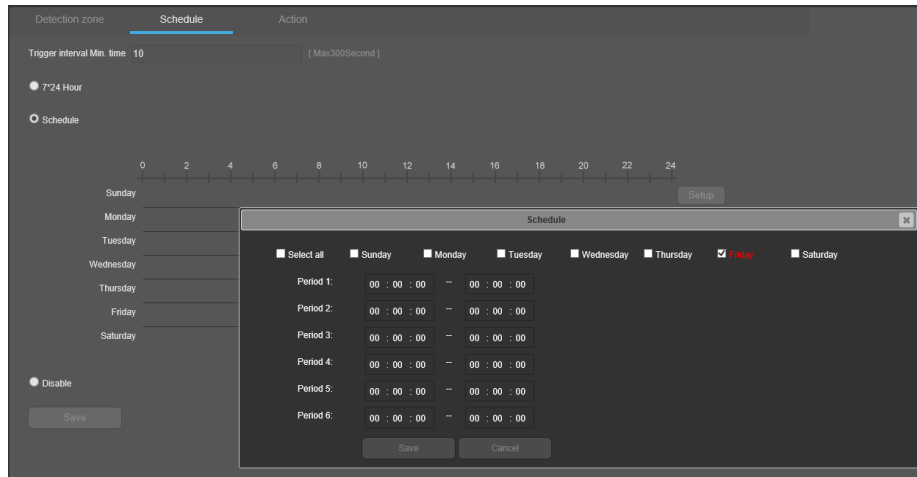


Below is an explanation of the fields on the I/O Alarm tab:

- **Trigger level:** This dropdown box allows the user to select the input alarm level: low or high.
- **Alarm output level:** This dropdown box allows the user to select the output alarm level from the camera: low or high.
- **Restore Default:** Restore the values to default setting.
- **Refresh:** Refresh the display of the settings' value.
- **Save:** Save the settings.

## 2. Schedule

This tab allows the user to modify I/O Alarm schedule settings. Below is a screenshot of schedule settings tab.



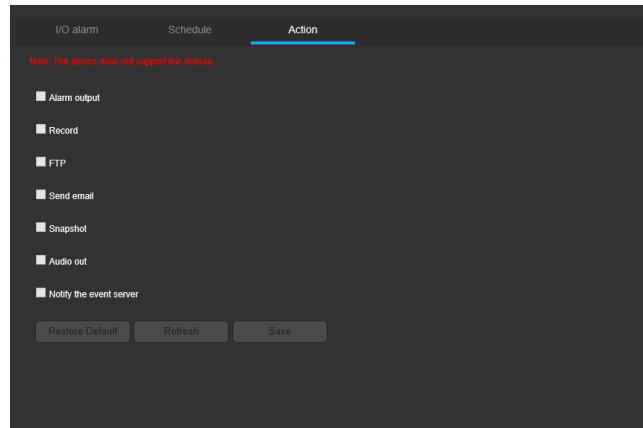
- **7\*24 Hour:** This checkbox allows the user to enable the I/O Alarm working on 7\*24 hours.
- **Schedule:** This checkbox allows the user to enable the I/O Alarm working on the specified schedule.

If Schedule is selected, then click and drag on time bar for the desired date. To edit multiple days at once, drag the cursor further up or down to cover the other days.

- **Setup:** Clicking this button opens a screen that allows for recording periods to be set for each day and for each recording type. There is a total of 6 periods that can be set.
- **Disable:** This checkbox allows the user to disable the I/O Alarm functionality.
- **Restore Default:** Restore the values to default setting.
- **Refresh:** Refresh the display of the settings' value.
- **Save:** Save the settings.

## 3. Action

This tab allows the user to modify I/O Alarm action settings. Below is a screenshot of action settings tab.



Below is an explanation of the fields on the Action tab:

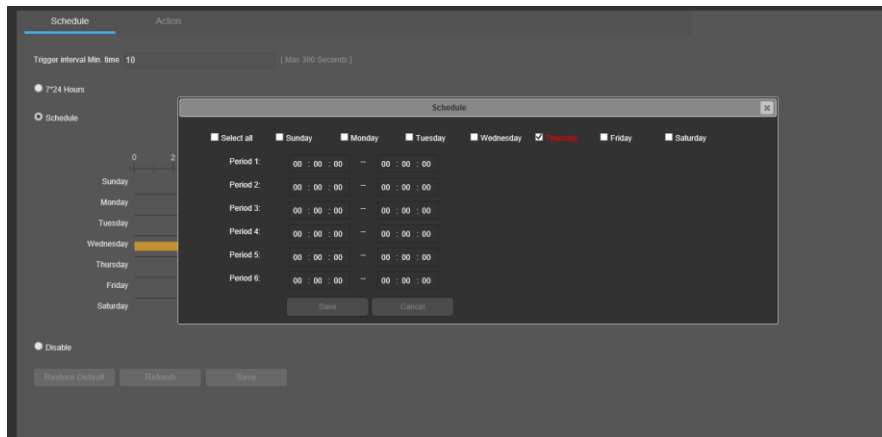
- **Alarm output:** This checkbox allows the user to enable the camera to send the alarm notification output when a motion detection alarm is triggered.
- **Record:** This checkbox allows the user to enable the camera to record video when a motion detection alarm is triggered.
- **FTP:** This checkbox allows the user to enable the camera to upload the video and snapshot to the FTP server when a motion detection alarm is triggered.
- **Send Email:** This checkbox allows the user to enable the camera to send an email when a motion detection alarm is triggered.
- **Snapshot:** This checkbox allows the user to enable the camera to take a snapshot when a motion detection alarm is triggered.
- **Audio out:** This checkbox allows the user to enable the camera to activate speaker sounds when a motion detection alarm is triggered.
- **Notify the event server:** This checkbox allows the user to enable the camera to send the alarm notification to the specified event server when a motion detection alarm is triggered.
- **Restore Default:** Restore the values to default setting.
- **Refresh:** Refresh the display of the settings' value.
- **Save:** Save the settings.

## 2.3.6.4 PIR

PIR stands for Passive Infrared Detection. The sensor can detect the human, animals etc. The PIR menu has two tabs: Schedule and Action. If the camera has no PIR hardware interfaces, there is a notification: **Note: The device does not support this feature.**

### 1. Schedule

This tab allows the user to modify PIR schedule settings. Below is a screenshot of schedule settings tab.



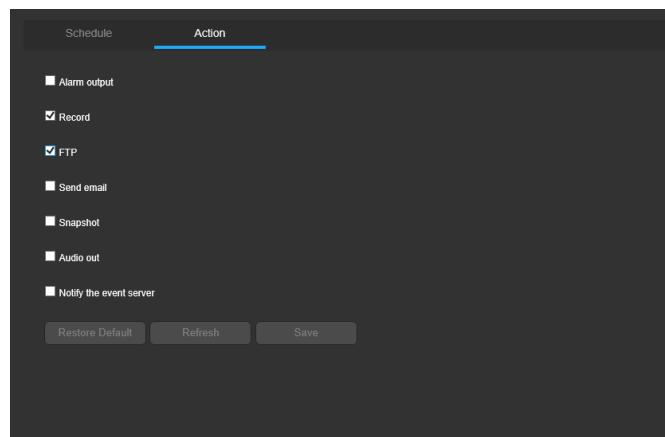
- **7\*24 Hour:** This checkbox allows the user to enable the PIR working on 7\*24 hours mode.
- **Schedule:** This checkbox allows the user to enable the PIR working on the specified schedule.

If Schedule is selected, then click and drag on time bar for the desired date. To edit multiple days at once, drag the cursor further up or down to cover the other days.

- **Setup:** Clicking this button opens a screen that allows for recording periods to be set for each day and for each recording type. There is a total of 6 periods that can be set.
- **Disable:** This checkbox allows the user to disable the PIR functionality.
- **Restore Default:** Restore the values to default setting.
- **Refresh:** Refresh the display of the settings' value.
- **Save:** Save the settings.

## 2. Action

This tab allows the user to PIR action settings. Below is a screenshot of action settings tab.



Below is an explanation of the fields on the Action tab:

- **Alarm output:** This checkbox allows the user to enable the camera to send the alarm notification output when a motion detection alarm is triggered.
- **Record:** This checkbox allows the user to enable the camera to record video when a motion detection alarm is triggered.
- **FTP:** This checkbox allows the user to enable the camera to upload the video and snapshot to the FTP server when a motion detection alarm is triggered.
- **Send Email:** This checkbox allows the user to enable the camera to send an email when a motion detection alarm is triggered.



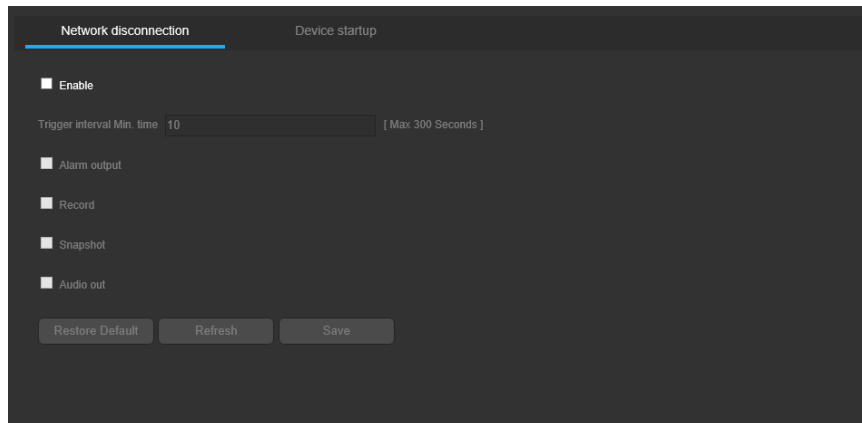
- **Snapshot:** This checkbox allows the user to enable the camera to take a snapshot when a motion detection alarm is triggered.
- **Audio out:** This checkbox allows the user to enable the camera to activate speaker sounds when a motion detection alarm is triggered.
- **Notify the event server:** This checkbox allows the user to enable the camera to send the alarm notification to the specified event server when a motion detection alarm is triggered.
- **Restore Default:** Restore the values to default setting.
- **Refresh:** Refresh the display of the settings' value.
- **Save:** Save the settings.

### 2.3.6.5 Abnormality

This menu has 2 tabs: Network disconnection, and Device startup.

#### 1. Network disconnection

This tab allows the user to set the camera's response to a Network disconnection related abnormality. Below is a screenshot of the Network disconnection tab screen:

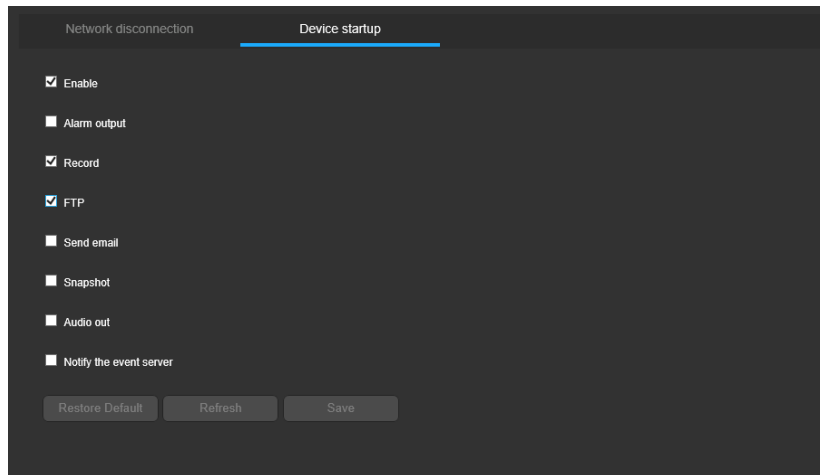


Below is an explanation of the fields on the Network Disconnection tab:

- **Enable:** This checkbox enables the Network abnormality trigger for the camera.
- **Trigger interval Min. time:** This field allows the user to fill out the alarm triggered interval minimum time.
- **Alarm output:** This checkbox allows the user to enable the camera to send the alarm notification output when a motion detection alarm is triggered.
- **Record:** This checkbox allows the user to enable the camera to record video when a motion detection alarm is triggered.
- **Snapshot:** This checkbox allows the user to enable the camera to take a snapshot when a motion detection alarm is triggered.
- **Audio out:** This checkbox allows the user to enable the camera to activate speaker sounds when a motion detection alarm is triggered.
- **Restore Default:** Restore the values to default setting.
- **Refresh:** Refresh the display of the settings' value.
- **Save:** Save the settings.

#### 2. Device startup

This tab allows the user to set the camera's response to a Device start up related abnormality. Below is a screenshot of the Device startup tab screen:



Below is an explanation of the fields on the Device startup tab:

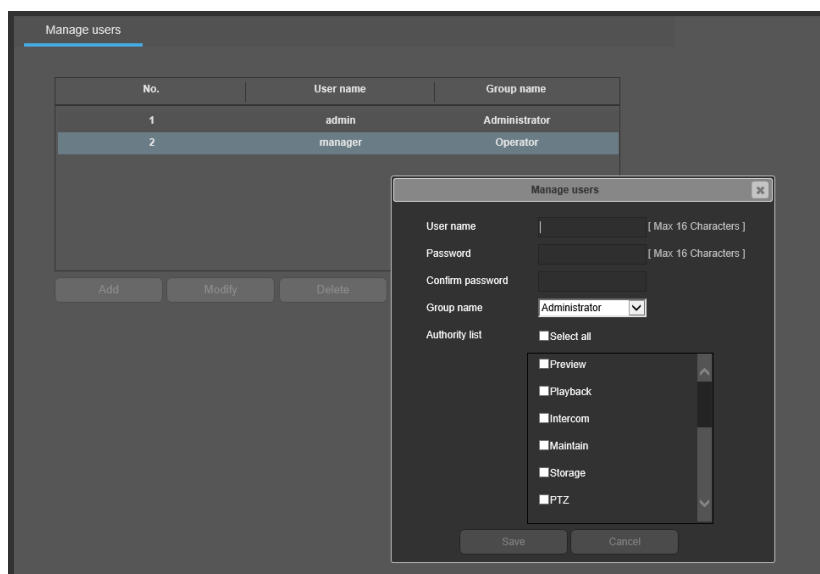
- **Alarm output:** This checkbox allows the user to enable the camera to send the alarm notification output when a motion detection alarm is triggered.
- **Record:** This checkbox allows the user to enable the camera to record video when a motion detection alarm is triggered.
- **FTP:** This checkbox allows the user to enable the camera to upload the video and snapshot to the FTP server when a motion detection alarm is triggered.
- **Send Email:** This checkbox allows the user to enable the camera to send an email when a motion detection alarm is triggered.
- **Snapshot:** This checkbox allows the user to enable the camera to take a snapshot when a motion detection alarm is triggered.
- **Audio out:** This checkbox allows the user to enable the camera to activate speaker sounds when a motion detection alarm is triggered.
- **Notify the event server:** This checkbox allows the user to enable the camera to send the alarm notification to the specified event server when a motion detection alarm is triggered.
- **Restore Default:** Restore the values to default setting.
- **Refresh:** Refresh the display of the settings' value.
- **Save:** Save the settings.

## 2.3.7 Security

This menu section allows the user to change different settings for security.

### 2.3.7.1 Manage users

This menu allows the user to change the user accounts on the camera. By default, the camera only has the admin account which has all rights/authorities. Additional accounts can be created from this screen. Below is a screenshot of the manage users screen:



Below is an explanation of the fields on the Manage Users screen:

- **Add User:** This button allows the user to add a new user to the camera.
- **Modify:** This button allows the user to modify the user account selected in the table.
- **Delete:** This button allows the user to delete an user account. Note: The admin account cannot be deleted.
- **User Name:** This column shows existing usernames.
- **Group name:** This column shows the which user groups the existing user belongs to.

Below is an explanation of the fields on the promoted window when the user add/modify the user.

- **User Name:** This field allows the user to create new accounts.
- **Password:** This field allows the user to create a password for the new account. **Confirm password:** This field ask the user to fill out the password again to confirm the password of the new account.
- **Group Name:** This dropdown box allows the user to select the account groups: administrator, operator and viewer. They have the different right like the below:
  - **Administrator:** it's the camera's administrator who has the full right or permission to access and operate all functionalities of the camera.
  - **Operator:** the operator can do the functionalities which are authorized by administer but not including creating new account and modifying other account's password. Operator can modify its own password.
  - **Viewer:** the viewer cannot make any operation, only can view the video in live view, the viewer cannot see all configurations in the camera when he accesses the camera.

**Authority list:** the functionalities list which will be authorized by the administrator.

### 2.3.7.2 IP Filter

This screen allows for the filtering of IP addresses, either blocking them, or granting them access to the camera. This feature helps make the camera more secure by limiting remote access only to approved users. Below is a screenshot of the IP Filter screen.

IP filter

Enable: Yes

IP address filter type: Forbidden

Start IP	End IP	Alias
192.168.0.130	192.168.0.133	Goodman

Add Modify Delete

Below is an explanation of fields on the IP Filter settings screen:

- **Enable:** This checkbox allows the user to enable the IP Filter feature for trusted IP address.
- **IP address filter type:** This dropdown box allows the user to select the type of the IP filtering: Forbidden or Allowed.
- **Add:** This button allows the user to add one filtering rule.
- **Modify:** This button allows the user to modify one filtering rule in the table.
- **Delete:** This button allows the user to delete one filter rule in the table.
- **Start IP:** This column shows the starting IP address which will be filtered.
- **End IP:** This column shows the end IP address which will be filtered.
- **Alias:** This column shows the rule's name the user defined.

## 2.3.8 Smart video (Only Available on Specific Model)

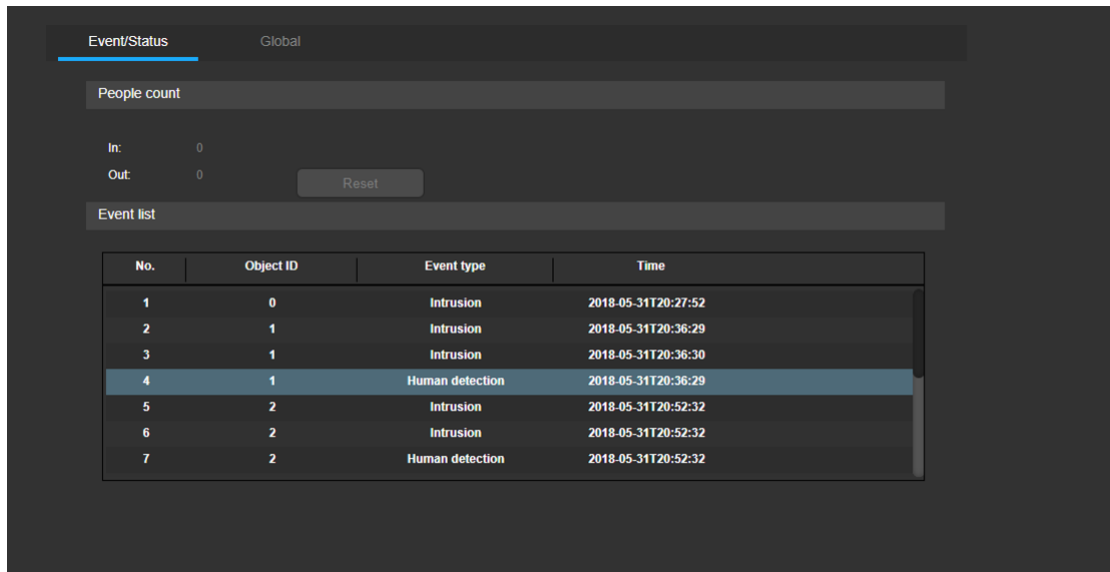
This menu section allows the user to change different settings for smart video.

### 2.3.8.1 General

The general menu has two tabs: Event/Status, and Global settings.

#### 1. Event/Status

This tab shows the result of the smart video analysis in the web interface. Below is a screenshot of the General tab:



Below is an explanation of the fields on the Event/Status tab:

- **People count**

There is the result of the people counting, the user can refresh the web page to get the latest value.

In: the amount of the incoming people;

Out: the amount of the outcoming people;

Please refer to the "People count" menu to understand how to set in and out;

- **Event list**

This table shows the events list of the smart video analysis automatically. All the event reported will be listed here for checking.

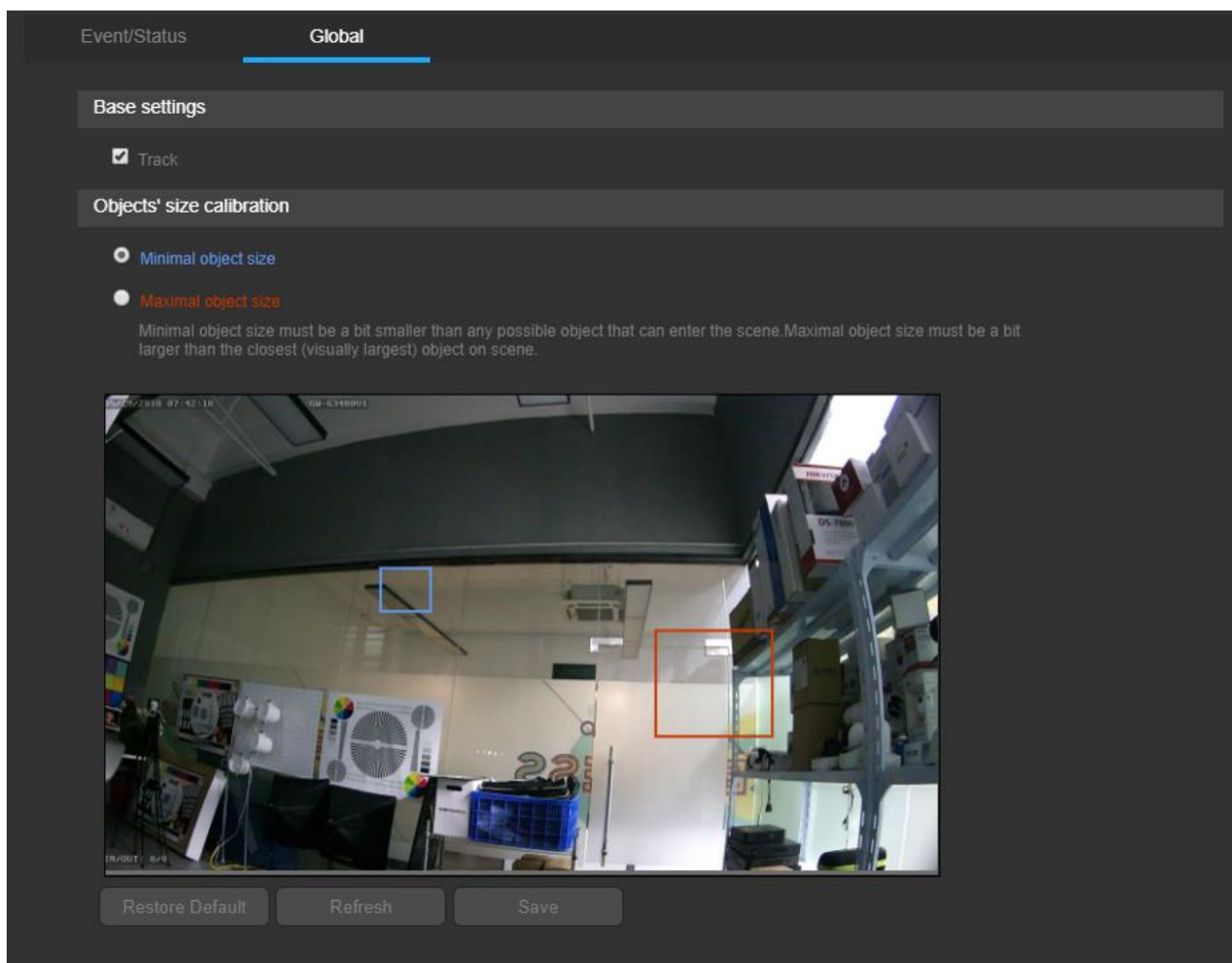
- **No.** is the sequent number of the event reported.
- **Object ID** is the auto-defined object ID number. Different ID means the different people or different objective. The same people or object will be kept the same ID during detection period and zones.
- **Event type** is the type of the smart video including Crossing line, Intrusion or Object left of removed.
- **Time** is the time of the event happened.

The user can scroll down to check the new event in the list.

No.	Object ID	Event type	Time
4	102	Intrusion	2018-05-24T10:03:09
5	102	Intrusion	2018-05-24T10:03:09
6	102	Cross Line	2018-05-24T10:03:10
7	102	Intrusion	2018-05-24T10:03:13
8	102	Intrusion	2018-05-24T10:03:13
9	102	Intrusion	2018-05-24T10:03:14
10	102	Cross Line	2018-05-24T10:03:16

## 2. Global

This tab allows the user to modify settings which will be applied for all the smart video functions. Below is a screenshot of Global settings tab.



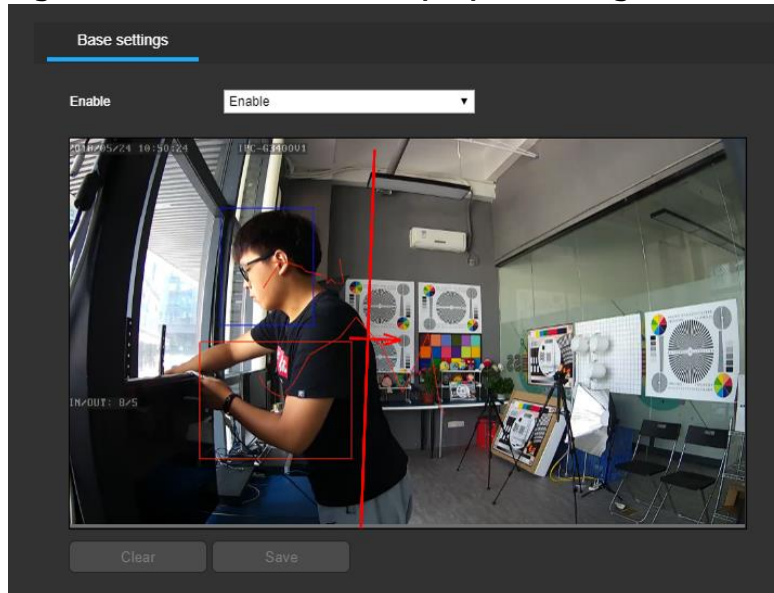
- **Base settings**  
**Track:** This checkbox allows the user to enable the tracking the people. There is the tracking line following the people.
- **Object' size calibration**  
**Minimal object size:** When the checkbox is checked, the user can set the minimal object size you want to detect. The smaller size detected set, the more accuracy of the detection, but the higher CPU load.  
  
**Maximal object size:** When the checkbox is checked, the user can set the maximal object size you want to detect.  
  
Please be noted that Minimal object size must be a bit smaller than any possible object that can enter the scene, and maximal object size must be a bit larger than the closest (visually largest) object on scene.
- **Restore Default:** Restore the values to default setting.
- **Refresh:** Refresh the display of the settings' value.
- **Save:** Save the settings.

### 2.3.8.2 People counting

The People counting menu has one tab: Base settings.

#### 1. Base settings

This tab allows the user to enable the people counting and draw the line as the gate to define the incoming or outcoming. Below is a screenshot of the people counting tab:



Below is an explanation of the fields on the Base settings tab:

- **Enable:** This dropdown box enables People counting function for the camera.

Live stream of the video is shown in the detection area. The user can draw the line from the beginning to define the gate which will be the boundary to count the people incoming or outcoming. To designate the gate, click and drag the mouse over the area desired. The drawled line is the gate to count the incoming and outcoming people. The below is the snapshot of the drawled gate.



Remember to click the save button on the settings screen, otherwise the gate of people count will not go into effect. Clicking the clear button to clear the gate of people count. Totally the user can set one gate for the people count.

After the gate of the people count is set, the count result will be shown in the preview video like the below, and the result will be changed automatically according to the analysis result.

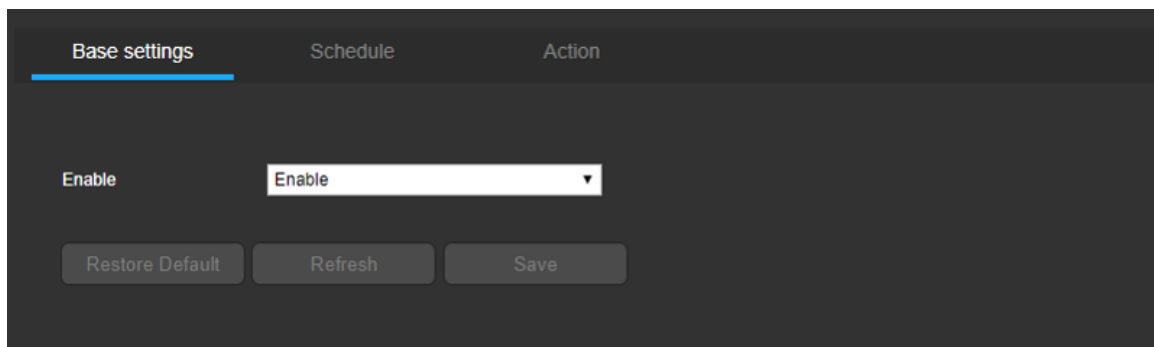


### 2.3.8.3 Human detection

The human detect menu has three tabs: Base settings, Schedule and Action.

#### 1. Base settings

This tab allows the user to modify human detection settings. Below is a screenshot of the human detection tab:



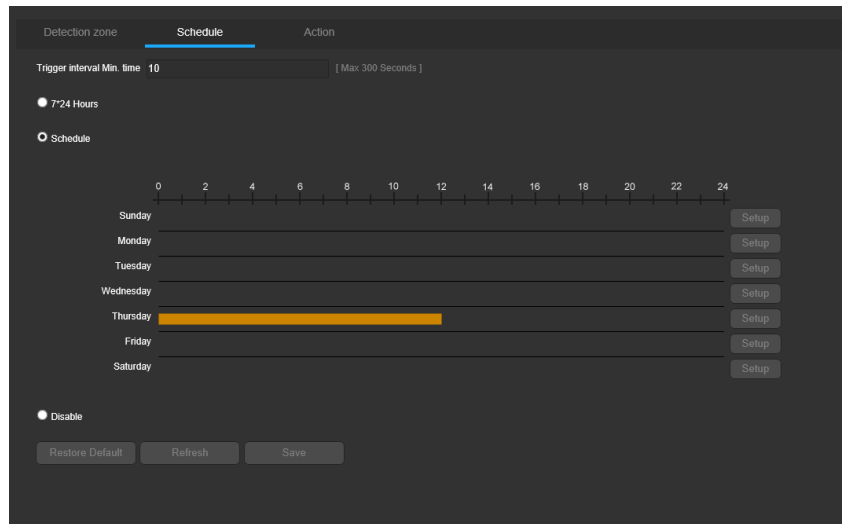
Below is an explanation of the fields on the Base settings tab:

- **Enable:** This dropdown box enables Human detection settings for the camera.
- **Restore Default:** Restore the values to default setting.
- **Refresh:** Refresh the display of the settings' value.
- **Save:** Save the settings.

#### 2. Schedule

This tab allows the user to modify human detection schedule settings. Below is a screenshot of schedule settings tab.





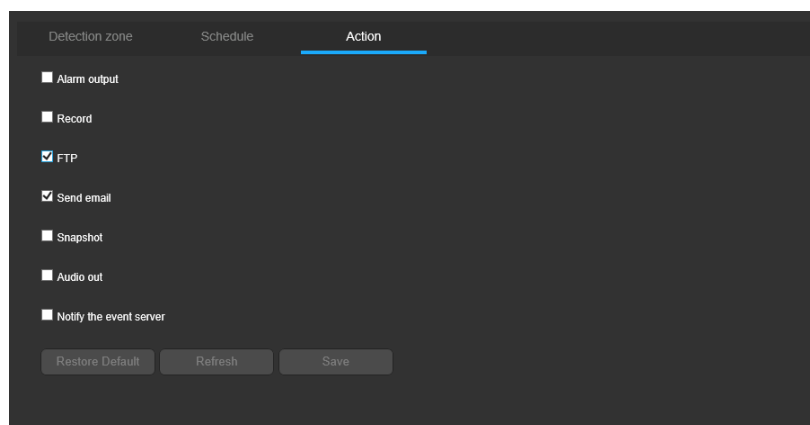
- **7\*24 Hour:** This checkbox allows the user to enable the face detect working on 7\*24 hours mode.
- **Schedule:** This checkbox allows the user to enable the face detect on the specified schedule.

If Schedule is selected, then click and drag on time bar for the desired date. To edit multiple days at once, drag the cursor further up or down to cover the other days.

- **Setup:** Clicking this button opens a screen that allows for recording periods to be set for each day and for each recording type. There is a total of 6 periods that can be set.
- **Disable:** This checkbox allows the user to disable the face detect functionality.
- **Restore Default:** Restore the values to default setting.
- **Refresh:** Refresh the display of the settings' value.
- **Save:** Save the settings.

### 3. Action

This tab allows the user to modify face detect action settings. Below is a screenshot of action settings tab.



Below is an explanation of the fields on the Action tab:

- **Alarm output:** This checkbox allows the user to enable the camera to send the alarm notification output when a motion detection alarm is triggered.
- **Record:** This checkbox allows the user to enable the camera to record video when a motion detection alarm is triggered.
- **FTP:** This checkbox allows the user to enable the camera to upload the video and snapshot to the FTP server when a motion detection alarm is triggered.

- **Send Email:** This checkbox allows the user to enable the camera to send an email when a motion detection alarm is triggered.
- **Snapshot:** This checkbox allows the user to enable the camera to take a snapshot when a motion detection alarm is triggered.
- **Audio out:** This checkbox allows the user to enable the camera to activate speaker sounds when a motion detection alarm is triggered.
- **Notify the event server:** This checkbox allows the user to enable the camera to send the alarm notification to the specified event server when a motion detection alarm is triggered.
- **Restore Default:** Restore the values to default setting.
- **Refresh:** Refresh the display of the settings' value.
- **Save:** Save the settings.

## 2.3.8.4 Face Detection

The Face Detection menu has three tabs: Base settings, Schedule and Action.

### 4. Base settings

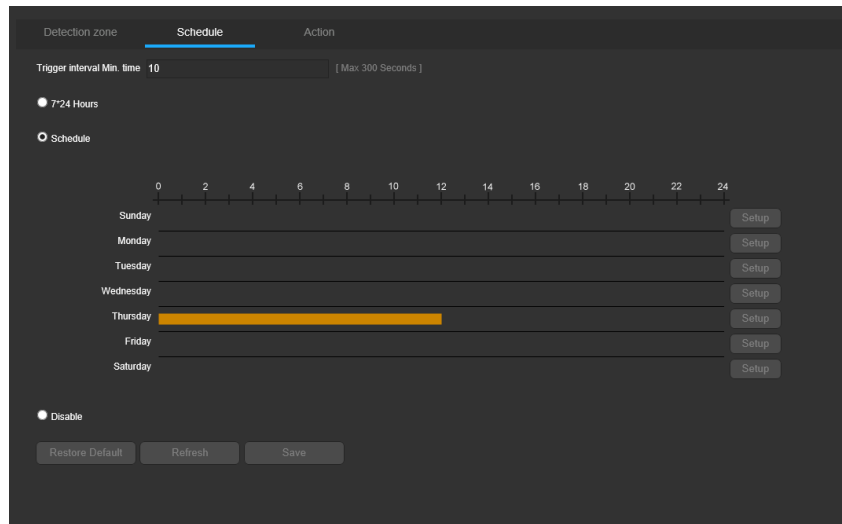
This tab allows the user to modify Face Detection settings. Below is a screenshot of the Face detect tab:

Below is an explanation of the fields on the Base settings tab:

- **Enable:** This dropdown box enables Face Detection settings for the camera.
- **Confidence:** This field allows the user to set the confidence value from 0 -100, it means how much the snapshot picture is the real face. The higher value it is, the higher accuracy of the snapshot face, and the higher camera load, and the more missed faces pictures, for example, 1/3 face or 1/4 face pictures will be missed.
- **Face size:** This dropdown box allows the user to set the size of the face snapshot.
- **Clear:** Clicking the clear button to clear the settings.
- **Save:** Clicking the save button to save the settings.

### 5. Schedule

This tab allows the user to modify Face Detection schedule settings. Below is a screenshot of schedule settings tab.



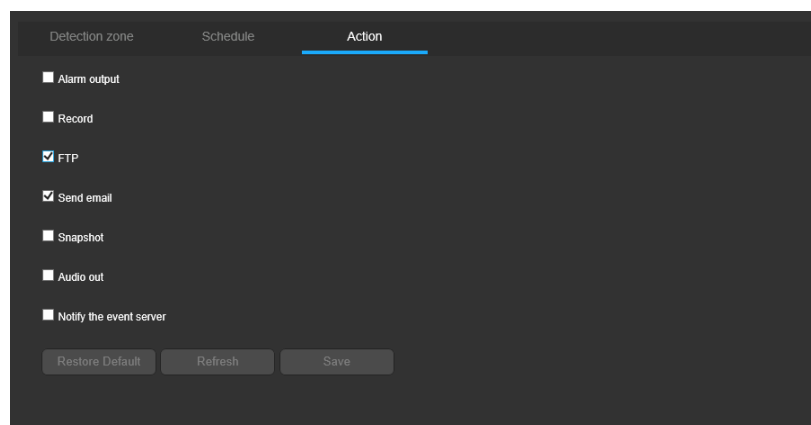
- **7\*24 Hour:** This checkbox allows the user to enable the face detect working on 7\*24 hours mode.
- **Schedule:** This checkbox allows the user to enable the face detect on the specified schedule.

If Schedule is selected, then click and drag on time bar for the desired date. To edit multiple days at once, drag the cursor further up or down to cover the other days.

- **Setup:** Clicking this button opens a screen that allows for recording periods to be set for each day and for each recording type. There is a total of 6 periods that can be set.
- **Disable:** This checkbox allows the user to disable the face detect functionality.
- **Restore Default:** Restore the values to default setting.
- **Refresh:** Refresh the display of the settings' value.
- **Save:** Save the settings.

## 6. Action

This tab allows the user to modify Face Detection action settings. Below is a screenshot of action settings tab.



Below is an explanation of the fields on the Action tab:

- **Alarm output:** This checkbox allows the user to enable the camera to send the alarm notification output when a motion detection alarm is triggered.
- **Record:** This checkbox allows the user to enable the camera to record video when a motion detection alarm is triggered.
- **FTP:** This checkbox allows the user to enable the camera to upload the video and snapshot to the FTP server when a motion detection alarm is triggered.

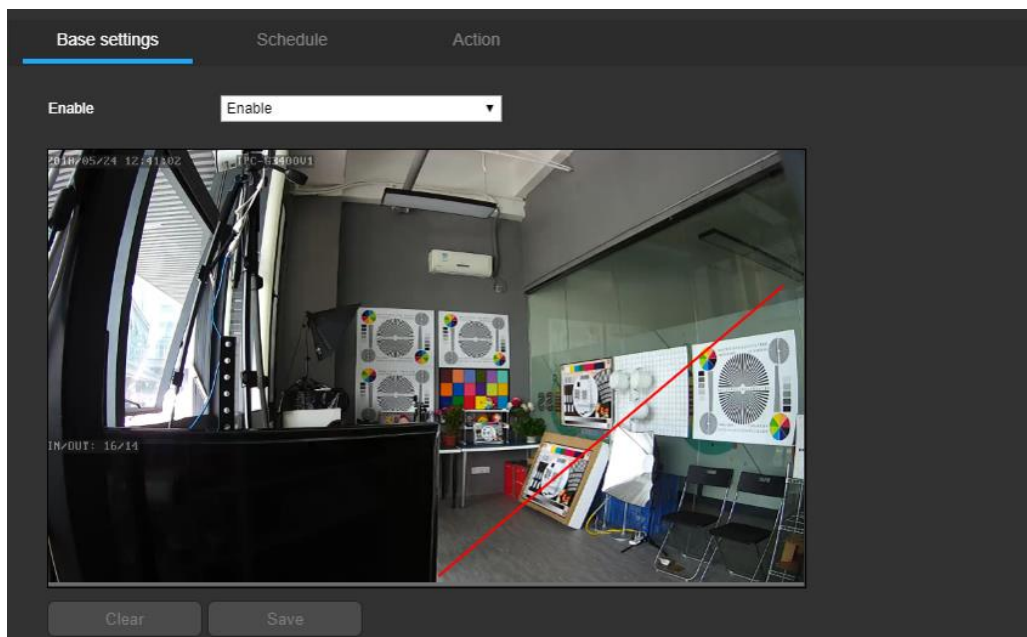
- **Send Email:** This checkbox allows the user to enable the camera to send an email when a motion detection alarm is triggered.
- **Snapshot:** This checkbox allows the user to enable the camera to take a snapshot when a motion detection alarm is triggered.
- **Audio out:** This checkbox allows the user to enable the camera to activate speaker sounds when a motion detection alarm is triggered.
- **Notify the event server:** This checkbox allows the user to enable the camera to send the alarm notification to the specified event server when a motion detection alarm is triggered.
- **Restore Default:** Restore the values to default setting.
- **Refresh:** Refresh the display of the settings' value.
- **Save:** Save the settings.

### 2.3.8.5 Line Crossing

The Line Crossing menu has three tabs: Base settings, Schedule and Action.

#### 1. Base settings

This tab allows the user to modify Line crossing settings. Below is a screenshot of the Line Crossing tab:



Below is an explanation of the fields on the Base settings tab:

- **Enable:** This dropdown box enables Cross line settings for the camera.

Live stream of the video is shown in the detection area. The user can draw the line from the beginning to define the detected gate which will be the boundary to detect the people crossing.

- **Clear:** Clicking the clear button to clear the settings.
- **Save:** Clicking the save button to save the settings.

#### 2. Schedule

This tab allows the user to modify Line Crossing schedule settings. Below is a screenshot of schedule settings tab.

- **7\*24 Hour:** This checkbox allows the user to enable the Cross line working on 7\*24 hours mode.
- **Schedule:** This checkbox allows the user to enable the Cross line on the specified schedule.

If Schedule is selected, then click and drag on time bar for the desired date. To edit multiple days at once, drag the cursor further up or down to cover the other days.

- **Setup:** Clicking this button opens a screen that allows for recording periods to be set for each day and for each recording type. There is a total of 6 periods that can be set.
- **Disable:** This checkbox allows the user to disable the Cross line functionality.
- **Restore Default:** Restore the values to default setting.
- **Refresh:** Refresh the display of the settings' value.
- **Save:** Save the settings.

### 3. Action

This tab allows the user to modify Line Crossing action settings. Below is a screenshot of action settings tab.

Below is an explanation of the fields on the Action tab:

- **Alarm output:** This checkbox allows the user to enable the camera to send the alarm notification output when a motion detection alarm is triggered.

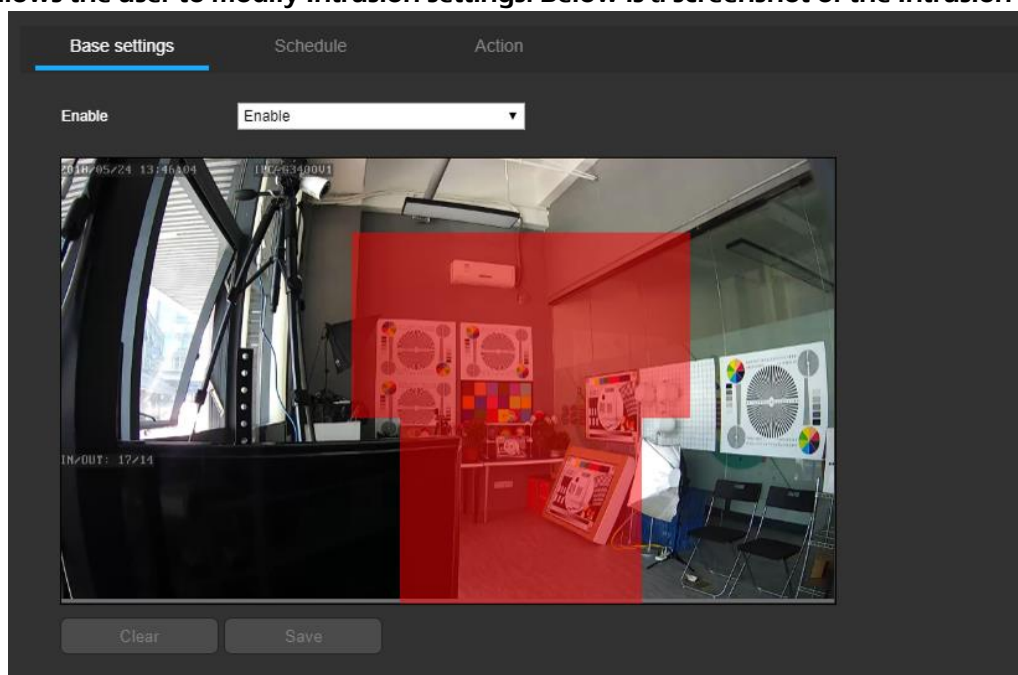
- **Record:** This checkbox allows the user to enable the camera to record video when a motion detection alarm is triggered.
- **FTP:** This checkbox allows the user to enable the camera to upload the video and snapshot to the FTP server when a motion detection alarm is triggered.
- **Send Email:** This checkbox allows the user to enable the camera to send an email when a motion detection alarm is triggered.
- **Snapshot:** This checkbox allows the user to enable the camera to take a snapshot when a motion detection alarm is triggered.
- **Audio out:** This checkbox allows the user to enable the camera to activate speaker sounds when a motion detection alarm is triggered.
- **Notify the event server:** This checkbox allows the user to enable the camera to send the alarm notification to the specified event server when a motion detection alarm is triggered.
- **Restore Default:** Restore the values to default setting.
- **Refresh:** Refresh the display of the settings' value.
- **Save:** Save the settings.

## 2.3.8.6 Intrusion

The Intrusion menu has three tabs: Base settings, Schedule and Action.

### 1. Base settings

This tab allows the user to modify Intrusion settings. Below is a screenshot of the Intrusion tab:



Below is an explanation of the fields on the Base settings tab:

- **Enable:** This dropdown box enables Intrusion settings for the camera.

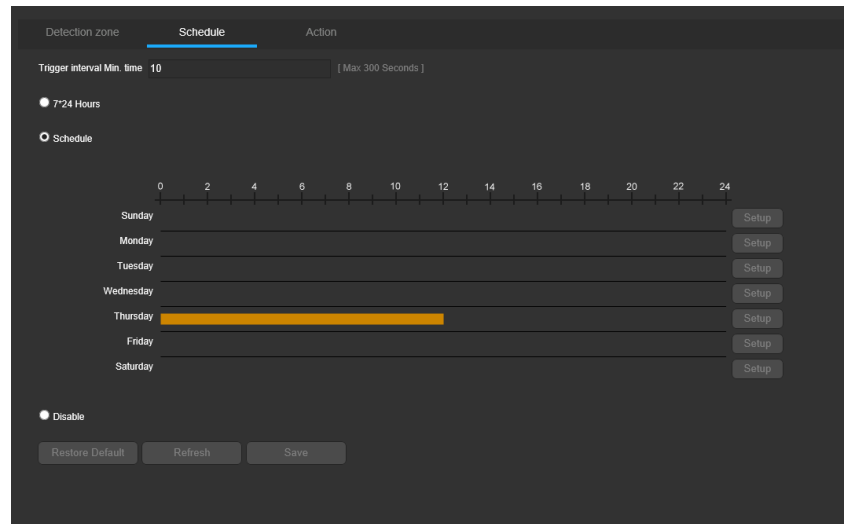
Live stream of the video is shown in the detection area. The user can draw the security zone from the beginning to define the detected zone which will be the security zone, and will detect if the people come into.

To designate a zone, click and drag the mouse over the area desired. The area is enabled for intrusion detection when a colored box is displayed over the live feed.

- **Clear:** Clicking the clear button to clear the settings.
- **Save:** Clicking the save button to save the settings.

## 2. Schedule

This tab allows the user to modify Intrusion schedule settings. Below is a screenshot of schedule settings tab.



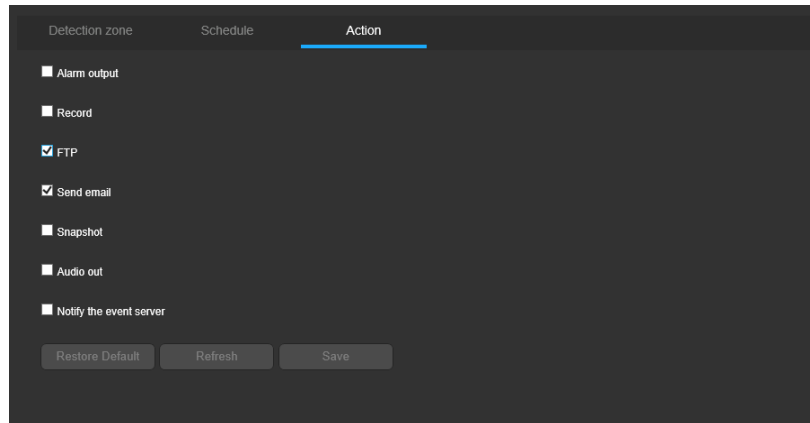
- **7\*24 Hour:** This checkbox allows the user to enable the Intrusion working on 7\*24 hours mode.
- **Schedule:** This checkbox allows the user to enable the Intrusion on the specified schedule.

If Schedule is selected, then click and drag on time bar for the desired date. To edit multiple days at once, drag the cursor further up or down to cover the other days.

- **Setup:** Clicking this button opens a screen that allows for recording periods to be set for each day and for each recording type. There is a total of 6 periods that can be set.
- **Disable:** This checkbox allows the user to disable the Intrusion functionality.
- **Restore Default:** Restore the values to default setting.
- **Refresh:** Refresh the display of the settings' value.
- **Save:** Save the settings.

## 3. Action

This tab allows the user to modify Intrusion action settings. Below is a screenshot of action settings tab.



Below is an explanation of the fields on the Action tab:

- **Alarm output:** This checkbox allows the user to enable the camera to send the alarm notification output when a motion detection alarm is triggered.
- **Record:** This checkbox allows the user to enable the camera to record video when a motion detection alarm is triggered.
- **FTP:** This checkbox allows the user to enable the camera to upload the video and snapshot to the FTP server when a motion detection alarm is triggered.
- **Send Email:** This checkbox allows the user to enable the camera to send an email when a motion detection alarm is triggered.
- **Snapshot:** This checkbox allows the user to enable the camera to take a snapshot when a motion detection alarm is triggered.
- **Audio out:** This checkbox allows the user to enable the camera to activate speaker sounds when a motion detection alarm is triggered.
- **Notify the event server:** This checkbox allows the user to enable the camera to send the alarm notification to the specified event server when a motion detection alarm is triggered.
- **Restore Default:** Restore the values to default setting.
- **Refresh:** Refresh the display of the settings' value.
- **Save:** Save the settings.

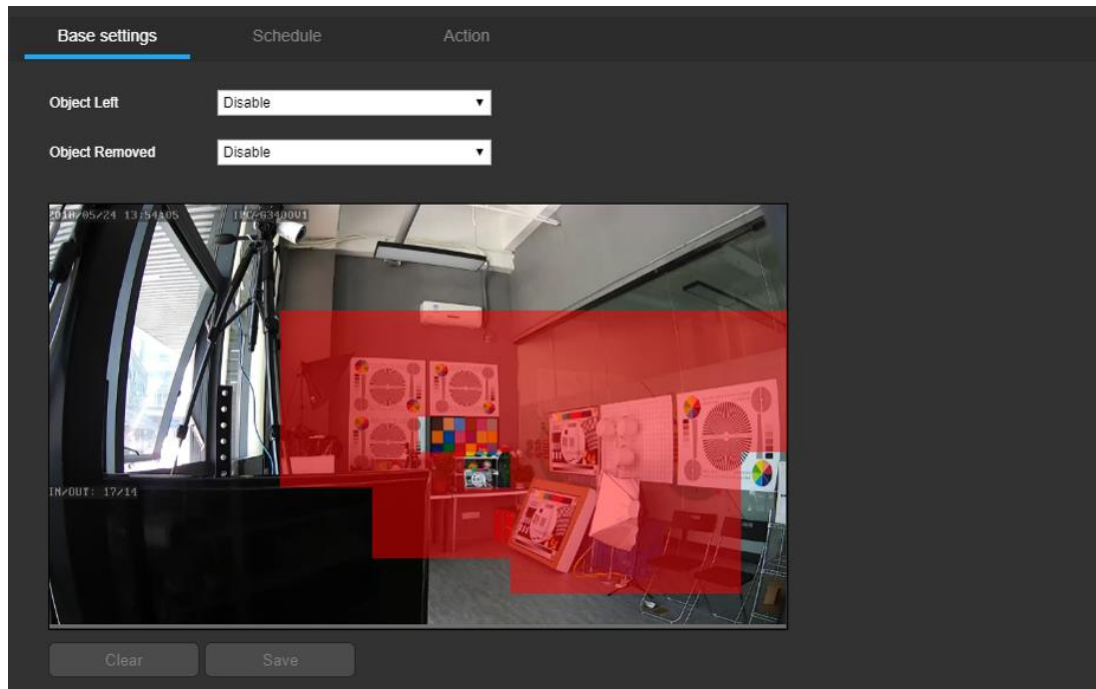
### 2.3.8.7 Object Remain/Object Remove

The Object Remain/Object Remove menu has three tabs: Base settings, Schedule and Action.

#### 1. Base settings

This tab allows the user to modify Object Remain/Object Remove settings. Below is a screenshot of the Object Remain/Object Remove tab:





Below is an explanation of the fields on the Base settings tab:

- **Object Remain:** This dropdown box enables object left settings for the camera.
- **Object Remove:** This dropdown box enables object removed settings for the camera.

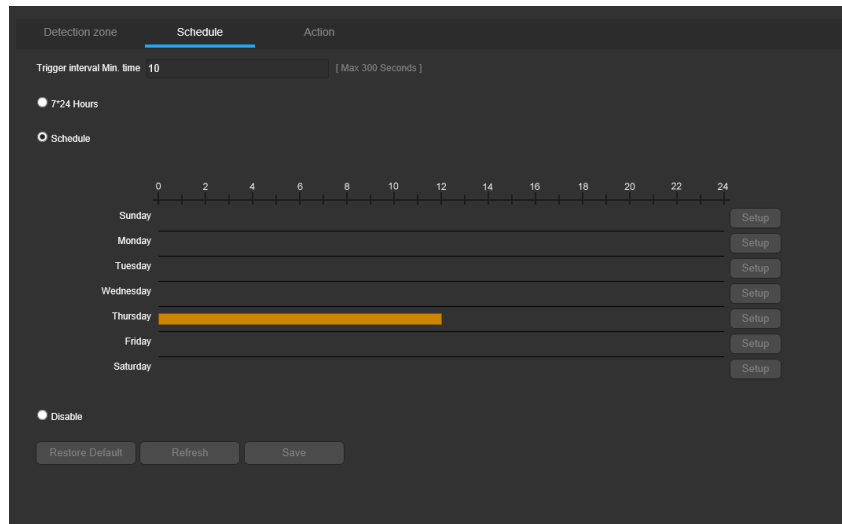
Live stream of the video is shown in the detection area. The user can draw the zone from the beginning to define the detected zone which will be the security zone and will detect if there is new things left in the zone (object left) or if there is the things removed in the zone (object removed).

To designate a zone, click and drag the mouse over the area desired. The area is enabled for object left and object removed detection when a colored box is displayed over the live feed.

- **Clear:** Clicking the clear button to clear the settings.
- **Save:** Clicking the save button to save the settings.

## 2. Schedule

This tab allows the user to modify Object Remain/Object Remove schedule settings. Below is a screenshot of schedule settings tab.



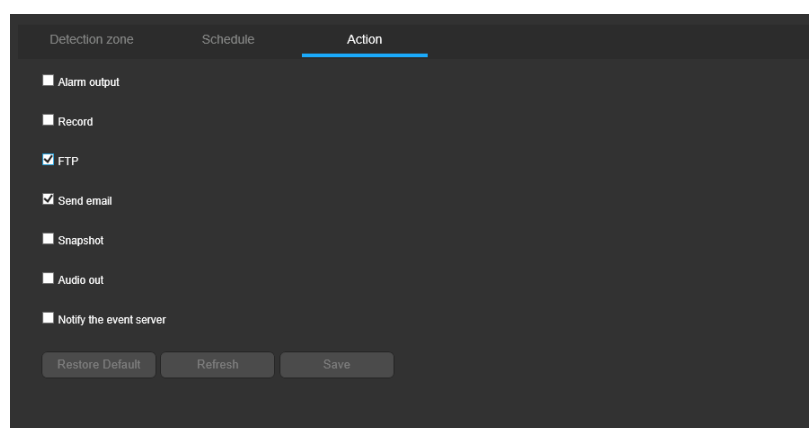
- **7\*24 Hour:** This checkbox allows the user to enable the Object left/object removed working on 7\*24 hours mode.
- **Schedule:** This checkbox allows the user to enable the Object left/object removed on the specified schedule.

If Schedule is selected, then click and drag on time bar for the desired date. To edit multiple days at once, drag the cursor further up or down to cover the other days.

- **Setup:** Clicking this button opens a screen that allows for recording periods to be set for each day and for each recording type. There is a total of 6 periods that can be set.
- **Disable:** This checkbox allows the user to disable the Object left/object removed functionality.
- **Restore Default:** Restore the values to default setting.
- **Refresh:** Refresh the display of the settings' value.
- **Save:** Save the settings.

### 3. Action

This tab allows the user to modify Object Remain/Object Remove action settings. Below is a screenshot of action settings tab.



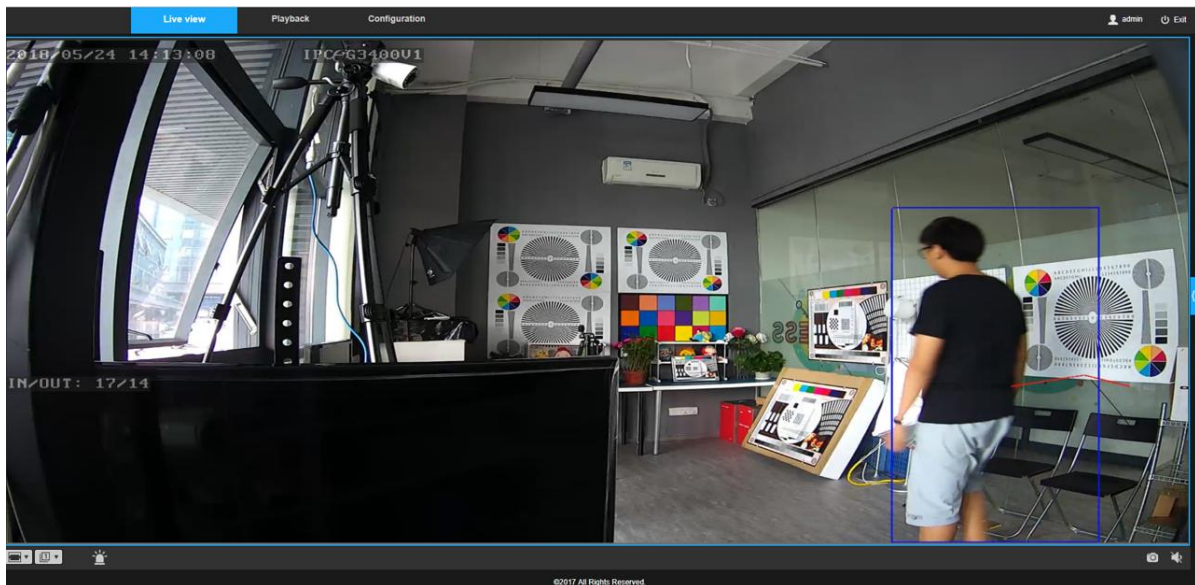
Below is an explanation of the fields on the Action tab:

- **Alarm output:** This checkbox allows the user to enable the camera to send the alarm notification output when a motion detection alarm is triggered.
- **Record:** This checkbox allows the user to enable the camera to record video when a motion detection alarm is triggered.

- **FTP:** This checkbox allows the user to enable the camera to upload the video and snapshot to the FTP server when a motion detection alarm is triggered.
- **Send Email:** This checkbox allows the user to enable the camera to send an email when a motion detection alarm is triggered.
- **Snapshot:** This checkbox allows the user to enable the camera to take a snapshot when a motion detection alarm is triggered.
- **Audio out:** This checkbox allows the user to enable the camera to activate speaker sounds when a motion detection alarm is triggered.
- **Notify the event server:** This checkbox allows the user to enable the camera to send the alarm notification to the specified event server when a motion detection alarm is triggered.
- **Restore Default:** Restore the values to default setting.
- **Refresh:** Refresh the display of the settings' value.
- **Save:** Save the settings.

### 2.3.8.8 Display in the live video

The enabled smart video functions can be shown in the live view video like the below:



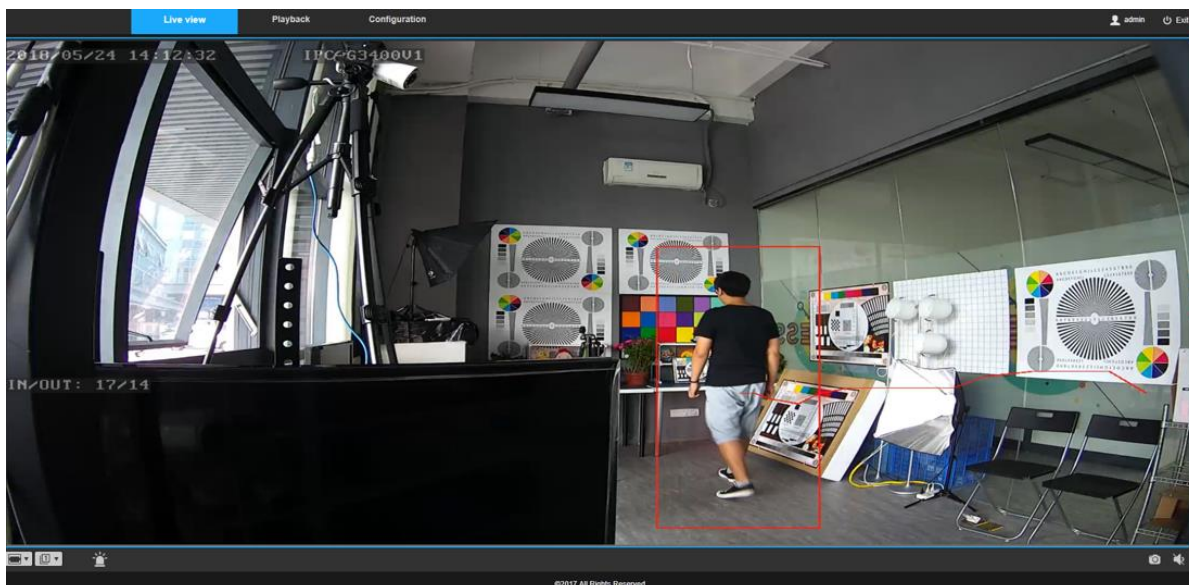
In the live view video, there will be the following things shown in the live feed which are related with the smart video.

**People count result:** the people count result will be shown in the live view video;

**Track line:** the tracking line will be followed the detected people if it is enabled;

**Green box around the object:** it's the normal box for the detected object;

**Red box around the object:** it's abnormal object which is detected like the below, there will be alarm triggered.



## 2.3.8.9 Smart video operation guide

### 1. Camera positioning

Camera positioning angle is very critical to getting good data for video analytics. Care should be taken to avoid the following: a) object size being too large so as to occupy a large part of the scene, and b) occlusions.

Typically, cameras can be installed with one of three views:

- Top-Down view (Vertical ceiling mount)
- Perspective or Angled view (Wall or Corner mount looking down) – Useful for detecting general intrusion.
- Side View (Horizontal wall mount at lower height).

The Top-Down View is generally good for counting, detecting direction of movement, etc. The second option (at angle looking down) is good for detecting intrusions. The third option (side view) should only be used for face detection. It is not recommended for other analytics since objects can be hidden from view (occlusions).

### 2. FoV (Field of View) and object Size

For people detection, the object or person size should be 10-20% of the whole screen. The object should not be so large as to occupy 40-100% of the screen.

### 3. Recommended scene and lighting conditions

Here are some general recommendations for lighting at the scene for Video Analytics.

- The scene should be well-lit. Low lighting produces video noise that triggers false object alerts.
- Stable and consistent lighting will provide good results. Fluctuations in lighting or uneven lighting at the scene will cause false alarms in any video analytics system.
- If providing proper lighting is an issue, it is recommended that an IR camera with IR illumination be used as a camera source.
- Avoid occlusions (one object going in front of another). This will break object tracks and will cause object disappearance and other related problems.

- Avoid pointing the camera directly at light sources as described below. These following situations will make the video unusable for analytics and will temporarily signal saturation.
  - Camera pointed directly at the sun.
  - Camera pointed directly at light source
  - Camera looking at vehicles with headlights (cars, trains in tunnels)
- Avoid or minimize shadows by repositioning the camera or light sources.
- If possible avoid the presence of trees and other vegetation in the camera's field of view. Swaying or movement of trees and bushes in the wind can cause false alarms. If they need to exist, then use special areas/zones to define/block off the zone as vegetation – these zones will be ignored during processing.
- If possible avoid the presence of water areas – rivers, lakes etc. in the camera's field of view. Water areas can cause reflections and ripples in the water can cause false alarms. Swaying or movement of trees and bushes in the wind can cause false alarms. If they need to exist, then use special areas/zones to define/block off these zones; they will be ignored during processing.
- Ensure that the size of the objects that are to be tracked in the scene is not too small. Object sizes have to be at least 5-10% of the screen size for consistent detection. If the objects are only few pixels (People or vehicles), it will be difficult to detect them consistently and will cause false alarms on most systems.
- Ensure that the object size is not too large – more than 40% of the screen size. The camera should not be too close to the objects being tracked.
- We recommend you turn off AGC (Auto Gain), Auto IRIS and White Balance on the cameras. These fluctuate some times and cause notable scene changes. It is possible to run the system with these settings ON, with lower sensitivity, if the scene is stable and fluctuations are less.
- Camera lens needs to be clean, and focused for best results.

Camera Zoom, FOV and Angle are important. The following sections address them fully with examples.

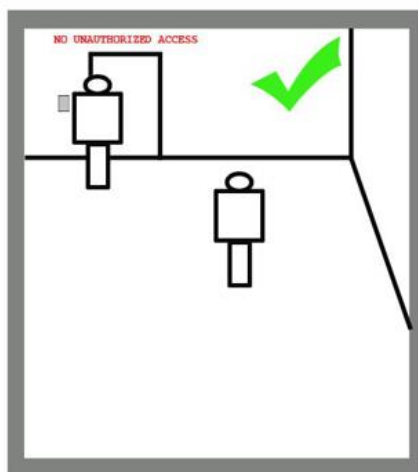
#### 4. Recommended camera positioning for common applications

- **Intrusion**

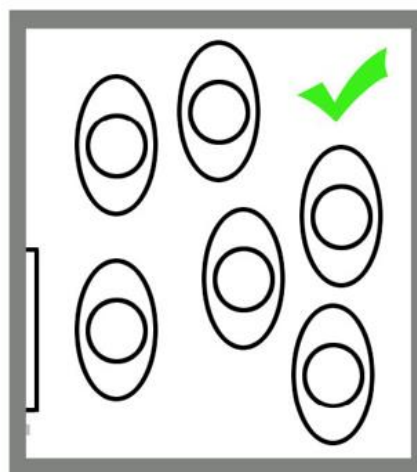
Camera must be at an angle looking down. Camera should be installed at sufficient height to avoid occlusions. The object size should not be too large to occupy large part of scene. It is recommended that the size of object entering in the scene should not exceed 50% of scene size. If the camera is used during night time, then the lighting reflections should be at a minimum to avoid bad detections. Light should be uniformly distributed in the scene and also try to avoid the shadows. Care should be taken that the light source should not be directed on Camera. A Camera at an angle looking down as seen from following picture is good for Intrusion, as is a top down view.



## Intrusion



Angled View



Top Down View

- Counting

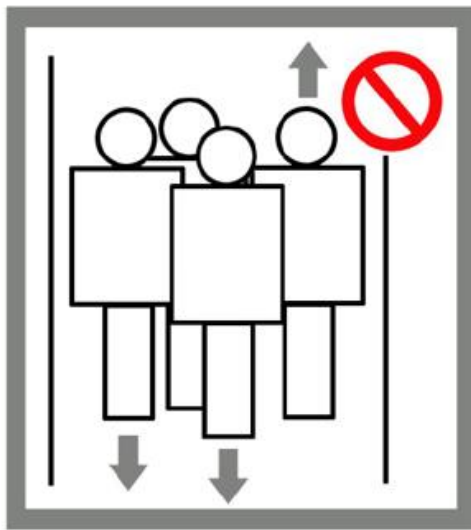
The camera must be installed at Overhead position. The object size should be constant wherever it is within the scene. The Maximum object size in the scene should not exceed 50-60% of scene size.

The perspective (angled) view should be used as least as possible. If the camera is installed from the side at a low angle, then the counting accuracy will be lower. The lighting reflections should be at a minimum to avoid bad detections. Light should be uniformly distributed in the scene to avoid the shadows. Care should be taken that the light source should not be directed on Camera.

Camera position as seen from above Fig.1 is not very good. Since there are lot of reflections and also the view is perspective. Camera position as seen from Fig.2 is good with far less reflections, shadows and the best perspective view.



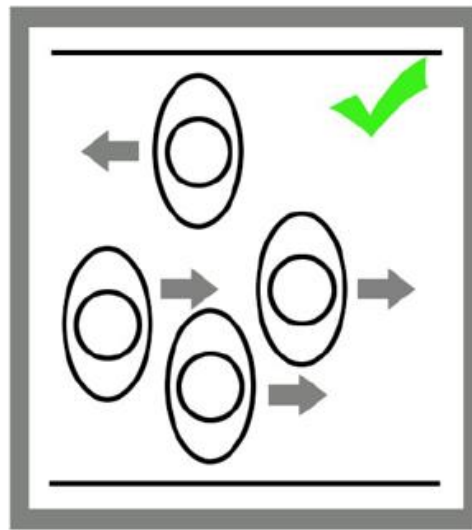
## Counting



Angled View



Fig.1



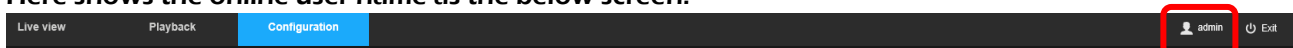
Top Down View



Fig.2

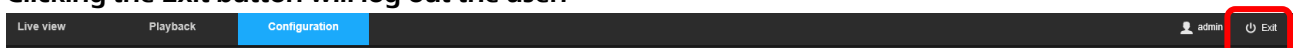
## 2.4 Online user

Here shows the online user name as the below screen.



## 2.5 Exit

Clicking the Exit button will log out the user.



## 3 Common Operations Guidance

### 3.1 Guidance for Motorized Camera Operations



This guide is designed for the user to have a full knowledge of the Motorized Lens' functionality. We will mainly introduce how to use this function via the IP Camera's web interface.

The Convenience Motorized Zoom feature will allow the user to Zoom in & out the camera lens via the WEB (IE/Chrome/Firefox/Safari), NVR, CMS and Mobile App remotely. Then the intelligent algorithm software will take care of the "Auto Focus" for you.

#### 1. Control from the Web Interface:

- Log into the camera's web interface;
- Find the "PTZ control" menu under "Preview";
- Zoom + / Zoom -






Please click the buttons:  and  to execute the Zooming out and Zooming in. After the user operates the zoom function, the camera will automatically complete the focus adjustment, under normal circumstances.

- Exceptions:

The "Auto Focus" function is based on a targeted object. When there are no target objects within the camera view, such as "Sky" or has a tiny small target object within the camera view such as "a bike in a wide open field", the camera may not be able to achieve auto focus.

We will need to perform the following operations to adjust the focus to achieve a clear view.



- 1) Via "Manual Focus" function: Click on either icon:  and  to operate the focus function: Focus + and Focus -;
- 2) When the camera is always out of focus or under a slow adjusting progress, click on the "Reset" icon  to initialize the motorize lens. The camera will complete the "Auto Focus" after initializing.

The intelligent algorithm software has integrated the most common environments for "Auto Focus". When using this function, if viewing a wide open field, the camera might take a few seconds to process the adjustment. The adjusting time is less than 3 seconds.

- Presets settings
  - 1) We can preset and save different view positions for the camera. The preset positions will allow the user to quickly switch the camera's field of view for different circumstances.



You can use the zoom function to a specific position then "double click" on the "preset number"



The camera will save this setting automatically after inputting a "name" for this preset.



You can select the preset then click “edit” icon  to modify the “Preset name”.

- 2) You can select the preset then click “call” icon  to change to the “Preset Position”. The camera’s field of view will quickly adjust to the specified position.
- 3) You can select the preset then click “delete” icon  to delete the “Preset Position”.

## 2. Control through NVR

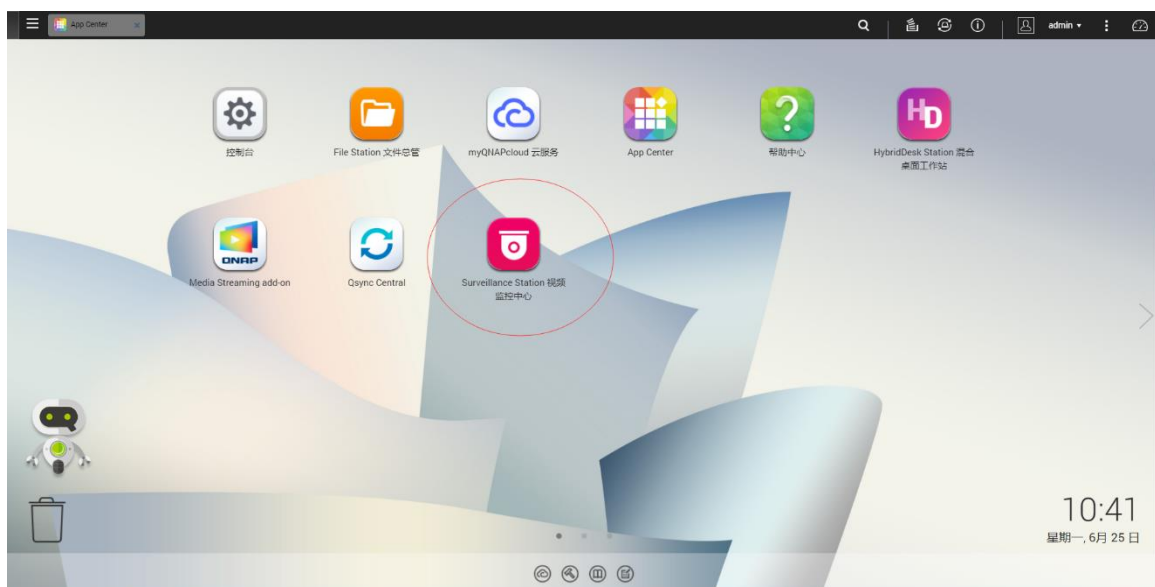
We can operate the “Motorized Zoom” function via any NVR’s PTZ Control Panel.

## 3.2 Guidance for QNAP NAS to search and add the network camera, and motion detection alarm triggered recording settings.


This guide is designed for the user to use QNAP built in Surveillance Station software to search and add network cameras through ONVIF, and set the motion detection alarm and alarm triggered recording as well.

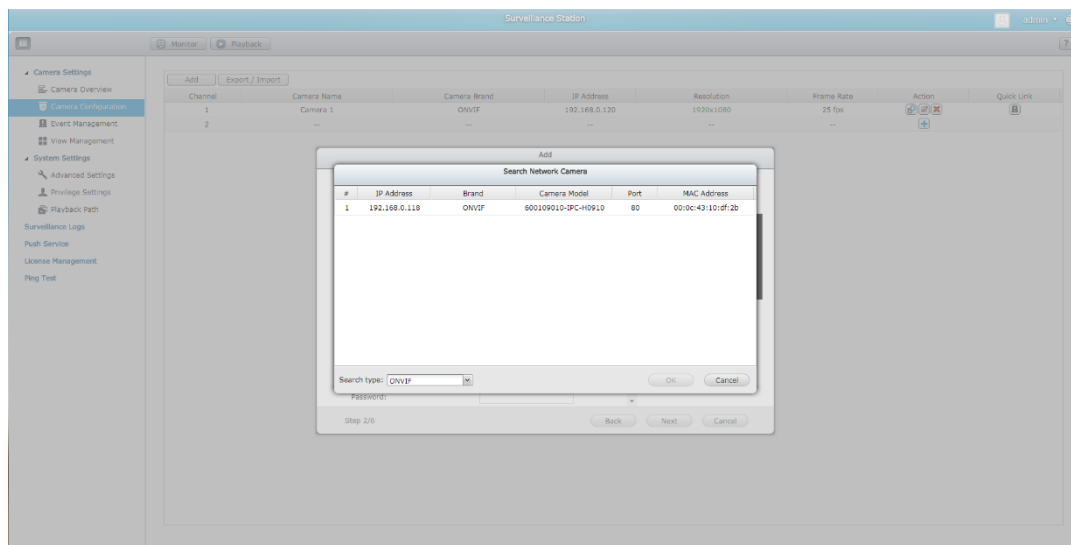
### 1. Install and run Surveillance Station Software


There is “Surveillance Station Software” tool built-in QNAP NAS Device, please run it. (Please check the QNAP NAS user guide for the detailed information.)

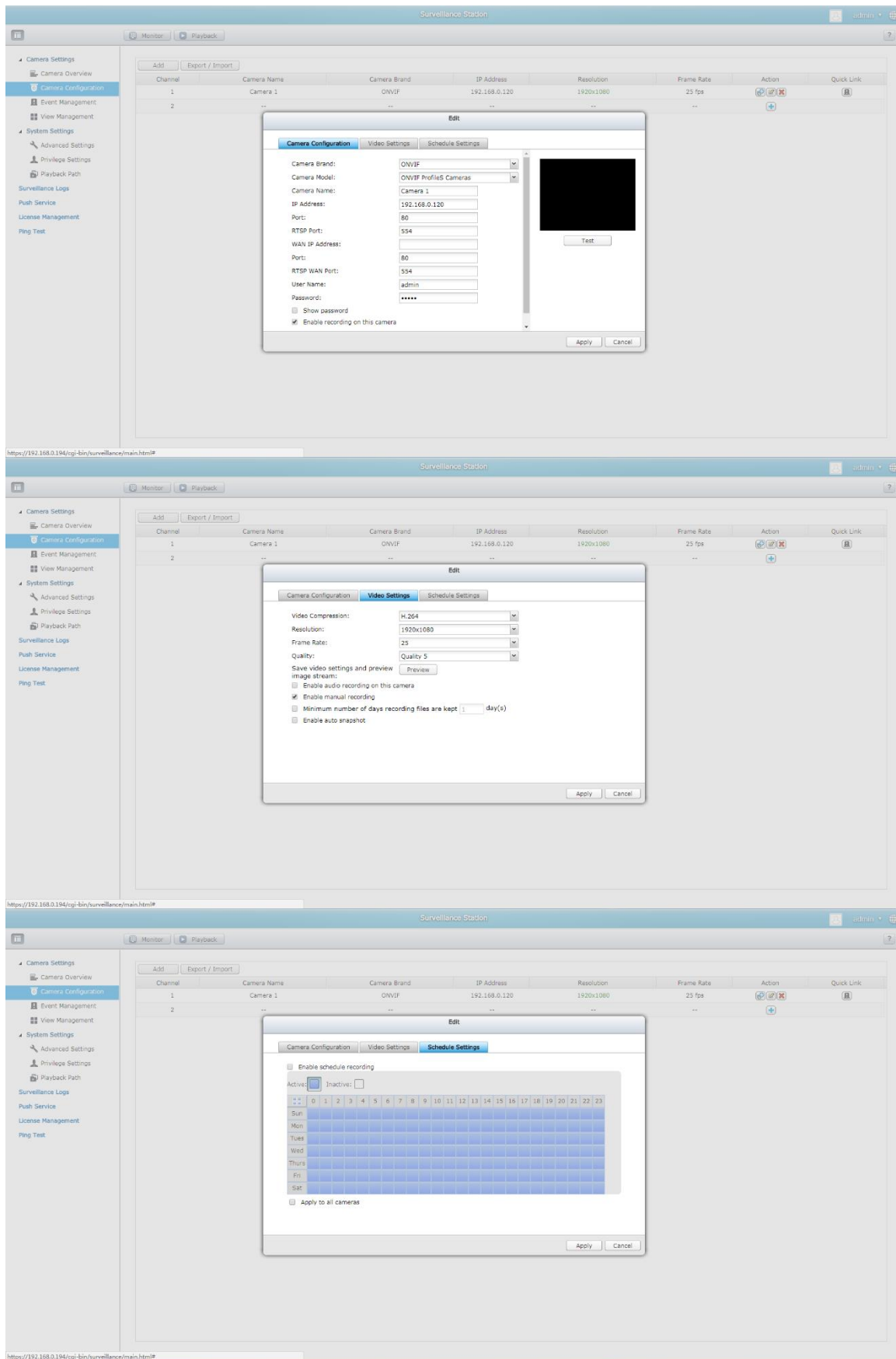


### 2. Search and add the network cameras

Click  to search and add the cameras in “Search Network Camera” window in the page of “Camera Settings” -> “Camera Configurations”. Please be noted that “ONVIF” should be selected in Search Type. The NAS will automatically search all the cameras in local network by ONVIF.



3. **Configure the network cameras**  
Please select and config the cameras' parameters in the page "Camera Settings" -> "Camera Configuration", and click  to config the cameras like the below pictures.



4. **Config motion detection and recording triggered by motion detection**  
Please set the motion detection alarm parameters and recording triggered by motion detection in the page “Camera Settings” -> “Event Management” like the below:

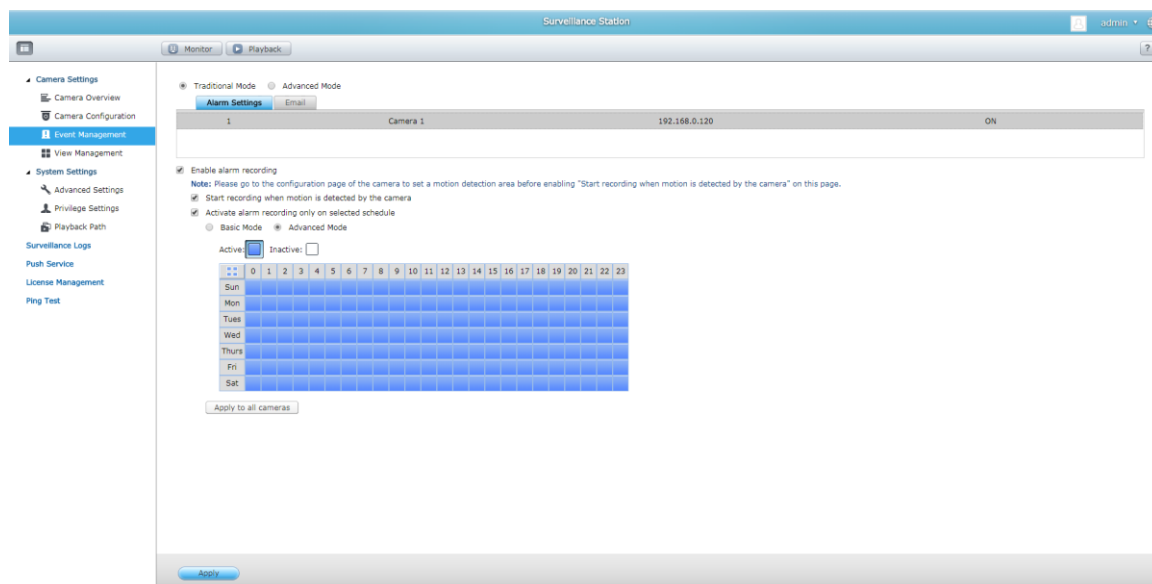
**Enable alarm recording:** please check the checkbox to enable motion detection recording;

(as suggested by QNAP, you need to set the motion detection parameters in camera side, please set the camera motion detection area, parameters etc. parameters.)

Check out the checkboxes of the “Start recording when motion is detected by the camera” and “Activate alarm recording only on selected schedule”.

Basic mode there are default schedule, and Advanced mode you can set the schedule as you like.

After settings, then apply it.



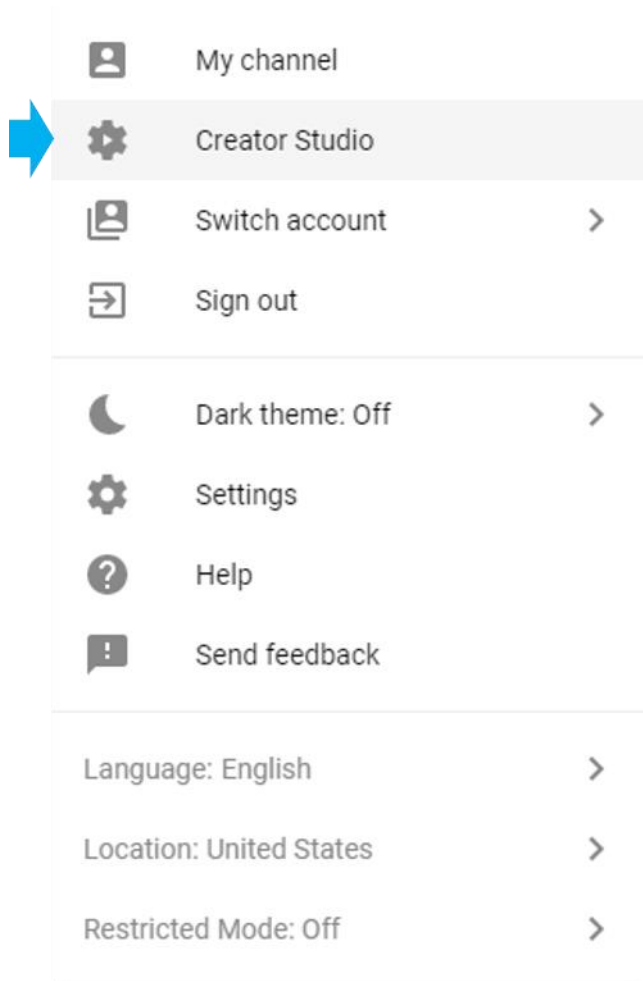
## 3.3 How to Stream to Youtube Live Streaming

- **Register the Youtube account**

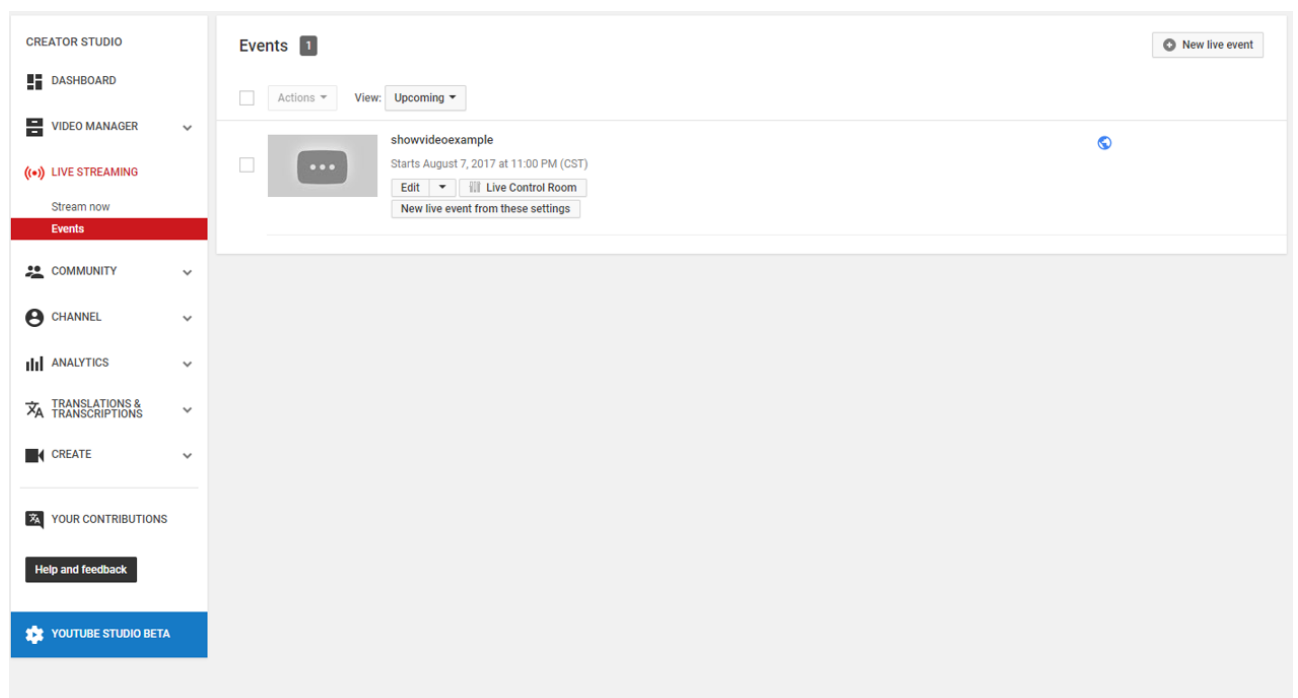
Make sure you have a YouTube account, please register Youtube account according to Youtube account registration steps. with Live Events capability.

- **LIVE STREAMING Settings**

After signing in the Youtube, click “Creator Studio” from the list when you click your account to come to the creator Studio window like the below:



1. Click Events from the “LIVE STREAMING” menu on the “CREATOR STUDIO” page like below:



2. Click “New live event” button on the right-upper corner.

- **Settings on “Info and Settings” Pages**

1. On the Basic info tab of the Info and Settings page, enter the relevant information about the stream (title, description, date/time, location, and so on) into the fields.
2. For Type, select **Custom (more encoding options)**.
3. Click “Create event”.

The screenshot shows the 'Info and Settings' page for a live stream. The left sidebar contains navigation links: DASHBOARD, VIDEO MANAGER, LIVE STREAMING (highlighted), COMMUNITY, CHANNEL, ANALYTICS, TRANSLATIONS & TRANSCRIPTIONS, CREATE, and YOUR CONTRIBUTIONS. The main content area has two tabs: 'Basic info' (selected) and 'Advanced settings'. Under 'Basic info', there are fields for title ('GW Camera Live Streaming'), start time ('Today' at '7:00 PM'), location ('United States'), time zone ('(GMT -08:00) Pacific'), description, and tags ('e.g., albert einstein, flying pig, mashup'). There's a 'Public' dropdown for visibility and an 'Also share on' section with social media icons. The 'Type' section has two options: 'Quick (using Google Hangouts On Air)' and 'Custom (more encoding options)' (selected). A reminder note is at the bottom. Buttons for 'Cancel' and 'Create event' are in the top right and bottom right.

4. You can set some more parameters on the tab of “Advanced settings” like Chat options, License and rights ownership, Caption certification etc. Please click “?” to check the meaning of this items like the below:

The screenshot shows the 'Advanced settings' tab. It includes sections for 'Chat' (with 'Enable live chat' checked and a tooltip explaining spam filtering), 'Category' (set to 'People & Blogs'), 'Video language' (a 'Select language' dropdown), 'Recording date' (set to 'Today'), 'Video statistics' (with 'Make video statistics on the watch page publicly visible' checked), 'License and rights ownership' (set to 'Standard YouTube License'), 'Syndication' (with 'Everywhere' selected), and 'Content declaration' (with a checkbox for 'This video contains paid promotion...'). A tooltip for 'seconds per person' is also visible. Buttons for 'Cancel' and 'Save changes' are in the top right.

### Settings on “Ingestion Settings” Pages

5. On the Main Camera tab of the event's Ingestion Settings page, you can upload one picture for “Thumbnail” throw click “Browser” as your preference. (It's not necessary to upload the picture.)

GW Camera Live Streaming


Cancel

Save changes

Main Camera


Add a Camera

Thumbnail



Please upload as large an image as possible (suggested: 1280x720) since the image will also be used as the preview image when your event is embedded on other sites. You can upload a JPG, GIF, BMP, or PNG file. Maximum file size is 2MB.

Browse



Select type of stream key

Choose between a single-use or reusable stream key. Reusable keys are named and allow for easier next stream setup, recurring events, or simultaneous events of the same quality.

NEW

You no longer need to specify the resolution and framerate for new stream keys.

☐ Single-use stream key

☒ Reusable stream key

?

Select a stream

▼

- You can choose any of options for "Select type of stream key" item. Here "Single-use stream key" is as example.
- Select "Other encoders" under "Select your encoder" item, and you will get some important information automatically like: Stream Name, Primary Server URL and Backup Server URL. These information are necessary to set the camera side. Below is the example settings.

Select your encoder

YouTube Live provides support for a variety of encoders. Select one of the encoder options below and follow the instructions.

Other encoders

▼

1. Configure your encoder

[Recommended bitrates and settings](#)

2. Copy and paste into your encoder

Enter the stream names and URLs in the configuration options of your encoding software.

Stream Name

pruq-tdpc-zc2h-0jpg

Primary Server URL

rtmp://x.rtmp.youtube.com/live2

Backup Server URL

rtmp://y.rtmp.youtube.com/live2?backup=1

3. Start your encoder

In your encoder, start sending us your video stream.

4. Go to the Live Control Room.

You can preview and start your event from the [Live Control Room](#).

**Stream Name:** pruq-tdpc-zc2h-0jpg  
**Primary Server URL:** rtmp://x.rtmp.youtube.com/live2  
**Backup Server URL:** rtmp://y.rtmp.youtube.com/live2?backup=1

**Note:** there is some recommended bitrates and settings for the camera, you can refer to it otherwise maybe you won't set the live streaming successfully.  
For example please set the right video codec to H.264 instead of H.265, Audio codec to AAC instead of G.711A or G.711U, and Bitrate encoding to CBR instead of VBR etc.

### Encoder settings

Protocol: RTMP Streaming

Video codec: H.264, 4.1 for up to 1080p 30 FPS  
H.264, 4.2 for 1080p 60 FPS  
H.264, 5.0 for 1440p 30 FPS  
H.264, 5.1 for 1440p 60 FPS  
H.264, 5.1 for 2160p 30 FPS  
H.264, 5.2 for 2160p 60 FPS

Frame rate: up to 60 fps

Keyframe frequency: Recommended 2 seconds  
do not exceed 4 seconds

Audio codec: AAC or MP3

Bitrate encoding: CBR

8. Please come to the RTMP settings page of the camera's web interface like below.

RTMP

Enable: Yes

Period1: 00 : 00 : 00 ~ 24 : 00 : 00

Period2: 00 : 00 : 00 ~ 00 : 00 : 00

Period3: 00 : 00 : 00 ~ 00 : 00 : 00

Period4: 00 : 00 : 00 ~ 00 : 00 : 00

Push type: Main stream

Push URL: rtmp://x.rtmp.youtube.com/live2/crc3

Restore Default Refresh Save

In Push URL, you can select the primary server URL for the main stream like:

<rtmp://x.rtmp.youtube.com/live2/pruq-tdpc-zc2h-0jpg>, in fact this PUSH URL is combine the below information using "/" you got above step:

**Stream Name:** pruq-tdpc-zc2h-0jpg

**Primary Server URL:** rtmp://x.rtmp.youtube.com/live2

and select the backup server URL for the sub stream like:

rtmp://y.rtmp.youtube.com/live2?backup=1/xgu4-4qx3-er77-0ej4

then click "Save" it in the camera side.

9. Please click "Live Control Room" to preview and start your event, if all parameters are set correctly, there will be automatically video pushed from the camera in Youtube site.



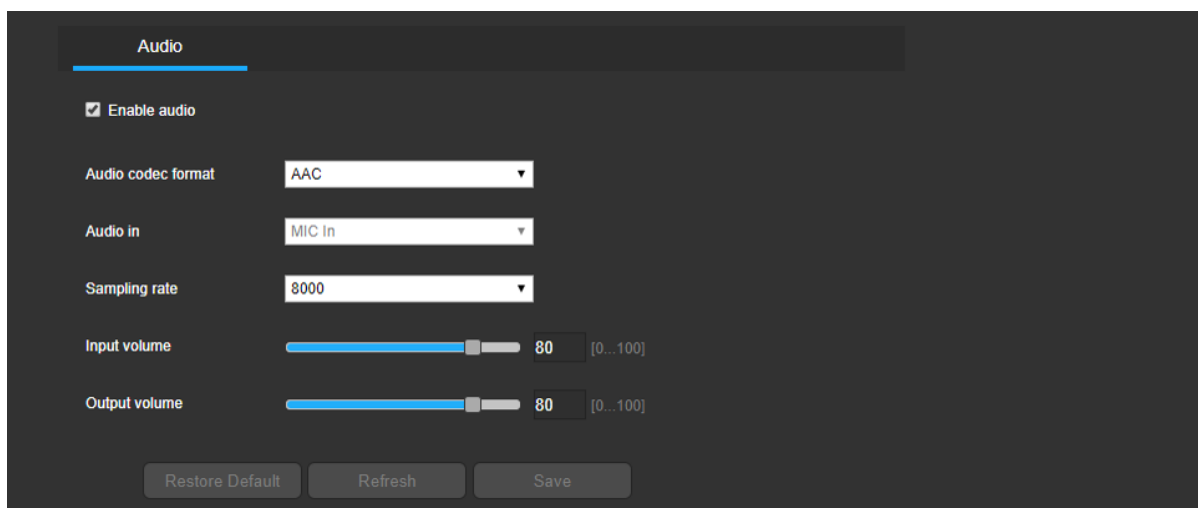
There is Stream STATUS to show the connection between the camera and Youtube server. If the status is “NO DATA”, please check your camera Internet connection and parameters.

10. Please come back to “Ingestion Settings” and click “Save changes”.
11. Now you can click “LIVE Control Room” to check the live video.
12. The live video can be set “public” or “private” as your preference, and more information please check the YOUTUBE website HELP.

## 3.4 Audio Parameters Description

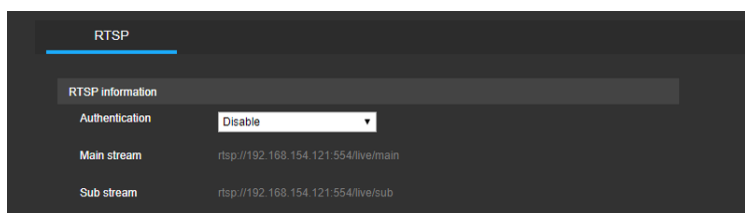
Please change the audio codec from AAC to G.711A or G.711U when there is no audio voice when the camera is used in third-party NVR or CMS software though ONVIF. Normally AAC audio codec is not supported by these NVR or CMS software.

Please also set the Audio sampling to 8000K which is also normal for all third-party NVR and CMS software. The bigger of sampling rate, the better quality audio.



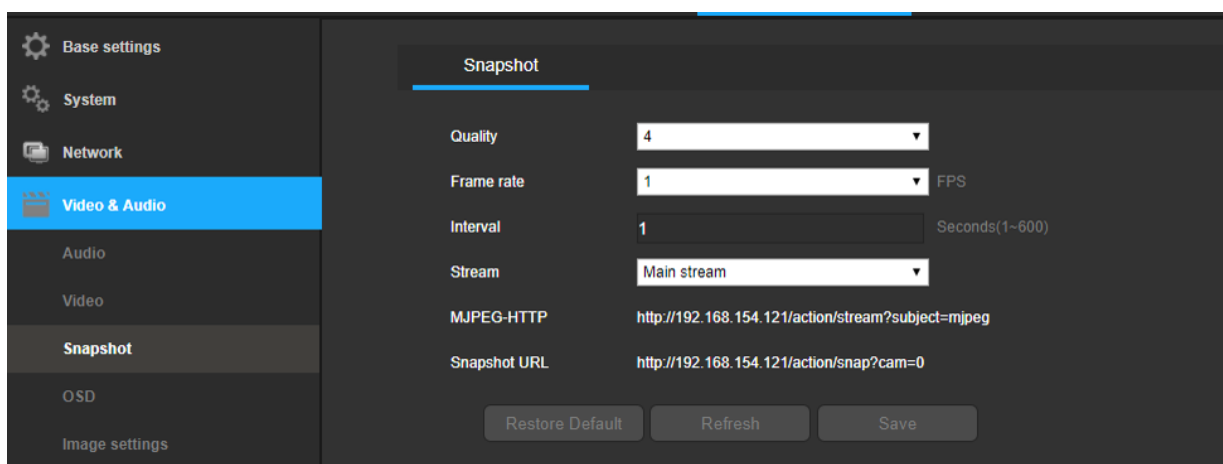
## 3.5 Disable RTSP Authentication

Please be noted that some third-party NVR or CMS don't support RTSP Authentication. There will be no video when you use the default settings. Please “Disable” RTSP Authentication from the camera's web interface like below:



## 3.6 How to use HTTP Streamer and Snapshot

You can get the camera's HTTP Streamer and snapshot HTTP URL from the camera's web interface like the below:



Sometimes you need to add the username and password as request, so please add the username and password to the behind of the URL like:

<http://192.168.1.120/action/stream?subject=mjpeg&user=admin&pwd=12345>

<http://192.168.1.120/action/snap?cam=0&user=admin&pwd=12345>.

The IP address, User and Password showing in the above URL are factory default. Please use IPC's current IP address, user name and password to replace the content.

## 3.7 Requirements for Micro SD card

If there is SD/USB supported in the camera, please be noted that:

- Recommend SD card class 10.
- Recommend insert the SD card first then turn on the IP Camera.
- SD card must be formatted as FAT32. IP Camera will not recognize NTFS format.

## 4 FAQs/Troubleshooting

### 1) The camera does not boot up properly.

Below are a few possible reasons why this may be occurring:

- The power input is not the correct voltage.
- The power cable connection is not secured correctly.
- The firmware was upgraded incorrectly.

### 2) Camera often automatically shuts down or stops running.

Below are a few possible reasons why this may be occurring:

- The input voltage is too low or is not stable.
- The insides of the camera have accumulated too much dust.
- The temperature is either too hot or too cold.
- The hardware is malfunctioning.

### 3) Real-time video color is distorted.

Below are a few possible reasons why this may be occurring:

- The camera is not compatible with the monitor.
- The camera color or brightness settings are not correctly configured.

### 4) Local Recordings are not searchable.

Below are a few possible reasons why this may be occurring:

- The camera's firmware is incompatible with the recorded video.
- The recorded files have been overwritten.
- The recording function has been disabled.

### 5) Playback video is distorted.

Below are a few possible reasons why this may be occurring:

- The video quality setting is too low.
- The camera software has a read error. Restart the camera to solve this problem.
- The camera's hardware is malfunctioning.

### 6) The time-stamp is not displaying the correct time.

Below are a few possible reasons why this may be occurring:

- The time and date settings may not be configured correctly.

### 7) Motion detection does not work.

Below are a few possible reasons why this may be occurring:

- The motion detection time period may be incorrectly configured.
- Motion detection zone setup is not correctly configured.
- Motion detection sensitivity is set too low.
- Motion detection threshold is set too high

### 8) Web Access is not working.

Below are a few possible reasons why this may be occurring:

- Windows version is pre -Windows 2000 service pack 4. Use a more recent version of Windows.
- ActiveX controls have been disabled.
- The PC is not using DirectX 8.1 or higher. Upgrade to a more recent version of DirectX.
- The camera is having network connection errors.
- Web access may be set up incorrectly.

- The username or password may be incorrect.

**9) Web Access live view is only displaying a static picture. Both live playback and recorded playback are not working.**

Below are a few possible reasons why this may be occurring:

- The network speed is not sufficient to transfer video data via web access.
- The client PC may have limited resources.
- Multicast mode may be causing this issue.
- A privacy mask or screensaver may be enabled.
- The logged in user may not have sufficient rights to monitor real-time playback.
- The camera's local video output quality is not sufficient.

**10) Network connection is not stable.**

Below are a few possible reasons why this may be occurring:

- The network is not stable.
- There may be an IP address conflict.
- There may be a MAC address conflict.
- The PC or camera network card may be defective.
- The Wi-Fi network the camera is picking up is too weak.

**11) The alarm signal cannot be disarmed.**

Below are a few possible reasons why this may be occurring:

- An alarm may be setup incorrectly.
- An alarm output may have been manually opened.
- There may be an error in the camera's firmware.

**12) Alarms are not working.**

Below are a few possible reasons why this may be occurring:

- The alarm is not setup correctly.
- The alarm cable is not connected correctly.
- The alarm input signal is not correctly configured.
- There are two loops connected to one alarm device.

**13) The camera is not recording enough video.**

Below are a few possible reasons why this may be occurring:

- The storage capacity is not enough.
- The storage device is damaged.

**14) Downloaded files cannot be played back.**

Below are a few possible reasons why this may be occurring:

- The media player software on the PC may not be able to read the file format.
- The PC may not have DirectX 8.1 or higher.
- The PC may not have Windows XP or higher.

**15) Forgot login information.**

Below are a few solutions:

- Hold the reset button on the back of the camera to execute a factory reset. This will restore the device to its factory settings and will reset ALL of the camera's settings.
- If there is no hardware reset button, please use the IPCManager tool, the camera will be searched automatically, and select it, then right click to select "Find the password" function.

## 5 Glossary of Terms

**Abnormality** – Any malfunction in terms of storage of data to the SD card.

**DDNS** – This stands for Dynamic Domain Name System. DDNS is a method of automatically updating a name server in the Domain Name System (DNS), often in real time, with the active DNS configuration of its configured hostnames, addresses or other information.

**Default Gateway** – The node on the computer network that the network software uses when an IP address does not match any other routes in the routing table.

**DHCP** – Dynamic Host Configuration Protocol is a network protocol that enables a server to automatically assign an IP address to a computer from a defined range of numbers (i.e., a scope) configured for a given network.

**IP Address** – Internet Protocol Address is a unique numerical label assigned to each device connected to a computer network. The IP address allows communication between different devices on a network.

**Main Stream** – Main Stream is the main streaming protocol for the camera. Main stream uses more bandwidth and attempts to keep quality and fluency high.

**NTP** – Network Time Protocol is a networking protocol for clock synchronization between computer systems over packet-switched, variable-latency data networks.

**P2P** – Peer-to-Peer is a decentralized communications model in which each party has the same capabilities and either party can initiate a communication session.

**PPPoE** – Point to Point Protocol over Ethernet is a network protocol for encapsulating Point to Point Protocol data packets inside Ethernet frames.

**PTZ** – Pan Tilt Zoom is a feature that allows a camera to remotely change its position.

**QR Code** – Quick Response code is a type of digital barcode that enables devices to share complex data strings quickly.

**RTMP** – Real Time Messaging Protocol, it is based on TCP protocol. It supports live stream broadcasting with RTMP server like public Youtube, Wowza etc.

**S/N** – S/N stands for serial number.

**Sensitivity** – Sensitivity is the amount of change required to increase the motion detected by a percentage. The lower the sensitivity, the more movement is required to trigger an alarm.

**SMTP** – Simple Mail Transfer Protocol is an Internet standard for electronic mail (e-mail) transmission.

**Static IP** – An IP address that does not change.

**Sub Stream** – Sub Stream is an alternative streaming protocol for the camera. Sub stream uses less bandwidth and attempts to keep fluency high at the expense of quality.

**Subnet Mask** – a 32-bit number that masks an IP address, and divides the IP address into network address and host address.

**TCP/IP** – TCP/IP stands for Transmission Control Protocol/Internet Protocol and it is the language/protocol that allows communication between internet connected devices, whether on a local network, or on the Internet at large.

**Threshold** – Threshold is the level that the motion detection needs to reach in order to trigger an alarm.

**UPnP** – UPnP stands for Universal Plug and Play, and it is a protocol used to easily connect devices to the internet.

**VoIP** – Voice over Internet Protocol, it's for IP voice to be transmitted on the network.