



*Now you can see!*

# Ultra-Z IP

Network IR PTZ Camera

[www.provisionISR.com](http://www.provisionISR.com)



- Z-20IP-1
- Z-20IP-2
- Z-30IP-1
- Z-30IP-2

*User Manual*

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# Chapter 1 Overview

## 1.1 Functions

**Note:** The functions may vary depending on the models of PTZ.

### Limit Stops

The dome can be programmed to move within the limit stops (left/right, up/down).

### Scan Modes

The dome provides 5 scan modes: auto scan, tilt scan, frame scan, random scan and panorama scan.

### Presets

A preset is a predefined image position. When the preset is called, the dome will automatically move to the defined position. The presets can be added, modified, deleted and called.

### Label Display

The on-screen label of the preset title, azimuth/elevation, zoom, time and dome name can be displayed on the monitor. The displays of time and PTZ name can be programmed.

### Auto Flip

In manual tracking mode, when a target object goes directly beneath the dome, the video will automatically flip 180 degrees in horizontal direction to maintain continuity of tracking. This function can also be realized by auto mirror image depending on different camera models.

### 3D Positioning

In the client software, use the left key of mouse to click on the desired position in the video image and drag a rectangle area in the lower right direction, then the dome system will move the position to the center and allow the rectangle area to zoom in. Use the left key of mouse to drag a rectangle area in the upper left direction to move the position to the center and allow the rectangle area to zoom out.

### Proportional Pan/Tilt

Proportional pan/tilt automatically reduces or increases the pan and tilt speeds according to the amount of zoom. At telephoto zoom settings, the pan and tilt speeds will be slower than at wide zoom settings. This keeps the image from moving too fast on the live view image when there is a large amount of zoom.

### Auto Focus

The auto focus enables the camera to focus automatically to maintain clear video images.

### Day/Night Auto Switch

The PTZs deliver color images during the day. And as light diminishes at night, the PTZs switch to night mode and deliver black and white images with high quality.

### Slow Shutter

In slow shutter mode, the shutter speed will automatically slowdown in low illumination conditions to maintain clear video images by extending the exposure time. The feature can be enabled or disabled.

**Backlight Compensation (BLC)**

If you focus on an object against strong backlight, the object will be too dark to be seen clearly. The BLC (Backlight Compensation) function can compensate light to the object in the front to make it clear, but this causes the over-exposure of the background where the light is strong.

**(Digital) Wide Dynamic Range (WDR)**

The wide dynamic range (WDR) function helps the camera provide clear images even under back light circumstances. When there are both very bright and very dark areas simultaneously in the field of view, Digital WDR balances the brightness level of the whole image and provide clear images with details.

**White Balance (WB)**

White balance can remove the unrealistic color casts. White balance is the white rendition function of the camera to adjust the color temperature according to the environment automatically.

**Patrol**

A patrol is a memorized series of pre-defined preset function. The scanning speed between two presets and the dwell time at the preset are programmable.

**Pattern**

A pattern is a memorized series of pan, tilt, zoom, and preset functions. By default the focus and iris are in auto status during the pattern is being memorized.

**Power Off Memory**

The dome supports the power off memory capability with the predefined resume time. It allows the dome to resume its previous position after power is restored.

**Park Action**

This feature allows the dome to start a predefined action automatically after a period of inactivity.

**User Management**

The dome allows you to edit users with different levels of permission, in the admin login status. Multiple users are allowed to access and control the same network PTZ via network simultaneously.

**3D Digital Noise Reduction (DNR)**

Comparing with the general 2D digital noise reduction, the 3D digital noise reduction function processes the noise between two frames besides processing the noise in one frame. The noise will be much less and the video will be clearer.

# Chapter 2 Network Connection

## *Before you start:*

If you want to set the IP PTZ via a LAN (Local Area Network), please refer to Section **2.1 Setting the IP PTZ Camera over the LAN**.

If you want to set the network PTZ via a WAN (Wide Area Network), please refer to Section **2.2 Setting the IP PTZ Camera over the WAN**.

## 2.1 Setting the IP PTZ Camera over the LAN

### *Purpose:*

To view and configure the PTZ via a LAN, you need to connect the network PTZ in the same subnet with your computer, and install the Provided IP Tool to search and change the IP of the network PTZ.

### 2.1.1 Wiring over the LAN

The following figures show the two ways of cable connection of a network PTZ and a computer:

#### *Purpose:*

To test the network PTZ, you can directly connect the network PTZ to the computer with a network cable as shown in Figure 2-1.

Refer to the Figure 2-2 to set the network PTZ over the LAN via a switch or a router.

### 2.1.2 Detecting and Changing the IP Address

You need the IP address to visit the network PTZ.

#### *Steps:*

1. To get the IP address, you can choose either of the following methods:
  - Use IP Tool, a software tool which can automatically detect the online network PTZs in the LAN and list the device information including IP address, subnet mask, port number, device serial number, device version, etc., shown in Figure 2-3.
  - Use the client software to list the online devices. Please refer to the user manual of client software for detailed information.
2. Change the IP address and subnet mask to the same subnet as that of your computer.
3. Enter the IP address of network PTZ in the address field of the web browser to view the live video.

**Notes:**

Out of the box, the camera will work on DHCP and get an IP address automatically from the DHCP server. In case a “Restore to factory default” was done, the default IP address will change to 192.168.0.99. The default **user name** is **admin** and **password** is **admin**.

For accessing the network PTZ from different subnets, please set the gateway for the network PTZ after you logged in. For detailed information, please refer to Section **6.3.1 Configuring TCP/IP Settings**.

## 2.2 Setting the IP PTZ Camera over the WAN

**Purpose:**

This section explains how to connect the network PTZ to the WAN with a static IP or a dynamic IP.

### 2.2.1 Static IP Connection

**Before you start:**

Please apply a static IP from an ISP (Internet Service Provider). With the static IP address, you can connect the network PTZ via a router or connect it to the WAN directly.

**Connecting the network PTZ via a router**

**Steps:**

1. Connect the network PTZ to the router.
2. Assign a LAN IP address, the subnet mask and the gateway. Refer to Section **2.1.2 Detecting and Changing the IP Address** for detailed IP address configuration of the PTZ.
3. Save the static IP in the router.
4. Set port mapping, E.g., 80, 8000 and 554 ports. The steps for port mapping vary depending on different routers. Please call the router manufacturer for assistance with port mapping.

**Note:** Refer to Appendix 2 for detailed information about port mapping.

5. Visit the network PTZ through a web browser or the client software over the internet.

**Connecting the network PTZ with static IP directly**

You can also save the static IP in the PTZ and directly connect it to the internet without using a router. Refer to Section **2.1.2 Detecting and Changing the IP Address** for detailed IP address configuration of the PTZ.

### 2.2.2 Dynamic IP Connection

**Before you start:**

Please apply a dynamic IP from an ISP. With the dynamic IP address, you can connect the network PTZ to a modem or a router.

## Connecting the network PTZ via a router

### Steps:

1. Connect the network PTZ to the router.
2. In the PTZ, assign a LAN IP address, the subnet mask and the gateway. Refer to Section **2.1.2 Detecting and Changing the IP Address** for detailed LAN configuration.
3. In the router, set the PPPoE user name, password and confirm the password.
4. Set port mapping. E.g. 80, 8000 and 554 ports. The steps for port mapping vary depending on different routers. Please call the router manufacturer for assistance with port mapping.

**Note:** Refer to Appendix 2 for detailed information about port mapping.

5. Apply a domain name from a domain name provider.
6. Configure the DDNS settings in the setting interface of the router.
7. Visit the PTZ via the applied domain name.

## Connecting the network PTZ via a modem

### Purpose:

This PTZ supports the PPPoE auto dial-up function. The PTZ gets a public IP address by ADSL dial-up after the PTZ is connected to a modem. You need to configure the PPPoE parameters of the network PTZ. Refer to Section **6.3.3 Configuring PPPoE Settings** for detailed configuration.

**Note:** The obtained IP address is dynamically assigned via PPPoE, so the IP address always changes after rebooting the PTZ. To solve the inconvenience of the dynamic IP, you need to get a domain name from the DDNS provider (E.g. DynDns.com). Please follow below steps for normal domain name resolution and private domain name resolution to solve the problem.

### Normal Domain Name Resolution

#### Steps:

1. Apply a domain name from a domain name provider.
2. Configure the DDNS settings in the **DDNS Settings** interface of the network PTZ. Refer to Section **6.3.4 Configuring DDNS Settings** for detailed configuration.
3. Visit the PTZ via the applied domain name.

### Private Domain Name Resolution

#### Steps:


1. Install and run the IP Server software in a computer with a static IP.
2. Access the network PTZ through the LAN with a web browser or the client software.
3. Enable DDNS and select IP Server as the protocol type. Refer to Section **6.3.4 Configuring DDNS Settings** for detailed configuration.



# Chapter 3 Access to the IP PTZ Camera

## 3.1 Accessing by Web-Browsers

**Steps:**

1. Open the web browser.
2. In the address field input the IP address of the network PTZ, e.g., 192.168.0.99 and press the **Enter** key to enter the login interface.
3. Select English as the interface language on the top-right of login interface.
4. Input the user name and password and click .

**Note:** The default user name is admin, password is admin.

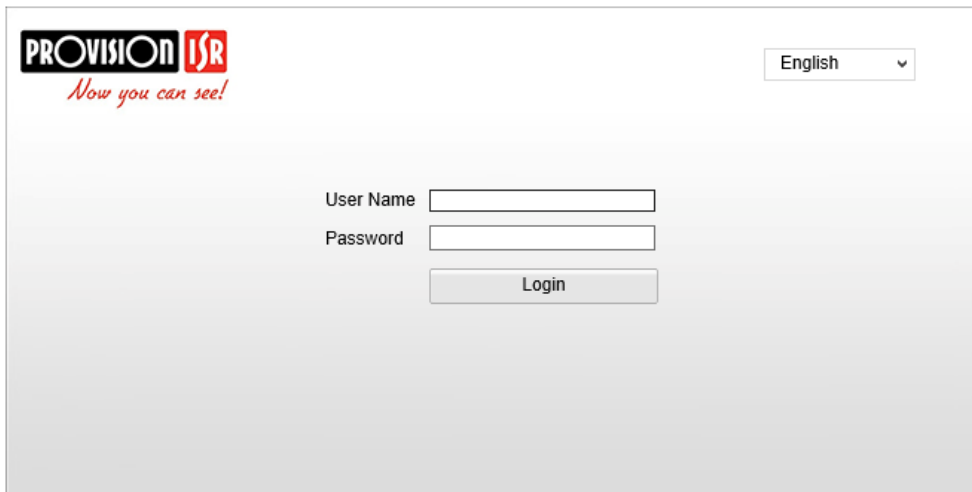


Figure 3-1 Login Interface

5. Before being able to view the camera you will need to install the camera's plug in. Please follow the installation prompts to install the plug-in.

**Note:** You may have to close the web browser for the installation to take place. Please reopen the web browser and log in again after installing the plug-in.

## 3.2 Accessing by IP Tool

- The product CD contains the IP Tool. You can view the live video and manage the PTZ with the client software.
- Follow the installation prompts to install the IP Tool. The configuration interface and live view interface of client software are shown bellow.



Figure 3-6 IP Tool Control Panel

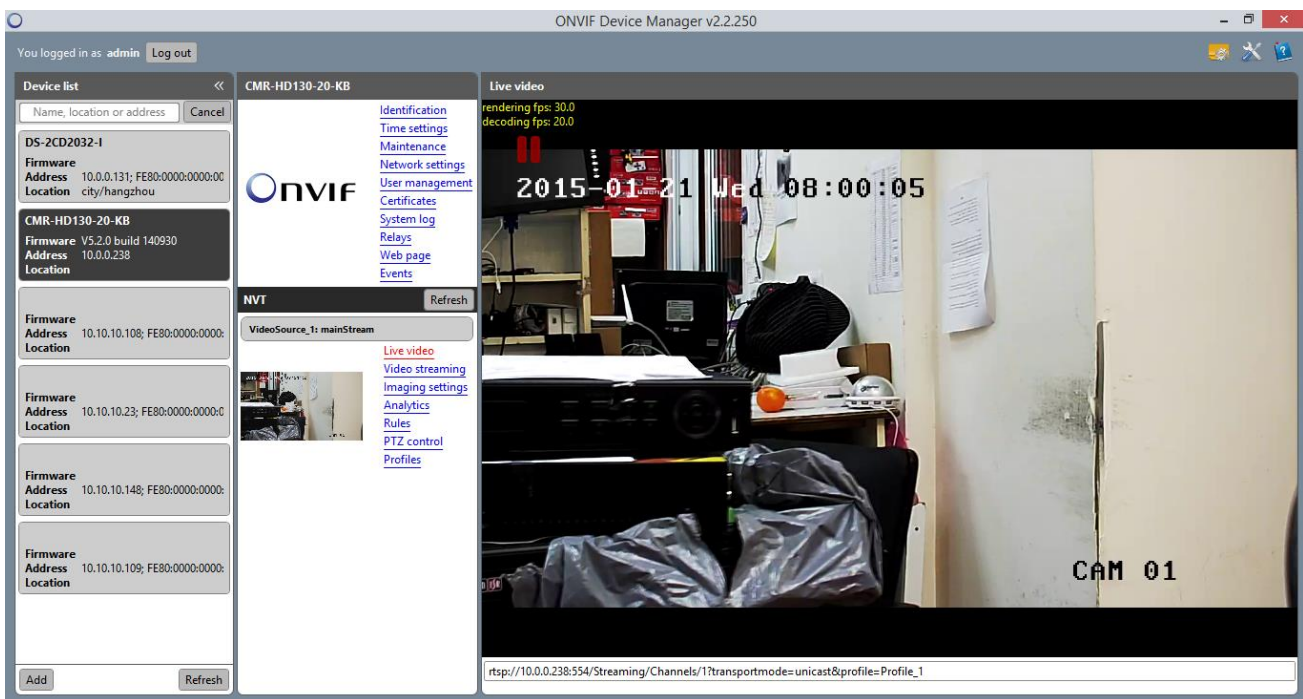


Figure 3-7 IP Tool Live View Interface

**Notes:**

If you use Provision-ISR CMS software, please refer to the CMS user manual for proper configuration of the camera as this manual mainly introduces accessing to the network PTZ by web browser.

# Chapter 4 Live View

## 4.1 Power-up Action

After the power is applied, the PTZ will perform self-test actions. It begins with lens actions and then pan and tilt movement. After the power-up self-test actions, the information as shown in Figure 4-1 will be displayed on screen for 40 seconds.

The System Information displayed on the screen includes the dome model, address, protocol, version and other information. The COMMUNICATION refers to the baud rate, parity, data bit and stop bit of the dome. e.g., 2400, N, 8, 1 indicates the dome is configured with the baud rate of 2400, no parity, 8 data bits and 1 stop bit.

Model	XX-2XXXXX-X ADDRESS
	0
COMMUNICATION	0000,0,0,0
SOFTWARE VERSION	V000
CAMERA VERSION	V000
LANGUAGE	ENGLISH

Figure 4-1 Power-up information

## 4.2 Live View Page

**Purpose:**

The live video page allows you to view live video, capture images, control the PTZ, set/call presets and configure video parameters.

Log in the network speed dome to enter the live view page, or you can click



on the menu bar of the main page to enter the live view page.

## Descriptions of the live view page:

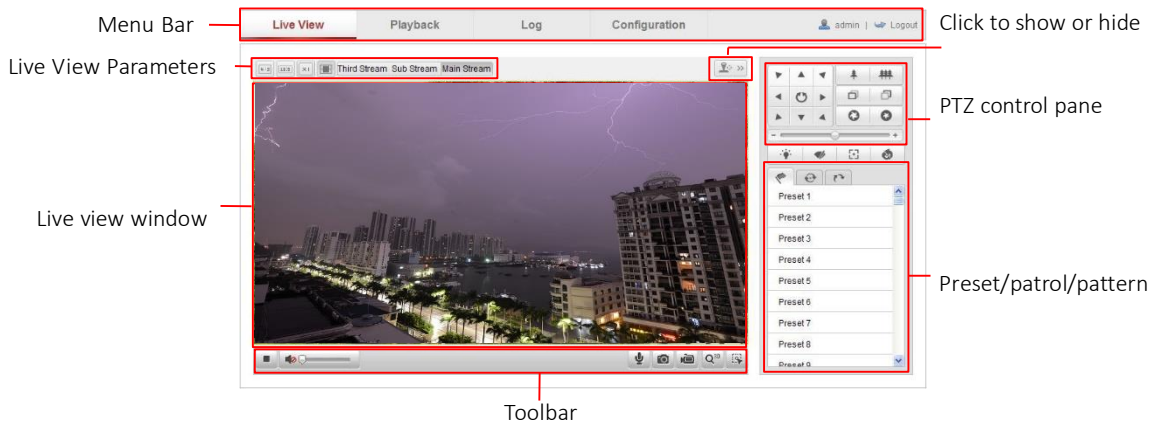


Figure 4-2 Live View Page

### Menu Bar:

Click each tab to enter Live View, Playback, Log and Configuration page respectively.

**Live View Window:** Display the live video.

**Toolbar:** Operations on the live view page, e.g., live view, capture, record, audio on/off, two-way audio, etc.

**PTZ Control:** Panning, tilting, focusing and zooming actions of the PTZ. The lighter, wiper, one-touch focus and lens initialization control.

**Preset/patrol/pattern:** Set and call the preset/patrol/pattern for the PTZ.

**Live View Parameters:** Configure the image size and stream type of the live video.

## 4.3 Starting Live View













In the live view window as shown in Figure 4-3, click  on the toolbar to start the live view of the PTZ.



Figure 4-3 Start Live View

Table 4-1 Descriptions of the Toolbar

Icon	Description	Icon	Description
	Live view on		Live view off
	Manually capture the pictures		
	Manual recording off		Manual recording on
	Audio on and adjust volume		Mute
	Two-way audio off		Two-way audio on
	3D positioning		Manual tracking


**Note:** Before using the two-way audio or recording with audio functions, please set the **Stream Type** to **Video & Audio** referring to Section **6.4.1 Configuring Video Settings**.

#### Full-screen Mode:



You can double-click on the live video to switch the current live view into full-screen or return to normal mode from the full-screen.

#### 3D Positioning:

##### Steps:

1. Click  on the tool bar of live view interface.
2. Operate the 3D positioning function: Left click a position of the live video. The corresponding position will be moved to the center of the live video.
3. Hold down the left mouse button and drag the mouse to the lower right on the live video. The corresponding position will be moved to the center of the live video and zoomed in.
4. Hold down the left mouse button and drag the mouse to the upper left on the live video. The corresponding position will be moved to the center of the live video and zoomed out.

## 4.4 Recording and Capturing Pictures Manually

In the live view interface, click  on the toolbar to capture the live pictures or click  to record the live video. The local saving paths of the captured pictures and clips can be set in the

**Configuration > Local Configuration** interface.

To configure remote automatic recording, please refer to Section **7.2 Configuring Recording Schedule**.

**Note:** The captured image will be saved as a JPEG file in your computer.

## 4.5 Operating PTZ Control

### Purpose:

In the live view interface, you can use the PTZ control buttons to control panning, tilting and zooming.

### 4.5.1 PTZ Control Panel



On the live view page, click  to show the PTZ control panel or click  to hide it. Click the direction buttons to control the pan/tilt movements. Click the zoom/iris/focus buttons to realize lens control.



Figure 4-4 PTZ Control Panel





Button	Description
	Zoom in/out
	Focus near/far
	Iris +/-
	Adjust speed of pan/tilt movements

Table 4-2 Descriptions of PTZ Control Panel

### 4.5.2 Setting / Calling a Preset

#### Purpose:

A preset is a predefined image position. For the defined preset, you can click the calling button to quickly view the desired image position.

#### Setting a Preset:

##### Steps:

1. In the PTZ control panel, select a preset number from the preset list.

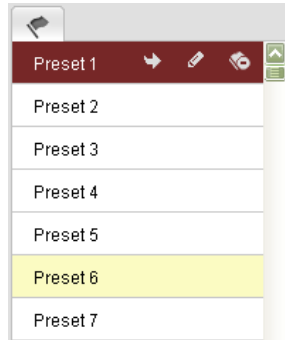




Figure 4-5 Setting a Preset

2. Use the PTZ control buttons to move the lens to the desired position.
  - Pan the PTZ to the right or left.
  - Tilt the PTZ up or down.
  - Zoom in or out.
  - Refocus the lens.
3. Click  to finish the setting of the current preset.
4. You can click  to delete the preset.

**Note:** You can configure up to 256 presets.

#### Calling a Preset:

In the PTZ control panel, select a defined preset from the list and click  to call the preset.

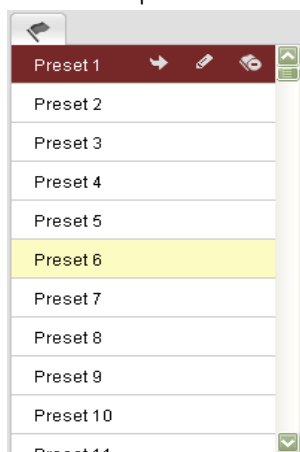


Figure 4-6 Calling a Preset

For convenient preset selection, refer to the following steps to navigate to the preset you want.

#### Steps:

1. Select any preset from the list.
2. Click the preset number you need on the keyboard.

**Note:** The following presets are predefined with special commands. You can only call them but not configure them. For instance, preset 95 is the “Open OSD Menu”.

You may need to use the OSD (On Screen Display) menu when controlling the PTZ remotely. To display the OSD menu on the live view screen, you can call the preset number 95. Note that the OSD menu doesn’t appear on the Analog CVBS output.

Serial No.	Command	Fast Call Up	Note
3	Open OSD Menu	Call 95	
1	Start Pattern Tour	Call 97	Default to start pattern tour of group No.1
1	Start Sequence Tour	Call 98	<b>Configure the Sequence via the OSD Menu (Page 82)</b>
3	Start Auto Scan	Call 99	<b>Configure the Auto Scan via the OSD Menu (Page 81)</b>
4	Remote Reset	Call 94	



### 4.5.3 Setting / Calling a Patrol

**Purpose:**




A patrol is a memorized series of preset function. It can be configured and called on the patrol settings interface. There are up to 8 patrols for customizing. A patrol can be configured with 32 presets.

**Before you start:**

Please make sure that the presets you want to add into a patrol have been defined.

**Setting a Patrol:**

**Steps:**

1. In the PTZ control panel, click  to enter the patrol settings interface.
2. Select a patrol number from .
3. Click  to enter the adding interface of preset as shown in Figure 4-8.

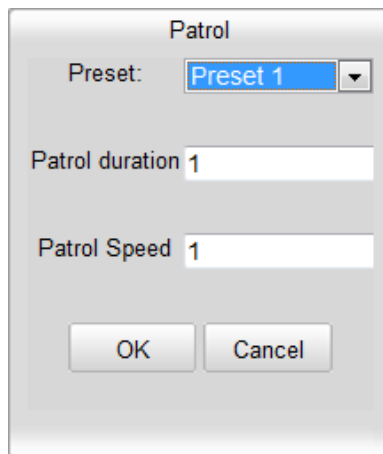
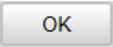




Figure 4-8 Adding Presets

4. Configure the preset number, patrol duration and patrol speed.

Name	Description
Patrol Duration	It is the duration staying on one patrol point. The PTZ moves to another patrol point after the patrol time.
Patrol Speed	It is the speed of moving from one preset to another.

5. Click  to save a preset into the patrol.
6. Repeat the steps from 3 to 5 to add more presets.
7. Click  to save all the patrol settings.

### Calling a Patrol:

In the PTZ control panel, select a defined patrol from  and click  to call the patrol as shown in Figure 4-9.

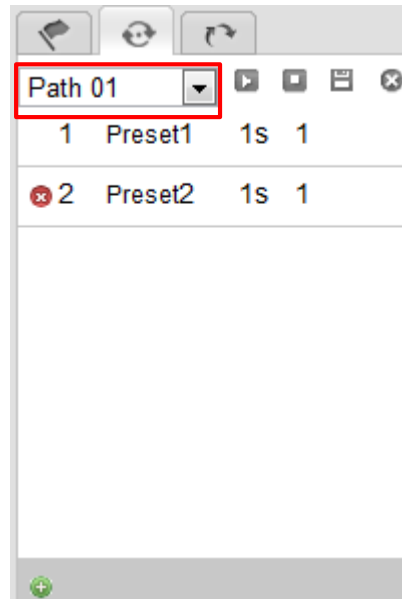









Figure 4-9 Calling a Preset

### ? Buttons on the Patrols interface:

Buttons	Description
	Save a patrol
	Call a patrol
	Stop a patrol
	Enter the adding interface of preset
	Modify a preset
	Delete a preset
	Delete all the presets in one patrol


## 4.5.4 Setting / Calling a Pattern

### Purpose:

A pattern is a memorized series of pan, tilt, zoom, and preset functions. It can be called on the pattern settings interface. There are up to 4 patterns for customizing.

## Setting a Pattern:

### Steps:

1. In the PTZ control panel, click  to enter the pattern settings interface.
2. Select a pattern number from the list as shown in Figure 4-10.

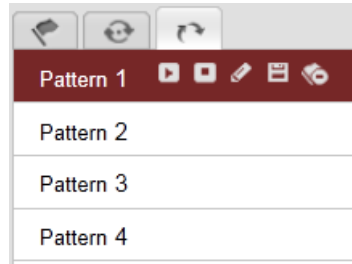









Figure 4-10 Patterns Settings Interface

3. Click  to enable recording the panning, tilting and zooming actions.
4. Click  to save all the pattern settings.

### Buttons on the Patterns interface:

Buttons	Description
	Start to record a pattern.
	Stop recording a pattern.
	Call the current pattern.
	Stop the current pattern.
	Delete the current pattern.

### Notes:

- These 4 patterns can be operated separately and with no priority level.
- When configuring and calling the pattern, proportional pan is valid; the limit stops and auto flip will be invalid; and the 3D positioning operation is not supported.





## 4.6 Configuring Live View Parameters

### Main stream/Sub-stream/Third stream:

You can select **Main Stream** or **Sub Stream** as the stream type of live viewing. The main stream is with a relatively high resolution and needs much bandwidth. The sub-stream is with a low resolution and needs less bandwidth. The default setting of stream type is **Main Stream**.

**Note:** Please refer to Section **6.4.1 Configuring Video Settings** for more detailed parameter settings of the main stream, sub-stream and third stream respectively.

### Image Size:

You can scale up/down the live view image by clicking    . The image size can be 4:3, 16:9, original or auto.

# Chapter 5 PTZ Configuration

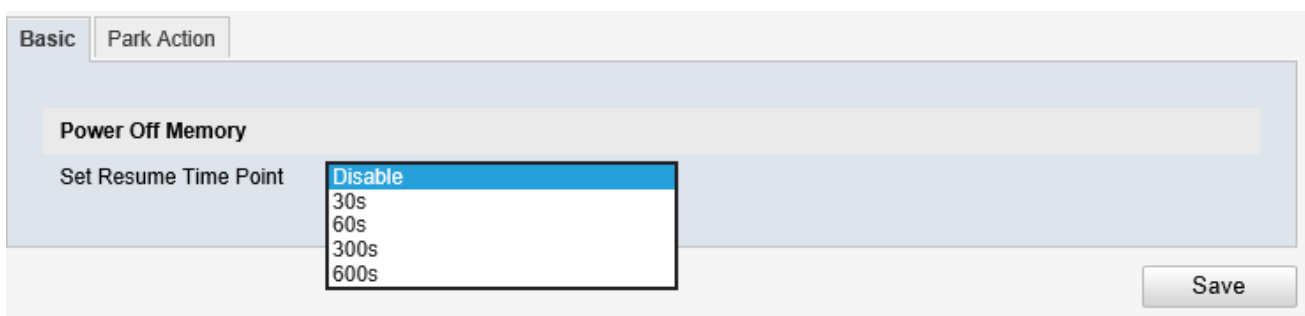
## 5.1 Configuring Power Off Memory

**Purpose:**

This feature allows the dome to resume whichever actions that the PTZ was performing after a power off has occurred.

**Steps:**

1. Enter the Basic Settings interface:  
Configuration > PTZ > Basic



2. Select the duration after the power off where the camera should resume the last performed action:
3. Click "Save"

## 5.2 Configuring Park Actions

**Purpose:**

This feature allows the dome to start a predefined park action (scan, preset, patrol) automatically after a period of inactivity (park time).

**Note:** Scheduled Tasks function is prior to Park Action function. When these two functions are set at the same time, only the Scheduled Tasks function takes effect.

**Steps:**

1. Enter the Park Action Settings interface:  
Configuration > PTZ > Park Action

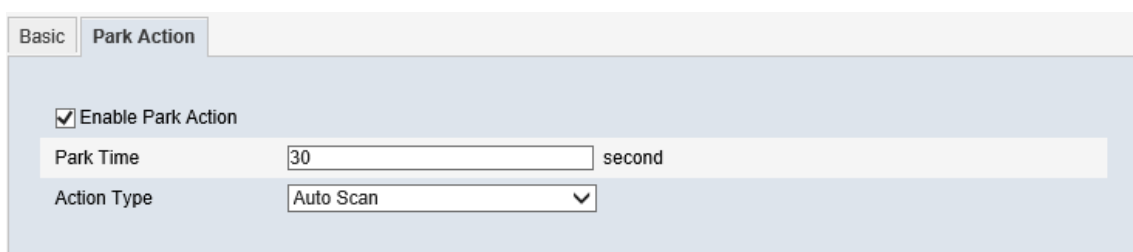


Figure 5-7 Set the Park Action

2. Check the checkbox of **Enable Park Action**.
3. Set the **Park Time** as the inactivity time of the dome before it starts the park actions.
4. Choose **Action Type** the from the drop-down list.



Figure 5-8 Action Types

5. Click  to save the settings.

## Chapter 6 Speed Dome Configuration

### 6.1 Configuring Local Parameters

**Note:** The local configuration refers to the parameters of the live view and other operations using the web browser.

**Steps:**

1. Enter the Local Configuration interface:

Configuration > Advanced Configuration > Local Configuration

The screenshot shows the 'Local Configuration' interface with the following settings:

- Live View Parameters:**
  - Protocol:  TCP,  UDP,  MULTICAST,  HTTP
  - Live View Performance:  Shortest Delay,  Real Time,  Balanced,  Fluency
  - Rules:  Enable,  Disable
  - Image Format:  JPEG,  BMP
- Record File Settings:**
  - Record File Size:  256M,  512M,  1G
  - Save record files to:
  - Save downloaded files to:
- Picture and Clip Settings:**
  - Save snapshots in live view to:
  - Save snapshots when playback to:
  - Save clips to:

A  button is located at the bottom right of the interface.

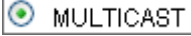
Figure 6-1 Local Configuration Interface

2. Configure the following settings:
  - ▣ **Live View Parameters:** Set the protocol type, stream type, image size and live view performance. **Protocol Type:** TCP, UDP, MULTICAST and HTTP are selectable.

**TCP:** Ensures complete delivery of streaming data and better video quality, yet the real-time transmission will be affected.

**UDP:** Provides real-time audio and video streams.

**HTTP:** Allows the same quality as of TCP without setting specific ports for streaming under some network environments.

**MULTICAST:** It's recommended to select the protocol type to  when using the Multicast function. For other information about Multicast, refer to Section **6.3.1 Configuring TCP/IP Settings**.

**Live View Performance:** Set the live view performance to Least Delay, Balanced or Best Fluency.

**Note:** Please set Live View Performance as Best Fluency for the high frame rate PTZ.

**Rules:** You can enable or disable the rules of dynamic analysis for motion here.

**Image Format:** The captured pictures can be saved as different format. JPEG and BMP are available.

**Record File Settings:** Set the saving path of the video files.

**Record File Size:** Select the packed size of manually recorded and downloaded video files. The size can be set to 256M, 512M or 1G.

**Save record files to:** Set the saving path for the manually recorded video files.

**Save downloaded files to:** Set the saving path for the downloaded video files in playback interface.

**Picture and Clip Settings:** Set the saving paths of the captured pictures and clipped video files.

**Save snapshots in live view to:** Set the saving path of the manually captured pictures in interface.

**Save snapshots when playback to:** Set the saving path of the captured playback interface.

**Note:** You can click “Browse” to change the directory for saving video files, clips and pictures.

3. Click to save the settings.

## 6.2 Configuring Time Settings

### *Purpose:*

You can follow the instructions in this section to configure the time which can be displayed on the video. There are Time Zone, Time Synchronization, Daylight Saving Time (DST) functions for setting the time. Time Synchronization consists of auto mode by Network Time Protocol (NTP) server and manual mode.

To enter the Time Settings interface:

**Configuration > Advanced Configuration > System > Time Settings**

The screenshot shows the 'Time Settings' interface with three tabs: 'Device Information', 'Time Settings', and 'Maintenance'. The 'Time Settings' tab is active. It features a 'Time Zone' dropdown menu set to '(GMT+08:00) Beijing, Urumqi, Singapore'. Below this is a 'Time Sync.' section with two radio buttons: 'NTP' (unselected) and 'Manual Time Sync.' (selected). Under 'NTP', there are input fields for 'Server Address', 'NTP Port', and 'Interval' (with a 'min.' label). Under 'Manual Time Sync.', there are input fields for 'Device Time' and 'Set Time', and a checkbox labeled 'Sync. with computer time' which is currently unchecked. A 'Save' button is located at the bottom right of the interface.

Figure 6-2 Time Settings

**Configuring Time Synchronization by NTP Server** (1) Check the checkbox to enable the NTP function. (2) Configure the following settings:

**Server Address:** IP address of NTP server.

**NTP Port:** Port of NTP server, 123 by default.

**Interval:** The time interval between the two synchronizing actions by NTP server. It can be set from 1 to 10080 minutes.


This screenshot shows a close-up of the 'Time Sync.' section. The 'NTP' radio button is selected. The 'Server Address' field is empty. The 'NTP Port' field contains the value '123'. The 'Interval' field contains the value '0' with a 'min.' label to its right.

Figure 6-3 Time Sync by NTP Server

**Note:** If the PTZ is connected to a public network, you should use a NTP server that has a time synchronization function, such as the server at the National Time Center (IP Address: 210.72.145.44). If the PTZ is set in a customized network, NTP software can be used to establish a NTP server for time synchronization.

## Configuring Time Synchronization Manually

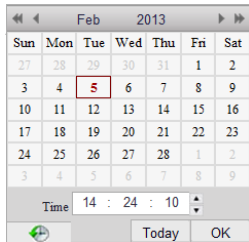
(1) Check the **Manual Time Sync.** Checkbox.

(2) Click  to set the system time from the pop-up calendar. (3) Click



to save the settings.

**Note:** You can also check the **Sync. with computer time** checkbox to synchronize the time of the PTZ with the time of your computer.



**Manual Time Sync.**

Device Time

Set Time

Sync. with computer time

Figure 6-4 Time Sync Manually

### Select the Time Zone

#### *Purpose:*

When the PTZ is taken to another time zone, you can use the **Time Zone** function to adjust the time. The time will be adjusted according to the original time and the time difference between the two time zones.

From the **Time Zone** drop-down menu as shown in Figure 6-5, select the Time Zone in which the PTZ locates.

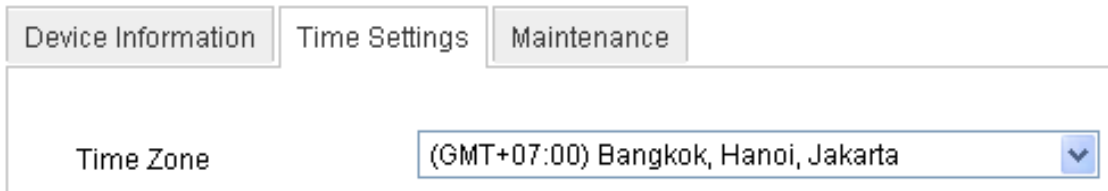


Figure 6-5 Time Zone Settings

## 6.3 Configuring Network Settings

### 6.3.1 Configuring TCP/IP Settings

#### *Purpose:*

TCP/IP settings must be properly configured before you operate the PTZ over network. IPv4 and IPv6 are both supported.



**Steps:**

1. Enter TCP/IP Settings interface:  
**Configuration > Advanced Configuration > Network > TCP/IP**

NIC Settings	
NIC Type	Auto
<input type="checkbox"/> DHCP	
IPv4 Address	172.8.4.166
IPv4 Subnet Mask	255.255.255.0
IPv4 Default Gateway	172.8.4.1
IPv6 Mode	Route Advertisement <span>View Route Advertisement</span>
IPv6 Address	
IPv6 Subnet Mask	
IPv6 Default Gateway	
Mac Address	8c:e7:48:d9:b1:4c
MTU	1500
Multicast Address	

DNS Server	
Preferred DNS Server	8.8.8.8
Alternate DNS Server	

Save

Figure 6-7 TCP/IP Settings

2. Configure the NIC settings, including the **IPv4 (IPv6) Address**, **IPv4 (IPv6) Subnet Mask** and **IPv4 (IPv6) Default Gateway**.
3. Click Save to save the above settings.

**Notes:**

- If the DHCP server is available, you can check  DHCP to automatically obtain an IP address and other network settings from that server.
- The valid value range of Maximum Transmission Unit (MTU) is 500 ~ 9676. The default value is 1500.
- The Multicast sends a stream to the multicast group address and allows multiple clients to acquire the stream at the same time by requesting a copy from the multicast group address.
- Before utilizing this function, you have to enable the Multicast function of your router and configure the gateway of the network PTZ.
- If the DNS server settings are required for some applications (e.g., sending email), you should properly configure the **Preferred DNS Server** and **Alternate DNS server**.

DNS Server	
Preferred DNS Server	8.8.8.8
Alternate DNS Server	

Figure 6-8 DNS Server Settings

**Note:** The router must support the route advertisement function if you select **Route Advertisement** as the IPv6 mode.

### 6.3.2 Configuring Port Settings

**Purpose:**

If there is a router and you want to access the PTZ through Wide Area Network (WAN), you need to forward the 3 ports for the PTZ.

**Steps:**

1. Enter the Port Settings interface:  
**Configuration > Advanced Configuration > Network > Port**

Port Type	Port Number
HTTP Port	80
RTSP Port	554
HTTPS Port	443
Server Port	8000

Figure 6-9 Port Settings

2. Set the HTTP port, RTSP port and port of the PTZ. **HTTP Port:** The default port number is 80. **RTSP Port:** The default port number is 554. **HTTPS Port:** The default port number is 443. **SDK Port:** The default port number is 8000.
3. Click  to save the settings.

### 6.3.3 Configuring PPPoE Settings

**Purpose:**

If you have no router but only a modem, you can use Point-to-Point Protocol over Ethernet (PPPoE) function.

**Steps:**

1. Enter the PPPoE Settings interface:  
**Configuration > Advanced Configuration > Network > PPPoE**

Setting	Value
Enable PPPoE	<input checked="" type="checkbox"/>
Dynamic IP	0.0.0.0
User Name	
Password	
Confirm	

Figure 6-10 PPPoE Settings

2. Check the **Enable PPPoE** checkbox to enable this feature.
3. Enter **User Name**, **Password**, and **Confirm** password for PPPoE access.

**Note:** The User Name and Password should be assigned by your ISP.

4. Click  to save and exit the interface.

### 6.3.4 Configuring DDNS Settings

**Purpose:**

If your PTZ is set to use PPPoE as its default network connection, you can use the Dynamic DNS (DDNS) for network access.

**Before you start:**

Registration on the DDNS server is required before configuring the DDNS settings of the PTZ.

**Steps:**

1. Enter the DDNS Settings interface:  
**Configuration > Advanced Configuration > Network > DDNS**

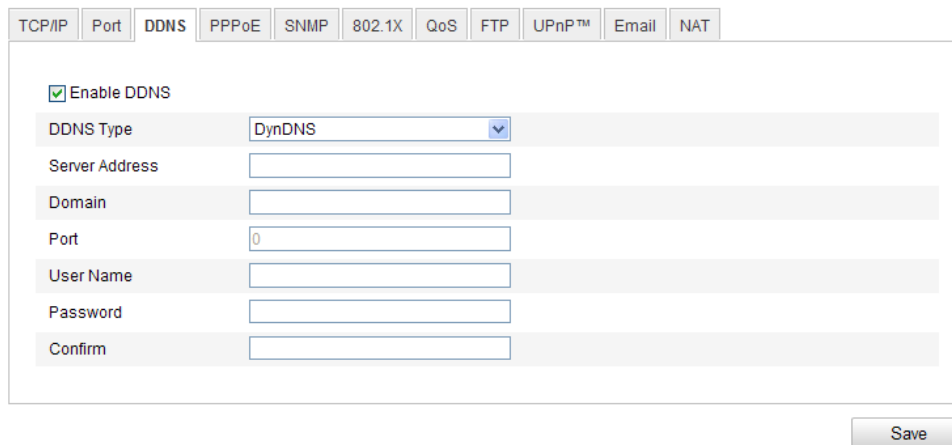
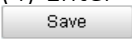


Figure 6-11 DDNS Settings

2. Check the **Enable DDNS** checkbox to enable this feature.
3. Select **DDNS Type**. Three DDNS types are selectable: DynDNS & NO-IP.

**DynDNS:**

**Steps:**

- (1) Enter **Server Address** of DynDNS (e.g. members.dyndns.org).
- (2) In the **Domain** text field, enter the domain name obtained from the DynDNS website.
- (3) Enter the **Port** of DynDNS server.
- (4) Enter the **User Name** and **Password** registered on the DynDNS website. (5) Click  to save the settings.

Enable DDNS

DDNS Type	DynDNS
Server Address	members.dyndns.org
Domain	123.dyndns.org
Port	0
User Name	test
Password	•••••
Confirm	•••••

Figure 6-12 DynDNS Settings

**IP Server:**

**Steps:**

(1) Enter the Server Address of the IP Server. (2) Click  to save the settings.

**Note:** The **Server Address** should be entered with the static IP address of the computer that runs the IP Server software. For the IP Server, you have to apply a static IP, subnet mask, gateway and preferred DNS from the ISP.

Enable DDNS

DDNS Type	IPServer
Server Address	202.23.10.117

Figure 6-13 IP Server Settings

### 6.3.5 Configuring SNMP Settings

**Purpose:**

You can use SNMP to get PTZ status and parameters related information.

**Before you start:**

Before setting the SNMP, please use the SNMP software and manage to receive the PTZ information via SNMP port. By setting the Trap Address, the PTZ can send the alarm event and exception messages to the surveillance center.

**Note:** The SNMP version you select should be the same as that of the SNMP software.

**Steps:**

1. Enter the SNMP Settings interface:

## Configuration > Advanced Configuration > Network > SNMP

TCP/IP Port DDNS PPPoE **SNMP** 802.1X QoS FTP UPnP™ Email NAT

**SNMP v1/v2**

Enable SNMPv1

Enable SNMP v2c

Write SNMP Community private

Read SNMP Community public

Trap Address

Trap Port 162

Trap Community public

**SNMP v3**

Enable SNMPv3

Read UserName

Security Level no auth, no priv

Authentication Algorithm  MD5  SHA

Authentication Password

Private-key Algorithm  DES  AES

Private-key password

Write UserName

Security Level no auth, no priv

Authentication Algorithm  MD5  SHA

Authentication Password

Private-key Algorithm  DES  AES

Private-key password

**SNMP Other Settings**

SNMP Port 161

Save

Figure 6-15 SNMP Settings

2. Check the corresponding version checkbox  Enable SNMPv1  Enable SNMP v2c  Enable SNMPv3 to enable the feature.
3. Configure the SNMP settings.  
**Note:** The configuration of the SNMP software should be the same as the settings you configure here.
4. Click  to save and finish the settings.

### 6.3.6 Configuring 802.1X Settings

#### **Purpose:**

The PTZ supports IEEE 802.1X standard.

IEEE 802.1X is a port-based network access control. It enhances the security level of the LAN. When devices connect to this network with IEEE 802.1X standard, the authentication is needed. If the authentication fails, the devices don't connect to the network.

The protected LAN with 802.1X standard is shown as follows:

- ② before connecting the Network Camera to the protected LAN, please apply a digital certificate from a Certificate Authority.


- ② The network camera requests access to the protected LAN via the authenticator (a switch).
- ② The switch forwards the identity and password to the authentication server (RADIUS server).
- ② The switch forwards the certificate of authentication server to the network camera.
- ② If all the information is validated, the switch allows the network access to the protected network.

**Steps:**

1. Connect the network camera to your PC directly with a network cable.
2. Enter the 802.1X Settings interface:

**Configuration > Advanced Configuration > Network > 802.1X**

Figure 6-17 802.1X Settings

3. Check the **Enable IEEE 802.1X** checkbox to enable it.
4. Configure the 802.1X settings, including user name and password.
  - Note:** The EAP-MD5 version must be identical with that of the router or the switch.
5. Enter the user name and password (issued by the CA) to access the server.
6. Click  to finish the settings.
  - Note:** The camera reboots when you save the settings.
7. After the configuration, connect the camera to the protected network.

### 6.3.7 Configuring QoS Settings

**Purpose:**

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

**Steps:**

1. Enter the QoS Settings interface:  
**Configuration > Advanced Configuration > Network > QoS**

Figure 6-18 QoS Settings

- Configure the QoS settings, including video/audio DSCP, event/alarm DSCP and Management DSCP.  
The valid DSCP value ranges from 0 to 63. The DSCP value is bigger, the priority is higher.
- Click  to save the settings.

**Notes:**

Make sure that you enable the QoS function of your network device (such as a router). It will ask for a reboot for the settings to take effect.

### 6.3.8 Configuring FTP Settings

**Purpose:**

You can set a FTP server and configure the following parameters for uploading captured pictures.

**Steps:**

- Enter the FTP Settings interface:  
**Configuration >Advanced Configuration > Network > FTP**

Figure 6-19 FTP Settings

- Configure the FTP settings, including server address, port, user name, password, directory and upload type.
  - Setting the directory in FTP server for saving files:**  
In the **Directory Structure** field, you can select the root directory, parent directory and child directory.
    - Root directory:** The files will be saved in the root of FTP server.
    - Parent directory:** The files will be saved in a folder in FTP server. The name of folder can be defined as shown in following Figure 6-20.

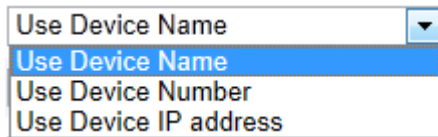


Figure 6-20 Parent Directory

**Child directory:** It is a sub-folder which can be created in the parent directory. The files will be saved in a sub-folder in FTP server. The name of folder can be defined as shown in following Figure 6-21.

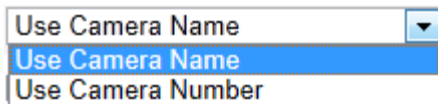


Figure 6-21 Child Directory

**Upload type:** To enable uploading the captured picture to the FTP server.

- Click  to save the settings.

**Note:** If you want to upload the captured pictures to FTP server, you also have to enable the continuous snapshot or event-triggered snapshot in **Snapshot** interface. For detailed information, please refer to the Section **7.3 Configuring Snapshot Settings**.

### 6.3.9 Configuring UPnP™ Settings

Universal Plug and Play (UPnP™) is a networking architecture that provides compatibility among networking equipment, software and other hardware devices. The UPnP protocol allows devices to connect seamlessly and to simplify the implementation of networks in the house and corporate environments.

With the function enabled, you don't need to configure the port mapping for each port, and the camera is connected to the Wide Area Network via the router.

**Steps:**

- Enter the UPnP™ settings interface.  
**Configuration > Advanced Configuration > Network > UPnP**
- Check the checkbox to enable the UPnP™ function.  
You can edit the Friendly Name of the PTZ. This name can be detected by corresponding device, such as a router.

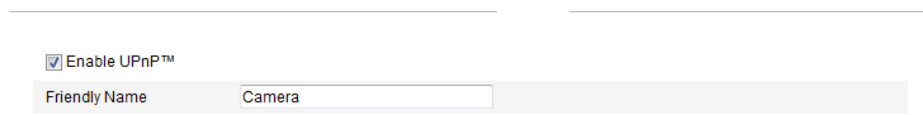
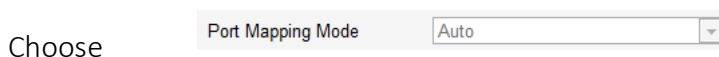


Figure 6-22 Configure UPnP Settings

### 6.3.10 Configuring NAT (Network Address Translation) Settings

**Steps:**

- Set the port mapping mode:  
**To port mapping with the default port numbers:**





To port mapping with the customized port numbers:

Choose

And you can customize the value of the port number by yourself.

Enable Port Mapping

	Protocol Name	External Port	Status
<input checked="" type="checkbox"/>	HTTP	83	Not Valid
<input checked="" type="checkbox"/>	RTSP	<input type="text" value="554"/>	Not Valid
<input checked="" type="checkbox"/>	SDK	8003	Not Valid

2. Click  to save the settings.

### 6.3.11 Configuring Email Settings

**Purpose:**

The system can be configured to send an Email notification to all designated receivers if an alarm event is detected, e.g., motion detection event, video loss, tamper-proof, etc.

**Before you start:**

Please configure the DNS Server settings under **Advanced Configuration > Network > TCP/IP** before using the Email function.

**Steps:**

1. Enter the Email Settings interface:

2. Configuration > Advanced Configuration > Network > Email

The screenshot shows a web-based configuration interface for email settings. It is organized into two main sections: 'Sender' and 'Receiver'.  
**Sender Section:**  
- 'Sender': Text input field.  
- 'Sender's Address': Text input field.  
- 'SMTP Server': Text input field.  
- 'SMTP Port': Text input field with '25' entered.  
- 'Enable SSL': Unchecked checkbox.  
- 'Interval': Dropdown menu with '2s' selected.  
- 'Attached Image': Unchecked checkbox.  
- 'Authentication': Unchecked checkbox.  
- 'User Name': Text input field.  
- 'Password': Text input field.  
- 'Confirm': Text input field.  
**Receiver Section:**  
- 'Receiver1': Text input field.  
- 'Receiver1's Address': Text input field.  
- 'Receiver2': Text input field.  
- 'Receiver2's Address': Text input field.  
- 'Receiver3': Text input field.  
- 'Receiver3's Address': Text input field.

Figure 6-23 Email Settings

2. Configure the following settings:

**Sender:** The name of the email sender.

**Sender's Address:** The email address of the sender.

**SMTP Server:** The SMTP Server IP address or host name (e.g., smtp.263xmail.com).

**SMTP Port:** The SMTP port. The default TCP/IP port for SMTP is 25.

**Enable SSL:** Check the checkbox to enable SSL if it is required by the SMTP server.

**Attached Image:** Check the checkbox of Attached Image if you want to send emails with attached alarm images.

**Interval:** The interval refers to the time between two actions of sending attached pictures.

**Authentication (optional):** If your email server requires authentication, check this checkbox to use authentication to log in to this server and enter the login user name and password.

**Receiver:** Select the receiver to which the email is sent. Up to 2 receivers can be configured.

**Receiver:** The name of the user to be notified.

**Receiver's Address:** The email address of user to be notified.

3. Click  to save the settings.

## 6.4 Configuring Video and Audio Settings

### 6.4.1 Configuring Video Settings

**Steps:**

1. Enter the Video Settings interface:

Configuration > Advanced Configuration > Video / Audio > Video

The screenshot shows a web interface for configuring video settings. At the top, there are two tabs: 'Video' (selected) and 'Audio'. Below the tabs is a form with the following fields:

Stream Type	Main Stream(Normal)
Video Type	Video&Audio
Resolution	1920*1080P
Bitrate Type	Constant
Video Quality	Medium
Frame Rate	25
Max. Bitrate	6144 Kbps
Video Encoding	H.264
Profile	High Profile
I Frame Interval	25

At the bottom right of the form is a 'Save' button.

Figure 6-24 Configure Video Settings

2. Select the **Stream Type** of the PTZ to main stream (normal), sub-stream or third stream. The main stream is usually for recording and live viewing with good bandwidth, and the sub-stream can be used for live viewing when the bandwidth is limited. Refer to the Section **6.1 Configuring Local Parameters** for switching the main stream and sub-stream for live viewing.
3. You can customize the following parameters for the selected main stream or sub-stream:

**Video Type:**

Select the stream type to video stream, or video & audio composite stream. The audio signal will be recorded only when the **Video Type** is **Video & Audio**.

**Resolution:**  
Select the resolution of the video output.

**Bitrate Type:**

Select the bitrate type to constant or variable.

**Video Quality:**

When bitrate type is selected as **Variable**, 6 levels of video quality are selectable.

**Frame Rate:**

The frame rate is to describe the frequency at which the video stream is updated and it is measured by frames per second (fps). A higher frame rate is advantageous when there is movement in the video stream, as it maintains image quality throughout.

**Max. Bitrate:**

Set the max. bit-rate to 32~16384 Kbps. The higher value corresponds to the higher video quality, but the higher bandwidth is required.

**Video Encoding:**

The **Video Encoding** standard can be set to H.264 or MJPEG.

**Profile:**

You can set the profile level to **High Profile**, **Main Profile** or **Basic Profile**.

**I Frame Interval:**

Set the I-Frame interval from 1 to 400.

- Click  to save the settings.

## 6.4.2 Configuring Audio Settings

**Steps:**

- Enter the Audio Settings interface  
**Configuration > Advanced Configuration > Video / Audio > Audio**

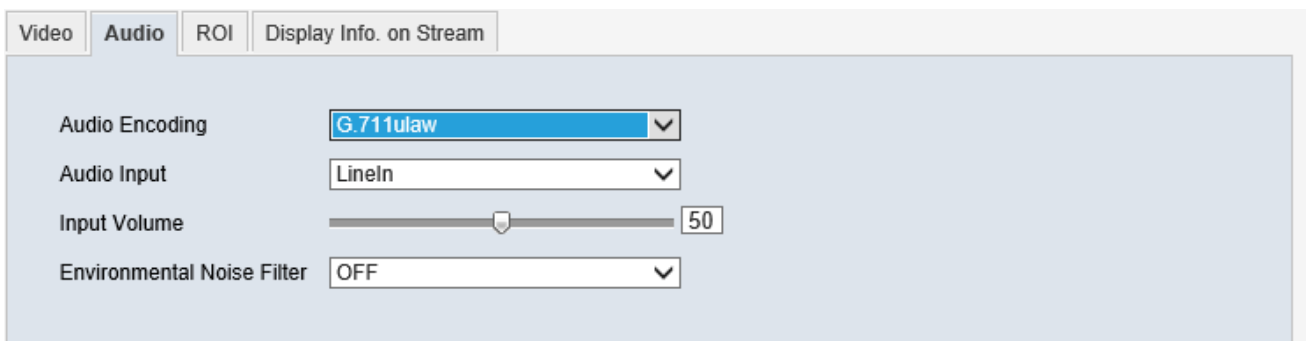



Figure 6-25 Audio Settings

- Configure the following settings.  
**Audio Encoding:** G.711ulaw, G.711alaw and G.726, MP2L2, AAC selectable.
- Click  to save the settings.

## 6.4.3 Configuring ROI Settings

**Before you start:**

ROI (Region of Interest) encoding is used to enhance the quality of images which are specified in advance.

**Stream Type:**

You can set the ROI function for main stream, sub stream or third stream. Select a stream type and then configure the ROI settings.

**Fixed Region:** The fixed region encoding is the ROI encoding for the manually configured area. And you can choose the Image Quality Enhancing level for ROI encoding, and you can also name the ROI area.

**Steps:**

1. Enter the ROI Settings interface  
**Configuration > Advanced Configuration > Video / Audio > ROI**
2. Select a **Region No.**.
3. Check the check box of **Enable** under **Fixed Region**.
4. Click **Draw Area** and draw a red frame in the live view image.
5. Adjust the **ROI level** from 1 to 6. The higher the value, the better image quality in the red frame.
6. Enter a **Region Name** and click **Save** to save the settings.

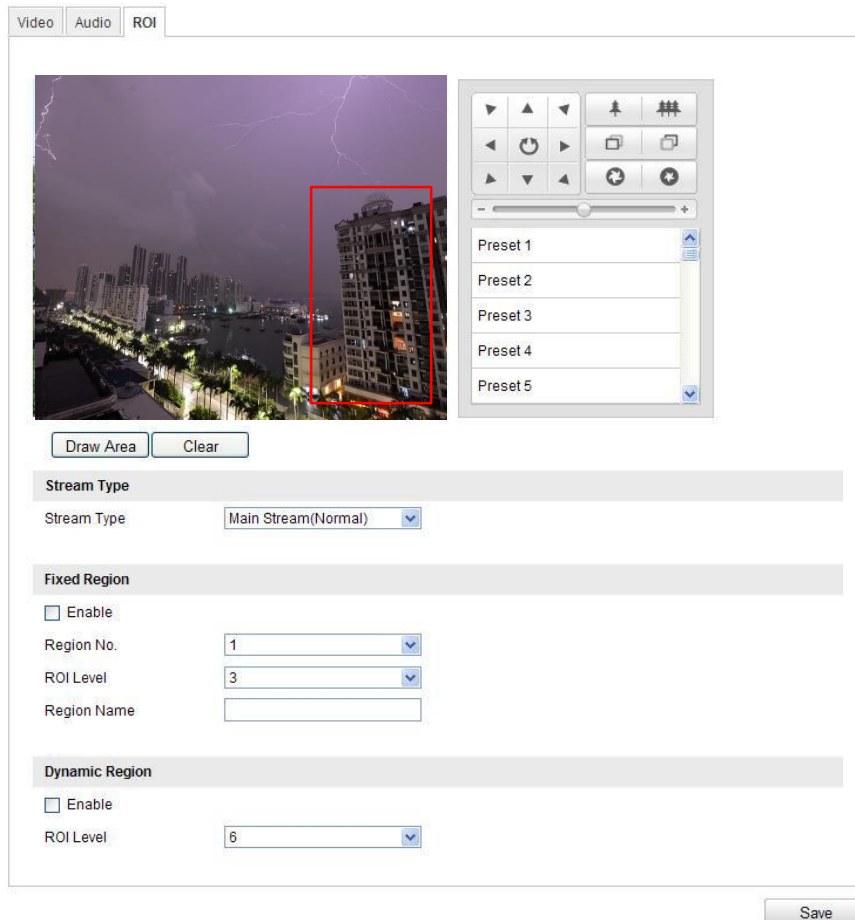


Figure 6-26 Region of Interest

**Dynamic Region:** And the dynamic tracking refers to the ROI defined by intelligent analysis such as human face detection. You can choose the Image Quality Enhancing level for the ROI encoding.

**Steps:**

1. Check the check box of **Enable** under **Dynamic Tracking**.
2. Adjust the **ROI level** from 1 to 6. The higher the value, the better the ROI quality.
3. Click **Save** to save the settings.

## 6.5 Configuring Image Settings

### 6.5.1 Configuring Display Settings

**Purpose:**

You can set the image quality of the PTZ, including brightness, contrast, saturation, sharpness, etc.

**Notes:**

The parameters in **Display Settings** interface vary depending on the models of PTZ.

You can double click the live view to enter full screen mode and double click it again to exit.

**Steps:**

1. Enter the Display Settings interface:  
Configuration > Basic Configuration> Image> Display Settings  
Or Configuration > Advanced Configuration> Image> Display Settings
2. Set the image parameters of the PTZ.

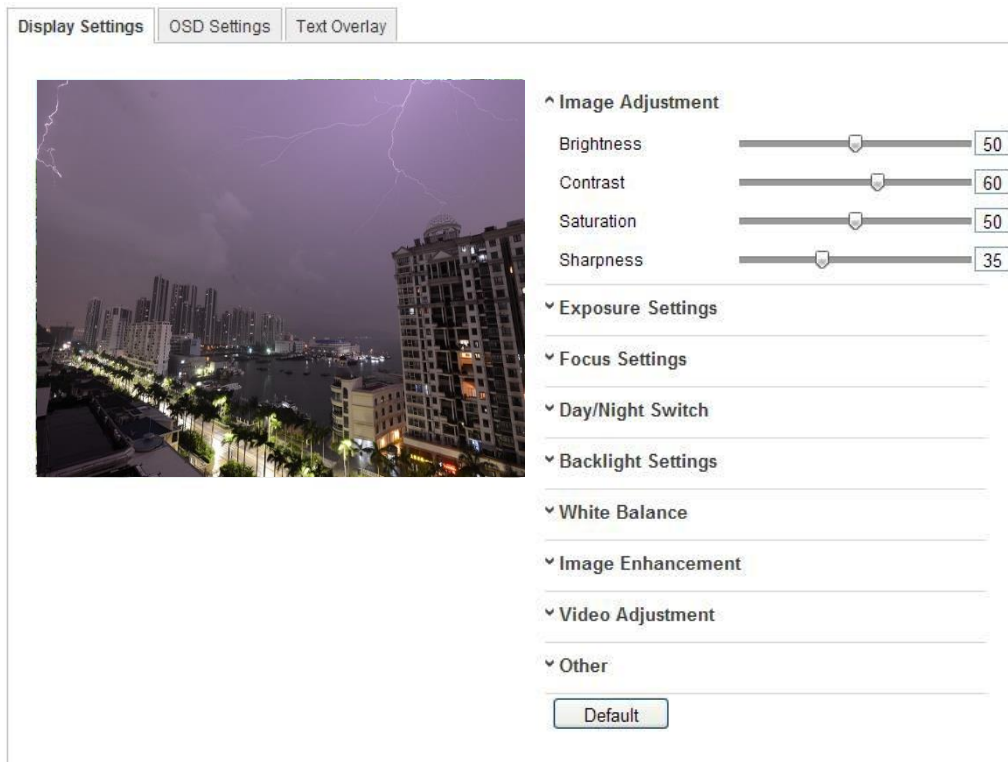


Figure 6-27 Display Settings

#### Image Adjustment

##### Brightness

This feature is used to adjust brightness of the image. The value ranges from 0 to 100.

##### Contrast

This feature enhances the difference in color and light between parts of an image. The value ranges from 0 to 100.

## Saturation

This feature is used to adjust color saturation of the image. The value ranges from 0 to 100.

## Sharpness

Sharpness function enhances the detail of the image by sharpening the edges in the image. The value ranges from 0 to 100.

## Exposure Settings

### Exposure Mode

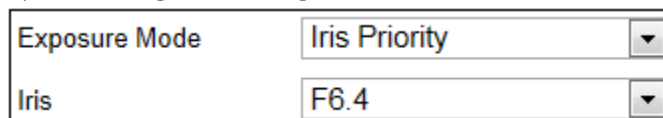
The **Exposure Mode** can be set to **Auto**, **Iris Priority**, **Shutter Priority**, **Manual**.

Auto:

The iris, shutter and gain values will be adjusted automatically according to the brightness of the environment.

Iris Priority:

The value of iris needs to be adjusted manually. The shutter and gain values will be adjusted automatically according to the brightness of the environment.

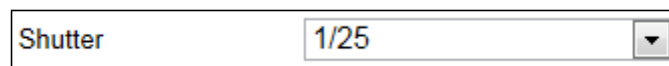


Exposure Mode	Iris Priority
Iris	F6.4

Figure 6-28 Manual Iris

Shutter Priority:

The value of shutter needs to be adjusted manually. The iris and gain values will be adjusted automatically according to the brightness of the environment.




Shutter	1/25
---------	------

Figure 6-29 Manual Shutter

Gain Priority:

The value of gain needs to be adjusted manually. The shutter and iris values will be adjusted automatically according to the brightness of the environment.



Gain	20
------	----

Figure 6-30 Manual Gain

Manual:

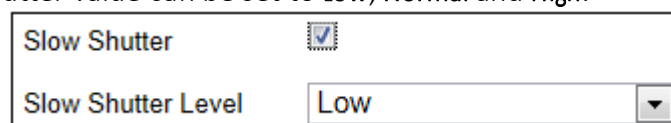
In **Manual** mode, you can adjust the values of **Gain**, **Shutter**, **Iris** manually.

### Limit Gain

This feature is used to adjust gain of the image. The value ranges from 0 to 100.

### Slow Shutter

This function can be used in underexposure condition. It lengthens the shutter time to ensure full exposure. The slow shutter value can be set to **Low**, **Normal** and **High**.



Slow Shutter	<input checked="" type="checkbox"/>
Slow Shutter Level	Low

Figure 6-31 Slow Shutter

## Focus Settings

### Focus Mode

The **Focus Mode** can be set to **Auto**, **Manual**, **Semi-auto**.

**Auto:**

The PTZ focuses automatically at any time according to objects in the scene.

**Semi-auto:**

The PTZ focuses automatically only once after panning, tilting and zooming.

**Manual:**

In **Manual** mode, you need to use  on the control panel to focus manually.

### Min. Focus Distance

This function is used to limit the minimum focus distance. The value can be set to 1.5m, 3m, 6m, 10cm and 50cm.

## Day/Night Switch

### Day/Night Switch

The **Day/Night Switch** mode can be set to **Auto**, **Day** and **Night**.

**Auto:**

In **Auto** mode, the day mode and night mode can switch automatically according to the light condition of environment. The switching sensitivity can be set to **Low**, **Normal**, **High**.

Day/Night Switch	Auto	▼
Sensitivity	Normal	▼

**Day:**

In **Day** mode, the PTZ displays color image. It is used for normal lighting conditions.

**Night:**

In **Night** mode, the image is black and white. **Night** mode can increase the sensitivity in low light conditions.

**Notes:** When the **IR Light Mode** is auto, the day/night mode is adjusted automatically according to the IR Light Mode. Manually setting the day/night mode is invalid.

When the **IR Light Mode** is manual and the **IR Light Bright** is 0, you can set the day/night mode manually.

When the **IR Light Mode** is manual and the **IR Light Bright** is not 0, the night mode is set as the default mode. Manually setting the day/night mode is invalid.

### IR Light Mode

IR light mode can be set to **Auto** and **Manual**.

**Auto:** The brightness of the infrared light will be adjusted automatically. **IR Light Sensitivity** value ranges from 0 to 100.

**Manual:** you need to adjust the brightness value of infrared light manually.



IR Light Bright value ranges from 0 to 100.

**Note:** For detailed parameters configuration of IR light, you can enter the OSD menu by calling the special preset 95.

## Backlight Settings

### BLC

If there's a bright backlight, the subject in front of the backlight appears silhouetted or dark. Enabling **BLC** (back light compensation) function can correct the exposure of the subject. But the backlight environment is washed out to white.

### WDR (Wide Dynamic Range)

The wide dynamic range (WDR) function helps the camera provide clear images even under back light circumstances. When there are both very bright and very dark areas simultaneously in the field of view, WDR balances the brightness level of the whole image and provide clear images with details.

You can enable or disable the WDR function as shown in Figure 6-33. The wide dynamic level ranges from 0 to 100.

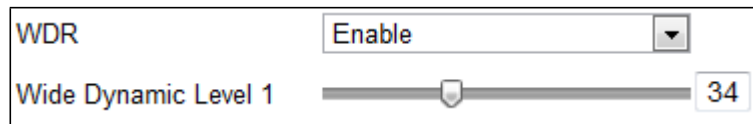


Figure 6-33 WDR

### HLC (Not Functional)

HLC (High Light Compensation) makes the camera identify and suppress the strong light sources that usually flare across a scene. This makes it possible to see the detail of the image that would normally be hidden.

## White Balance

The **White Balance** mode can be set to **Auto**, **MWB**, **Outdoor**, **Indoor**, **Fluorescent Lamp**.

### Auto:

In **Auto** mode, the camera retains color balance automatically according to the current color temperature.

### Manual White Balance:

In **MWB** mode, you can adjust the color temperature manually to meet your own demand as shown in Figure 6-34.

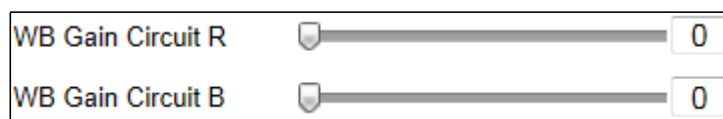


Figure 6-34 Manual White Balance

### Outdoor

You can select this mode when the PTZ is installed in outdoor environment.

### Indoor

You can select this mode when the PTZ is installed in indoor environment.

### Fluorescent Lamp

You can select this mode when there are fluorescent lamps installed near the PTZ.

## Image Enhancement

### 3D Digital Noise Reduction

You can enable or disable the 3D **Digital Noise Reduction** function as shown in Figure 6-35. The level ranges from 0 to 100.

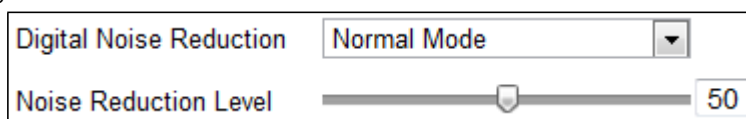


Figure 6-35 3D Digital Noise Reduction

### De-fog Mode

When there is fog in the image, you can enable this function to get clear image.

### Chroma Suppress

The **Chroma Suppress** level ranges from 0 to 100 as shown in Figure 6-36.

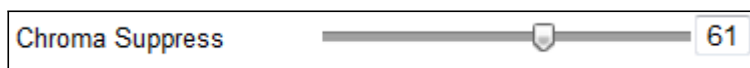


Figure 6-36 Chroma Suppress

## Video Adjustment

### Mirror

If you turn the **MIRROR** function on, the image will be flipped. It is like the image in the mirror. The flip direction can be set to OFF, LEFT/RIGHT, UP/DOWN or CENTER.

### Video Standard

You can set the **Video Standard** to 50hz (PAL) or 60hz (NTSC) according to the video system in your country.

### Other

#### Lens Initialization

The lens operates the movements for initialization when you check the check box of

#### Lens Initialization. Zoom Limit

You can set **Zoom Limit** value to limit the maximum value of zooming. The value can be set to 20, 40, 80, 160 and 320.

#### Local Output

You can select the output mode to ON or OFF.

## 6.5.2 Configuring OSD Settings

**Purpose:** The PTZ supports following on screen displays:

**Zoom:** Identifies the amount of magnification.

**Direction:** Displays panning and tilting direction, with the format of PXXX TXXX. The XXX following P indicates the degrees in pan direction, while the XXX following T indicates the degrees in tilt position.

**Time:** Supports for time display.

**Preset Title:** Identifies preset being called.

**Camera Name:** Identifies the name of PTZ.

You can customize the on screen display of time.

**Steps:**

1. Enter the OSD Settings interface:

Configuration > Advanced Configuration > Image > OSD Settings

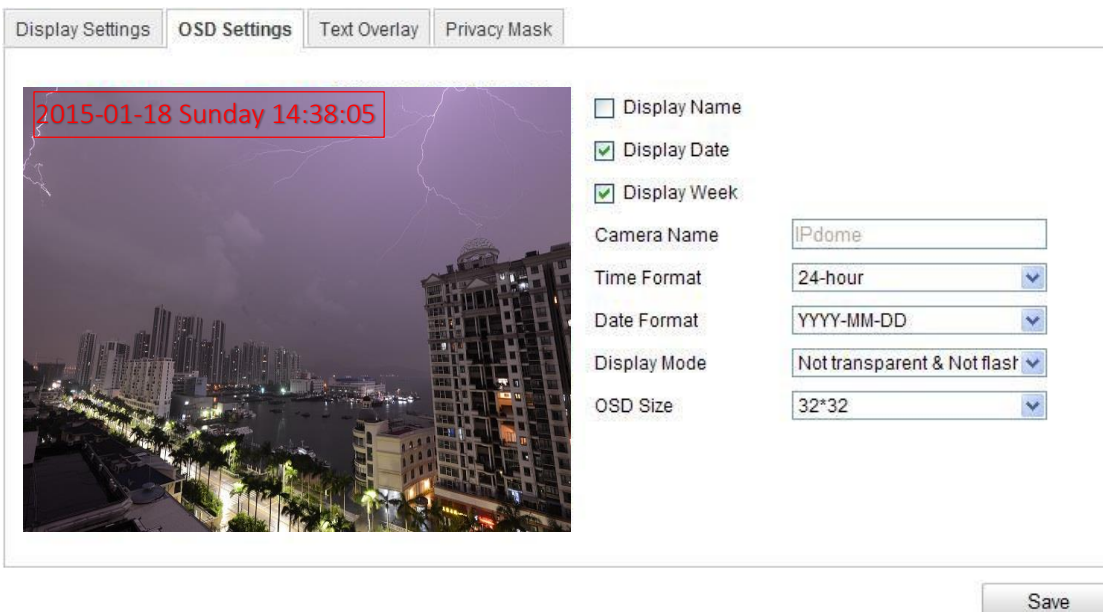


Figure 6-37 OSD Settings


2. Check the corresponding checkbox to select the display of PTZ name, date or week if required.
3. Edit the PTZ name in the text field of **Camera Name**.
4. Select from the drop-down list to set the time format, date format and display mode.
5. You can use the mouse to click and drag the text frame  in the live view window to adjust the OSD position.



Figure 6-38 Adjust OSD Location

6. Click  to activate above settings.

### 6.5.3 Configuring Text Overlay Settings

**Purpose:**

You can customize the text overlay.

**Steps:**

1. Enter the Text Overlay Settings interface:  
**Configuration > Advanced Configuration > Image > Text Overlay**
2. Check the checkbox in front of textbox to enable the on-screen display.
3. Input the characters in the textbox.
4. Use the mouse to click and drag the red text frame  in the live view window to adjust the text overlay position.
5. Click .

**Note:** There are up to 8 text overlays configurable.

## 6.6 Configuring and Handling Alarms

**Purpose:**

This section explains how to configure the network PTZ to respond to alarm events, including motion detection, external alarm input, video loss, tamper-proof and exception. These events can trigger the alarm actions, such as Notify Surveillance Center, Send Email, Trigger Alarm Output, etc.

For example, when an external alarm is triggered, the network PTZ sends a notification to an e-mail address.

## 6.6.1 Configuring Motion Detection

### Purpose:

Motion detection is a feature which can trigger alarm actions and actions of recording videos when the motion occurred in the surveillance scene.

### Steps:

1. Set the Motion Detection Area.

#### Steps:

- (1) Enter the motion detection settings interface  
Configuration > Advanced Configuration > Events > Motion Detection
- (2) Check the checkbox of **Enable Motion Detection**.

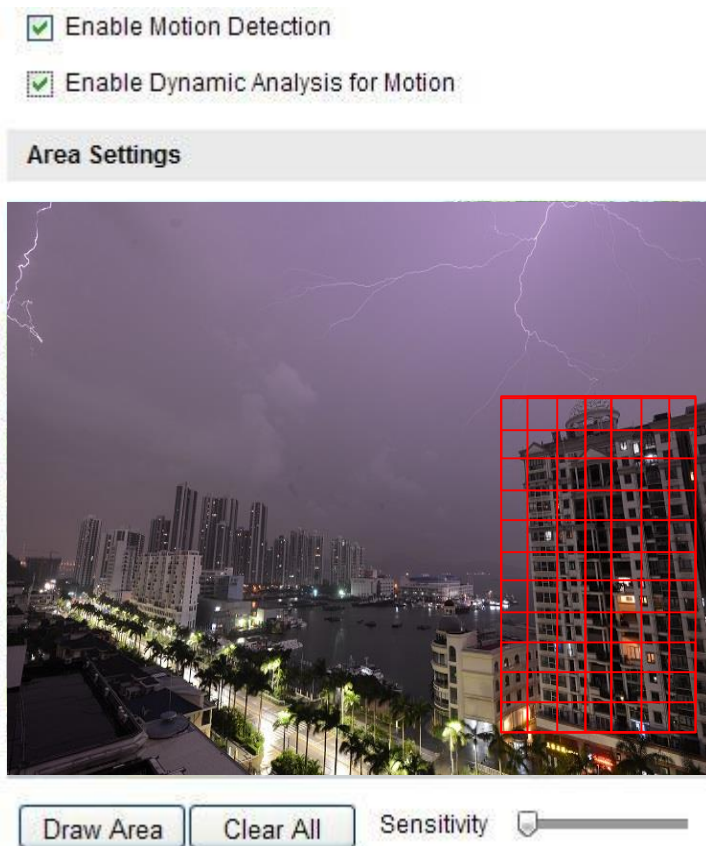


Figure 6-40 Enable Motion Detection

- (3) Click **Draw Area**. Click and drag the mouse on the live video image to draw a motion detection area.

**Note:** You can draw up to 8 motion detection areas on the same image.


- (4) Click **Stop Drawing** to finish drawing.

**Note:** You can click **Clear All** to clear all of the areas.

- (5) Move the slider **Sensitivity** to set the sensitivity of the detection.

- Set the Arming Schedule for Motion Detection.

**Steps:**

- To edit the arming schedule as shown in Figure 6-42, click  in Figure 6-41.

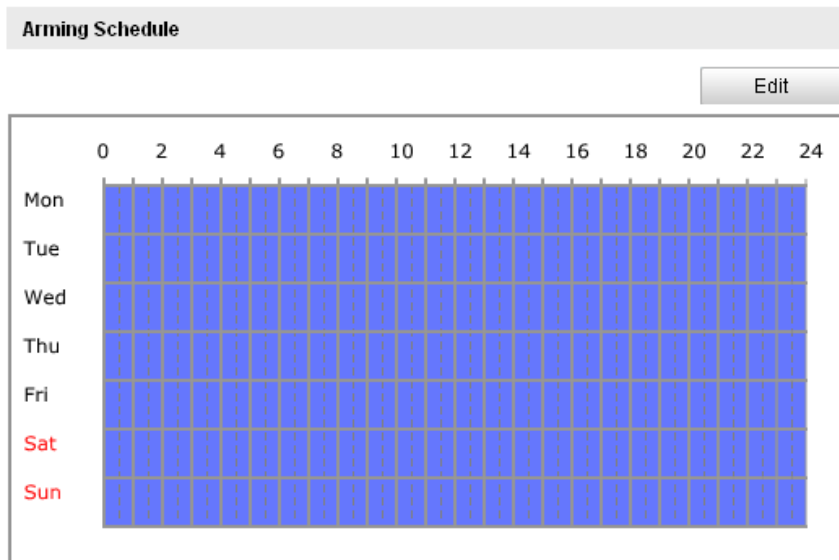




Figure 6-41 Arming Schedule

- Choose the day you want to set the arming schedule as shown in Figure 6-42. (3) Click  to set the time period for the arming schedule.

- After you set the arming schedule, you can click  to copy the schedule to other days (Optional).

- Click  to save the settings.

**Note:** The time of each period can't be overlapped. Up to 4 periods can be configured for each day.

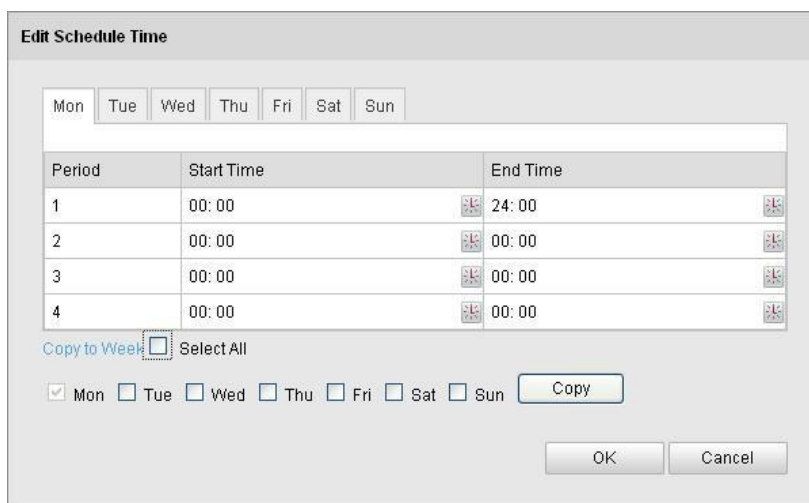


Figure 6-42 Arming Time Schedule

- Set the Alarm Actions for Motion Detection.

**Purpose:**

You can specify the linkage method when an event occurs. The following contents are about how to configure the different types of linkage method.

Linkage Method	
Normal Linkage	Other Linkage
<input type="checkbox"/> Notify Surveillance Center <input type="checkbox"/> Send Email <input type="checkbox"/> Upload to FTP <input type="checkbox"/> Trigger Channel	Trigger Alarm Output <input type="checkbox"/> Select All <input type="checkbox"/> A->1 <input type="checkbox"/> A->2

Figure 6-43 Linkage Method

Check the checkbox to select the linkage method. Notify surveillance center, send email, upload to FTP, trigger channel and trigger alarm output are selectable.

**Notify Surveillance Center**

Send an exception or alarm signal to remote management software when an event occurs.

**Send Email**

Send an email with alarm information to a user or users when an event occurs.

**Note:** To send the Email when an event occurs, you need to refer to Section

**6.3.10 Configuring Email Settings** to set the Email parameters.

**Upload to FTP**

Capture the image when an alarm is triggered and upload the picture to a FTP server.

**Note:** You need a FTP server and set FTP parameters first. Refer to Section

**6.3.8 Configuring FTP Settings** for setting FTP parameters.

**Trigger Channel** Record a video when an event occurs.

**Note:** You have to set the recording schedule to realize this function. Please refer to Section **7.2 Configuring Recording Schedule** for settings the recording schedule.

**Trigger Alarm Output** Trigger one or more external alarm outputs when an event occurs.

**Note:** To trigger an alarm output when an event occurs, please refer to Section **6.6.5 Configuring Alarm Output** to set the alarm output parameters.

## 6.6.2 Configuring Video Loss Alarm

### Steps:

1. Enter the Video Loss Setting interface:

Configuration > Advanced Configuration > Events > Video Loss

Enable Video Loss Detection

**Arming Schedule**

	0	2	4	6	8	10	12	14	16	18	20	22	24
Mon													
Tue													
Wed													
Thu													
Fri													
Sat													
Sun													

**Linkage Method**

Normal Linkage	Other Linkage
<input type="checkbox"/> Notify Surveillance Center	Trigger Alarm Output <input type="checkbox"/> Select All
<input type="checkbox"/> Send Email	<input type="checkbox"/> A->1 <input type="checkbox"/> A->2

Figure 6-44 Video Loss

2. Check the **Enable Video Loss Detection** checkbox to enable the video loss detection.
3. Click  to edit the arming schedule for video loss detection. The arming schedule configuration is the same as the setting of the arming schedule for motion detection. Refer to *Step 2 Set the Arming Schedule for Motion Detection* in **Section 6.6.1**.
4. Check the checkbox to select the linkage method taken for the video loss alarm. Notify surveillance center, send email and trigger alarm output are selectable. Please *Step 3 Set the Alarm Actions for Motion Detection* in **Section 6.6.1**.
5. Click  to save the settings.



### 6.6.3 Configuring Video Tampering Alarm

**Purpose:**

You can configure the PTZ to trigger the alarm actions when the lens is covered.

**Steps:**

1. Enter the tampering Settings interface:  
Configuration > Advanced Configuration > Events > Video Tampering

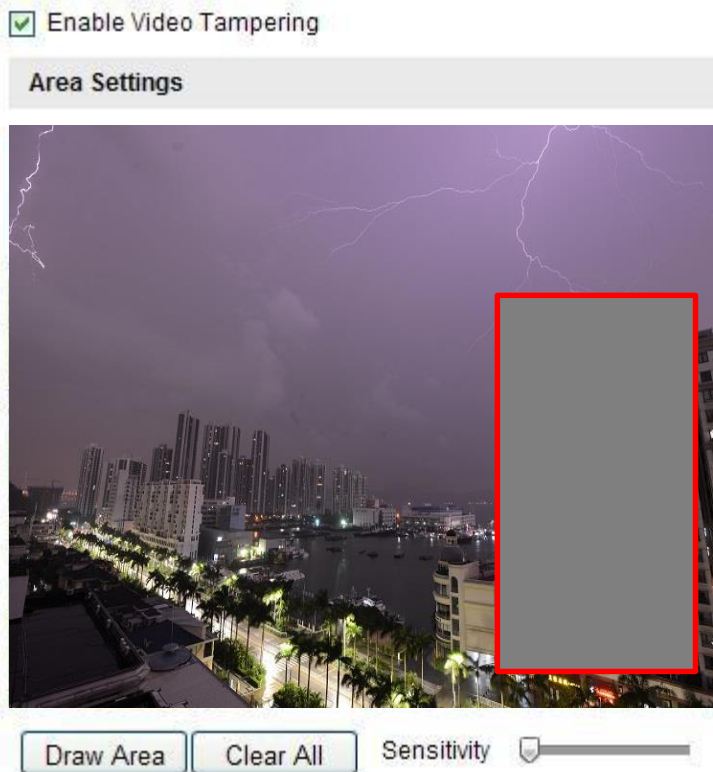


Figure 6-45 Tamper-proof Alarm

2. Check **Enable Video Tampering** checkbox to enable the tampering detection.
3. Set the tampering area. Refer to *Step 1 Set the Motion Detection Area* in Section **6.6.1 Configuring Motion Detection**.
4. Click  to edit the arming schedule for tampering. The arming schedule configuration is the same as the setting of the arming schedule for motion detection. Refer to *Step 2 Set the Arming Schedule for Motion Detection* in Section **6.6.1 Configuring Motion Detection**.
5. Check the checkbox to select the linkage method taken for the tampering. Notify surveillance center, send email and trigger alarm output are selectable. Please refer to *Step 3 Set the Alarm Actions for Motion Detection* in Section **6.6.1 Configuring Motion Detection**.
6. Click  to save the settings.

## 6.6.4 Configuring External Alarm Input

### Steps:

1. Enter the Alarm Input Settings interface:

**Configuration > Advanced Configuration > Events > Alarm Input:**

2. Choose the alarm input No. and the Alarm Type. The alarm type can be NO (Normally Open) and NC (Normally Closed).

3. Edit the name in **Alarm Name**  to set a name for the alarm input (optional).

Alarm Input No.

Alarm Name

Alarm Type

**Arming Schedule**

	0	2	4	6	8	10	12	14	16	18	20	22	24
Mon													
Tue													
Wed													
Thu													
Fri													
Sat													
Sun													

Figure 6-46 Alarm Input Settings

4. Click  to set the arming schedule for the alarm input. Refer to *Step 2 Set the Arming Schedule for Motion Detection* in Section **6.6.1 Configuring Motion Detection**.
5. Check the checkbox to select the linkage method taken for the alarm input. Refer to *Step 3 Set the Alarm Actions for Motion Detection* in Section **6.6.1 Configuring Motion Detection**.
6. You can also choose the PTZ linking for the alarm input. Check the relative checkbox and select the No. to enable Preset Calling, Patrol Calling or Pattern Calling.
7. You can copy your settings to other alarm inputs.
8. Click  to save the settings.

Linkage Method	
Normal Linkage	Other Linkage
<input type="checkbox"/> Notify Surveillance Center <input type="checkbox"/> Send Email <input type="checkbox"/> Upload to FTP <input type="checkbox"/> Trigger Channel	Trigger Alarm Output <input type="checkbox"/> Select All <input type="checkbox"/> A->1 <input type="checkbox"/> A->2 PTZ Linking <input type="checkbox"/> Preset No. <input type="text" value="1"/> <input type="button" value="v"/> <input type="checkbox"/> Patrol No. <input type="text" value="1"/> <input type="button" value="v"/> <input type="checkbox"/> Pattern <input type="text" value="1"/> <input type="button" value="v"/>
Copy to Alarm	
<input type="checkbox"/> Select All <input checked="" type="checkbox"/> A<-1 <input type="checkbox"/> A<-2 <input type="checkbox"/> A<-3 <input type="checkbox"/> A<-4 <input type="checkbox"/> A<-5 <input type="checkbox"/> A<-6 <input type="checkbox"/> A<-7	

Figure 6-47 Linkage Method

## 6.6.5 Configuring Alarm Output

### Steps:

1. Enter the Alarm Output Settings interface:  
**Configuration>Advanced Configuration> Events > Alarm Output**
2. Select one alarm output channel in the **Alarm Output** drop-down list.
3. Set a name in **Alarm Name**  for the alarm output (optional).
4. The **Delay** time can be set to **5sec, 10sec, 30sec, 1min, 2min, 5min, 10min** or **Manual**. The delay time refers to the time duration that the alarm output remains in effect after alarm occurs.
5. Click  to enter the **Edit Schedule Time** interface. The time schedule configuration is the same as the settings of the arming schedule for motion detection. Refer to *Step 2 Set the Arming Schedule for Motion Detection* in Section **6.6.1 Configuring Motion Detection**.
6. You can copy the settings to other alarm outputs.
7. Click  to save the settings.

Alarm Output

Alarm Name

Delay

**Arming Schedule**

	0	2	4	6	8	10	12	14	16	18	20	22	24
Mon													
Tue													
Wed													
Thu													
Fri													
Sat													
Sun													

**Copy to Alarm**

Select All

A->1

Figure 6-48 Alarm Output Settings

### 6.6.6 Handling Exception

The exception type can be HDD full, HDD error, network disconnected, IP address conflicted and illegal login to the PTZs.

**Steps:**

1. Enter the Exception Settings interface:  
**Configuration > Advanced Configuration > Events > Exception**
2. Check the checkbox to set the actions taken for the Exception alarm. Refer to *Step 3 Set the Alarm Actions Taken for Motion Detection* in Section **6.6.1 Configuring Motion Detection**.

Exception Type		HDD Full
Normal Linkage		Other Linkage
<input type="checkbox"/> Notify Surveillance Center	Trigger Alarm Output <input type="checkbox"/> Select All	
<input type="checkbox"/> Send Email	<input type="checkbox"/> A->1 <input type="checkbox"/> A->2	

Figure 6-49 Exception Settings

- Click  to save the settings.

## Chapter 7 Record Settings

### Before you start:

To configure record settings, please make sure that you have the network storage device within the network or the SD card inserted in your PTZ.

### 7.1 Configuring NAS Settings

#### Before you start:

The network disk should be available within the network and properly configured to store the recorded files, log files, etc.

#### Steps:

- Add the network disk
  - Enter the NAS (Network-Attached Storage) Settings interface:


Configuration > Advanced Configuration > Storage > NAS

HDD No.	Type	Server Address	File Path
1	NAS	10.99.105.249	/dvr/test
2	NAS		
3	NAS		
4	NAS		

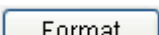
Figure 7-1 Add Network Disk

- Enter the IP address of the network disk, and the default format of file path is */dvr/share* as shown in Figure 7-1.

**Note:** The network disk file path name *share* is user-defined while creating the DVR network storage. Please refer to the *User Manual of NAS* for creating the file path.

- Click  to add the network disk.

**Note:** After having saved successfully, you need to reboot the PTZ to activate the settings.

- Initialize the added network disk.
  - Enter the HDD Settings interface (**Advanced Configuration > Storage > Storage Management**), in which you can view the capacity, free space, status, type and property of the disk.
  - If the status of the disk is **Uninitialized** as shown in Figure 7-2, check the corresponding checkbox to select the disk and click  to start initializing the disk.

HDD Device List							Format
<input checked="" type="checkbox"/>	HDD No.	Capacity	Free space	Status	Type	Property	Progress
<input checked="" type="checkbox"/>	9	0.96GB	0.00GB	Uninitialized	NAS	R/W	

Figure 7-2 Initialize Disk

HDD Device List							Format
<input checked="" type="checkbox"/>	HDD No.	Capacity	Free space	Status	Type	Property	Progress
<input checked="" type="checkbox"/>	9	39.06GB	0.00GB	Uninitialized	NAS	R/W	7%

Figure 7-3 Initializing

When the initialization completed, the status of disk will become **Normal** as shown in Figure 7-4.

HDD Device List							Format
<input type="checkbox"/>	HDD No.	Capacity	Free space	Status	Type	Property	Progress
<input type="checkbox"/>	9	39.06GB	38.75GB	Normal	NAS	R/W	

Figure 7-4 View Disk Status

**Notes:**

- ☐ Up to 8 NAS disks can be connected to the PTZ.
- ☐ To initialize and use the SD card after insert it to the PTZ, please refer to the steps of NAS disk initialization.

## 7.2 Configuring Recording Schedule

**Purpose:**

There are two kinds of recording for the PTZs: manual recording and scheduled recording. For the manual recording, refer to Section **4.4 Recording and Capturing Pictures Manually**. In this section, you can follow the instructions to configure the scheduled recording. By default, the record files of scheduled recording are stored in the SD card (if supported) or in the network disk.

**Steps:**

1. Enter the Record Schedule Settings interface:  
 Configuration > Advanced Configuration > Storage > Record Schedule

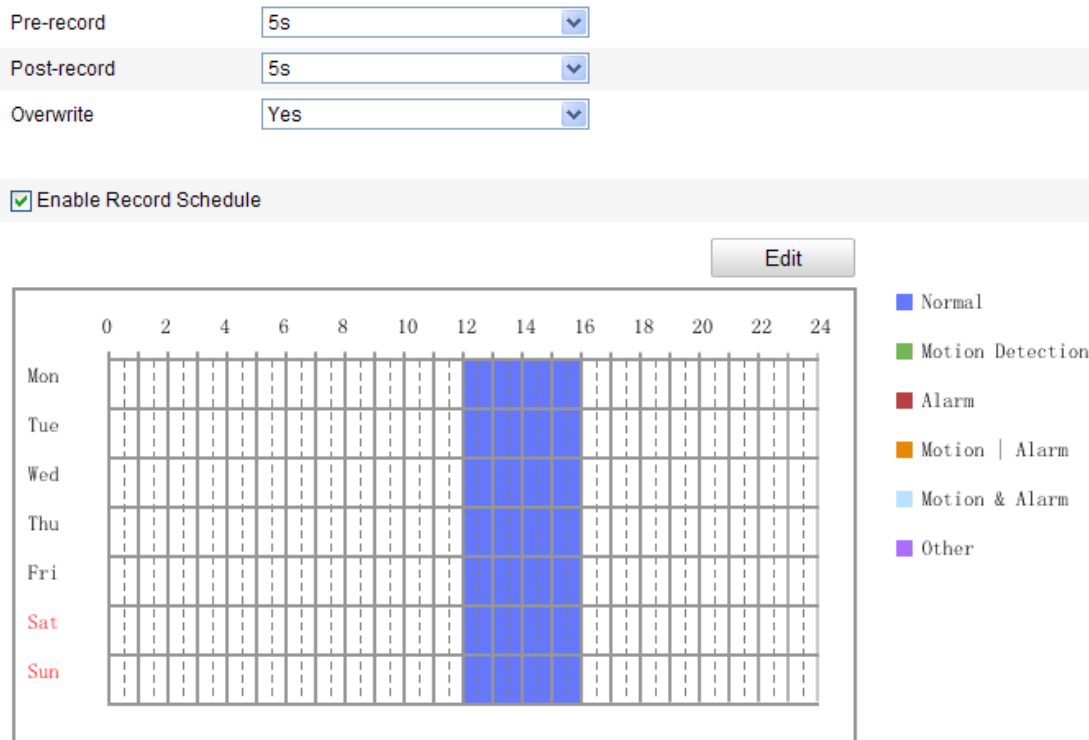


Figure 7-5 Recording Schedule Interface

2. Check the checkbox of **Enable Record Schedule** to enable scheduled recording.
3. Set the record parameters of the PTZ.

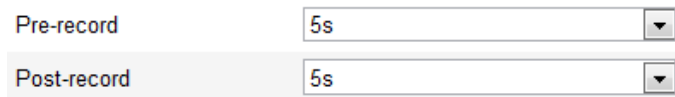

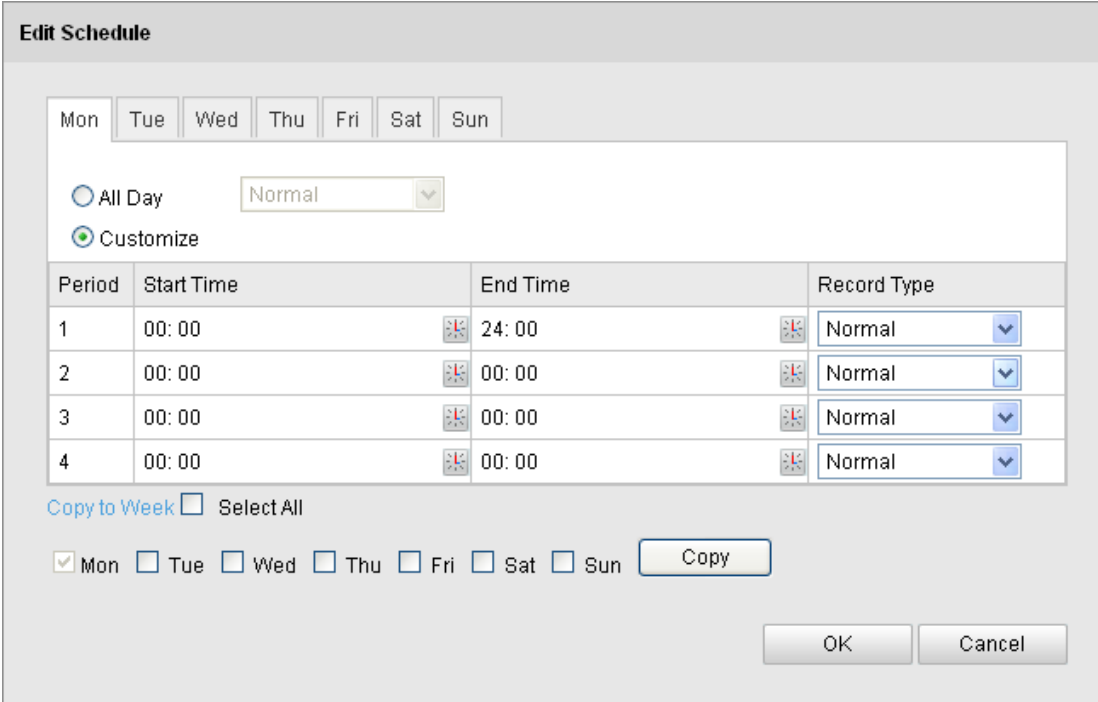


Figure 7-6 Record Parameters

- ❓ **Pre-record:** The time you set to start recording before the scheduled time or the event. For example, if an alarm triggers recording at 10:00, and the pre-record time is set as 5 seconds, the PTZ starts to record at 9:59:55.  
The Pre-record time can be configured as No Pre-record, 5 s, 10 s, 15 s, 20 s, 25 s, 30 s or not limited.  
**Note:** The pre-record time changes according to the video bitrate.
- ❓ **Post-record:** The time you set to stop recording after the scheduled time or the event. For example, if an alarm triggered recording ends at 11:00, and the post-record time is set as 5 seconds, the PTZ records until 11:00:05. The Post-record time can be configured as 5 s, 10 s, 30 s, 1 min, 2 min, 5 min or 10 min.
- ❓ **Overwrite:** If you enable his function and the HDD is full, the new record files overwrite the oldest record files automatically.

4. Click  to edit the record schedule.



Period	Start Time	End Time	Record Type
1	00:00	24:00	Normal
2	00:00	00:00	Normal
3	00:00	00:00	Normal
4	00:00	00:00	Normal

Figure 7-7 Record Schedule

5. Choose the day to set the record schedule. (1) Set all-day record or segment record:
- ❓ If you want to configure the all-day recording, please check the **All Day** checkbox.
  - ❓ If you want to record in different time sections, check the **Customize** checkbox. Set the **Start Time** and **End Time**.
- Note:** The time of each segment can't be overlapped. Up to 4 segments can be configured.
- (2) Select a **Record Type**. The record type can be Normal, Motion Detection, Alarm, Motion | Alarm, Motion & Alarm.
- ❓ **Normal**  
If you select **Normal**, the video will be recorded automatically according to the time of the schedule.
  - ❓ **Record Triggered by Motion Detection**  
If you select **Motion Detection**, the video will be recorded when the motion is detected.  
Besides configuring the recording schedule, you have to set the motion detection area and check the checkbox of **Trigger Channel** in the **Linkage Method** of Motion Detection Settings interface. For detailed information, please refer to the *Step 1 Set the Motion Detection Area* in the Section **6.6.1 Configuring Motion Detection**.
  - ❓ **Record Triggered by Alarm**  
If you select **Alarm**, the video will be recorded when the alarm is triggered via the external alarm input channels.  
Besides configuring the recording schedule, you have to set the **Alarm Type** and check the checkbox of **Trigger Channel** in the **Linkage Method** of Alarm Input Settings interface. For detailed information, please refer to Section **6.6.4 Configuring External Alarm Input**.



❓ **Record Triggered by Motion & Alarm**

If you select **Motion & Alarm**, the video will be recorded when the motion and alarm are triggered at the same time.

Besides configuring the recording schedule, you have to configure the settings on the **Motion Detection** and **Alarm Input Settings** interfaces. Please refer to Section 6.6.1 and Section 6.6.4 for detailed information.

❓ **Record Triggered by Motion & Alarm**

If you select **Motion & Alarm**, the video will be recorded when the external alarm is triggered or the motion is detected.

Besides configuring the recording schedule, you have to configure the settings on the **Motion Detection** and **Alarm Input Settings** interfaces. Please refer to Section 6.6.1 and Section 6.6.4 for detailed information.

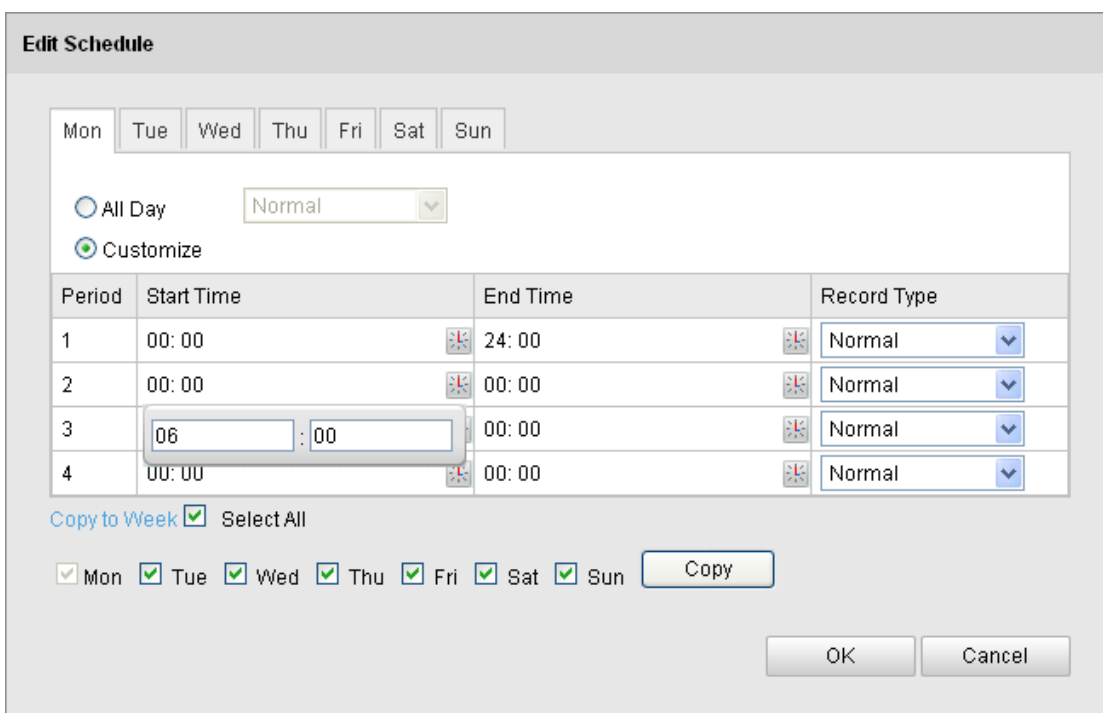


Figure 7-8 Edit Record Schedule

(3) Check the checkbox  Select All and click  to copy settings of this day to the whole week. You can also check any of the checkboxes before the date and click copy.

(4) Click  to save the settings and exit the **Edit Record Schedule** interface.

6. Click  to save the settings.

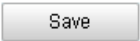
## 7.3 Configuring Snapshot Settings

### *Purpose:*

You can configure the scheduled snapshot and event-triggered snapshot. You can upload the captured pictures to a FTP server.

### **Basic Settings**

#### *Steps:*

1. Enter the Snapshot Settings interface:  
**Configuration > Advanced Configuration > Storage > Snapshot**
2. Check the **Enable Timing Snapshot** checkbox to enable continuous snapshot.  
Check the **Enable Event-triggered Snapshot** checkbox to check event-triggered snapshot.
3. Select the quality of the snapshot.
4. Set the time interval between two snapshots.
5. Click  to save the settings.

### **Uploading to FTP**

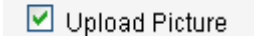


Please make sure that the FTP server is online.

You can follow below configuration instructions to upload the snapshots to FTP.

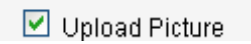

- ☐ Upload continuous snapshots to FTP

#### *Steps:*

- 1) Configure the FTP settings and check  checkbox in FTP Settings interface.  
Please refer to Section **6.3.8 Configuring FTP Settings** for more details to configure FTP parameters.
- 2) Check the **Enable Timing Snapshot** checkbox.

- ☐ Upload event-triggered snapshots to FTP

#### *Steps:*

- 1) Configure the FTP settings and check  checkbox in FTP Settings interface. Please refer to Section **6.3.8 Configuring FTP Settings** for more details to configure FTP parameters.
- 2) Check  checkbox in Motion Detection Settings or Alarm Input interface.  
Please refer to *Step 3 Set the Alarm Actions Taken for Motion Detection* in Section **6.6.1 Configuring Motion Detection**, or *Step 4 Configuring External Alarm Input* in Section **6.6.1 Configuring Motion Detection**.
- 3) Check the **Enable Event-triggered Snapshot** checkbox.

**Timing**

Enable Timing Snapshot

Format:

Resolution:

Quality:

Interval:

**Event-Triggered**

Enable Event-Triggered Snapshot

Format:

Resolution:

Quality:

Interval:

Capture Number:

Figure 7-9 Snapshot Settings

## Chapter 9 Log (not available on this model)

## Chapter 10 Others

### 10.1 Managing User Accounts

Enter the User Management interface:

Configuration > Basic Configuration > Security > User Or Configuration > Advanced Configuration > Security > User

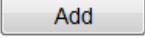

The **admin** user has access to create, modify or delete other accounts. Up to 32 user accounts can be created.

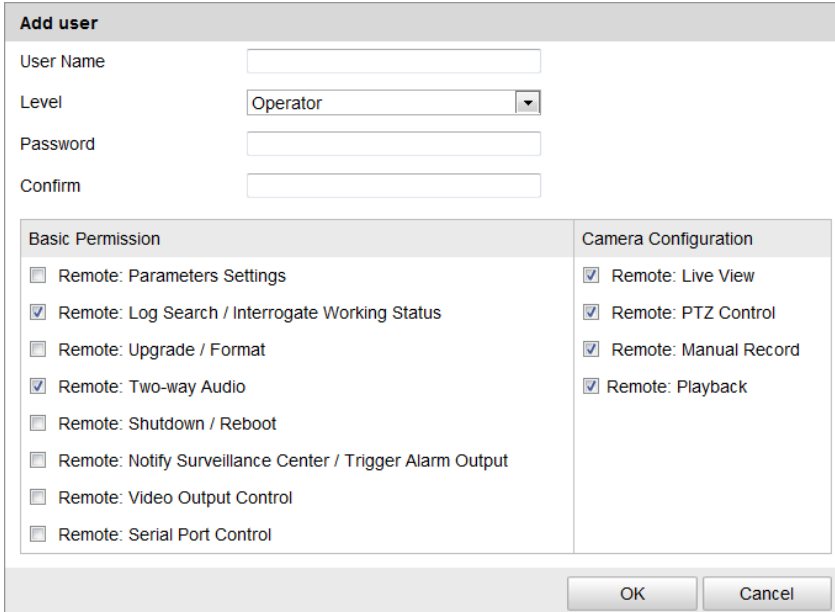
No.	User Name	Level
1	admin	Administrator

Figure 10-1 User Information

## Add a User

### Steps:

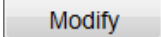
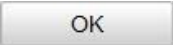
1. Click  to add a user.
2. Input the new **User Name**, select **Level** and input **Password**.  
**Note:** The level indicates the permissions you give to the user. You can define the user as **Operator** or **User**.
3. In the **Basic Permission** field and **Camera Configuration** field, you can check or uncheck the permissions for the new user.
4. Click  to finish the user addition.



Basic Permission	Camera Configuration
<input type="checkbox"/> Remote: Parameters Settings	<input checked="" type="checkbox"/> Remote: Live View
<input checked="" type="checkbox"/> Remote: Log Search / Interrogate Working Status	<input checked="" type="checkbox"/> Remote: PTZ Control
<input type="checkbox"/> Remote: Upgrade / Format	<input checked="" type="checkbox"/> Remote: Manual Record
<input checked="" type="checkbox"/> Remote: Two-way Audio	<input checked="" type="checkbox"/> Remote: Playback
<input type="checkbox"/> Remote: Shutdown / Reboot	
<input type="checkbox"/> Remote: Notify Surveillance Center / Trigger Alarm Output	
<input type="checkbox"/> Remote: Video Output Control	
<input type="checkbox"/> Remote: Serial Port Control	

## Modify a User

### Steps:

1. Left-click to select the user from the list and click .
2. Modify the **User Name**, **Level** or **Password**.
3. In the **Basic Permission** field and **Camera Configuration** field, you can check or uncheck the permissions.
4. Click  to finish the user modification.

**Modify user**

User Name:

Level:

Password:

Confirm:

Basic Permission	Camera Configuration
<input type="checkbox"/> Remote: Parameters Settings	<input checked="" type="checkbox"/> Remote: Live View
<input checked="" type="checkbox"/> Remote: Log Search / Interrogate Working Status	<input checked="" type="checkbox"/> Remote: PTZ Control
<input type="checkbox"/> Remote: Upgrade / Format	<input checked="" type="checkbox"/> Remote: Manual Record
<input checked="" type="checkbox"/> Remote: Two-way Audio	<input checked="" type="checkbox"/> Remote: Playback
<input type="checkbox"/> Remote: Shutdown / Reboot	
<input type="checkbox"/> Remote: Notify Surveillance Center / Trigger Alarm Output	
<input type="checkbox"/> Remote: Video Output Control	
<input type="checkbox"/> Remote: Serial Port Control	

OK Cancel

Figure 10-3 Modify a User

## Delete a User

### Steps:

1. Left-click the user name you want to delete and click .
2. Click  on the pop-up dialogue box to delete the user.

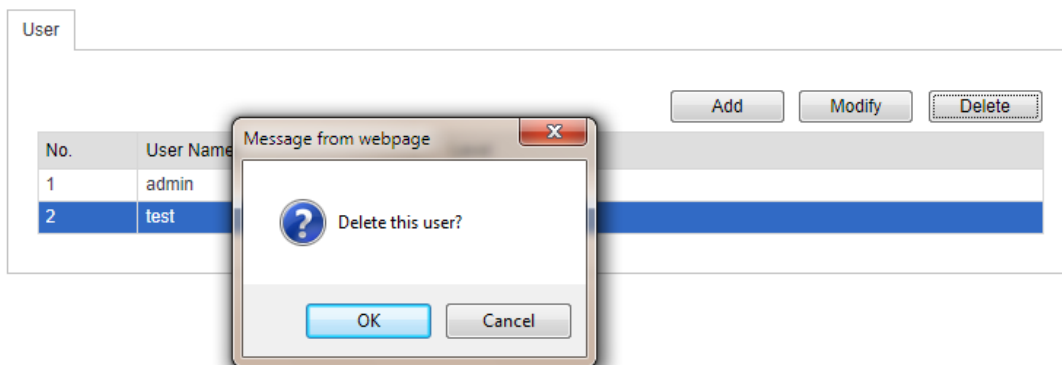


Figure 10-4 Delete a User

## 10.2 Configuring RTSP Authentication

### Purpose:

You can specifically secure the stream data of live view.

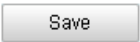
### Steps:

1. Enter the RTSP Authentication interface:  
Configuration > Advanced Configuration > Security > RTSP Authentication



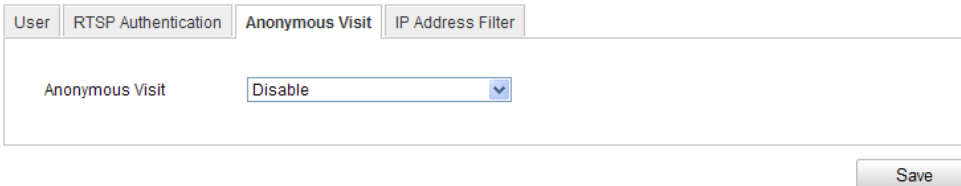
The screenshot shows a configuration window with a tab labeled 'RTSP Authentication'. Inside the window, there is a label 'Authentication' followed by a dropdown menu currently showing 'basic'. A 'Save' button is located at the bottom right of the window.

Figure 10-5 RTSP Authentication

2. Select the **Authentication** type **basic** or **disable** in the drop-down list to enable or disable the RTSP authentication.
3. Click  to save the settings.

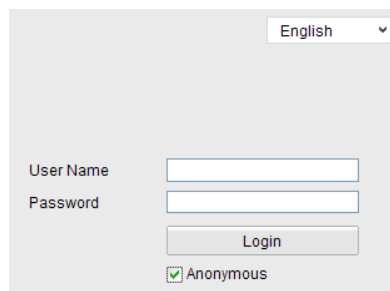
## 10.3 Configuring Anonymous Visit

When you enable this function, you can log into the camera without a username and password. In login interface, check the **Anonymous** checkbox and click **Login** to enter the camera as shown in Figure 10-7.



The screenshot shows a configuration window with tabs for 'User', 'RTSP Authentication', 'Anonymous Visit', and 'IP Address Filter'. The 'Anonymous Visit' dropdown menu is set to 'Disable'. A 'Save' button is located at the bottom right of the window.

Figure 10-6 Anonymous Login



The screenshot shows a login interface with a language dropdown set to 'English'. It contains two input fields: 'User Name' and 'Password'. Below these fields is a 'Login' button and a checked checkbox labeled 'Anonymous'.

Figure 10-7 Login Interface

## 10.4 Configuring IP Address Filter

With this function on, the camera allows certain IP addresses whether to log in or not.

Filter Type	Description
Forbidden	Forbid the IP addresses added in the IP Address Filter interface to log in.
Allowed	Allow only the IP addresses added in the IP Address Filter interface to log in.

Figure 10-8 IP Address Filter

## 10.5 Viewing Device Information

Enter the Device Information interface:

Configuration > Basic Configuration > System > Device Information

Or Configuration > Advanced Configuration > System > Device Information

In the **Device Information** interface, you can edit the Device Name.

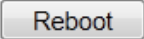
Other information of the network PTZ, such as Model, Serial No., Firmware Version, Encoding Version, Number of Channels, Number of HDDs, Number of Alarm Input and Number of Alarm Output are displayed. The information cannot be changed in this menu. It is the reference for maintenance or modification in future.

Figure 10-9 Device Information

## 10.6 Maintenance

### 10.6.1 Rebooting the Speed Dome

**Steps:**

1. Enter the Maintenance interface:  
Configuration > Basic Configuration > System > Maintenance  
Or Configuration > Advanced Configuration > System > Maintenance:
2. Click  to reboot the network PTZ.

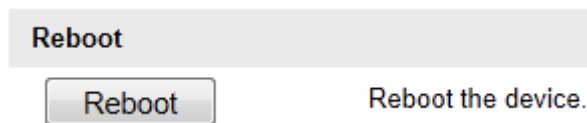


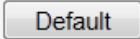


Figure 10-10 Reboot the Device

### 10.6.2 Restoring Default Settings

**Steps:**

1. Enter the Maintenance interface:  
Configuration > Basic Configuration > System > Maintenance  
Or Configuration > Advanced Configuration > System > Maintenance
2. Click  or  to restore the default settings.

**Note:** Clicking  restores all the parameters to default settings including the IP address and user information. Please use this button with caution.

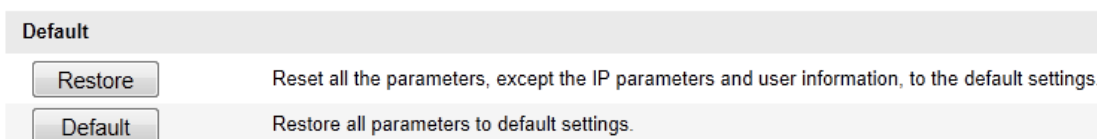
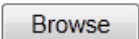
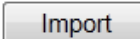


Figure 10-11 Restore Default Settings

### 10.6.3 Importing/Exporting Configuration File

**Steps:**

1. Enter the Maintenance interface:  
Configuration > Basic Configuration > System > Maintenance  
Or Configuration > Advanced Configuration > System > Maintenance
2. Click  to select the local configuration file and then click  to start importing configuration file.



**Note:** You need to reboot the PTZ after importing configuration file.

- Click  and set the saving path to save the configuration file in local storage.

The screenshot shows two sections: 'Import Config. File' and 'Export Config. File'. The 'Import' section includes a text input for 'Config File', a 'Browse' button, and an 'Import' button. The 'Export' section includes an 'Export' button.

Figure 10-12 Import/Export Configuration File

## 10.6.4 Upgrading the System

### Steps:

- Enter the Maintenance interface:  
Configuration > Basic Configuration > System > Maintenance  
Or Configuration > Advanced Configuration > System > Maintenance

- Click  to select the local upgrade file and then click  to start remote upgrade.

**Note:** The upgrading process will take 1 to 10 minutes. Please don't disconnect power of the PTZ during the process. The PTZ reboots automatically after upgrading.

The screenshot shows the 'Remote Upgrade' section with a 'Firmware' input field, 'Browse' and 'Upgrade' buttons, and a 'Status' label. A note below states: 'Note : The upgrading process will be 1 to 10 minutes, please don't disconnect power to the device during the process. The device reboots automatically after upgrading.'

Figure 10-13 Remote Upgrade

## 10.7 RS-485 Settings

### Purpose:

The RS-485 serial port is used to control the PTZ of the camera. The configuring of the PTZ parameters should be done before you control the PTZ unit.

### Steps:

- Enter RS-485 parameter setting interface:  
Configuration > Advanced Configuration > System > RS485

Device Information	Time Settings	Maintenance	RS485	DST
Baud Rate	9600 bps			
Data Bit	8			
Stop Bit	1			
Parity	None			
Flow Ctrl	None			
PTZ Protocol	PELCO_P			
PTZ Address	1			

Figure 10-14 RS-485 Settings

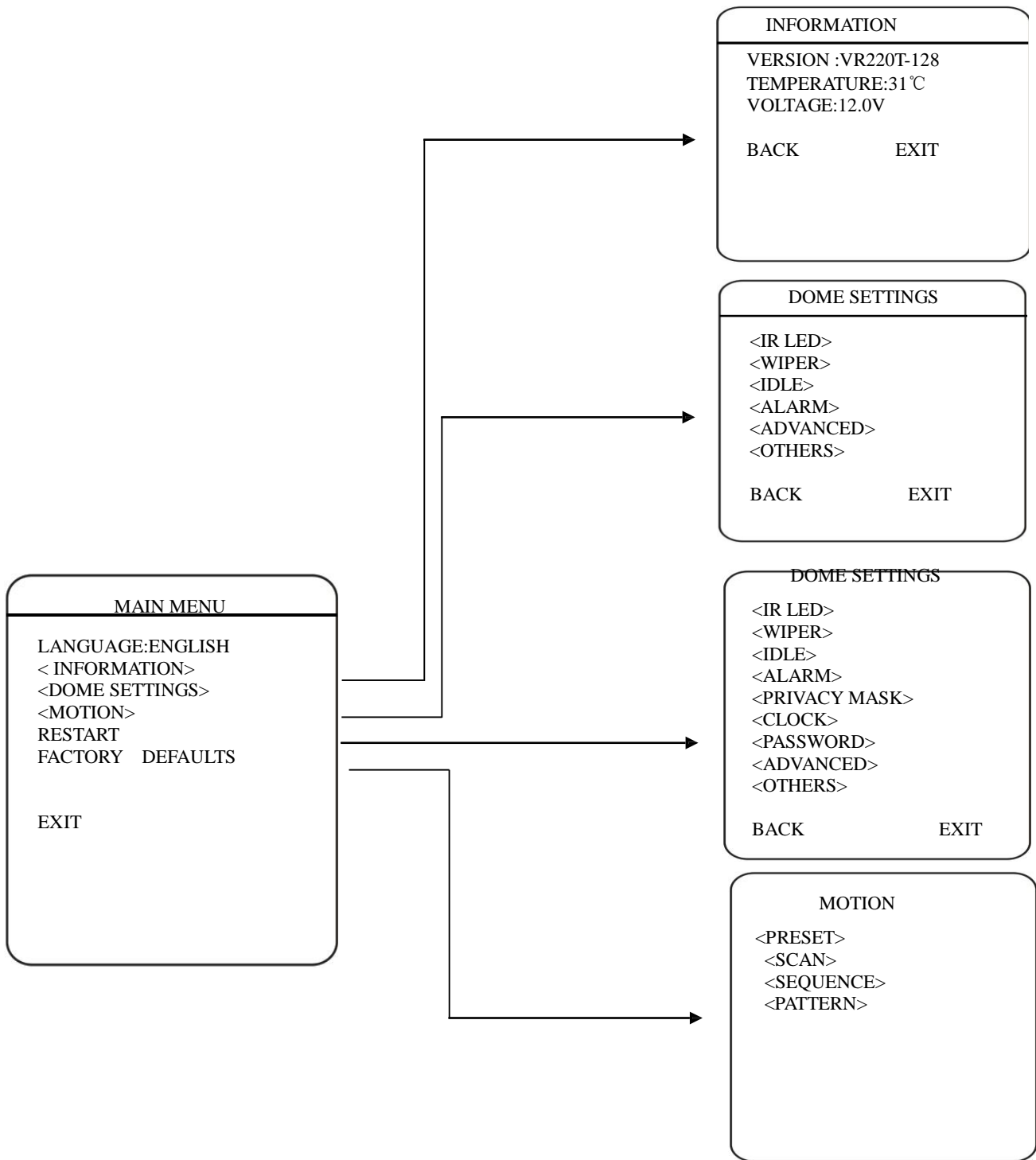
- Set the RS-485 parameters and click  to save the settings.

By default, the Baud Rate is set as 9600 bps, the Data Bit is 8, the stop bit is 1 and the Parity and Flow Control is None.

**Note:** The Baud Rate, PTZ Protocol and PTZ Address parameters of the PTZ should be exactly the same as those of the remote control device.

**Note:** In order to switch the control method from Network to RS-485 – the Baud rate value must be 2400

# Chapter 11: OSD Menu



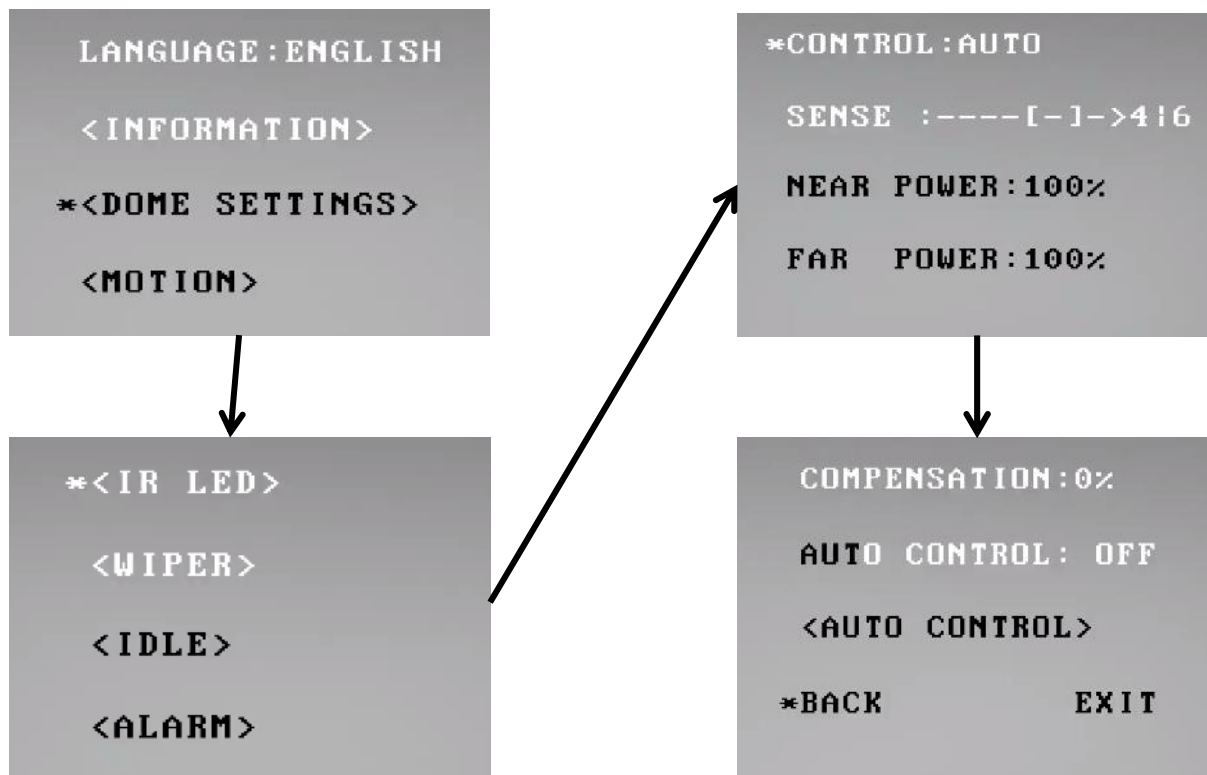
## 11.1) IR LED

In the menu the user can enable and disable the IR LED manually and set up the IR LED work mode under this OSD mean

### CONTROL MODE:

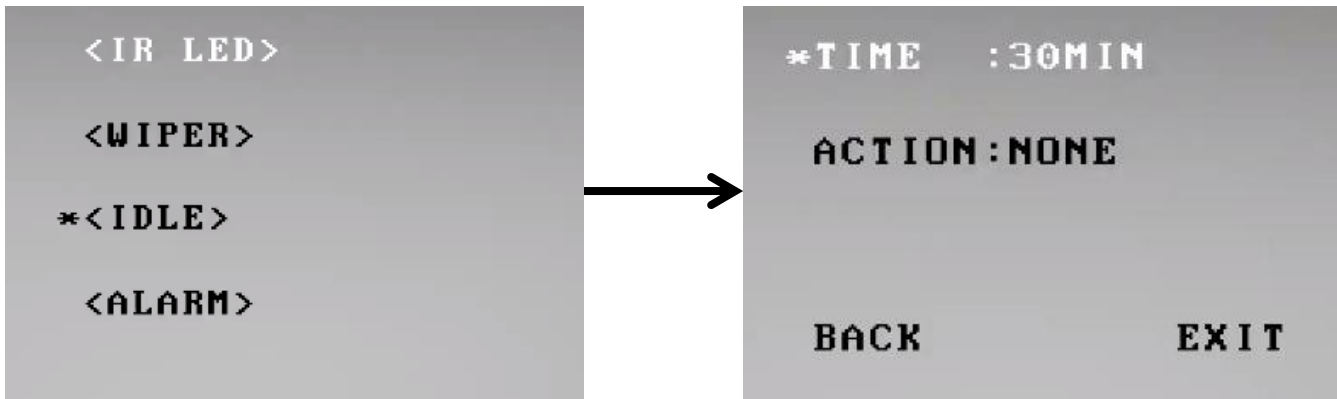
<b>AUTO</b>	IR LEDs turn on or off automatically according to light conditions
<b>TIMING</b>	LED is adjusted according to On and Off Times.
<b>OPEN</b>	IR LED forcedly open
<b>CLOSE</b>	IR LED forcedly close
<b>CAMERA</b>	IR LED status (Open/Close) will be synchronized with Camera day and night switching

- 1) **SENSE**: Here the user can manually set the sensitivity from 1-9. The smaller the number is, the lower light of the environment will be when the IR LED on.
- 3) **NEAR POWER COMPENSATION**: set the near power compensation to a value from 0-100%. The default is 100%. Any value lower than 100% will reduce the light of the LED
- 4) **FAR POWER COMPENSATION**: set the far power compensation to a value from 0-100%. The default is 100%. Any value lower than 100% will reduce the light of the LED
- 5) **AUTO CONTROL**: When it is on, the IR LED will turn its power consumption to the standby status which will effectively extend the service life of IR LEDs. And under this mode, when objects appear in the screen, the IR LED will turn its power consumption back to the normal status.



**IDLE setting (Also known as “Park Action”):** if the PTZ will not receive any command for the specified time, it will run the defined command.

- 1) **TIME:** Move the cursor to “TIME” and click IRIS + to enter, and click up or down button to select among 30 sec, 1 min, 5 min, 10 min and 30 min. And click IRIS + to confirm.
- 2) **ACTION:** Move the cursor to “ACTION” and click IRIS + to enter. Click up or down button to select the actions including NONE, PRESET, SCAN, SEQUENCE, and PATTERN. Click IRIS + to confirm.



**Alarm:** The dome system has 1 alarm input and 1 alarm output. When alarm is received, an input signal to the dome triggers the user defined action (such as presets, patterns, etc.), and at meantime the alarm output signals is activated.

**ALARM NO.:** Move the cursor to ALARM NO. Click “Iris +” to enter and click up or down button to select the alarm input no.

**INPUT STATE:** Set the alarm contact status. There are two input states, N/O – Normally Open and N/C - Normally Close.

**ALARM MODE:**

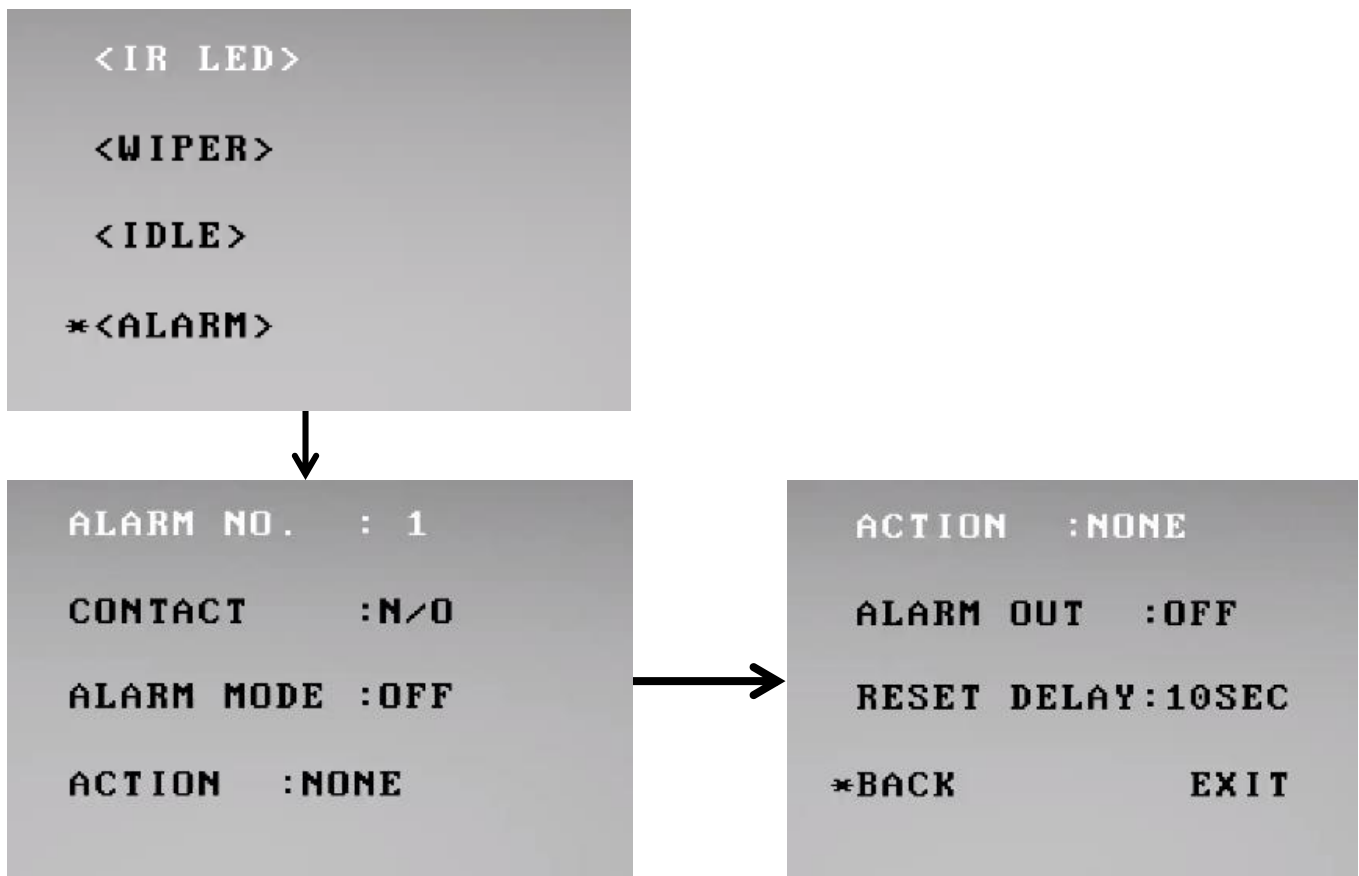
OFF	Alarm function is deactivated.
ON	Alarm function is activated.
AUTO	AUTO Alarm function will be activated and deactivated between START TIME and STOP TIME.

**ACTION: Set the alarm action:**

NONE	(default) No action
PRESET	Dome goes to preset. (Default as Preset 1)
SCAN	Dome starts auto scan (Default as Auto Scan 1)
SEQ	Dome runs auto cruise (Default as Auto Cruise 1)
PATTERN	Dome runs pattern (Default as Pattern 1)

**ALARM OUT:** Move the cursor to ALARM OUT. Click IRIS + to enter and click up or down button to select alarm output channels among “OFF”, “OUTPUT1”, “ALL”, which is used to set linkage alarm to the output switch after receiving effective alarm input signals.

**RESET DELAY:** Move the cursor to the ALARM OUT. Click IRIS + to enter and click up or down button to select reset delay among “10SEC” “30SEC” “1MIN” “5MIN” “10MIN”.Which means the time of the speed dome from detecting alarm signals to alarm reset and return to normal. The setting is valid under AUTO ALARM MODE.



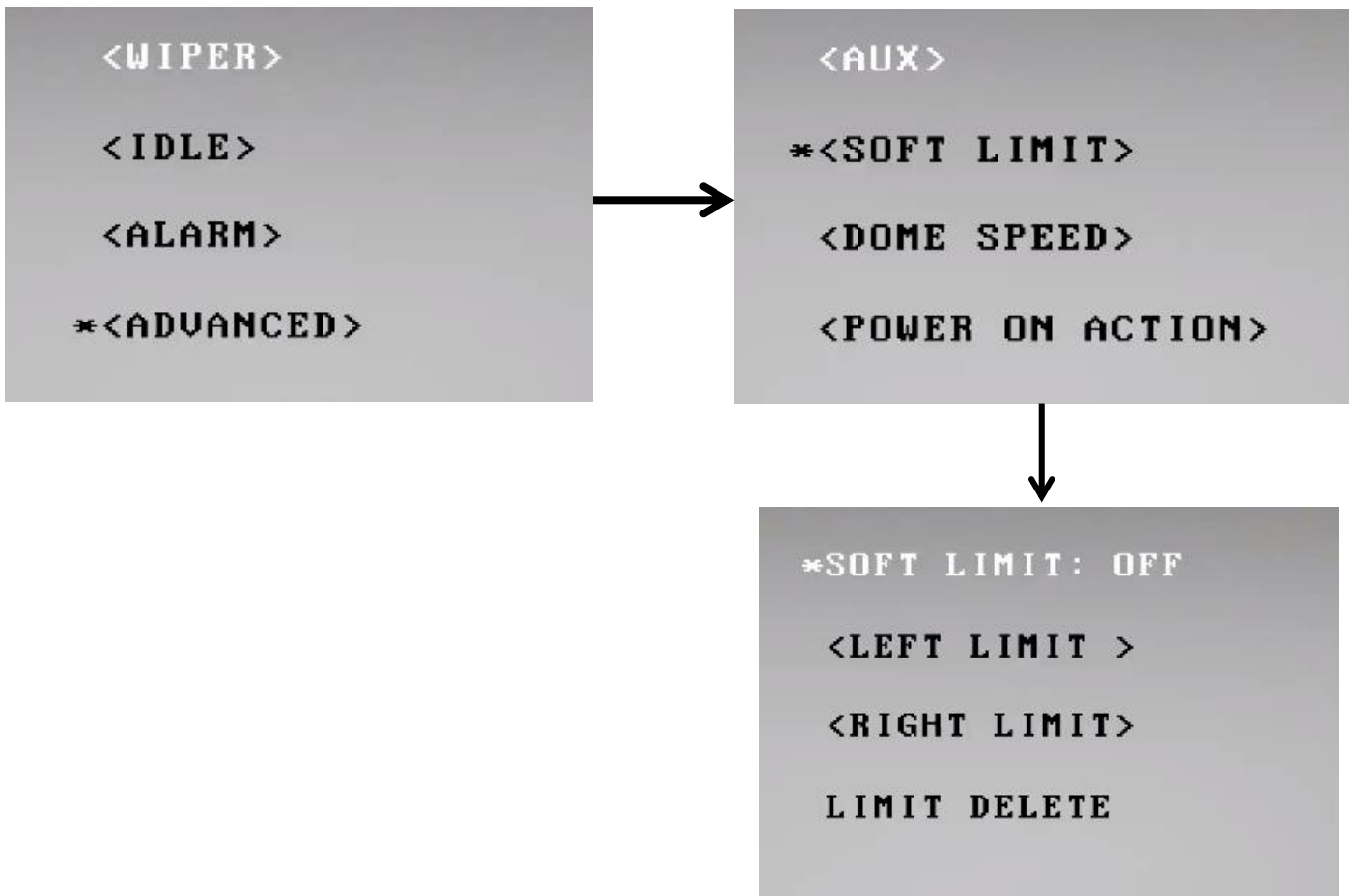
**Dome Limitation:** The user can set up the software (Soft) limit to define the left and right boundaries for the pan movement.

**SOFT LIMIT:** Move the cursor here and click IRIS + to enter. Click the up or down button to select “ON” or “OFF” to enable or disable this function.

**LEFT LIMIT:** Move the cursor here and click IRIS + to enter and control the PAN movement of the dome to a defined position for the left limit. Click IRIS + to confirm.

**RIGHT LIMIT:** Move the cursor here and click IRIS + to enter and control the PAN movement of the dome to a defined position for the right limit. Click IRIS + to confirm.

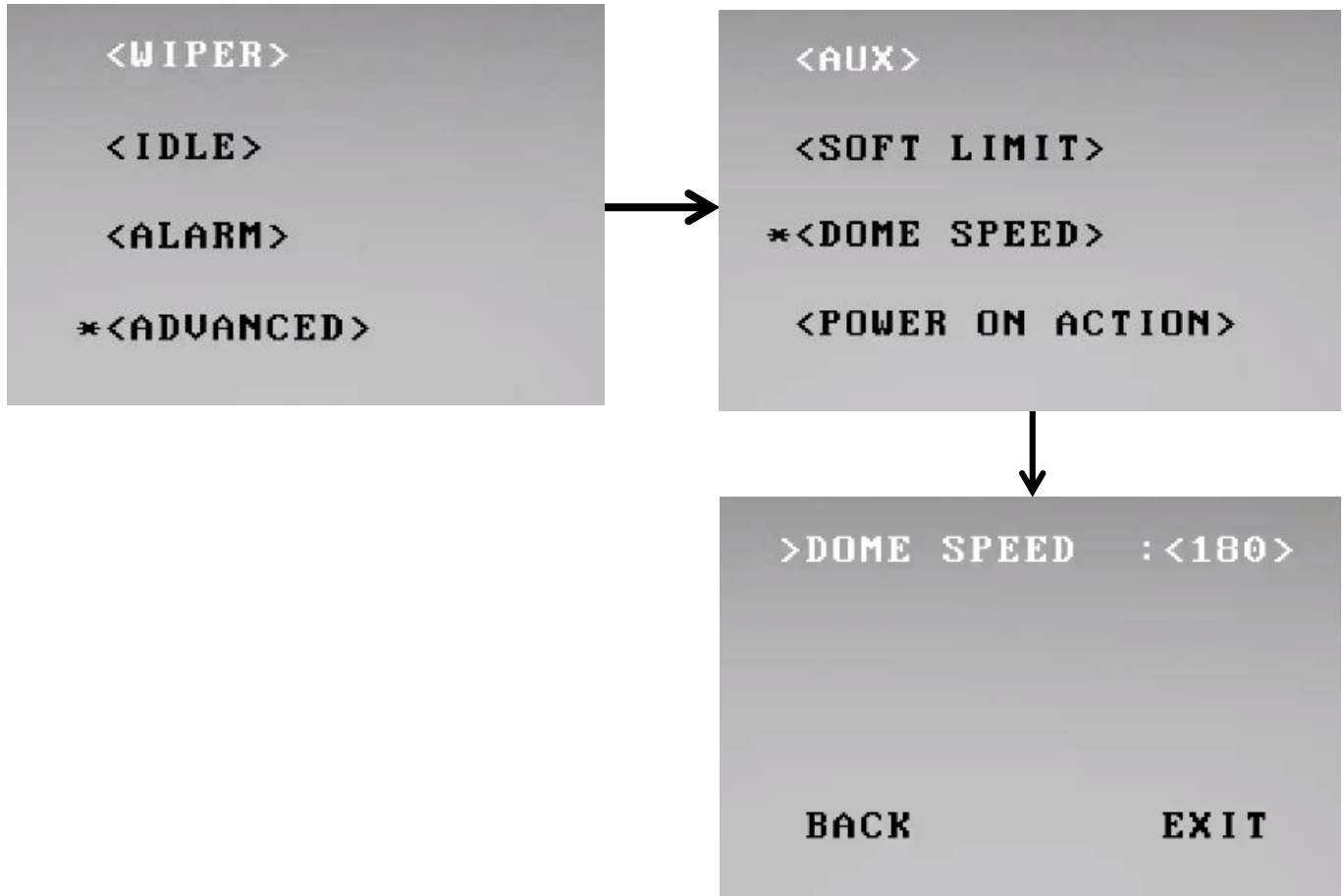
**LIMIT DELETE:** Move the cursor here and click IRIS + to delete all the settings.



**Dome Speed:** This menu is to define the top speed of the dome.

Move the cursor to DOME SPEED and click IRIS + to enter to select the dome speed when doing the pan movement.

Move the cursor to BACK/EXIT and click IRIS + to run the command of BACK or EXIT.



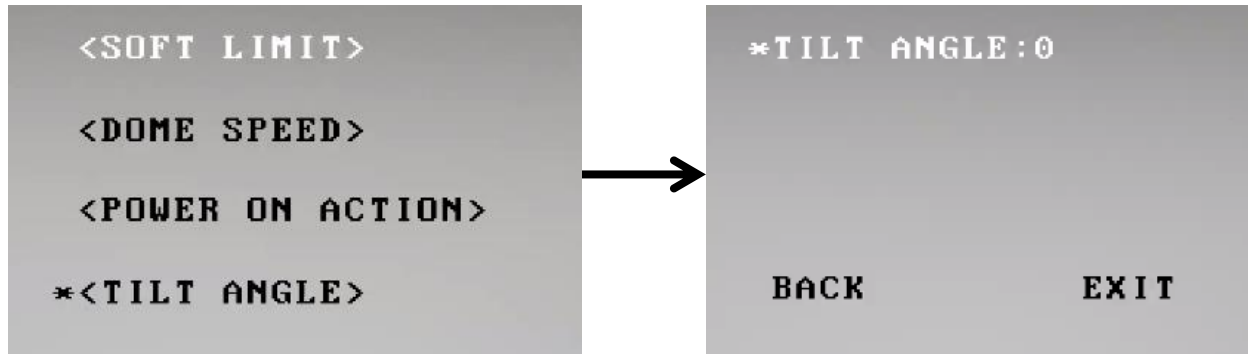
**Power-Up Action:** The user can define the dome action when power on, Move the cursor to POWER ON ACTION and click IRIS+ to enter the mode of setup

NONE	(default) No action
PRESET	Dome goes to preset. (Default as Preset 1)
SCAN	Dome starts auto scan (Default as Auto Scan 1)
SEQ	Dome runs auto cruise (Default as Auto Cruise 1)
PATTERN	Dome runs pattern (Default as Pattern 1)



**Tilt Angle:** The user can set up the tilt angle limit under the menu of TILT ANGLE.

Move the cursor to “TILT ANGLE” and click IRIS + to the setup of tilt angle. Click the up or down button to select the angle and click the IRIS + to confirm.



Others Menu: The user can set up TEMP MODE, INTERNAL FAN, PRESET FREEZE, STOP TIME, MENU OFF TIME and NORTH ZERO.

**TEMP MODE:** Should be set to Auto.

**AUTO FLIP:** When the camera tilts downward and goes just beyond the vertical position, the camera will rotate 180 degrees. The user can click IRIS + to enter and choose to turn this function on/off.

**MENU OFF TIME:** To set up the time that OSD menu be off when no operations. Options include 1/2/5/10 min.

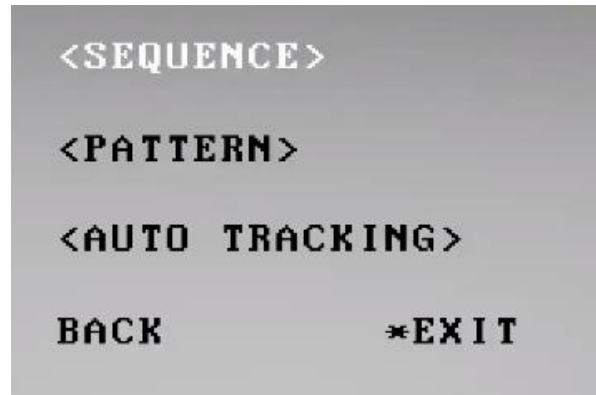
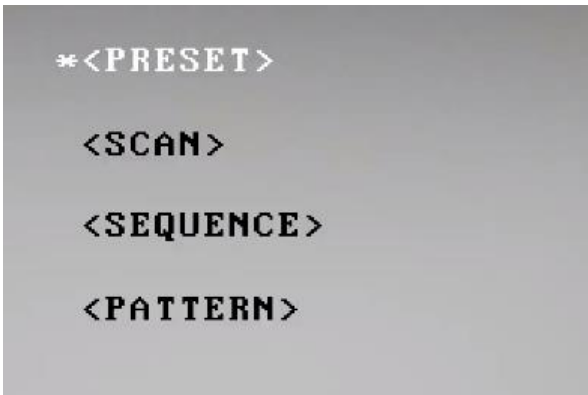
**DISPLAY:** To set up the time that OSD parameters will show after moving the camera.

**AZIMUTH ZERO:** To set up the north angle of the dome (pan 0°)

Move the cursor here and click IRIS + to enter. Click the up or down button to control the dome to pan 0° and click IRIS+ to confirm.



**Motion Menu:** The dome supports 220 presets. Please check the following steps to set up a preset.



### **Preset Menu:**

- 1) **PRESET NO.:** Move the cursor here and click IRIS + to enter the setup of Preset Number. Click the up or down button to select a preset number (1-64 and 100-255) and click IRIS + to confirm.
- 2) **TITLE:** Move the cursor here and click IRIS + to enter the setup of Preset Title. Check the detailed above in DOME TITLE settings.
- 3) **<SET>:** Move the cursor here and click IRIS + to enter. Move the dome to a defined position as preset point and click IRIS + to save the preset position.
- 4) **CALL:** Move the cursor here and click IRIS + to call up the current preset.
- 5) **DELETE:** Move the cursor here and click IRIS + to delete the current preset.
- 6) **SPEED:** Move the cursor here and click IRIS + to set up the preset call up speed of LOW, MID and HIGH.

### **Scan Menu:**

The dome supports 8 groups of auto scan. Please check the following steps to set up a scan.

- 1) **SCAN NO.:** Move the cursor here and click IRIS + to enter the setup of SCAN Number. Click the up or down button to select a preset number (1-8) and click IRIS + to confirm.
- 2) **TITLE:** Move the cursor here and click IRIS + to enter the setup of SCAN Title. Check the detailed above in DOME TITLE settings.
- 3) **<LEFT LIMIT>:** Move the cursor here and click IRIS + to enter. Move the dome to a defined position as left limit and click IRIS + to save this left boundary.

- 4) **<RIGHT LIMIT>**: Move the cursor here and click IRIS + to enter. Move the dome to a defined position as right limit and click IRIS + to save this right boundary.
- 5) **START**: Move the cursor here and click IRIS + to start the current scan.
- 6) **SCAN SPEED**: Move the cursor here and click IRIS + to set up the scan speed ranging 1-30.

## Sequence Menu:

The dome supports 8 groups of auto cruise and each cruise supports 32 presets. . Please check the following steps to set up cruise.

- 1) **SEQ NO.:** Move the cursor here and click IRIS + to enter the setup of Sequence Number. Click the up or down button to select a preset number (1-8) and click IRIS + to confirm.
- 2) **TITLE:** Move the cursor here and click IRIS + to enter the setup of Sequence Title. Check the detailed above in DOME TITLE Settings.
- 3) **<SEQUENCE SET>**: Move the cursor here and click IRIS + to enter. Move the cursor to EDIT and click IRIS + enter edit mode of sequence. Move the left and right button to select each item.
  - a) When the < > is on the item NO., move the up or down button to select the Serial NO. of the preset in a sequence. There are up to 32 presets in each sequence.
  - b) When the < > is on the item PRESET, move the up or down button to select the preset NO. that the user wants to add in the sequence.
  - c) When the < > is on the INTERVAL, move the up or down button to select the interval time between each preset.
  - d) When the < > is on the last item, move the up or down button to select edition mode as "INS (insert)", "ok" and "delete".

Click IRIS + when selecting INS to insert the settings into the position of current Serial No.

Click IRIS + when selecting OK to override the settings of Current Serial No.

Click IRIS + when selecting delete to delete the settings of the Current Serial No.

Click IRIS + to save all the setting and click IRIS CLOSE to exit.

- 4) **DELETE/START**: Move the cursor here and click IRIS + to delete/start the current sequence.

## Pattern Menu:

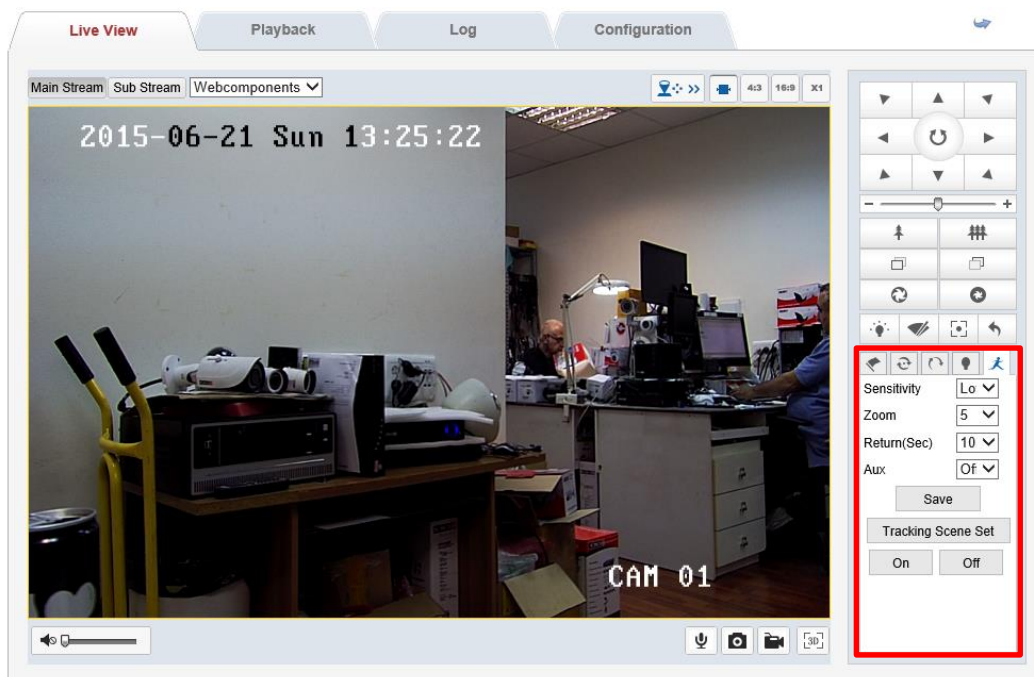
The dome supports 4 pattern tours and each pattern cover at most 10 Minutes of 500 commands. Please check the following steps to set up a pattern.

- 1) **PATTERN NO.:** Move the cursor here and click IRIS + to enter the setup of Pattern Number. Click the up or down button to select a pattern number (14) and click IRIS + to confirm.

- 2) **TITLE:** Move the cursor here and click IRIS + to enter the setup of Pattern Title .Check the detailed above in DOME TITLE settings.
- 3) **<SET>:** Move the cursor here and click IRIS + to enter. Click the dome up/down/left/right, make the zoom in/out and click IRIS + to save the pattern tour.
- 4) **START:** Move the cursor here and click IRIS + to start the current pattern tour.
- 5) **DELETE:** Move the cursor here and click IRIS + to delete the current pattern tour.

### Auto Tracking Menu (This can be set up through the web-client as well):

With Auto tracking active, the dome will auto track the moving objects entering the scene. When the object is moving out of the scene, the dome will return to a preset position as defined after the defined time.



**SENSITIVITY:** The user can set up the auto tracking sensitivity under this menu. When set as LOW, the dome will do auto tracking when obvious object entering the screen. When set as HIGH, the dome will do auto tracking when small object moving into the screen. Move the cursor there and click the IRIS + to enter. The options include: LOW, MID and HIGH.

**TARGET:** To set up the size of the tracking object. The options include Large. MID and SMALL.

**AUX:** If set "ON" here, the object auto tracking will activate alarm aux output at the same time. Click IRIS + to enter to select "ON" or "OFF"

**ZOOM MATCH:** Under the auto tracking model, if turn on the function of ZOOM MATCH, the dome will do zooming in and out during auto tracking to keep the right proportion between the object and background. Move

the cursor there and click the IRIS + to enter. And click the up or down to select the optical zoom.

**ENABLE:** Move the cursor here and click IRIS + to enter to select “ON” or “OFF” to enable or disable this function.

**TRACKING SCENE SET:** Here the user can set up the scene that the dome will get back to when finishing the action of auto tracking. Move the cursor here and click IRIS + to enter. Move the dome to the wanted scene and click IRIS + to confirm.

**DELETE (Available only after setting the scene):** Move the cursor here and click IRIS + to delete the return scene.

**RETURN DELAY (Available only after setting the Scene):** To set up the time that dome will waiting to return to this scene.

## General:

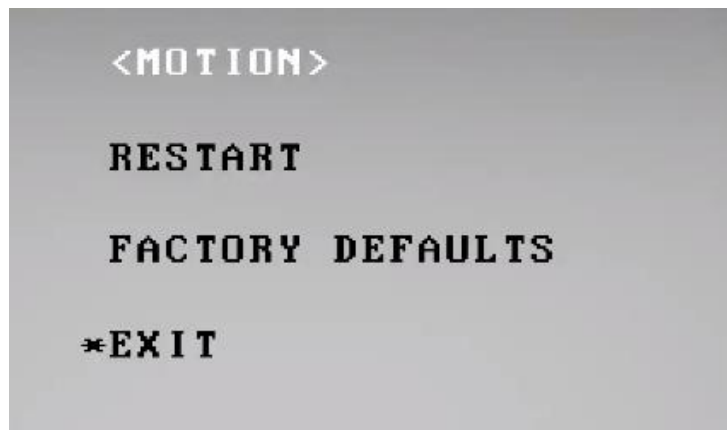
**RESTART:** The dome allows the user to reset its settings remotely under this menu.

Move the cursor here and click IRIS + to enter.

Select "OK" or "CANCEL" to continue the reset or cancel the reset.

**FACTORY DEFAULTS:** Allows the user to recover all the setting to factory default setting.

Move the cursor here and click IRIS + to enter. Select "OK" or "CANCEL" to continue the reset or cancel the reset.



# Appendix

## Appendix 1 IP Tool Software Introduction

### ? Description of IP Tool

IP Tool (Search Active Devices Protocol) is a kind of user-friendly online device search tool. It searches the active online devices within your subnet and displays the information of the devices. You can also modify the basic network information of the devices using this software.

### ? Logging in the IP Tool

In order to have full control over the camera and its settings – you must log into the IP Tool with the Administrator username and password (In this case, User name: admin, Password: Admin). Once logged in – the IP Tool will use these credentials when communicating with the online cameras.

### ? Search active devices online

#### ? Search online devices automatically

After launch the IP Tool software, it automatically searches the online devices from the subnet where your computer locates. It displays the total number and information of the searched devices in the Online Devices interface. Device information including the device firmware and IP address will be displayed.

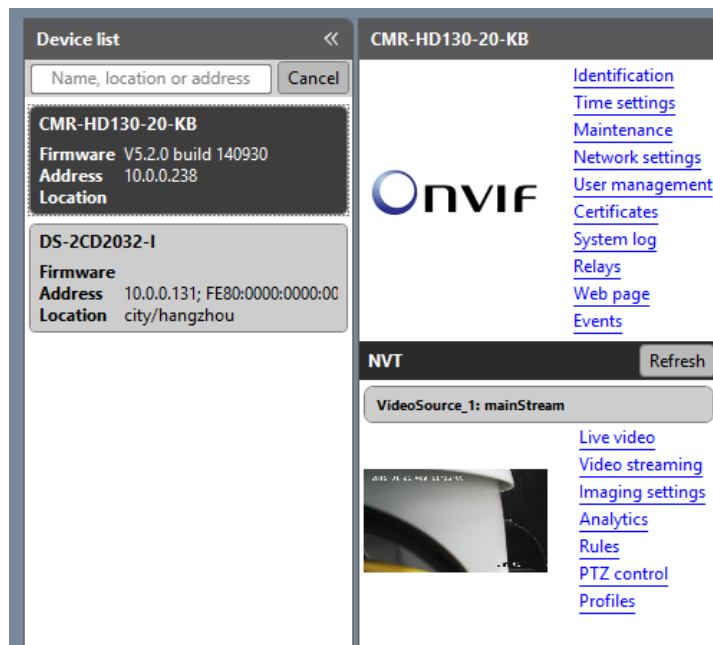
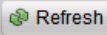


Figure A.1.1 Searching Online Devices

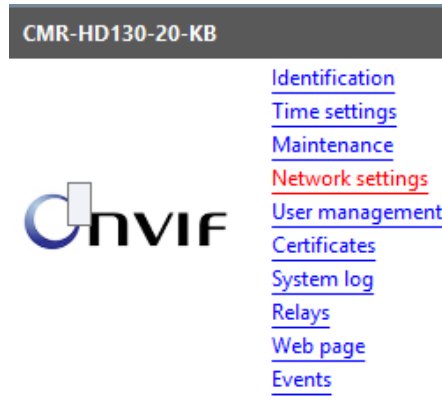
? **Search online devices manually**

You can also click  to refresh the online device list manually. The newly searched devices will be added to the list.

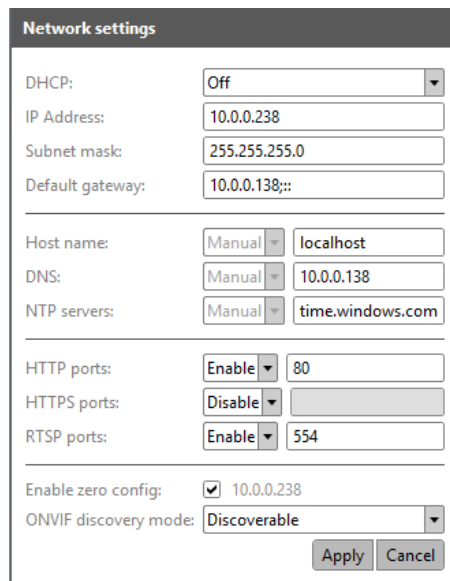
? **Modify network parameters**

**Steps:**

1. Select the device to be modified in the device list (Left column). The device menu will open next to it. Click on **Network Settings** on the panel on the right side.



2. A new column with the network settings will open on the right



2. Edit the modifiable network parameters, e.g. IP address and port number.
3. Click “Apply” to save the changes.





*Now you can see!*

*The IP Ultra-Z IR PTZ gives you the versatility of an IP camera while preserving all the best features and more of the Ultra-Z series: It is faster, More accurate and its video Performance is better than ever even in complete darkness!*