SiBell Network Video Recorder (NVR) User Manual

NVR-NV9000 Version:001

Please read this manual carefully for correct use of the product and preserve it for
reference purposes. (specifications subject to change without notice*)

Notes

Please read this user manual carefully to ensure correct device usage.

Notice: There may be some technically incorrect places or printing errors in this manual. The updates will be added into the new versions of this manual. The contents of this manual are subject to change without notice.

Advisory/ Warnings

- Power: This device should be operated from the power source indicated on the marking label **ONLY**. The voltage of the power must be verified before using. Remove the cable from power if the device is turned off for an extended time.
- **Do not** install this device near heat sources such as radiators, heat registers, stoves or other devices that produce heat.
- **Do not** install this device near water. Clean only with a dry cloth.
- **Do not** block ventilation openings and ensure proper ventilation around the machine.
- **Do not** power off the device during normal recording condition.
- **This machine is for indoor use only**. Keep out of wet environments. In the case any substance or liquid gets inside the machine, please turn off the device immediately and get it checked by a qualified technician.
- Do not try to repair or tamper with the device without technical aid or approval, (warranty may be voided).
- This manual is suitable for many NVR models. All examples and pictures used in the manual are only from one of the models for reference purpose.

Disclosure: The pictures and screenshots in this manual are only used to explain the usage of our product. The ownerships of trademarks, logos and other intellectual properties related to Microsoft, Apple and Google shall belong to the above-mentioned companies.

Contents

1   Introduction

1.1 Summary

SiBell NVR's were designed with advanced SOC Technology, sleek user interface software and embedded to create a system that is both secure and user-friendly. This series of NVR's are powerful, easy to use and provide superior image quality and system stability. Designed specifically for the Network Video monitoring field, Sibell's Network Video Recorders are high performance, high quality with smart IP Camera Management capabilities as well has advanced record search.

SiBell NVR's are adaptable to provide security to multiple industries: such as Banks/ Financial Institutions, home security, School Security, traffic, oil and gas security, grocery and convenience store security, retail security, communities, hotels/ hospitality and much more.

1.2 Features

➕ **Basic Functions**

- Supports network device access including IP Network Cameras and Sibell IP cameras as well as the support for third-party IP cameras.
- Some NVRs support the latest H.265 video coding stream and a mixture input of H.265 and H.264 IP cameras **(see your models Specifications Sheet)**
- Supports standard ONVIF protocol
- Supports stream dual recording of each camera (max 5MP resolution)
- Supports Quick Setup or manual set up of Sibell IP Cameras
- Supports batch or single configuration of the camera's OSD, video parameters, mask, motion and other camera features.
- Supports a maximum of **8 user permission groups** including **Administrator**, **Advanced**, and **Ordinary**, which are the default groups of the system.
- Supports a maximum of **16 users** and allows user permissions to be enabled or disabled by the administrator.
- Allows for multiple web client logins by using a single username at the same time, (a maximum of 10 web clients login at the same time).

➕ **Live Preview**

- Supports 4K×2K/1920×1080/1280×1024 HDMI and 1920×1080/1280×1024 VGA high definition synchronous display
- Supports multi-screen modes such as 1/4/6/8/9/16/25/36
- Supports auto adjustment of the camera's image. (Display & proportion)
- Supports audio monitoring of the camera to be enabled or disabled
- Supports manual snapshots of the preview camera
- Supports the sequence of the preview cameras to be adjusted
- Supports display presets to be added and saved. Saved presets can be called directly
- Supports quick tool bar operation of the preview window
- Supports camera group view and scheme view in sequence, quick sequence view and

　　　　dwell time setting.
- Supports motion detection and video masking
- Supports multiple P.T.Z. control protocols and setup of the preset and cruise
- Supports direct mouse control including rotating, zoom, focusing and so on.
- Supports single camera image to be zoomed by sliding the scroll wheel of the mouse
- Supports any area of the image to be zoomed into a maximum of 16 times of the current size
- Supports image and lens adjustments (only available for some cameras)
- Supports quick camera adding; in the camera window of the live preview interface

Disk Management

- The NVRs with the 2U case can add a maximum of 8 SATA HDDs; a maximum of 4 SATA HDDs with the 1.5U case, a maximum of 2 SATA HDDs with the 1U case and a maximum of 1 SATA HDD with the small 1U case **(see your models Specifications Sheet)**
- Each SATA interface of the NVR supports the HDDs with max 6TB storage capacity
- Some of the NVRs support record to be backed up by e-SATA HDD
- Support disk group configuration and management and each camera can be added into different disk groups with different storage capacity
- Support disk information and disk working status viewing
- Support batch formatting of the disks

Record Configuration

- Supports main stream and sub stream recording at the same time and batch or single configuration of the record stream
- Supports manual and auto record modes
- Supports schedule recording, sensor alarm recording, and motion detection recording
- Supports schedule recording and event recording setting with different record streams
- Supports record schedule setting and recycle recording
- Supports pre recording and delay recording configuration of the event recording

Record Playback

- Supports time scale operation in quick playback and the playback date and time can be set randomly by scrolling the mouse; the time interval of the time scale can be zoomed
- Support record searching by time slice/time/event/tag
- Supports time view and camera view in search by time slice mode
- Supports time slice searching by month, by day, by hour and by minute and time slice to be displayed with camera thumbnail
- Supports a maximum of 16 cameras to be searched by time
- Supports event searching by manual/motion/sensor events
- Supports tag searching by the manual added tags
- Supports instant playback of the selected camera in the live preview interface
- Supports a maximum of 16 synchronous playback cameras
- Supports acceleration(maximum 32 times of the normal speed), deceleration (minimum

1/32 times of the normal speed) and 30s' addition or reduction to current playing time

+ **Record Backup**
  - Supports record to be backed up through USB (U disk, mobile HDD) or e-SATA interface
  - Supports record to be backed up by time/event/image searching
  - Supports record cutting for backing up when playing back
  - Supports a maximum of 10 backup tasks in background and backup status viewing

+ **Alarm Management**
  - Supports alarm schedule setting
  - Supports enabling or disabling of the motion detection, external sensor alarm input and exception alarms including IP address conflict alarm, disk IO error alarm, disk full alarm, no disk alarm, illegal access alarm, network disconnection alarm, IPC offline alarm and so on, alarm trigger configuration supportable
  - Supports IPC offline alarm trigger configuration of PTZ, snap, pop-up video, etc.
  - Supports event notification modes of alarm-out, pop-up video, pop-up message box, buzzer, e-mail and so on
  - The snapped images can be attached to e-mail when alarm linkage is triggered
  - Support alarm status view of alarm-in, alarm-out, motion detection and exception alarm
  - Support alarm to be triggered and cleared manually
  - Support system auto reboot when exception happens

+ **Network Functions**
  - Support TCP/IP and PPPoE, DHCP, DNS, DDNS, UPnP, NTP, SMTP protocol
  - Support allow and block list function and the allow and block IP address/IP segment/MAC address can be set
  - Support multiple browsers including IE8/9/10/11, Firefox, Opera, Chrome (available only for the versions lower than 45) and Safari in MAC system
  - Support remote achievement, configuration, import and export of the NVR parameters and other system maintenance operations including remote upgrading and system restart
  - Support remote camera configuration of the NVR including video parameters, and image quality
  - Support remote searching, playback, and backup of the NVR
  - Support manual alarm to be triggered and cleared remotely
  - Support NVMS or other platform management software to access the NVR and manage
  - Support NAT function and QRCode scanning by mobile phone and PAD
  - Support mobile surveillance by phones or PADs with iOS or Android OS
  - Support NVR to be accessed remotely through telnet and the telnet function can be enabled or disabled

+ **Other Functions**
  - The NVR can be controlled and operated by the buttons on the front panel, the remote controller, and the mouse

● Setting interfaces can be switched to one another conveniently by clicking the main menus on the top of the setting interfaces
● Support NVR information viewing including basic, camera status, alarm status, record status, network status, disk and backup status
● Support factory restoring, import and export of the system configuration, log view and export and local upgrading by USB mobile device
● Support auto recognition of the display resolution

1.3 Front Panel Descriptions

The following descriptions are for reference only.
Type I:

Name	Descriptions
REC	When recording, the light is blue
Net	When NVR has access to network, the light is blue
Power	Power indicator, when connected, the light is blue
Fn	Not functioning temporarily

Type II:

Name	Descriptions
Power	Power Indicator, when connected, the light is blue
HDD	The light turns blue when reading/writing HDD
Net	The light turns blue when able to access the network
Backup	The light turns blue when backing up files and data
Play	The light turns blue when playing video
REC	Power Indicator, when connected, the light is blue
AUDIO /+	1. Adjust audio 2. Increase the value in setup
P.T.Z / -	1. Enter PTZ mode 2. Decrease the value in setup
MENU	Enter Menu in live view
INFO	Check the information of the device
BACKUP	Enter backup mode in live view
SEARCH	Enter search mode in live view
Exit	Exit the current interface
●	Manually record
▶❙	Play/Pause
◀◀	Speed down
▶▶	Speed up
1-9	Input digital number and select camera
0/--	Input number 0, the number above 10
Direction Key	Change direction
Multi-Screen Switch	Change the screen mode
Enter	Confirm selection
USB	To connect external USB device like USB mouse or USB flash

1.4 Rear Panel Descriptions

Here we take only a part of real panels for example to introduce their interfaces and connections. The interfaces and locations of the interfaces are only for references.
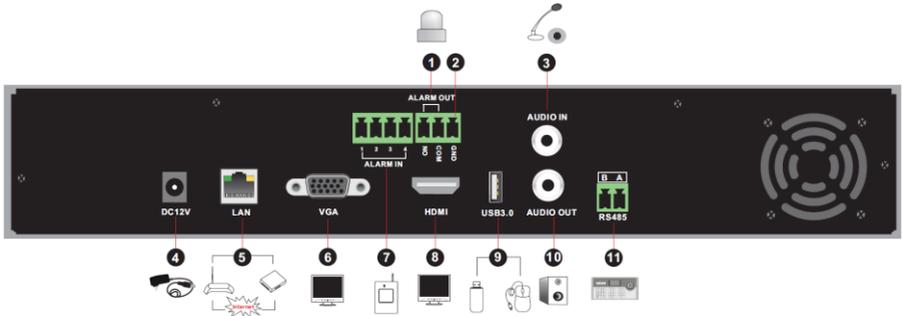
No.	Name	Descriptions
1	ALARM OUT	Relay output; connect to external alarm
2	GND	Grounding
3	AUDIO IN	Audio input; connect to audio input device, like microphone, pickup, etc
4	DC12V	DC12V power input
5	LAN	Network port
6	VGA	Connect to monitor
7	ALARM IN	Alarm inputs for connecting sensors
8	HDMI	Connect to high definition display device
9	USB	Connect USB storage device or USB mouse
10	AUDIO OUT	Audio output; connect to sound box
11	RS485	Connect to keyboard. A is TX+; B is TX-
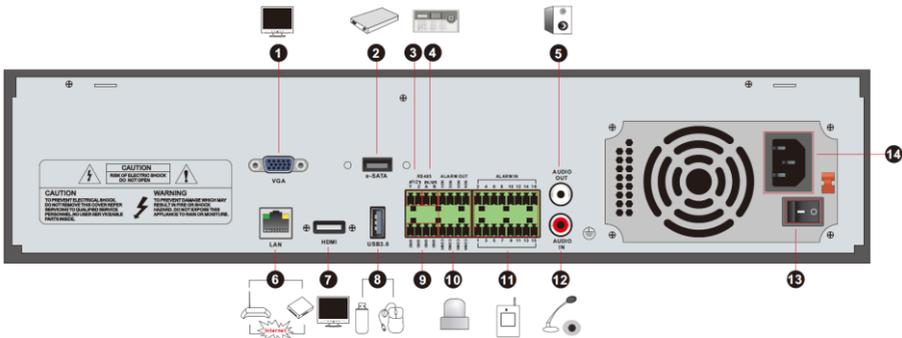
No.	Name	Descriptions
1	VGA	Connect to monitor

No.	Name	Descriptions
2	e-SATA	Connect to HDD with e-SATA interface
3	RS485 Y/Z interface	Unavailable right now
4	RS485 A/B interface	Connect to keyboard. A is TX+; B is TX-
5	AUDIO OUT	Audio output; connect to sound box
6	LAN	Network port
7	HDMI	Connect to high definition display device
8	USB	Connect USB storage device or USB mouse
9	GND	Grounding
10	ALARM OUT	Relay output; connect to external alarm
11	ALARM IN	Alarm inputs for connecting sensors
12	AUDIO IN	Audio input; connect to audio input device, like microphone, pickup, etc
13	Power Switch	Press the switch to turn on/off the NVR
14	Power Supply	Power supply interface
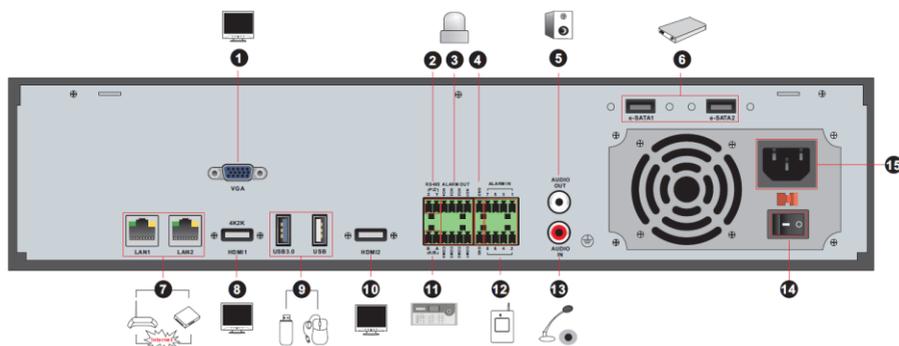
No.	Name	Descriptions
1	VGA	Connect to monitor
2	RS485 Y/Z interface	Unavailable right now
3	ALARM OUT	Relay output; connect to external alarm
4	GND	Grounding
5	AUDIO OUT	Audio output; connect to sound box
6	e-SATA1/ e-SATA2	Connect to HDD with e-SATA interface
7	LAN1/LAN2	Network port
8	HDMI1	Connect to 4K×2K high definition display device
9	USB3.0/USB	USB3.0 and USB 2.0 interface, connect USB storage device or USB mouse
10	HDMI2	Connect to 1920×1080 high definition display device
11	RS485 A/B interface	Connect to keyboard. A is TX+; B is TX-
12	ALARM IN	Alarm inputs for connecting sensors
13	AUDIO IN	Audio input; connect to audio input device, like microphone, pickup, etc
14	Power Switch	Press the switch to turn on/off the NVR
15	Power Supply	Power supply interface
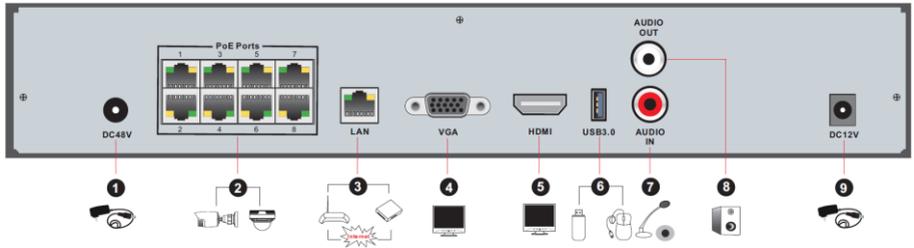
No.	Name	Descriptions
1	Power Supply	DC48V power supply interface
2	PoE port	8 PoE network ports; connect to 8 PoE IP cameras
3	LAN	Network port
4	VGA	Connect to monitor
5	HDMI	Connect to 1920×1080 high definition display device
6	USB3.0	USB3.0 interface, connect USB storage device or USB mouse
7	AUDIO IN	Audio input; connect to audio input device, like microphone, pickup, etc
8	AUDIO OUT	Audio output; connect to sound box
9	Power Supply	DC12V power supply interface

1.5 Connections

● **Video Connections**

Video Output: Supports VGA/HDMI video output. You can connect to monitor through these video output interfaces simultaneously or independently.

● **Audio Connections**

Audio Input: Connect to microphone, pickup, etc.
Audio Output: Connect to headphone, sound box or other audio output devices.

● **Alarm Connections**

Some models may support this function. Take 16 CH alarm inputs and 1 CH alarm output for example.
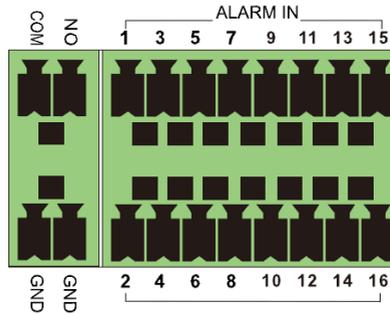
Alarm Input:

Alarm IN 1~16 are 16 CH alarm input interfaces. There are no type requirements for sensors. NO type and NC type are both available.

The way to connect sensor and the device is shown below:

The alarm input is an open/closed relay. If the input is not an open/closed relay, please refer to the following connection diagram:
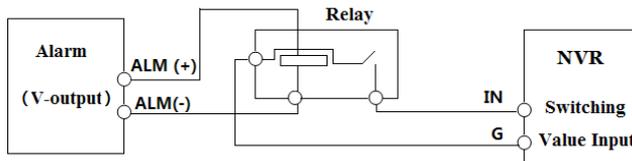
Alarm Output:

The way to connect alarm output device:

Pull out the green terminal blocks and loosen the screws in the alarm-out port. Then insert the signal wires of the alarm output devices into the port of NO and COM separately. Finally, tighten the screws. Provided that the external alarm output devices need power supply, you can connect the power supply as per the following figures.
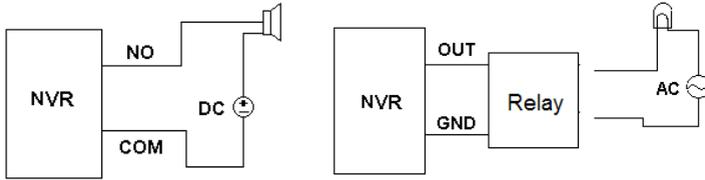
● **RS485 Connection**

There are two types of RS485 interfaces:
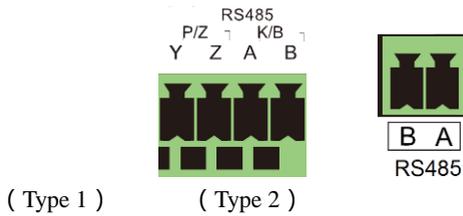
（Type 1）   （Type 2）

Type 1: The P/Z interfaces are unavailable temporarily. K/B interfaces are used to connect keyboard.
Type 2: The RS485 interfaces are used to connect keyboard. A is TX+; B is TX-.

2 Basic Operation Guide

2.1 Startup & Shutdown

Please make sure all the connections are done properly before you power on the unit. Proper startup and shutdown are crucial to expending the life of your device.

2.1.1 Startup

1   Connect the output display device to the VGA/HDMI interface of the NVR.
2   Connect with the mouse and power. The device will boot and the power LED will turn blue.
3   A WIZARD window will pop up (you should select the display language the first time you use the NVR). Refer to 3.1 Startup Wizard for details.

2.1.2 Shutdown

You can power off the device by using remote controller or mouse.

By remote controller:

1   Press Power button. This will take you to a shutdown window. The unit will power off after a while by clicking "OK" button.
2   Disconnect the power.

By mouse:

1   Click Start→Shutdown to pop up the Shutdown window. Select "Shutdown" in the window. The unit will power off after a while by clicking "OK" button.
2   Disconnect the power.

2.2 Remote Controller

1   It uses two AAA size batteries.
2   Open the battery cover of the remote controller.
3   Place batteries.
4   Replace the battery cover.

Key points to check in case the remote doesn't work.
1. Check batteries polarity.
2. Check the remaining charge in the batteries.
3. Check IR controller sensor for any masking.

If it still doesn't work, please trya new remote controller or contact your dealer. You can turn the IR sensor of the remote controller towards the IR receiver of the NVR to control it when

you are controlling multiple devices by remote controller.

There are two kinds of remote controller. The interface of remote controller is shown as below.
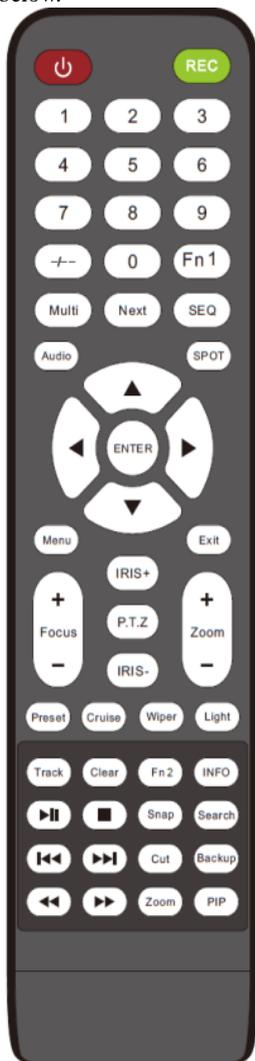
Button	Function
⏻ Power Button	Switch off—to stop the device
Record Button	To start recording
-/-- /0-9	Input number or choose camera
Fn1 Button	Unavailable temporarily
Multi Button	To choose multi screen display mode
Next Button	To switch the live image
SEQ	To go to sequence view mode
Audio	To enable audio output in live mode
Switch	No function temporarily
Direction button	To move cursor in setup or pan/title PTZ
Enter Button	To confirm the choice or setup
Menu Button	To go to menu
Exit Button	To exit the current interface
Focus/IRIS/Zoom/PTZ	To control PTZ camera
Preset Button	To enter into preset setting in PTZ mode
Cruise Button	To go to cruise setting in PTZ mode
Track Button	No track function temporarily
Wiper Button	No function temporarily
Light Button	No function temporarily
Clear Button	No function temporarily
Fn2 Button	No function temporarily
Info Button	Get information about the device
▶⏸ ■ ⏮ ⏭ ◀◀ ▶▶	To control playback. Play(Pause)/Stop/Previous Frame/Next Frame/Speed Down/Speed Up
Snap Button	To take snapshots manually
Search Button	To go to search mode
Cut Button	No function temporarily
Backup Button	To go to backup mode
Zoom Button	To zoom in the images
PIP Button	No function temporarily

Note:
You shall press P.T.Z button to enter PTZ setting mode, choose a channel and press P.T.Z button again to hide the P.T.Z control panel. Then you can press preset, cruise, track, wiper or light button to enable the relevant function.

Button	Function
REC	Record manually
Search	To enter search mode
MENU	To enter menu
Exit	To exit the current interface
ENTER	To confirm the choice or setup
Direction button	To move cursor in setup
ZOOM	To zoom in
PIP	No function temporarily
	To control playback. Play(Pause)/Next Frame/Speed Up/Stop/Previous Frame/Speed Down
Multi	To choose multi screen display mode
Next	To switch the live image
SEQ	To go to sequence view mode
INFO	Get information about the device

2.3 Mouse Control

➢ **Mouse control in Live Preview & Playback interface**

In the live preview & playback interface, double click on any camera window to show the window in single screen mode; double click the window again to restore it to the previous size.

In the live preview & playback interface, if the interfaces display in full screen, move the mouse to the bottom of the interface to pop up a tool bar. The tool bar will disappear automatically after you move the mouse away from it for some time; move the mouse to the right side of the interface to pop up a panel and the panel will disappear automatically after you move the mouse away from it.

➢ **Mouse control in text-input**

Move the mouse to the text-input box and then click the box. The input keyboard will pop up automatically.

Note: Mouse is the default tool for all operations unless an exception as indicated.

2.4 Text-input Instruction
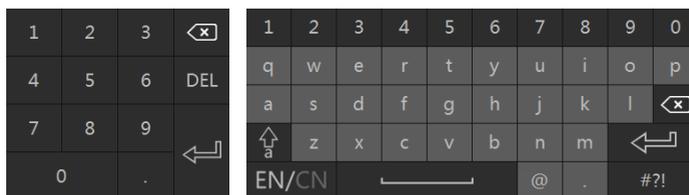
The system includes two input boxes. Refer to the above pictures. The left box is the number input box and the right box is the input box which provides inputs of numbers, letters and punctuation characters. The introductions of keys on the input boxes are shown below.

Button	Meaning	Button	Meaning
⌫	Backspace key	#?!	Switch key of punctuation character
DEL	Delete Key	⏎	Enter key
⇧	Switch key between upper and lower letter	␣	Space key
EN/CN	Switch key of language		

2.5 Common Button Operation

Button	Meaning
⌄	Click it to show the menu list.
↓ ↑	Click it to change the sequence of the list.
⊞ ⊞ ⊞ ⊞	Click it to change the camera displaying mode.
✕	Click it to close the current interface.
Earliest	Click it to go to the earliest date of camera recording.
Latest	Click it to go to the latest date of camera recording.

3 Wizard & Main Interface

3.1 Startup Wizard

The disk icons will be shown on the top of the startup interface. You can view the number and status of each disk quickly and conveniently through these icons (🖥: no disk; 🖥: unavailable disk; 🖥: RW available disk).

You can quickly configure the NVR by wizard setup to make the NVR work normally. You must configure the wizard when you start the NVR for the first time (or click "Skip" to cancel the wizard until next time).
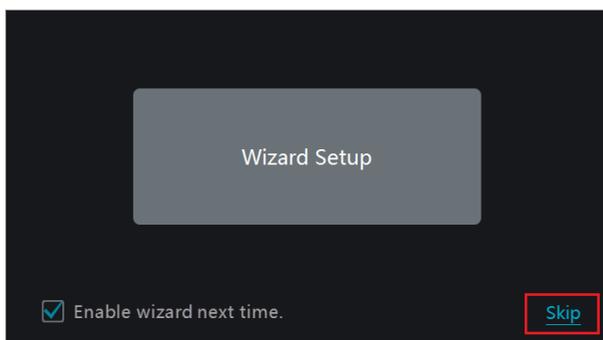
Click "Wizard Setup" to start wizard. The setting steps are as follows.

1   *System Login*. Set your own password or use the default when you use the wizard for the first time (the default username of the system is *admin* and the default password of admin is *123456*)
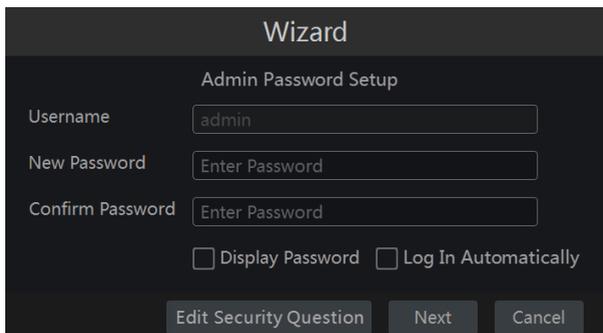
Click "Edit Security Question" to set questions and answers for password security of admin. If you forget the password, please refer to Q4 in Appendix A FAQ for details.

Click "Next" to continue or click "Cancel" to exit the wizard.

2   ***Date and Time Configuration***. Refer to the following figure. Set the time zone, system time, date format and time format. The DST will be enabled by default if the time zone selected includes DST. Click "Next" to continue.
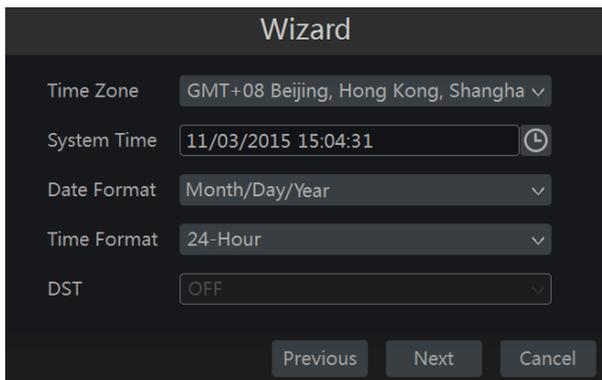
3   ***Network Settings***. Check "Obtain an IP address automatically" and "Obtain DNS automatically" to get the IP address and DNS automatically (the DHCP function of the router in the same LAN should also be enabled), or manually input them. Input the HTTP port, RTSP port and Server port (please see 11.1.2 Port Configuration for details). Click "Next" to continue.
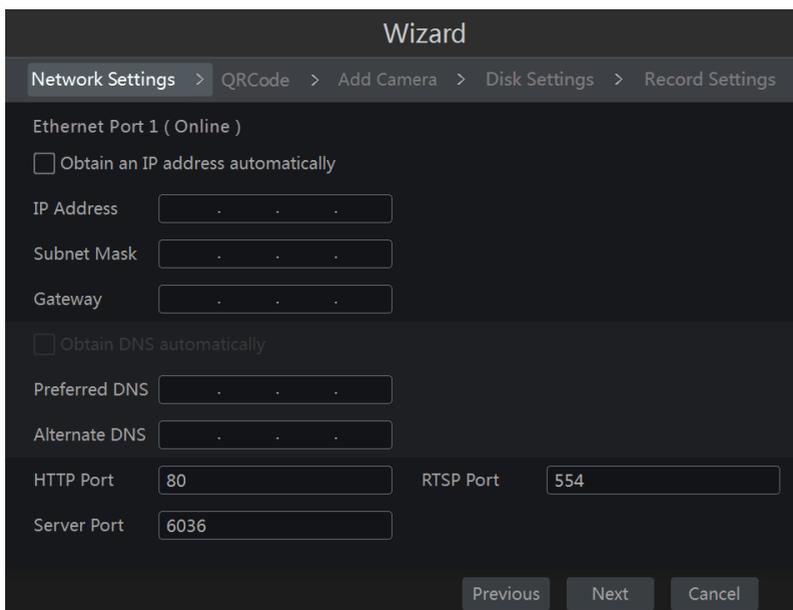
Note:

If you use the NVR with PoE network ports, the online state of the internal Ethernet port will be shown on the interface. Refer to the picture below. Please refer to 11.1.1 TCP/IPv4 Configuration for detailed introduction of the internal Ethernet port.

4   **QRCode.** You can scan the QRCode through mobile client which is installed in the mobile phone or PAD to log in the mobile client instantly. Please refer to 12.1 Mobile Client Surveillance for details.

5   **Add Camera**. Click "Refresh" to refresh the list of online IP cameras which are in the same local network with NVR and then click [+] to add the searched camera. Click "Add All" to add all the cameras in the list. Click [🗑] to delete the added camera. Click "Delete All" to delete all the added cameras.
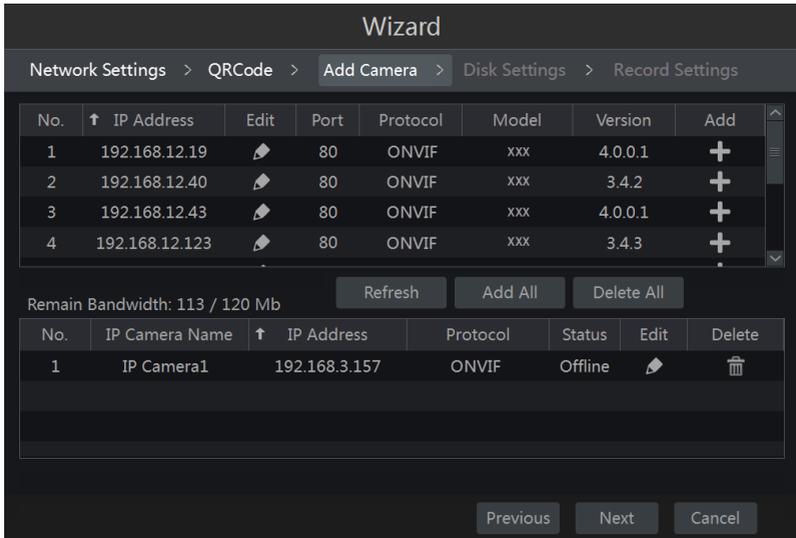
Click to edit the searched IP camera as shown on the below left. Input the new IP address, subnet mask, gateway, username and the password of the camera. Click "OK" to save the settings.
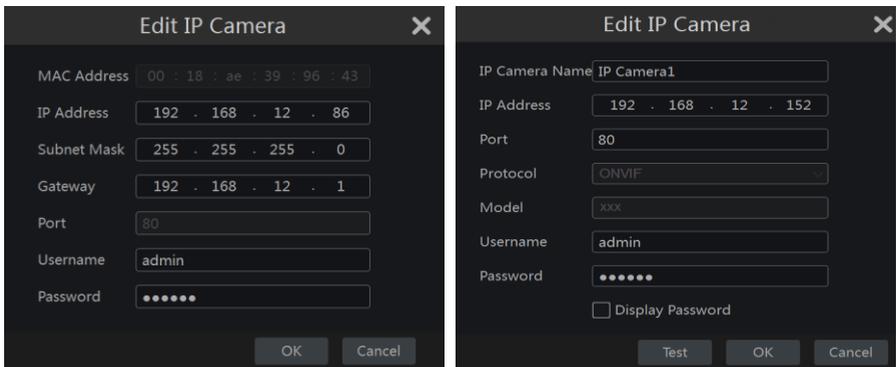
Click to edit the added camera as shown on the above right. Input the new camera name, IP address, port, username and the password of the camera. You can click "Test" to test the effectiveness of the input information. Click "OK" to save the settings. You can change the IP camera name only when the added camera is online. Click "Next" to continue.

6   *Disk Settings.* You can view the disk number, disk capacity of the NVR and serial number, R&W status of the disk. Click "Formatting" to format the disk. Click "Next" to continue.

7   *Record Settings*. Two record modes are available: auto and manual.

Auto: Select one auto mode as seen in the interface below, and then click "OK" button to save the settings. See 7.1.1 Mode Configuration for details.

Manual: Set the "Sensor Record", "Motion Record" and "Schedule Record" of each camera. Click "OK" to save the settings. See 7.1.1 Mode Configuration for details.

3.2 Main Interface

3.2.1 Main Interface Introduction
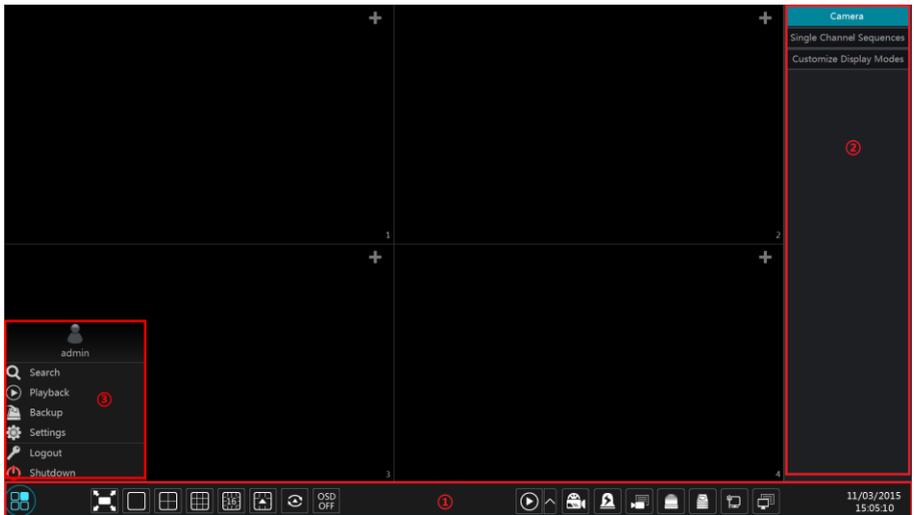
The buttons in area ① are introduced in the table below.

Button	Meaning
	Start button. Click it to pop up area ③.
	Full screen button. Click it to show full screen; click it again to exit the full screen.
	Screen mode button.
	Dwell button (see 5.2.2 Quick Sequence View and 5.2.4 Scheme View In Sequence for details).
	Click to enable OSD; click to disable OSD.
	Click to set the default playback time before starting instant playback (8.1 Instant Playback) or going to the playback interface for playback operations (8.2 Playback Interface Introduction); click to go to the playback interface. For instance, if you choose "5 minutes ago" as the default playback time, you can playback the record from the past five minutes.
	Manual record button. Click it to enable/disable record.
	Manual alarm button. Click it to trigger or clear the alarm-out manually in the popup window.
	Record status button. Click it to view the record status.
	Alarm status button. Click it to view the alarm status.
	Disk status button. Click it to view the disk status and RAID status.
	Network status button. Click it to view the network status.
	Information button. Click it to view system information.

Introduction of area ②:

Click "Camera" to view all the added cameras in the camera list. Select one camera and then double click to preview the camera image in the selected window.

Click "Single Channel Sequences" to view all the added groups in the group list; click one group in the list to view all the added cameras in the group (refer to 4.2 Add/Edit Camera Group for detail configuration of the camera group). Select one camera window on the left side of the interface and then double click one group in the group list to preview the cameras' images one by one in the selected window.

Click "Customize Display Modes" to view all the display modes in the display mode list (refer to 5.2.1 Preview By Display Mode for detail configuration of the display mode). Double click one display mode in the list to switch to the display mode for previewing.

Introduction of area ③:

Icon / Button	Meaning
admin	It shows the current login user.
Q Search	Click Search to go to record search interface, see 8.3 Record Search & Playback for details.
⊙ Playback	Click Playback to go to playback interface (click ◖ on the tool bar at the bottom of the live preview interface to set the default playback time), see 8.2 Playback Interface Introduction for details.
Backup	Click Backup to go to backup interface, see 8.4 Backup for details.
Settings	Click Settings to pop up the setup panel, see 3.2.2 Setup Panel for details.
Logout	Click Logout to log out the system.
Shutdown	Click shutdown and then select "Logout", "Reboot" or "Shutdown" in the popup window.
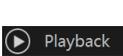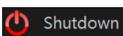
3.2.2 Setup Panel

Click Start→Settings to pop up the setup panel as shown below.
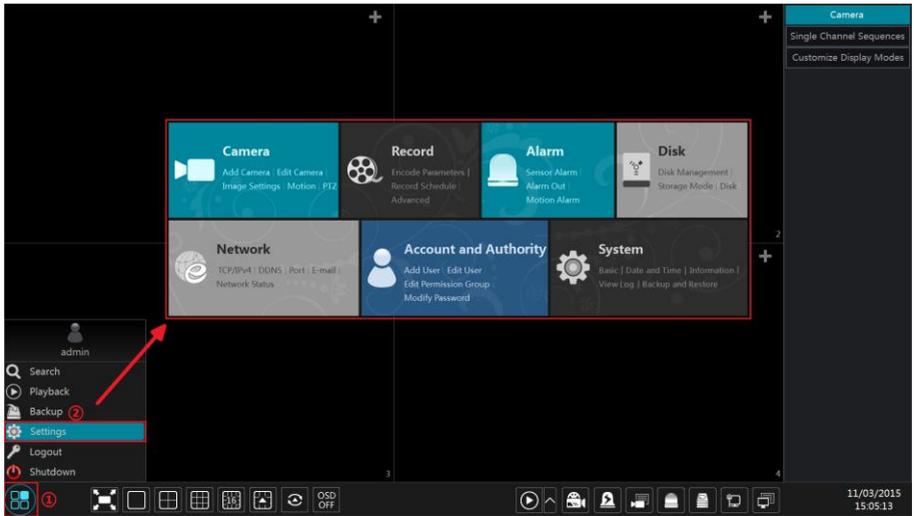
The setup panel includes seven modules. Each module provides some function entries with links for convenient operation.

Here we take *Camera* module as an example. The *Camera* module provides convenient links such as "Add Camera", "Edit Camera", "Image Settings", "Motion" and "PTZ". Click *Camera* to go to the camera management interface as shown below.
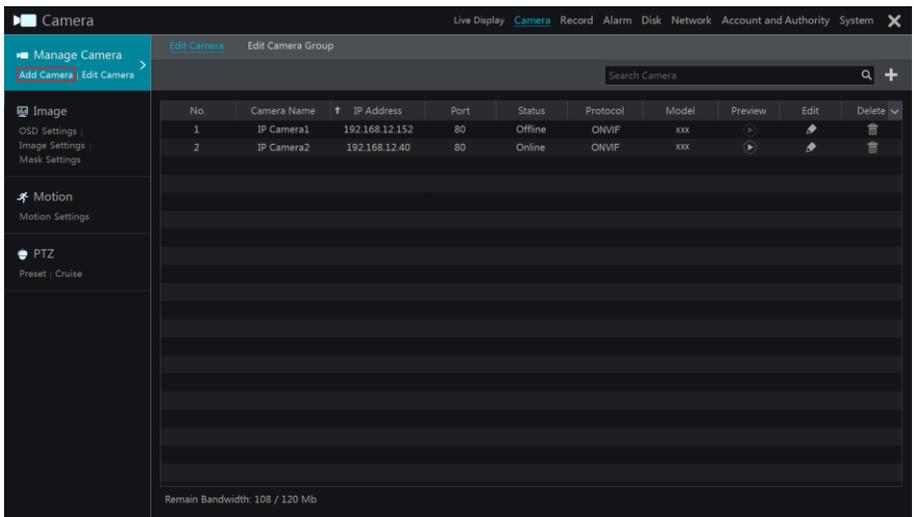
There are some function items on the left side of the camera management interface. Click each item to go to corresponding interface or window. For instance, click "Add Camera" to pop up the window as shown below.
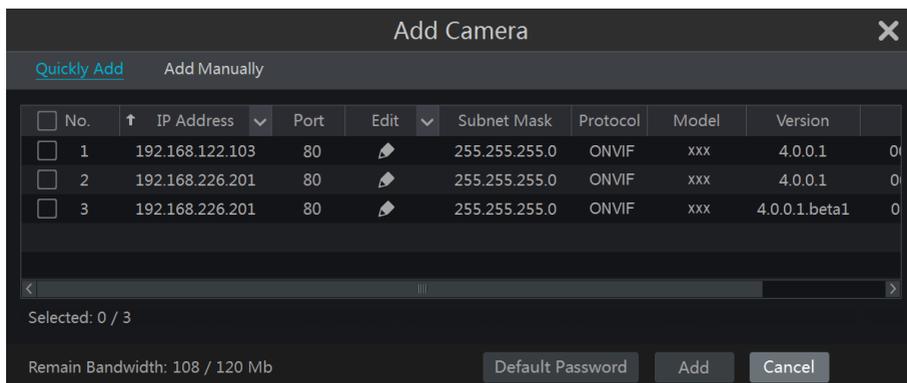
Choose an option on the top of the camera management interface to go to corresponding interfaces. Refer to the picture below.
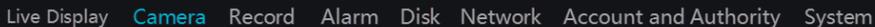
3.2.3 Main Functions

➢ **Camera**

The module covers the functions such as *Camera Management* (see Chapter 4 Camera Management for details), *Image Settings* (see 5.3 Preview Image Configuration for details), *Motion* (see 9.2.1 Motion Configuration for details) and *PTZ* (see Chapter 6 PTZ for details) and so on.

➢ **Record**

The module covers the functions such as *Encode Parameters* and *Record Schedule, etc.*. Please see Chapter 7 Record & Disk Management for details.

➢ **Disk**

The module covers the functions such as *Disk Management*, *Storage Mode*, *Disk Information, etc.*. Please see Chapter 7 Record & Disk Management for details.

➢ **Alarm**

The module covers the functions such as *Sensor and Motion Alarm Handling* and *Alarm Out Settings*. Please see Chapter 9 Alarm Management for details.

➢ **Network**

The module covers the functions such as *TCP/IPv4*, *DDNS*, *Port*, *E-mail* and *Network Status, etc*. Please see 11.1 Network Configuration for details.

➢ **Account and Authority**

The module covers the functions such as ***Account Management,*** (see <u>10.1 Account Management</u> for details) ***Permission Management*** (see <u>10.3 Permission Management</u> for details).

➢ **System**

The module covers the functions such as ***Basic Configuration*** (see <u>11.2 Basic Configuration</u> for details), ***Device Information*** (see <u>11.7 View System Information</u> for details), ***Log Information,*** (see <u>11.6 View Log</u> for details) ***Configuration File Import&Export*** (see <u>11.5 Backup and Restore</u> for details).

4 Camera Management

4.1 Add/Edit Camera

4.1.1 Add Camera

The network of the NVR should be set before adding IP camera (see <u>11.1.1 TCP/IPv4</u> <u>Configuration</u> for details).

Refer to the pictures below. Click ***Add Camera*** in the setup panel or ✚ in the top right corner of the preview window to pop up the "Add Camera" window as shown below.
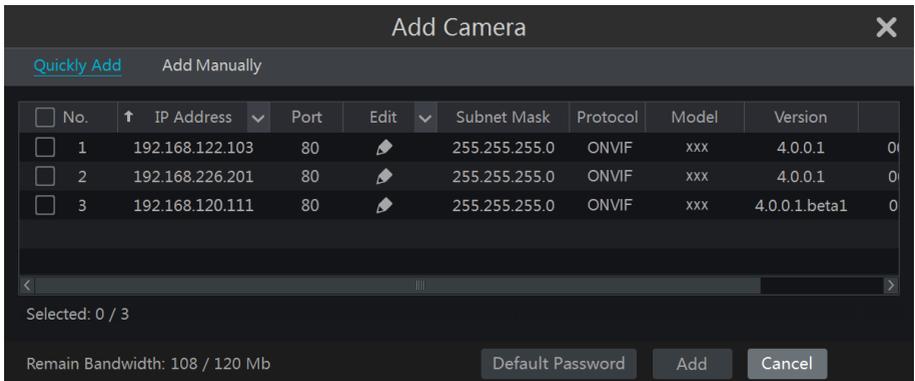
➤ **Quickly Add**

Check the cameras and then click "Add" to add cameras. Click 🖊 to edit the camera's IP address, username, password and so on. Click "Default Password" to set the default username and password of each camera.

Add Camera ✕

Quickly Add	Add Manually					
IP Address	Port	Username	Password	Protocol	Test	Delete
0.0.0.0	80	admin ⌄	******	ONVIF ⌄	Test	🗑

Remain Bandwidth: 108 / 120 Mb   Default Password   Add   Cancel

➢ **Add Manually**

Input the IP address, port, username and password of the camera and then select the protocol. Click "Test" to test the effectiveness of the input information and then click "Add" button. Click 🗑 to delete the camera. Click "Default Password" to set the default username and password of each camera.

4.1.2 Edit Camera

Click "Edit Camera" in the setup panel to go to the interface as shown below. Click ▶ to view the live image of the camera in the popup window. Click ✎ to edit the camera (see *Add camera* in 3.1Startup Wizard for details). Click 🗑 to delete the camera.

Edit Camera	Edit Camera Group							

Search Camera 🔍 ➕

No.	Camera Name ↑	IP Address	Port	Status	Protocol	Model	Preview	Edit	Delete ⌄
1	IP Camera1	192.168.12.152	80	Offline	ONVIF	xxx	▶	✎	🗑
2	IP Camera2	192.168.12.40	80	Online	ONVIF	xxx	▶	✎	🗑

Remain Bandwidth: 108 / 120 Mb

Note:

If you use the NVR with the PoE network ports, the IP cameras (with PoE function) which directly connect to the PoE port of the NVR will be displayed automatically in the camera list. Refer to the picture below. The IP camera which occupies the PoE resource has a prefix shown before its camera name. The prefix consists of PoE plus PoE port number. The IP camera which connects to the PoE port cannot be deleted from the camera list manually.

No.	Camera Name	↑ IP Address	Port	Status	Protocol	Model	Preview	Edit	Delete ∨
1	[POE3]IP Camera1	10.151.151.20	80	Online	ONVIF	xxx	▶	✎	🗑
2	IP Camera2	192.168.12.40	80	Online	ONVIF	xxx	▶	✎	🗑
3	IP Camera3	192.168.12.152	80	Online	ONVIF	xxx	▶	✎	🗑
4	IP Camera4	192.168.12.41	80	Online	ONVIF	xxx	▶	✎	🗑
5	IP Camera5	192.168.12.153	80	Offline	ONVIF	xxx	▶	✎	🗑
6	IP Camera6	192.168.12.154	80	Online	ONVIF	xxx	▶	✎	🗑
7	IP Camera7	192.168.12.155	80	Online	ONVIF	xxx	▶	✎	🗑
8	IP Camera8	192.168.12.156	80	Online	ONVIF	xxx	▶	✎	🗑
9	IP Camera9	192.168.12.157	80	Online	ONVIF	xxx	▶	✎	🗑
10	[POE1]IP Camera10	192.168.12.158	80	Online	ONVIF	xxx	▶	✎	🗑

Remain Bandwidth: 60 / 120 Mb

● The IP camera which directly connects to the PoE port of the NVR through private protocol will be shown automatically in the camera list.

● One of the two conditions must be met for the IP camera which directly connects to the PoE port of the NVR through ONVIF protocol to be shown automatically in the camera list.

✓ The IP camera which directly connects to the PoE port must be in the same network segment with the internal Ethernet port.

✓ The DHCP (obtain an IP address automatically) of the IP camera is enabled.

If the IP camera which connects to the PoE port cannot be displayed automatically in the camera list, please refer to Q6 in Appendix A FAQ for details.

4.2 Add/Edit Camera Group

4.2.1 Add Camera Group

Click "Edit Camera Group" in the above interface to go to the interface as shown below.

Edit Camera	Edit Camera Group				
					✚
Group1	Dwell Time (10 Secs)	Number of Cameras(2)	✎	🗑	⌄
Group2	Dwell Time (10 Secs)	Number of Cameras(2)	✎	🗑	⌄
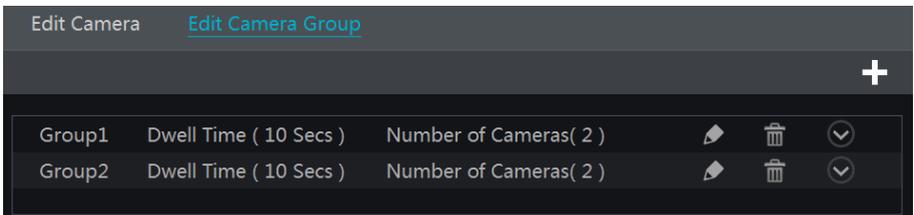
Click ✚ to pop up the window as shown below. Set the group name and dwell time (the

dwell time of the camera group sequence view) in the window. Check the cameras and then click "Add" to add group. Click ⊙ to view the cameras in the group after adding group.
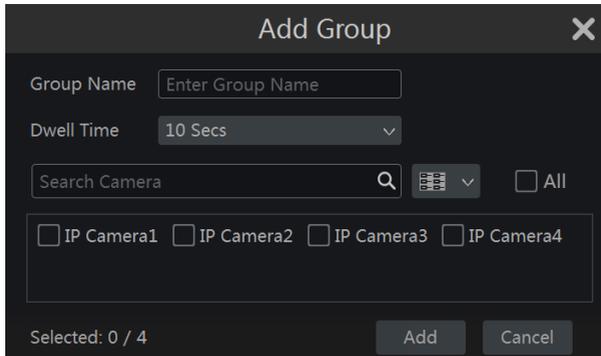
4.2.2 Edit Camera Group
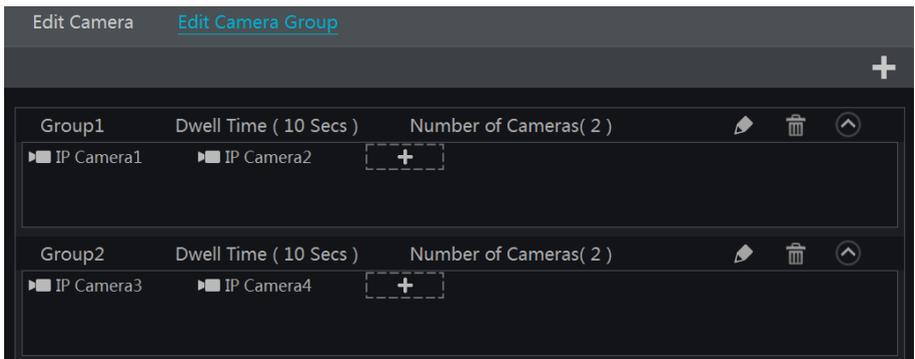
Click 🖊 to modify the group information such as group name and dwell time. Click 🗑 to delete the group.

5 Live Preview Introduction

5.1 Preview Interface Introduction

You should add camera before attempting live preview (see <u>4.1.1 Add Camera</u> for details). Refer to the interface as shown below, drag one camera in the preview window to another window for camera window exchanging.
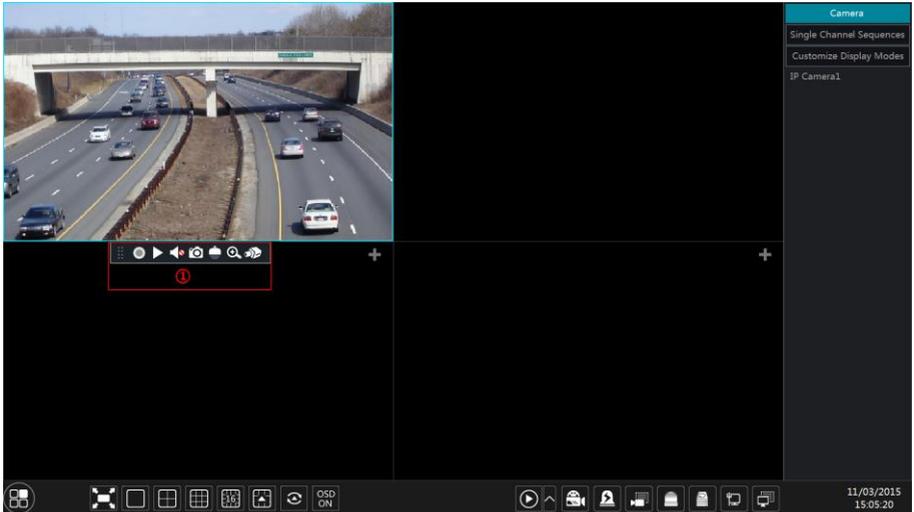
Click the preview window to show the tool bar as shown in area ①; right click the preview window to show the menu list. The tool bar and menu list are introduced in the table below.

Button	Menu List	Meaning
	--	Move tool. Click it to move the tool bar anywhere.
	Manually Record On	Click it to start recording.
	Instant Playback	Click ▶ to playback the record; click "Instant Playback" to select or self-define the instant playback time. See <u>8.1 Instant Playback</u> for details.
	Enable Audio	Click it to enable audio. You can listen to the camera audio by enabling audio.
	Snap	Click it to pop up the snap window. Click "Save" in the window to save the image. Click "Export" to export the image.
	PTZ Control	Click it to go to PTZ control interface. See <u>Chapter 6 PTZ</u> for details.
	Zoom In	Click it to go to single channel amplification interface.
	--	Click it to go to image adjustment interface. Refer to <u>5.3.4 Image Adjustment</u> for details.

--	**Camera Info**	Click it to view the camera information.

The single channel amplification interface is as shown below. Press and drag the blue box to select the zoom in area. Click 🔍 / 🔍 to zoom the image. Click the camera selection box to select other cameras for amplification. Click "Back" to return to the live preview interface.

5.2 Preview Mode

5.2.1 Preview By Display Mode

Set different screen modes and camera display sequences as needed and then save the display mode. Refer to the picture below. Double click one display mode in the display mode list to view the live images in this mode.

> ➤ **Add Display Mode**

Method One:

1   Click "Customize Display Modes" in the above interface and then set the screen mode.
2   Add the cameras and adjust the cameras as needed.
3   Click "Save" button under the display mode list and then enter the display mode name in the popup window, click "OK" button to save the current display mode.

Method Two:

1   Click Start→Settings→System→Basic→Output Settings to go to the interface and then set the screen mode.
2   Double click the camera or camera group in the list to add them to the selected window.
3   Click ⭐ to save the current display mode (refer to <u>5.2.4 Scheme View In Sequence</u> for detail configurations). The display mode will be saved and displayed in the display mode list in the live preview interface.

> ➤ **Edit Display Mode**

Click "Customize Display Modes" tab in the live preview interface and then select one display mode in the list. Click "Rename" to edit the display mode name; click "Delete" to delete the display mode.

5.2.2 Quick Sequence View

You can start quick sequence view if the scheme has not been created. If the scheme has been created, please refer to <u>5.2.4 Scheme View in Sequence</u> for details.
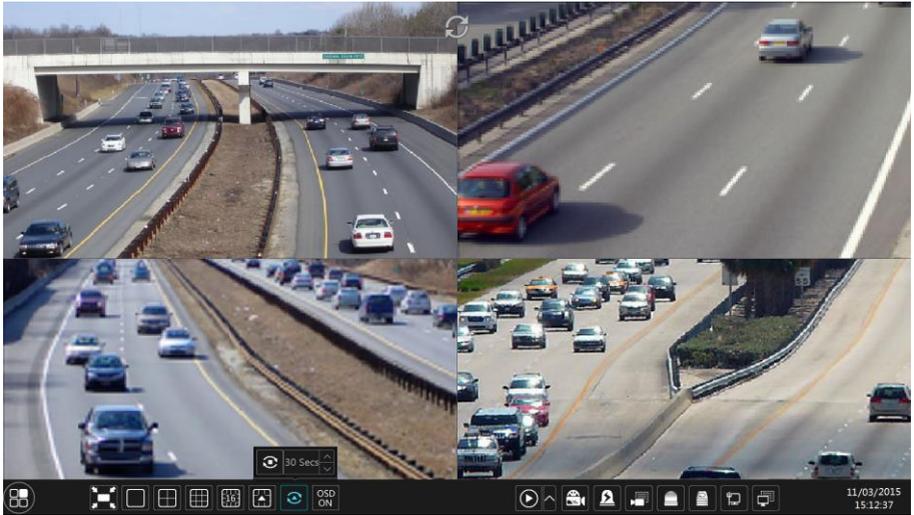
Go to the live preview interface and then click ⊙ to pop up a little window. Set the dwell time in the window and then click ⊙ to view the live group by group according to the camera number of the current screen mode. Double click the sequence view interface to pause the view; double click again to restore the view. Click ⊙ to stop the view.

5.2.3 Camera Group View In Sequence

You can start camera group view in sequence if camera group has been created (see 4.2.1 Add Camera Group for details).

1   Go to the live preview interface and then select a camera window.
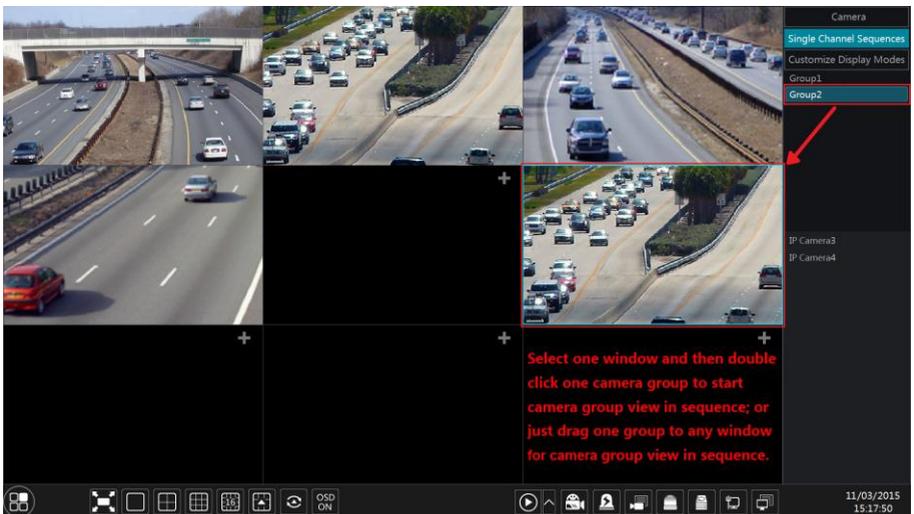
2   Double click one camera group on the right side of the interface. The cameras in the group will start camera group view one by one in the selected camera window.

You can also drag the group directly to any preview window. Right click on the group view window and then click "Close Dwell" button to stop the view.

5.2.4 Scheme View In Sequence

Click Start→Settings→System→Basic→Output Settings to go to the interface as shown below. Area ① displays all the dwell schemes; area ② shows the detailed information of the scheme; area ③ displays all the cameras and groups; area ④ is the tool bar (⟨img⟩: clear button; ★: favorite button, click it to pop up a window, enter the display mode name in the window and then click "OK" to save the current display mode; other buttons are screen mode buttons).
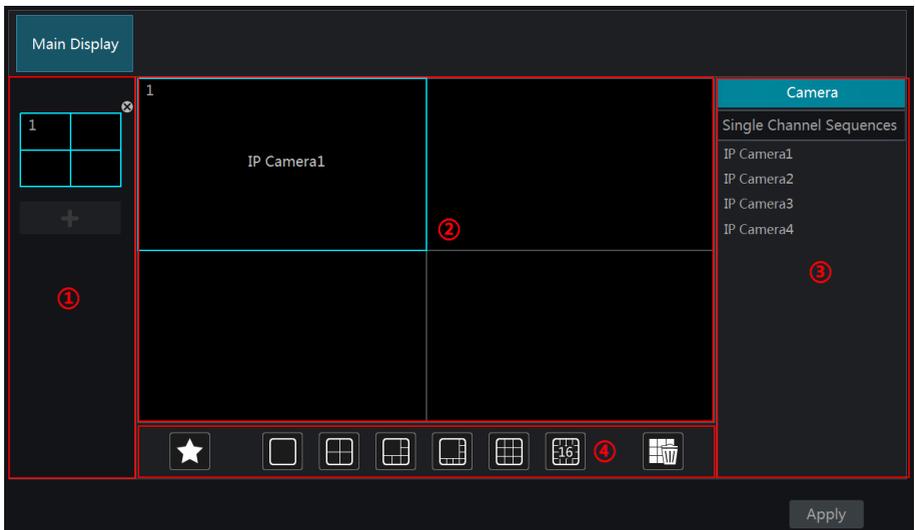
> **Add Scheme**

Click ✚ in area ① to create a new scheme. Click ⊗ on the top right corner of the scheme to delete it.

> **Configure Scheme**

a)   Select a scheme in area ① and then click the screen mode button on the tool bar to set the screen mode of the scheme.

b)   Select a camera window in area ② and then double click the camera or group in area ③. The camera or group will be added into the selected window. One camera in the same scheme cannot repeat. You can click the right-click menu "Clear" in area ② to remove a single camera or click ⟨img⟩ to remove all the cameras.

c)   Click "Apply" to save the settings.

➢ **Start Sequence View**

Go to live preview interface and then click ⟳ to pop up a window. Set the dwell time in the window and then click ⟳ to start scheme view in sequence. Double click the sequence view interface to pause the view; double click again to restore the view. Click ⟳ to stop the view.

5.3 Preview Image Configuration
5.3.1 OSD Settings

Click Start→Settings→Camera→Image→OSD Settings to go to the interface as shown below. Select the camera, input the camera name (or double click the camera name in the camera list to change the camera name), enable or disable the name and time OSDs (if enabled, drag the red name and time OSDs directly in the image view area to change the OSDs' display position) and select the date and time formats. Click "Apply" to save the settings.
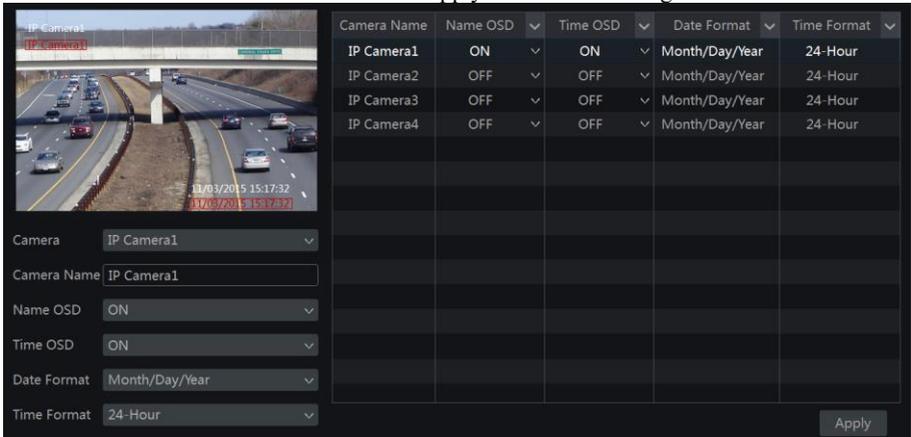
5.3.2 Image Settings

Click Start→Settings→Camera→Image→Image Settings to go to the following interface. Select the camera and then set the brightness, contrast, saturation and hue of the camera. You can click "Default" button to restore the image settings to the default factory settings.
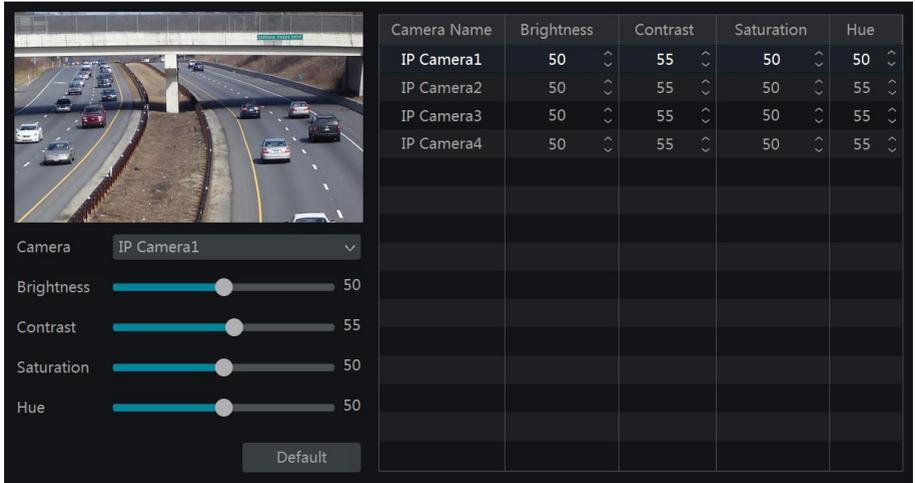
Camera Name	Brightness		Contrast		Saturation		Hue	
IP Camera1	50	˅	55	˅	50	˅	50	˅
IP Camera2	50	˅	55	˅	50	˅	55	˅
IP Camera3	50	˅	55	˅	50	˅	55	˅
IP Camera4	50	˅	55	˅	50	˅	55	˅

5.3.3 Mask Settings

Some areas of the image can be masked for privacy. Up to four mask areas can be set for each camera. Click Start→Settings→Camera→Image→Mask Settings to go to the interface as shown below. Select the camera and enable the mask. Click "Draw" button and then drag the mouse on the image area to set the mask area; click "Delete" button to delete the mask areas; click "Apply" to save the settings.
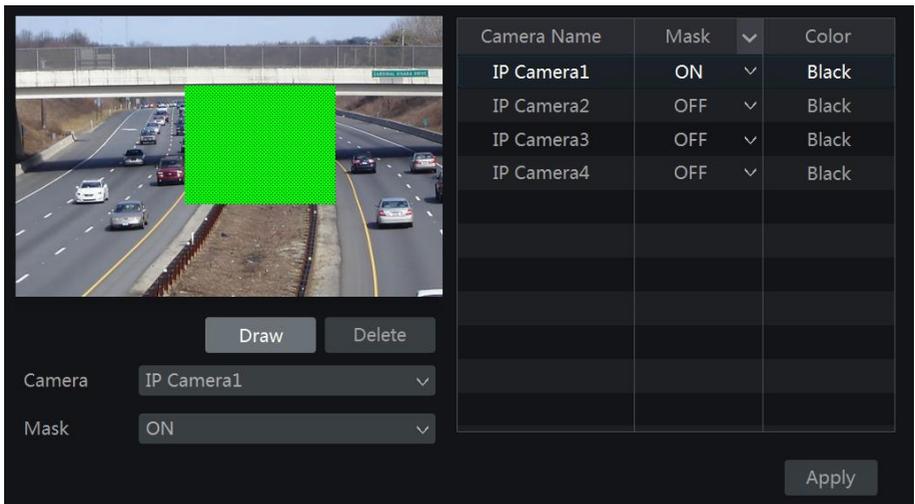
5.3.4 Image Adjustment

Go to live preview interface and then click [image] button on the tool bar under the camera window to go to the image adjustment interface.
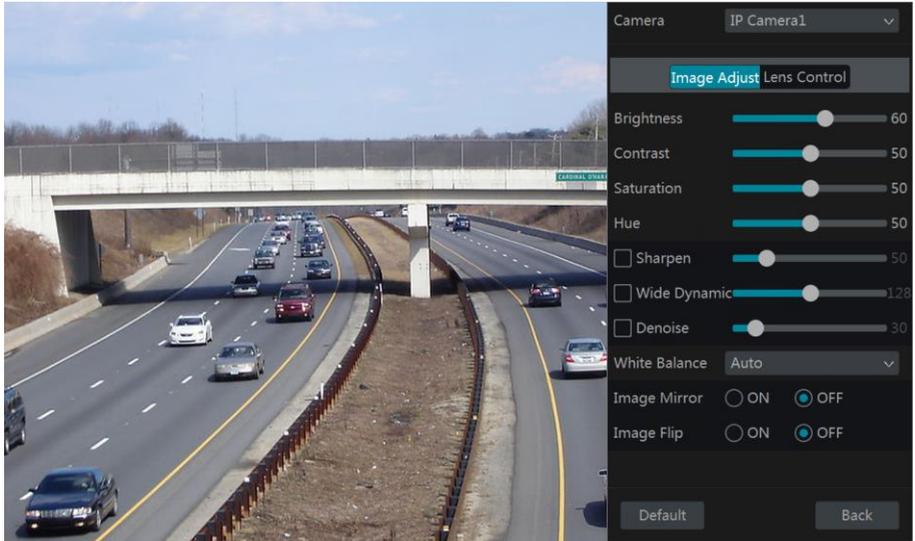
> ➢ **Image Adjustment**

Select the camera and then click "Image Adjustment" to go to image adjustment tab. Refer to the above picture. Drag the slider to set the camera's brightness, contrast, saturation and hue value. Check sharpen, wide dynamic and denoise and then drag the slider to set the value. Click "Default" button to set these parameters to default values.

The introductions of these parameters are as follows:

Parameter	Meaning
Brightness	It is the brightness level of the camera's image.
Contrast	It is the color difference between the brightest and darkest parts.
Saturation	It is the degree of color purity. The color is purer, the image is brighter.
Hue	It relates to the total color degree of the image.
Sharpen	It relates to the resolution level of the image plane and the sharpness level of the image edge.
Wide Dynamic	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.
Denoise	Adopt the noise reduction technology to decrease the noise and make the image more thorough. Increasing the value will make the noise reduction effect better but it will reduce the image resolution.
White Balance	White balance is the white rendition function of the camera to adjust the color temperature according to the environment automatically.
Image Mirror	Reverse the current video image right and left.
Image Flip	Turn the current video image upside down.

➢ **Lens Control**

Select the camera and then click "Lens Control" to go to lens control tab. Click [—] or [+] to adjust the zoom and focus parameters of the camera's lens. Click "Save" to save the settings.
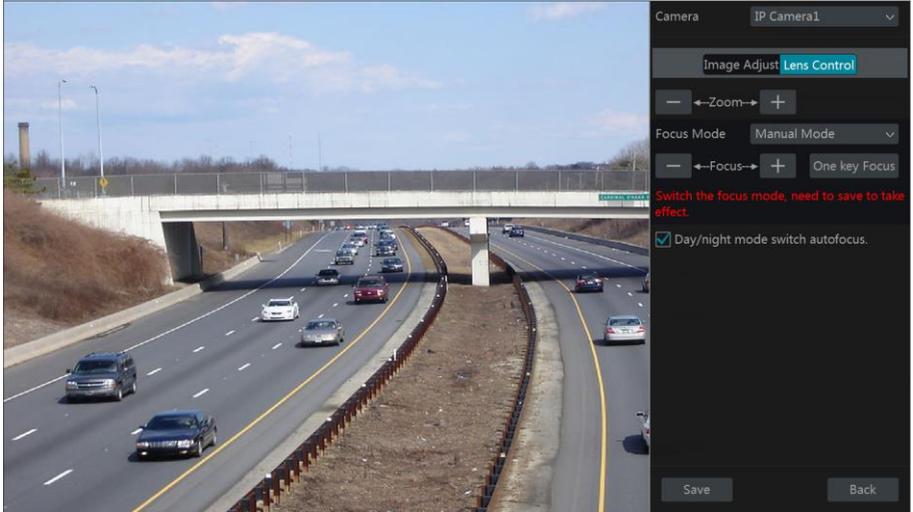
The introductions of these parameters and buttons are as follows:

Button/Parameter	Meaning
[—] ←Zoom→ [+]	Click [+] / [—] to zoom in/out the image.
Focus Mode	If manual mode is selected, focus button & "One Key Focus" & "Day/night mode switch autofocus" will be available; if auto mode is selected, the time interval setup will be available.
[—] ←Focus→ [+]	Click [+] / [—] to increase/decrease the focal length.
One key Focus	Click it to focus instantly.
Day/night mode switch autofocus	If checked, the lens will focus automatically when the camera is switching day/night mode.
Time Interval	It is the time interval when camera lens is auto-focusing. The interval can be set in the drop-down list.
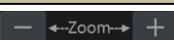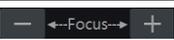
Note: This function is only available for the models with auto varifocal lens, or the settings here are ineffective.

6 PTZ

6.1 PTZ Control Interface Introduction

You can control the IP dome or PTZ which connects to the IP camera for PTZ control.

Click ⬚ on the tool bar at the bottom of the live preview window to go to the PTZ control interface as shown below. You can select another IP dome or PTZ which connects to the IP camera on the top right of the interface for PTZ control.
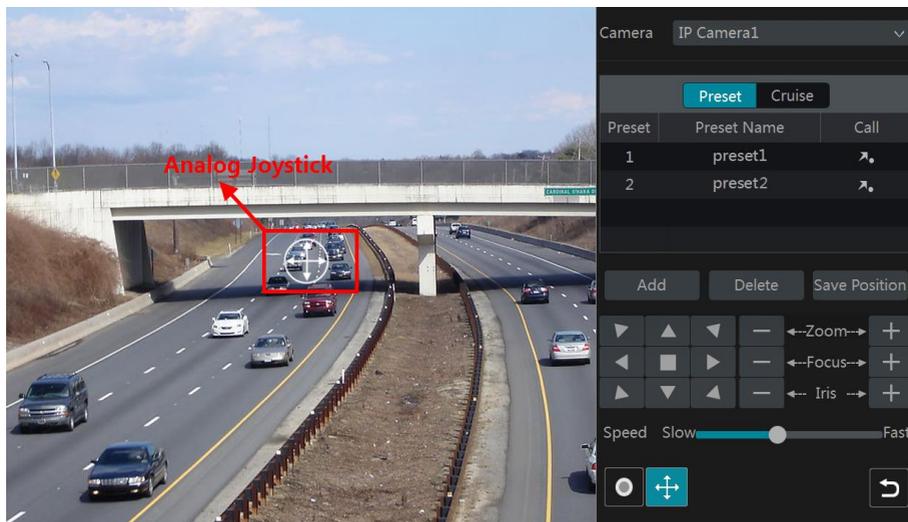
Introductions of the buttons on the bottom right of the interface:

Button	Meaning
▶ ▲ ◀ / ◀ ■ ▶ / ▲ ▼ ◀	Click ▲ / ▶ / ▼ / ◀ / ▶ / ◀ / ▶ to rotate the dome. Click ■ to stop rotating the dome.
─ ◀--Zoom--▶ ＋	Click ＋ / ─ to zoom in / out the camera image.
─ ◀--Focus--▶ ＋	Click ＋ / ─ to increase / decrease the focal length.
─ ◀-- Iris --▶ ＋	Click ＋ / ─ to increase / decrease the iris of the dome.
Slow ▬▬●▬▬ Fast	Drag the slider to adjust the rotating speed of the dome.
⬤ / ⬤	Click ⬤ / ⬤ to start / stop recording.
✛ / ✛	Click ✛ / ✛ to hide / show the analog joystick.
↩	Click it to return to the live preview interface.

➢ **Analog Joystick Control**

The analog joystick on the left side of the interface provides quick PTZ control. The dome or PTZ will rotate when you drag the analog joystick. The farther you drag the analog joystick from the middle of the image, the faster the dome or PTZ rotates. The dome or PTZ will stop rotating when you stop dragging the analog joystick.

➢ **3D Control**

Click the camera image on any area and then the image will be centered on the clicked point. Refer to the picture as shown below. Drag the mouse from A to B to get a green rectangle and the rectangle area will be zoomed in.
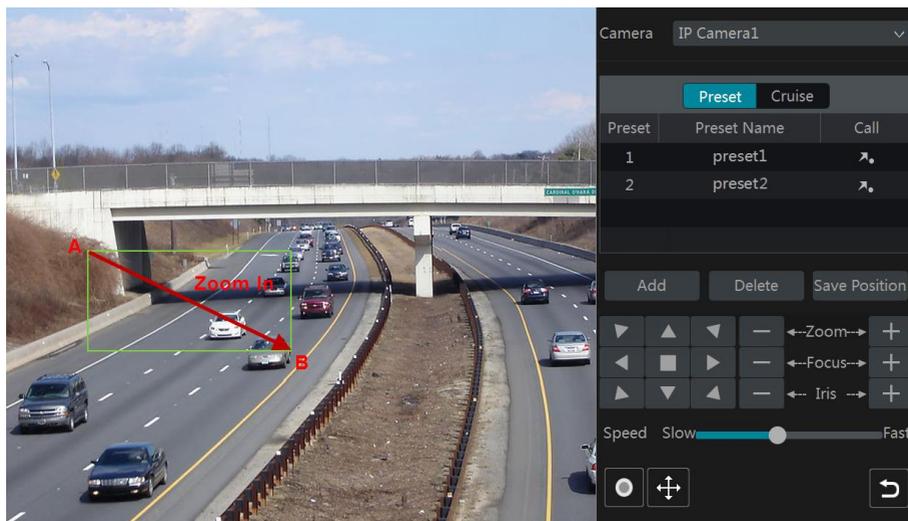
Refer to the picture as shown below. Drag the mouse from C to D to get a green rectangle and the rectangle area will be zoomed out.
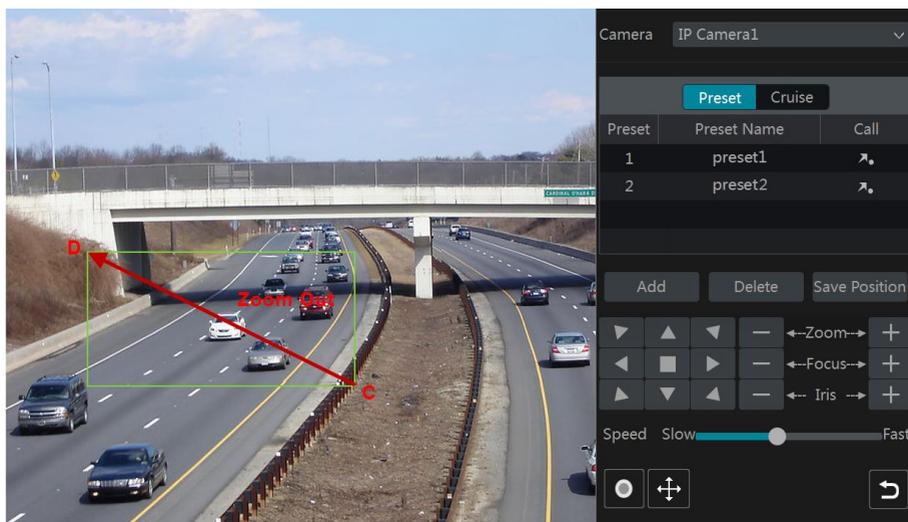
➢ **Advanced 3D Control**

Double click the left button of the mouse on any area of the camera image and then the image size will be doubled and centered on the clicked point.

Press and hold the left button of the mouse on any area of the camera image to zoom in the image; press and hold the right button to zoom out the image.

Move the cursor of the mouse to the camera image and then slide the scroll wheel of the mouse forward to zoom in the image, slide the scroll wheel of the mouse backward to zoom out the image.

➢ **Preset Setting**

Click "Preset" to go to preset operation tab and then click "Add" button to pop up a window as shown below. Select the preset and then input the preset name in the window; finally, click "OK" button to save the settings. You can add 255 presets for each dome at most.

Adjust the dome's direction and then click "Save Position" to save the current preset position (you can also click another preset in the preset list and then save the preset position after

adjusting the dome's direction); click in the preset list to call the preset; click "Delete" button to delete the selected preset.

You can also go to preset setting interface for preset setting, see 6.2 Preset Setting for details.

➢   **Cruise Setting (Tour)**

Click "Cruise" to go to cruise operation tab and then click "Add" button to pop up a window as shown below on left. You can add up to 8 cruises at most for each dome.
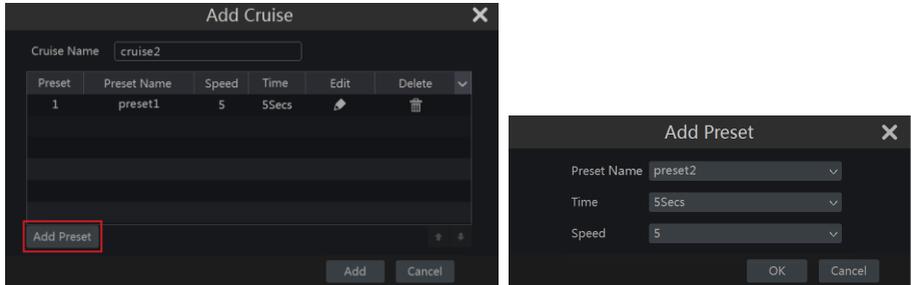
1   Input the cruise name in the "Add Cruise" window and then click "Add preset" to pop up the "Add Preset" window (Before adding preset to the cruise, please add preset of the dome first).

2   In the "Add Preset" window, select the preset name, preset time and preset speed and then click "OK" button.

3   In the "Add Cruise" window, you can click to reselect the preset, then change the preset time and speed. Click to delete the preset. Click "Add" button to save the cruise.

Click to start the cruise and click to stop the cruise in the cruise list of the cruise operation tab; click "Delete" button to delete the selected cruise.

You can also go to cruise setting interface for cruise setting, see 6.3 Cruise Setting for details.

6.2 Preset Setting

Click Start➔Settings➔Camera➔PTZ➔Preset to go to the interface as shown below.
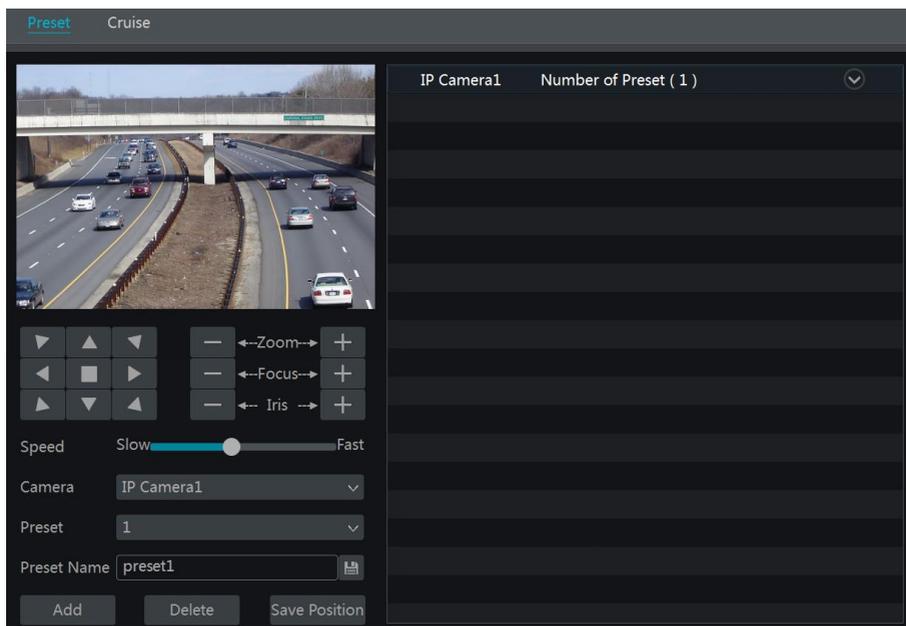
> ➢ **Add preset**

Select camera and then click "Add" button to add preset; or click [icon] in the camera list on the right side of the interface to display the preset information of the dome and then click [icon] to add preset. The operations of the "Add Preset" window are similar to that of the PTZ control interface; please see <u>6.1 PTZ Control Interface Introduction</u> for details.

> ➢ **Edit preset**

Select camera and preset. You can input the new name of the preset and then click [icon] to save the new preset name. Adjust the rotating speed, position, zoom, focus and iris of the preset and then click "Save Position" to save the preset.

> ➢ **Delete Preset**

Select camera and preset and then click "Delete" to delete the preset.

6.3 Cruise Setting (Tour Setting)

Click Start→Settings→Camera→PTZ→Cruise to go to the interface as shown below.
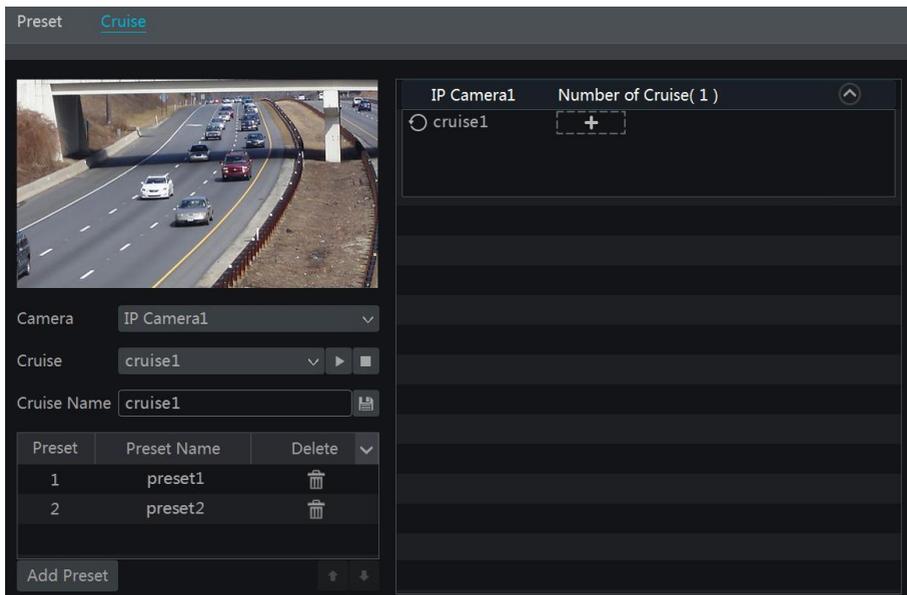
> ➢ **Add Cruise**

Click ⊙ in the camera list on the right side of the interface to display the cruise information of the dome and then click ▭✚▭ to add cruise. The operations of the "Add Cruise" window are similar to that of the PTZ control interface; please see <u>6.1 PTZ Control Interface Introduction</u> for details.

> ➢ **Edit Cruise**

Select the camera and cruise in the "Cruise" interface. Input the new cruise name and then click 💾 to save the cruise name. Click "Add Preset" to add preset to the cruise. Click 🗑 to delete the preset from the cruise. Click one preset in the preset list and then click ⬇ to move down the preset and click ⬆ to move up the preset. Click ▶ to start the cruise and click ⬛ to stop it.

> ➢ **Delete Cruise**

Click ⊙ in the camera list on the right side of the interface to display the cruise information of the dome and then click ✕ on the top right corner of the cruise to delete the cruise.

7 Record & Disk Management

7.1 Record Configuration

7.1.1 Mode Configuration

Please format the HDDs before recording (refer to 7.5 Disk Management for details). Click Start→Settings→Record→Mode Settings to go to the mode settings interface. You can set the record time under the "Manual Record Settings" and then click "Apply" button to save the settings. There are two record modes: auto mode and manual mode.

> ➤ **Auto Mode**

Motion Record: Motion alarm record will be enabled when motion alarm happens.

Sensor Record: Sensor alarm record will be enabled when sensor alarm happens.

Motion Record+Sensor Record: Motion/sensor alarm record will be enabled when motion/sensor alarm happens.

Always(24 x7) Record+Motion Record: Normal record is enabled all the time; motion alarm record will be started when motion alarm happens.

Always(24 x7) Record+Sensor Record: Normal record is enabled all the time; sensor alarm record will be started when sensor alarm happens.

Always(24 x7) Record+Motion Record+Sensor Record: Normal record is enabled all the time; motion/sensor alarm record will be enabled when motion/sensor alarm happens.

Select one auto mode to pop up the corresponding window. Set the video encode, resolution,

FPS, bitrate and audio of each camera and then click "OK" to save the settings.

				Normal					Motion Record+Sensor Record			
Camera Name	Stream Type	Video Encode	Resolution	FPS	Bitrate	Audio	Record Stream	Resolution	FPS	Bitrate	Audio	Record Stream
IP Camera1	Main Stream	H.264	1920x1080	25	4096Kbps	ON	Dual Stream	2560x1440	25	6144Kbps	ON	Dual Stream
IP Camera2	Main Stream	H.264	1920x1080	25	4096Kbps	ON	Dual Stream	2560x1440	25	6144Kbps	ON	Dual Stream
IP Camera3	Main Stream	H.265	1920x1080	25	4096Kbps	ON	Dual Stream	2560x1440	25	6144Kbps	ON	Dual Stream
IP Camera4	Main Stream	H.265	1920x1080	25	4096Kbps	ON	Dual Stream	2560x1440	25	6144Kbps	ON	Dual Stream

Title bar: Always(24x7) Record+Motion Record+Sensor Record
Footer: Remain Bandwidth: 92 / 120 Mb   OK   Cancel

Video Encode: the available options will be H.265 and H.264 if the connected IP camera supports H.265, if not the option will be H.264 only.
Resolution: the higher the resolution is, the clearer the image is.
FPS: the higher the frame rate is, the more fluent the video. However, more storage room will be taken up.
Bitrate: the higher the image quality you choose, the more bit rate will be required.

➢ **Manual Mode**

If the manual mode is selected, you need to set the encode parameters and record schedules of each camera. See 7.2 Encode Parameters Setting and 7.3 Schedule Setting for details.

7.1.2 Advanced Configuration

Click Start➔Settings➔Record➔Advanced to go to the following interface. Enable or disable cycle record (cycle record: the earliest record data will be replaced by the latest when the disks are full). Set the pre-alarm record time, post-alarm record time and expiration time of each camera and then click "Apply" to save the settings.

Advanced Record Settings
☑ Cycle Record
Camera's Record Parameters

Camera Name	Pre-alarm Record Time	Post-alarm Record Time	Expiration Time
IP Camera1	5 Secs	10 Secs	Never Expire
IP Camera2	5 Secs	10 Secs	Never Expire
IP Camera3	5 Secs	10 Secs	Never Expire
IP Camera4	5 Secs	10 Secs	Never Expire

Apply
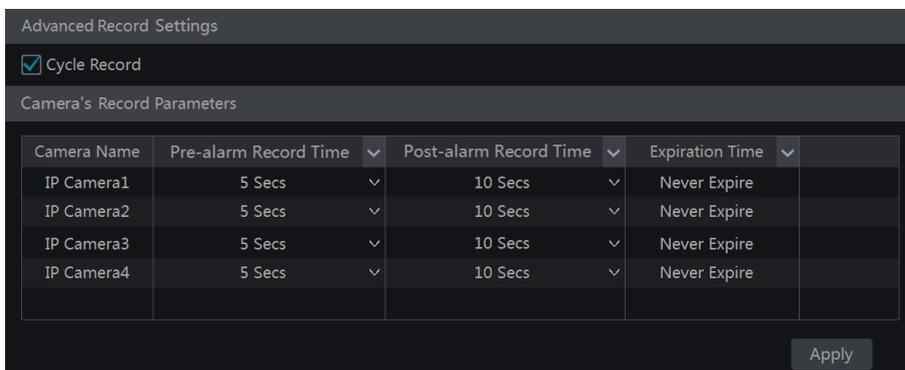
Pre-alarm Record Time: set the time to record before the actual recording begins.
Post-alarm Record Time: set the time to record after the actual recording is finished.
Expiration Time: set the expiration time for recorded video. If the set date is overdue, the recorded data will be deleted automatically.

7.2 Encode Parameters Setting

Click Start→Settings→Record→Encode Parameters to go to the interface as shown below. Set the video encode, resolution, FPS, bitrate and audio of main stream for each camera in "Event Record Stream" and "Timing Record Stream" interfaces. Click "Apply" to save the settings. You can set the record stream of each camera one by one or batch set them for all cameras.

Event Record Stream	Timing Record Stream						
Camera Name	Stream Type	Video Encode	Resolution	FPS	Bitrate	Audio	Record Stream
IP Camera1	Main Stream	H.264	2560x1440	25	6144Kbps	ON	Dual Stream
IP Camera2	Main Stream	H.264	2560x1440	25	6144Kbps	ON	Dual Stream
IP Camera3	Main Stream	H.265	2560x1440	25	6144Kbps	ON	Dual Stream
IP Camera4	Main Stream	H.265	2560x1440	25	6144Kbps	ON	Dual Stream

Remain Bandwidth: 92 / 120 Mb   Apply

Click Start→Settings→Record→Stream Settings to go to "Sub-stream" interface. Set the video encode, resolution, FPS and bitrate of sub-stream for each camera in the interface and then click "Apply" to save the settings.

Sub-stream					
Camera Name	Stream Type	Video Encode	Resolution	FPS	Bitrate
IP Camera1	Sub-stream	H.264	352x240	25	512Kbps
IP Camera2	Sub-stream	H.264	352x240	25	512Kbps
IP Camera3	Sub-stream	H.265	352x240	25	512Kbps
IP Camera4	Sub-stream	H.265	352x240	25	512Kbps

Apply

7.3 Schedule Setting
7.3.1 Add Schedule

Click Start→Settings→Record→Record Schedule→Edit Schedules to go to the interface as shown below. "24 x 7", "24 x 5" and "24 x 2" are the default schedules; you cannot edit or delete "24 x 7," while "24 x 5" and "24 x 2" can be edited and deleted. Click the schedule name to display the detailed schedule information on the left side of the interface. The seven rows stand for the seven days in a week and each row stands for 24 hours in a day. Blue stands for the selected time and gray stands for unselected time.

Click ✚ to add a new schedule. Refer to the picture below.

Set the schedule name and schedule time and then click "Add" to save the schedule. You can set day schedule or week schedule. : add button; : delete button.

➢ **Set Day Schedule**

Click and then drag the cursor on the time scale to set record time; click and then drag the cursor on the time scale to delete the selected area.

You can manually set the record start time and end time. Click or and then click "Manual" on each day to pop up a window as shown below. Set the start and end time in the window and then click "OK" to save the settings.
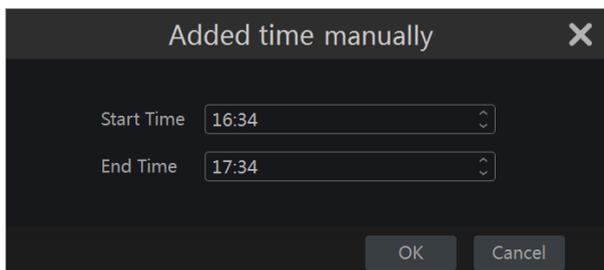
Click "All" to set all day recording; click "Reverse" to swap the selected and deselected time in a day; click "Clear All" to clear all the selected area in a day.

Click "Copy To" to copy the schedule of the day to other days. Refer to the picture below. Check the days in the window and then click "OK" to save the settings.
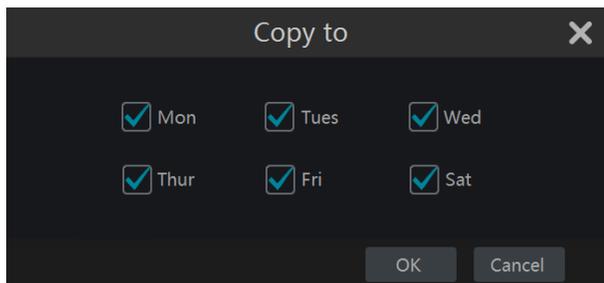
➢ **Set Week Schedule**

Click or and then click "Manual" beside to set the week schedule. Refer to the picture below. Set the start and end time, check the days in the window and then click "OK" to save the settings.

Added time manually ✕

Start Time | 16:37

End Time | 17:37

☑ Sun ☑ Mon ☑ Tues ☑ Wed

☑ Thur ☑ Fri ☑ Sat

OK   Cancel
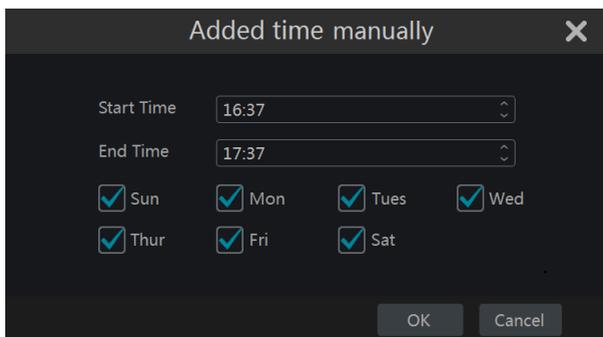
Click "All" to set all week recording; click "Reverse" to swap the selected and deselected time in a week; click "Clear All" to clear all the selected area in a week.

7.3.2 Record Schedule Configuration

Click Start→Settings→Record→Record Schedule→Schedule Configuration to go to the interface as shown below. Set the schedule of sensor record, motion record, and timed record. Click "None" in the drop-down menu to clear the schedule. Click "Apply" to save the settings.

Schedule Config	Edit Schedules				
Camera Name	Sensor Record Schedule	∨	Motion Record Schedule	∨	Timed Record Schedule	∨
IP Camera1	24×7	∨	24×7	∨	24×7	∨
IP Camera2	24×7	∨	24×7	∨	24×7	∨
IP Camera3	24×5	∨	24×5	∨	24×5	∨
IP Camera4	24×5	∨	24×5	∨	24×5	∨

Apply

Go to "Edit Schedules" interface and then click 🖉 to edit the schedule. The settings of "Edit Schedule" are similar to that of the "Add Schedule". Click 🗑 to delete the schedule.

7.4 Record Mode

7.4.1 Manual Recording

Method One: Click 📷 on the tool bar at the bottom of the live preview interface to enable recording of the camera.

Method Two: Go to live preview interface and then open the right-click menu and select "Manually Record On" in the camera window or click ⭕ on the tool bar under the camera window to start recording.

> *Note: Click Start→Settings→Record→Mode Settings and then set the manual record time in the interface. Click "Apply" to save the settings.*

7.4.2 Timing Recording

Timing Recording: the system will record automatically according to the schedule.
Set the timing record schedule of each camera. See 7.3 Schedule Setting for details.

7.4.3 Motion Based Recording

Motion Based Recording: the system will start motion based recording when motion is detected in the setup motion area. The setup steps are as follows:

1   Set the motion based recording schedule of each camera. See 7.3 Schedule Setting for details.

2   Enable the motion and set the motion area of each camera. See 9.2.1 Motion Configuration for details.

The camera will start motion based recording once you finish the above settings.

7.4.4 Sensor Based Recording

1   Set the sensor based recording schedule of each camera. See 7.3 Schedule Setting for details.

2   Set the NO/NC type of the sensor, enable the sensor alarm and then check and configure the "Record". See 9.1 Sensor Alarm for details.

7.5 Disk Management

Click Start→Settings→Disk→Disk Management to go to disk management interface. You can view the NVR's disk number, disk status and so on in the interface. Click "Formatting" button to format the HDD.

Disk	Capacity[GB]	Disk Serial No.	Disk Model	Status	Operation ∨
Disk2	931	XXX	XXX	✅ RW	Formatting

Note: All HDD New or Used should be formatted before use.

7.5.1 Storage Mode Configuration

Click Start→Settings→Disk→Storage Mode to go to the interface as shown below.
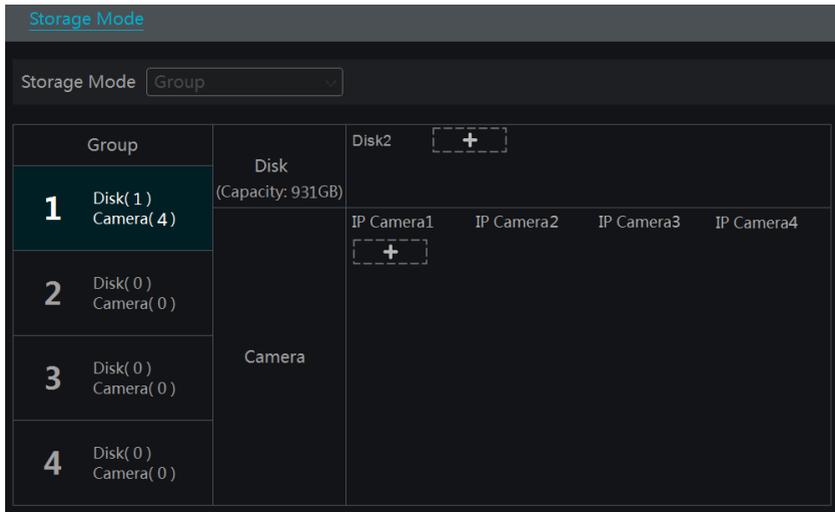
There are four disk groups. By using disk group, you can set the camera to record data to a specific camera group.

The added disks and cameras will be added into group one automatically. The disks and cameras in the groups can be deleted except group one (select a disk group and then click ⊗ on the top right corner of the added disk or camera to delete it from the group). The deleted disks and cameras will be moved into group one automatically.

Each group can copy the disks and cameras to other groups, each disk and camera can only be added into one group. Select a disk group and then click ┃ + ┃ in the disk or camera row to pop up a window. Check the disks or cameras in the window and then click "Add".

7.5.2 View Disk and S.M.A.R.T. Information

Click Start→Settings→Disk→View Disk Information to view the HDD information; click "S.M.A.R.T. Information" to view the working status of the HDD. Refer to the picture below.

ID	Attibution	Value	Worst Value	Threshold	Raw Value	Status
0x01	Read Error Rate	100	100	62	0	Normal
0x02	Throughput Performance	100	100	40	0	Normal
0x03	Spin-Up Time	234	234	33	1	Normal
0x04	Start/Stop Count	100	100	0	96	Normal
0x05	Reallocated Sector Count	100	100	5	0	Normal
0x07	Seek Error Rate	100	100	67	0	Normal
0x08	Seek Time Performance	100	100	40	0	Normal
0x09	Power-On Hours	99	99	0	724	Normal
0x0a	Spin Retry Count	100	100	60	0	Normal
0x0c	Power Cycle Count	100	100	0	93	Normal
0xbf	G-sense Error Rate	100	100	0	0	Normal
0xc0	Power-off Retract Count	100	100	0	58	Normal
0xc1	Load Cycle Count	100	100	0	8815	Normal
0xc2	Temperature	187	187	0	1638432	Normal
0xc4	Reallocation Event Count	100	100	0	0	Normal
0xc5	Current Pending Sector Count	100	100	0	0	Normal
0xc6	Uncorrectable Sector Count	100	100	0	0	Normal
0xc7	UltraDMA CRC Error Count	200	200	0	0	Normal
0xdf	Load/Unload Retry Count	100	100	0	0	Normal

8 Playback & Backup

8.1 Instant Playback

Click ▶ on the tool bar at the bottom of the preview camera window to play back the recording. (click ⌃ on the tool bar at the bottom of the live preview interface to set the default playback time) Refer to the picture below. Drag the playback progress bar to change the playback time. You can also open the right-click menu and click "Instant Playback" in the camera window and then set the instant playback time to play back the record.
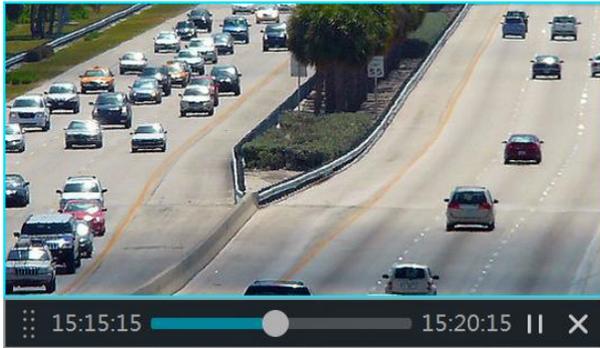
8.2 Playback Interface Introduction

Click ⊙ on the tool bar at the bottom of the live preview interface or click Start→Playback to go to the playback interface as shown below (click ⌃ on the tool bar at the bottom of the live preview interface to set the default playback time).
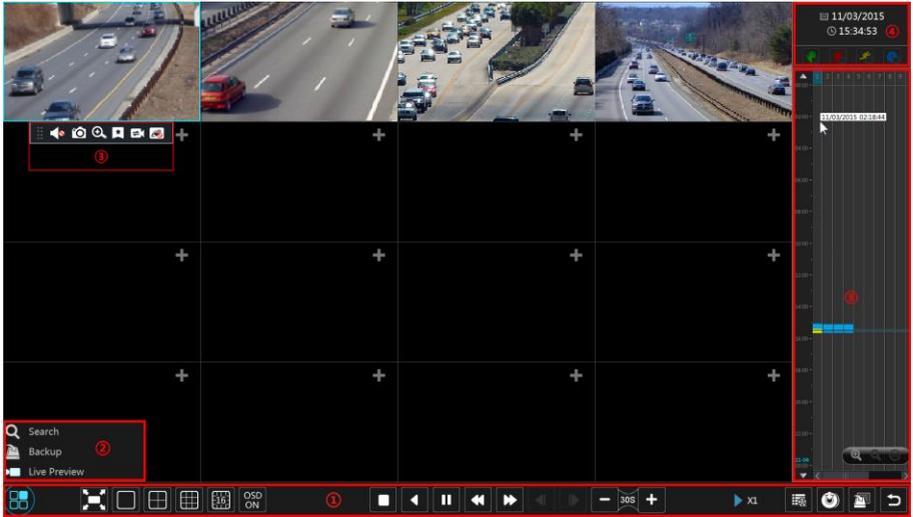
The added cameras will playback their records in the playback interface automatically. You can also add the playback camera manually. Click ➕ in the playback window to pop up the "Add Camera" window. Check the cameras in the window and then click "Add" to add playback camera. The system supports a maximum of 16 synchronous playback cameras.

The buttons on the tool bar (area ①) at the bottom of the playback interface are introduced in the table below.

Button	Meaning
⏹	Start button. Click it to pop up area ②.
⛶	Full screen button. Click it to show full screen; click it again to exit the full screen.
▫ ⊞ ⊞ 🔢	Screen mode button.
OSD ON	OSD ON button. Click it to enable OSD; click OSD OFF to disable OSD.
⏹	Stop button.
◀	Rewind button. Click it to play video backward.
▶	Play button. Click it to play video forward.
⏸	Pause button.
⏪	Deceleration button. Click it to decrease the playing speed.
⏩	Acceleration button. Click it to increase the playing speed.
◀⏽	Previous frame button. It works only when the forward playing is paused in single screen mode.
⏽▶	Next frame button. It works only when the forward playing is paused in single screen mode.
➖ 30S ➕	Click ➖ to step backward 30s and click ➕ to step forward 30s.

Button	Meaning
🖺	Event list/tag button. Click it to view the event record of manual/schedule/sensor/ motion and the tag information.
🕓	Backup button. Drag the mouse on the time scale to select the time periods and cameras, and then click the button to back up the record.
🖥	Backup status button. Click it to view the backup status.
�-↩	Back button. Click it to return.

Introduction of area ②:

Button	Meaning
🔍 Search	Click it to go to record search interface; see <u>8.3 Record Search & Playback</u> for details.
📋 Backup	Click it to go to backup interface; see <u>8.4 Backup</u> for details.
▶■ Live Preview	Click it to go to live preview interface; see <u>Chapter 5 Live Preview Introduction</u> for details.

Click on the playback window to show the tool bar as shown in area ③; right click on the window to show the menu list. The tool bar and menu list are introduced in the table below.

Button	Menu List	Meaning
⠿	--	Move tool. Click it to move the tool bar anywhere.
🔊	**Enable Audio**	Click it to enable audio. You can listen to the camera audio by enabling audio.
📷	**Snap**	Click it to snap.
🔍	**Zoom In**	Click it to go to the zoom in interface. The zoom in interface is similar to that of the camera window in the live preview interface. Click ⏸ to pause the record playing; click ▶ to play the record. When the record is paused in forward playing mode, you can click ◀ to view the previous frame and click ▶ to view the next frame.
⭐	**Add Tag**	Click it to add tag. You can play back the record by searching the added tag. Click it and then input the tag name in the popup window. Click "Add" to add tag.
🎥	**Switch Camera**	Click it to switch the playback camera. Click it and then check the camera in the popup window. Click "OK" to change the camera.
📹	**Close Camera**	Click it to close the playback camera.

Introduction of area ④:

Click 🖺 to set the date; click 🕓 to set the time and then the playback camera will play the record from the time you set. You can specify which record type you want to review; first, you should click ▢ on the tool bar at the bottom of the interface to clear the playback, then check-mark which record type you want to review (✋: manual record; 🔴: sensor based record; 🏃: motion based record; 📅: schedule record) and finally click ➕ in the playback window to add

camera for playback (the record time scale will show the record data of the checked record type only after the above operations).

Introduction of the record time scale (area ⑤):

A tool bar will appear after moving the mouse to the record time scale. Click 🔍 / 🔍 to zoom the timeline; click 🔄 to recover the timeline to 24 hours' ratio. Drag the timeline or slide the scroll wheel of the mouse on the time scale to show the hidden time on the top or bottom of the timeline. You can also click ▲ to show the hidden time on the top of the timeline or click ▼ to show the hidden time on the bottom of the timeline. Drag the slider at the bottom of the time scale to show the hidden playback cameras.

The record time scale shows different record types with different colors. The green block stands for manual record, red block stands for sensor based record, yellow block stands for motion based record and blue block stands for schedule record. Click the record block to set the time and then the playback camera will play the record from the time you set.

Drag the color block on the time scale to select the backup area and then right click the area or click 🔘 to pop up a backup information window. Click "Backup" button in the window to pop up the backup window. Select the device, backup path, and backup format and then click "Backup" button to start the backup.

8.3 Record Search & Playback

8.3.1 Search & Playback by Time-sliced Image

1   Click Start→Search→By Time-sliced Image to go to "By Time-sliced Image" tab. There are two view modes: by time and by camera. In the time view mode, a maximum of 64 camera thumbnails can be showed. If the camera thumbnail number is more than 64, the cameras will be listed directly by their camera name, not the thumbnail. A maximum of 196 camera names can be listed. If the camera name number is more than 196, the time view mode will be disabled and the camera view mode will be available only.
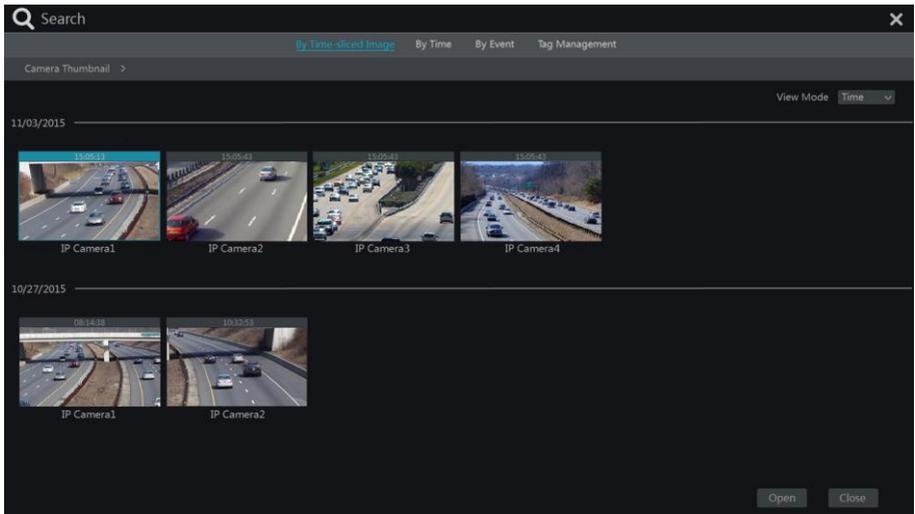
2   Select one camera in the interface and then click "Open" button.

3   Click the image box to play the record in the small playback box on the left side of the interface (the box which has image inside indicates that the record data exist).

4   Refer to the picture below. Drag the color blocks on the time scale to select the record data and then click "Backup" button to pop up a window; select the device, backup path and backup format in the window and then click "Backup" button to start the backup.

5   Click "Playback" button to play the record in the playback interface (refer to 8.2 Playback Interface Introduction for details). Click "Close" to close the interface.

Time Slice Mode Selecting:

Method One: Click "Year", "Month" or "Day" button under the record time scale to select the time slice mode. In "Day" mode, click / on the left/right side of the time scale to view the record of the last/next day; click "Minute" in the "Picture" option under the time scale to select "Minute" mode (in "Minute" mode, click the time scale to change the time of the 60 display windows) and click "Hour" to select "Hour" mode.

Method Two: Click beside "Camera Thumbnail" on the left top corner of the interface to select the time slice mode.

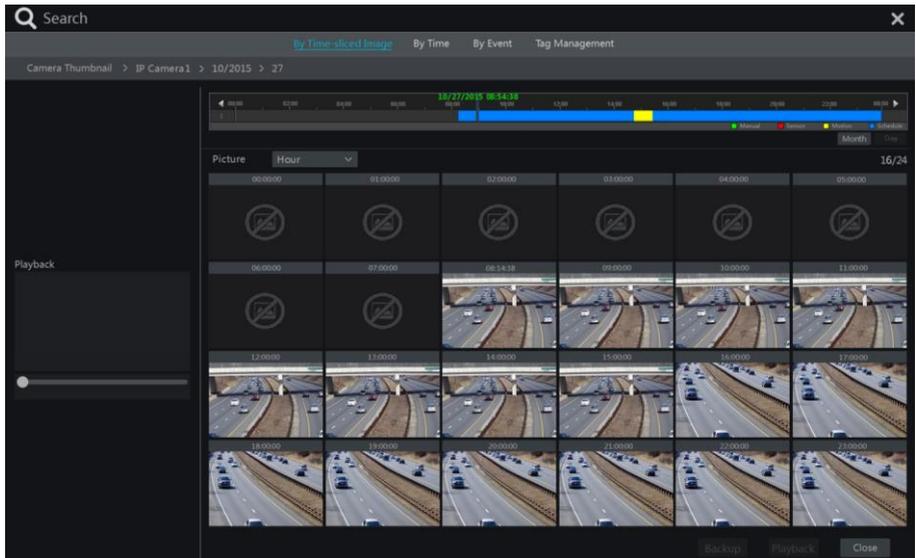**Method Three**: Right-click the mouse on any area of the time-sliced interface to go back to the upper interface.

8.3.2 Search & Playback by Time

1   Click Start→Search→By Time to go to "By Time" tab as shown below.

2   Click on the bottom of the interface to add playback camera. A maximum of 16 cameras can be added for playback. Click "Modify" on the top right corner of the camera window to change the camera and click "Clear" to remove the camera.

3   Click the camera window to play the record in the small playback box on the left side of the interface. You can set the date on the top left of the interface, check the event type as required and click the time scale or click under the time scale to set the time. The camera window will play the record according to the time and event type you set.

4   Drag the color blocks on the time scale to select the record data and then click "Backup" button for record backup. Click "Playback" button to play the record in the playback interface.
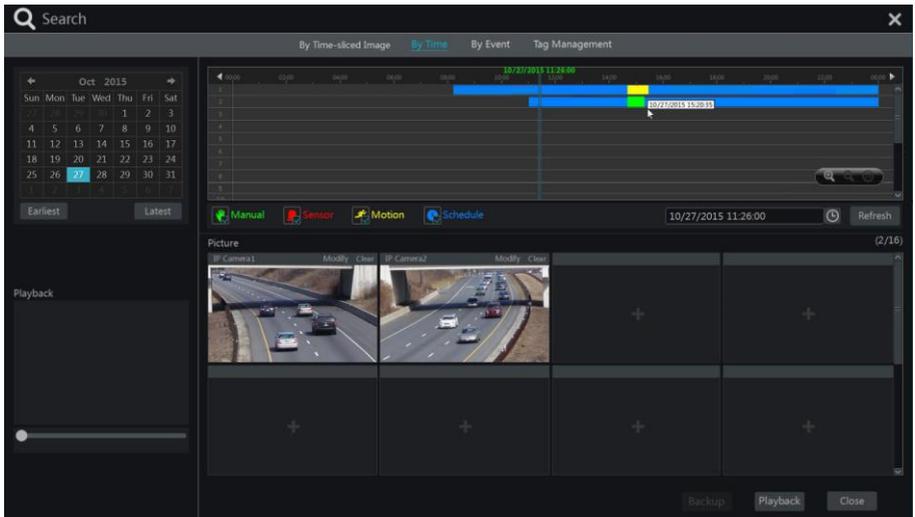
8.3.3　Search & Playback by Event

1　Click Start→Search→By Event to go to "By Event" tab as shown below.
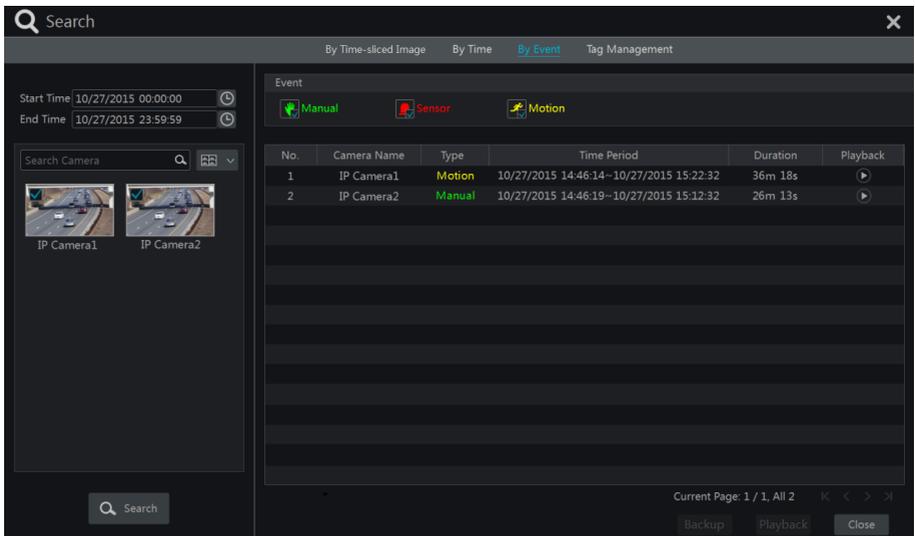
2　Check the event type in the interface as required.

3　Click ⊕ to set the start time and end time on the top left of the interface.

4　Check cameras on the left side of the interface and then click ![Search] to search the record. The searched record will be displayed in the list.

5   Click in the list to play back the record in the popup window. Select one record data in the list and then click "Backup" button for record backup.

6   Select one record data in the list and then click "Playback" button to play the record in the playback interface.

8.3.4 Search & Playback by Tag

Only if you add the tags can you play the record by tag search. Click Start→Playback to go to the playback interface and then click on the bottom of the camera window to add tag when you want to mark the playback time point of the selected camera.

Click Start→Search→Tag Management to go to "Tag Management" tab.
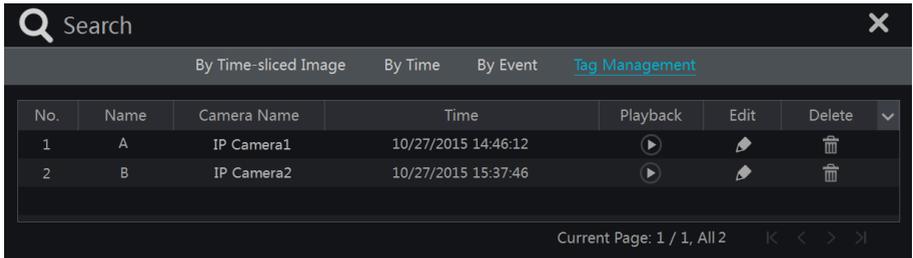
Click in the interface to play the record. Click to edit the tag name. Click to delete the tag.

8.4 Backup

The record data and the snapped pictures can be backed up through network, USB (Flash drive or USB mobile HDD) or e-SATA (only available for some models). **The file system of the backup devices should be FAT32 format. **Notice: External USB Hard drives need to be re-formatted to FAT32, using a third party software on a computer in order to partition the entire disk.**

8.4.1 Backup by Time

1   Click Start→Backup→By Time to go to the "By Time" tab.

2   Click in the tab to pop up the add camera window. Check the cameras in the window and then click "Add" button. Click "Modify" on the top right corner of the camera window to change the camera and click "Clear" to remove the camera.

3   Set the date on the top left of the interface. Drag the time scale to set the backup time period or click under the time scale to set the backup start time and end time.
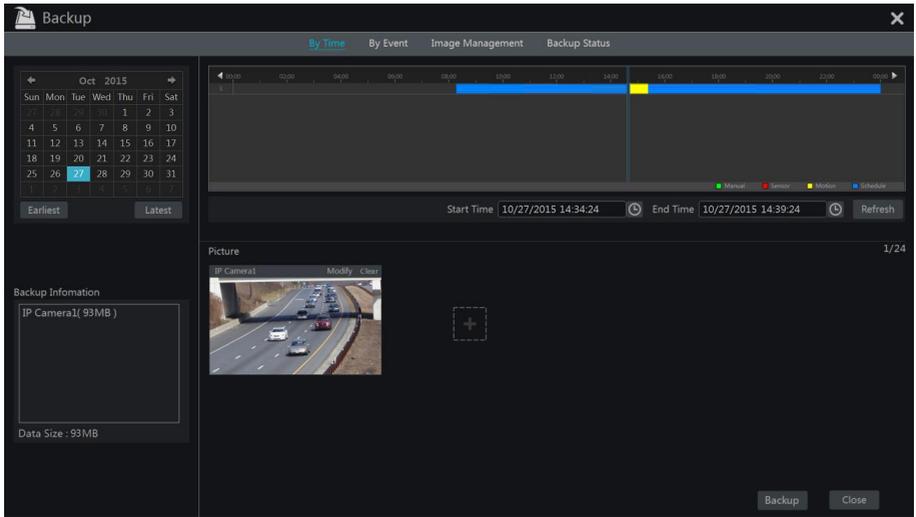
4   Click "Backup" button to pop up the "Record Backup" window as shown below. Select the device name, backup format and path and then click "Backup" button to start the backup.
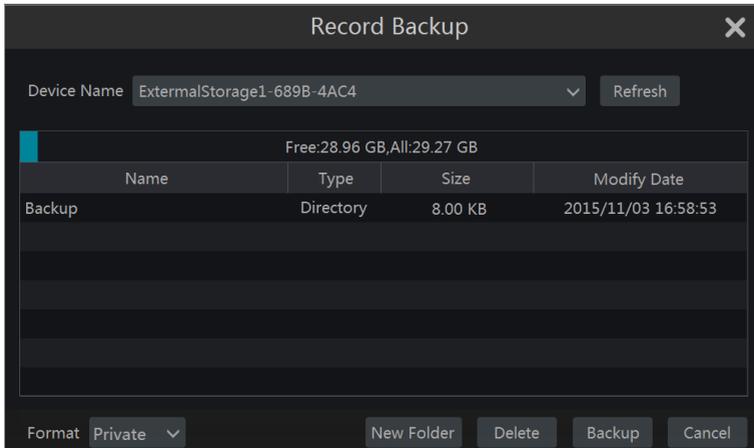
8.4.2 Backup by Event

1   Click Start→Backup→By Event to go to "By Event" tab.
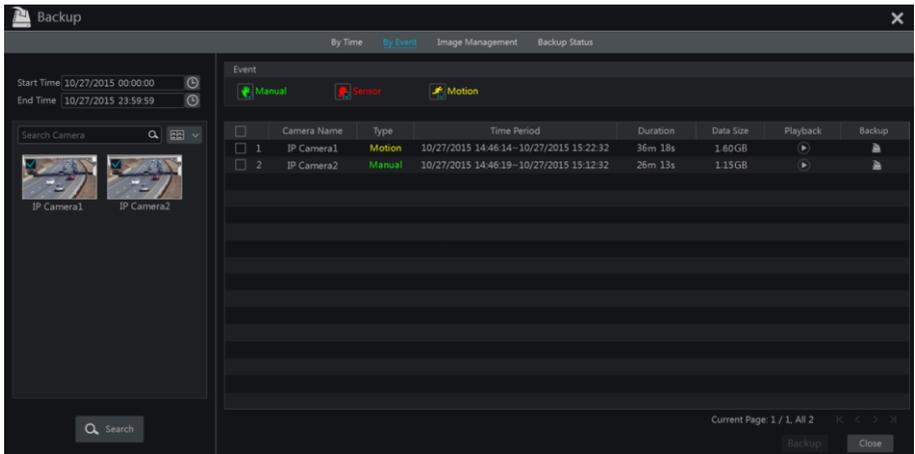
2   Click to set the start time and end time on the left top of the interface.
3   Check the event types and cameras.
4   Click to search the record. The searched record data will be displayed in the list.
Click in the list to play the record in the small popup playback window. Click to back
up the record. Check one record data or above in the list and then click "Backup" button to
back up the record data.

8.4.3 Image Management

Click Start→Backup→Image Management to go to "Image Management" tab. The system will
display all the snapped images automatically in the list.
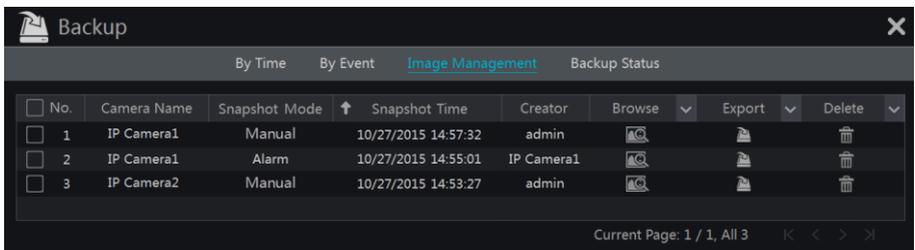
Click to delete the image. Click to pop up the "Export" window. Select the device
name and save path in the window and then click "Save" button.
Click to pop up the "View Image" window. Click to export the image. Click to
view the previous image; click to view the next image; click to delete the image;
click to play all the images.
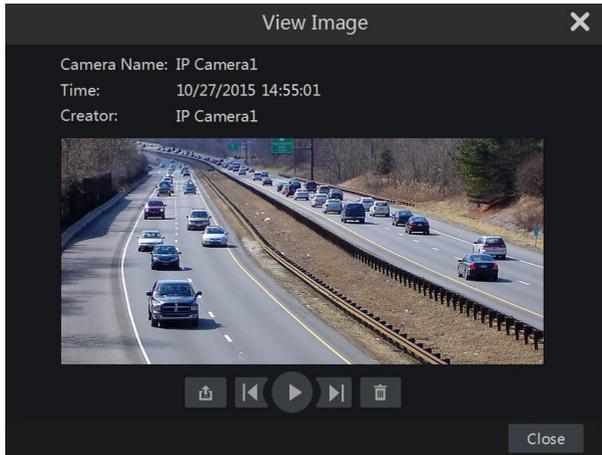
8.4.4 View Backup Status

Click Start→Backup→Backup Status or click on the tool bar at the bottom of the playback interface to view the backup status.

9 Alarm Management

9.1 Sensor Alarm

To complete the entire sensor alarm settings, you should enable the sensor alarm of each camera and then set up the alarm handling of each camera.

1   Click Start→Settings→Alarm→Sensor Alarm to go to the following interface.

Alarm Name	Type	Enable	Record	Snap	Alarm-out	Preset	(•)	⌷	⌷	⌷
Sensor1	NO	ON	☐ Configure	☐ Configure	☐ Configure	☐ Configure	OFF	OFF	ON	OFF
Sensor2	NO	ON	☐ Configure	☐ Configure	☐ Configure	☐ Configure	OFF	OFF	ON	OFF
Sensor3	NO	ON	☐ Configure	☐ Configure	☐ Configure	☐ Configure	OFF	OFF	ON	OFF
Sensor4	NO	ON	☐ Configure	☐ Configure	☐ Configure	☐ Configure	OFF	OFF	ON	OFF
IP Camera1_Sensor1	NO	ON	☐ Configure	☐ Configure	☐ Configure	☐ Configure	OFF	OFF	ON	OFF

Alarm Handling Setting — (•) Buzzer ⌷ Pop-up Video ⌷ Pop-up Message Box ⌷ E-mail — Apply

2   Select the alarm type (NO or NC) according to trigger type of the sensor.
3   Enable the sensor alarm of each camera.
4   Check the "Record", "Snap", "Alarm-out" and "Preset" and enable or disable the "Buzzer", "Pop-up Video", "Pop-up Message Box" and "E-mail" as required.
5   Click "Apply" to save the settings.

The configuration steps of the above mentioned alarm linkages are as follows.

Record: check it and then the "Trigger Record" window will pop up automatically (you can also click "Configure" button to pop up the window). Select camera on the left side and then click ▐ ›› ▌ to set the camera as the trigger camera. Select trigger camera on the right side and then click ▐ ‹‹ ▌ to cancel the trigger camera. Click "OK" button to save the settings. The trigger cameras will record automatically when the sensor alarm is triggered.

Snap: check it and then the "Trigger Snapshot" window will pop up automatically. Configure the trigger camera in the window. The trigger cameras will snap automatically when the sensor alarm is triggered.

Alarm-out: check it and then the "Trigger Alarm-out" window will pop up automatically. Configure the trigger alarm-out in the window. The system will trigger the alarm-out automatically when the sensor alarm is triggered. You need to set the delay time and the schedule of the alarm outputs. See 9.4.1 Alarm-out for details.

Preset: check it and then the "Trigger Preset" window will pop up automatically. Configure the trigger preset of each camera. To add presets, please see 6.2 Preset Setting for details.

Buzzer: if enabled, the system will begin to buzz when the sensor alarm is triggered. To set the delay time of the buzzer, please see 9.4.4 Buzzer for details.

Pop-up Video: After camera setting, the system will pop up the corresponding video automatically when the sensor alarm is triggered. To set the duration time of the video, please

see 9.4.3 Display for details.

Pop-up Message Box: if enabled, the system will pop up the corresponding alarm message box automatically when the sensor alarm is triggered. To set the duration time of the message box, please see 9.4.3 Display for details.

E-mail*:* if enabled, the system will send an e-mail when the sensor alarm is triggered. Before you enable the email, please configure the recipient's e-mail address first (see 11.1.4 E-mail Configuration for details).

9.2 Motion Alarm

Motion Alarm: when the motion object appears in the specified area, it will trigger the alarm. You should enable the motion of each camera first and then set the alarm handling of the camera to complete the whole configuration of the motion alarm.

9.2.1 Motion Configuration

1   Click Start→Settings→Camera→Motion to go to the following interface.

2   Select the camera, enable the motion and set the sensitivity and duration of the camera.

Sensitivity: the higher the value is, the more sensitive it is to motion. You should adjust the value according to the practical conditions since the sensitivity is influenced by color and time (day or night).

Duration: it refers to the interval time between the adjacent motion events. For instance, if the duration time is set to 10 seconds, once the system detects motion, it will go to alarm and will not detect any other motion (specific to that camera) for 10 seconds. If there is additional motion detected during this period, it will be considered as continuous movement; otherwise, it will be considered as a single motion.

3　Drag the camera image to set the motion area. You can set more than one motion area. Click "All" to set the whole camera image as the motion area. Click "Reverse" to swap the motion area and the non-motion area. Click "Clear" to clear all the motion areas.

4　Click "Apply" to save the settings. Click "Processing Mode" to go to the alarm handling configuration interface of the motion alarm.

9.2.2 Motion Alarm Handling Configuration

1　Click Start→Settings→Alarm→Motion Alarm to go to the following interface.

Camera Name	Snap		Alarm-out		Preset		((•))		▣		✉	
IP Camera1	ON	∨	☐ Configure		☐ Configure		OFF	∨	OFF	∨	OFF	∨
IP Camera2	ON	∨	☐ Configure		☐ Configure		OFF	∨	OFF	∨	OFF	∨
IP Camera3	ON	∨	☐ Configure		☐ Configure		OFF	∨	OFF	∨	OFF	∨
IP Camera4	ON	∨	☐ Configure		☐ Configure		OFF	∨	OFF	∨	OFF	∨

Alarm Handling Setting — ((•)) Buzzer　▣ Pop-up Video　✉ E-mail — Motion Settings　Apply
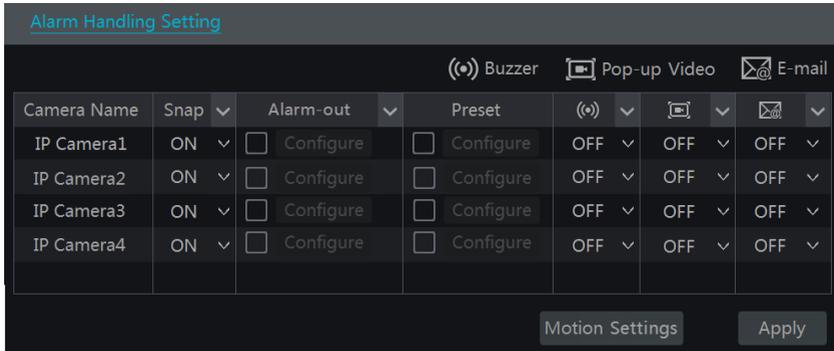
2　Enable or disable "Snap", "Alarm-out", "Preset", "Buzzer", "Pop-up Video" and "E-mail". The alarm handling setting of motion alarm is similar to that of the sensor alarm (see 9.1 Sensor Alarm for details).

3　Click "Apply" to save the settings. You can click "Motion Settings" to go to the motion configuration interface.

9.3 Exception Alarm

9.3.1 Exception Handling Settings

1　Click Start→Settings→Alarm→Exception→Exception Handling Settings to go to the interface as shown below.

2　Enable or disable "Alarm-out", "Buzzer", "Pop-up Message Box" and "E-mail". The exception handling settings are similar to that of the sensor alarm (see 9.1 Sensor Alarm for details).

3　Click "Apply" to save the settings.

Exception Handling Settings	IPC Offline Settings						
		((•)) Buzzer		[A] Pop-up Message Box		✉ E-mail	
Event Type	Alarm-out ∨	((•)) ∨		[A] ∨		✉ ∨	
IP Address Conflict	☐ Configure	ON	∨	ON	∨	OFF	∨
Disk IO Error	☐ Configure	ON	∨	ON	∨	OFF	∨
Disk Full	☐ Configure	ON	∨	ON	∨	OFF	∨
No Disk	☐ Configure	ON	∨	ON	∨	OFF	∨
Illegal Access	☐ Configure	ON	∨	ON	∨	OFF	∨
Network Disconnection	☐ Configure	ON	∨	ON	∨	OFF	
						Apply	
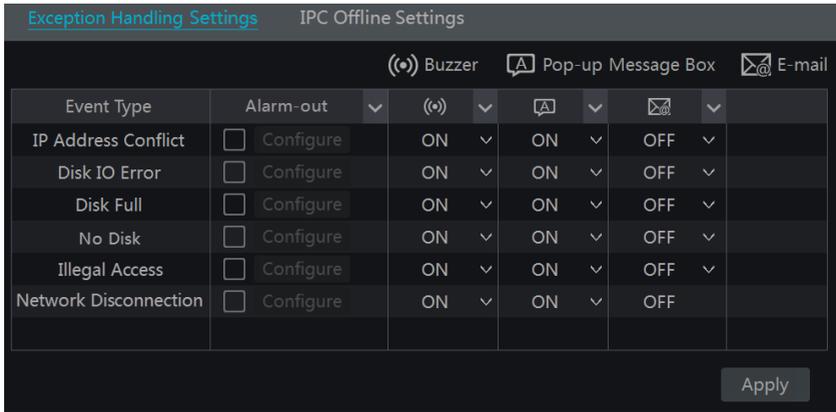
9.3.2 IPC Offline Settings

1   Click Start→Settings→Alarm→Exception→IPC Offline Settings to go to the interface as shown below.
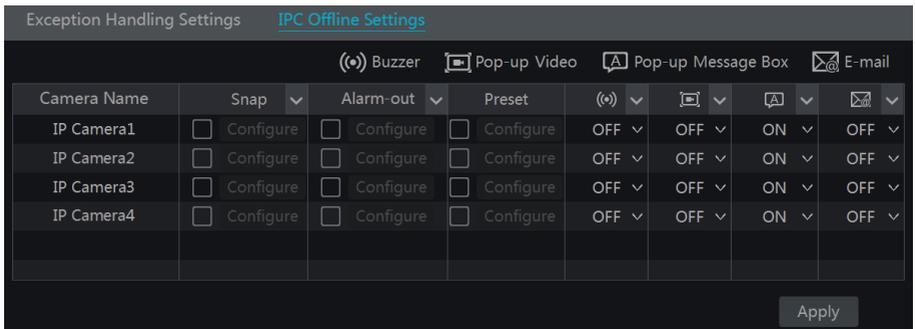
Exception Handling Settings	IPC Offline Settings										
					((•)) Buzzer		▣ Pop-up Video		[A] Pop-up Message Box		✉ E-mail
Camera Name	Snap ∨		Alarm-out ∨		Preset		((•)) ∨	▣ ∨	[A] ∨	✉ ∨	
IP Camera1	☐ Configure		☐ Configure		☐ Configure		OFF ∨	OFF ∨	ON ∨	OFF ∨	
IP Camera2	☐ Configure		☐ Configure		☐ Configure		OFF ∨	OFF ∨	ON ∨	OFF ∨	
IP Camera3	☐ Configure		☐ Configure		☐ Configure		OFF ∨	OFF ∨	ON ∨	OFF ∨	
IP Camera4	☐ Configure		☐ Configure		☐ Configure		OFF ∨	OFF ∨	ON ∨	OFF ∨	
										Apply	

2   Enable or disable "Snap", "Alarm-out", "Preset", "Buzzer", "Pop-up Video", "Pop-up Message Box" and "E-mail". The IPC Offline Settings are similar to that of the sensor alarm (see 9.1 Sensor Alarm for details).

3   Click "Apply" to save the settings.

9.4 Alarm Event Notification

9.4.1 Alarm-out

1   Click Start→Settings→Alarm→Event Notification to go to the following interface.

No.	Name	Delay ∨	Schedule ∨	Test
1	AlarmOut1	10 Secs ∨	24×7 ∨	Test
2	AlarmOut2	10 Secs ∨	24×7 ∨	Test
3	AlarmOut3	10 Secs ∨	24×7 ∨	Test
4	AlarmOut4	10 Secs ∨	24×7 ∨	Test
5	IP Camera1_AlarmOut1	10 Secs ∨	24×7 ∨	Test

Alarm-out   Edit Schedules

Apply

2   Set the delay time and the schedule of each alarm-out. You can click "Edit Schedules" to edit the schedules (see 7.3.1 Add Schedule for details).

3   Click "Apply" to save the settings. You can click "Test" to test the alarm output.

9.4.2 E-mail

Click Start→Settings→Alarm→Event Notification→E-mail to go to the e-mail configuration interface. Set the e-mail address of the recipients. See 11.1.4 E-mail Configuration for details.

9.4.3 Display

Click Start→Settings→Alarm→Event Notification→Display to go to the display configuration interface. Set the duration time of the pop-up video and the pop-up message box. Click "Apply" to save the settings.

Pop-up Video

Duration   5 Secs ∨

Pop-up Message Box

Duration   10 Secs ∨
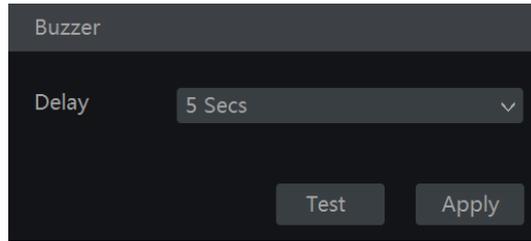
Apply

9.4.4 Buzzer

Click Start→Settings→Alarm→Event Notification→Buzzer to go to the buzzer configuration interface. Set the delay time of the buzzer and then click "Apply" to save the setting. You can click "Test" to test the buzzer.

9.5 Manual Alarm

Click ▣ on the tool bar at the bottom of the live preview interface to pop up a window. Click "Trigger" to start alarm. Click "Clear" to stop alarm.

Alarm-out Name	Status	Trigger	Clear ⌄
AlarmOut1	Normal	Trigger	Clear
AlarmOut2	Normal	Trigger	Clear
AlarmOut3	Normal	Trigger	Clear
AlarmOut4	Normal	Trigger	Clear
IP Camera1_AlarmOut1	Normal	Trigger	Clear

Close

9.6 View Alarm Status

Click Start→Settings→Alarm→Alarm Status or click ▣ on the tool bar at the bottom of the live preview interface to view the alarm status.

Click "Clear" button to stop the buzzer when the buzzer alarm happens. Click ⊙ to view the detail information as shown below.
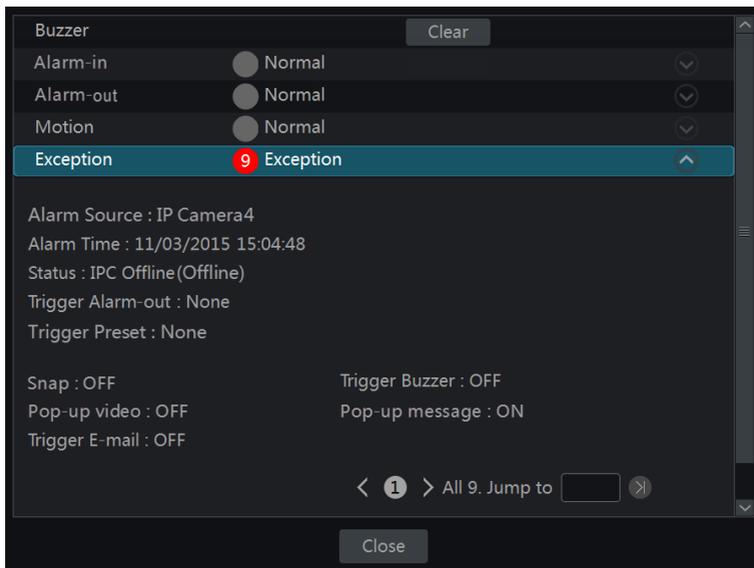
If the exception information is more than one page, you can input the number in the box and then click [▷|] to jump to the specified page. Click [<] / [>] to view the exception alarm information in the previous/next page. Click [▶] to play the alarm record.

10 Account & Permission Management

10.1 Account Management

Click Start→Settings→Account and Authority→Account→Edit User to go to the interface as shown below.

Area ① displays the user permissions. Area ② displays the user list. Click the user in the list to display its user permissions in area ①.

There are three default permission groups ("Administrator", "Advanced" and "Ordinary") available when adding accounts. You can manually add new permission group (see 10.3.1 Add Permission Group for details).

The user *admin* owns all the permissions and it can manage the system's accounts. Group "Administrator" owns all the permissions displayed in area ① and its permissions cannot be changed while the permissions of "Advanced" and "Ordinary" can be changed.

10.1.1 Add User

1   Click Start→Settings→Account and Authority→Account→Add User or click ➕ beside the search box to pop up the window as shown below.

2   Set the username, password, and group. The e-mail address, MAC address, and the remark are optional (input the MAC address after you check it). Click "Add" to add the user.

10.1.2 Edit User

Click Start→Settings→Account and Authority→Account→Edit User and then click in the user list or double click the user to edit the user information. Click to delete the user (the user *admin* cannot be deleted).

➢   **Edit Security Question**

You can set password security only for *admin*. Click "Edit Security Question" and then set questions and answers in the popup window. If you forget the password, please refer to Q4 in Appendix A FAQ for details.

➢   **Modify Password**

Only the password of *admin* can be modified. Click "Modify Password" to pop up a window. Input the current password and then set new password. Click "OK" to save the settings.

➢   **Recover Password**

Click "Recover Password" to reset the password to *123456*.

➤ **Edit User**

Click "Edit User" to pop up the window as shown below. The **admin** is enabled, its permission control is closed and permission group cannot be changed by default. You can enable or disable other users (if disabled, the user will be invalid), open or close their permission control (if closed, the user will get all the permissions which the administrator permission group has) and set their permission groups. Click "OK" to save the settings.
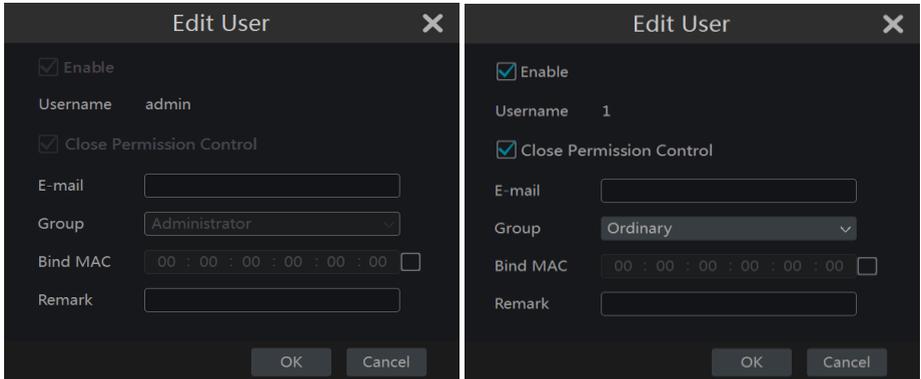
10.2 User Login & Logout

Login: Click Start→Login or directly click the preview interface and then select username and enter the password in the popup window. Click "Login" button to log in the system.

Logout: Click Start→Logout or click Start→Shutdown to pop up the "Shutdown" window. Select "Logout" in the window and then click "OK" button to log out the system.

10.3 Permission Management

10.3.1 Add Permission Group

Click Start→Settings→Account and Authority→Account→Edit Permission Group to go to the interface as shown below.

Click to add permission group. Set the group name, check the permissions as required and then set the "Local" and "Remote" permissions. Click "Add" to save the settings.

10.3.2　Edit Permission Group

Go to "Edit Permission Group" interface and then click in the group list to edit the permission group (the operations of the "Edit Permission Group" are similar to that of the "Add Permission Group", please see 10.3.1 Add Permission Group for details). Click to save the group as another group. Click to delete the permission group. The three default permission groups ("Administrator", "Advanced" and "Ordinary") cannot be deleted.

10.4　Black and White List

1　Click Start→Settings→Account and Authority→Security to go to the following interface.
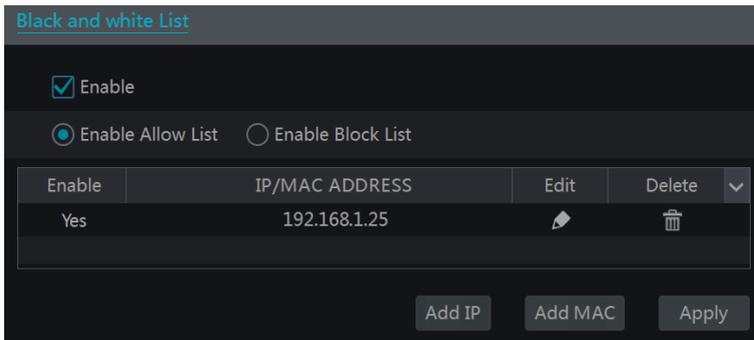
2　Check "Enable" and then choose "Enable Allow List" or "Enable Block List" (the PC client of which the IP address is in the allow list can access NVR remotely while the PC client in the block list cannot).

3　Add IP/IP segment/MAC. Click "Add IP" or "Add MAC" button and then check "Enable" in the popup window (only if you check it can the IP/IP segment/MAC you add be effective). Enter the IP/IP segment/MAC and then click "OK" button. In the above interface, click to edit IP/IP segment/MAC, click to delete it. Click "Apply" to save the settings.

11   Device Management

11.1 Network Configuration

11.1.1 TCP/IPv4 Configuration

➢ **IP Address Settings**

Click Start→Settings→Network→TCP/IPv4 to go to the following interface. Check "Obtain an IP address automatically" and "Obtain DNS automatically" to get the IP address and DNS automatically, or manually input IP address, subnet mask, gateway, preferred DNS and alternate DNS. Click "Apply" to save the settings.

IP Address Settings

Ethernet Port 1 (Online)
☐ Obtain an IP address automatically

IP Address

Subnet Mask

Gateway

☐ Obtain DNS automatically

Preferred DNS

Alternate DNS

PPPoE Settings

☐ Enable

Username   abc

Password   ● ● ● ● ● ●

☐ Display Password

Apply

Internal Ethernet Port Introduction:

If you use the NVR with the PoE network ports, the online state of the internal ethernet port will be shown on the interface. Refer to the picture below.

The internal ethernet port is the port which connects all the PoE ports with the NVR system. The PoE ports are available if the internal ethernet port is online; if it is offline, all the PoE

ports will be unavailable. The IP address and subnet mask of the internal ethernet port can be changed to make the port in the same network segment with the IP cameras which directly connect to the PoE ports of the NVR (**it is not recommended to change the IP address and subnet mask of the internal ethernet port**).

IP Address Settings

Ethernet Port 1 (Online)   Internal Ethernet Port (Online)
☐ Obtain an IP address automatically

IP Address   .   .   .   IP Address   10 . 151 . 151 . 1
Subnet Mask   .   .   .   Subnet Mask   255 . 0 . 0 . 0
Gateway   .   .   .

☐ Obtain DNS automatically
Preferred DNS   .   .   .
Alternate DNS   .   .   .

PPPoE Settings
☐ Enable
Username   abc
Password   ●●●●●●
              ☐ Display Password
                                                                              Apply

➢   **PPPoE Settings**

In the above interface, check "Enable" in "PPPoE Settings" and then input the username and password obtained from the dealer. Click "Apply" to save the settings.

11.1.2 Port Configuration

Click Start→Settings→Network→Port to go to the interface as shown below. Input the HTTP port, server port and RTSP port of the NVR and then click "Apply" to save the ports.

Port

HTTP Port   80
Server Port   6036
RTSP Port   554
                              Apply

HTTP Port: the default HTTP port of the NVR is 80. The port number can be changed to others like 81. The port is mainly used to IE remote access. If you want to access the NVR through IE, you should input IP address plus HTTP port in the IE address bar like http://192.168.11.61:81.

Server Port: the default server port of the NVR is 6036. The server port number can be changed as required. The port is mainly used in network video management system.

RTSP Port: RTSP real-time stream protocol can be used to control the sending of real-time data. By media player which supports the RTSP real-time stream protocol, you can view the live images synchronously. The default RTSP port is 554 and it can be changed as required.

> *Note: The HTTP port and server port of the NVR should be mapped to the router before you access the NVR via WAN.*

11.1.3 DDNS Configuration

The DDNS is used to control the dynamic IP address through domain name. You can access to the NVR easily if the DDNS is enabled and configured.

Click Start→Settings→Network→DDNS to go to the interface as shown below.

Check "Enable" and then select the DDNS type. Input the server address, domain name, username and password according to the selected DDNS type. Click "Test" to test the effectiveness of the input information. Click "Apply" to save the settings.

You will have to input the server address and domain name if some DDNS types are selected. Go to the relative DNS website to register domain name and then input the registered domain information here). Now we take *www.dvrdydns.com* for example.

1   Input *www.dvrdydns.com* in the IE address bar to visit its DNS website.

2   Click *Registration* button to go to the interface as shown below. Set the DDNS account information (username, password and so on) and then click *Submit* button to save the account.

3   Create domain name and then click *Request Domain*.

4   After you successfully request your domain name, you will see your domain name information in the list.

5   Click Start→Settings→Network→DDNS to go to DDNS setting interface. Enable DDNS and then select the *www.dvrdydns.com* DDNS type. Input the registered username, password and domain name and then click "Apply".

6   Map the IP address and HTTP port in the router (you can skip this step if UPnP function is enabled).

7   Input the registered domain name plus HTTP port like *http://www.[mysite].dvrdydns.com:81* in the IE address bar and then press Enter key to go to the IE client.

11.1.4 E-mail Configuration

Click Start→Settings→Network→E-mail to go to the following interface. Input the sender's e-mail address, name, password, SMTP server, and SMTP port (you can click "Default" to reset the SMTP port to the default value) and then enable or disable the SSL and attaching image. Click "Test" to pop up a window. Input the e-mail address of the recipient in the window and then click "OK" button. The e-mail address of the sender will send an e-mail to the recipient. If the e-mail is sent successfully, it indicates that the e-mail address of the sender is configured correctly. Click "Apply" to save the settings.

Click "Edit Recipient" to go to the following interface.

Click "Add" and then input the recipient's e-mail address in the popup window. Click "Add" in the window to add the recipient. Click to delete the recipient in the list. Click "Apply" to save the settings. Click "Edit Sender" to go to the e-mail configuration interface of the sender.

11.1.5 UPnP Configuration

By UPnP, you can access the NVR through IE client which is in WAN via router without port mapping.
1   Click Start→Settings→Network→UPnP to go to the following interface.
2   Make sure the router supports UPnP function and the UPnP is enabled in the router.

3   Set the NVR's IP address, subnet mask and gateway and so on corresponding to the router.

4   Check "Enable" in the interface as shown below and then click "Apply" button.

Click "Refresh" button to refresh the UPnP status. If the UPnP status were still "Invalid UPnP" after refreshing it for many times, the port number would be wrong, or UpnP is disabled in the router. If UpnP is enabled, please change the mapping type to "Manual" and then click ![pencil] to modify the port until the UPnP status turns to "Valid UPnP". Refer to the following picture. You can view the external IP address of the NVR. Input the external IP address plus port in the IE address bar to access the NVR such as http://183.17.254.19:81.
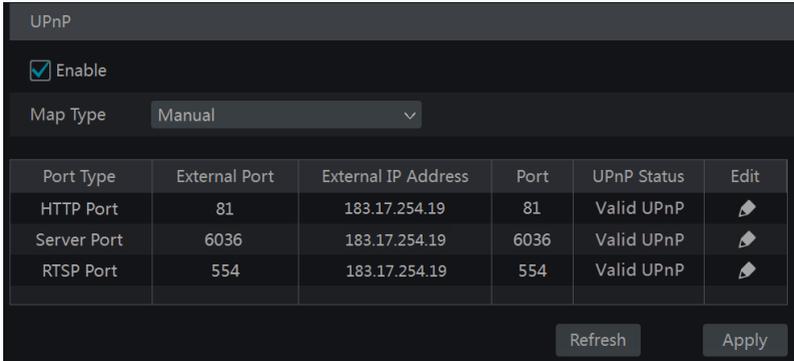
UPnP					
☑ Enable					
Map Type	Manual ∨				
Port Type	External Port	External IP Address	Port	UPnP Status	Edit
HTTP Port	81	183.17.254.19	81	Valid UPnP	🖉
Server Port	6036	183.17.254.19	6036	Valid UPnP	🖉
RTSP Port	554	183.17.254.19	554	Valid UPnP	🖉
				Refresh	Apply

11.1.6 NAT Configuration

Click Start→Settings→Network→NAT to go to the interface for NAT configuration. Check "Enable" and then select the NAT server address (***nat.autonat.com*** by default). Click "Apply" to save the settings.

11.1.7 View Network Status

Click Start→Settings→Network→Network Status to view the network status or click ![icon] on the tool bar at the bottom of the live preview interface to view network status conveniently.

11.2 Basic Configuration

11.2.1 Common Configuration

Click Start→Settings→System→Basic→General Settings to go to the following interface. Set the device name, device No., language, video format, and resolution. Enable or disable wizard, "Log In Automatically" and "Log Out Automatically" (if checked, you can set the wait time). Click "Apply" to save the settings.
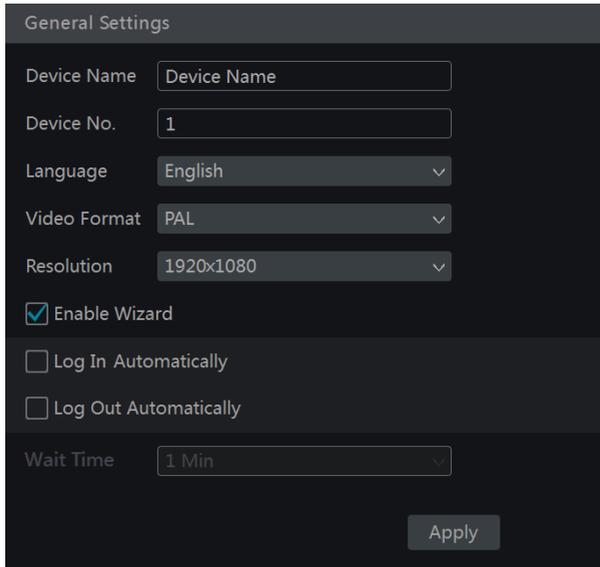
General Settings

Device Name | Device Name

Device No. | 1

Language | English

Video Format | PAL

Resolution | 1920×1080

☑ Enable Wizard

☐ Log In Automatically

☐ Log Out Automatically

Wait Time | 1 Min

Apply

Device Name: The name of the device. It may display on the client end or CMS that help user to recognize the device remotely.

Video Format: Two modes: PAL and NTSC. Select the video format according to the camera. North America is NTSC.

11.2.2 Date and Time Configuration

Click Start→Settings→System→Basic→Date and Time to go to the interface as shown below. Set the system time, date format, time format, and time zone of the NVR. If the selected time zone includes DST, the DST of the time zone will be checked by default. Click "Apply" to save the settings.

You can manually set the system time or synchronize system time with network through NTP.

Manual: select "Manual" in the "Synchronous" option and then click 🕐 after the "System Time" option to set the system time.

NTP: select "NTP" in the "Synchronous" option and then input the NTP server.

Date and Time

System Time	11/03/2015 17:02:13 🕐
Date Format	Month/Day/Year ⌄
Time Format	24-Hour ⌄

Sync Time With Network

Synchronous	Manual ⌄
NTP Server	time.windows.com ⌄

Time Zone / DST

Time Zone	GMT+08 Beijing, Hong Kong, S ⌄
DST	☐ Enable

Apply

11.3 Factory Default

Click Start→Settings→System→Maintenance→Factory Default and then click "Reset to factory default" button in the interface to reset to the factory default settings.

11.4 Device Software Upgrade

You can click Start→Settings→System→Information→Basic to view MCU, kernel version and firmware version. Before upgrade, please get the upgrade file from your dealer.

The upgrade steps are as follows:

1   Copy the upgrade software into the USB storage device.

2   Insert the USB storage device into the USB interface of the NVR.

3   Click Start→Settings→System→Maintenance→Upgrade to go to "Upgrade" interface. Select the USB device in "Device Name" option and go to the path where the upgrade software exists. Select the upgrade software and then click "Upgrade". The system may automatically restart during upgrading. **Please wait for a while and do not power off the NVR during upgrading.**

Note: The file system of the USB mobile device which is used for upgrading, backing up and restoring should be FAT32 format.

11.5 Backup and Restore

You can back up the configuration file of the NVR by exporting the file to other storage devices; you can recover the configuration to other NVRs which are of the same model with the NVR by importing the configuration file to other NVRs for time saving.

Insert the USB storage device into the USB interface of the NVR and then click Start→Settings→System→Maintenance→Backup and Restore to go to the interface.

- **Backup**

Select the USB device in "Device Name" option; go to the path where you want to store the configuration backup file and then click "Backup" button; finally, click "OK" button in the popup window.

- **Recover**

Select the USB device in "Device Name" option; find the configuration backup file and then click "Recover" button; finally click "OK" button in the popup window.

11.6 View Log

Click Start→Settings→System→Maintenance→View Log to go to the log view interface. Select the log main type, click ⏰ to set start time and end time and then click "Search" button. The searched log files will be displayed in the list.
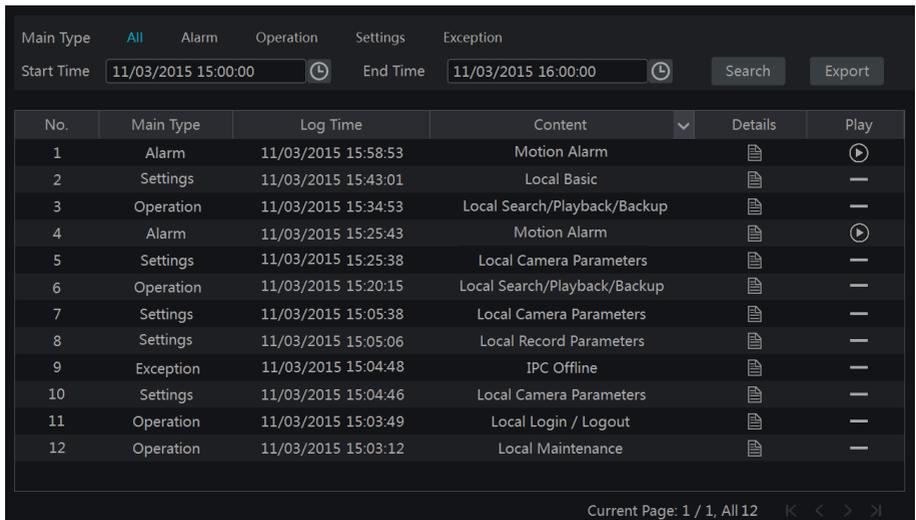
No.	Main Type	Log Time	Content	Details	Play
1	Alarm	11/03/2015 15:58:53	Motion Alarm	📄	▶
2	Settings	11/03/2015 15:43:01	Local Basic	📄	—
3	Operation	11/03/2015 15:34:53	Local Search/Playback/Backup	📄	—
4	Alarm	11/03/2015 15:25:43	Motion Alarm	📄	▶
5	Settings	11/03/2015 15:25:38	Local Camera Parameters	📄	—
6	Operation	11/03/2015 15:20:15	Local Search/Playback/Backup	📄	—
7	Settings	11/03/2015 15:05:38	Local Camera Parameters	📄	—
8	Settings	11/03/2015 15:05:06	Local Record Parameters	📄	—
9	Exception	11/03/2015 15:04:48	IPC Offline	📄	—
10	Settings	11/03/2015 15:04:46	Local Camera Parameters	📄	—
11	Operation	11/03/2015 15:03:49	Local Login / Logout	📄	—
12	Operation	11/03/2015 15:03:12	Local Maintenance	📄	—

Start Time: 11/03/2015 15:00:00   End Time: 11/03/2015 16:00:00   Search   Export

Main Type: All   Alarm   Operation   Settings   Exception

Current Page: 1 / 1, All 12

Choose the log file in the list and then click "Export" button to export the log file. Click ⌄ on the "Content" title bar to pop up a menu list. Check contents in the menu list and then the log list will show the checked log contents only. Click ▶ to play the video log.

11.7 View System Information

Click Start→Settings→System→Information and then click the corresponding menu to view the "Basic", "Camera Status", "Alarm Status", "Record Status", "Network Status" and "Disk" information of the system.

12 Remote Surveillance

12.1 Mobile Client Surveillance

1   Enable NAT in the NVR. Refer to <u>11.1.6 NAT Configuration</u> for details.

2   Download and install the mobile client "Sibell Mobile" into the mobile device with the Android or iOS system.

3   Run the mobile client, go to the "Add Device" interface and then click 🔲 to scan the QRCode of the NVR (Go to Start→Settings→System→Information→Basic to view the QRCode of the NVR).

4   After scanning the QRCode successfully, input the login password to log in mobile client.
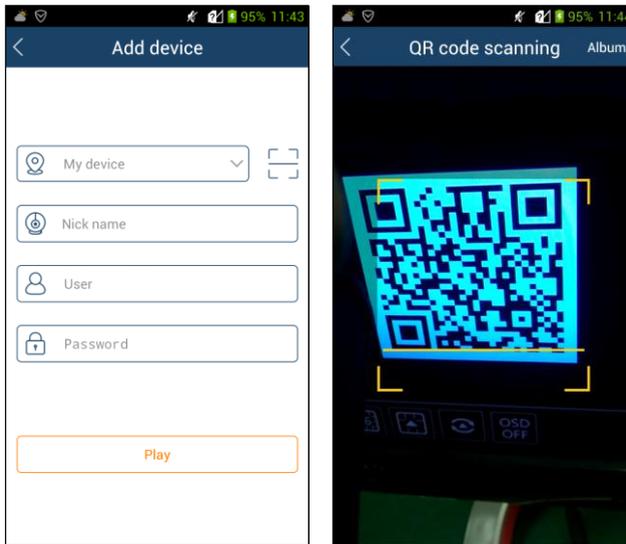
12.2 Web LAN Access

1   Click Start→Settings→Network→TCP/IPv4 to go to the "TCP/IPv4" interface. Set the IP address, subnet mask, gateway, preferred DNS and alternate DNS of the NVR.

2   Open IE browser on a computer, input the IP address of the NVR in the IE address bar and then press enter to go to the login interface as shown below. You can change the display language on the top right corner of the login interface. Input the username and password of the NVR in the interface and then click "Login" to go to the live preview interface.
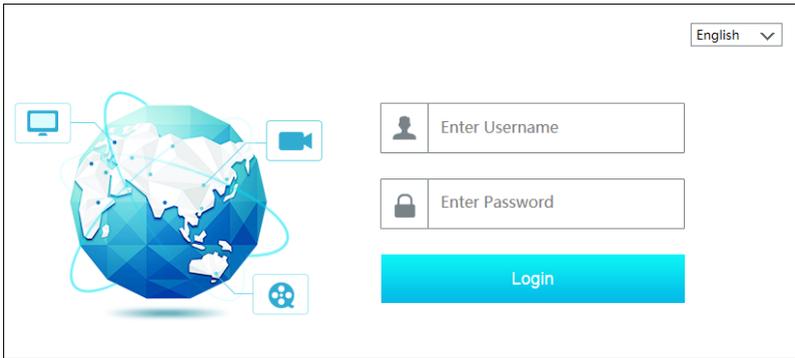
> *Notes: 1. Please make sure that the IP address of the NVR and the computer are both in the same*
> *local network segment. For example, supposing that the IP address of the computer is*
> *192.168.1.41, the IP address of the NVR shall be set to 192.168.1.XXX.*
> *2. If the HTTP port of the NVR is not 80, but other number instead, you need to input the IP*
> *address plus port number in the IE address bar when accessing the NVR over network. For*
> *example, the HTTP port is 81. You should enter http://192.168.1.42:81 in the IE address bar.*

12.3 Web WAN Access

➢ **NAT Access**

1   Set the network of the NVR. Please refer to <u>11.1.1 TCP/IPv4 Configuration</u> for details.

2   Enable NAT and then set the NAT server address. Please refer to <u>11.1.6 NAT Configuration</u> for details.

3   Open IE browser on a computer, input the NAT server address ***http://www.autonat.com/n9000*** in the IE address bar and then press enter to go to the interface as shown below (download and install the relative plugin according to the popup tip if you access the NVR through NAT for the first time).

Input the serial number (click 🖥 on the tool bar at the bottom of the live preview interface to

see the serial number of the NVR), user name (the user name of the NVR, *admin* by default) and password (the password of the NVR, *123456* by default) of the NVR, select the display language on the top right corner of the interface and then click "Login" button to go to the web client interface.

➢ **PPPoE Access**

1   Click Start→Settings→Network→TCP/IPv4 to go to the "TCP/IPv4" interface. Check "Enable" in the "PPPoE settings" and then input the username and password you get from your ISP. Click "Apply" to save the settings.

2   Click Start→Settings→Network→Network Status to view the IP address of the NVR.

3   Open IE browser on a computer, input the IP address of the NVR like http://210.21.229.138 in the IE address bar and then press enter to go to the login interface. Input the username and password of the NVR in the interface and then click "Login" to go to the live preview interface.

➢ **Router Access**

1   Click Start→Settings→Network→TCP/IPv4 to go to the "TCP/IPv4" interface. Set the IP address, subnet mask, gateway, preferred DNS and alternate DNS of the NVR.

2   Set the HTTP port (it is suggested to modify the HTTP port because the default HTTP port 80 might be taken up) and enable UPnP function in both the NVR and the router. If the UPnP function is not available in the router, you need to forward the LAN IP address, HTTP port and server port of the NVR to the router. Port mapping settings may be different in different routers, so please refer to the user manual of the router for details.

3   Get the WAN IP address of the NVR from the router. Open IE browser on a computer, input the WAN IP address plus HTTP port like http://116.30.18.215:100 in the IE address bar and then press enter to go to the login interface. Input the username and password of the NVR in the interface and then click "Login" to go to the live preview interface.

Note: If the WAN IP address is a dynamic IP address, it is necessary for you to use the domain name to access the NVR. Click Start →Settings →Network→DDNS to set DDNS (see 11.1.3 DDNS Configuration for details). By using DDNS function you can use the domain name plus HTTP port like http://sunshine.dvrdydns.com:100 to access the NVR via internet.

12.4 Web Remote Control

The supported browsers of the remote surveillance are IE8/9/10/11, Firefox, Opera and Chrome (Version 45 and higher not supported) in Windows system and Safari in MAC system.

When you access the NVR through IE for the first time, you need to download and install the relative components for normal preview and playback. Please refer to the tips in the remote interfaces for details. The buttons and icons on the top right corner of the remote interface are introduced as follows.

admin: the current login username.

Logout: click it to log out and return to the login interface.

Modify Password: click it to change the password of the current login user. Input current password and then set a new password in the popup window. Click "OK" button to save the new password.

Local Settings: click it to change the local settings. Set the snapshot number and click "Browse" to set the snapshot path and record path as shown below. Click "Apply" button to save the settings.

Snapshots number	5 ∨	
Save snapshots to	C:\Users\Administrator\Pictures	Browse
Save record files to	C:\Users\Administrator\Videos	Browse
		Apply

12.4.1 Remote Preview

Click "Live Display" in the remote interface to go to the preview interface. The preview interface consists of the four areas marked in the following picture.

> **Start Preview**

Select a window in the preview area and then click one online camera on the left panel to preview the camera in the window. You can click 🖾 in the tool bar to preview all the cameras.

➢ **Left Panel Introduction**

Click ❮ on the left panel to hide the panel and click ❯ to show the panel. You can view all the added cameras and groups on the left panel.

● **View Camera**

Click ◼◣ Camera to view the cameras. You can view the number of all the added cameras and the online cameras. For instance, the left number 3 in Camera (3/4) on the left panel stands for the number of online cameras; the right number 4 stands for the number of all the added cameras. Input the camera name in the search box and then click 🔍 to search the camera. Click ↻ to refresh the camera list.

● **View Group**

Click ◼◣ Single Channel Sequences to view the groups. The up side of the left panel displays all the groups and the down side displays all the cameras in the group.

➢ **Tool Bar Introduction**

Button	Meaning
▦	Screen mode button.
OSD OFF	Click it to disable OSD. Click OSD ON to enable OSD.
⛶	Click it to show full screen. Right, click on the full screen to exit full screen.
All Main Stream / All Sub Stream	Click "All Main Stream" or "All Sub Stream" to set the stream of all the cameras.
🔔	Manual alarm button. Click it to pop up a window and then trigger and clear the alarm-out in the window manually.
🖼	Click it to preview all the cameras.
🖼🚫	Click it to close all the preview cameras.
◎	Click it to start recording. Click ⏺ to stop recording.
🎤	Click it to enable talk with the NVR.
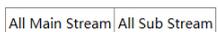
➢ **Right Panel Introduction**

Click ❮ on the right panel to show the panel and click ❯ to hide the panel. Click ⬤ PTZ at the bottom of the panel to go to "PTZ" panel. Click ⬚ Operation to go to "Operation" panel.
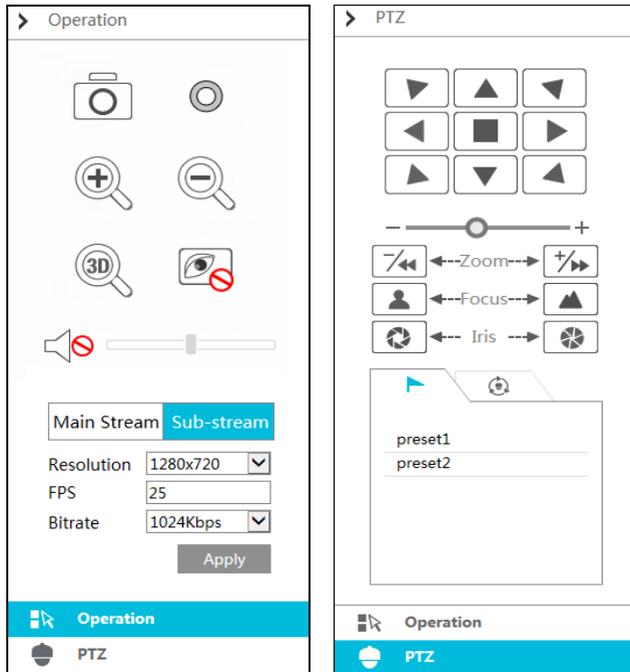
Click one camera window in the preview area and then click [Main Stream] to set the camera's live preview stream and record stream to main stream in manual record mode; click [Sub-stream] to set the camera's live preview stream and record stream to sub stream. In sub stream tab, set the resolution, FPS, and bitrate and then click "Apply" to save the settings.

Operation panel introduction:

Button	Meaning
⌾	Click it to snap.
◎	Click it to start recording; click it again to stop recording.
⊕	Click it to zoom in the image of the camera and then drag the mouse on the camera image to view the hidden area.
⊖	Click it to zoom out the image of the camera.
③Ⓓ	The 3D zoom in function is designed for P.T.Z. Click the button and then drag the image to zoom in or zoom out the image; click the image on different areas to view the image of the dome omni-directionally.
◎	Click it to close the preview camera.
🔊	Click it to enable audio and then drag the slider bar to adjust the volume. You can listen to the camera audio by enabling audio.

PTZ panel introduction:

Button	Meaning
(directional pad buttons)	Click ▲ / ▼ / ▼ / ▼ / ◄ / ▲ / ◄ / ► to rotate the dome; click ■ to stop rotating the dome.
— ○ +	Drag the slider to adjust the rotating speed of dome.
7/◄◄ ◄--Zoom--► +/►►	Click +/►► / 7/◄◄ to zoom in/out camera image.
▲ ◄--Focus--► ▲	Click ▲ / ▲ to increase/ decrease the focal length.
❂ ◄-- Iris --► ❂	Click ❂ / ❂ to increase/decrease the iris of the dome.
⚑	Click it to view the preset list and then click the button in the list to call the preset.
⊕	Click it to view the cruise list and then click the corresponding buttons in the list to start or stop the cruise.

12.4.2 Remote Playback

Click "Playback" in the remote interface to go to the playback interface.

1   Check the record event types and cameras on the left panel. Set the record date on the calendar beside the time scale.

2   Click 🔍 Search to search the record data and then click ▶ Play or directly click the time scale to play the record.

The operation of the playback time scale is similar to that of the time scale in the main program of the NVR. Please refer to <u>8.2 Playback Interface Introduction</u> for details.

Introduction of playback control buttons:

Button	Meaning
■	Stop button.
◄	Rewind button. Click it to play video backward.
►	Play button. Click it to play video forward.
❚❚	Pause button.
◄◄	Deceleration button. Click it to decrease the playing speed.
►►	Acceleration button. Click it to increase the playing speed.
◄❙	Previous frame button. It works only when the forward playing is paused in single screen mode.
❙►	Next frame button. It works only when the forward playing is paused in single screen mode.
⊖30s⊕	Click ⊖ to step backward 30s and click ⊕ to step forward 30s.
⤞	Backup start time button. Click the time scale and then click it to set the backup start time.
⤝	Backup end time button. Click the time scale and then click it to set the backup end time.
⬇	Backup button.

Button	Meaning
📷	Backup tasks button. Click it to view the backup status.
☰	Event list button. Click it to view the event record of manual/schedule/sensor/motion.

12.4.3 Remote Backup

Click "Backup" in the remote interface to go to the backup interface. You can back up the record by event or by time.

➢ **By Event**

Check the record type on the left side of the interface and then click 🗓 to set the start time and end time; check the cameras and then click 📄 on the right side to search the record (the searched record data will be displayed in the list); check the record data in the list and then click "Backup" button to backup the record.

➢ **By Time**

Click 🗓 to set the start time and end time on the left side of the interface; check the cameras and then click 🖼 on the right side to backup the record.

View Backup Status: **NOTE: In IE, you must add the NVR to "Trusted sites" in internet options (Tools > Internet Options > security > trusted sites > "sites" button > add)** Click "Backup Status" to view the backup status. Click "Pause" to pause the backup; click "Resume" to continue the backup; click "Delete" to delete the task.

12.4.4 Remote Configuration

Click "Function Panel" in the remote interface and then configure the camera, record, alarm, disk, network, account and authority and system of the NVR remotely. All of these settings are similar to that of the NVR. See the configurations of the NVR for details.

Appendix A FAQ

Q1. Why can't I find the HDD?

a.   Please check the power and SATA data cables of the HDD to make sure they are well connected.

b.   For some NVRs with the 1U or small 1U case, the power of the adapter may be not enough to operate them. Please use the power adaptor supplied with the NVR.

c.   Please make sure the HDDs are compatible with the NVR. See Appendix C Compatible Device List for details.

d.   The HDD could have gone bad.

Q2. Why is there no image output on some or all of the camera windows?

a.   Please make sure the resolutions of the cameras are supported by the NVR.

b.   Please make sure the network cables of the IP camera and NVR are both connected properly and the network parameters are set correctly.

c.   Please make sure the network and the switch both work normally.

Q3. The screen has no output after booting the NVR.

a.   Please make sure the screen, HDMI or VGA cables are well connected.

b.   Please make sure the screen supports the resolution of your outputting.

Q4. What if I forgot the passwords?

a.   The password of the super administrator ***admin*** can be reset through "Edit Security Question" function.

Click "Edit Security Question" button in the login window and then enter the corresponding answer of the selected question in the popup window, the password of ***admin*** will be reset to ***123456*** by default. If you forget the answer of the question, please contact your dealer for help.

b.   The passwords of other users can be reset by the super administrator ***admin***, please refer to 10.1.2 Edit User for details.

Q5. The NVR cannot add the maximum number of IP cameras?

Take the 16 CH NVR as an example. Some 16 CH NVR supports a maximum of 120Mbps total bandwidth from all cameras. Refer to the picture below. The remaining bandwidth should be larger than the bandwidth of the IP camera you want to add, or you would fail to add the IP camera. You should lower the added cameras' bitrate to release the bandwidth. It is recommended to add cameras by "Quickly Add" for batch adding.
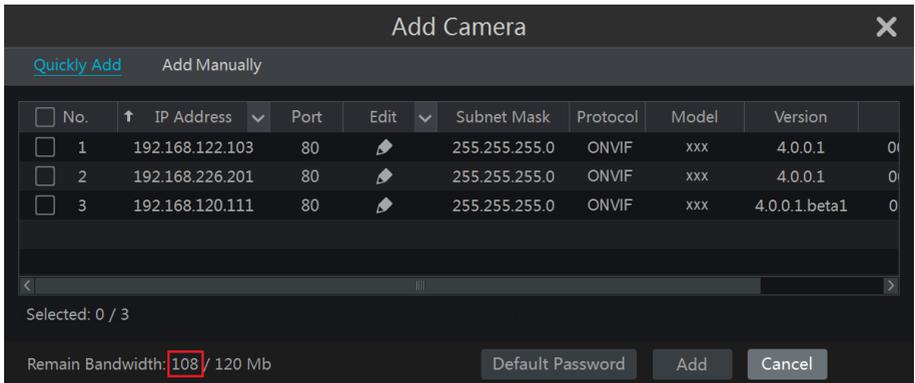
Q6. The IP camera which connects to the PoE port of the NVR cannot be displayed automatically in the camera list, why?

a. Please check whether the resource of the PoE port is occupied by another IP camera that is added through network.

● Take the 16 CH NVR with 8 PoE ports as an example. The resource distribution of the 16 CH IP cameras is shown in the picture below.

When you add IP cameras through network, the IP cameras will occupy the resource from CH1, CH2, CH3, CH4… in sequence; if you directly connect the IP cameras to the PoE ports of the NVR, the IP cameras will occupy the resource from CH9 to CH16 according to the number of the PoE port each IP camera is connecting to.

Supposing that 12 CH IP cameras have been added to the NVR through network and no IP camera has been directly connected to the PoE port. The 12 CH IP cameras occupy the 8 network resources from CH1 to CH8 and 4 PoE resources from CH9 to CH12 which are supposed to be occupied by connecting the IP cameras directly. In this situation, if you directly connect one IP camera to PoE5, PoE6, PoE7 or PoE8, the IP camera will be displayed in the camera list automatically; if you connect it to PoE1, PoE2, PoE3 or PoE4, it won't be displayed in the camera list by showing resource conflict; if you just need to connect it to PoE1, PoE2, PoE3 or PoE4, you should first delete the IP camera which occupies the PoE port resource and then reconnect it to the PoE port.

● Take the 8 CH NVR with 8 PoE ports as another example. The resource distribution of the 8 CH IP cameras is shown in the picture below and the adding rules of the IP cameras are similar to the rules mentioned in the above. Please refer to the above for details.

b.   Please make sure that the internal ethernet port and the IP camera which directly connects to the PoE port through ONVIF protocol are in the same network segment.

The internal ethernet port and the IP camera which directly connects to the PoE port through ONVIF protocol should be in the same network segment, or you will fail to add the IP camera. Log in the IP camera's web client and then enable DHCP (obtain an IP address automatically), or manually change the IP address of the IP camera to make it in the same network segment with the internal ethernet port.

c.   Check whether the number of the added IP camera is the maximum.

If the number of the added IP camera is the maximum, the system will show you the message that the IP camera number is beyond the maximum when you directly connect another IP camera to the available PoE port and thus you will fail to add the IP camera.

Q7. The IP camera which directly connects to the PoE port of the NVR through ONVIF protocol is shown in the camera list, but there is no image output, why?

Please make sure the username and password of the IP camera are correct. The IP camera's username and password can be modified through the two ways mentioned as below.

①   Click "Edit Camera" in the Camera module of the setup panel to go to the interface as shown below. Click ✎ to modify the username and password of the IP camera (input the correct username and password of the IP camera in the popup window and then click "OK" button).
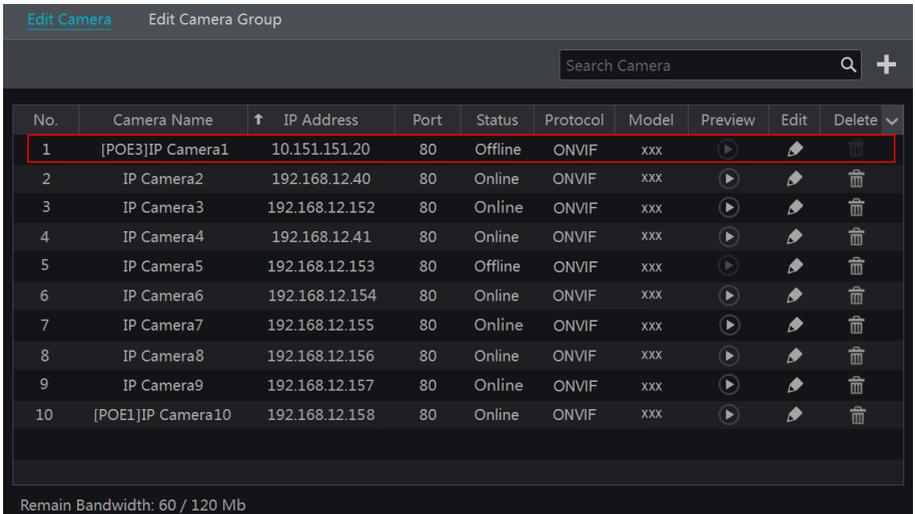
No.	Camera Name	↑ IP Address	Port	Status	Protocol	Model	Preview	Edit	Delete ∨
1	[POE3]IP Camera1	10.151.151.20	80	Offline	ONVIF	xxx	▶	✎	🗑
2	IP Camera2	192.168.12.40	80	Online	ONVIF	xxx	▶	✎	🗑
3	IP Camera3	192.168.12.152	80	Online	ONVIF	xxx	▶	✎	🗑
4	IP Camera4	192.168.12.41	80	Online	ONVIF	xxx	▶	✎	🗑
5	IP Camera5	192.168.12.153	80	Offline	ONVIF	xxx	▶	✎	🗑
6	IP Camera6	192.168.12.154	80	Online	ONVIF	xxx	▶	✎	🗑
7	IP Camera7	192.168.12.155	80	Online	ONVIF	xxx	▶	✎	🗑
8	IP Camera8	192.168.12.156	80	Online	ONVIF	xxx	▶	✎	🗑
9	IP Camera9	192.168.12.157	80	Online	ONVIF	xxx	▶	✎	🗑
10	[POE1]IP Camera10	192.168.12.158	80	Online	ONVIF	xxx	▶	✎	🗑

Edit Camera   Edit Camera Group

Search Camera

Remain Bandwidth: 60 / 120 Mb

②   Go to the live preview interface and then click ✎ in the preview window of the IP camera to edit the IP camera's username and password.

Q8. The system cannot record, why?

a.   Make sure the HDD was formatted prior to use.

b.   The record schedule has not been set in manual record mode. Please refer to 7.3.2 Record Schedule Configuration for details.

c.   Maybe HDD is full and thus, the NVR is not able to record. Check HDD information from Disk Management and if required, please enable the recycle function (please see 7.1.2 Advanced Configuration for details).

d.   There is no disk but cameras in the disk group, so please add at least one disk to the group. Refer to 7.5.1 Storage Mode Configuration for details.

e.   The HDD could have gone bad. Please change another one.

Q9. Why can't I access the NVR remotely through IE.

a.   Please make sure the IE version is IE8 or above.

b.   Please check whether the PC has enabled the firewall or installed the antivirus software. Please try to access the NVR again after you disable the firewall and stop the antivirus software.

c.   Allow & block list may have been set in Account and Authority setting. The PC of which the IP address is in the block list or out of the allow list cannot access the NVR remotely.

Q10.   ActiveX control cannot be downloaded. How can I fix?

a.   IE browser blocks ActiveX control. Please do setup as per the steps mentioned below.

 b.   Click on Tools (cog wheel top right corner) > Internet Options > Security > Click Custom level > Scroll to **DOWNLOAD UNSIGNED ACTIVEX CONTROLS >** set it to **PROMPT** > Click OK.
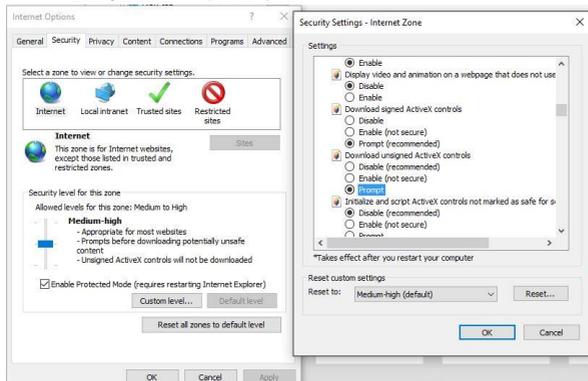
c.   Other plug-ins or anti-virus may block ActiveX. Please disable Windows Firewall/Defender or anti-virus protection temporarily.

Q11. How do i play a backup file?

a.   Insert the USB device in which the record backup files is saved to and then open the USB device path. The record can be backed up in the private format and AVI format by NVR.

●   If you select the private format when backing up record by NVR, a RPAS compression package will be backed up to the USB device automatically along with the record data. Uncompress the "RPAS.zip" and then click "RPAS.exe" to set up RPAS. After the setup is completed, open RPAS player and then click "Open Folder" button in the middle of the interface to select the record data. Refer to Fig 11-1.

Select camera in the resource tree on the left side of the interface to play the camera record. Click ◀× on the tool bar under the camera image to enable audio. Refer to Fig 11-2.

> *Note: The record will not have audio output if you disable the audio when recording by NVR. Please see 7.1.1 Mode Configuration and 7.2 Encode Parameters Setting for details.*

●   If you select the AVI format when backing up record by NVR, the record backup data can be played by the video player which supports this format.

b.   Record backed up through web. The record can only be backed up with AVI format through web. The record can be backed up to PC and played by the video player which supports this format.
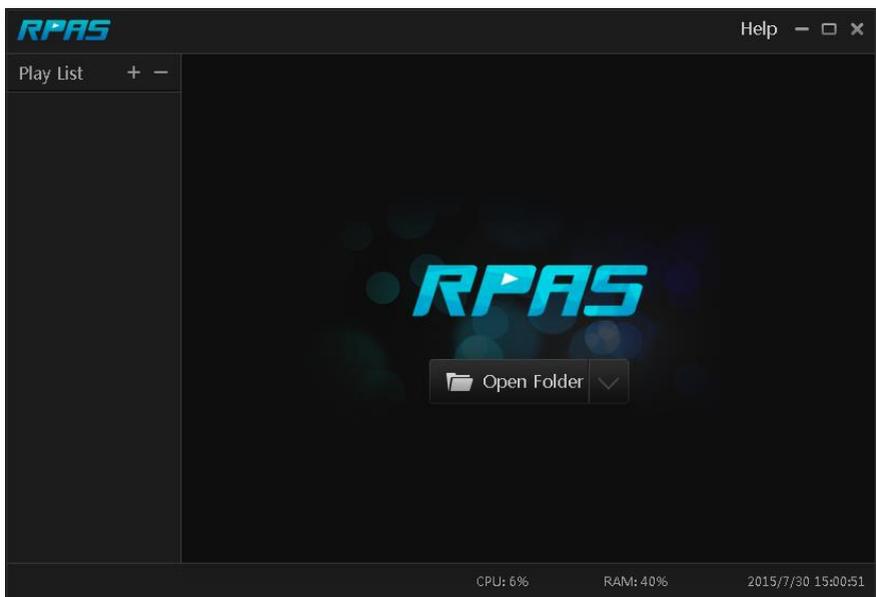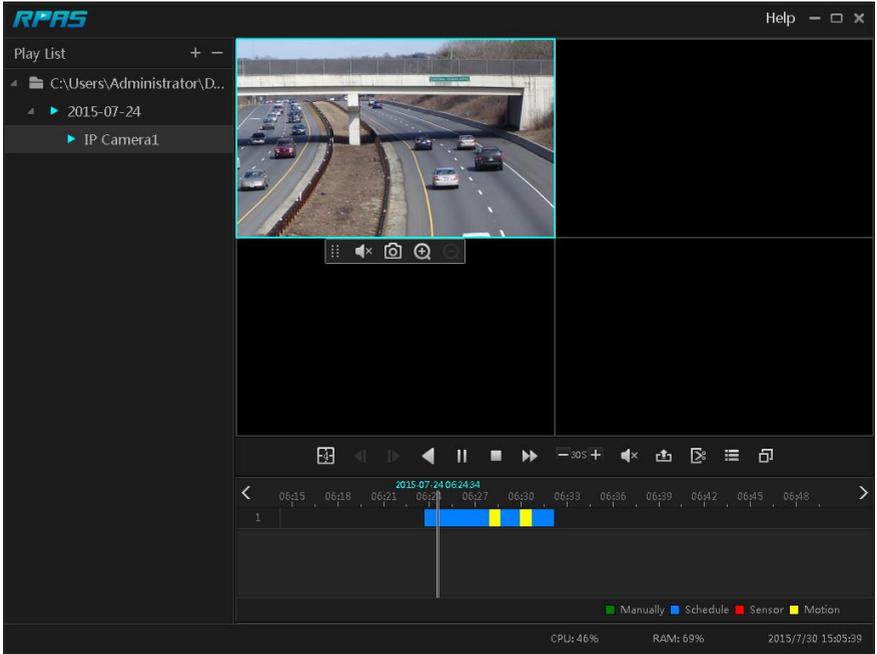

Fig 11-1

Fig 11-2

Appendix B Calculate Recording Capacity

The recording capacity is mainly up to the record resolution, record stream, and bitrate. Different image quality parameters decide different disk capacity occupation in equal times. The bigger the record resolution, record stream, and record bitrate is, the more disk capacity is taken up in equal times. The calculation format of recording capacity is shown as below.

Recording Capacity(MB) = Bitrate(Kbps) ÷1024 ÷ 8 × 3600 × Recording hours per day × Record Storage Days × channel numbers

3600 means record for an hour(1TB=1024GB，1GB=1024MB，1MB=1024KB，1Byte=8bit).

Record Bitrate (Kbps)	Used Space (MB/H)	Used Space (MB/D)
10240	4500	108000
8192	3600	86400
6144	2700	64800
4096	1800	43200
3072	1350	32400
2048	900	21600
1024	450	10800
768	337.5	8100
512	225	5400
384	168.75	4050
256	112.5	2700

The table below shows the recording capacity requirements for record storage in 30 days.

Record Bitrate (Kbps)	Recording Capacity(TB)					
	1CH	4CH	8CH	16CH	32CH	64CH
10240	3.09	12.36	24.72	49.44	98.88	197.76
8192	2.48	9.89	19.78	39.56	79.11	158.21
6144	1.86	7.42	14.84	29.67	59.33	118.66
4096	1.24	4.95	9.89	19.78	39.56	79.11
3072	0.93	3.71	7.42	14.84	29.67	59.33
2048	0.62	2.48	4.95	9.89	19.78	39.56
1024	0.31	1.24	2.48	4.95	9.89	19.78
768	0.24	0.93	1.86	3.71	7.42	14.84
512	0.16	0.62	1.24	2.48	4.95	9.89
384	0.12	0.47	0.93	1.86	3.71	7.42
256	0.08	0.31	0.62	1.24	2.48	4.95

For instance, there is a 32CH NVR recording 24 hours per day and the record stores for 30 days. The NVR adopts dual stream recording. The main stream is 4096Kbps and the sub stream is 1024Kbps, then the total recording capacity is 49.45TB (39.56TB + 9.89TB). Considering the format loss of the disk is about 10%, the required disk capacity will be 55TB

(49.45TB ÷(1-10%)).

Appendix C Compatible Device List

Compatible HDD list

Brand and Series		Capacity
Seagate	Barracuda Series	500GB /1TB /2TB /3TB
	SV35 Series (recommended)	1TB /2TB /3TB
	Surveillance HDD Series (recommended)	1TB /2TB /3TB /4TB /6TB
Western Digital	Blue Series	500GB /1TB
	Green Series	2TB /3TB /4TB
	Purple Series (recommended)	1TB /2TB /3TB /4TB /6TB

Compatible USB mobile device

Brand	Capacity
SSK	2GB
Netac	4GB
Kingston	2GB/8GB/16GB/32GB
Aigo	2GB
Smatter vider	1GB
SanDisk	4GB/8GB/16GB/32GB