VT-TR2/8HA Series

Transcendent Series 4, 8, 16, 32 Ch.
2 / 8 MegaPixel 5-in-1
Digital Video Recorders

FEATURES:

- 4, 8, 16, or 32 Channel HD-TVI / AHD / CVI / CVBS BNC Inputs Supporting up to 5MP Lite / 8 MegaPixels + Additional IP Camera Support of 2 ch. (VT-TR2HA410/ VT-TR8HA410), 4 ch. (VT-TR2HA810), 8 ch. (VT-TR2HA1620 / VT-TR2HA3280 / VT-TR8HA820), 16 ch. (VT-TR2HA1620 / VT-TR8HA1620), 32 ch. (VT-TR8HA3280)
- IP Camera Support up to 5 MegaPixels (VT-TR2HA Series) and 8 MegaPixels (VT-TR8HA Series)
- HDMI (4K), VGA, and BNC Spot Video Output
- Simple plug and play, point-to-point connection from camera to DVR
- H.265 High Profile Compression (H.264 Compression on VT-TR5HA3280)
- 2-Way Audio
- PTZ Control over RS-485 / Control over Coax (CoC)
- 4 Alarm Inputs / 1 Output (4, 8, 16 Channel models) & 16 Alarm Inputs / 4 Outputs (32 Channel model)
- Pentaplex: Live Display / Record / Playback / Backup / Remote Access
- 1 Internal SATA2/SATA3 HDD Slot supporting up to 10TB (1 x 10TB HDD) (VT-TR2HA410 / VT-TR2HA810) / 2 Internal SATA2/SATA3 HDD Slot supporting up to 20TB (2x10TB HDD) (VT-TR2HA1620 / VT-TR8HA820 / VT-TR8HA1620) / 8 Internal SATA2/SATA3 HDD Slot Supporting up to 80TB (8 x10TB HDD) (VT-TR2HA3280, VT-TR8HA3280)
- Applications for iOS & Android
- Remote Viewing over the Internet via Web Browser or LAN
- Mac OS® Client & CMS Central Management Software Included
- Supports both Dynamic and Static IP Addresses
- Control locally via USB Mouse or IR Remote control
- 3-year Warranty

VITEK

Notes

- Please read this user manual carefully to ensure that you can use the device correctly and safely.
- There may be several technically incorrect places or printing errors in this manual. The updates will be added into the new version of this manual. The contents of this manual are subject to change without notice.
- This device should be operated only from the type of power source indicated on the marking label. The voltage of the power must be verified before using. Kindly remove the cables from the power source if the device is not to be used for a long period of time.
- Do not install this device near any 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 any ventilation openings and ensure proper ventilation around the machine.
- To shut down follow shutdown procedures .
- This machine is for indoor use only. Do not expose the machine in rain or moist environment. In case any solid or liquid get inside the machine's case, please turn off the device immediately and get it checked by a qualified technician.
- Do not try to repair the device by yourself without technical aid or approval.
- When this product is in use, the relevant contents of Microsoft, Apple and Google will be involved. 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.
- It is recommended to back up and clear the personal data stored in the device before the device is returned to us for repair or replacement except those data that are essential for purposes of repair or replacement. The device will be restored to the default factory settings and all personal data will be cleared after repair or replacement. Our company ensures that the customer's data is not made available to third parties if the device is exchanged.
- This manual is suitable for many models. All examples and pictures used in the manual are from one of the models for reference purpose.

Disclaimer

- With regard to the product with internet access, the use of product shall be wholly at your own risks. Vitek shall not be responsible for abnormal operation, privacy leakage or other damages resulting from cyber attack, hacker attack, virus inspection, or other internet security risks; however, Vitek will provide timely technical support if necessary.
- Surveillance laws vary. Check all laws in your local region before using this product for surveillance purposes. We shall not take the responsibility for any consequences resulting from illegal operations.
- The storage period of the personal data depends on the capacity of the storage devices. The users data stored in the device shall be responsible by the user. Our company shall not be

responsible for the data loss.

Cyber security Recommendations

- Change passwords and use strong passwords. At least 8 characters or a combination of characters, numbers, and upper and lower case letters should be used in your password.
- The system will automatically check the latest firmware version once a day. Once the latest version is checked, you can update it to ensure the system is current with the latest security patches and fixes.
- Regularly change the passwords of your devices to ensure that only authorized users can access the system.
- Change default ports (like HTTP, data port) to reduce the risk of outsiders being able to access.
- It is recommended to set the firewall of your router. But note that some important ports cannot be closed like 80, 443, 6036 (default ports).

Regulatory Information

FCC Marking

FC The products have been tested and found in compliance with the council FCC rules and regulations part 15 subpart B. Operation of this product is subject to the following two conditions: (1) this device may not cause harmful interface, and (2) this device must accept any interference received, including interference that may cause undesired operation.

CE Marking

CE The products have been manufactured to comply with the following directives.
EMC Directive 2014/30/EU

RoHS Marking

The products have been designed and manufactured in accordance with Directive EU RoHS Directive 2011/65/EU and its amendment Directive EU 2015/863 on the restriction of the use of certain hazardous substances in electrical and electronic equipment.

Contents

1 Introduction

1.1 Features

Basic Functions

- Local device and network device access including third party IP cameras
- Standard ONVIF protocol
- Dual stream recording of each camera
- IP cameras can be added quickly or manually
- Collective or individual configuration of the cameras' OSD, video parameters, mask, motion and so on
- Supports a maximum of 8 user permission groups including Administrator, Advanced and common which are the default permission groups of the system
- A maximum of 16 users can be created, multiple web clients login by using one username at the same time and the user's permission control to be enabled or disabled
- Maximum of 10 web clients login at the same time

Live Preview

- Supports 4K×2K/2560×1440/1920×1080/1280×1024 HDMI and 1920×1080/1280×1024 VGA high definition synchronous display
- Multi-screen modes
- Supports auto adjustment of the camera's image display proportion
- Audio monitoring of the camera can be enabled or disabled
- Manual snap of the preview camera
- Sequencing of cameras can be adjusted
- Display mode can be added and saved and the saved modes can be called directly
- Supports motion detection and video mask
- Supports multiple popular P.T.Z. control protocol and setup of the preset and cruise
- Direct mouse control of the dome including rotating, zoom, focusing and so on
- Single camera image can be zoomed by sliding the scroll wheel of the mouse
- Support any area of the image to be zoomed in to a maximum of 16 times of the current size
- Image and lens adjustment (only available for some cameras)
- Quick camera adding in the camera window of the live preview interface
- The live camera sequence of the web client will keep consistent with that of the DVR after adjusting the live camera sequence of the DVR, but the live camera sequence of the DVR will not be changed if that of the web client is changed

Disk Management

- The DVRs with the 2U case can hold 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
- Each SATA interface of the DVR supports the HDDs with max 8TB storage capacity

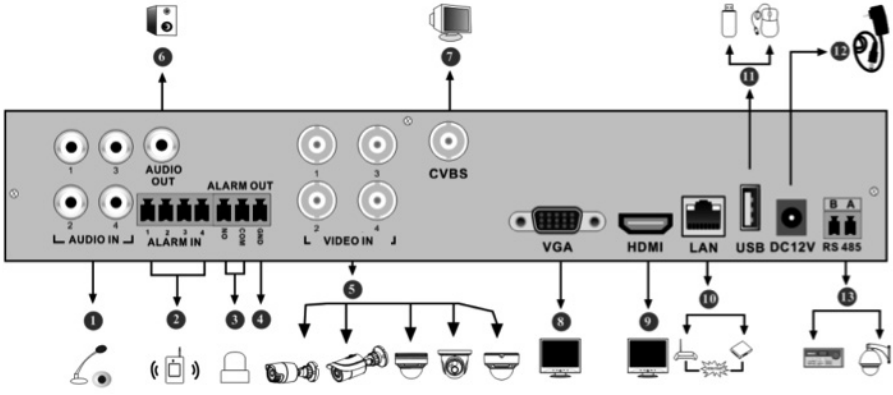
1.2 Front Panel Descriptions

The following descriptions are for reference only. Type I:

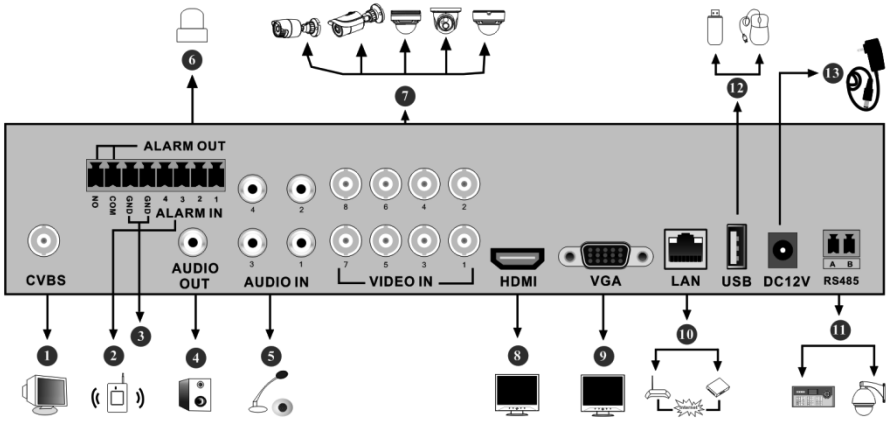
Name	Descriptions
REC	When recording, the light is blue
Net	When connected to a network , the light is blue
Power	Power indicator, when connected, the light is blue

1.3 Rear Panel Descriptions

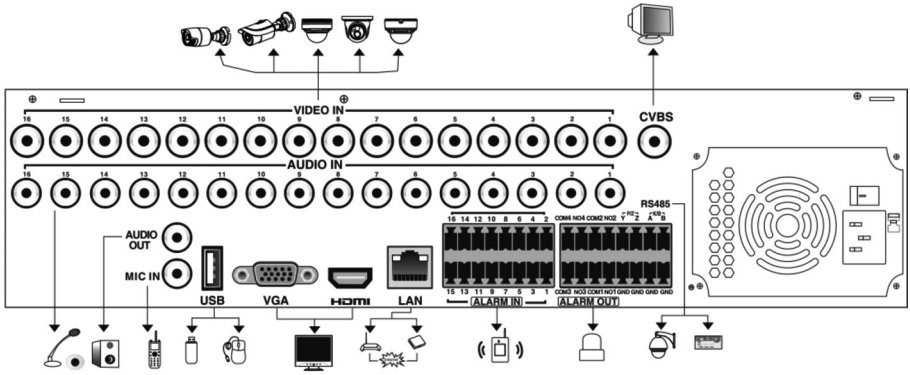
Below images are for example purposes only. Actual product may vary.



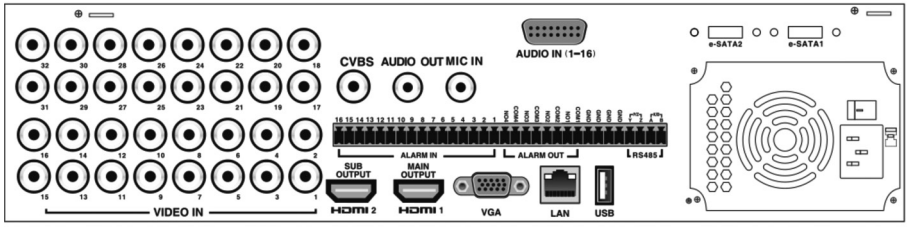
No.	Name	Descriptions
1	AUDIO IN	Audio input
2	ALARM IN	Alarm inputs for connecting sensors
3	ALARM OUT	Relay output; connect to external alarms
4	GND	Ground
5	VIDEO IN	4 CH video inputs
6	AUDIO OUT	Audio output
7	CVBS	CVBS video output; connect to monitor
8	VGA	Connect to monitor
9	HDMI	Connect to high definition display devices
10	LAN	Network port
11	USB	Connector for USB storage devices or USB mouse
12	DC12V	DC12V power input
13	RS485	Connector for keyboards or speed domes. A is TX+; B is TX-



No.	Name	Descriptions
1	CVBS	CVBS video output; connect to monitor
2	ALARM IN	Alarm inputs for connecting sensors
3	GND	Ground
4	AUDIO OUT	Audio output;
5	AUDIO IN	Audio input
6	ALARM OUT	Relay output; connect to external alarms
7	VIDEO IN	8 CH video inputs
8	HDMI	Connect to high definition display devices
9	VGA	Connect to monitor
10	LAN	Network port
11	RS485	Connectors for keyboards or speed domes. A is TX+; B is TX-
12	USB	Connector for USB storage devices or USB mouse
13	DC12V	DC12V power input



Rear Panel for 16CH



Rear Panel for 32CH

1.4 Connections

- **Video Connections**

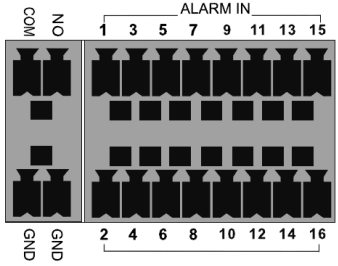
Video Output: Supports VGA/HDMI video output. You can connect to monitor through these video output interfaces simultaneously or independently.

- **Audio Connections**

Audio Input: Connect to microphone, pickup, etc.
Audio Output: Connect to headphones, amplifier etc.

- **Alarm Connections**

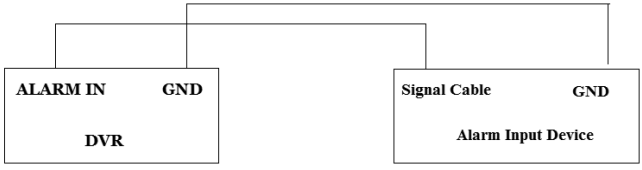
Some models may support this function. Take 16 CH alarm inputs and 1 CH alarm output for example.



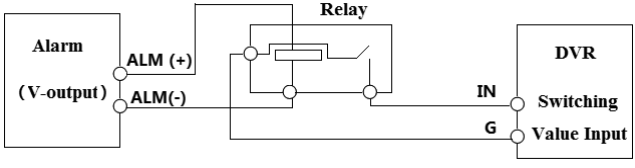
Alarm Input:

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 as shown below:



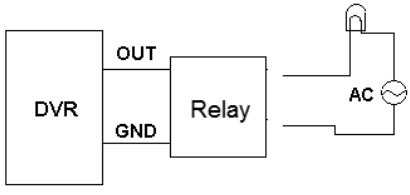
The alarm input is an open/closed relay. If the input is not an open/closed relay, please refer to the following connection diagram:



Alarm Output:

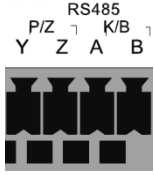
The way to connect alarm output device:

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 used to connect speed dome. K/B interfaces are used to connect keyboard.
Type 2: The RS485 interfaces are not only used to connect speed dome but also to connect keyboard.
The way to connect speed dome to the DVR:
Type 1: Disconnect pluggable block from the RS485 terminal block and then loosen the screws from the pluggable block, insert signal cables into Y and Z port separately (Y is TX+; Z is TX-) and tighten the screws. Next, connect pluggable block back into terminal block. Finally, connect the video cable of the speed dome to the video input interface of the DVR.
Type 2: Disconnect pluggable block from the RS485 terminal block and then loosen the screws from the pluggable block, insert signal cables into A and B port separately (A is TX+; B is TX-) and tighten the screws. Next, connect pluggable block back into terminal block. Finally, connect the video cable of the speed dome to the video input interface of the DVR.

Note:
The pluggable block of some models may not be connected into the terminal block and you shall obtain it from the accessories package.

2 Basic Operation Guide

2.1 Startup & Shutdown

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

2.1.1 Startup

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

2.1.2 Shutdown

You can shutdown the device by using remote controller or mouse.

By remote controller:

- Press Power button. This will take you to a shutdown window. The unit will power off after a while by clicking “OK” button.
- Disconnect the power.

By mouse:

- 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.
- Disconnect the power.

2.2 Remote Controller

- It uses two AAA size batteries.
- Open the battery cover of the remote controller.
- Place batteries. Please take sure of the polarity (+ and -).
- 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 blockage.

If it still doesn’t work, please try a new remote control or contact your dealers. You can just point the IR sensor of the remote controller towards the IR receiver of the DVR 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	N/A
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	N/A
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	N/A
Wiper Button	N/A
Light Button	N/A
Clear Button	N/A
Fn2 Button	N/A
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	N/A
Backup Button	To go to backup mode
Zoom Button	To zoom in the images
PIP Button	N/A

Note:

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, button to enable the relevant function.

Button	Function
REC	Record manually
Search	To enter search mode
MEUN	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	N/A
	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 Display & Playback interface**

In live display & 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.

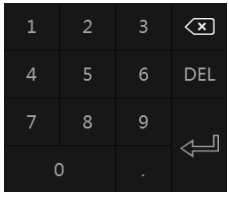
In live display & playback interface, if the interfaces display is in full screen, move the mouse to the bottom of the interface to pop up a tool bar. The tool bar will disappear automatically after you move the mouse away from it; move the mouse to the right side of the interface to pop up a panel and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

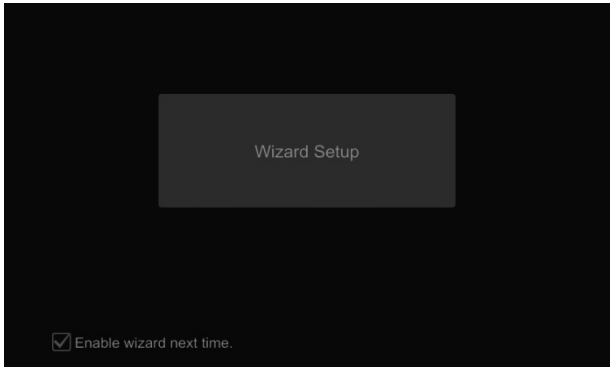
Button	Meaning
	Click it to show the menu list.
	Click it to change the sequence of the list.
	Click it to change the camera displaying mode.
	Click it to close the current interface.
Earliest	Click it to go to the earliest date of camera recording.
Latest	Click it to go to the latest date of camera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

3 Wizard & Main Interface

3.1 Startup Wizard

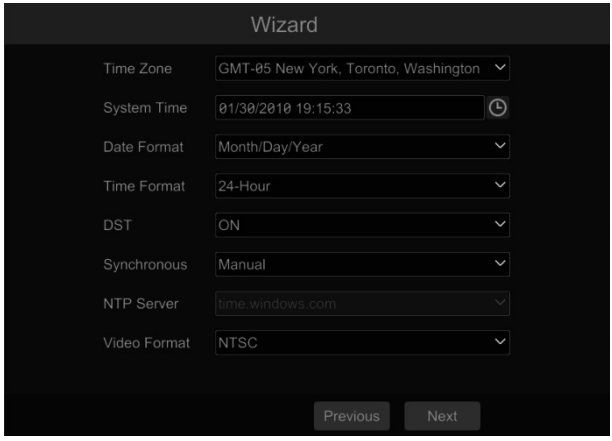
The disk icons will be shown on the top of the startup interface. You can view the number and status of each disk quickly and conveniently through these icons (: no disk; : unavailable disk; : RW available disk).

You can quickly configure the DVR by using the wizard setup to make the DVR work normally. You must configure the wizard if you start the DVR for the first time (or click "Skip" to cancel the wizard next time).

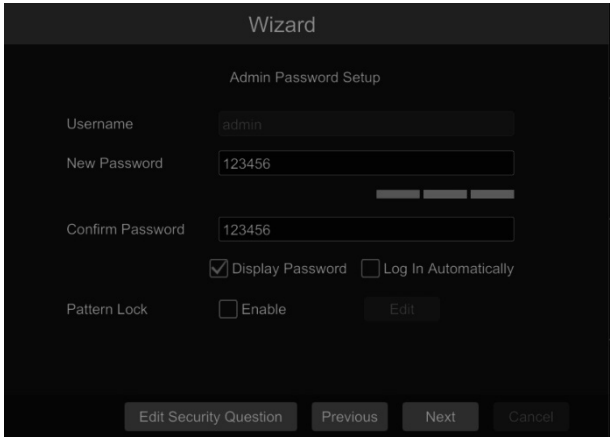


Click "Wizard Setup" to start wizard. The setting steps are as follows.

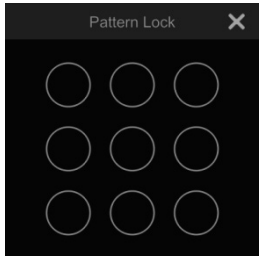
- Choose the language and locality as needed if it is the first time for you to use the wizard.
- ***Date and Time Configuration***. The date and time of the system needs to be set up if you use the wizard for the first time. Refer to the following figure. Set the time zone, system time, date format and time format. The DST will be enabled by default if the time zone selected includes DST. Click "Next" to continue.



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***); select the login username and enter the corresponding password next time.

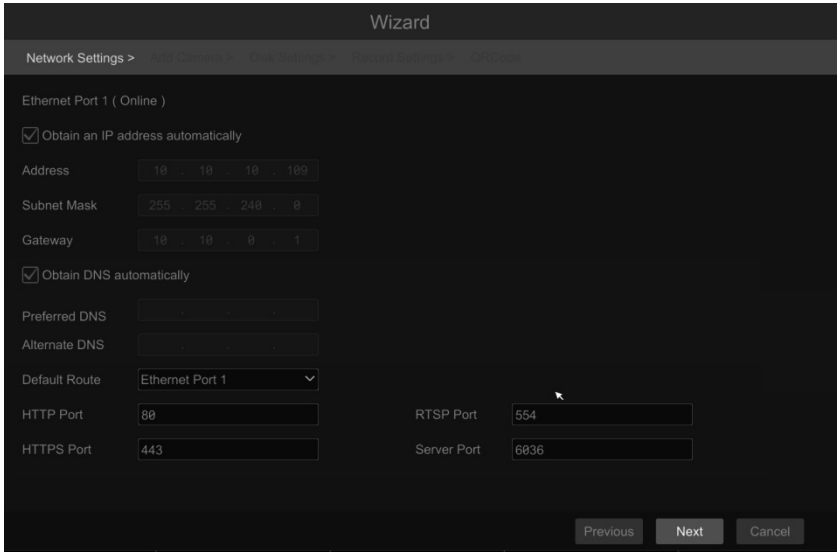


Enable pattern lock and click “Edit” to set the pattern lock.

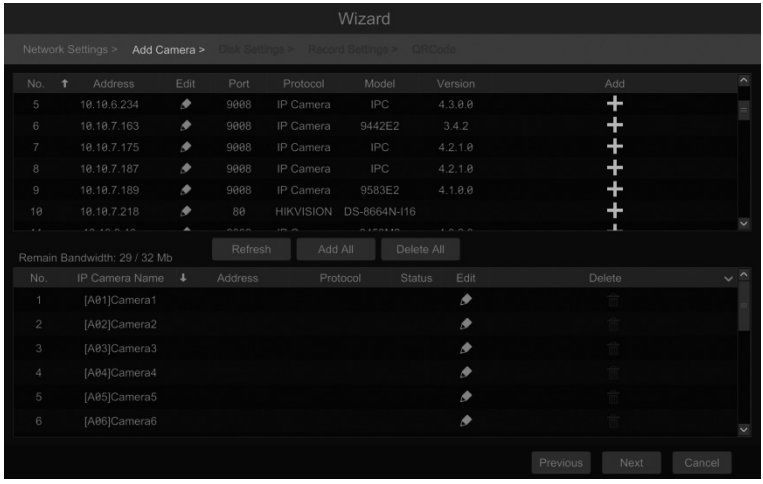


Click "**Edit Security Question"** to set questions and answers for password security of admin. If you forget the password, please refer to Q4 in Appendix A FAQ for details.
Click "Next" to continue or click "Cancel" to exit the wizard.

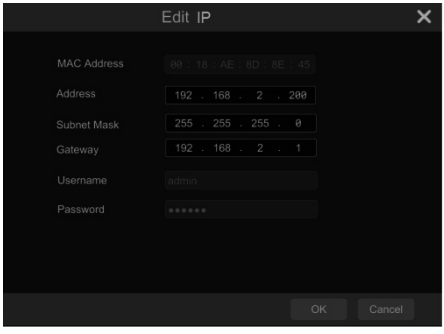
 Network Settings. Check "Obtain an IP address automatically" and "Obtain DNS automatically" to get the IP address and DNS automatically (the DHCP function of the router in the same LAN must also be enabled), or manually enter them. Enter the HTTP port, HTTPS port, RTSP port and Server port (please see 11.1.2 Port Configuration for details). Click "Next" to continue.

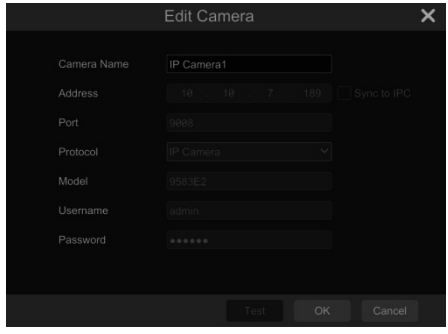


 Add Camera. Click "Refresh" to refresh the list of online IP cameras which are in the same local network with DVR and then click to add the searched camera. Click "Add All" to add all the cameras in the list. Click to delete the added camera. Click "Delete All" to delete all the added cameras.



Click  to edit the found IP camera as shown on the below left. Enter the new IP address, subnet mask, gateway and the password of the camera. You can check "Sync to IPC" to modify the IP address of the IPC via different network segments for being in the same network segment with the DVR. Click "OK" to save the settings.





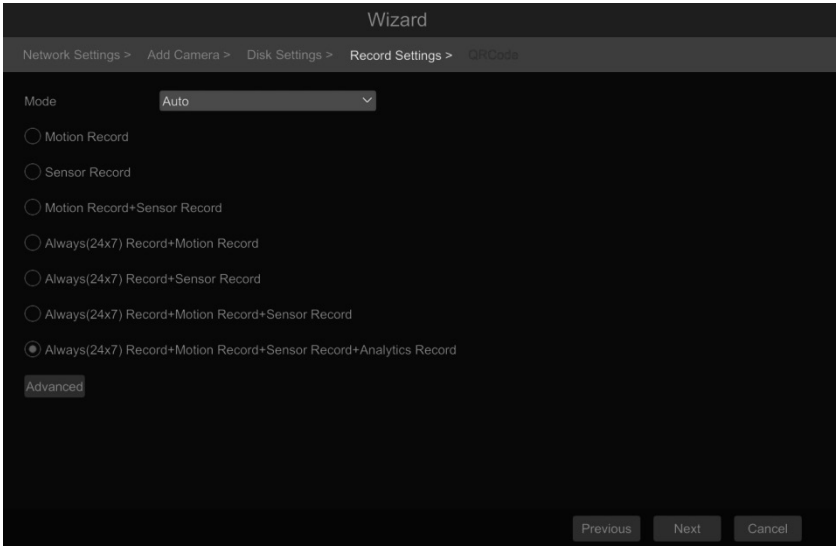
Click  to edit the added camera as shown on the above right. Enter the new camera name, IP address, port, username and the password of the camera. You can click "Test" to test the effectiveness of the input information. Click "OK" to save the settings. You can change the camera name only if it's an analog camera or the added IPC is online. Click "Next" to continue.

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

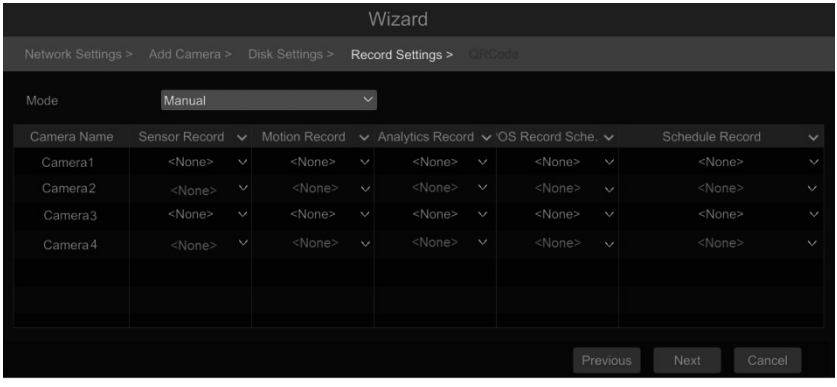
 Record Settings. Two record modes are available: auto and manual.

Auto: Select one auto mode in the interface as shown below and then click "OK" button to save

the settings. See 7.1.1 Mode Configuration for details.



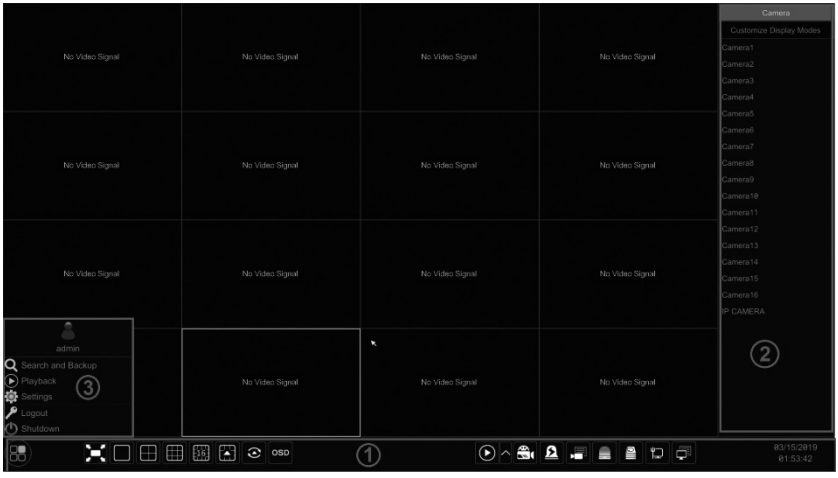
Manual: Set the "Sensor Record", "Motion Record" and "Schedule Record" of each camera. Click "Next" to save the settings. See 7.1.1 Mode Configuration for details.



 QRCode. Enable the NAT function in the interface or set it in the network configuration after exiting the wizard (please refer to 11.1.7 NAT Configuration for details). You can scan the QRCode through mobile client which is installed in the mobile phone or tablet. Please refer to 12.1 Mobile Client Surveillance for details. Click"OK"to save the settings.

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 5.2.3 Scheme View In Sequence for details).
	Click it to enable OSD; click again 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 recording 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.

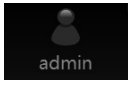
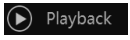
Button	Meaning
	Network status button. Click it to view the network status.
	Information button. Click it to view system information.

Introduction of area 2:

Click “Camera” to view all the added cameras in the camera list. Select one camera window on the left side of the interface and then double click one IP camera in the list to preview the camera image in the selected window.

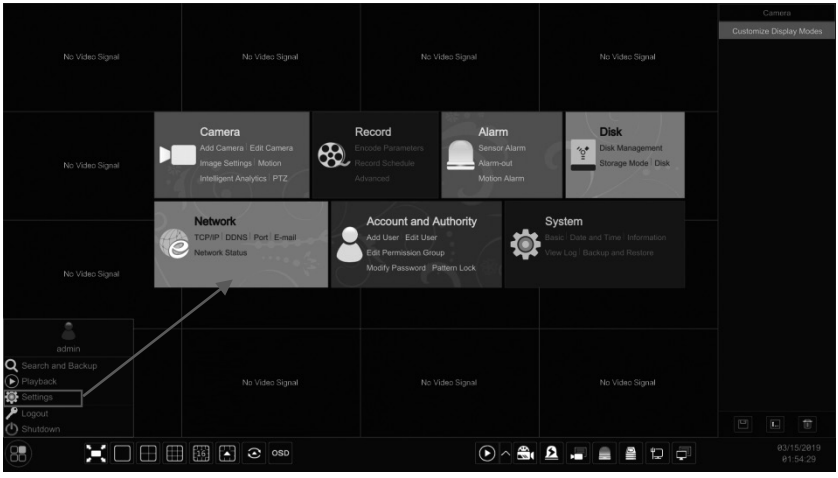
Click “Customize Display Modes” to view all the display modes in the display mode list (refer to 5.2.1 Preview By Display Mode for detail configuration of the display mode). Double click one display mode in the list to switch to the display mode for previewing.

Introduction of area 3:

Icon / Button	Meaning
	It shows the current login user.
	Click it to go to record search interface, see 8.3 Record Search, Playback & Backup for details.
	Click it 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.
	Click it to pop up the setup panel, see 3.2.2 Setup Panel for details.
	Click it to log out the system.
	Click it and then select “Logout”, “Reboot” or “Shutdown” in the popup window.

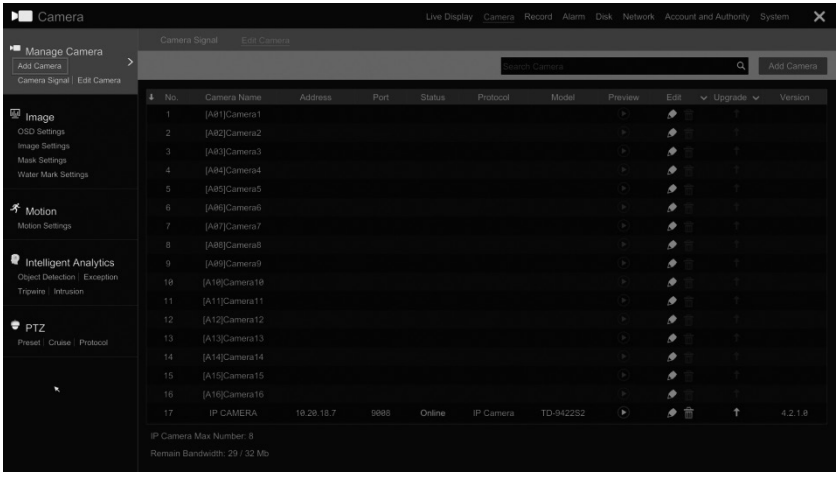
3.2.2 Setup Panel

Click Start→Settings to bring up the setup panel as shown below.



The setup panel includes seven modules. Each module provides some function entries with links for convenient operation.

Take ***Camera*** module as an example. The ***Camera*** module provides convenient links such as "Add Camera", "Edit Camera", "Image Settings", "Motion", "Intelligent Detection" 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.

Click the main menus on the top of the camera management interface to go to corresponding interfaces. Refer to the picture below. For instance, you can go to system setup interface by clicking "System" tag.

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*** and ***Disk Information***. 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/IP***, ***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 10.1 Account Management for details) and ***Permission Management*** (see 10.3 Permission Management for details) etc.

- **System**

The module covers the functions such as ***Basic Configuration*** (see 11.2 Basic Configuration for details), ***Device Information*** (see 11.8 View System Information for details), ***Log Information*** (see 11.7 View Log for details) and ***Configuration File Import&Export*** (see 11.5 Backup and Restore for details) etc.

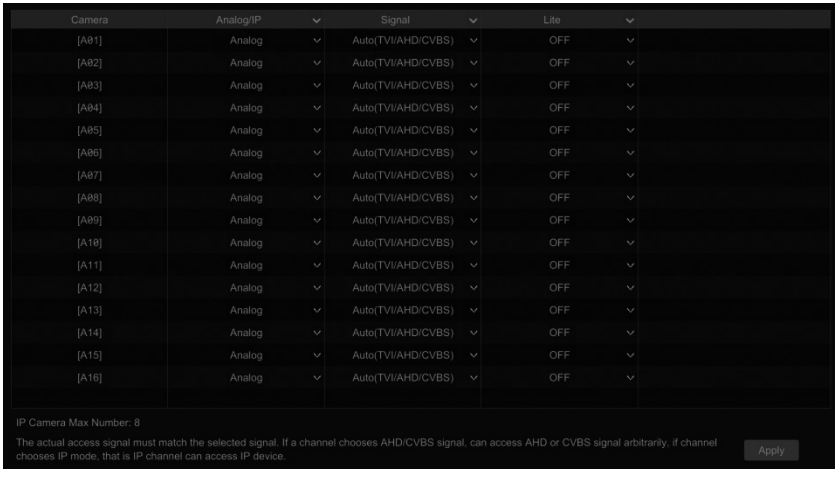
4 Camera Management

4.1 Camera Signal

Click Start→Settings→Camera→Manage Camera→Camera Signal to go to the interface as shown below.

Some models may support analog signal switching to IP signal, which means decreasing (or increasing) the number of analog channels, accordingly increasing (or decreasing) the number of IP channels with the total channels unchanged.

The DVR device supports hybrid access of TVI, AHD, CVI and CVBS high definition cameras. If a TVI high definition camera is connected to the DVR, you should select TVI in the following interface to show the camera image normally; if you select AHD, then there will be no image or the image has no color. The default selection of the camera signal is Auto. If you select Auto, the image of the camera will be shown normally regardless of the camera type.



Note: You can enable "Lite" in the interface if the DVR supports "Lite" recording. It will lower the recording resolution and increase the recording frame rate. Please enable or disable the Lite as needed.

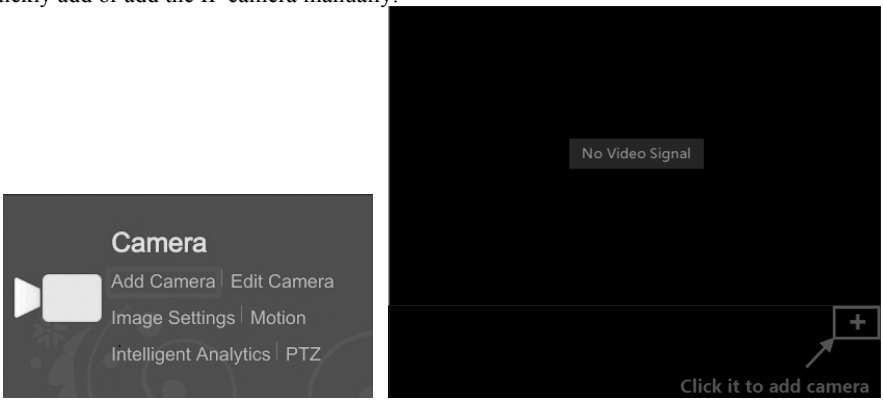
4.2 Add/Edit Camera

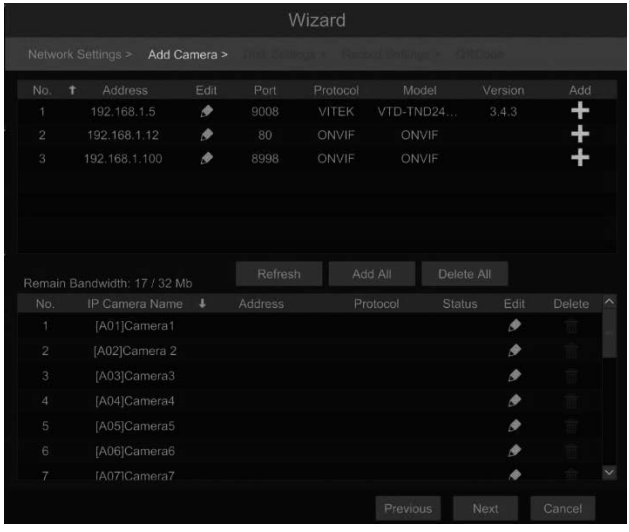
4.2.1 Add Camera

The network of the DVR should be set before adding IP camera (see 11.1.1 TCP/IP Configuration 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. You can

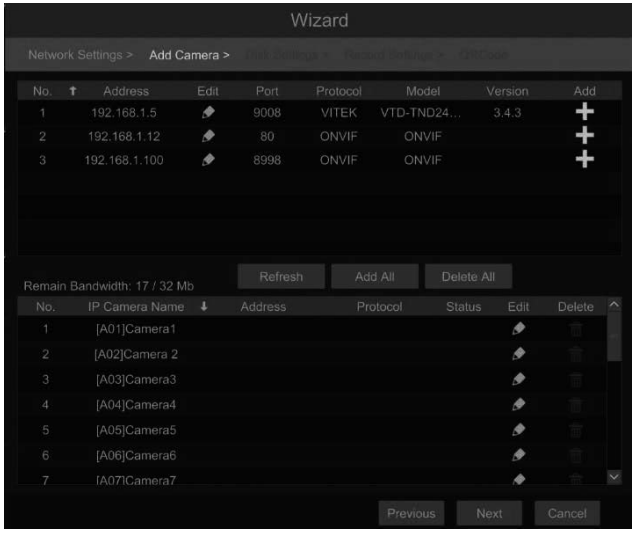
quickly add or add the IP camera manually.





➢ **Quickly Add**

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

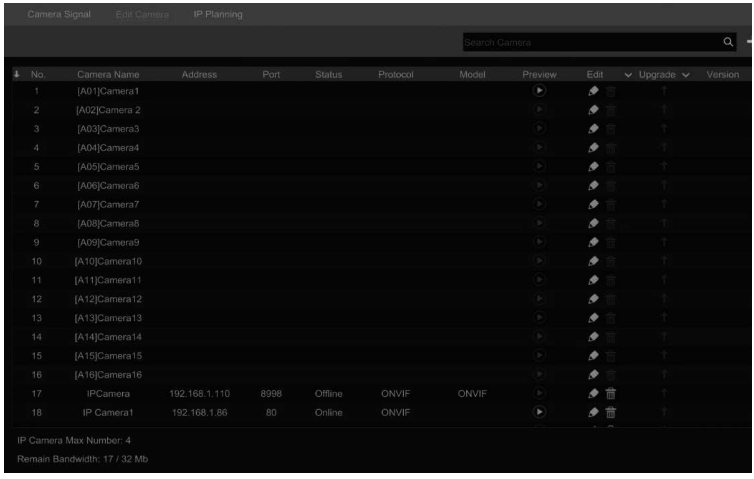


➢ **Add Manually**

Enter the IP address or domain name (click in the IP address column to pop up the domain name input window, enter the domain name of the IPC in the window and then click "OK" button), port, username and password of the camera and then select the protocol. Click "Test" to test the effectiveness of the information and then click "Add" button (you can fill out one camera's information or above such as IP address, username and password before clicking "Add" button). Click to delete the camera. Click "Default Password" to set the default username and password of each camera.

4.2.2 Edit Camera

Click "Edit Camera" in the setup panel to go to the interface as shown below.

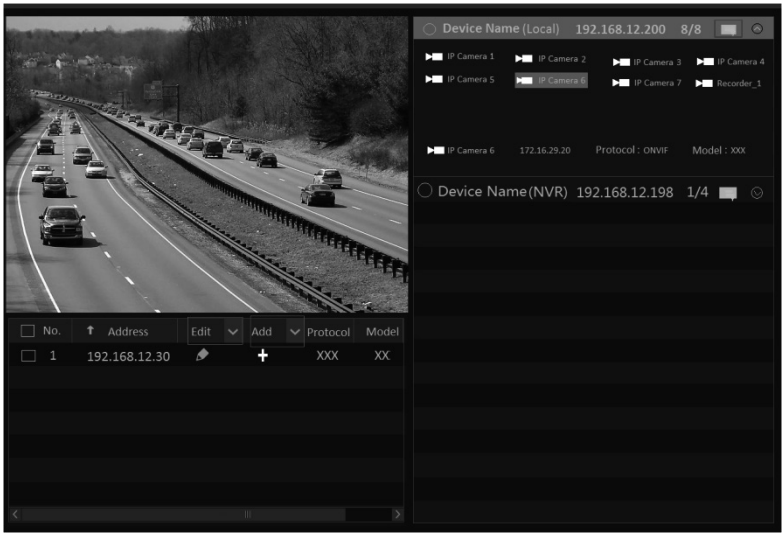


Click  to view the live image of the camera in the popup window. Click  to edit the camera (see ***Add camera*** in 3.1 Startup Wizard for details). Click  to delete the IP camera. Click  in the "Operation" header line and then click "Modify IPC Password" to pop up a window(check the IPCs in the window, set the new password and then click "OK" button; only the online IPCs' passwords can be modified and a batch of IPCs' passwords can be modified at the same time). Click  to upgrade an online IPC (or click  in the "Upgrade" header line and then click "IPC Batch Upgrade" to upgrade a batch of IPCs), select the device which stores the upgrade file in the "Device Name" item of the popup window and the upgrade file in the list(you should select the upgrade IPC model in the window if a batch of IPCs' passwords need to be modified) and then click "Upgrade" button to start upgrading(the IPC will restart automatically after the upgrade is completed successfully).

4.3 IP Planning

Some models may not support this function.

Click "IP Planning" to go to the interface as shown below. This function supports searching other DVRs/NVRs that is in the same local network as the local DVR. The user may add the IPC of other DVRs/NVRs into the unoccupied channels of the local DVR.



Click  to edit the IP address, user name or password and other information of the DVRs/NVRs.

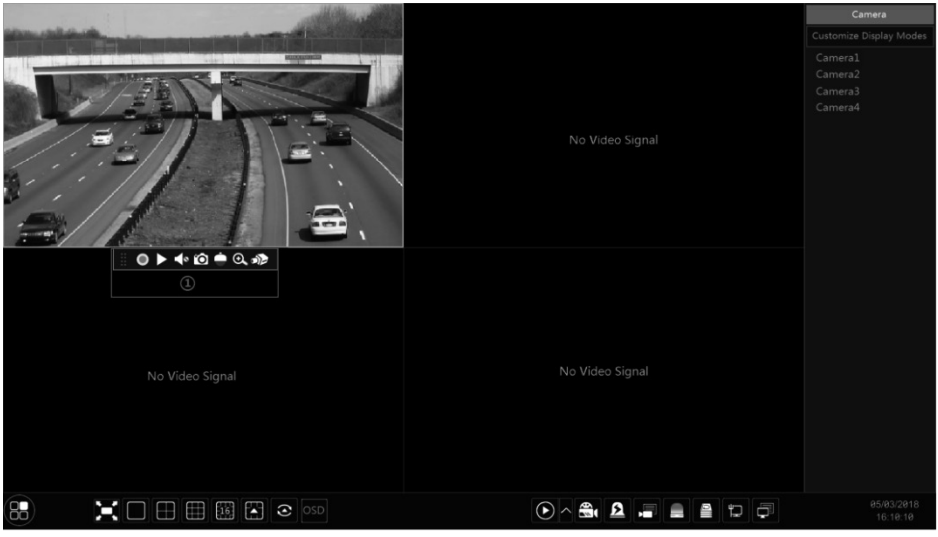
Click  behind “Add” button to add the IPC selected and the user may edit the IP address, user name or password by clicking  behind “Edit” button.

5 Live View Introduction

5.1 Preview Interface Introduction

The connected analog cameras will be added automatically in the live preview interface for previewing. You need to add IP camera manually for previewing (see 4.2.1 Add Camera for details). Refer to the interface as shown below, drag one camera in the preview window to another window for camera window exchanging.

The record symbols with different colors in the live preview window refer to different record types when recording: green stands for manual record, red stands for sensor based record, yellow stands for motion based record, blue stands for schedule record and cyan stands for intelligence record.



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 8.1 Instant Playback 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.

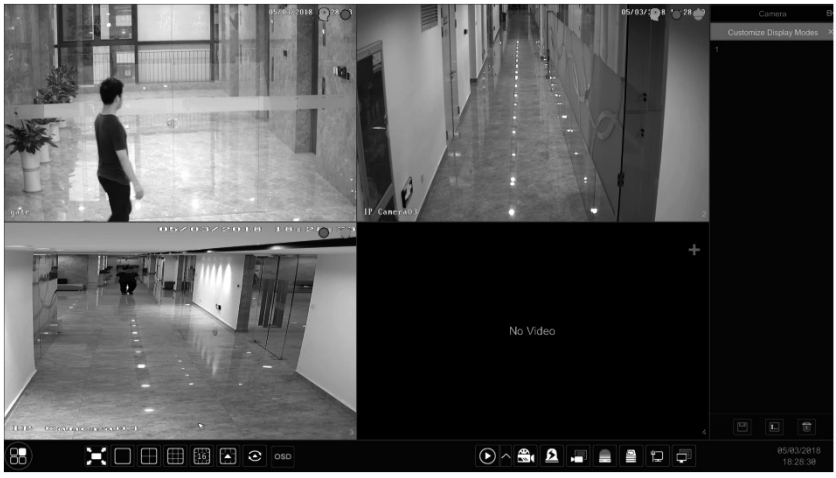
Button	Menu List	Meaning
	PTZ Control	Click it to go to PTZ control interface. See Chapter 6 PTZ for details.
	Zoom In	Click it to go to single channel amplification interface.
	--	Click it to go to image adjustment interface. Refer to 5.3.5 Image Adjustment for details.
--	**Camera Info**	Click it to view the IP camera information.

The single channel zoom interface is as shown below. Click 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 zooming. 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 cameras' display sequences as required and then save the display modes classified by surveillance areas, priorities and so on. 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:

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

Method Two:

- Click Start→Settings→System→Basic→Output Settings→Main Output to go to the interface and then set the screen mode.
- Double click the camera or camera group-in the list to add them to the selected window.
- Click to save the current display mode (refer to 5.2.3 Scheme View In Sequence 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 the "Customize Display Modes" tab in the live preview interface and then select one display mode in the list. Click to edit the display mode name; click 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 5.2.3 Scheme View in Sequence 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 Scheme View In Sequence

Click Start→Settings→System→Basic→Output Settings→Main Output 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; area 4 is the tool bar (: 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 in area 3. The camera will be added into the selected window. One camera in the same scheme cannot repeat. You can right-click menu "Clear" in area 4 to remove a single camera or click  to remove all the cameras.

c) Click "Apply" to save the settings.

- **Start Sequence View**

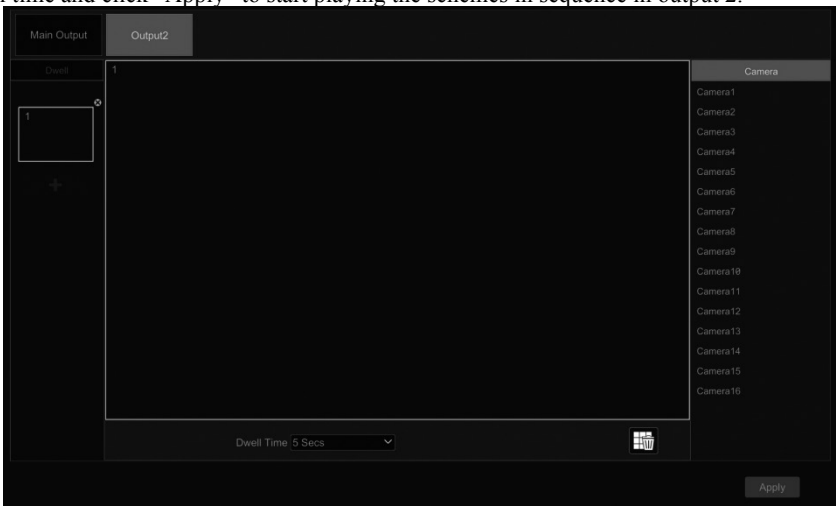
Go to live preview interface and then click  to pop up a window. Set the dwell time in the window and then click  to start scheme view in sequence. Double click the sequence view interface to pause the view; double click again to restore the view. Click  to stop the view.

5.2.4 Spot View

Click Start→Settings→System→Basic→Output Settings→Output 2 to go to the interface as shown below.

Click  on the left to create a new scheme. Each scheme can only add one analog camera. Select a scheme on the left and then double click or drag a camera on the right to the scheme window in the middle of the interface. After finishing the settings of all the schemes, select the

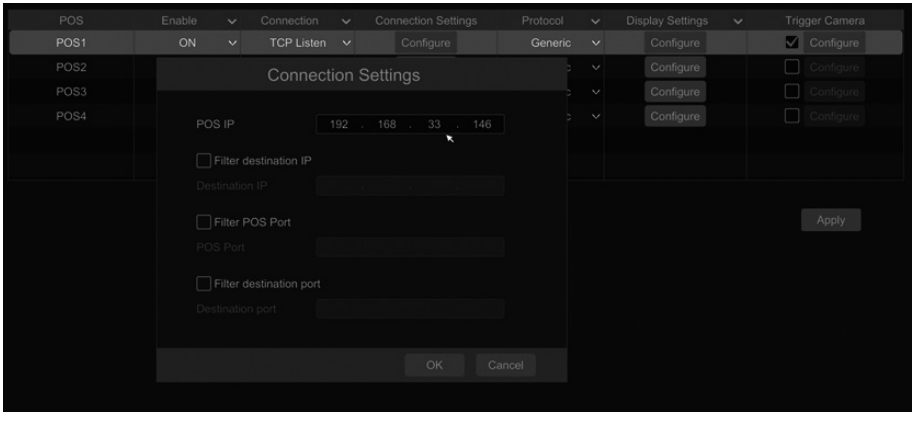
dwell time and click “Apply” to start playing the schemes in sequence in output 2.



5.3 POS Settings

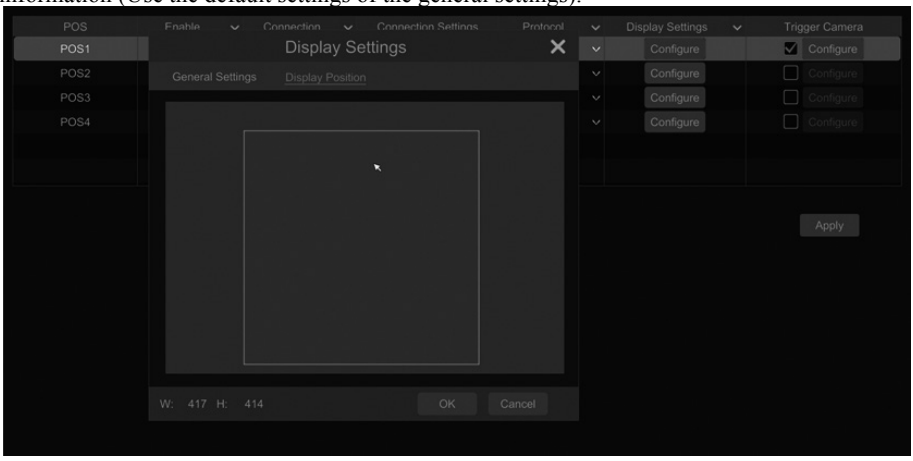
Some models may not support this function.

- Click Start→Settings→Basic→POS Settings to go to the interface.
- Enable POS and click configure under “Connection Settings” to go to the following interface.
- Enter the IP address of the POS you want to add.
- Check “Filter destination”, “Filter POS port” and “Filter destination Port” (If you do not check them, please skip this step) and Enter the destination IP, POS port and destination port you want to filter.

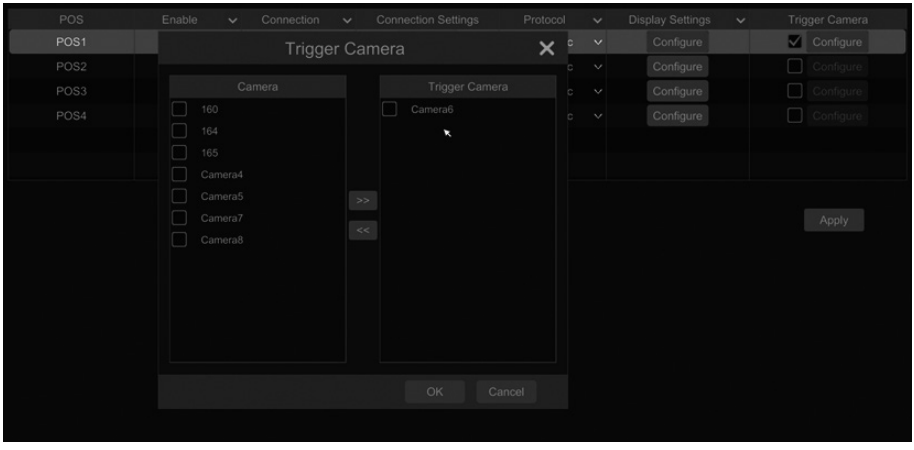


- Click “Display Position” under “Display Settings” to set the position of the POS

information (Use the default settings of the general settings).

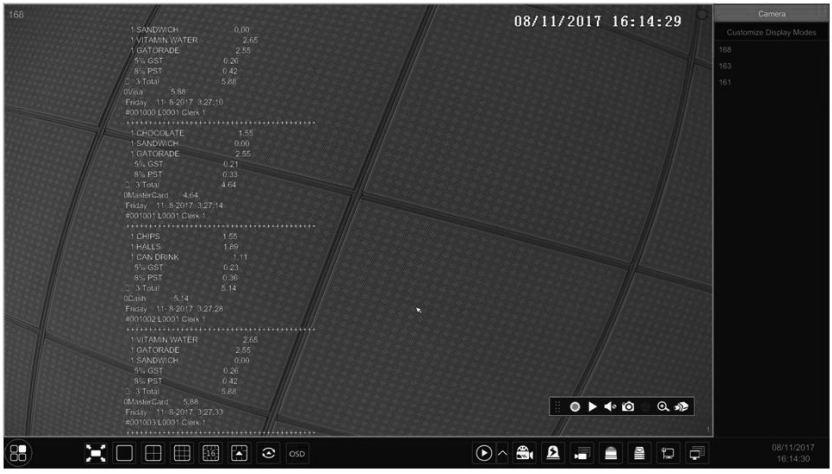


 Check “Trigger Camera” and click configure under it to bind POS to the camera. One POS can be bound to multiple channels, but one channel can only be bound to one POS.

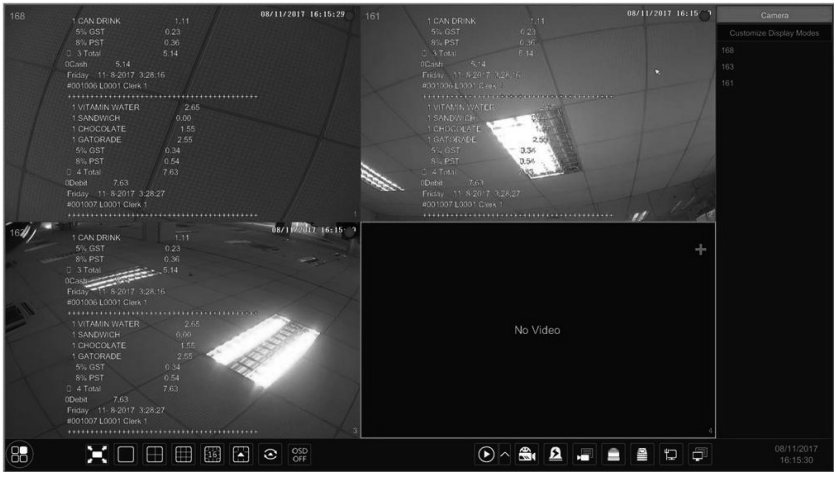


 Click “Apply” to save the settings and then the trade information will be displayed on the preview image in real-time.

One POS is bound to one camera:



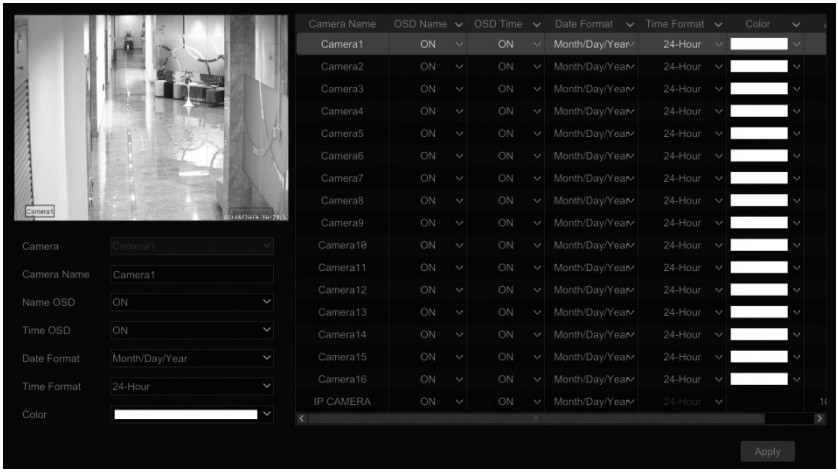
One POS is bound to multiple cameras:



5.4 Image Configuration

5.4.1 OSD Settings

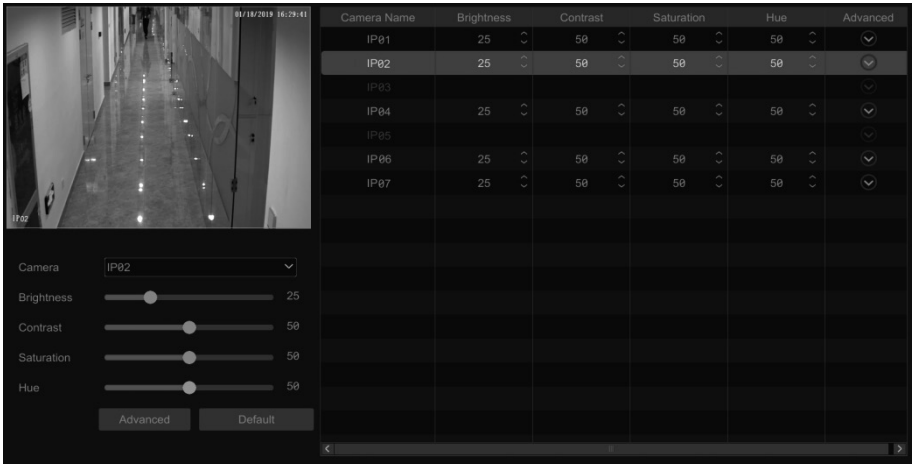
Click Start→Settings→Camera→Image→OSD Settings to go to the interface as shown below. Select the camera, enter the camera name (or double click the camera name in the camera list to change the camera name), enable or disable the name and time OSDs (if enabled, drag the red name and time OSDs directly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



5.4.2 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. Click "Advanced" button or in the camera list on the right side of the interface to pop up "Image Adjust" interface and then set the relevant setting items. Please refer to 5.3.5 Image Adjustment for detailed introductions of these items.

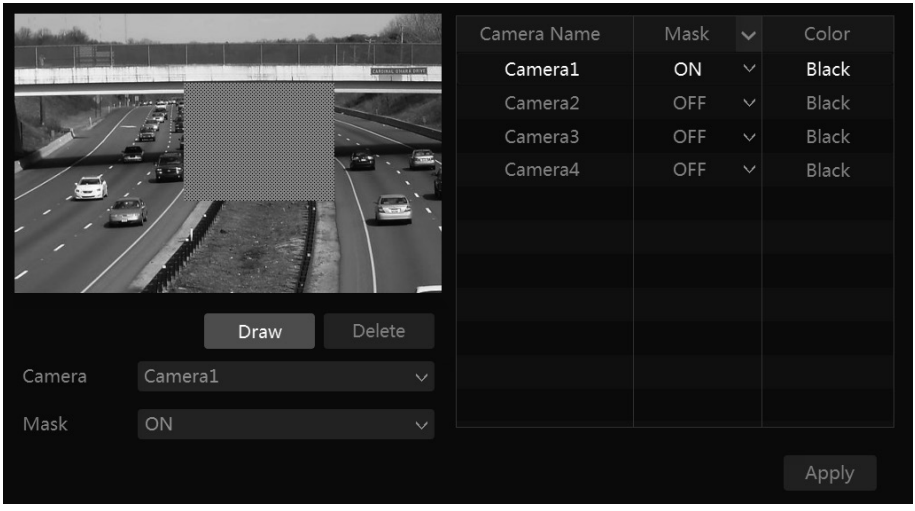
You can click "Default" button to restore the image settings to the default factory settings.



5.4.3 Mask Settings

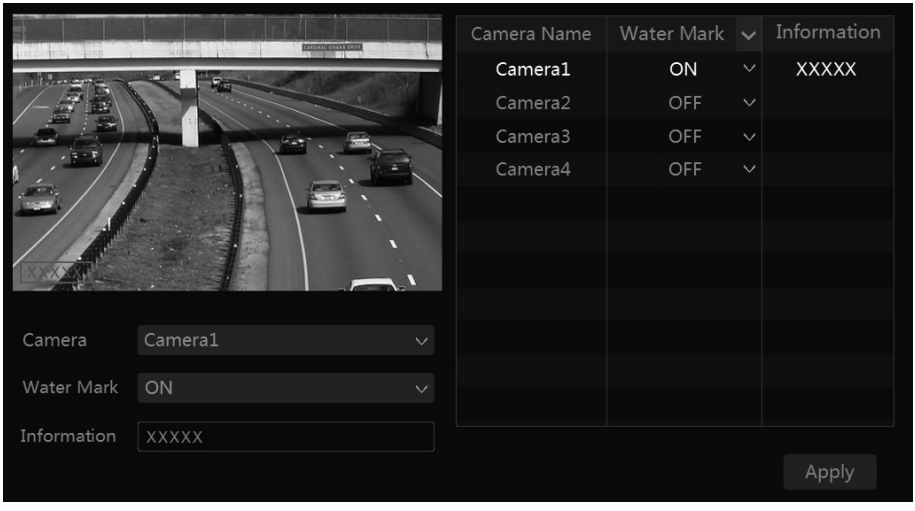
Some areas of the image can be masked for privacy. Up to four mask areas can be set for each camera. Click Start→Settings→Camera→Image→Mask Settings to go to the interface as

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.



5.4.4 Water Mark Settings

Click Start→Settings→Camera→Image→Water Mark Settings to go to the interface as shown below. Select the camera and enable water mark and then enter the water mark information. Click “Apply” to save the settings.



5.4.5 Image Adjustment

Go to live preview interface and then click 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 sharpness, 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 refers to the total color degree of the image.
Sharpen	It refers 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.
BLC	HLC: lowers the brightness of the entire image by suppressing the brightness of the image's bright area and reducing the size of the halo area. BLC: If enabled, the auto exposure will activate according to the scene so that the object of the image in the darkest area will be seen clearly.

Parameter	Meaning
Denoise	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	Adjust the color temperature according to the environment automatically.
Image Mirror	Turn the current video image horizontally.
Image Flip	Turn the current video image vertically.

- **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.

Button/Parameter	Meaning
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

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 PTZ 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.
Speed	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 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 PTZ rotates. The 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**

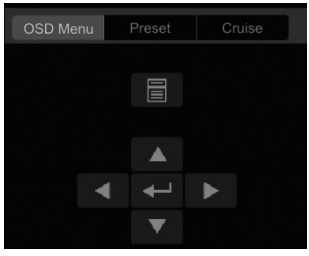
Double click the left button of the mouse on any area of the camera image and then the image size will be doubled and centered on the clicked point.

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.

➢ **OSD Setting**

Go to PTZ protocol setting interface and then set the protocol to COC before you call the OSD. Click "OSD Menu" to go to camera OSD setting interface. Click  to start OSD setting. The meanings of the buttons are shown in the table below.

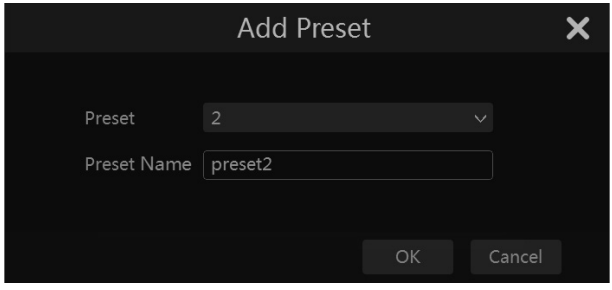


Button	Meaning
	Call main menu or enter the sub menu or confirm the settings.

Button	Meaning
	Call main menu or enter the sub menu or confirm the settings.
	Change the menu mode or decrease the menu value.
	Change the menu mode or increase the menu value.
	Go to the previous menu.
	Go to the next menu.

- **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 enter the preset name in the window; finally click "OK" button to save the settings. You can add up to 255 presets depending on PTZ.

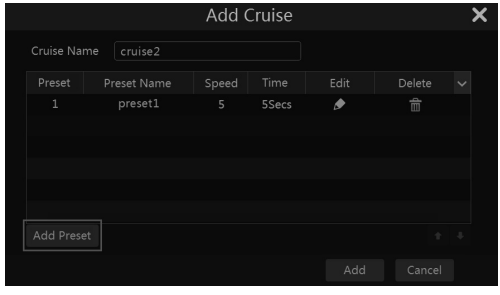


Adjust the dome's direction and then click "Save Position" to save the current preset position (you can also click another preset in the preset list and then save the preset position after adjusting the dome's direction); click in the preset list to call the preset; click "Delete" button to delete the selected preset.

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

- **Cruise Setting**

Click "Cruise" to go to cruise operation tab and then click "Add" button to pop up a window as shown below left. You can add 8 cruises for each PTZ at most.



 Enter 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 PTZ first).

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

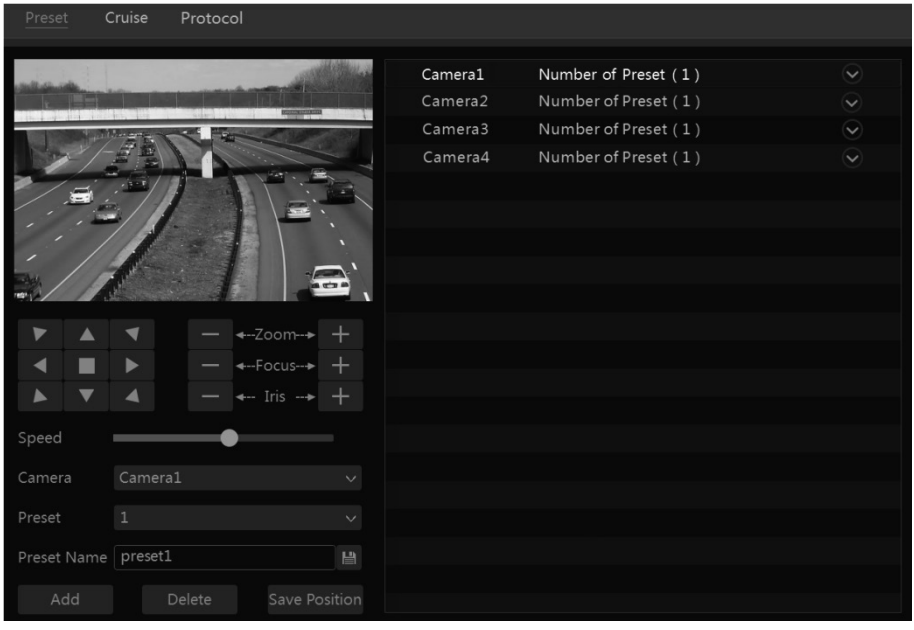
 In the “Add Cruise” window, you can click to reselect the preset, then change the preset time and speed. Click to delete the preset. Click “Add” button to save the cruise.

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 in the camera list on the right side of the interface to display the preset information of the dome and then click to add preset. The operations of the "Add Preset" window are similar to that of the PTZ control interface; please see 6.1 PTZ Control Interface Introduction for details.

➢ **Edit preset**

Select camera and preset. You can enter a new name of the preset and then click 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

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 6.1 PTZ Control Interface Introduction for details.

➢ **Edit Cruise**

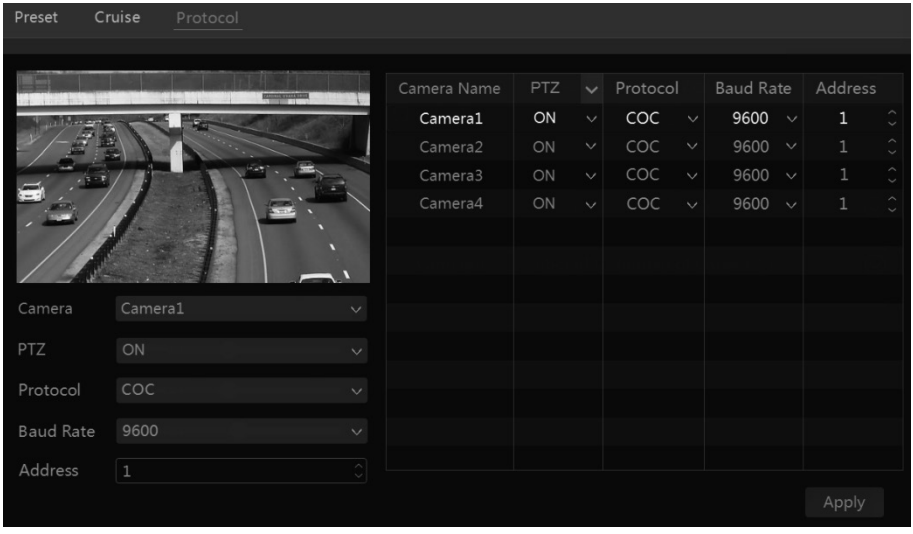
Select the camera and cruise in the "Cruise" interface. Enter the new cruise name and then click to save the cruise name. Click "Add Preset" to add preset to the cruise. Click to edit the preset. Click to delete the preset from the cruise. Click one preset in the preset list and then click to move down 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.

6.4 PTZ Protocol Setting

Click Start→Settings→Camera→PTZ→Protocol to go to the interface as shown below. You can enable or disable the PTZ and set the protocol, baud rate and address of the analog dome in the interface. Please make sure the analog speed dome camera is connected to the DVR before you control it.



Select the camera and enable PTZ and then set the protocol, baud rate and address of the dome according to the settings of the dome.

Protocol: The default communication protocol of the DVR is COC. Range from: PELCOP, PELCOD, LILIN, MINKING, NEON, STAR, VIDO, DSCP, VISCA, COC, etc.

Address: The address of the PTZ device.

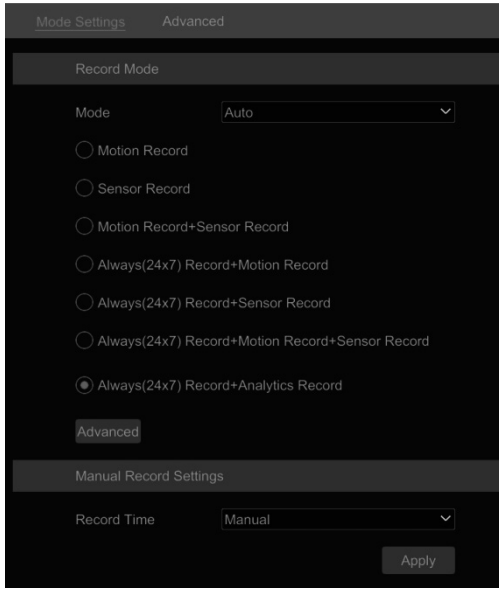
Baud Rate: Baud rate of the PTZ device. Range from: 110, 300, 600, 1200, 2400, 4800, 9600, 19200, 34800, 57600, 115200, 230400, 460800, 921600.

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**

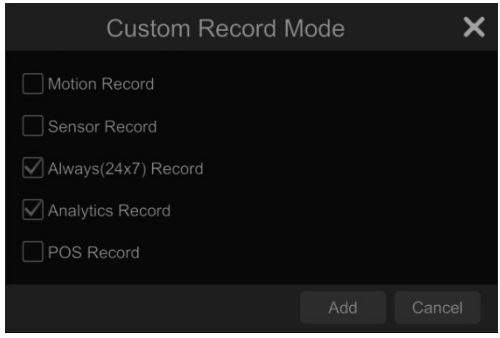
Motion Record: Motion alarm record will be enabled when motion alarm happens.
Sensor Record: Sensor alarm record will be enabled when sensor alarm happens.
Motion Record+Sensor Record: Motion/sensor alarm record will be enabled when motion/sensor alarm happens.
Always(24x7) Record+Motion Record: Normal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

motion/sensor/intelligence alarm happens.

Always(24 x 7) Record+Motion Record+Sensor Record+Analytics Record+POS Record: Normal record is enabled all the time; motion/sensor/Analytics/POS alarm record will be enabled when motion/sensor/ Analytics /POS alarm happens.

Some models may not support POS recording.

You can add more auto modes on intelligence record. Click "Advanced" button to pop up a window as shown below. Check the modes in the window and then click "Add" button to show the modes in the record mode list (in the window, the checked modes can be shown in the record mode list while the unchecked modes cannot; you cannot only check "***Always(24x7) Record***").



Select one auto mode to pop up the corresponding window. Set the encode, GOP, resolution, FPS, bitrate type, quality, max bitrate and audio of each camera and then click "OK" to save the settings. Please adjust the parameters according to the actual condition.

Video Encode: the video encode format of the camera.

GOP: group of pictures.

Resolution: the higher the resolution is, the clearer the image is.

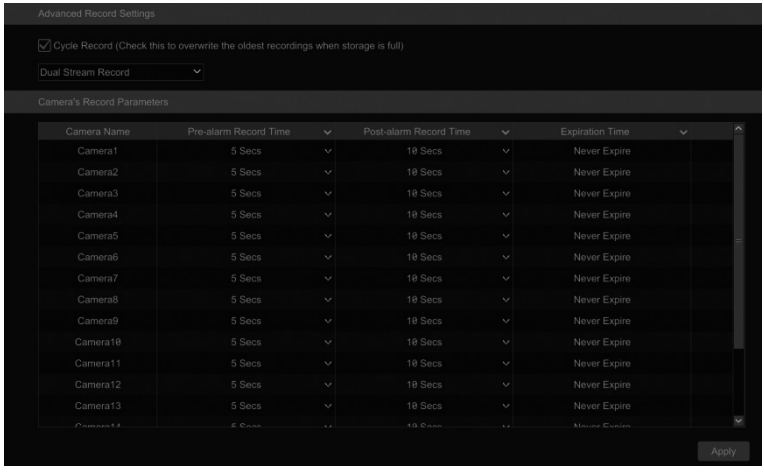
FPS: the higher the frame rate is, the more fluid the video is. However, more storage room will be taken up.
Bitrate Type: CBR and VBR are optional. CBR means that no matter how much change is seen in the video scene, the compression bitrate will be kept constant. VBR means that the compression bitrate will be adjusted according scene changes. For example, for scenes that do not have much movement, the bitrate will be kept at a lower value. This will help to optimize the network bandwidth.
Quality: When VBR is selected, you need to choose image quality. The higher the image quality you choose, the more bitrate will be required.
Max Bitrate: 32Kbps ~10240Kbps are optional.

- **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

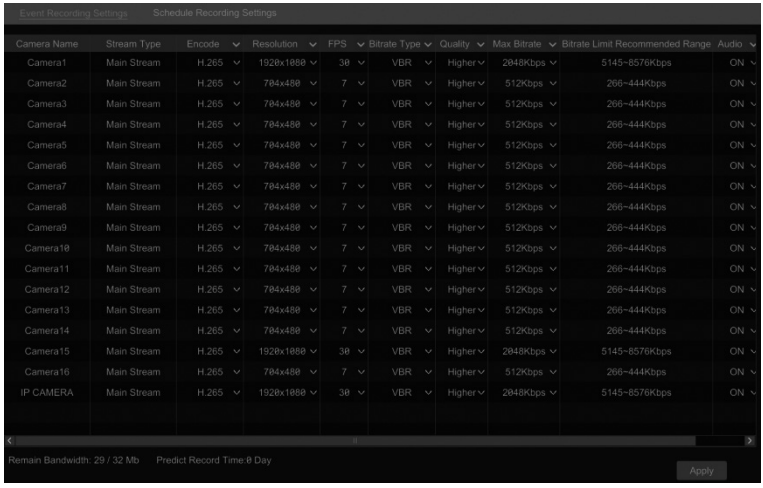
Click Start→Settings→Record→Advanced to go to the following interface. Enable or disable cycle record (cycle record: the earliest record data will be replaced by the latest when the disks are full). Set the stream, pre-alarm record time, post-alarm record time and expiration time of each camera and then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



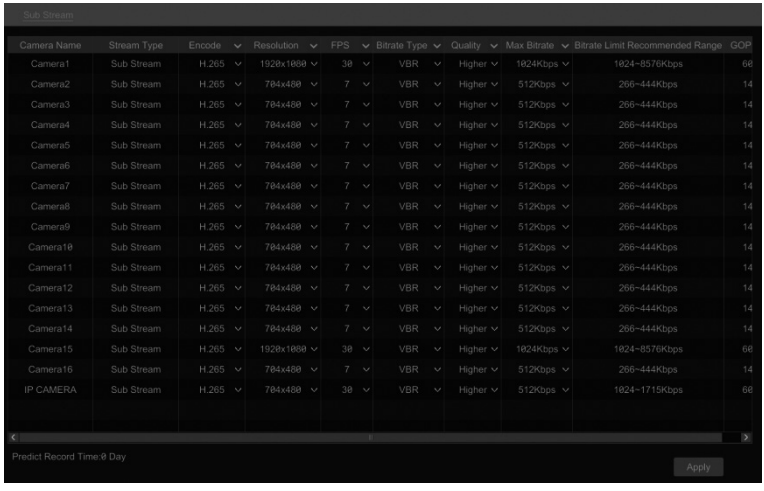
Pre-alarm Record Time: set the time to record before the actual recording begins.
Post-alarm Record Time: set the time to record after the actual recording is finished.
Expiration Time: set the expiration time for recorded video. If the set date is overdue, the recorded data will be deleted automatically.

7.2 Encode Parameters Setting

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



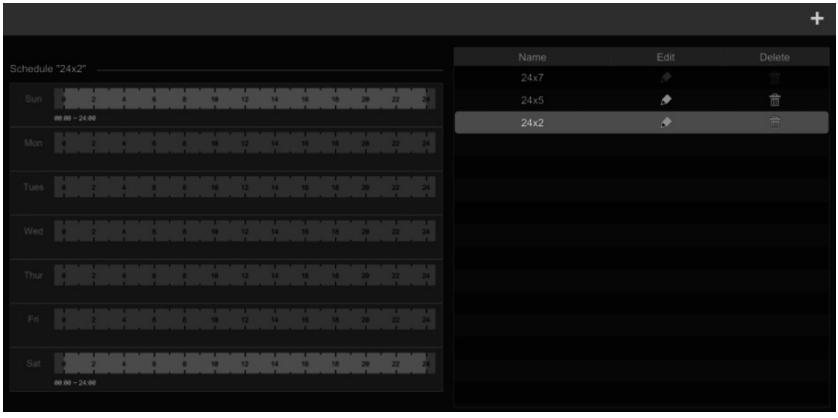
Click Start→Settings→Record→Stream Settings to go to "Sub Stream" interface. Set the encode, resolution, FPS, bitrate type, quality and max bitrate of sub-stream for each camera in the interface and then click "Apply" to save the settings.



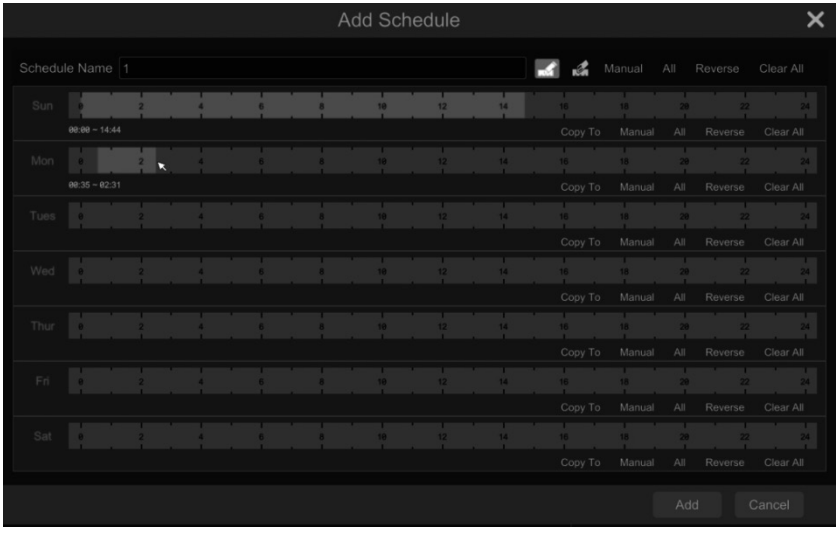
7.3 Schedule Setting

7.3.1 Add Schedule

Click Start→Settings→Record→Record Schedule→Edit Schedules to go to the interface as shown below. “24x7”, “24x5” and “24x2” are the default schedules; you cannot edit or delete “24x7” while “24x5” and “24x2” 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.

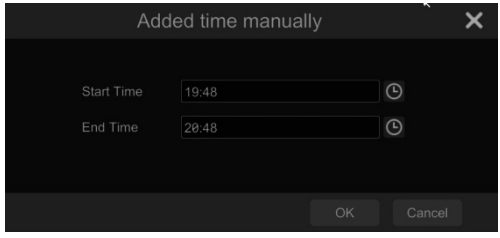


Set the schedule name and schedule time and then click “Add” to save the schedule. You can set day schedule or week schedule. : add button; : delete button.

- **Set Day Schedule**

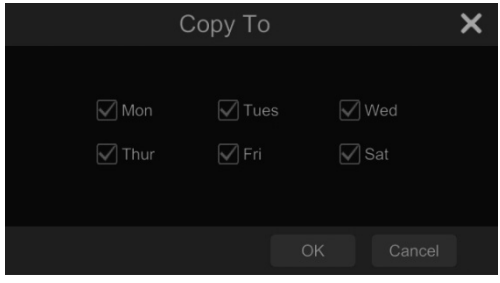
Click and then drag the cursor on the time scale to set record time; click and then drag the cursor on the time scale to delete the selected area.

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.



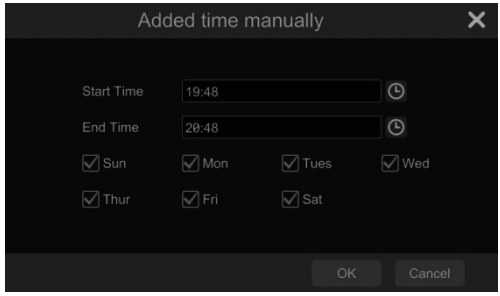
Click “All” to set all day recording; click “Reverse” to swap the selected and unselected time in a day; click “Clear All” to clear all the selected area in a day.

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**

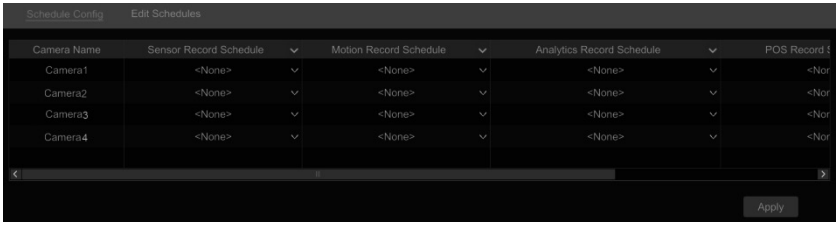
Click or and then click “Manual” beside to set the week schedule. Refer to the picture below. Set the start and end time, check the days in the window and then click “OK” to save the settings.



Click “All” to set all week recording; click “Reverse” to swap the selected and unselected 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, timed record and intelligence record. Click “None” in the drop-down menu to clear the schedule. Click “Apply” to save the settings.



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 click the right-click menu “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 object appears in the setup schedule. The setup steps are as follows:

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

 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

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

 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.

7.4.5 Intelligence Recording

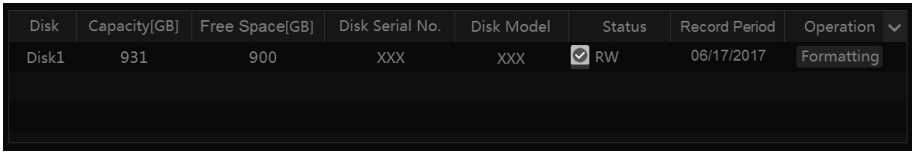
 Set the intelligence recording schedule of each IP camera. See 7.3 Schedule Setting for details.

 Enable the intelligence detection (object detection, exception, line crossing or intrusion detection) and draw alert surface or warning area of each IP camera. See 9.3 Intelligence Alarm for details.

The camera will start intelligence recording once you finish the above settings. This function is only available for some IPCs.

7.5 Disk Management

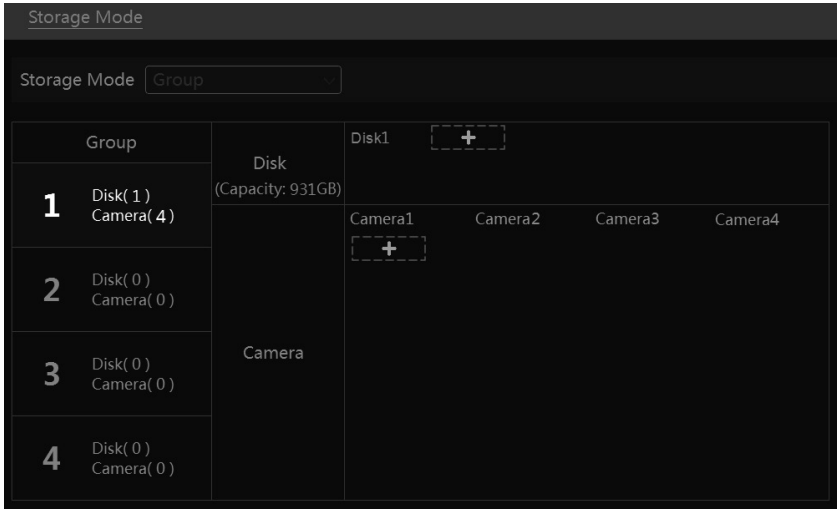
Click Start→Settings→Disk→Disk Management to go to disk management interface. You can view the DVR's disk number and disk status and so on in the interface. Click the "Formatting" button to format the HDD.



Note: 1. A new HDD should be formatted for normal use.
2. For normal use of the HDD which has been used in other DVR, if the DVR is of the same model with the new DVR, please import the configuration file of the DVR to the new DVR or format the HDD; if the models of the two DVRs are different, please format the HDD.

7.5.1 Storage Mode Configuration

Click Start→Settings→Disk→Storage Mode to go to the interface as shown below.



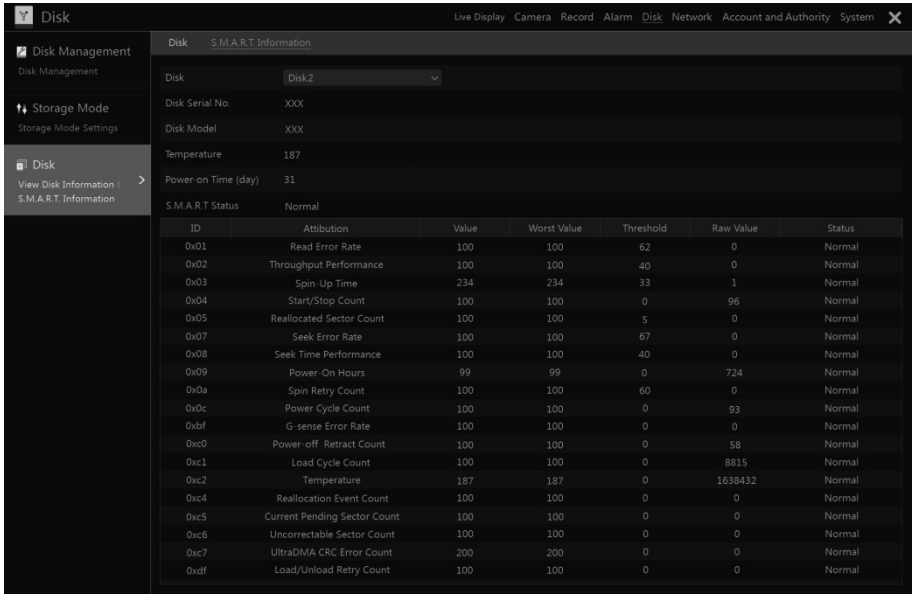
There are four disk groups. By using disk group, you can correspond the camera to disk (the record data of the camera in the group will be stored into the disks in the same group). The DVR with e-SATA interface supports e-SATA recording.

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 add the disks and cameras from 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.


Disk
Live Display Camera Record Alarm Disk Network Account and Authority System
Disk Management
Disk Management
Storage Mode
Storage Mode Settings
Disk
View Disk Information
S.M.A.R.T. Information
Disk S.M.A.R.T. Information
Disk Disk2
Disk Serial No. XXX
Disk Model XXX
Temperature 187
Power-on Time (day) 31
S.M.A.R.T Status Normal
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

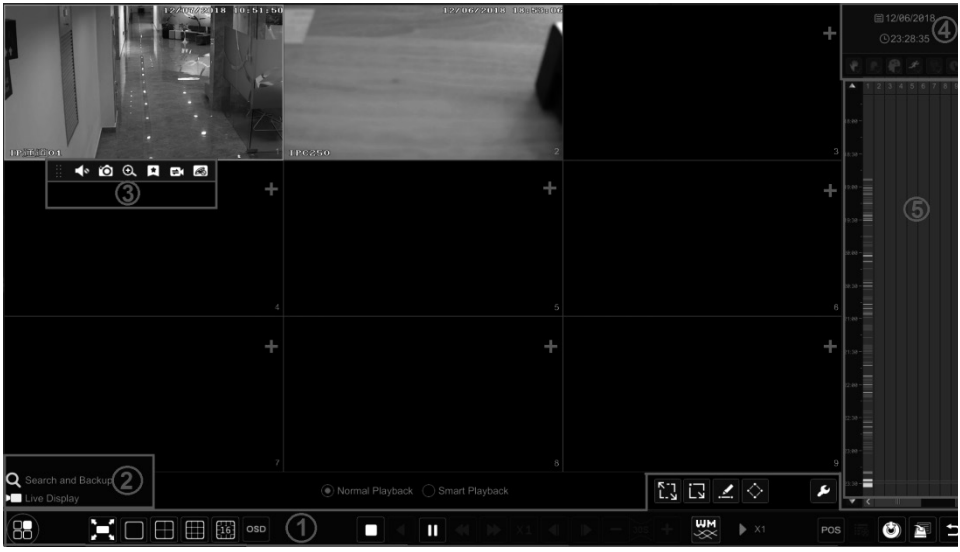
8 Playback & Backup

8.1 Instant Playback

Click on the tool bar at the bottom of the live camera window to playback 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 click the right-click menu “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 recording 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 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	OSD ON button. Click it to enable OSD; click it again to disable OSD.
	Stop button.
	Rewind button. Click it to play video backward.
	Play button. Click it to play video forward.
	Pause button.
	Click it to decrease the playing speed.
	Click it to increase the playing speed.
	Previous frame button. It works only when the forward playing is paused in single screen mode.

Button	Meaning
	Next frame button. It works only when the forward playing is paused in single screen mode.
	Click  to step backward 30s and click  to step forward 30s.
	Click it to show the water mark on the image; click  to hide the water mark.
	Event list/tag button. Click it to view the event record of manual/schedule/sensor/ motion and the tag information.
	Open/close POS 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.
	Full screen motion button.
	Draw rectangle. You can search the recording of motion detection in the pre-defined rectangular area.
	Draw line. You can search the record of crossing the line after drawing the line.
	Draw quadrilateral. You can search the record in this quadrilateral after drawing it.
	Smart playback settings. Click it to set smart playback.

Introduction of area □ :

Button	Meaning
	Click it to go to record search interface; see 8.4 Record Search, Playback & Backup for details.
	Click it to go to live preview interface; see Chapter 5 Live Preview Introduction 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 take a snapshot.

	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 recording by searching the added tag. Click it and then enter 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 recording from the time you set. You can check the recording type as required for recording playback; first you should click on the tool bar at the bottom of the interface to clear all the playback cameras, then check the record type (: manual record; : sensor based record; : motion based record; : schedule record; : intelligence record; : POS record) and finally click in the playback window to add camera for playback (the recording time scale will show the recorded data of the checked recording type only after the above operations).

Introduction of the recorded time scale (area ⑤):

A tool bar will appear after moving the mouse to the recorded 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 at the top or bottom of the timeline. You can also click to show the hidden time at the top of the timeline or click to show the hidden time at the bottom of the timeline. Drag the slider at the bottom of the time scale to show the hidden playback cameras.

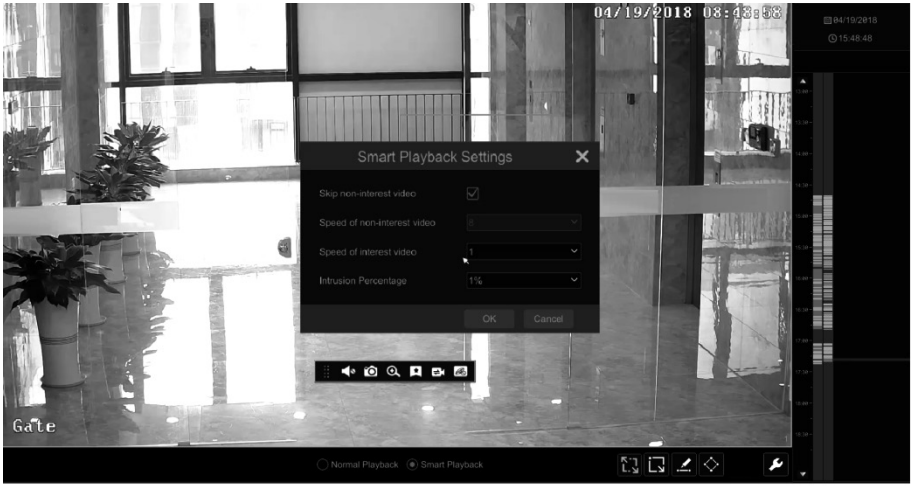
The recorded time scale shows different recording types with different colors. The green block stands for manual record, red block stands for sensor based record, yellow block stands for motion based record, blue block stands for schedule record and cyan block stands for intelligence record. Click the recording block to set the time and then the playback camera will play the recording 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 the "Backup" in the window to pop up the backup window. Select the device, backup path and backup format and then click the "Backup" button to start the backup.

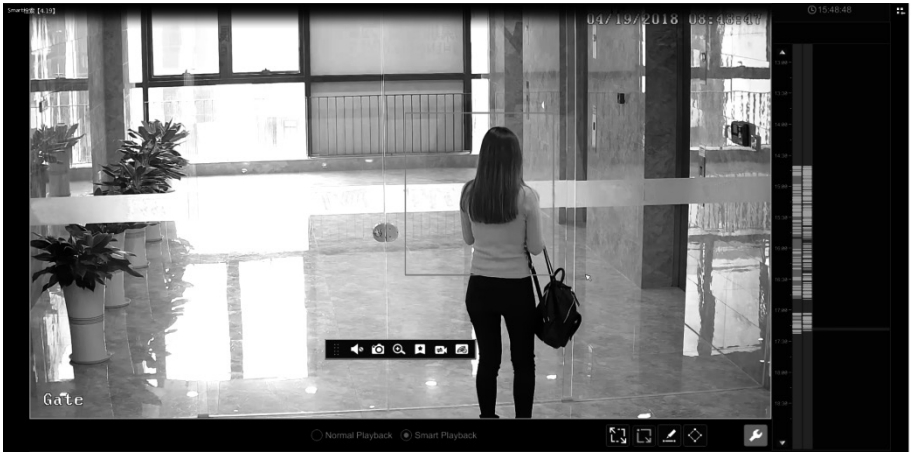
8.3 Smart Playback

- Smart Playback Settings

Click to go to the following interface. Set the value of "Speed of non-interest video" (Please skip this one if you click "Skip non-interest video"), "Speed of interest video" and "Intrusion percentage".



- **Smart Playback by Drawing Rectangle**



Click and draw a rectangle in the desired area. Then the system will automatically search the recorded files of this area. The cyan blocks indicate that there are intelligent recording files. Move the cursor to such block and click to play the recording.

- **Smart Playback by Drawing Line**

Click and draw a line in the desired area. Then the system will automatically search the recorded files about crossing this line. The cyan blocks indicate that there are intelligent recording files. Move the cursor to such block and click to play the recording.

- **Smart Playback by Drawing Quadrilateral**

Click and draw a quadrangle in the desired area. Then the system will automatically search the recorded files of this area. The cyan blocks indicate that there are intelligent recording files. Move the cursor to such block and click to play the record.

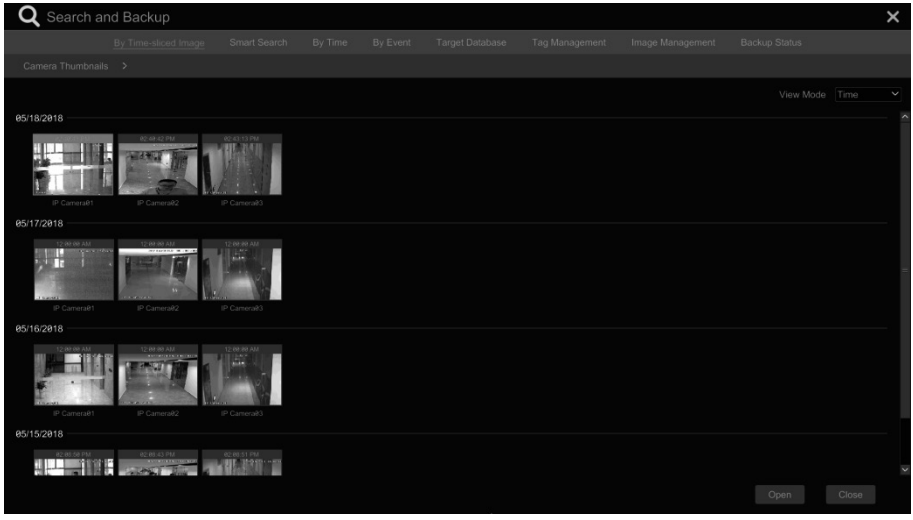
8.4 Record Search, Playback & Backup

The recorded data and the snapped pictures can be backed up through a network or USB (U

disk or USB mobile HDD). The file system of the backup devices should be FAT32 format.

8.4.1 Search, Playback & Backup by Time-sliced Image

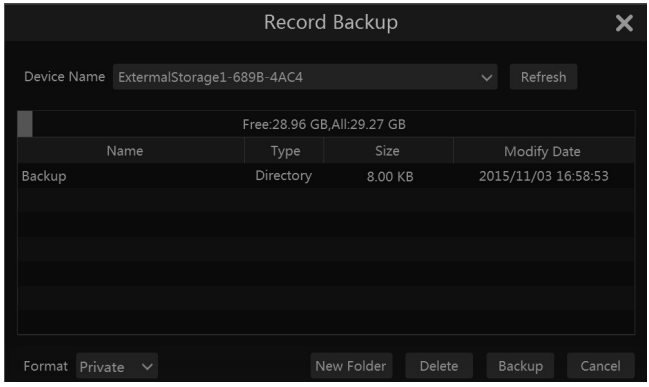
 Click Start→Search and Backup→By Time-sliced Image to go to “By Time-sliced Image” tab. There are two view modes: by time and by camera. In the time view mode, a maximum of 64 camera thumbnails can be shown. If the camera thumbnail number is more than 64, the cameras will be listed directly by their 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.



 Select one camera in the interface and then click the “Open” button.

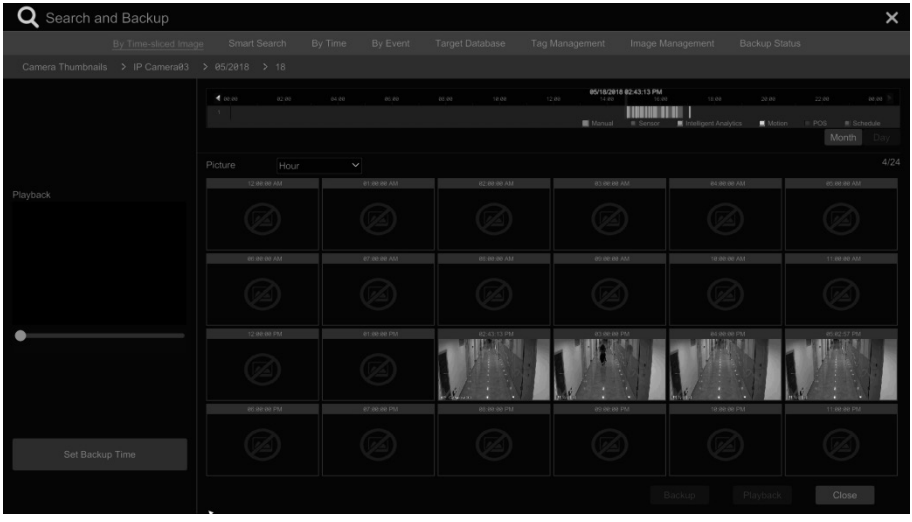
 Click the image box to play the recording in the small playback box on the left side of the interface (the box which has image inside indicates that the recorded data exist).

 Refer to the picture below. Drag the color blocks on the time scale to select the recorded data and then click the “Backup” button to pop up the “Record Backup” window as shown below. Select the device name, backup format and path and then click the “Backup” button to start the backup.



Note: If you back up the record in private format, the system will back up a RPAS player to USB device automatically. The private format record can be played by RPAS player only.

Playback Interface Introduction for details). Click "Close" to close the interface.



Time Slice Mode Selecting:

Method One: Click the "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 recording 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.

8.4.2 Smart Search

 Click Start→Search and Backup→Smart Search to go to "Smart Search" tab as shown below.

Behavior Detection: when you select the smart playback mode, the system will analyze the video including the motion detection, tripwire and intrusion detection.

 Click "Behavior". Set the searching time period and you will search the channel which has the intelligence detection record.

 Check the channel and select the smart playback.

 Set the backup time and select the channel to backup.

: Smart playback settings button. Click it to set intrusion percentage.

: Full screen motion button.

: Motion button.

: Draw line button. You can search the recording of crossing the line after drawing the line.

: Draw quadrilateral. You can search the recording in this quadrilateral after drawing it.

8.4.3 Search, Playback & Backup by Time

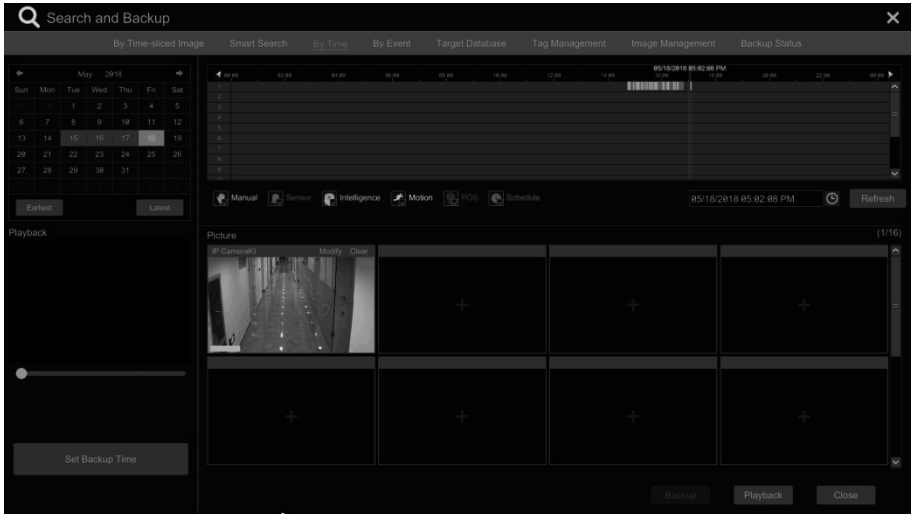
① Click Start→Search and Backup→By Time to go to "By Time" tab as shown below.

 Click on the bottom of the interface to add playback camera. 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 recording 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 recording according to the time and event type you set.

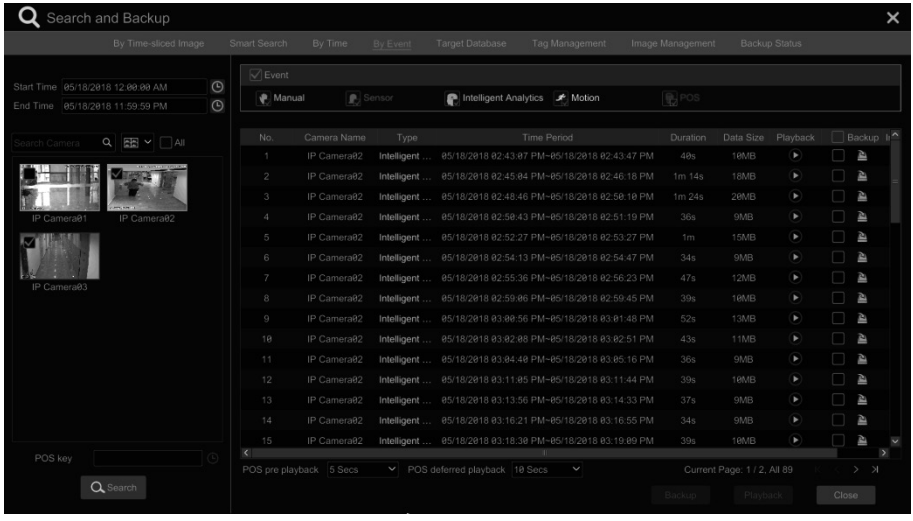
④ Drag the color blocks on the time scale to select the recorded data (or click the "Set Backup Time" button on the bottom left corner of the interface to set the backup start time and end time) and then click the "Backup" button for record backup. Click the "Playback" button to play the recording in the playback interface.



8.4.4 Search, Playback & Backup by Event

Some models may support searching POS events.

- Click Start→Search and Backup→By Event to go to "By Event" tab as shown below.

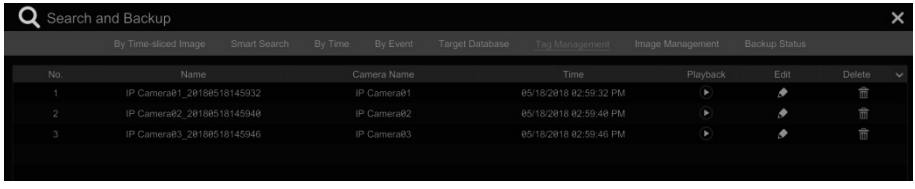


- Check the event type in the interface as required.
- Click  to set the start time and end time on the top left of the interface.
- Check cameras on the left side of the interface or check "All" to select all the cameras and then click  to search the recording. The searched recording will be displayed in the list.
- Click  in the list to play back the recording in the popup window. Click  to back up one recorded data or check multiple recorded data in the list and then click the "Backup" button for recording batch backup.
- Select one recorded data in the list and then click the "Playback" button to play the recording in the playback interface.

8.4.5 Search & Playback by Tag

Only if you add the tags can you play the recording 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.

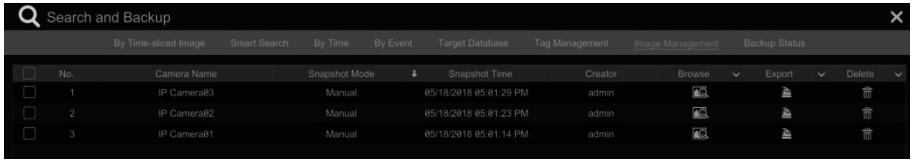
Click Start→Search and Backup→Tag Management to go to "Tag Management" tab.



Click  in the interface to play the recording. Click  to edit the tag name. Click  to delete the tag.

8.4.6 Image Management

Click Start→Search and Backup→Image Management to go to "Image Management" tab. The system will display all the snapshot 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 the "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.

8.4.7 View Backup Status

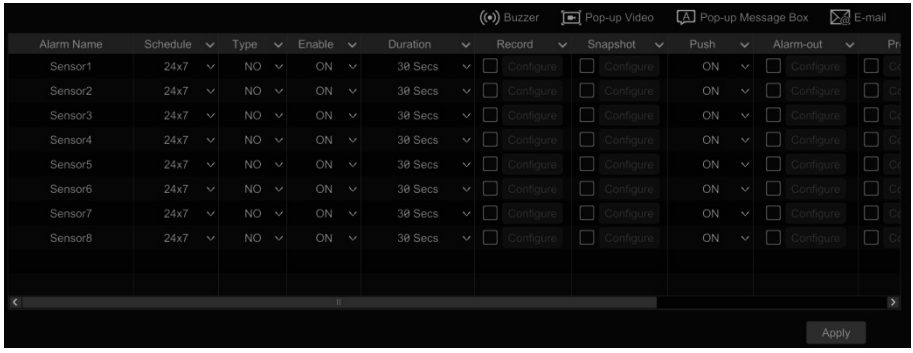
Click Start→Search and Backup→Backup Status or click  on the tool bar at the bottom of the playback interface to view the backup status.

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.

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



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

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

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

Record: check it and then the "Trigger Record" window will pop up automatically (you can also click the "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 the "OK" button to save the settings. The trigger cameras will record automatically when the sensor alarm is triggered.

Snapshot: 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.

Push: check it and choose ON or OFF. If it is ON, the system will send messages 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 9.5.1 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 9.5.4 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 9.5.3 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 9.5.3 Display for details.

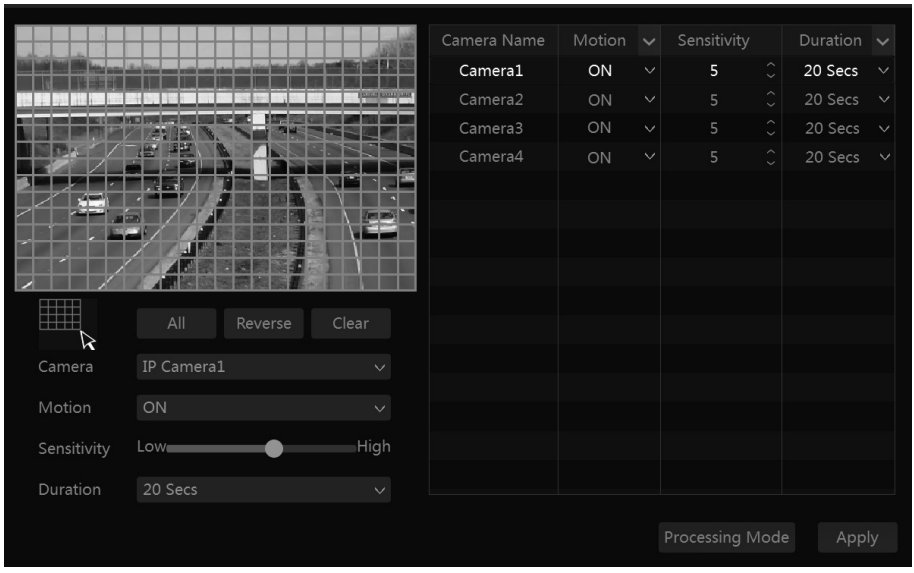
E-mail: if enabled, the system will send an e-mail when the sensor alarm is triggered. Before you enable the email, please configure the recipient's e-mail address first (see 11.1.5 E-mail Configuration for details).

9.2 Motion Alarm

Motion Alarm: when motion 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

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



- 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 conditions since the sensitivity is influenced by color and time (day or night).

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

- 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.
- 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

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

- Enable or disable “Record”, “Snapshot”, “Push”, “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).
- Click “Apply” to save the settings. You can click “Motion Settings” to go to the motion configuration interface.

9.3 Intelligence Alarm (IP Camera Dependent)

9.3.1 Object Detection

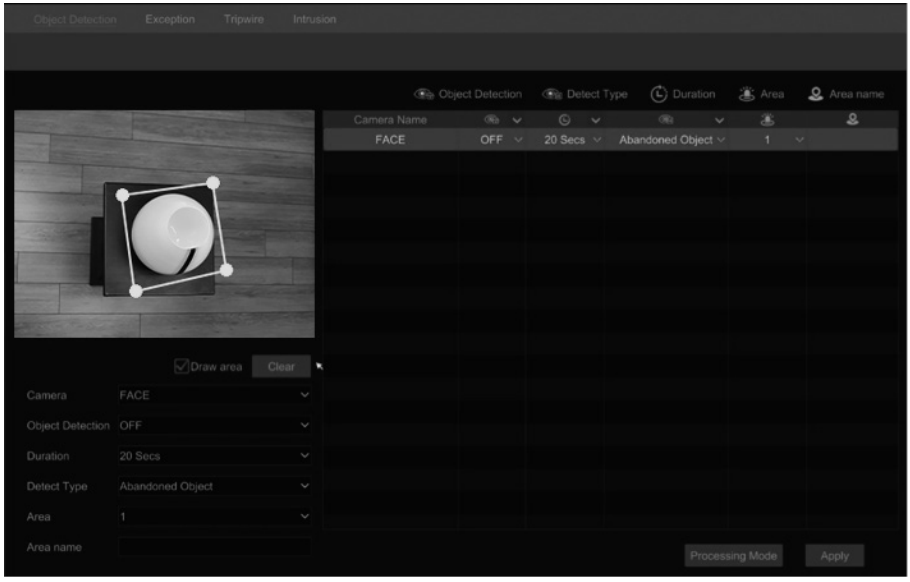
Object Detection Configuration:

- Click Start→Settings→Camera→Intelligent Analytics→Object Detection to go to the following interface.
- Select the camera, enable the object detection and set the duration and detect type. There are two detect types: Abandoned object and missing object.

Abandoned object: Alarms will be triggered if there are articles left in the pre-defined detection area.

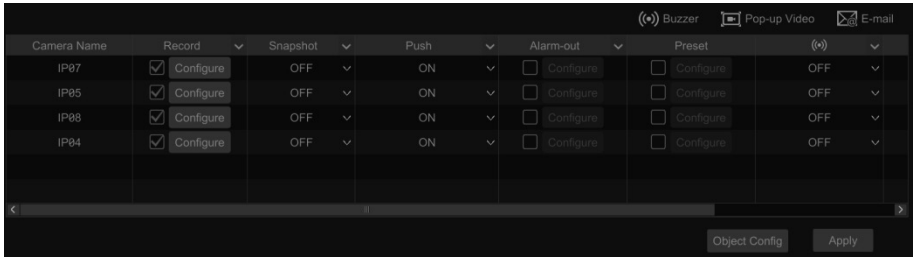
Missing object: Alarms will be triggered if there are articles missing in the detection area drew by the users.

- Select the alarm area. A maximum of 4 alarm areas can be set.
- Draw the alarm area of the object detection. Refer to the interface as shown below. Check “Draw Area” and then click around the area where you want to set as the alarm area in the image (the alarm area should be a closed area). Uncheck the “Draw Area” when you finish the drawing. Click the “Clear” button to delete the alarm area.
- Click “Apply” to save the settings.
- Click “Processing Mode” to go to the alarm handling configuration interface of object detection.



Object Detection Alarm Handling Configuration:

 Click Start→Settings→Alarm→Intelligence Alarm→Object Detection to go to the following interface.



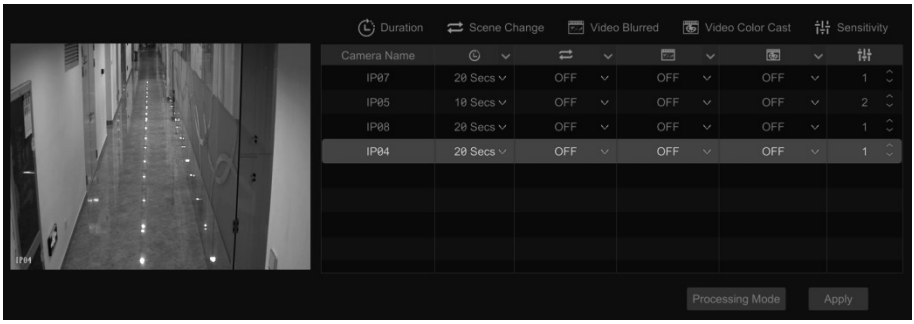
 Enable or disable “Record”, “Snapshot”, “Push”, “Alarm-out”, “Preset”, “Buzzer”, “Pop-up Video” and “E-mail”. The alarm handling setting of object detection alarm is similar to that of the sensor alarm (see 9.1 Sensor Alarm for details).

 Click “Apply” to save the settings. You can click “Object Config” to go to the object detection configuration interface.

9.3.2 Exception

Exception Configuration:

 Click Start→Settings→Camera→Intelligent Detection→Exception to go to the following interface.



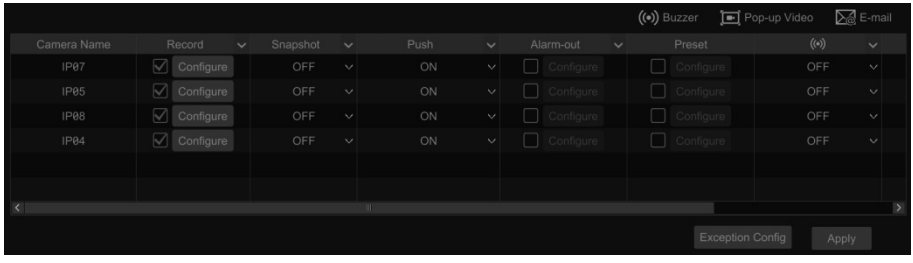
- Select the camera and enable the relevant detection as needed.

Scene Change: Alarms will be triggered if the scene on the cameras video has changed.
Video Blurred: Alarms will be triggered if the video becomes blurry.
Video Color Cast: Alarms will be triggered if the video becomes obscured.

- Set the sensitivity of the exception detection.
- Click "Apply" to save the settings.
- Click "Processing Mode" to go to the alarm handling configuration interface of exception detection.

Exception Alarm Handling Configuration:

- Click Start→Settings→Alarm→Intelligence Alarm→Exception to go to the interface.



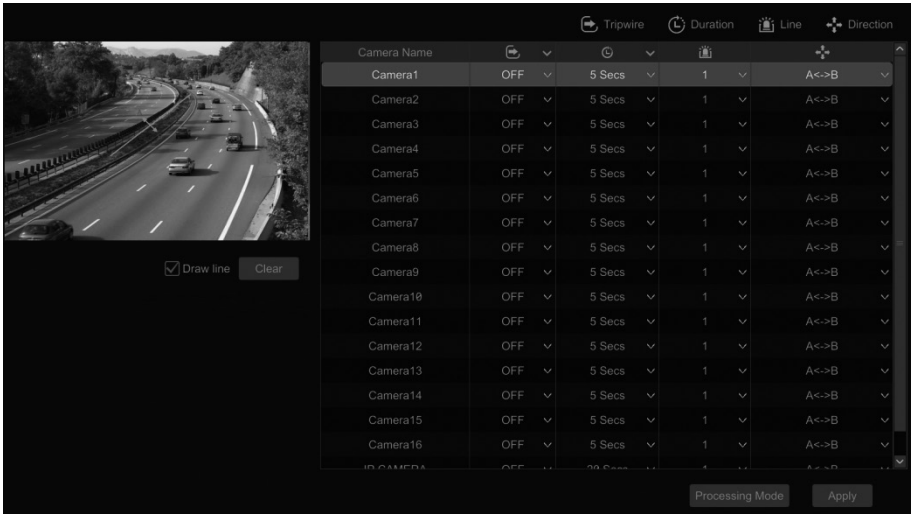
- Enable or disable "Record", "Snapshot", "Push", "Alarm-out", "Preset", "Buzzer", "Pop-up Video" and "E-mail". The alarm handling setting of exception detection alarm is similar to that of the sensor alarm (see 9.1 Sensor Alarm for details).
- Click "Apply" to save the settings. You can click "Exception Config" to go to the exception detection configuration interface.

9.3.3 Tripwire

Tripwire/Line Crossing Configuration:

Alarms will be triggered if someone or something crosses the pre-defined alarm line.

 Click Start→Settings→Camera→Intelligent Detection→Tripwire to go to the following interface.



 Select the camera, enable the line crossing detection and set the duration.

 Select the direction.

Direction: A<->B, A->B and A<-B options. It is the crossing direction of the intruder who crosses over the alert line.

A<->B: the alarm triggers when the intruder crosses over the alert line from B to A or from A to B.

A->B: the alarm triggers when the intruder crosses over the alert line from A to B.

A<-B: the alarm triggers when the intruder crosses over the alert line from B to A.

 Draw line. Refer to the interface as shown above. Check “Draw line” and then drag the mouse in the image to draw an alert line. Uncheck the “Draw line” when you finish the drawing. Click the “Clear” button to delete the alert line.

 Click “Apply” to save the settings.

 Click “Processing Mode” to go to the alarm handling configuration interface of line crossing detection.

Line Crossing Alarm Handling Configuration:

 Click Start→Settings→Alarm→Intelligence Alarm→Line Crossing to go to the following interface.

□ Enable or disable “Record”, “Snapshot”, “Push”, “Alarm-out”, “Preset”, “Buzzer”, “Pop-up Video” and “E-mail”. The alarm handling setting of line crossing alarm is similar to that of the sensor alarm (see 9.1 Sensor Alarm for details).

□ Click “Apply” to save the settings. You can click “Crossing Config” to go to the line crossing configuration interface.

9.3.4 Intrusion Detection

Intrusion Configuration:

Alarms will be triggered if someone or something intrudes into the pre-defined area.

□ Click Start→Settings→Camera→Intelligent Detection→Intrusion Detection to go to the following interface.

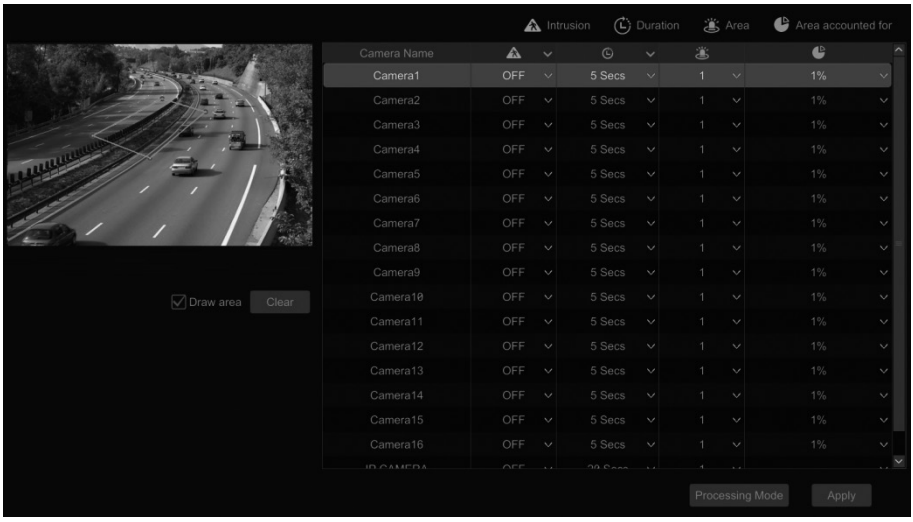
□ Select the camera, enable the intrusion detection and set the duration.

□ Select the alarm area. Up to 4 alarm areas can be set up.

□ Draw the alarm area of the intrusion detection. Refer to the interface as shown below. Check “Draw Area” and then click around the area where you want to set as the alarm area in the image (the alarm area should be a closed area). Uncheck the “Draw Area” when you finish the drawing. Click the “Clear” button to delete the alarm area.

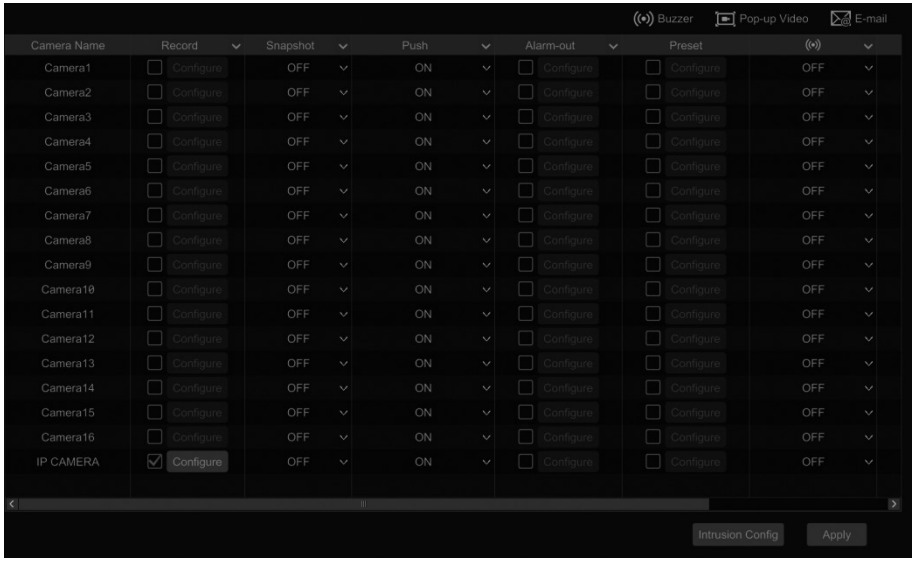
□ Click “Apply” to save the settings.

□ Click “Processing Mode” to go to the alarm handling configuration interface of intrusion detection.



Intrusion Detection Alarm Handling Configuration:

Click Start→Settings→Alarm→Intelligence Alarm→Intrusion Detection to go to the following interface.



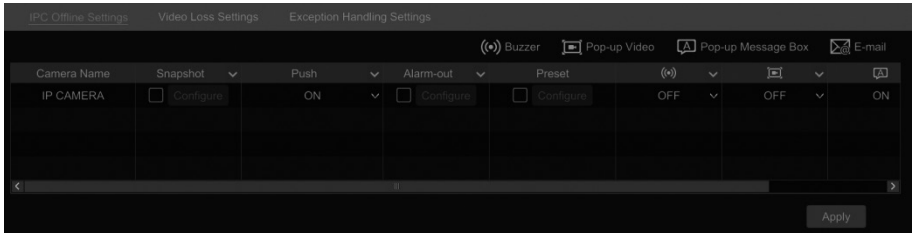
Enable or disable “Record”, “Snapshot”, “Push”, “Alarm-out”, “Preset”, “Buzzer”, “Pop-up Video” and “E-mail”. The alarm handling setting of intrusion detection alarm is similar to that of the sensor alarm (see 9.1 Sensor Alarm for details).

Click “Apply” to save the settings. You can click “Regional Invasion Config” to go to the intrusion detection configuration interface.

9.4 Exception Alarm

9.4.1 IPC Offline Settings

Click Start→Settings→Alarm→Exception→IPC Offline Settings to go to the interface as shown below.

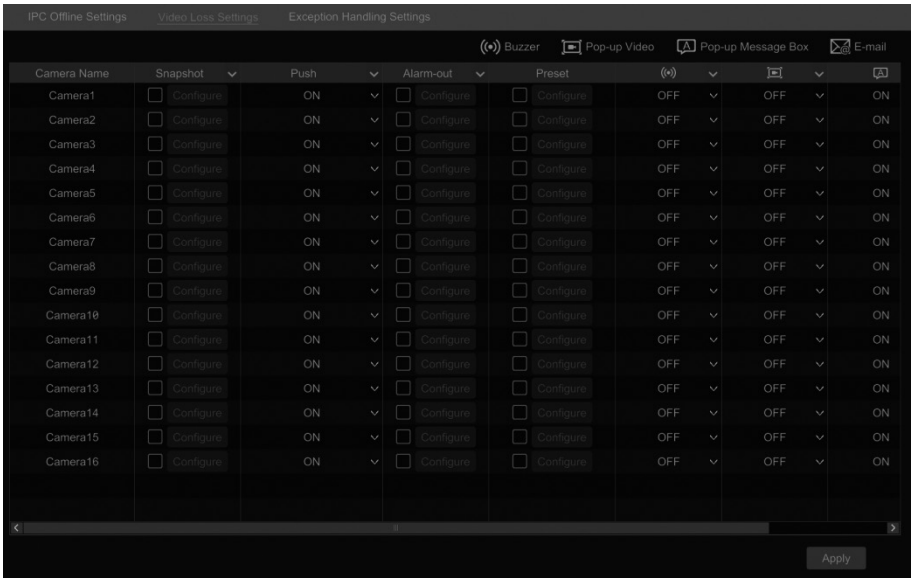


Enable or disable “Snapshot”, “Push”, “Alarm-out”, “Preset”, “Buzzer”, “Pop-up Video”, “Pop-up Message Box” and “E-mail”. The IPC Offline Settings are similar to that of the sensor alarm (see 9.1 Sensor Alarm for details).

Click “Apply” to save the settings.

9.4.2 Video Loss Settings

Click Start→Settings→Alarm→Exception→Video Loss Settings to go to the interface as shown below.



□ Enable or disable “Record”, “Snapshot”, “Push”, “Alarm-out”, “Preset”, “Buzzer”, “Pop-up Video”, “Pop-up Message Box” and “E-mail”. The Video Loss Settings are similar to that of the sensor alarm (see 9.1 Sensor Alarm for details).

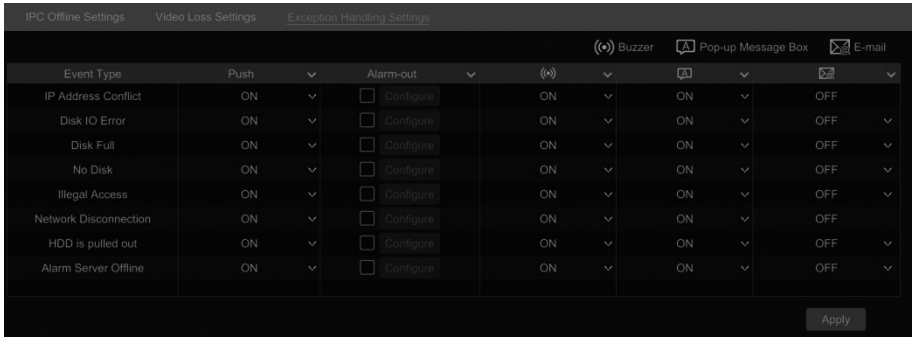
□ Click “Apply” to save the settings.

9.4.3 Exception Handling Settings

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

□ 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).

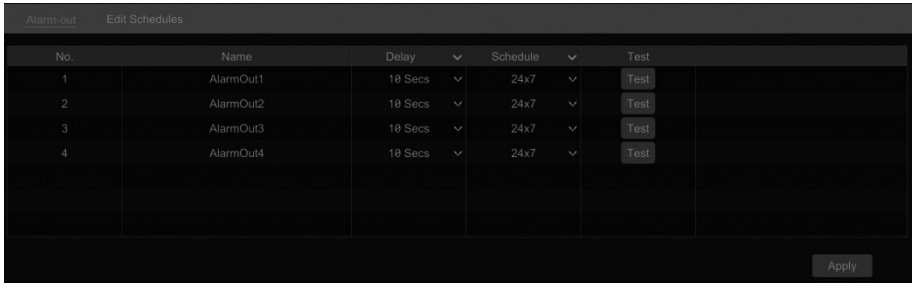
□ Click “Apply” to save the settings.



9.5 Alarm Event Notification

9.5.1 Alarm-out

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



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).

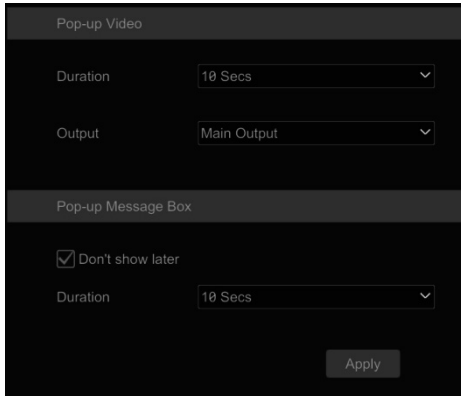
Click "Apply" to save the settings. You can click "Test" to test the alarm output.

9.5.2 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 11.1.5 E-mail Configuration for details.

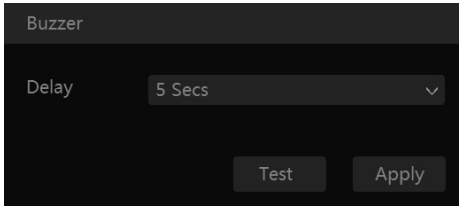
9.5.3 Display

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.



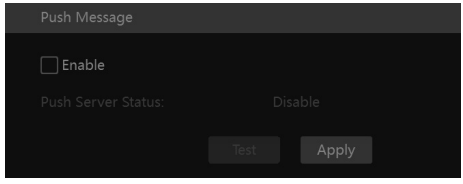
9.5.4 Buzzer

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.



9.5.5 Push Message

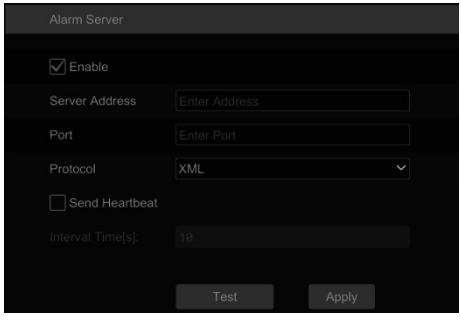
Click Start→Settings→Alarm→Event Notification→Push Message to go to the interface as shown below. Check "Enable" and then click the "Apply" button to save the settings. If Push Server is online, it will push messages to the mobile clients.



9.5.6 Alarm Server

Go to Alarm→Alarm Server interface as shown below.

Enable the alarm server and enter server address and port of the alarm server. Then select protocol. If "Send Heartbeat" is enabled, set the interval times. After that, test the effectiveness of the alarm server. Having tested successfully, please click "Apply". When an alarm occurs, the device will transfer the alarm event to the alarm server. If an alarm server is not needed, there is no need to configure this section.

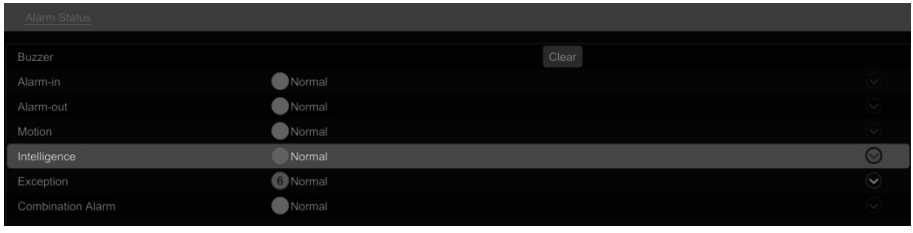


9.6 Manual Alarm

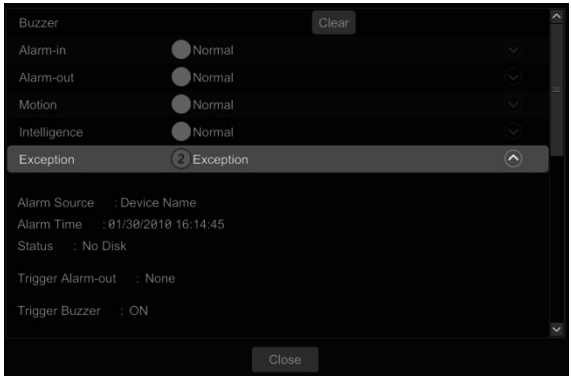
Click on the tool bar at the bottom of the live preview interface to pop up a window. Click "Trigger" to start alarm. Click "Clear" to stop alarm.

9.7 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 the "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 enter 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.

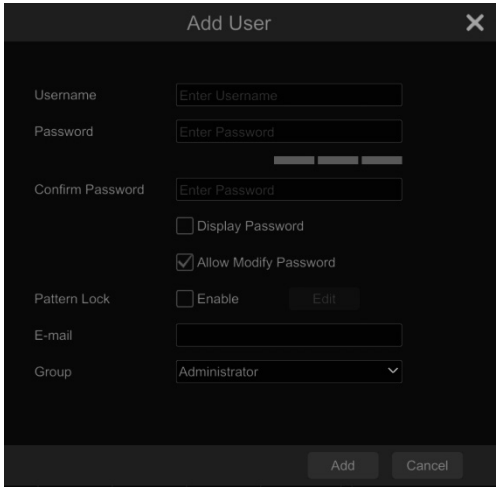
Area ① displays the user permissions. Area ② displays the user list. Click the user in the list to display its user permissions in area ①.

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

Only ***admin*** and the users that have the "Account and Authority" permission can manage the system's accounts. Group "Administrator" owns all the permissions displayed in area ① except "Account and Authority" and its permissions cannot be changed while the permissions of "Advanced" and "Common" can be changed.

10.1.1 Add User

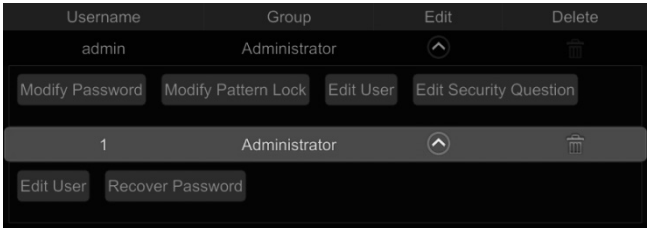
 Click Start→Settings→Account and Authority→Account→Add User or click + beside the search box to pop up the window as shown below.



 Set the username, password and group. The e-mail address and MAC address are optional (enter 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**

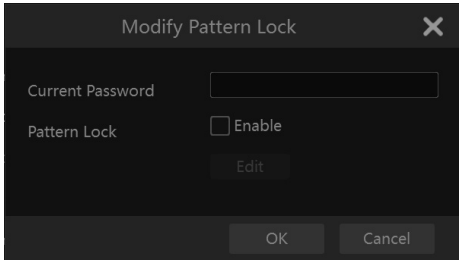
You can set password security only for ***admin***. Click "Edit Security Question" and then set questions and answers in the popup window. If you forget the password for ***admin***, please refer to Q4 in Appendix A FAQ for details. The passwords of other users can be recovered by ***admin*** or the users that have the "Account and Authority" permission.

- **Modify Password**

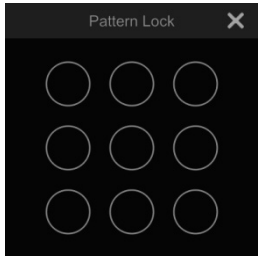
Only the password of ***admin*** can be modified. Click "Modify Password" to pop up a window. Enter the current password and then set new password. Click "OK" to save the settings.

- **Modify Pattern Lock**

Some models may not support this function.
Click “Modify Pattern Lock” to pop up a window.



Enter the current password and then check “Enable” to set pattern lock.

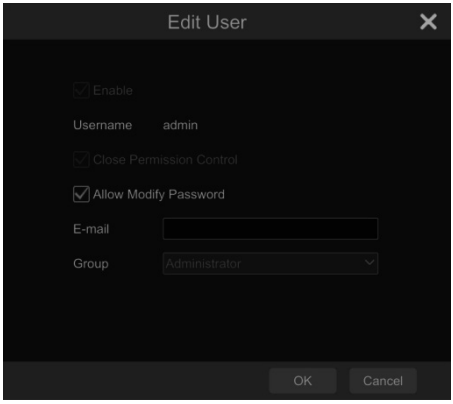


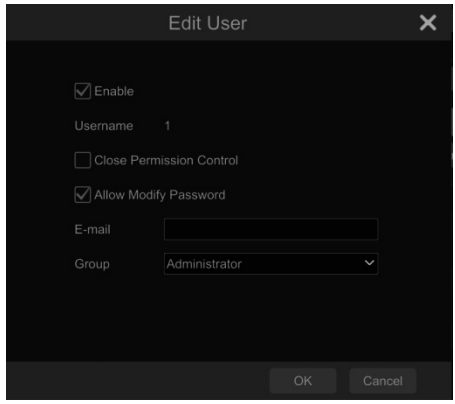
- **Recover Password**

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 ***admin*** has) and set their permission groups. Click “OK” to save the settings.





10.2 User Login & Logout

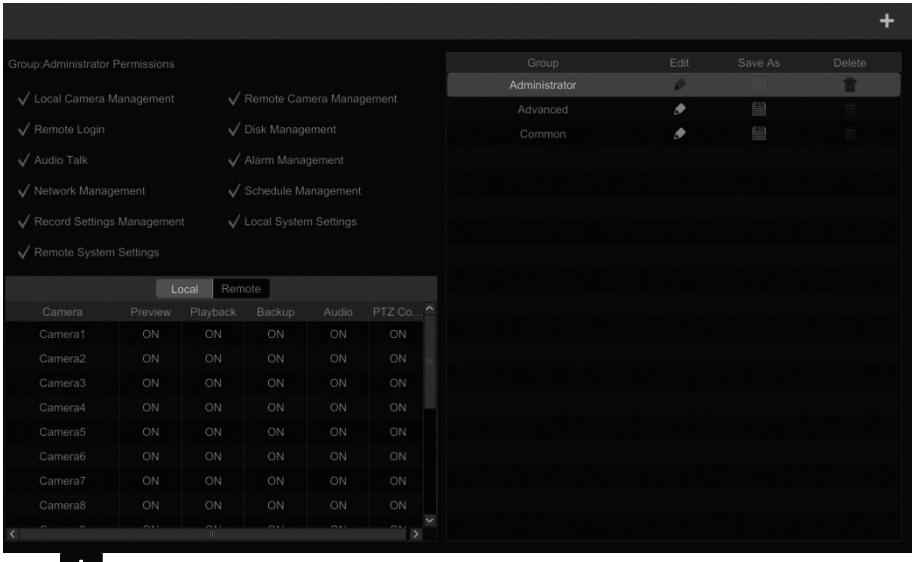
Login: Click Start→Login or directly click the preview interface and then select username and enter the password in the popup window. Click the "Login" button to log in the system.

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

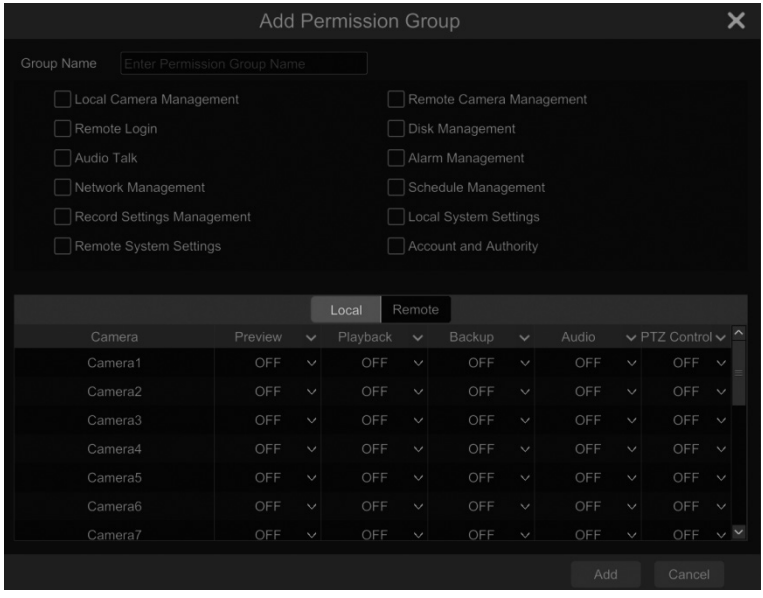
10.3 Permission Management

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.



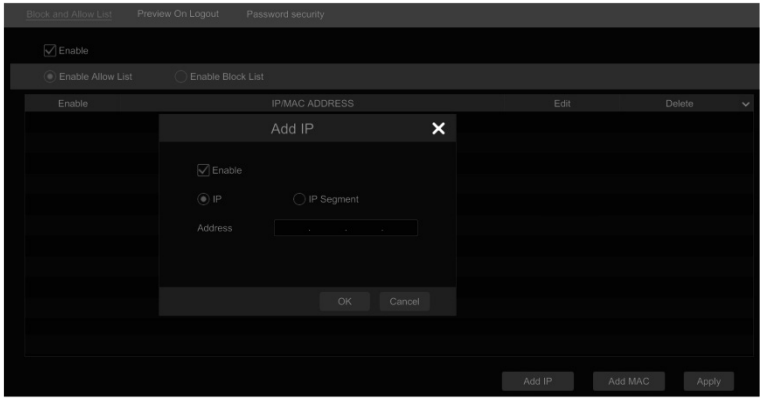
10.3.2 Edit Permission Group

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 "Common") cannot be deleted.

10.4 Black and White List

 Click Start→Settings→Account and Authority→Security to go to the following interface.



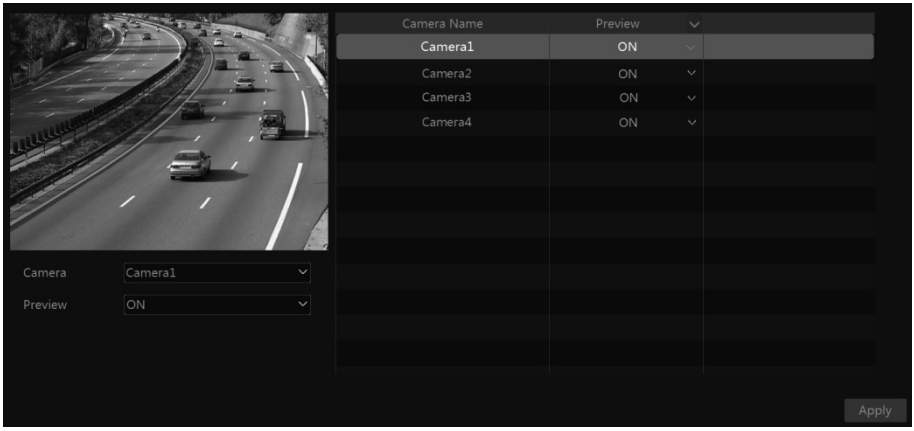
 Check "Enable" and then choose "Enable Allow List (white list)" or "Enable Block List (black list)" (the PC client of which the IP address is in the allow list can access DVR remotely while the PC client in the block list cannot).

 Add IP/IP segment/MAC. Click "Add IP" or "Add MAC" 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". In the above interface, click to edit IP/IP segment/MAC, click to delete it. Click "Apply" to save the settings.

10.5 Preview On Logout

Click Start→Settings→Account and Authority→Security→Preview On Logout to go to the following interface.

Set a camera and then enable or disable the preview permission on logout as required. If a camera's preview permission on logout is "ON", you can view the live image of the camera when the system is logged out, or the live image of the camera cannot be seen when logged out.



10.6 Password Security

Click Start→Settings→Account and Authority→Security→Password Security to go to the following interface.

In this interface, you can set the level and expiration time of the password.

10.7 View Online User

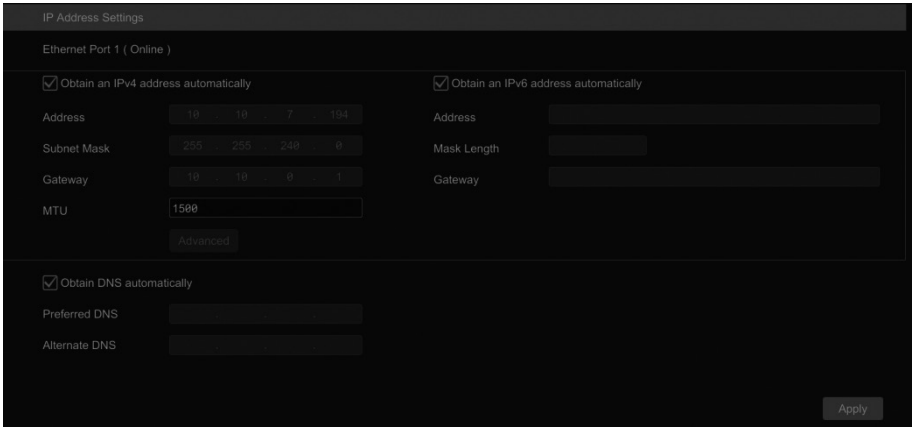
Click Start→Settings→Account and Authority→User Status to view the online user information (you can view the online user name, login type, IP address and login time; click to pop up a window showing the preview occupied channel number and playback occupied channel number).

11 Device Management

11.1 Network Configuration

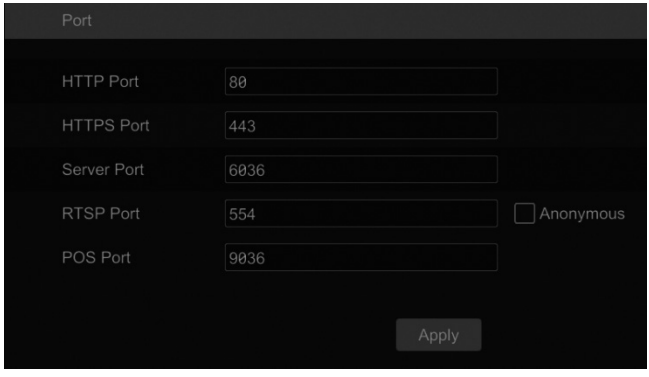
11.1.1 TCP/IP Configuration

Click Start→Settings→Network→TCP/IP to go to the following interface. Check "Obtain an IPv4 address automatically", "Obtain an IPv6 address automatically" and "Obtain DNS automatically" to get the network addresses automatically, or manually enter the network addresses. You can modify the MTU value according to the network condition (MTU, Maximum Transmission Unit, can be modified according to network condition for higher network transmission efficiency). Click "Apply" to save the settings.



11.1.2 Port Configuration

Click Start→Settings→Network→Port to go to the interface as shown below. Enter the HTTP port, HTTPS Port, server port, RTSP and POS port of the DVR, enable "Anonymous" as required and then click "Apply" to save the settings.



HTTP Port: the default HTTP port of the DVR is 80. The port number should be changed to others like 81. The port is mainly used to client remote access. If you want to access the DVR through a web browser, you should enter IP address plus HTTP port in the address bar like http://192.168.11.61:81.

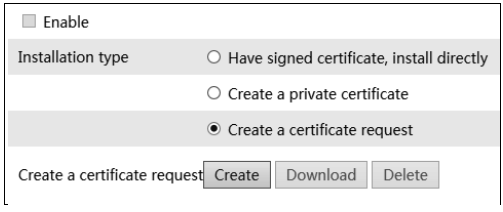
HTTPS Port: the default HTTPs port of the DVR is 443.

HTTPs provides authentication of the web site and protects user privacy. How to use it?

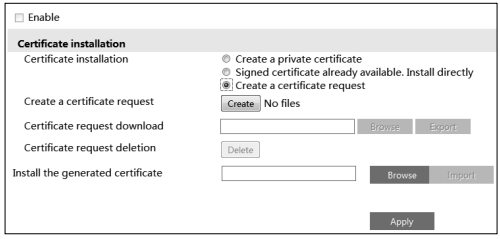
① Enter IP address plus HTTP port in the address bar of the web browser. Then enter username and password to log in. Click Functional Panel→Network→HTTPS to go to the following interface.

② Install a certificate.

* You can create a private certificate here. Click the "Create" button to create a private certificate. Enter the country (only two letters available), domain (NVR's IP address/domain), validity date, password, province/state, region and so on. Then click "OK" to save the settings.
* If there is a signed certificate, click "Browse" to select it and then click "Install" to install it.
* Click "Create a certificate request" to enter the following interface.



Click "Create" to create the certificate request. Then download the certificate request and submit it to the trusted certificate authority for signature. After receiving the signed certificate, import the certificate to the device.



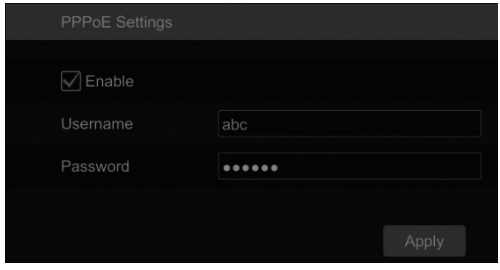
③ After the certificate has been installed, enable this function and apply it. Then the camera can be accessed by entering https://IP: https port via the web browser (eg. https://192.168.1.201:443).

Server Port: the default server port of the DVR 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 simultaneously. The default RTSP port is 554 and it can be changed as needed.
POS Port: the default POS port of the DVR is 9036.

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

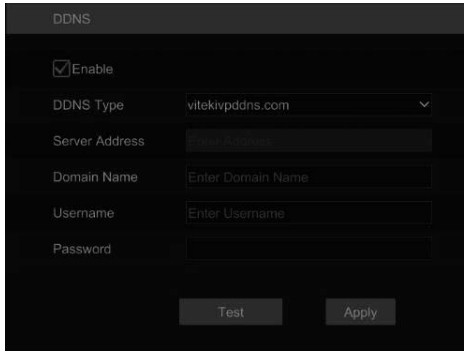
11.1.3 PPPoE Configuration

Click Start→Settings→Network→PPPoE to go to the interface as shown below. Check "Enable" in "PPPoE Settings" and then enter the username and password obtained from the dealer. Click "Apply" to save the settings.



11.1.4 DDNS Configuration

The DDNS is used to control the dynamic IP address through domain name. You can access the DVR 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. Enter 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.

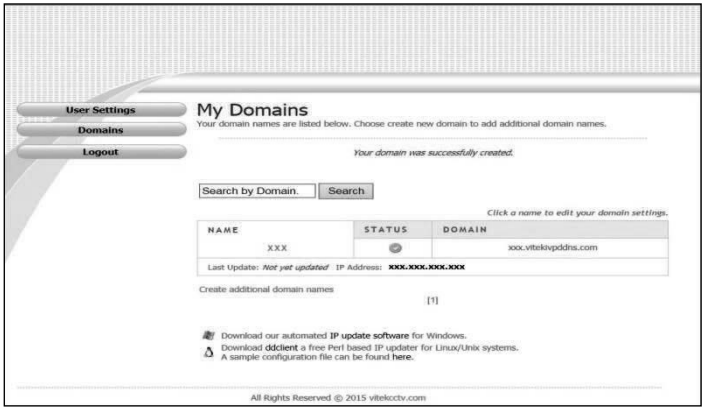
You will have to enter the server address and domain name if some DDNS types are selected. Go to the relative DNS website to register domain name and then enter the registered domain information here). Now we take ***www.vitekivpddns.com*** for example.

 Enter ***www.vitekivpddns.com*** in the address bar of a web browser to visit its DNS website.

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

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

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



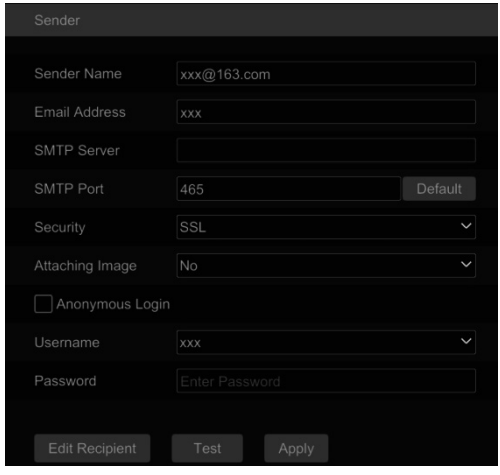
 Click Start→Settings→Network→DDNS to go to DDNS setting interface. Enable DDNS and then select the ***www.vitekivpddns.com*** DDNS type. Enter the registered username, password and domain name and then click "Apply".

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

 Enter the registered domain name plus HTTP port like ***http://www.xxx.vitekivpddns.com:81*** in the address bar and then press Enter key to go to the client.

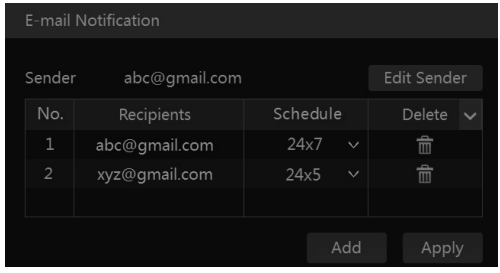
11.1.5 E-mail Configuration

Click Start→Settings→Network→E-mail to go to the following interface.



Enter the sender's name, e-mail address, 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. Select the username (the username list will be updated automatically according to the email address you enter) and enter the password of the sender and then click “Apply” to save the settings (you don’t have to enter the username and password if “Anonymous Login” is enabled). Click “Test” to pop up a window. Enter the e-mail address of the recipient in the window and then click the “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 “Edit Recipient” to go to the following interface.



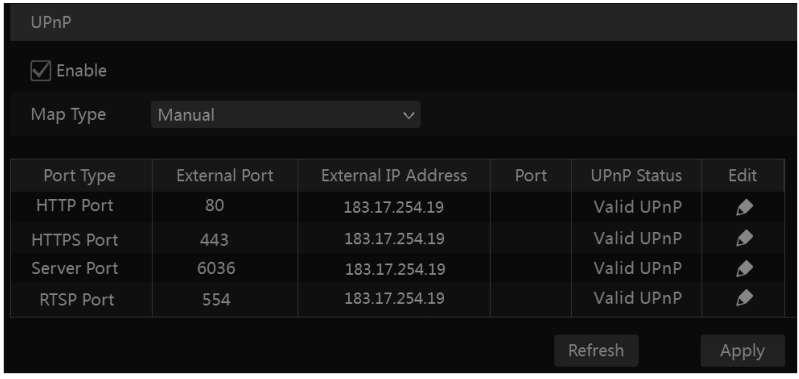
Click “Add” and then enter the recipient’s e-mail address and select the schedule (if a schedule is selected, the system will send the alarm email and the recipient will receive it only in the selected schedule time) in the popup window. Click “Add” in the window to add the recipient. You can also change the recipient’s receiving schedule by clicking in the “Schedule” column. 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.

11.1.6 UPnP Configuration

By UPnP you can access the DVR through the web client which is in WAN via router without port mapping.

- Click Start→Settings→Network→UPnP to go to the following interface.
- Make sure the router supports UPnP function and the UPnP is enabled in the router.
- Set the DVR’s IP address, subnet mask and gateway and so on corresponding to the router.
- Check “Enable” in the interface as shown below and then click “Apply”.

Click “Refresh” 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. Please change the mapping type to “Manual” and then click 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 DVR. Enter the external IP address plus port in the address bar to access the DVR such as http://183.17.254.19:81.



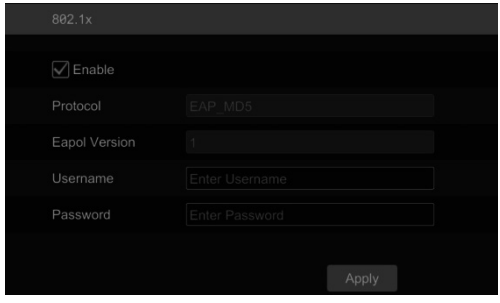
11.1.7 NAT Configuration

Click Start→Settings→Network→NAT to go to the interface for NAT configuration. Check "Enable" and then select the NAT server address. Click "Apply" to save the settings.

You can scan the QRCode through the mobile client which is installed on a mobile phone or tablet to log into the mobile client.

11.1.8 802.1X

If it is enabled, the NVR data can be protected. When the NVR is connected to the network protected by the IEEE 802.1X, user authentication is needed.



To use this function, the NVR shall be connected to a switch supporting 802.1x protocol. The switch can be considered as an authentication system to identify the device in a local network. If the NVR connected to the network interface of the switch has passed the authentication of the switch, it can be accessed via the local network.

Protocol type and EAPOL version: Please use the default settings.

User name and password: The user name and password must be the same with the user name and password applied for and registered in the authentication server.

11.1.9 FTP Configuration

Some models may not support this function.

Click Start→Settings→Network→FTP to go to the interface for FTP configuration. Check "Enable" and enter the server name, port, username and password, max file size and remote directory.

11.1.10 Platform Access

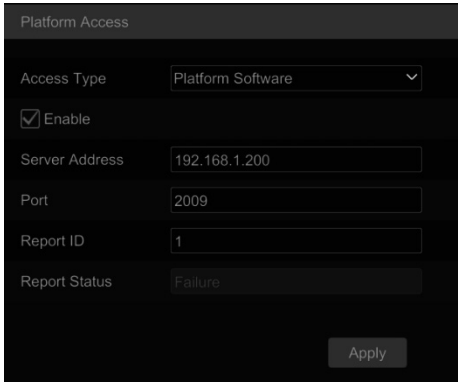
Some models may not support this function.

This function is mainly used for connecting ECMS/NVMS. The setting steps are as follows.

Click Start→Settings→Network→Platform Access to go to the interface.

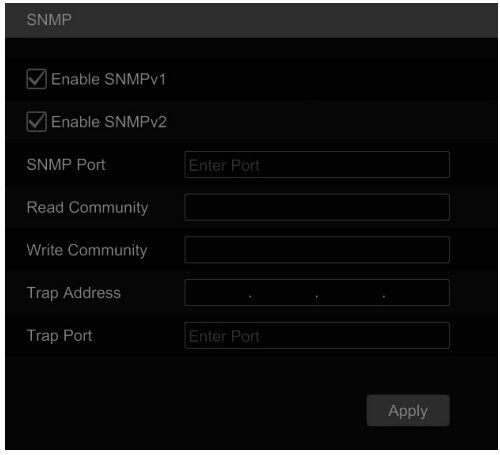
Platform Access

- Set "Access Type" as "Platform Software" and select "Enable" as shown below.
- Check the IP address and port of the transfer media server in the ECMS/NVMS. The default server port for auto report is 2009. If it is modified, please go to the transfer media interface to check.
- Enable the auto report in the ECMS when adding a new device. Then self-define device ID and fill out the remaining information of the device in the ECMS/NVMS.
- Enter the above-mentioned server address, port and report ID in the server interface. Then click the "Apply" button to save the settings. Now the ECMS/NVMS system will automatically connect this device.



11.1.11 SNMP

① Click Start→Settings→Network→SNMP to go to the interface for SNMP configuration.



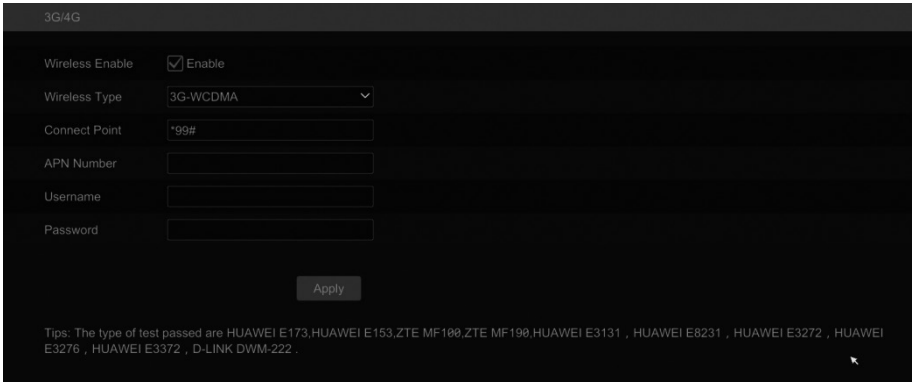
② Check SNMPv1or SNMPv2 to enable this function.
③ Set the port of the SNMP.
④ Set the trap address and the trap port.
⑤ Click “Apply” to save the settings.

Trap Address: The IP address of SNMP host.
Trap Port: The port of SNMP host.

Tips: Before setting the SNMP, please download the SNMP software and manage to receive the device information via SNMP port. By setting the trap address, the device is allowed to send the alarm event and exception message to the monitoring center.

11.1.12 Wireless

① Plug in the USB wireless device with SIM card.
② Click Start→Settings→Network→Wireless to go to the interface for wireless settings.



③ Enable wireless function.
④ Choose the wireless type as needed.
⑤ Click “Network Status” to view the 3G/4G connection status and get the IP address.

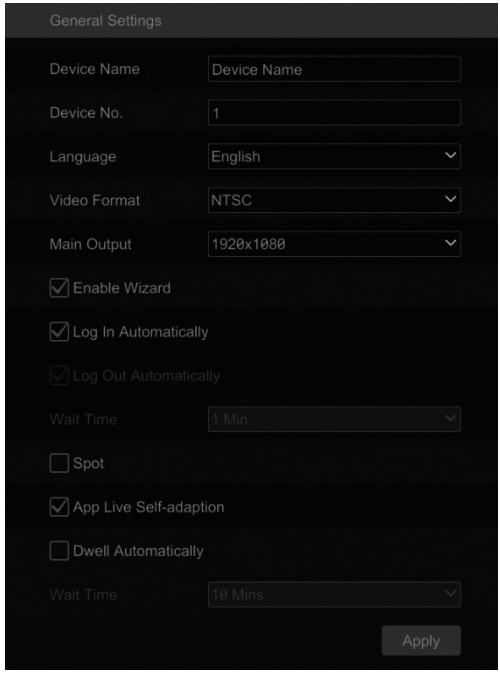
11.1.13 View Network Status

Click Start→Settings→Network→Network Status to view the network status or click 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 main output resolution. Enable or disable wizard, "Log In Automatically", "Log Out Automatically" (if checked, you can set the wait time) "App Live Self-Adaption" and "Dwell Automatically" (if checked, you can set the wait time). Click "Apply" to save the settings.

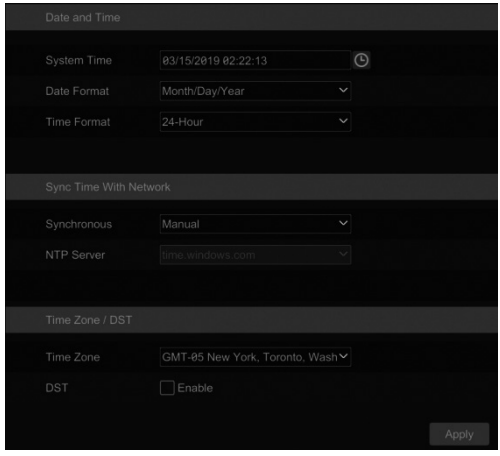
Device Name: The name of the device. It may display on the client end or CMS that help user to recognize the device remotely.
Video Format: Two modes: PAL and NTSC. Select the video format according to the camera.
Spot: If the DVR supports spot output, you should enable spot output. Connect the spot output device to the DVR and then set the spot output (see 5.2.4 Spot View for details).
Dwell Automatically: Switch automatically. Check it and set "wait time".The system will switch images automatically if it is not operated during the time you set.

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 DVR. The default time zone is GMT-08 Las Vegas, San Francisco, Vancouver. 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

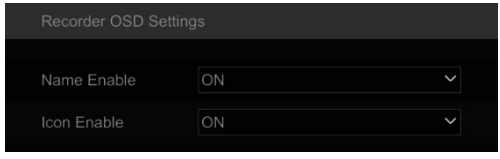
Time" option to set the system time.

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



11.2.3 Recorder OSD Settings

Click Start→Settings→System→Basic→Recorder OSD settings to go to the following interface. OSD name and icon can be enabled here.



11.3 Factory Default

Click Start→Settings→System→Maintenance→Factory Default and then click the "Reset to factory default" button in the interface to reset to the factory default settings(check "Reset retain Network Configuration" to retain the network settings).

Note: Resetting to the factory default settings will not change time zone.

11.4 Device Software Upgrade

- **Common Upgrade**

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

The upgrade steps are as follows:

- Copy the upgrade software (.tar) into the USB storage device.
- Insert the USB storage device into the USB interface of the DVR.

 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 DVR during upgrading.

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

- **Flash Upgrade**

The upgrade steps are as follows:

 Copy the flash upgrade files into the USB storage device.

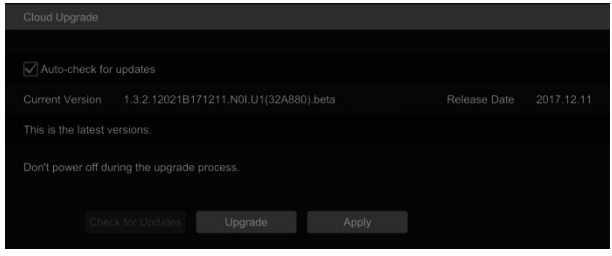
 Insert the USB storage device into the USB interface of the DVR.

 Restart the DVR. Then the system will automatically upgrade.

- **Cloud Upgrade**

 Click Start→Settings→System→Maintenance→Cloud Upgrade to go to “Cloud Upgrade” interface.

 Enable “Auto-check for updates” to check if the current version is the latest one automatically. You can also click “Check for updates” to check the version by yourself. If it is not the latest one, obtain the latest version from the cloud server and then click “Upgrade”. The system may automatically restart during upgrading. Please wait for a while and do not power off the device during upgrading.



11.5 Backup and Restore

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

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

- **Backup**

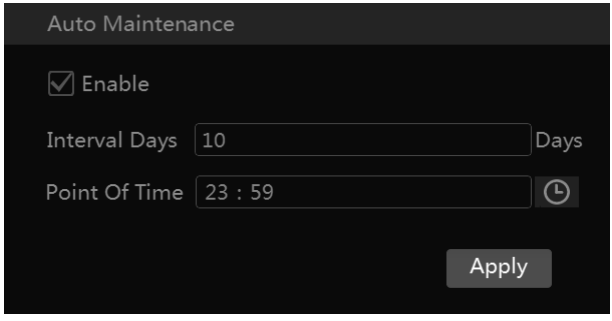
Select the USB device in “Device Name” option; go to the path where you want to store the configuration backup file and then click the “Backup” button; finally click the “OK” button in the popup window.

- **Recover**

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

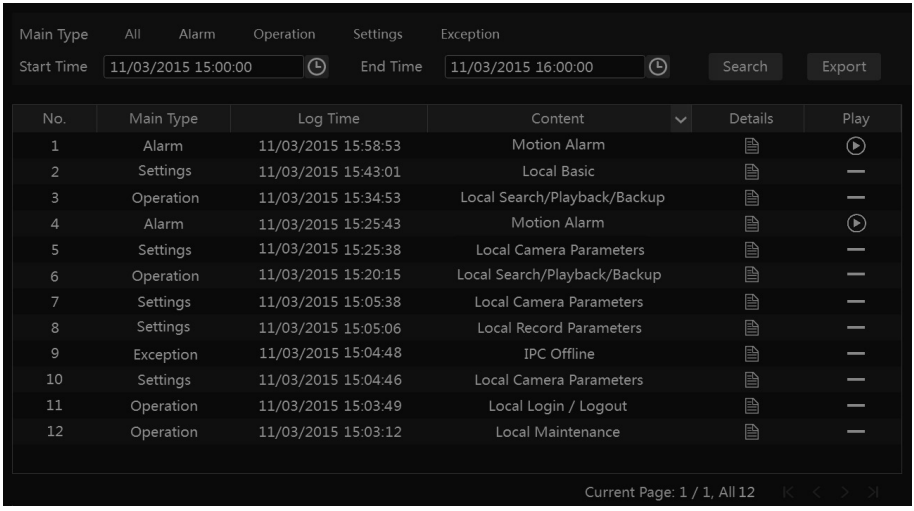
11.6 Restart Automatically

You can set the automatic restart time for the DVR to maintain it regularly. Click Start→Settings→System→Maintenance→Auto Maintenance to go to the interface as shown below. Enable auto maintenance, set the interval days and point of time and then click “Apply” to save the settings. The DVR will restart automatically at the pointed time every interval days.



11.7 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 the “Search” button. The searched log files will be displayed in the list.



Choose the log file in the list and then click the "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.

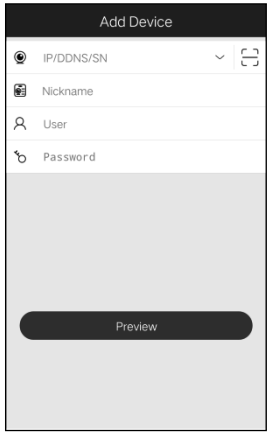
11.8 View System Information

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

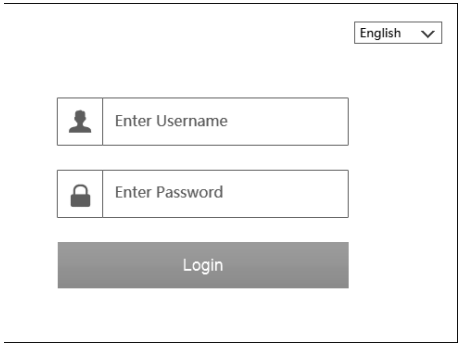
12.1 Mobile Client Surveillance

- Enable NAT in the DVR. Refer to 11.1.7 NAT Configuration for details.
- Download and install the mobile client “Transcendent Viewer” into the mobile device with Android or iOS system.
- Run the mobile client, go to the “Add Device” interface and then click to scan the QRCode of the DVR (Go to Start→Settings→System→Information→Basic to view the QRCode of the DVR).
- After scanning the QRCode successfully, enter the login user name and password to login from mobile client.



12.2 Web LAN Access

- Click Start→Settings→Network→TCP/IP to go to the “TCP/IP” interface. Set the IP address, subnet mask, gateway, preferred DNS and alternate DNS of the DVR.
- Open a web browser on your computer, enter the IP address of the DVR in the 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. Enter the username and password of the DVR 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 DVR 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 DVR shall be set to 192.168.1.XXX.

2. If the HTTP port of the DVR is not 80, but other number instead, you need to enter the IP address plus port number in the address bar of the web browser when accessing the DVR over network. For example, the HTTP port is 81. You should enter http://192.168.1.42:81 in the address bar of the web browser.

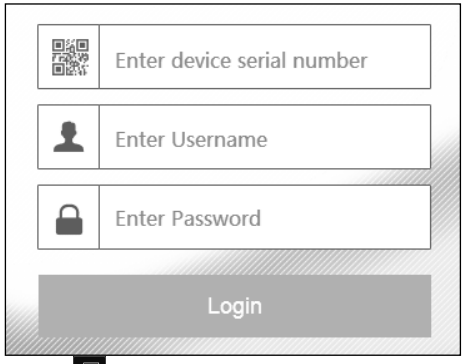
12.3 Web WAN Access

- **NAT Access**

Set the network of the DVR. Please refer to 11.1.1 TCP/IP Configuration for details.

Enable NAT and then set the NAT server address. Please refer to 11.1.7 NAT Configuration for details.

Open a web browser on your computer, enter the NAT server address ***www.autonat.com*** in the 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 DVR through NAT for the first time).



Enter the serial number (click on the tool bar at the bottom of the live preview interface to see the serial number of the DVR), user name (the user name of the DVR, ***admin*** by default) and password (the password of the DVR, ***123456*** by default) of the DVR, select the display language on the top right corner of the interface and then click the "Login" button to go to the web client interface.

- **PPPoE Access**

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

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

 Open a web browser on your computer, enter the IP address of the DVR like http://210.21.229.138 in the address bar and then press enter to go to the login interface. Enter the username and password of the DVR in the interface and then click "Login" to go to the live preview interface.

- **Router Access**

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

 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 DVR 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 DVR to the router. Port mapping settings may be different in different routers, so please refer to the user manual of the router for details.

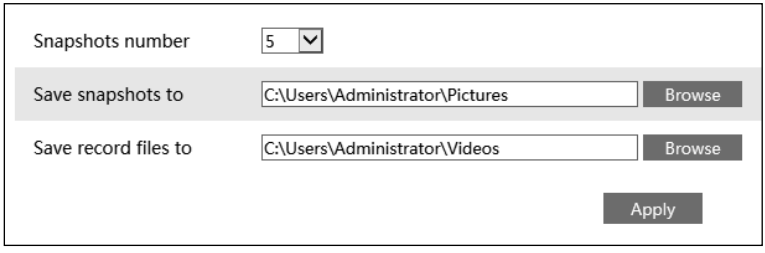
 Get the WAN IP address of the DVR from the router. Open a web browser on your computer, enter the WAN IP address plus HTTP port like http://116.30.18.215:100 in the address bar and then press enter to go to the login interface. Enter the username and password of the DVR in the interface and then click "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 DVR. Click Start→Settings→Network→DDNS to set DDNS (see 11.1.4 DDNS Configuration for details). By using DDNS function you can use the domain name plus HTTP port like http://XXX.vitekivpddns.com:100 to access the DVR via internet.

12.4 Web Remote Control

The supported browsers for remote access are IE8/9/10/11, Firefox, Opera and Chrome (available only for the versions lower than 45) in Windows system and Safari in MAC system. When you access the DVR 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. Enter the current password and then set a new password in the popup window. Click the "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 the "Apply" button to save the settings.



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.

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. Enter the camera name in the search box and then click to search the camera. Click to refresh the camera list.

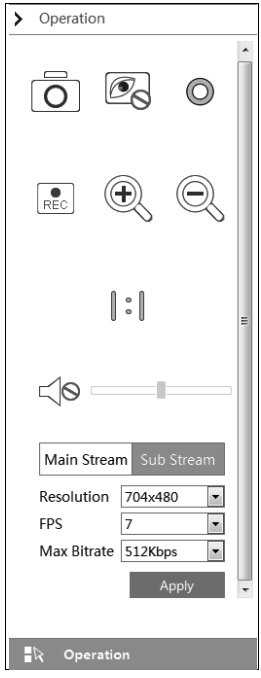
➢ **Tool Bar Introduction**

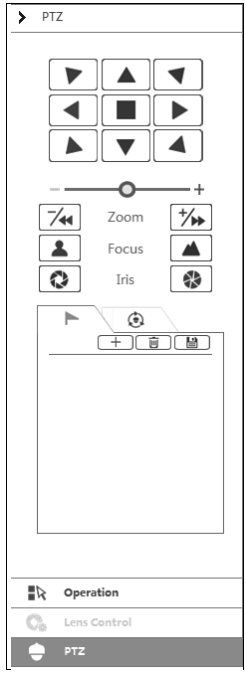
Button	Meaning
	Screen mode button.
OSD OFF	Click it to disable OSD. Click OSD ON to enable OSD.
	Click it to show full screen. Right click on the full screen to exit full screen.
All Main Stream | All Sub Stream	Click “All Main Stream” or “All Sub Stream” to set the stream of all the cameras.
	Manual 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.

Button	Meaning
	Click it to close all the preview cameras.
	Click it to start recording for all cameras to computer. Click to stop recording.
REC	Click it to start recording for all cameras to the DVR. Click REC to stop recording.
	Click it to enable talk with the DVR.

➢ **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.



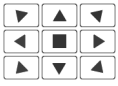
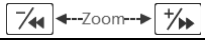
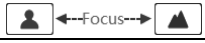
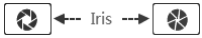


Click one camera window in the preview area and then click Main Stream to set the camera's live preview stream and record stream to main stream in manual record mode; click Sub-stream to set the camera's live preview stream and record stream to sub stream. In sub stream tab, set the resolution, FPS and bitrate and then click "Apply" to save the settings.

Operation panel introduction:

Button	Meaning
	Click it to snap.
	Click it to start record to computer
	Click it to start record to the NVR.
	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.
	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
	Click / / / / / / / / to rotate the dome; click to stop rotating the dome.
	Drag the slider to adjust the rotating speed of dome.
	Click / to zoom in/out camera image.
	Click / to increase/ decrease the focal length.
	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.

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

 Click Search to search the recorded data and then click Play or directly click the time scale to play the recording.

The operation of the playback time scale is similar to that of the time scale in the main program of the DVR. Please refer to 8.2 Playback Interface Introduction 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.
	Click it to decrease the playing speed.
	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.
	Click  to step backward 30s and click  to step forward 30s.
	Click the time scale and then click it to set the backup start time.
	Click the time scale and then click it to set the backup end time.
	Backup button.
	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 backup the recording by event or by time.

- **By Event**

Check the recording 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 recording (the searched recorded data will be displayed in the list); check the recorded data in the list and then click the “Backup” button to backup the recording.

- **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 recording.

View Backup Status: 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 DVR remotely. All of these settings are similar to that of the DVR. See the configurations of the DVR for details.

VT-TR2HA410

Transcendent Series 4 Channel 5-In-1 HD-TVI / AHD / CVI / 960H / IP Digital Video Recorder

Detailed Specifications

Video Inputs	4 Channels HD-TVI / AHD / CVI / CVBS Analog BNC Inputs Supporting up to 5MP Lite
IP Camera Support	2 IP Cameras (5MP @ 30fps Max)
Compression	H.265
Recording (5MP Lite)	40fps: 10fps per channel
Recording (4MP Lite / 1080P)	60fps: 15fps per channel
Recording (1080P Lite) / (720P)	120fps: 30fps per channel
Local Playback	4 CH
OS	Embedded Linux
Video Output	1 x HDMI (1080p) / 1 x VGA (1080p) / 1 x BNC Spot (Analog)
Multi Operation	Pentaplex: Live Display / Record / Playback / Backup / Remote Access
Audio	Input: RCA x 4 / Output: RCA x 1
Two-Way Audio	Yes
Bit Rate	32Kbps ~ 4Mbps
Encode	VBR / CBR
Quality Levels	6 level
Recording Modes	Manual, Timer, Motion, Sensor
Search	Time Sliced, Time, Event, Tag Management
Function	Play, Pause, FF ,FB, Shutter Control, Jog, Digital zoom
Alarm In/Out	4 Alarm inputs / 1 Alarm Output
Alarm Modes	Sensor, Motion, Video loss
Alarm Triggering	Record, PTZ move, Relay out, E-mail, etc
Network Interface	RJ45 x 1
Remote Viewing	CMS / Web Browser / Mobile Platforms
Remote Playback	4CH
Dual-stream	Individual Network Video Stream and local recording stream, set separately
Remote Users	10 users online, dual stream
RS485	RS485 x1 (for PTZ)
PTZ Protocol	Control over Coax, Pelco D / Pelco P
Network Protocols	TCP/IP, UDP, DHCP, DNS, PPPOE, DDNS, SMTP, RTSP, HTTP
SATA HDD	Up to 10TB (1 x 10TB)
USB	2 x USB 2.0 for mouse and USB backup devices
Accessories	Remote controller, SATA cable, USB mouse
Power Consumption	≤ 8W (Without HDD)
Power Supply	DC: 12V
Working Environment	32°~104°F (0°~40°C) / 10~90% RH
Dimensions (WxHxD)	10.04" x 1.65" x 8.27" (255mm × 42mm × 210mm)

VT-TR2HA810

Transcendent Series 8 Channel 5-In-1 HD-TVI / AHD / CVI / 960H / IP Digital Video Recorder

Detailed Specifications

Video Inputs	8 Channels HD-TVI / AHD / CVI / CVBS Analog BNC Inputs Supporting up to 5MP Lite
IP Camera Support	4 IP Camera (5MP @ 30fps Max)
Compression	H.265
Recording (5MP Lite)	80fps: 10fps per channel
Recording (4MP Lite / 1080P)	120fps: 15fps per channel
Recording (1080P Lite) / (720P)	240fps: 30fps per channel
Local Playback	8 CH
OS	Embedded Linux
Video Output	1 x HDMI (1080p) / 1 x VGA (1080p) / 1 x BNC Spot (Analog)
Multi Operation	Pentaplex: Live Display / Record / Playback / Backup / Remote Access
Audio	Input: RCA x 8 / Output: RCA x 1
Two-Way Audio	Yes
Bit Rate	32Kbps ~ 4Mbps
Encode	VBR / CBR
Quality Levels	6 level
Recording Modes	Manual, Timer, Motion, Sensor
Search	Time Sliced, Time, Event, Tag Management
Function	Play, Pause, FF ,FB, Shutter Control, Jog, Digital zoom
Alarm In/Out	8 Alarm inputs / 2 Alarm Output
Alarm Modes	Sensor, Motion, Video loss
Alarm Triggering	Record, PTZ move, Relay out, E-mail, etc
Network Interface	RJ45 x 1
Remote Viewing	CMS / Web Browser / Mobile Platforms
Remote Playback	8CH
Dual-stream	Individual Network Video Stream and local recording stream, set separately
Remote Users	10 users online, dual stream
RS485	RS485 x1 (for PTZ)
PTZ Protocol	Control over Coax, Pelco D / Pelco P
Network Protocols	TCP/IP, UDP, DHCP, DNS, PPPOE, DDNS, SMTP, RTSP, HTTP
SATA HDD	Up to 10TB (1 x 10TB)
USB	2 x USB 2.0 for mouse and USB backup devices
Accessories	Remote controller, SATA cable, USB mouse
Power Consumption	≤ 8W (Without HDD)
Power Supply	DC: 12V
Working Environment	32°~104°F (0°~40°C) / 10~90% RH
Dimensions (WxHxD)	10.04" x 1.65" x 8.27" (255mm × 42mm × 210mm)

VT-TR2HA1620

Transcendent Series 16 Channel 5-In-1 HD-TVI / AHD / CVI / 960H / IP Digital Video Recorder

Detailed Specifications

Video Inputs	16 Channels HD-TVI / AHD / CVI / CVBS Analog BNC Inputs Supporting up to 5MP Lite
IP Camera Support	8 IP Camera (5 MegaPixel @ 30fps Max per Camera)
Compression	H.265
Recording (5MP Lite)	160fps: 10fps per channel
Recording (4MP Lite / 1080P)	240fps: 15fps per channel
Recording (1080P Lite) / (720P)	480fps: 30fps per channel
Local Playback	16 CH
OS	Embedded Linux
Video Output	1 x HDMI (1080p) / 1 x VGA (1080p) / 1 x BNC Spot (Analog)
Multi Operation	Pentaplex: Live Display / Record / Playback / Backup / Remote Access
Audio	Input: RCA x 8 / Output: RCA x 1
Two-Way Audio	Yes
Bit Rate	32Kbps ~ 5Mbps
Encode	VBR / CBR
Quality Levels	6 level
Recording Modes	Manual, Timer, Motion, Sensor
Search	Time Sliced, Time, Event, Tag Management
Function	Play, Pause, FF ,FB, Shutter Control, Jog, Digital zoom
Alarm In/Out	16 Alarm inputs / 4 Alarm Output
Alarm Modes	Sensor, Motion, Video loss
Alarm Triggering	Record, PTZ move, Relay out, E-mail, etc
Network Interface	RJ45 x 1
Remote Viewing	CMS / Web Browser / Mobile Platforms
Remote Playback	16CH
Dual-stream	Individual Network Video Stream and local recording stream, set separately
Remote Users	10 users online, dual stream
RS485	RS485 x1 (for PTZ)
PTZ Protocol	Control over Coax, Pelco D / Pelco P
Network Protocols	TCP/IP, UDP, DHCP, DNS, PPPOE, DDNS, SMTP, RTSP, HTTP
SATA HDD	Up to 20TB (2 x 10TB) + E-SATA x 1
USB	2 x USB 2.0 for mouse and USB backup devices
Accessories	Remote controller, SATA cable, USB mouse
Power Consumption	≤ 15W (Without HDD)
Power Supply	DC: 12V
Working Environment	32°~104°F (0°~40°C) / 10~90% RH
Dimensions (WxHxD)	15" x 1.75" x 11" (381 x 44.45 x 254mm)

VT-TR2HA3280

Transcendent Series 32 Channel 5-In-1 HD-TVI / AHD / CVI / 960H / IP Digital Video Recorder

Detailed Specifications

Video Inputs	32 Channels HD-TVI/AHD/CVI/Analog BNC Inputs Supporting up to 5MP Lite
IP Camera Support	8 IP Cameras (5MP @ 30fps)
Compression	H.265 High profile
Recording (5MP Lite)	320fps: 10fps per channel
Recording (4MP Lite / 1080P)	480fps: 15fps per channel
Recording (1080P Lite) / (720P)	960fps: 30fps per channel
Local Playback	16 CH
OS	Embedded Linux
Video Output	1 x HDMI (1080p) / 1 x VGA (1080p) / 1 x BNC Spot (Analog)
Multi Operation	Pentaplex: Live Display / Record / Playback / Backup / Remote Access
Audio	Input: RCA x 16 / Output: RCA x 1
Two-Way Audio	Yes
Bit Rate	32Kbps ~ 5Mbps
Encode	VBR / CBR
Quality Levels	6 level
Recording Modes	Manual, Timer, Motion, Sensor
Search	Time Sliced, Time, Event, Tag Management
Function	Play, Pause, FF ,FB, Shutter Control, Jog, Digital zoom
Alarm In/Out	16 Alarm inputs / 4 Alarm Output
Alarm Modes	Sensor, Motion, Video loss
Alarm Triggering	Record, PTZ move, Relay out, E-mail, etc
Network Interface	RJ45 x 1
Remote Viewing	CMS / Web Browser / Mobile Platforms
Remote Playback	16CH
Dual-stream	Individual Network Video Stream and local recording stream, set separately
Remote Users	10 users online, dual stream
RS485	RS485 x2 (for PTZ)
PTZ Protocol	Control over Coax, Pelco D / Pelco P
Network Protocols	TCP/IP, UDP, DHCP, DNS, PPPOE, DDNS, SMTP, RTSP, HTTP
SATA HDD	Up to 80TB (8 x 10TB) + E-SATA x 1
USB	USB 2.0 x 2
Accessories	Remote controller, SATA cable, USB mouse
Power Consumption	≤ 30W (Without HDD)
Power Supply	ATX 250W
Working Environment	14°F~122°F (-10°~50°C) / 10~90% RH
Dimensions (WxHxD)	16.93" x 3.54" x 17.72" (430 x 90 x 450mm)

VT-TR8HA410

Transcendent Series 4 Channel 8.0 MegaPixel 5-In-1 HD-TVI / AHD / CVI / CVBS / IP Hybrid Digital Video Recorder

Detailed Specifications	VT-TR8HA410
Video Inputs	4 Channels HD-TVI / AHD / CVI / Analog BNC Inputs Supporting up to 8 MegaPixel
Hybrid Inputs	4 HD Analog inputs may be substituted for IP Cameras (plus two additional IP Cameras up to 8MP) for a complete Hybrid solution (up to 6 cameras)
IP Camera Support	8 MegaPixel @ 30fps Max
Compression	H.265 High profile
Analog Recording	8MP (4K): 7fps (1 Channel Only) / 4K Lite: 15fps / 5MP: 12 fps / 5MP Lite: 20fps / 4MP: 15fps / 4MP Lite/1080P/720P/WD1: 30fps
Network (IP) Recording	8MP / 5MP / 4MP / 3MP / 1080P / 960P / 720P Real Time (30fps)
Local Playback	4 CH
OS	Embedded Linux
Video Output	1 x HDMI (3840×2160, 1920×1080,1280×1024) / 1 x VGA (1080p) / 1 x BNC Spot (Analog)
Multi Operation	Pentaplex: Live Display / Record / Playback / Backup / Remote Access
Audio	Input: RCA x 4 / Output: RCA x 1
Two-Way Audio	Yes
Bit Rate	32Kbps ~ 4Mbps
Encode	VBR / CBR
Quality Levels	6 level
Recording Modes	Manual, Timer, Motion, Sensor
Search	Time Sliced, Time, Event, Tag Management
Function	Play, Pause, FF, FB, Digital zoom
Alarm In/Out	4 Alarm inputs / 1 Alarm Output
Alarm Modes	Sensor, Motion, Video loss
Alarm Triggering	Record, PTZ move, Relay out, E-mail, etc
Network Interface	RJ45: 10/100Mbps × 1
Remote Viewing	CMS / Web Browser / Mobile Platforms
Remote Playback	4CH
Dual-stream	Individual Network Video Stream and local recording stream, set separately
Remote Users	10 users online, dual stream
RS485	RS485 x1 (for PTZ)
PTZ Protocol	Control over Coax (CoC) Pelco D / Pelco P
Network Protocols	TCP/IP, UDP, DHCP, DNS, PPPOE, DDNS, SMTP, RTSP, HTTP
SATA HDD	Up to 10TB (1 x 10TB) E-SATA x 1
USB	1 Front (USB 2.0) & 1 Rear (USB 2.0) for mouse and USB backup devices
Accessories	Remote controller, SATA cable, USB mouse
Power Consumption	≤ 10W (Without HDD)
Power Supply	DC: 12V
Working Environment	14°F~122°F (-10°~50°C) / 10~90% RH
Dimensions (WxHxD)	10.04" x 1.65" x 8.27" (255mm × 42mm × 210mm)

VT-TR8HA820

Transcendent Series 8 Channel 8.0 MegaPixel 5-In-1 HD-TVI / AHD / CVI / CVBS / IP Hybrid Digital Video Recorder

Detailed Specifications	VT-TR8HA820
Video Inputs	8 Channels HD-TVI / AHD / CVI / Analog BNC Inputs Supporting up to 8 MegaPixel
Hybrid Inputs	8 HD Analog inputs may be substituted for IP Cameras (plus 8 additional IP Cameras up to 8MP) for a complete Hybrid solution (up to 16 cameras)
IP Camera Support	8 MegaPixel @ 30fps Max
Compression	H.265 High profile
Analog Recording	8MP (4K): 7fps / 4K Lite: 15fps / 5MP: 12 fps / 5MP Lite: 20fps / 4MP: 15fps / 4MP Lite/1080P/720P/WD1: 30fps
Network (IP) Recording	8MP / 5MP / 4MP / 3MP / 1080P / 960P / 720P Real Time (30fps)
Local Playback	8 CH
OS	Embedded Linux
Video Output	1 x HDMI (4K - 3840×2160, 1920x1080, 1280×1024) / 1 x VGA (1080p) / 1 x BNC Spot (Analog)
Multi Operation	Pentaplex: Live Display / Record / Playback / Backup / Remote Access
Audio	Input: RCA x 8 / Output: RCA x 1
Two-Way Audio	Yes
Bit Rate	32Kbps ~ 5Mbps
Encode	VBR / CBR
Quality Levels	6 level
Recording Modes	Manual, Timer, Motion, Sensor
Search	Time Sliced, Time, Event, Tag Management
Function	Play, Pause, FF, FB, Digital zoom
Alarm In/Out	8 Alarm inputs / 2 Alarm Outputs
Alarm Modes	Sensor, Motion, Video loss
Alarm Triggering	Record, PTZ move, Relay out, E-mail, etc
Network Interface	RJ45: 10/100Mbps × 1
Remote Viewing	CMS / Web Browser / Mobile Platforms
Remote Playback	8CH
Dual-stream	Individual Network Video Stream and local recording stream, set separately
Remote Users	10 users online, dual stream
RS485	RS485 x1 (for PTZ)
PTZ Protocol	Control over Coax (CoC) Pelco D / Pelco P
Network Protocols	TCP/IP, UDP, DHCP, DNS, PPPOE, DDNS, SMTP, RTSP, HTTP
SATA HDD	Up to 20TB (2 x 10TB)
USB	USB 2.0 x 2
Accessories	Remote controller, SATA cable, USB mouse
Power Consumption	≤ 15W (Without HDD)
Power Supply	DC: 12V
Working Environment	14°F~122°F (-10°~50°C) / 10~90% RH
Dimensions (WxHxD)	15" x 1.75" x 11" (381 x 44.45 x 25.4mm)

VT-TR8HA1620

Transcendent Series 16 Channel 8.0 MegaPixel 5-In-1 HD-TVI / AHD / CVI / CVBS / IP Hybrid Digital Video Recorder

Detailed Specifications	VT-TR8HA1620
Video Inputs	16 Channels HD-TVI / AHD / CVI / Analog BNC Inputs Supporting up to 8 MegaPixel
Hybrid Inputs	8 HD Analog channels may be substituted for IP Cameras (plus 8 additional IP Cameras up to 8MP) for a complete Hybrid solution (up to 24 cameras)
IP Camera Support	8 MegaPixel @ 30fps Max
Compression	H.265 High profile
Analog Recording	8MP (4K): 7fps (Odd Channels Only) / 4K Lite: 15fps / 5MP: 12 fps / 5MP Lite: 20fps / 4MP: 15fps / 4MP Lite/1080P/720P/WD1: 30fps
Network (IP) Recording	8MP / 5MP / 4MP / 3MP / 1080P / 960P / 720P Real Time (30fps)
Local Playback	16 CH
OS	Embedded Linux
Video Output	1 x HDMI (4K - 3840×2160, 1920x1080, 1280×1024) / 1 x VGA (1080p) / 1 x BNC Spot (Analog)
Multi Operation	Pentaplex: Live Display / Record / Playback / Backup / Remote Access
Audio	Input: RCA x 8 / Output: RCA x 1
Two-Way Audio	Yes
Bit Rate	32Kbps ~ 5Mbps
Encode	VBR / CBR
Quality Levels	6 level
Recording Modes	Manual, Timer, Motion, Sensor
Search	Time Sliced, Time, Event, Tag Management
Function	Play, Pause, FF, FB, Digital zoom
Alarm In/Out	16 Alarm inputs / 4 Alarm Output
Alarm Modes	Sensor, Motion, Video loss
Alarm Triggering	Record, PTZ move, Relay out, E-mail, etc
Network Interface	RJ45: 10/100/1000Mbps × 1
Remote Viewing	CMS / Web Browser / Mobile Platforms
Remote Playback	16CH
Dual-stream	Individual Network Video Stream and local recording stream, set separately
Remote Users	10 users online, dual stream
RS485	RS485 x1 (for PTZ)
PTZ Protocol	Control over Coax (CoC) Pelco D / Pelco P
Network Protocols	TCP/IP, UDP, DHCP, DNS, PPPOE, DDNS, SMTP, RTSP, HTTP
SATA HDD	Up to 20TB (2 x 10TB)
USB	UBS 2.0 x 2
Accessories	Remote controller, SATA cable, USB mouse
Power Consumption	≤ 30W (Without HDD)
Power Supply	DC: 12V
Working Environment	14ºF~122ºF (-10º~50ºC) / 10~90% RH
Dimensions (WxHxD)	15" x 1.75" x 11" (381 x 44.45 x 25.4mm)

VT-TR8HA3280

Transcendent Series 32 Channel 8.0 [4K] MegaPixel 5-In-1
HD-TVI / AHD / CVI / CVBS / IP Hybrid Digital Video Recorder

Detailed Specifications	VT-TR8HA3280
Video Inputs	32 Channels HD-TVI / AHD / CVI / Analog BNC Inputs Supporting up to 8 MegaPixel [4K]
IP Camera Support	Up to 8 MegaPixel @ 30fps Max, 32h IP Plus HDA Inputs may be substituted for IP for up to 64ch IP
Compression	H.265 / H.264 High profile
Analog Recording	8MP@8fps, 8MP Lite@15fps, 5MP@12fps, 5MP Lite@20fps, 4MP/3MP@15fps, 4MP Lite/1080P/720P/WD1/D1@30fps
Network (IP) Recording	8MP / 5MP / 5MP Lite / 4MP / 3MP / 1080P / 960P / 720P Real Time (30fps)
Local Playback	16ch
OS	Embedded Linux
Video Output	**HDMI 1:** 3840 × 2160 / 1920 × 1080 / 1280 × 1024, **HDMI2:** 1920 × 1080 / 1280 × 1024 / 1024 × 768
	VGA: 1920 × 1080 / 1280 × 1024, **BNC × 1:** CVBS (used as the main or spot output)
Multi Operation	Pentaplex: Live Display / Record / Playback / Backup / Remote Access
Audio (Compression)	Input: RCA × 16 [2.0Vp-P, 1kΩ] / Output: 1[linear, 600Ω] (RCA × 1 G.711A/U)
Two-Way Audio	Yes - RCA × 1
Bit Rate	32Kbps ~ 10Mbps
Encode	VBR / CBR
Quality Levels	6 level
Recording Modes	Manual, Timer, Alarm linkage
Search	Time Slice, Time, Event, Tag Management
Function	Play, Pause, FF, FB, Digital zoom
Alarm In/Out	16 Alarm inputs / 8 Alarm Output
Alarm Modes	Sensor, Motion, Video loss
Alarm Triggering	Record, PTZ move, Relay out, E-mail, etc
Network Interface / Bandwidth	RJ45: 1000Mbps × 2 / Incoming: 160-360Mbps, Outgoing: 360Mbps
Remote Viewing	CMS / Web Browser / Mobile Platforms
Remote Playback	16ch
Dual-stream	Individual Network Video Stream and local recording stream, set separately
Remote Users	10 users online, dual stream
Remote Viewing	CMS / Web Browser / Mobile (iOS/Android)
RS485	Yes (full-duplex), connectors for PTZ and keyboard
PTZ Protocol	Control over Coax (CoC) Pelco D / Pelco P
Network Protocols	TCP/IP, UDP, DHCP, DNS, PPPOE, DDNS, SMTP, RTSP, HTTP, ONVIF
SATA HDD	Up to 80TB (8 × 10TB) + E-SATA × 1
RAID	RAID 0, 1, 5, 6, 10
USB	UBS 2.0 × 2, USB 3.0 × 1
Accessories	Remote Control, SATA cable, USB mouse
Power Consumption / Supply	≤ 70W (Without HDD) / ATX250W
Working Environment	14°F~122°F (-10°~50°C) / 10~90% RH
Dimensions (WxHxD), Weight	17.52 x 3.54 x 17.12" (445 × 90 × 436mm), 13.79lbs (net), 16.01lbs (shipping) / [6.25kg (net) / 7.29kg (shipping)]

VITEK LIMITED PRODUCT WARRANTY

VITEK products carry a three (3) year limited warranty. Digital recording and storage products are also warranted for 3 years. * Per a special agreement with Western Digital, as of August 2016, VITEK also warrants factory installed Hard Drives for the full 3 year span of the recorder warranty provided that the recorder was purchased through an authorized VITEK distributor.

VITEK warrants to the purchaser that products manufactured by VITEK are free of any rightful claim of infringement or the like, and when used in the manner intended, will be free of defects in materials and workmanship for a period of three (3) years, or as otherwise stated above, from the date of purchase by the end user. This warranty is non-transferable and extends only to the original buyer or end user customer of a Vitek Authorized Reseller.

This warranty shall not apply to repairs or replacements necessitated by any cause beyond the control of VITEK, including but not limited to, acts of nature, improper installation, excess moisture, misuse, lack of proper maintenance, accident, voltage fluctuations, or any unauthorized tampering, repairs or modifications. This warranty becomes VOID in the event of alteration, defacement, or removal of serial numbers.

Within the first 6 months of purchase, VITEK will replace or credit any defective product returned at the request of the customer (subject to availability) with a new product that equals or exceeds the performance of the original product purchased.

Within the first 6 months of purchase, at its sole discretion, VITEK may issue an advance replacement for a defective product; however, all related costs including, but not limited to shipping and/or delivery charges will be the responsibility of the customer. If upon return inspection a product is determined to be in good working order or shows evidence of misuse, the customer will be responsible for full payment of the original product purchased as well as the replacement product.

Beyond the first 6 month period for the remainder of the warranty, VITEK'S responsibility shall be limited to repairing the defective product, including all necessary parts and related labor costs. At its sole discretion, VITEK may choose to either exchange a defective product or issue a merchandise credit towards future product purchases. Any replacement parts furnished in connection with this warranty shall be warranted for a period not to exceed the remaining balance of the original equipment warranty.

A Return Authorization number or "RA" number must be obtained prior to the return of any item for repair, replacement, or credit. VITEK requires that this "RA" number be clearly printed on the outside of the shipping carton to avoid refusal of said shipment. The Return Authorization number expires after 30 days. Products returned after the 30 day period will be subject to refusal. Shipping charges, if any, must be prepaid. A copy of the bill of sale (or invoice of purchase), together with a complete written explanation of the problem must accompany all returns.

Vitek makes no warranty or guarantee whatsoever with respect to products sold or purchased through unauthorized sales channels. Warranty support is available only if product is purchased through a Vitek Authorized Reseller.

*Limited Warranty means that VITEK reserves the right to repair or replace any product found defective within the warranty time period, prorated to the date of original purchase. If VITEK cannot repair the product, VITEK reserves the right to replace it with an equal or better product and grade at VITEK's discretion.

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