

VL-NVR 4/8/16CH POE RECORDER



Please read this manual thoroughly before use and keep it handy for future reference.

Before You Begin

Read these instructions before installing or operating this product.

Note: This installation should be made by a qualified service person and should conform to local codes.

This manual provides installation and operation information. To use this document, you must have the following minimum qualifications:

- A basic knowledge of CCTV systems and components
- A basic knowledge of electrical wiring and low-voltage electrical connections

Intended use

Only use this product for its designated purpose; refer to the product specification and user documentation.

Customer Support

For assistance in installing, operating, maintaining and troubleshooting this product refer to this document and any other documentation provided. If you still have questions, please contact Norbain Technical Support and Sales:

**Norbain SD, Inspired, Easthampstead Road, Bracknell , Berkshire RG12 1YQ.
UK +44 (0) 118 912 5000**

Note: You should be at the equipment and ready with details before calling Technical Support.

Conventions Used in this Manual

Boldface or button icons highlight command entries. The following **WARNING**, **CAUTION** and **Note** statements identify potential hazards that can occur if the equipment is not handled properly:

*** WARNING:**

Improper use of this equipment can cause severe bodily injury or equipment damage.

**** Caution:**

Improper use of this equipment can cause equipment damage.

Note: Notes contain important information about a product or procedure.



Where applicable a Declaration of Conformity in accordance with the following EU directive has been made. The manufacturer declares that the product supplied with this document is compliant with the provisions of the EMC Directive 2014/30/EU, the CE Marking Directive 93/68 EEC and all associated amendments.

Our CE EU-Authorised Representative: Comply Express Unipessoal LDA, StartUp Madeira - EV141, Campus da Penteada, 9020-105 Funchal, Madeira, Portugal”



All lead-free products offered by the company comply with the requirements of the European law on the Restriction of Hazardous Substances (RoHS) directive: 2011/65/EU, which means our manufacture processes and products are strictly “lead-free” and without the hazardous substances cited in the directive.



The crossed-out wheeled bin mark symbolizes that within the European Union the product must be collected separately at the product end-of-life. This applies to your product and any peripherals marked with this symbol. Do not dispose of these products as unsorted municipal waste.

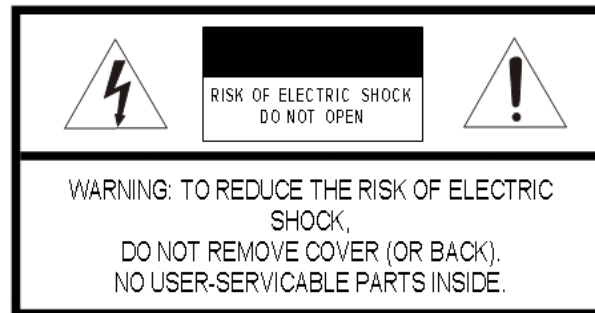


“A UK Declaration of Conformity in accordance with GB UKCA standards has been made. The manufacturer declares that the product supplied with this document is compliant with the provisions of the Electromagnetic Compatibility Regulations 2016, and where applicable, the Electrical Equipment (Safety) Regulations 2016 Directives.”

NORBAIN SD reserves the right to make changes to the product and specification of the product from time to time without prior notice.

WARNINGS AND CAUTIONS:

To reduce the risk of fire or electric shock, do not insert any metallic objects through the ventilation grills or other openings on the equipment.



IMPORTANT SAFEGUARDS

1. Read these instructions.
2. Keep these instructions.
3. Heed all warnings.
4. Follow all instructions.
5. Do not use this apparatus near water.
6. Clean only with dry cloth.
7. Do not block any ventilation openings. Install in accordance with the manufacturer's instructions.
8. Do not install near any heat sources such as radiators, heat registers, stoves, or other apparatus (including amplifiers) that product heat.
9. Do not defeat the safety purpose of the polarized or grounding-type plug. A polarized plug has two blades with one wider than the other. A grounding type plug has two blades and a third grounding prong. The wide blade or the third prong is provided for your safety. If the provided plug does not fit into your outlet, consult an electrician for replacement of the obsolete outlet.
10. Protect the power cord from being walked on or pinched particularly at plugs, convenience receptacles, and the point where they exit from the apparatus.
11. Only use attachments/accessories specified by the manufacturer.
12. Unplug this apparatus during lightning storms or when unused for long periods of time.
13. Refer all servicing to qualified service personnel. Servicing is required when the apparatus has been damaged in any way, such as power-supply cord or plug is damaged, liquid has been spilled or objects have fallen into the apparatus, the apparatus has been exposed to rain or moisture, does not operate normally, or has been dropped.
14. CAUTION - THESE SERVICING INSTRUCTIONS ARE FOR USE BY QUALIFIED SERVICE PERSONNEL ONLY. TO REDUCE THE RISK OF ELECTRIC SHOCK DO NOT PERFORM ANY SERVICING OTHER THAN THAT CONTAINED IN THE OPERATING INSTRUCTIONS UNLESS YOU ARE QUALIFIED TO DO SO.
15. IEC60950-1/UL60950-1 or Certified/Listed Class 2 power source only.

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1. Product Features

1.1 Main Features

- Real-time surveillance
- High resolution VGA output and HDMI output.
- Mobile app (iPhone/ iPad/ Android)
- Video compression H.265S / H.265+ / H.265, improved video quality and lower storage\bandwidth.
- Storage: Supports 1 SATA3.0 HDD (4Ch & 8Ch) and 2 SATA3.0 HDD (16Ch)
- Evidence export to USB thumb drive . Each backup file size is 128MB
- Adjustable record resolution, frame rate and quality;
8MP / 6MP / 5MP / 4MP / 3MP / 1080P / 1280 × 1024 / 960P / 720P / 960H / D1 / CIF
- Multi-record mode: manual, schedule, sensor and motion record.
- Single or Multi channel playback
- 2 way audio
- Audio: 1 audio input / 1 audio output
- Motion detection
- Pre and Post event record
- Multi PTZ protocol support
- Programmable 128 Preset points and 8 cruises
- Authority account setup
- Supported network functions;
 - IP: STATIC (Fixed IP), DHCP, PPPOE
 - DDNS / NAT / P2P
 - Event triggers sent to E-mail
 - Remote connection limitation
- Supported remote network control;
 - Recording
 - Playback
 - PTZ control
 - Re-configuration
 - IE surveillance
 - CMS application control
 - EMAP control
 - Snapshot

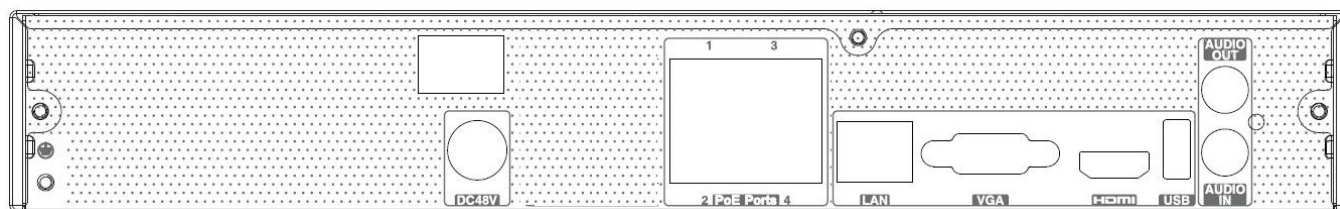
Note: as of the below firmware version, recorders are IOT compliant and require you to set your own strong admin password on first power-up! Until set, cameras cannot be added, and recording cannot be started! Any new factory default Vista VIP cameras you add will be automatically activated with the same strong password as the recorder.

Recorder Firmware Version	
VL-04/08/16NVR	Ver 1.4.6.67944B240313N0S

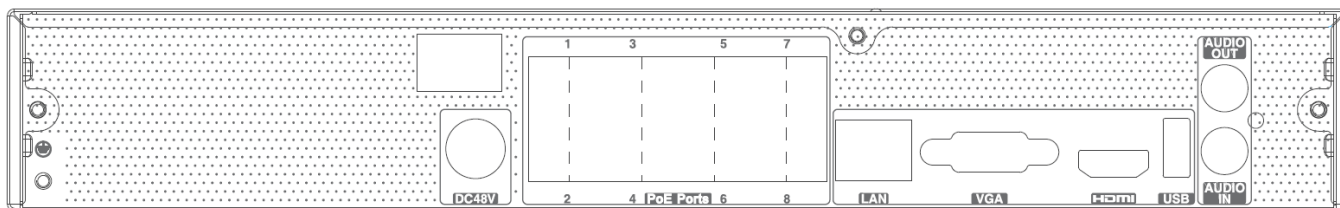
Prior to the above version of firmware, recorders used the below login defaults;
User Name: admin
Password: 123456

1.2 Rear Panel Instructions

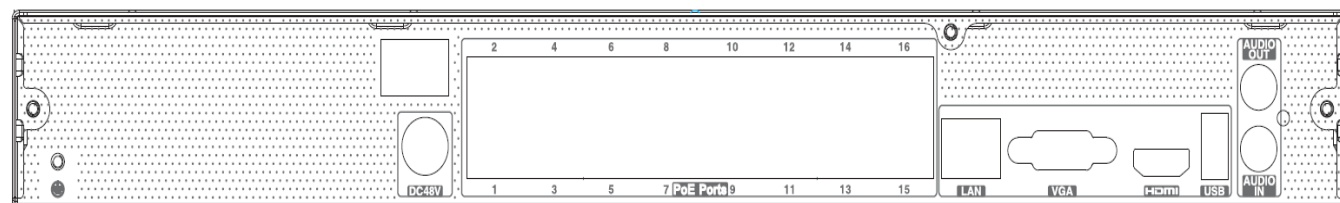
Below images for reference only.



Rear Panel for 4 CH



Rear Panel for 8 CH



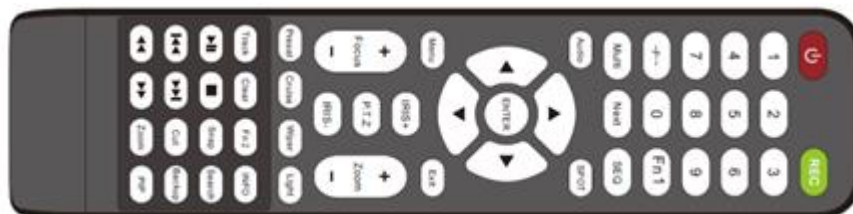
Rear Panel for 16 CH

Name	Descriptions
DC48V	DC48V Power Input.
USB	Connect external devices such as USB mouse or storage device.
LAN	Network Port.
HDMI	HDMI Port. Connect to high-definition display device.
VGA	VGA Port. Connect to monitor.
POE	4 ports (4 CH) / 8 ports (8 CH) / 16 ports (16 CH)
AUDIO OUT	1CH Audio output, connect to output or amplifier device.
AUDIO IN	1 CH Audio Input.

1.3 Remote Controller (Optional)

Requires two AAA size batteries

- Open the battery cover of the Remote Controller.
- Place batteries. Please take care of the polarity (+ and -).
- Replace the battery cover.



Remote Controller

Button	Function
Power Button	Switch off DVR. Use before turning off power
Record Button	To record manually
-/-- /0-9 Digital Button	Input number or choose camera
Fn1 Button	Not supported
Multi Button	To choose multi screen display mode
Next Button	To switch to next live channel
SEQ	To enter auto dwell mode
Audio	To enable audio output in live mode
Switch	To switch output between BNC and VGA
Direction button	To move cursor in setup or pan/title PTZ
Enter Button	To confirm choice or setup
Menu Button	To enter menu
Exit Button	To exit the current menu
Focus/IRIS/Zoom/PTZ	To control PTZ camera. Move camera/zoom/IRIS/Focus
Preset Button	To enter into preset setting in PTZ mode
Cruise Button	To enter into cruise setting in PTZ mode
Track Button	To enter into track setting in PTZ mode
Wiper Button	To enable wiper function in PTZ mode
Light Button	To enable light function in PTZ mode
Clear Button	To return to the previous interface
Fn2 Button	Not supported
Info Button	Show information such as firmware version, HDD etc
	To control playback. Play/Pause/Stop/Previous Section/Next Section/Rewind/Fast Forward
Snap Button	To take snapshots manually
Search Button	To enter into search mode
Cut Button	To set the start/end time for backup in playback mode
Backup Button	To enter into backup mode
Zoom Button	To zoom in to images
PIP Button	To enter into picture in picture setting mode

1.4 Mouse Control

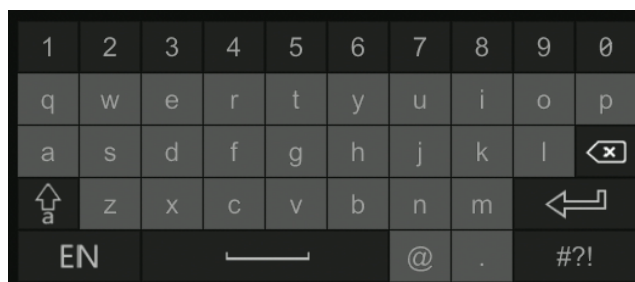
Live Preview & Playback interface

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

In the live preview & playback interface, if the screen displays in full screen, move the mouse to the bottom of the interface to pop up the tool bar. The tool bar will disappear automatically after you move the mouse away; 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.

Text-input

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



2. Basic Operation

Please make sure all the connections are made correctly before you power on the unit. Proper startup and shutdown are crucial to maintaining the life of your device.

2.1 Startup

Step1: Connect the output display device to the VGA/HDMI interface of the NVR.

Step2: Connect the mouse and power. The device will bootup and the power LED would turn blue.

Step3: A WIZARD window will pop up (you should select the display language the first time you use the NVR).

2.2 Shutdown

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

①By remote controller:

Step1: Press Power button. This will take you to a shutdown window.

The unit will power off after a while by clicking "OK" button.

Step2: Disconnect the power.

②By mouse:

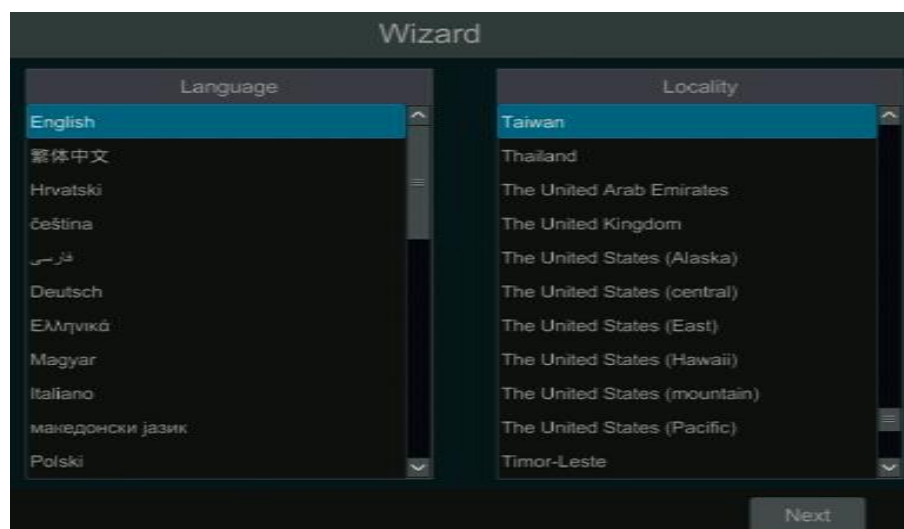
Step1: Click Start Shutdown to pop up the Shutdown window. Select "Shutdown" in the window.

The unit will power off after a while by clicking "OK" button.

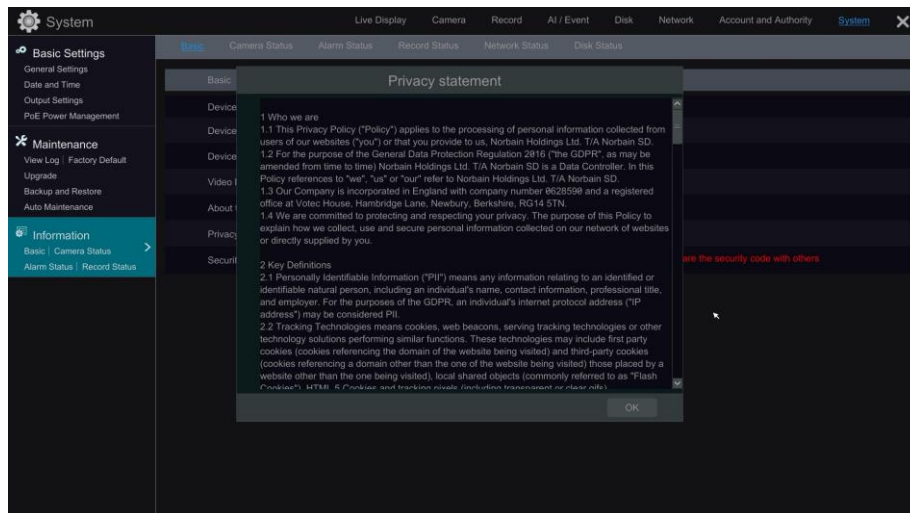
Step2: Disconnect the power.

2.3 Wizard Setup

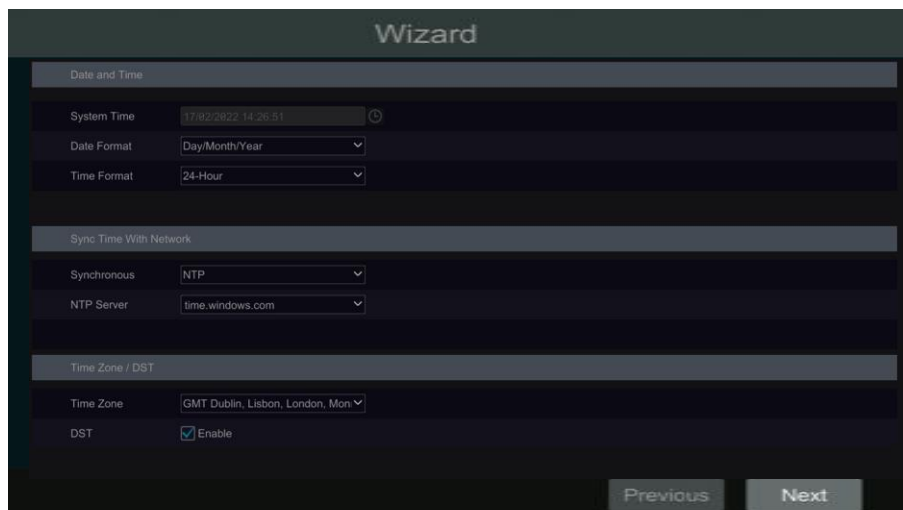
1. Choose the language and locality as required (below) if it is the first time you have run the wizard. Click "Next" to continue.



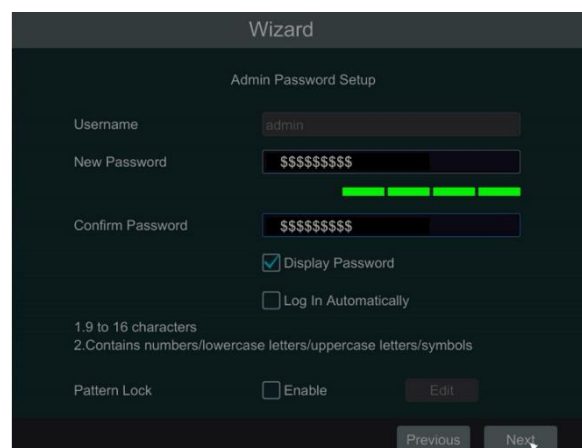
2. **Privacy Statement:** Read the Vista\Norbain statement, click "***I have read and agree***" if you agree. Click "OK" to continue.



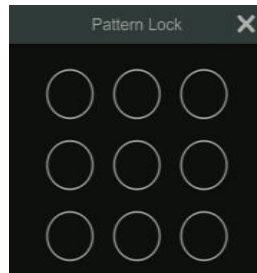
3. **Date and Time Configuration:** The date and time of the system needs to be set up if you use the wizard for the first time. Refer to the below example and set time zone, system time, date format and time format as required. DST will be enabled by default if the time zone selected includes DST. Click "Next" to continue.



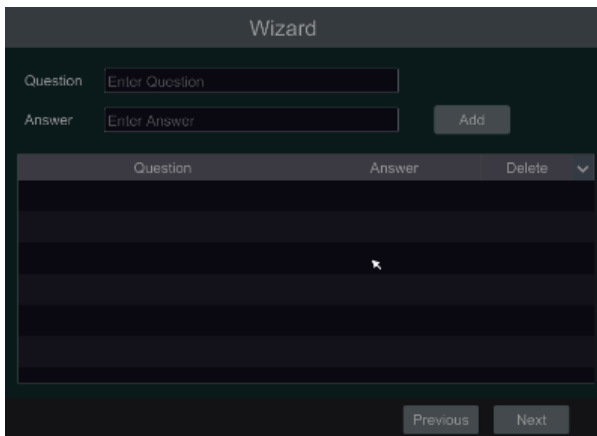
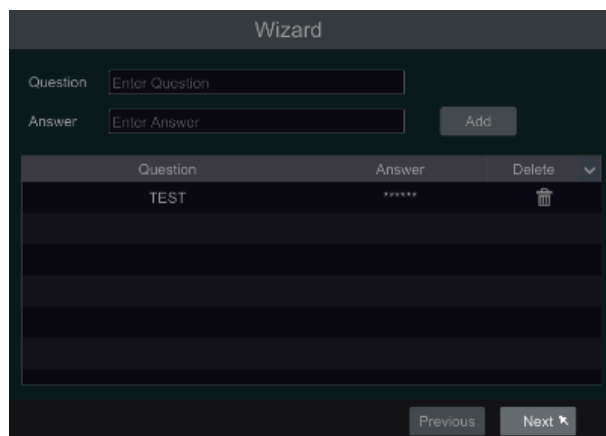
4. **System Login:** For IOT versions of firmware (refer to page 5.) you **must** set your own STRONG admin password before being allowed to continue to setup the recorder. Refer to the screen below for details of the minimum password strength. We suggest you set your own strong password for all recorder versions - default (admin/123456).



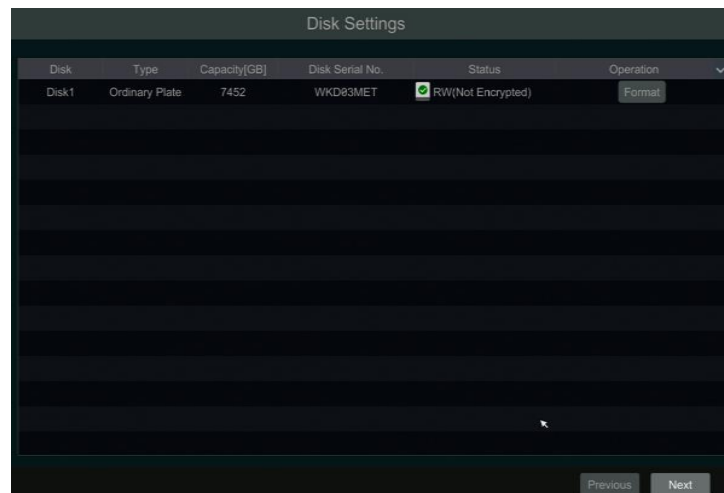
If required, click Enable pattern lock and click “Edit” to set a pattern lock.



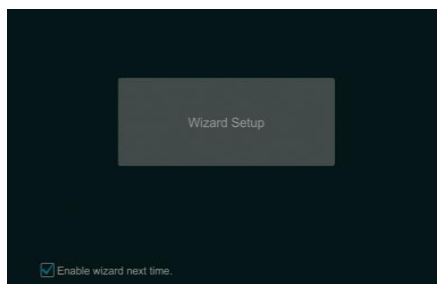
Click “Edit Security Question” to set questions and answers for password security of admin. Click “Next” to continue or click “Cancel” to exit the wizard.

A screenshot of the "Wizard" screen. It has a title bar "Wizard". Below it, there are two input fields: "Question" and "Answer", each with a placeholder text "Enter Question" and "Enter Answer" respectively. To the right of the "Answer" field is an "Add" button. Below these fields is a table with three columns: "Question", "Answer", and "Delete". The table is currently empty. At the bottom of the screen are "Previous" and "Next" buttons.A screenshot of the "Wizard" screen, similar to the previous one, but with one entry in the table. The "Question" column contains the text "TEST" and the "Answer" column contains "*****". There is a trash icon in the "Delete" column for this entry. The "Next" button at the bottom right has a right-pointing arrow.

5. **Disk Settings** : You can view the number of disks, disk capacity, serial number and R&W status. Click “Formatting” to format the disk – NOTE: previous recorded data will be lost in doing so! Click “Next” to continue.

A screenshot of the "Disk Settings" screen. It has a title bar "Disk Settings". Below it is a table with the following columns: "Disk", "Type", "Capacity(GB)", "Disk Serial No.", "Status", and "Operation". The first row of data shows: "Disk1", "Ordinary Plate", "7452", "WKD83MET", "RW(Not Encrypted)" (with a green checkmark icon), and a "Format" button. Below the table are "Previous" and "Next" buttons.

6. You have the option to quickly re-configure the NVR by reusing Wizard setup in future if you ever need to return it to the initial settings after defaulting. The Wizard will always be displayed on starting the NVR for the very first time, though you can click “Skip” to cancel it.



7. Network Settings:



Use the below only as an example to help set your required IP addressing; either via DHCP if your network has a DHCP server, or by determining the correct static IP settings for your network.

Input the HTTP port, RTSP port and Server port as required. Click “Next” to continue.

NOTE Internal Ethernet Port: If you use the NVRs PoE network ports for cameras, the online state of the internal Ethernet port and IP address will be shown.

 A screenshot of the "Wizard" network settings screen. It shows two columns of configuration options. The left column is for "Ethernet Port 1 (Online)" and the right column is for "Internal Ethernet Port (Online)". Both columns have checkboxes for "Obtain an IP address automatically" and "Obtain DNS automatically". Below these are fields for Address, Subnet Mask, Gateway, Preferred DNS, and Alternate DNS. At the bottom, there are fields for HTTP Port, HTTPS Port, RTSP Port, and Server Port. Navigation buttons "Previous", "Next", and "Cancel" are at the bottom right.

8. Add Camera:


Click “Refresh” to refresh the list of online IP cameras which have been found in the same local network with the NVR and click  to add any individual camera. Click “Add All” to add all the cameras in the list. Click  to delete any currently added camera. Click “Delete All” to delete all the currently added cameras.

Note: Any new factory default Vista VIP cameras you add will be automatically activated with the same strong admin password as you set for the recorder during the initial install Wizard.

 A screenshot of the "Wizard" add camera screen. It features a table with columns: No., Address, Edit, Port, Protocol, Model, Version, and Add. The table lists six detected cameras. Below the table are buttons for "Refresh", "Add All", and "Delete All". At the bottom, there are navigation buttons "Previous", "Next", and "Cancel".

No.	Address	Edit	Port	Protocol	Model	Version	Add
1	192.168.5.66		8080	IP Camera	TD-9423A3...	5.8.1.0	
2	192.168.5.187		8080	IP Camera	T077SP	5.8.2.0	
3	192.168.48.29		80	ONVIF	ONVIF		
4	192.168.48.21		80	ONVIF	ONVIF		
5	192.168.48.29		80	ONVIF	ONVIF		
6	192.168.48.33		80	ONVIF	ONVIF		

To modify the IP/login details for any “found” camera before “adding”:

Click  to edit the found IP camera to show the below. If required, input the new IP address, subnet mask, gateway, “Username” and “Password” of the camera. Click “OK” to save the settings.




The 'Edit IP' dialog box contains the following fields:

Field	Value
MAC Address	08 : 18 : AE : 84 : 27 : 96
Address	192 . 168 . 5 . 111
Subnet Mask	255 . 255 . 255 . 0
Gateway	192 . 168 . 5 . 254
Username	admin
Password	*****

Buttons: OK, Cancel

To modify the IP, login and name details for any “added” camera:

Click  against any “added” camera appearing in the lower part of the previous camera menu to edit the added camera, the below is shown.

Input details as required: camera name, IP address, port, “Username” and “Password” of the camera. You can click “Test” to test the effectiveness of the input information before clicking “OK” to save the settings.

NOTE: You can change the IP camera name only when the added camera is online. Click “Next” to continue.



The 'Edit Camera' dialog box contains the following fields:

Field	Value
Camera Name	B1-L
Address	192 . 168 . 5 . 111
Port	9008
Protocol	IP Camera
Model	D658RG
Username	admin
Password	*****

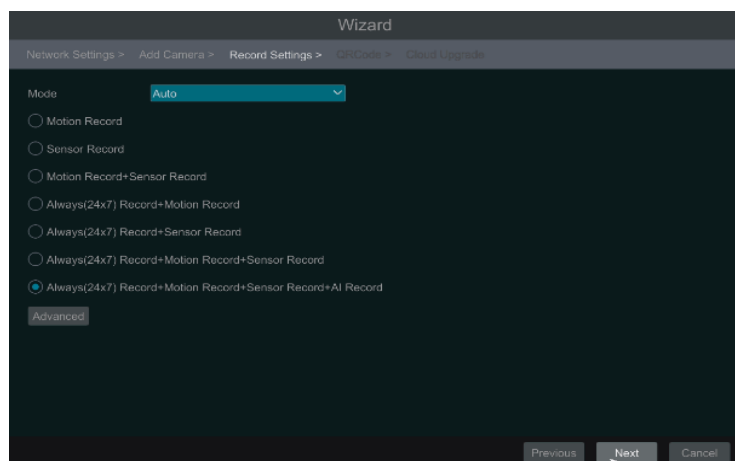
Buttons: Test, OK, Cancel

9. Record Settings:

Two record modes are available: auto and manual.

Auto: Select a required auto mode for all cameras as per the below examples, then click “OK” button to save the settings.

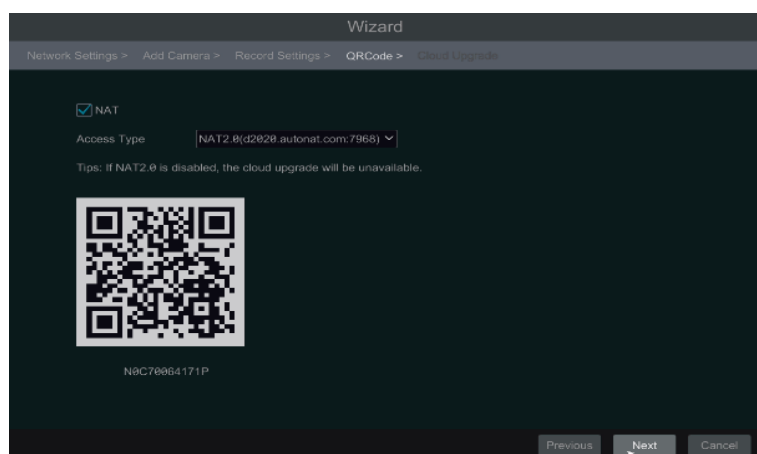
Manual: Alternatively, set the “Sensor Record”, “Motion Record” and “Schedule Record” of each camera instead. Click “OK” to save the settings.



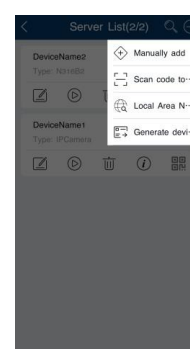
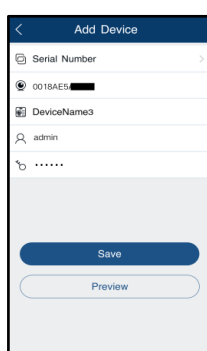
10. QR Code and Easy Mobile App Remote Access:

You can scan the QR Code through the NVRs mobile client app installed on a device to log in remotely and instantly.

Set the NVR Wizard QR Code screen as below, then click “Next”

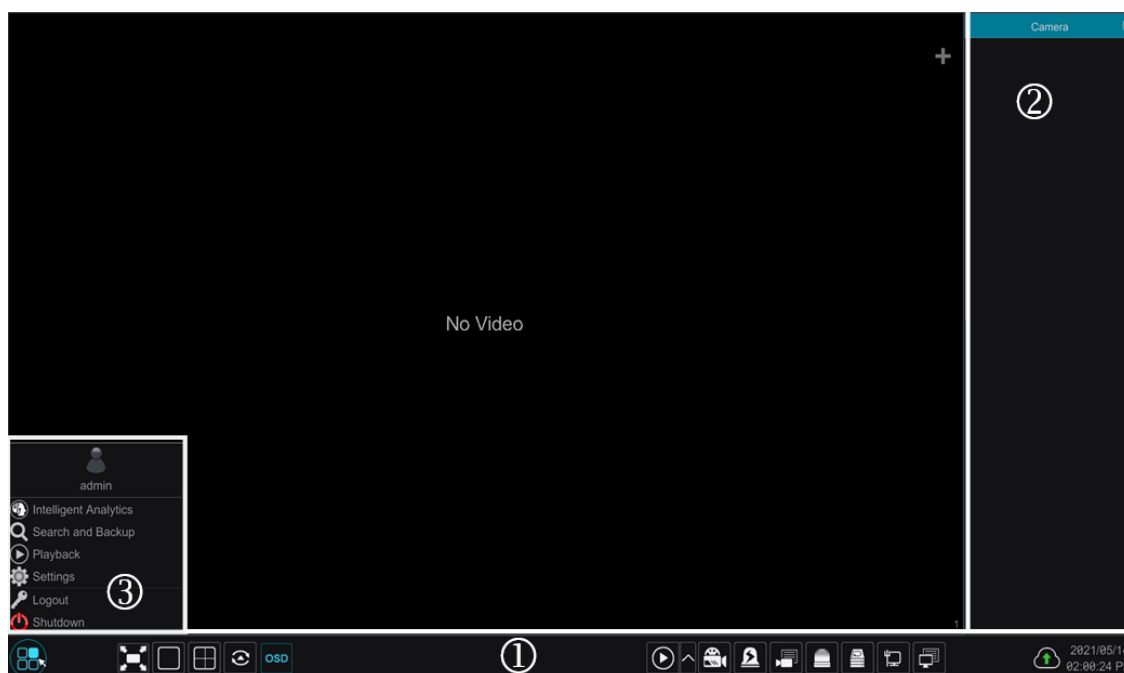


You will need to access Google PlayStore or AppleStore to search for, and install, the “Superlive Plus” mobile app by Peng Antai



2.4 Main Interface

2.4.1 Main Interface Introduction




The buttons in the lower area, labelled as 1. in the above screen menu, are listed in the table below.


Button	Meaning
	Start button. Click it to pop menu area ③.
	Full screen button. Click to show full screen; click again to exit full screen.
	Screen mode button (according to individual models).
	Dwell button.
	Click to enable OSD; click to disable OSD.
	Click to set the default playback time before starting instant playback or going to the playback interface for playback operations. Click to go to the playback interface. For instance, if you choose "5 minutes ago" as the default playback time, you will playback recordings from the past five minutes.
	Manual record button. Click to enable/disable record.
	Manual alarm button. Click to trigger or clear the alarm-out manually in the popup window.
	Record status button. Click to view the record status.
	Alarm status button. Click to view the alarm status.
	Disk status button. Click to view disk and RAID status.
	Network status button. Click to view network status.
	Information button. Click to view system information.
	Click button to enable cloud upgrade.


The buttons in the right-hand area, labelled as ② in the previous screen menu, are listed in the table below.

This area is hidden by default - move the cursor over the area to reveal it. Click "Camera" to view all the added cameras in the

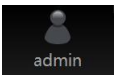







camera list. Select one camera window on the left side of the interface and then double click any camera in the list to preview the camera image in the selected window.

Click  on the top right corner and then select “Single Channel Sequences” to view all the added groups in the group list; click one group in the list to view all the added cameras in the group. Select one camera window on the left side of the interface and then double click one group in the group list to preview the cameras’ images one by one in the selected window.

Click  on the top right corner and then select “Customize Display Modes” to view all the display modes in the display mode list. Double click one display mode in the list to switch to the display mode for previewing.

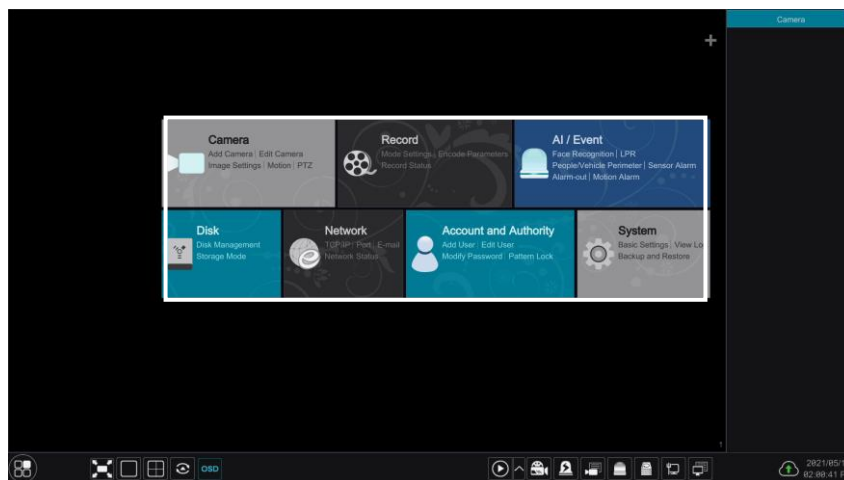
Click  on the top right corner and then select “Face Match” to go to face recognition interface. (This function is only available for models with face recognition function).

The buttons in the right-hand area, labelled as ③ in the previous screen menu, are listed in the table below.

Icon / Button	Meaning
	Shows current logged in user.
 Intelligent Analytics	Click to go to intelligent analytics interface
 Search and Backup	Click to go to record search interface.
 Playback	Click to go to playback interface (click  on the tool bar at the bottom of the live preview interface to set the default playback time).
 Settings	Click to pop up the setup panel.
 Logout	Click to log out the system.
 Shutdown	Click and then select “Logout”, “Reboot” or “Shutdown” in the popup window.

2.4.2 Setup Panel


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

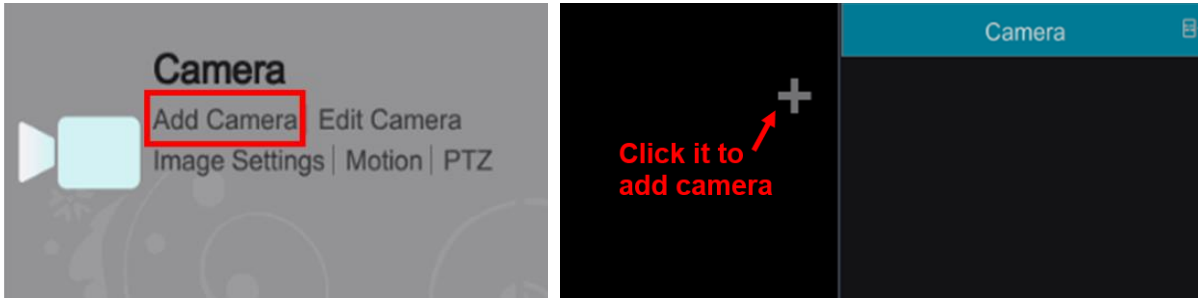


The setup panel (above) includes seven modules. Each provides related setup functions for all aspects of setting up the NVR recorder. Follow the relevant sections;


3. Camera Management

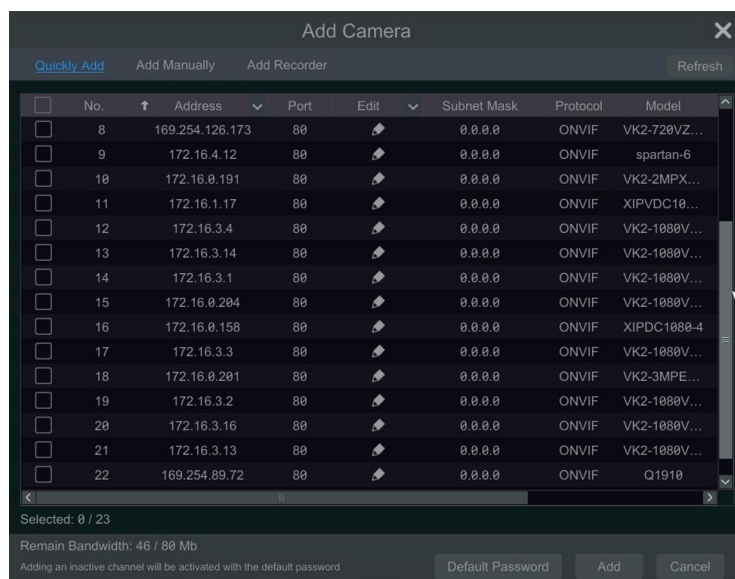
3.1 Add Camera

The IP settings of the NVR must be set before adding IP cameras! Referring to the images 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 either use Quickly Add, or manually add, IP cameras manually.





3.1.1 Add Quickly

Using screen below as an example, click-check the required cameras and then click “Add” to add them. Click  to edit the camera's IP address, username and password etc. Click “Default Password” to set the default username and password of each camera.



3.1.2 Add manually

Refer below and input the IP address, port, “Username” and “Password” of the camera required, then select the protocol. Click “Test” to test the validity of the input information and then click “Add” button. Click  to delete any required camera. Click “Default Password” to set the default username and password of each camera.






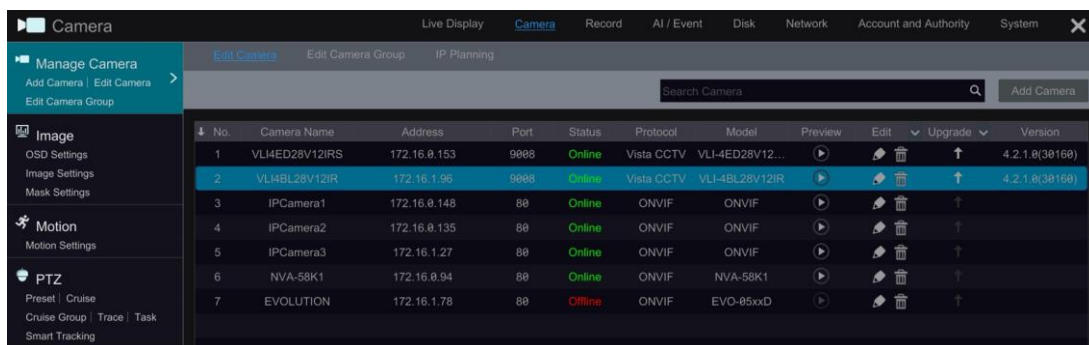
Address	Port	Username	Password	Protocol	Test	Delete
0.0.0.0	9008	admin	*****	IP Camera	Test	






















Remain Bandwidth: 63 / 80 Mb

Default Password Add Cancel

3.2 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. Click  to delete the camera.



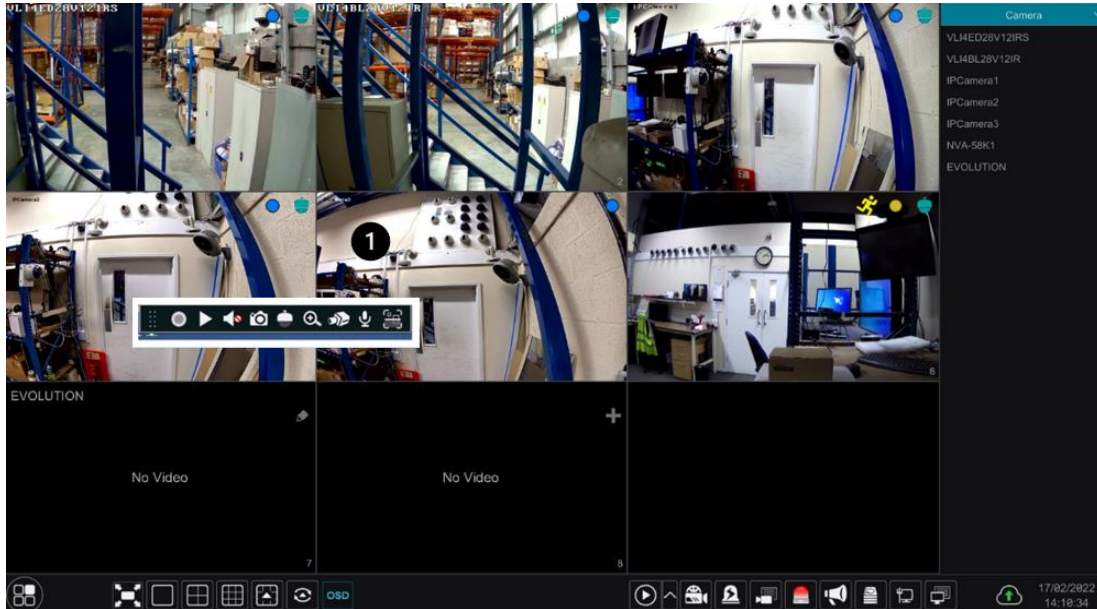
No.	Camera Name	Address	Port	Status	Protocol	Model	Preview	Edit	Upgrade	Version
1	VL4ED28V12IRS	172.16.0.153	9008	Online	Vista CCTV	VL4ED28V12...				4.2.1.0(38160)
2	VL4BL28V12IR	172.16.1.96	9008	Online	Vista CCTV	VL4BL28V12IR				4.2.1.0(38160)
3	IPCamera1	172.16.0.148	80	Online	ONVIF	ONVIF				↑
4	IPCamera2	172.16.0.135	80	Online	ONVIF	ONVIF				↑
5	IPCamera3	172.16.1.27	80	Online	ONVIF	ONVIF				↑
6	NVA-58K1	172.16.0.94	80	Online	ONVIF	NVA-58K1				↑
7	EVOLUTION	172.16.1.78	80	Offline	ONVIF	EVO-85xxD				↑

4. Live Display

4.1 Preview Interface

Cameras required for viewing of live and playback need to first be added to the recorder as shown in earlier sections.

Refer to the interface example shown below, drag the required camera in the preview window to another window for camera window exchanging.



Click the preview window to show the tool bar as shown in area ① above, right-click the preview window to show the menu list showing icons for manual record on, instant playback, enable audio, snap, zoom in, PTZ control and camera info.

The tool bar is explained in the table below.

Button	Menu List	Meaning
	--	Move tool. Click to move the tool bar to a new position on the screen.
	Manually Record On	Click to start manually recording the camera, if not already recording via a schedule.
	Instant Playback	Click to playback the cameras recording; either click "Instant Playback" or self-define the instant playback time.
	Enable Audio	Click to enable audio and listen to the camera's audio.
	Snap	Click to pop up the snap window. Click "Save" in the window to save the image. Click "Export" to export the image.
	PTZ Control	Click to go to PTZ control interface.
	Zoom In	Click to go to single camera channel interface.
	Image adjust	Click to go to image adjustment interface.
	Start/Close Talk	Click it to start talk.
	Target detection	Future Development

The single channel zoom interface is 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.

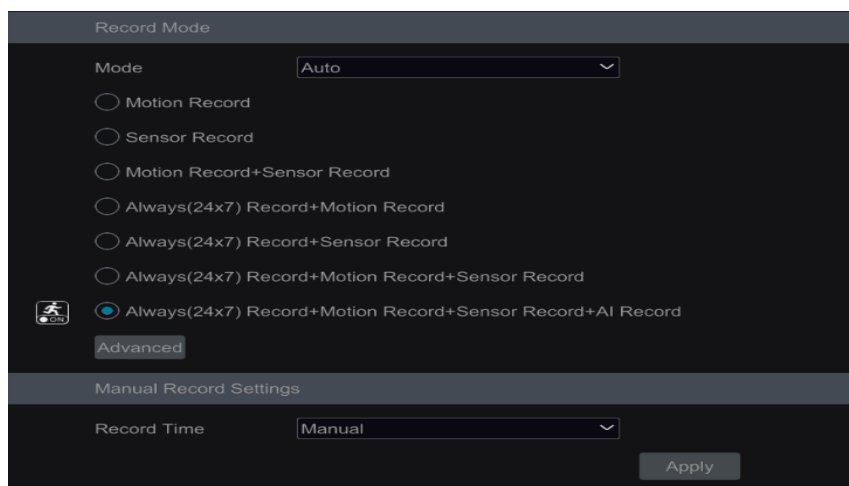


5. Record & Disk Management

5.1 Record

Note: please format the HDDs while installing the recorder and setting up recording for the first time.

To set a recording schedule, click Start → Settings → Record → Mode Settings to display the below interface. There are two record modes: auto mode for a global setting applied to all camera channels or alternatively manual mode for setting them individually.




5.1.1 Auto mode

The below Auto record modes are available and explained.

- **Motion Record:** Recording will only happen when motion alarm happens.
- **Sensor Record:** Recording will only happen when sensor alarm happens.
- **Motion Record+Sensor Record:** Recording will only happen when both motion and sensor alarms happen.
- **Always (24x7) Record+Motion Record:** Normal record is enabled all the time; motion alarm record will be started when motion alarm happens.
- **Always (24 x 7) Record+Sensor Record:** Normal record is enabled all the time; sensor alarm record will be started when sensor alarm happens.
- **Always (24 x 7) Record+Motion Record+Sensor Record:** Normal record is enabled all the time; motion/sensor alarm record will be enabled when both motion and sensor alarms happen.
- **Always (24 x 7) Record+Motion Record+Sensor Record+AI Record:** Normal record is enabled all the time; AI record will be enabled when AI event happens.

Select an auto mode to pop up the corresponding window (example below). Set the video encode, resolution, FPS, bitrate, audio of each camera and then click “OK” to save the settings.



Always(24x7) Record+Motion Record+Sensor Record										
Normal Motion Record+Sensor Record										
Camera Name	Stream Type	Encode	Resolution	FPS	Bitrate Type	Quality	Max Bitrate	Bitrate Limit Recommended Range	Audio	GOP
Camera5	Main Stream	H.264	784x488	7	--	--	2848Kbps	--		14
Camera5	Main Stream	H.264	784x488	7	--	--	2848Kbps	--		14

Video Encode: available options will be H.265 and H.264 – according to the camera supporting these.

Resolution: the higher the resolution, the clearer the image. Higher resolutions require more storage.

FPS: the higher the frame rate is the greater the motion capture and less motion blur. However, more storage is required.

Bitrate Type: CBR and VBR are optional. CBR constantly adjusts video compression to maintain a constant bitrate. VBR means the compression bitrate varies according to both the amount of detail and movement in a cameras scene. The higher these are then the greater the bandwidth and disk storage.

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.

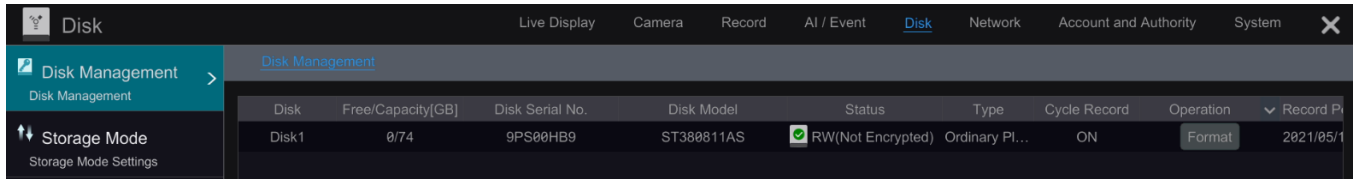
GOP: group of pictures. Can further help reduce network and storage bandwidth.

5.1.2 Manual Mode

If the manual mode is selected, you need to set the encode parameters and record schedules of each camera.

5.2 Disk Management

Click Start→Settings→Disk→Disk Management to go to disk management interface. You can view the NVR's disk number and disk status in the menu. Click “Format” button to format the HDD – if required.





Note:

1. If the HDD has been removed from an identical NVR of the same model, you can import the previous NVRs configuration file to the new NVR – if required.
2. For all other use, where the HDD came from a differing NVR or model, or is new, then simply format the HDD.

6. Playback & Backup



6.1 Instant Playback

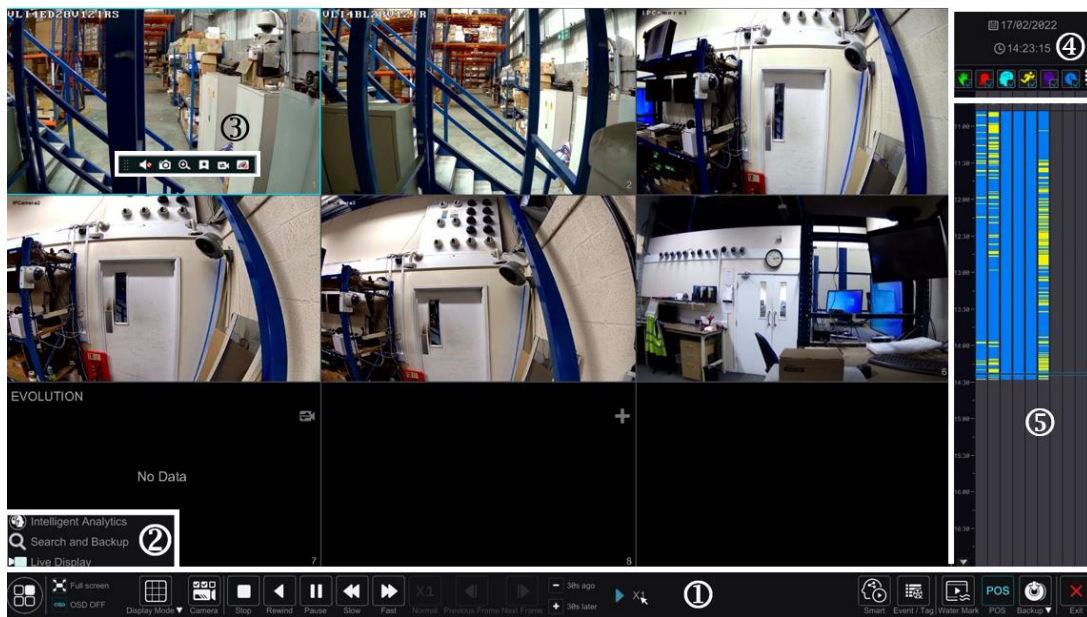
Click  on the tool bar at the bottom of any previewed camera window to play back the recording. Click  on the tool bar at the bottom of the live preview interface to set any required default playback time – 5-minutes etc.

Refer to the screen below. Drag the playback progress bar to change the playback time. You can also right-click the menu “Instant Playback” in the camera window and then change the instant playback time to use instead.




6.2 Playback Interface

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).

























Note: the numbered areas of the above screen example are mentioned below;

The added cameras will playback their records in the playback interface automatically. You can also add additional playback cameras manually, click  in the playback window to pop up the “Add Camera” window. Check the cameras in the window and then click “Add”.




The system supports a maximum of 16 synchronous playback cameras.

The buttons of the lower tool bar (area ① in above screen example) are explained below.












Button	Meaning
	Start button. Click to pop up area ②.
	Full screen button. Click to show full screen; click again to exit the full screen.
	OSD ON button. Click to enable OSD; click again to disable.
	Screen display mode button, click to select 4-way, 9-way etc.
	Quick channel selection button.
	Stop button.
	Rewind button. Click to play video backwards.
	Play button. Click to play video forwards.
	Pause button.
	Slow button. Click to decrease playing speed.
	Fast Forward button. Click to increase playing speed.
	Previous frame button – when playback is paused, will step backwards a single frame.
	Next frame button - when playback is paused, will step forwards a single frame.

Button	Meaning
	Click  to step backward 30s and click  to step forward 30s.
	Click to enter the smart playback interface.
	Event list/tag button. Click to view the event record of manual/schedule/sensor/ motion events.
	Watermark button. Click to enable watermark; click again to disable watermark.
	Open/close POS information. Future Development
	Backup button. First drag the mouse on the time scale to select the time periods and cameras, and then click backup button to back up the recording.
	Back button. Click to close and return.




Key for area ②:



Button	Meaning
 Intelligent Analytics	Click to go to the intelligent analytics interface. Future Development
 Search and Backup	Click to go to record search and backup interface.
 Live Display	Click to go to live preview interface.


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

Button	Menu List	Meaning
	--	Move tool. Click to move the tool bar to a new place on the screen.
	Enable Audio	Click to enable audio from the camera.
	Snap	Click to take a snapshot.
	Zoom In	Click to go to the zoom interface. The zoom 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 to add tag. You can play back the record by searching for added tags. Click it and then input the tag name in the popup window. Click “Add” to add tag.
	Switch Camera	Click to switch the playback camera. Click and then check the camera in the popup window. Click “OK” to change the camera.
	Close Camera	Click to close the playback camera.

Key for area ④:




Click  to set the date; click  to set the time and then the playback camera will play the record from the time you set. You can check the record type as required for record playback; first you should click  on the tool bar at the bottom of the interface to clear all the playback camera, then check the record type;



- : manual record
- : sensor based record
- : motion based record
- : schedule record
- : intelligence record
- : POS record)

Then finally click  on the playback window to add camera for playback (the record time scale will show the record data of the checked record type only after the above operations).


Introduction of the record time scale (area ⑤):

Refer to the previous screen example;

A tool bar will appear after moving the mouse to the record time scale. Click  /  to zoom the timeline; click  to recover the timeline to 24 hours' ratio. Drag the timeline or slide the scroll wheel of the mouse on the time scale to show the hidden time on the top or bottom of the timeline.

You can also click  to show the hidden time on the top of the timeline or click  to show the hidden time on the bottom of the timeline. Drag the slider at the bottom of the time scale to show the hidden playback cameras.

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

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

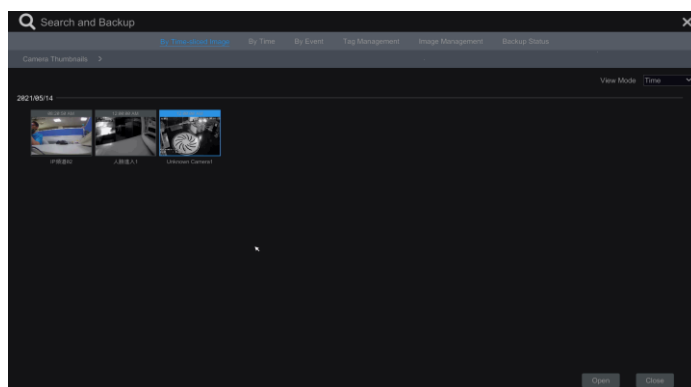
6.3 Record Search & Playback

6.3.1 Search & Playback by Time Sliced Image

① Click Start → Search and Backup → By Time-sliced Image to go to "By Time-sliced Image" tab.

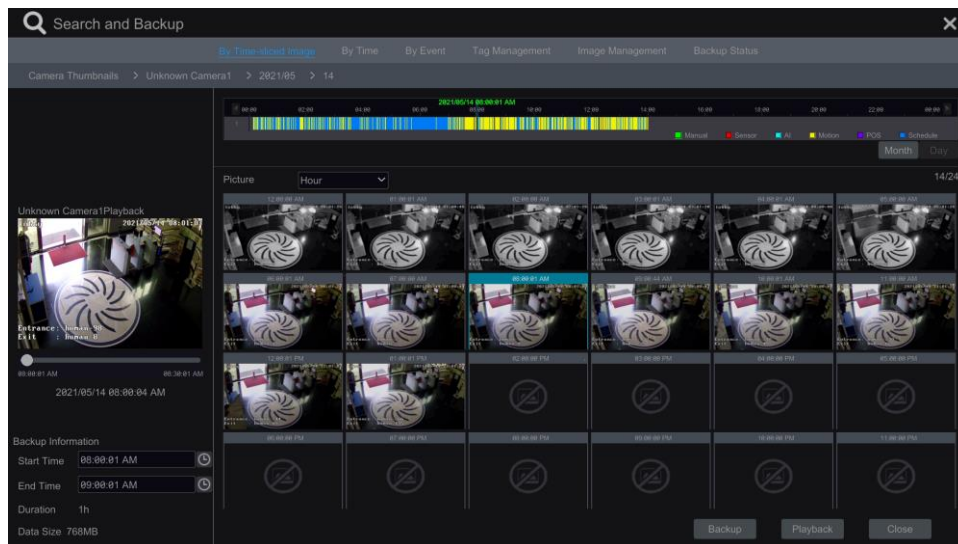
There are two modes: by time and by camera. In the time view mode, a maximum of 64 camera thumbnails can be showed. If the camera thumbnail number is more than 64, the cameras will be listed directly by their camera name, not the thumbnail.

A maximum of 196 camera names can be listed. If the camera name number is more than 196, the time view mode will be disabled and the camera view mode will be available only.



② Select a camera in the interface and then click "Open" button.

- ③ Click the image box to play the record in the small playback box on the left side of the interface (any box with thumbnail image inside indicates that recording data exists).
- ④ Refer to the picture below. Drag the colour blocks on the time scale to select the record data and then click “Backup” button to pop up a window; select the device, backup path and backup format in the window and then click “Backup” button to start the backup.
- ⑤ Click “Playback” button to play the record in the playback interface. Click “Close” to close the interface.



Time Slice Mode Selecting:

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

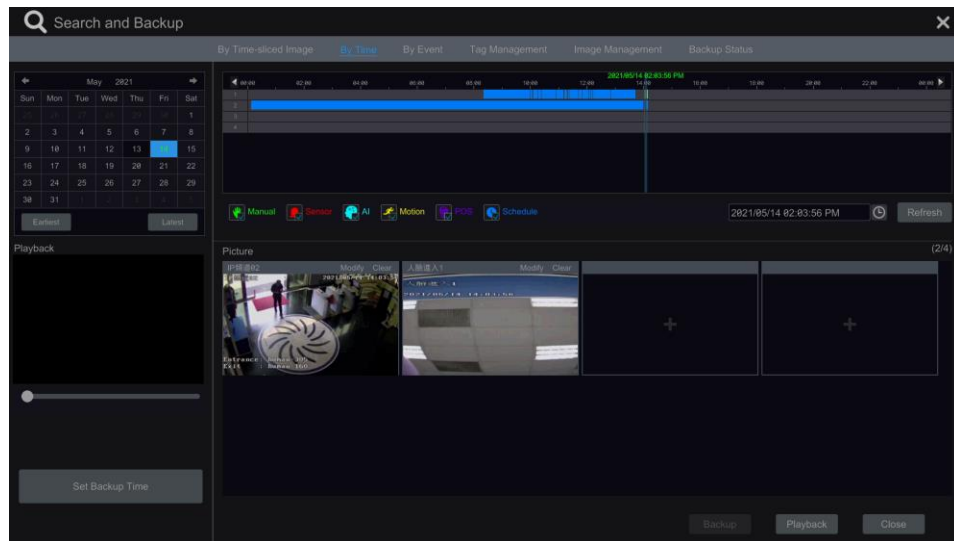
Method Two: Click ▶ beside “Camera Thumbnail” on the left top corner of the interface to select the time slice mode.

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

6.3.2 Search & Playback By Time

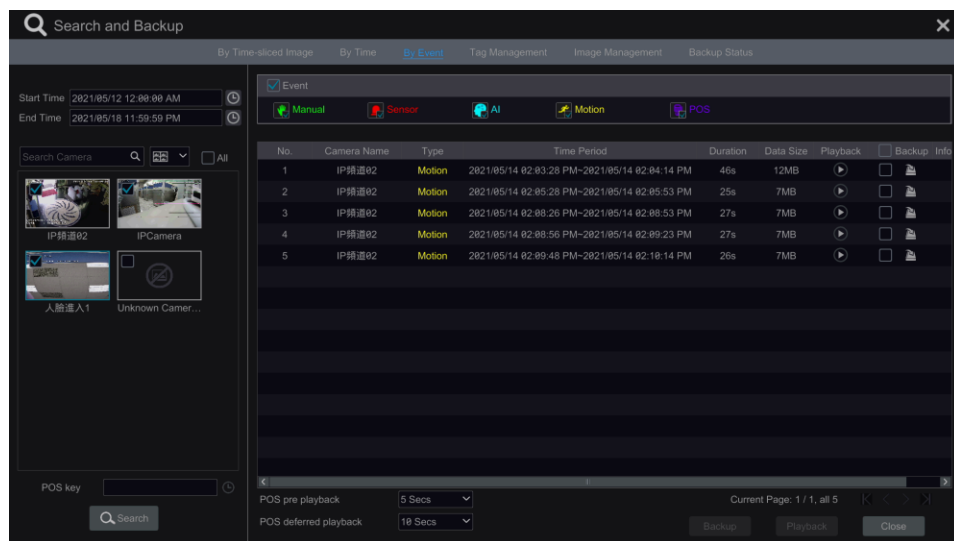
- ① Click Start → Search and Backup → By Time to go to “By Time” tab as shown below.
- ② Click + on the bottom of the interface to add playback camera. A maximum of 16 cameras can be added for playback. Click “Modify” on the top right corner of the camera window to change the camera and click “Clear” to remove the camera.
- ③ Click the camera window to play the record in the small playback box on the left side of the interface. You can set the date on the top left of the interface, check the event type as required and click ⌚, the time scale or click under the time scale to set the time. The camera window will play the record according to the time and event type you set.

- ④ Drag the colour blocks on the time scale to select the record data and then click “Backup” button for record backup. Click “Playback” button to play the record in the playback interface.



6.3.3 Search & Playback By Event


- ① Click Start → Search and Backup → By Event to go to “By Event” tab as shown below.















- ② Check the event type in the interface as required.
- ③ Click to set the start time and end time on the top left of the interface.
- ④ Check cameras on the left side of the interface and then click to search the record. The searched record will be displayed in the list.
- ⑤ Click in the list to play back the record in the popup window. Select one record data in the list and then click “Backup” button for record backup.
- ⑥ Select one record data in the list and then click “Playback” button to play the record in the playback interface.

6.3.4 Search & Playback by Tag Management

Only if you add the tags can you play the record by tag search. Click Start→Playback to go to the playback interface and then

click  on the bottom of the camera window to add tag when you want to mark the playback time point of the selected camera.

Click Start → Search and Backup → Tag Management to go to “Tag Management” tab. Click  in the interface to play the record. Click  to edit the tag name. Click  to delete the tag.

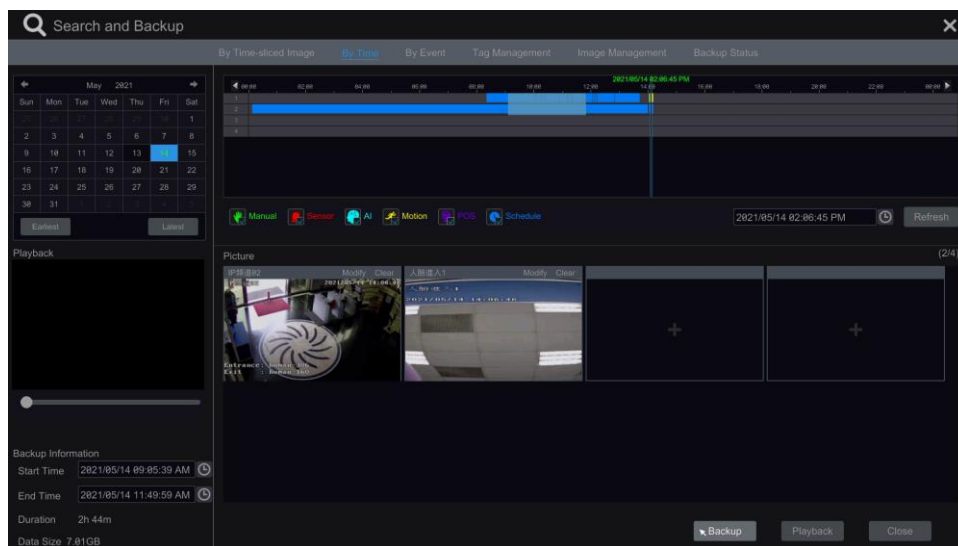
Search and Backup						
By Time-sliced Image By Time By Event Tag Management Image Management Backup Status						
No.	Name	Camera Name	Time	Playback	Edit	Delete
1	IP頻道02_20210514140601	IP頻道02	2021/05/14 02:06:01 PM			
2	IPCamera_20210514140612	IPCamera	2021/05/14 02:06:12 PM			
3	人臉進入1_20210514140608	人臉進入1	2021/05/14 02:06:08 PM			


6.4 Backup


The record data and the snapped pictures can be backed up through network, USB. The file system of the backup devices should be FAT32 format.

6.4.1 Backup by Time

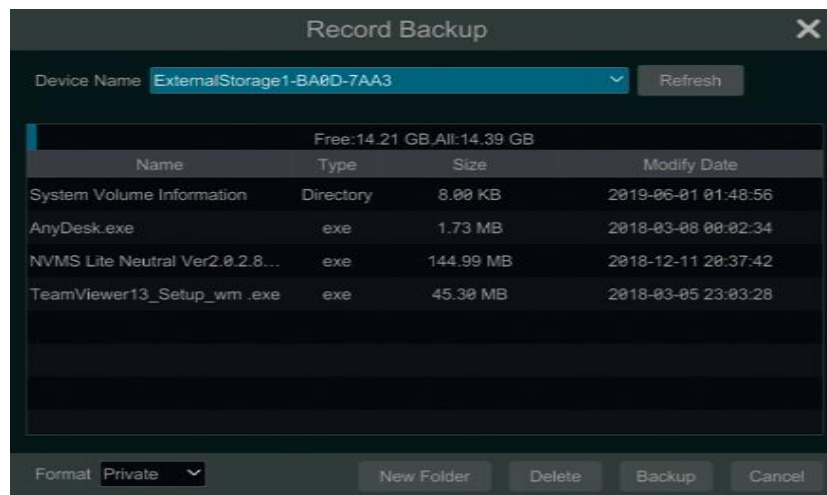
① Click Start → Search and Backup → By Time to go to the “By Time” tab.



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

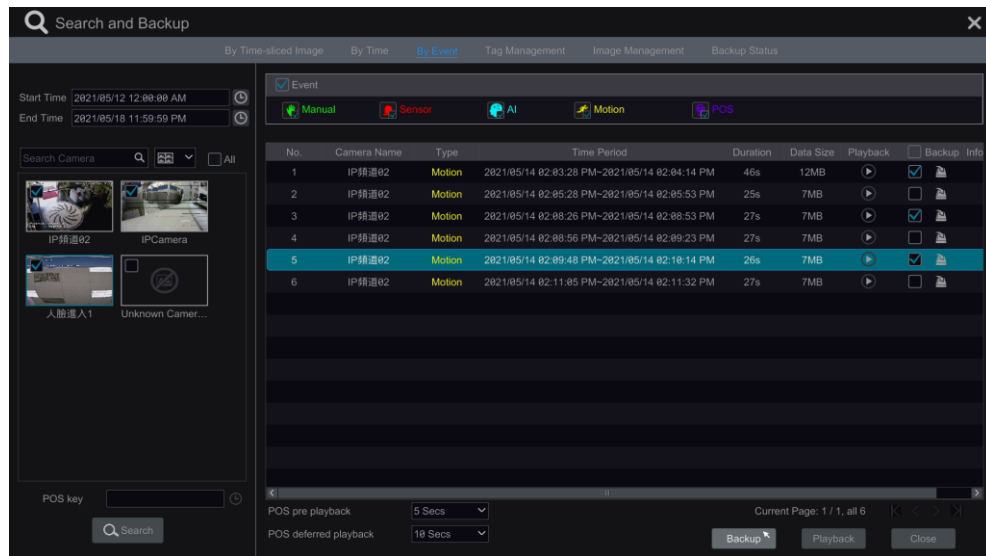
③ Set the date on the top left of the interface. Drag the time scale to set the backup time-period or click  under the time scale to set the backup start time and end time.

④ Click “Backup” button to pop up the “Record Backup” window as shown below. Select the device name, backup format and path and then click “Backup” button to start the backup.



6.4.1 Backup by Event

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



APPENDIX A Compatible Devices

1. Compatible USB drives.

Brand	Capacity
A-DATA	512MB, 1G, 2GB
Transcend	4GB
Kingston	2GB
Toshiba	2GB
SanDisk	4GB

2. Compatible external USB CD/DVD writers

Brand	Model
LG	GH24NS90

3. Compatible HDD

Brand	Model number	Capacity
Western Digital	WD10PURX FW:64D85Y0	1TB
	WD20PURX FW:64P6ZY0	2TB
	WD30PURX FW:64P6ZY0	3TB
	WD40PURX FW:64GVNY0	4TB
	WD40EURX FW:64WRWY0	4TB
	*WD60PURX FW:64LZMY0	6TB
SEAGATE	ST1000VX005 FW:CV12	1TB
	ST2000VX007(SkyHawk Lite) FW:CV11	2TB
	ST2000VX008 FW:CV12	2TB
	ST3000VX002 FW:CV12	3TB
	ST4000VX000 FW:CV11	4TB
	ST6000VX0003 FW:SC60	6TB
	ST8000VX0002 FW:AV01	8TB
	ST10000VX0004 FW:AV01	10 TB
TOSHIBA	HCS5C1050DLE630 FW:620DT01ABA050V	500GB
	DT01ABA100	1TB
	DT01ACA100	1TB
	MD06ACA600V FW:0603	6TB
	MD06ACA800V FW:0603	8TB
	MD06ACA10TV FW:0603	10 TB

***Power adapter greater than 12V, 3A required to support 6TB HDD.**

APPENDIX B Specification

Model	4CH	8CH	16CH
Compression format	H.265S / H.265+ / H.265 / H.264 Main Profile		
Video output	VGA × 1, HDM Ix 1		
Support IP camera	4	8	16
POE	4 ports	8 ports	16 ports
HDMI/VGA Resolution	HDMI × 1 : 3840 × 2160 / 1920 × 1080 / 1280 × 1024 / 1024 × 768 VGA ×1 : 1920 ×1080 / 1280 ×1024 / 1024 × 768		
Record Resolution	8MP/ 6MP / 5MP / 4MP / 3MP / 1080P / 1280 × 1024 /960P / 720P / 960H / D1 / CIF		
Audio Input	RCA × 1 (Two-way voice)		
Audio output	RCA × 1		
Record Mode	Manual / Schedule / Motion / Sensor detection		
Network Interface	RJ45		
PTZ control	YES		
Communication interface	USB 2.0 × 2 (one for backup, another for USB mouse)		
Disk info	SATA3.0 × 1 (18TB)	SATA3.0 × 1 (18TB)	SATA3.0 × 2 (18TB)
Remote controller	Optional		
Power Supply	DC48V/1.25A	DC48V/2.5A	DC48V/3.75A
Temperature	-10°C-50°C		
Humidity	10%-90%		