IRONGUARD 16 POE

16CH H.265 8MP NVR

User's Manual

EverFocus

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EVERFOCUS ELECTRONICS CORPORATION

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16CH H.265 8MP NVR

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www.everfocus.com.tw

Disclaimer

All the images including product pictures or screen shots in this document are for example only. The images may vary depending on the product and software version. Information contained in this document is subject to change without notice.

Copyright

Safety Precautions

- Refer all work related to the installation of this product to qualified service personnel or system installers.

- Do not block the ventilation openings or slots on the cover.

- Do not drop metallic parts through slots. This could permanently damage the appliance. Turn the power off immediately and contact qualified service personnel for service.

- Do not attempt to disassemble the appliance. To prevent electric shock, do not remove screws or covers. There are no user-serviceable parts inside. Contact qualified service personnel for maintenance. Handle the appliance with care. Do not strike or shake, as this may damage the appliance.

- Do not expose the appliance to water or moisture, nor try to operate it in wet areas. Do take immediate action if the appliance becomes wet. Turn the power off and refer servicing to qualified service personnel. Moisture may damage the appliance and also may cause electric shock.

- Do not use strong or abrasive detergents when cleaning the appliance body. Use a dry cloth to clean the appliance when it is dirty. When the dirt is hard to remove, use a mild detergent and wipe gently.

- Do not overload outlets and extension cords as this may result in a risk of fire or electric shock.

- Do not operate the appliance beyond its specified temperature, humidity or power source ratings. Do not use the appliance in an extreme environment where high temperature or high humidity exists. Use the NVR at temperatures within 0°C~40°C / 32°F~104°F (Storage). The input power source is 12VDC.

- **Read Instructions**
  All the safety and operating instructions should be read before the unit is operated.

- **Retain Instructions**
  The safety and operating instructions should be retained for future reference.

- **Heed Warnings**
  All warnings on the unit and in the operating instructions should be adhered to.

- **Follow Instructions**
  All operating and use instructions should be followed.

- **Cleaning**
  Unplug the unit from the outlet before cleaning. Do not use liquid cleaners, abrasive or aerosol cleaners. Use a damp cloth for cleaning.

- **Attachments**
  Do not use attachments not recommended by the product manufacturer as they may cause hazards.

- **Water and Moisture**
  Do not use this unit near water-for example, near a bath tub, wash bowl, kitchen sink, or laundry tub, in a wet basement, near a swimming pool, in an unprotected outdoor installation, or any area which is classified as a wet location.

- **Servicing**
  Do not attempt to service this unit by yourself as opening or removing covers may expose you to dangerous voltage or other hazards. Refer all servicing to qualified service personnel.

- **Power Cord Protection**
  Power supply cords should be routed so that they are not likely to be walked on or pinched by items placed upon or against them, playing particular attention to cords and plugs, convenience receptacles, and the point where they exit from the appliance.

- **Object and Liquid Entry**
  Never push objects of any kind into this unit through openings as they may touch dangerous voltage points or short-out parts that could result in a fire or electric shock. Never spill liquid of any kind on the unit.

- **RTC (Real Time Clock) Battery**
  When encounter failure of time calibration of your NVR, the issue may be caused by running-out of RTC battery. Users will have to change the RTC battery on the main board of the NVR.

CE

ATTENTION! This is a class A product which may cause radio interference in a domestic environment; in this case, the user may be urged to take adequate measures.

Federal Communication Commission Interference Statement

This equipment has been tested and found to comply with the limits for a Class B digital device, pursuant to Part 15 of the FCC Rules. These limits are designed to provide reasonable protection against harmful interference in a residential installation. This equipment generates, uses and can radiate radio frequency energy and, if not installed and used in accordance with the instructions, may cause harmful interference to radio communications. However, there is no guarantee that interference will not occur in a particular installation. If this equipment does cause harmful interference to radio or television reception, which can be determined by turning the equipment off and on, the user is encouraged to try to correct the interference by one of the following measures:

- Reorient or relocate the receiving antenna.
- Increase the separation between the equipment and receiver.
- Connect the equipment into an outlet on a circuit different from that to which the receiver is connected.
- Consult the dealer or an experienced radio/TV technician for help.

FCC Caution: Any changes or modifications not expressly approved by the party responsible for compliance could void the users' authority to operate this equipment.

This device complies with part 15 of the FCC Rules. Operation is subject to the following two conditions:
(1) This device may not cause harmful interference, and
(2) This device must accept any interference received, including interference that may cause undesired operation.

This Product is RoHS compliant.

WEEE

Your EverFocus product is designed and manufactured with high quality materials and components which can be recycled and reused. This symbol means that electrical and electronic equipment, at their end-of-life, should be disposed of separately from your household waste. Please, dispose of this equipment at your local community waste collection/recycling centre. In the European Union there are separate collection systems for used electrical and electronic product.
Please, help us to conserve the environment we live in!

This product complies with the High-Definition Multimedia Interface (HDMI) Specification Adopter Agreement.

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Chapter

1

1. Introduction

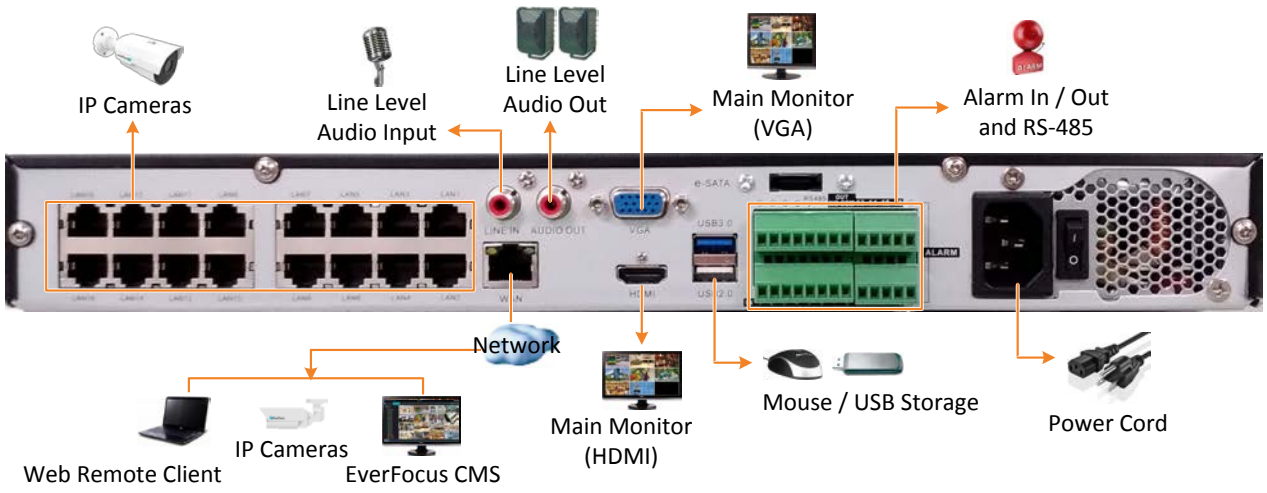
EverFocus' H.265 NVR, IRONGUARD 16 POE, supports 16 channels 8MP (4K) IP cameras. The model comes with 16 PoE ports (802.3at) for connecting to the IP cameras. A 1Gbps Ethernet port is also provided for internet connection.

IRONGUARD 16 POE supports AI Face Recognition and IVS functions. Users can utilize the AI function for access control or use the IVS functions, such as Perimeter Intrusion Detection, Line Crossing Detection, Object Detection, Pedestrian Detection and Cross-Counting Detection for security purpose.

Operating on a Linux-based system, the IRONGUARD 16 POE is able to install up to 2 SATA HDDs with 8TB storage capacity per HDD. Besides, the NVR also supports one e-SATA port for connecting to the external backup storage. The model also features cloud storage for users to backup recordings or snapshot images to the FTP sites or Dropbox.

The IRONGUARD 16 POE supports multi-channel playback at multiple speed options and easy data search by event, snapshot, tags or sub-periods. Users may enable and perform the specified functions through the local OSD menu or Web interface. Furthermore, you can output the video to a 4K monitor through HDMI; or use EverFocus' mobile APP, eFVMS, to remotely view camera streams from NVR through your handheld devices; or use EverFocus CMS video management system for remote management.

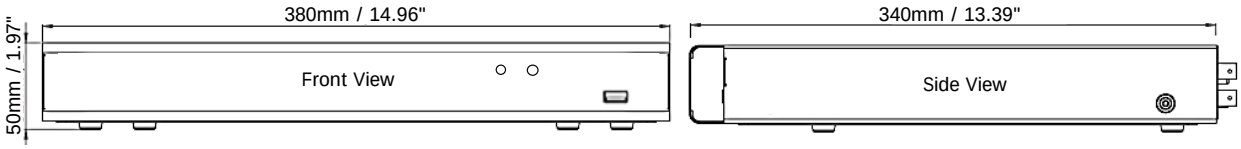
EverFocus' IRONGUARD 16 POE NVR is the best choice for a complete IP surveillance solution. It is versatile, flexible and well catered to the needs of the industry.



1.1 Features

- Supports 8MP (4K) IP camera up to 16 channels
- Supports 16 PoE ports
- Supports H.265 / H.264 compression format
- Supports 2 HDDs (8TB / HDD)
- Supports 1 e-SATA port
- Supports ONVIF 2.0 IP cameras
- Supports AI and IVS functions
- Control methods: mouse / IR remote controller
- Integrates with EverFocus CMS
- Supports mobile App: eFVMS App

1.2 Dimensions



1.3 Packing List

• NVR x 1 • Power Cord x 1 • Mouse x 1 • HDD Screw x 8	• Quick Installation Guide x 1 • CD x 1 (see Note 3) • IR Remote Control (with 2 AAA batteries) x 1 (see Note 4)

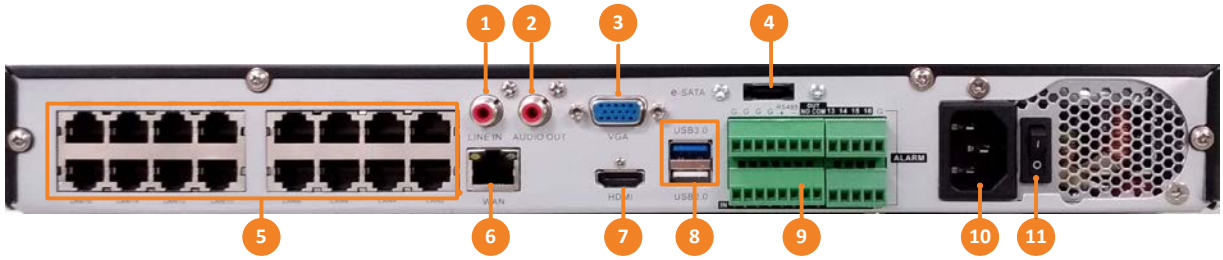
Note:

1. Equipment configurations and supplied accessories vary by country. Please consult your local EverFocus office or agents for more information. Please also keep the shipping carton for possible future use.
2. Contact the shipper if any items appear to have been damaged in the shipping process.
3. The CD contains the IP Utility software, User Manual and Quick Installation Guide.
4. Risk of explosion if battery is replaced by an incorrect type. Dispose of used batteries according to the instructions.
   a. Use only two AAA dry cell batteries.
   b. Do not dispose of the batteries in a fire as it may explode.

1.4 Front Panel

No.	Name	Description
1	**IR Receiver**	Receiver for signals from the IR remote control. Please refer to *Appendix A. IR Remote Control*.
2	**LED Indicator**	**Power:** When power is on, the LED will continue lighting in green. **HDD:** When power is on, the LED will continue lighting in red. When HDD is reading/writing data, the LED will flashes red.
3	**USB2.0 Port**	USB2.0 port for connecting to a mouse or an external storage device.

1.5 Rear Panel



No.	Name	Description
1	**Audio Input**	Connects to audio input devices, such as microphones. Note that the microphones with a (built-in) amplifier and external power supply are required.
2	**Audio Output**	Connects to an audio output device, such as speakers. Note that the speakers with a (built-in) amplifier and external power supply are required.
3	**VGA Port**	Connects to a monitor using a VGA cable.
4	**e-SATA**	Connects to an external e-SATA storage device.
5	**Video Input**	LAN (PoE) ports for connecting to the IP cameras.
6	**WAN**	Connects to the Network.
7	**HDMI Port**	Connects to a monitor using a HDMI cable.
8	**USB2.0 Port** **USB3.0 Port**	USB ports for connecting to a mouse or an external storage device.
9	**Terminal Block**	The Terminal Block provides alarm inputs, alarm output and RS-485 connection. Please refer to *2.2.1 Terminal Block*.
10	**Power Port**	Connects to a 12VDC power source.
11	**Power Switch**	Press to turn on or off the power.

Chapter
2

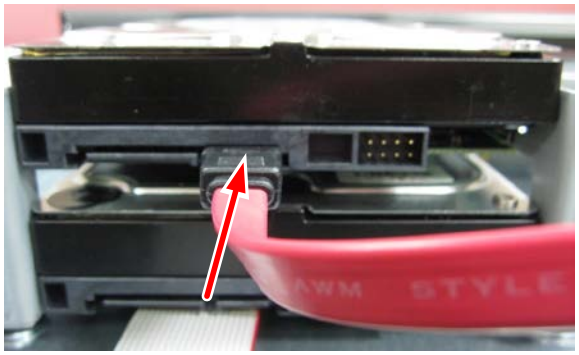
2. Connection and Installation

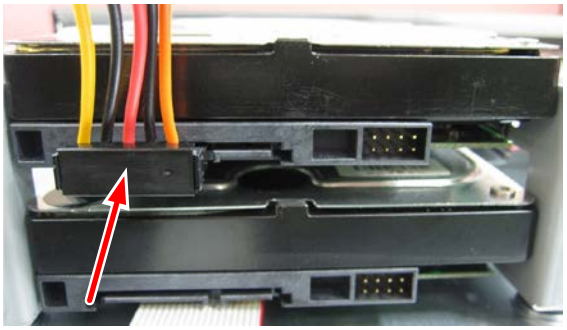
2.1 Hard Disk Installation

You can install two 3.5” HDDs inside the NVR for recording videos. The maximum capacity of each HDD is 8TB.

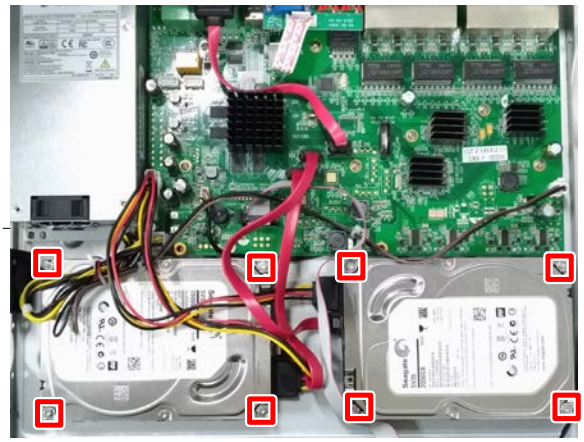
1. Make sure the NVR is power-off.
2. Unscrew the eight housing screws (4 on the rear panel, 2 on the left and right side each). To remove the housing cover from the NVR, push the cover backward and then lift it.

3. Find the SATA cable inside the NVR, and connect the SATA cable to the SATA port on the HDD (left image). Find the internal power cable, and connect the internal power cable to the HDD (right image).





4. Place the HDDs inside the NVR, screw the HDDs from the bottom side of the NVR using the supplied Screws.



5. Screw the housing cover back to the NVR.

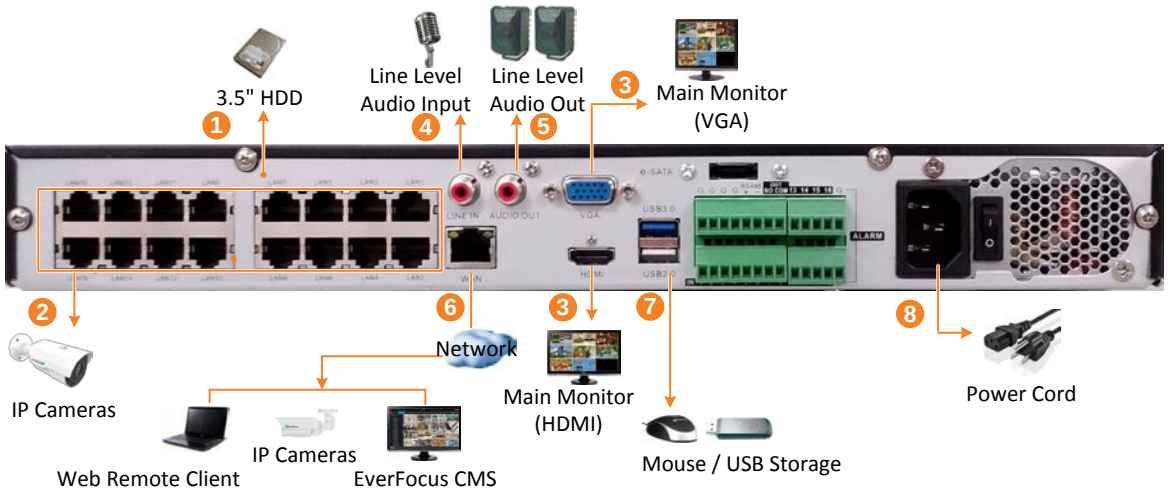
2.1.1 Hard Disk Compatibility List

Please go to the product page (Download) on EverFocus' Website www.everfocus.com.tw to see the latest Storage Compatibility List. It's recommended to use the hard disk models listed on the Storage Compatibility List to ensure your hard disks are compatible.

Note: If using two or more hard disks, please choose the hard disks with the same capacity.

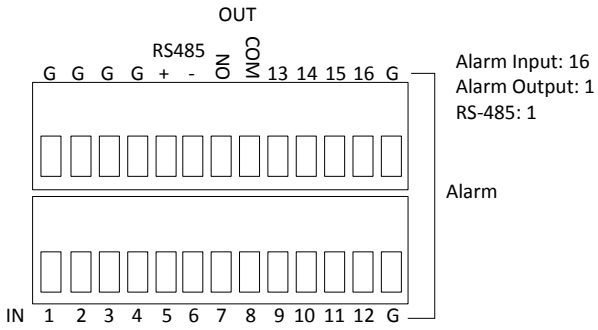
2.2 Basic Connection

The instructions below describe the basic connection to the NVR.



1. To record videos, install 3.5” HDD(s) to the NVR. Please refer to *2.1 Hard Disk Installation*.
2. To connect to the IP cameras, connect the cameras to the LAN (PoE) ports.
3. To view videos at local site, connect a monitor to the HDMI or VGA port using the HDMI or VGA cable supplied by the monitor manufacturer.
4. Connect microphones to the audio input ports to transmit audio from the NVR to the remote sites (Web browser of NVR, eFVMS App or EverFocus CMS). Note that the microphones with a (built-in) amplifier and external power supply are required.
5. To listen to the audio from IP cameras or remote sites, connect speakers to the audio output. Note that the speakers with a (built-in) amplifier and external power supply are required.
6. Use a standard RJ-45 CAT5 Ethernet cable to connect the NVR to the network.
7. Optionally connect a mouse to the NVR to control the system. You can also control the system using the supplied IR Remote Control (*Appendix A. IR Remote Control*).
8. Use the supplied Power Cord to connect the NVR to the power outlet.

2.2.1 Terminal Block

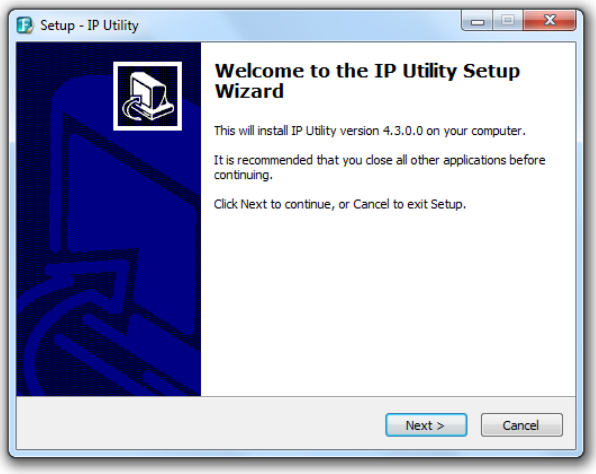


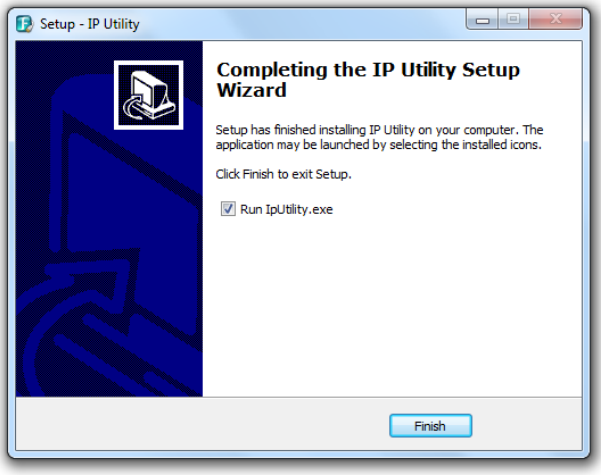
2.3 Accessing the Web Interface

You can look up the IP address and access the Web interface of the NVR using the **IP Utility (IPU)** program, which is included in the software CD. The IP Utility can also be downloaded from EverFocus' Website: http://www.everfocus.com.tw/product/ip-utility/

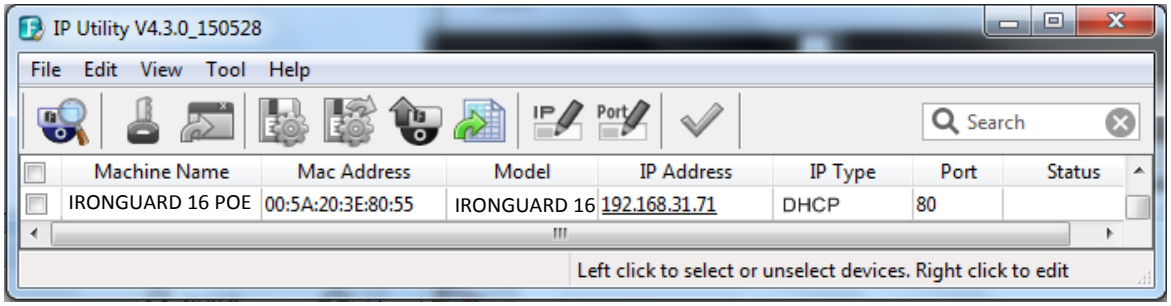
Please connect the NVR on the same LAN of your computer.

1. Save **IP Utility Setup .exe** in your computer. Double click the .exe file and follow the on-screen instructions to install the IP Utility.

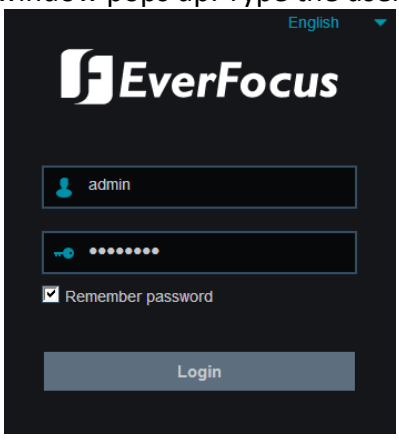




2. Click the **Finish** button, the IP Utility will be automatically launched to search the IP devices connected on the same LAN.

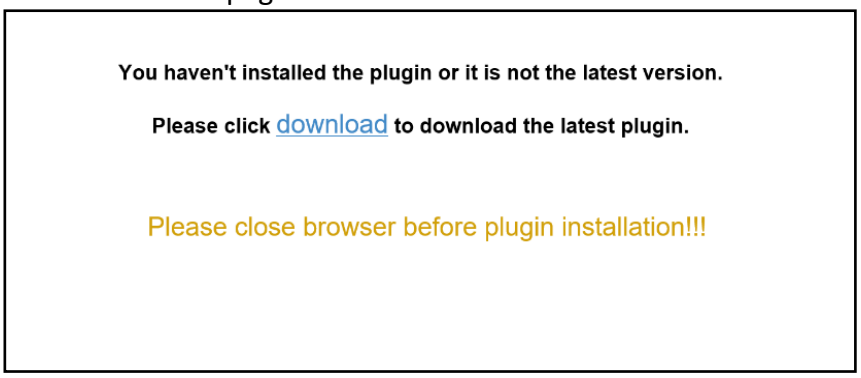


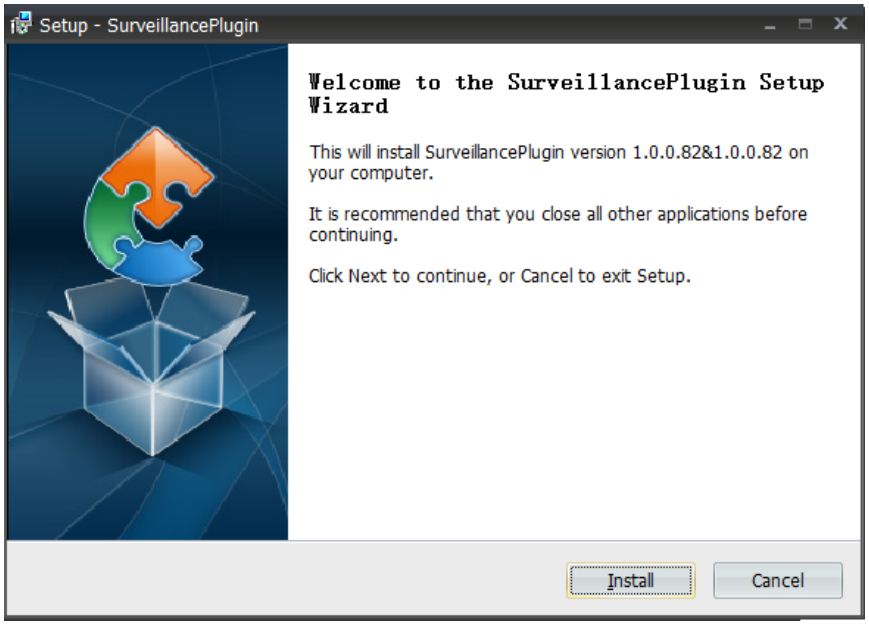
3. To access the Live View window, double click the IP address of the desired device, the login window pops up. Type the user ID and password to log in.



Note for the first time login:

- When the Plug-in blocked appears on the browser, click **download** to download the plug-in and install to your computer. Reload the webpage and you should see the remote live view page now.

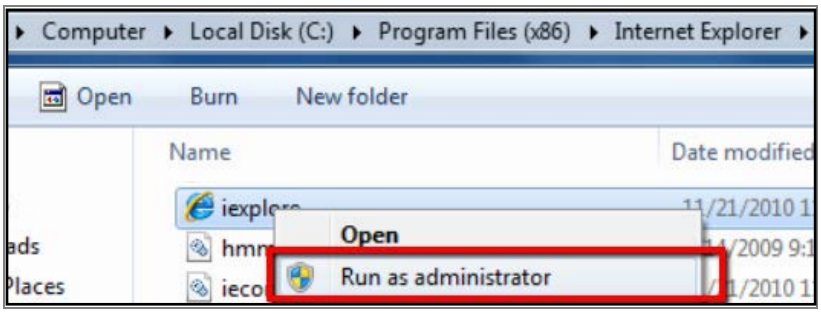




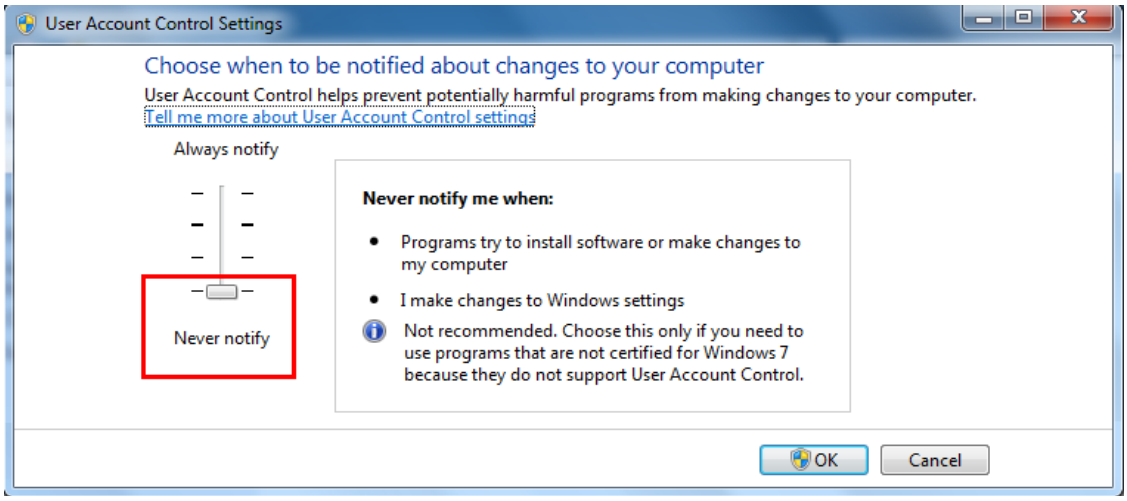
If you encounter the following problem or still can't access the remote Web interface, please follow the instructions below:

- If the ActiveX is not downloaded successfully, please check if your browser's safety level or firewall setting is set too high. Enable the following options on the Security Settings window (IE Browser < Tools < Internet Options < Security < Internet < Custom Level).
  - ✓ Automatic prompting for ActiveX controls
  - ✓ Script ActiveX controls marked safe for scripting

- If your PC or laptop is running with Windows, it's required to run the browser as administrator when first entering the remote web page of the device. Go to **C:\Program Files (x86)\Internet Explorer**, right-click the browser and then click **Run as administrator**.



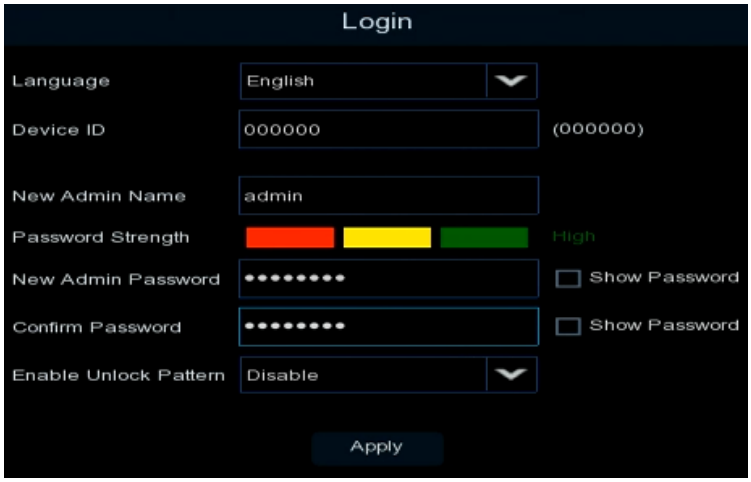
- If you are unable to backup or record during remote operation, you may need to turn off the firewall and turn **User Account Control** off.
  To turn **User Account Control** off, on the computer, **click Start > Control Panel > System and Security > Action Center** (click Change User Account Control Settings), the **User Account Control Settings** window appears. Adjust the slide bar to **Never Notify** and then click **OK**. Restart your computer if requested.



Chapter
3

3. Getting Started

After pressing the power switch to turn on the NVR, the NVR will enter the System Initialization process. When the process is done, it's required to set up a password for the administrator account immediately in order to protect your privacy.



Language: Select an OSD language.

Device ID: Input the device ID. The default ID is 000000. For more details about the Device ID, please refer to *4.9.1.1 General*.

New Admin name: Optionally input a name if you want to set up a name of the administrator account.

Password Strength: Displays the security strength of the setup password.

New Admin Password: Set up a password of the administrator account. The password must be a combination of at least 8 characters (alphabetic, numeric, or special characters).

Confirm Password: Enter the password again.

Enable Unlock Pattern: If you want to login the system with a pattern lock, select **Enable** from the drop-down list and then click the **Draw** button to draw a pattern. To disable the Unlock Pattern function, please refer to ***User Edit*** in *4.9.2 User Account*.

Apply: Click to save the settings.

After clicking the **Apply** button, the below Unlock page appears. Input the **User Name**, **Password** and then click **Unlock**.

3.1 Turning On / Off the Power

Before powering on the NVR, please make sure the internal HDDs have been installed properly. Once you have completed the basic cable connections, you are ready to turn on the NVR. Simply plug in the power source and then press the **Power Switch** on the rear panel of the NVR to turn on the NVR. The POWER LED will light up if power is normal. Once the system has finished loading, you can start setting up the menu options for the NVR.

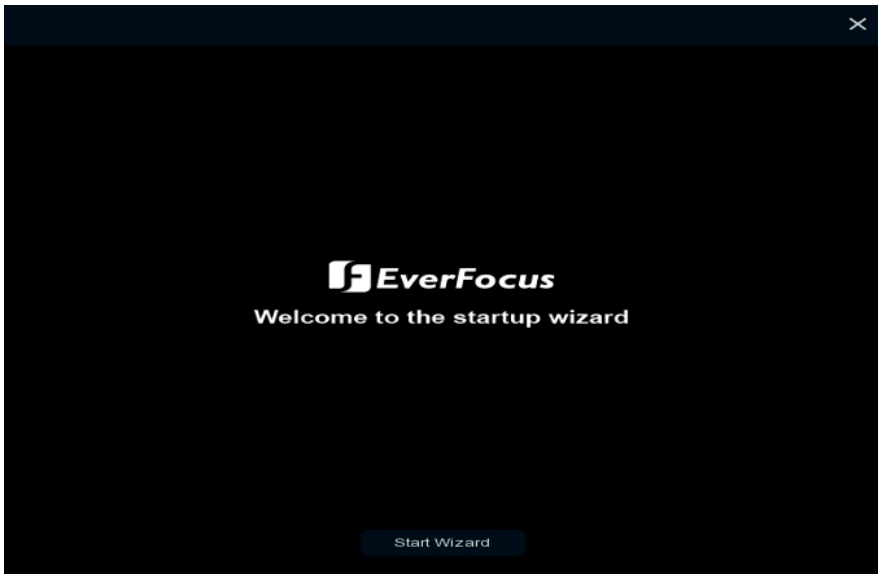
To turn off the power, please refer to ***Shutdown*** in *4.10 Exit* for more details.

3.2 Startup Wizard

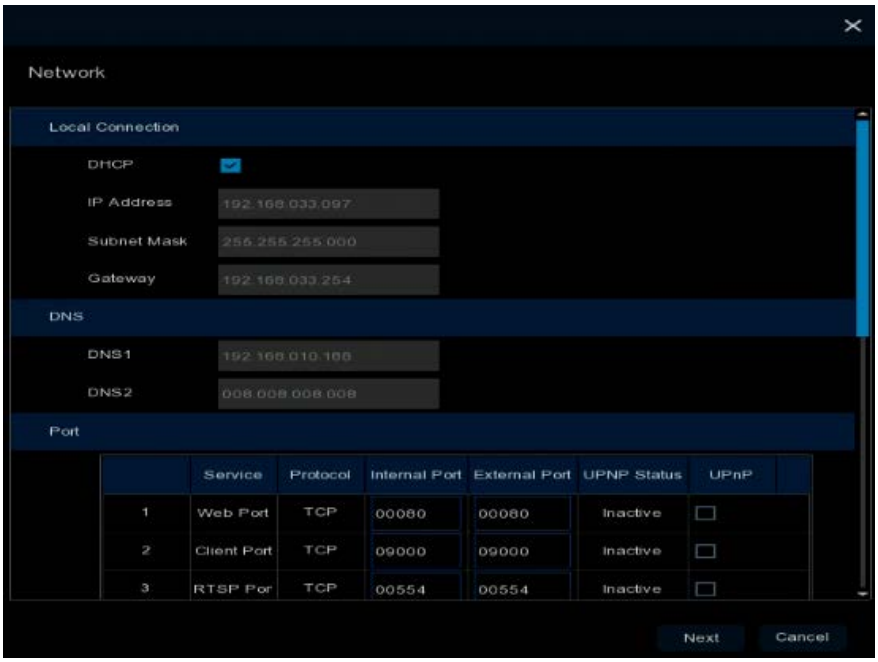
The Startup Wizard will guide you through some basic settings for the NVR. Please follow the on-screen instructions to proceed.

Note: If you don't want to run the startup Wizard to make any settings when you restart the NVR next time, you can go to **OSD Menu** > **System** > **General** and then uncheck the **Start wizard** function.

1. Click the **Start Wizard** button to start with the startup wizard.



2. Configure the Network settings. Click **Next** to proceed.



【Local Connection】

DHCP: For DHCP users, check DHCP, the router will automatically assign all the below IP parameters to the NVR.

IP Address: The IP address of the NVR. The IP address consists of four groups of numbers, separated by periods. For example, “192.168.001.100”.

Subnet Mask: Subnet mask is a network parameter which defines a range of IP addresses that can be used on a network. The subnet address also consists of four groups of numbers, separated by periods. For example, “255.255.000.000”.

Gateway: This address allows the NVR to access the Internet. The format of the Gateway address is the same as the IP Address. For example, “192.168.001.001”.

【DNS】

DNS1 is the primary DNS server and DNS2 is a backup DNS server. Usually, it’s enough to just enter the DNS1 server address.

【Port】

Web Port: The Web port can be used to remotely login the NVR (e.g. using the Web Client). If the default port 80 is already taken by other applications, please change it.

Client Port: The Client port can be used to send information through (e.g. using the mobile app). If the default port 9000 is already taken by other applications, please change it.

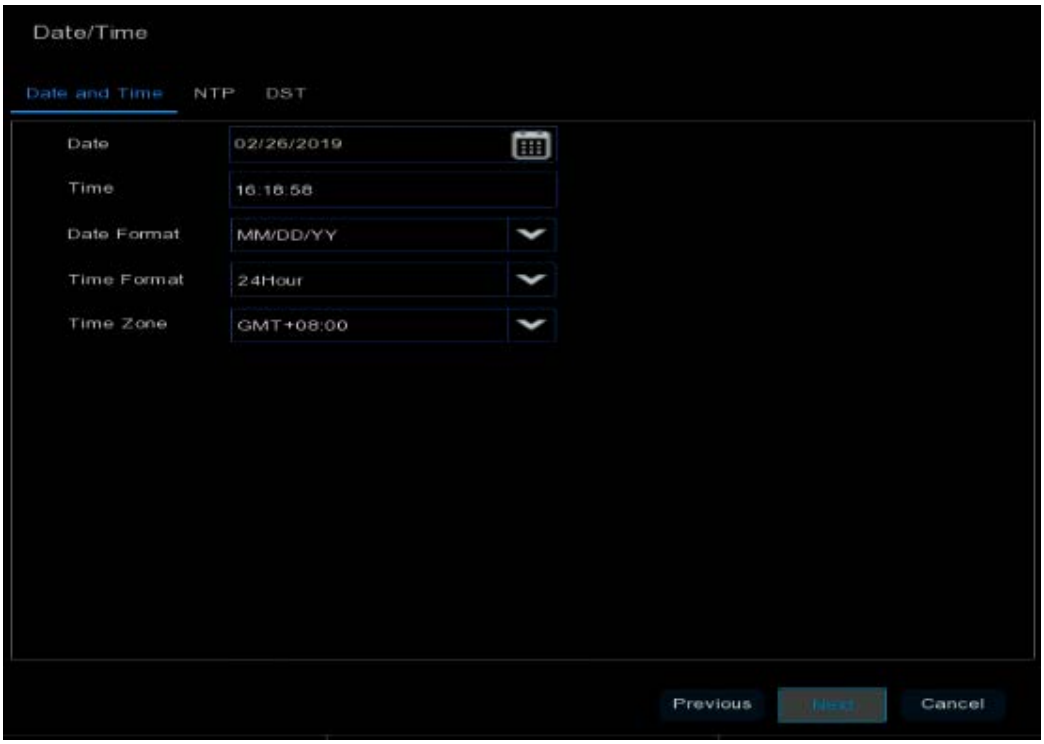
RTSP Port: The RTSP port allows the NVR to transmit real-time streaming to other devices (e.g. using a streaming media player).

HTTPS: The Hypertext Transfer Protocol Secure (HTTPS) is a combination of the Hypertext Transfer Protocol and the SSL/TLS protocol that provides encrypted communication and secure identification of a network web server.

【PPPoE】

PPPoE is an advanced protocol that allows the NVR to connect to the network via a DSL modem. To enable the PPPoE function, check **Enable PPPoE**, input the **User Name** and **Password** provided by your Internet Service Provider.

3. Configure the Date/Time settings. You can also configure the NTP and DST settings. Click **Next** to proceed.



【Date and Time】

Date: Click on the calendar icon to set the system date.

Time: Click to set the system time.

Date Format: Select a date format from the drop-down list.

Time Format: Select a time format from the drop-down list.

Time Zone: Select a time zone of your region.

【NTP】

NTP stands for Network Time Protocol. This feature allows you to synchronize the NVR date and time automatically over the Internet with the NTP server. Please ensure the NVR has been connected to the Internet before enabling the NTP function.
To enable NTP, check **Enable NTP**, select an NTP server from the drop-down list or input one of your region. Click **Update Now**.

【DST】

DST stands for Daylight Saving Time.

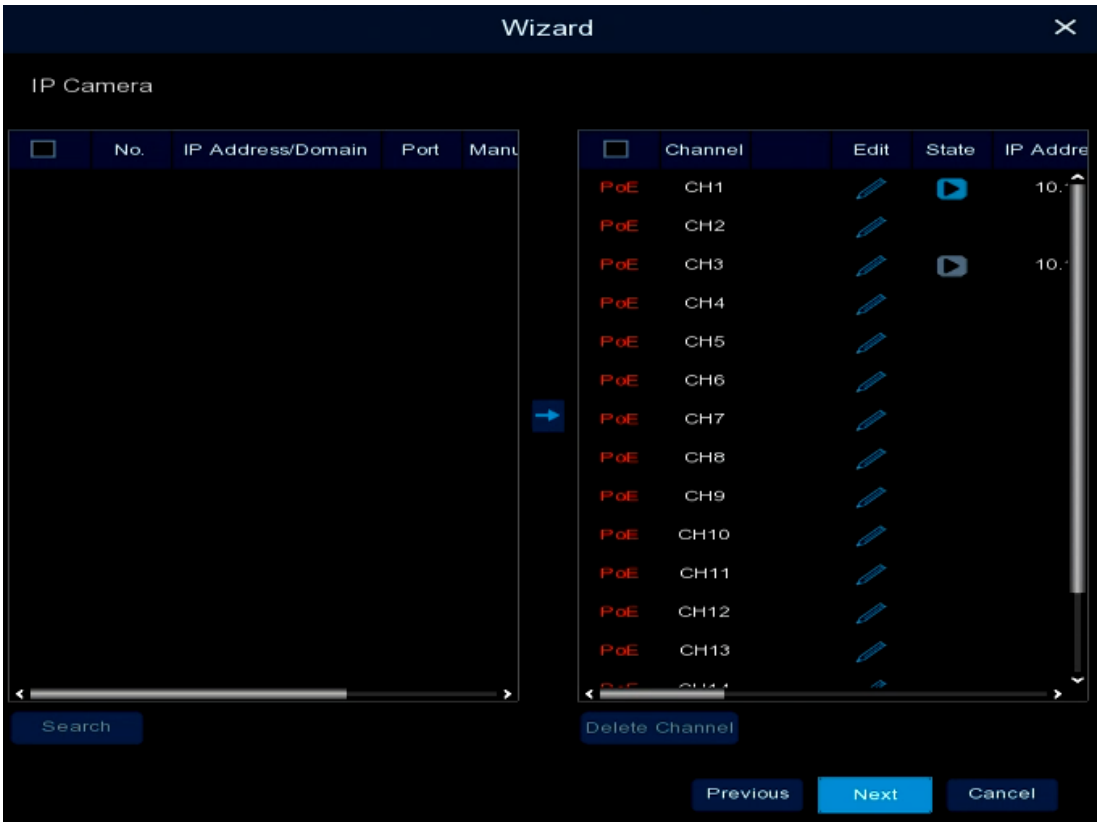
Enable DST: Check the box to enable the Daylight Saving Time (DST) function.

Time Offset: Select the amount of time to offset for DST.

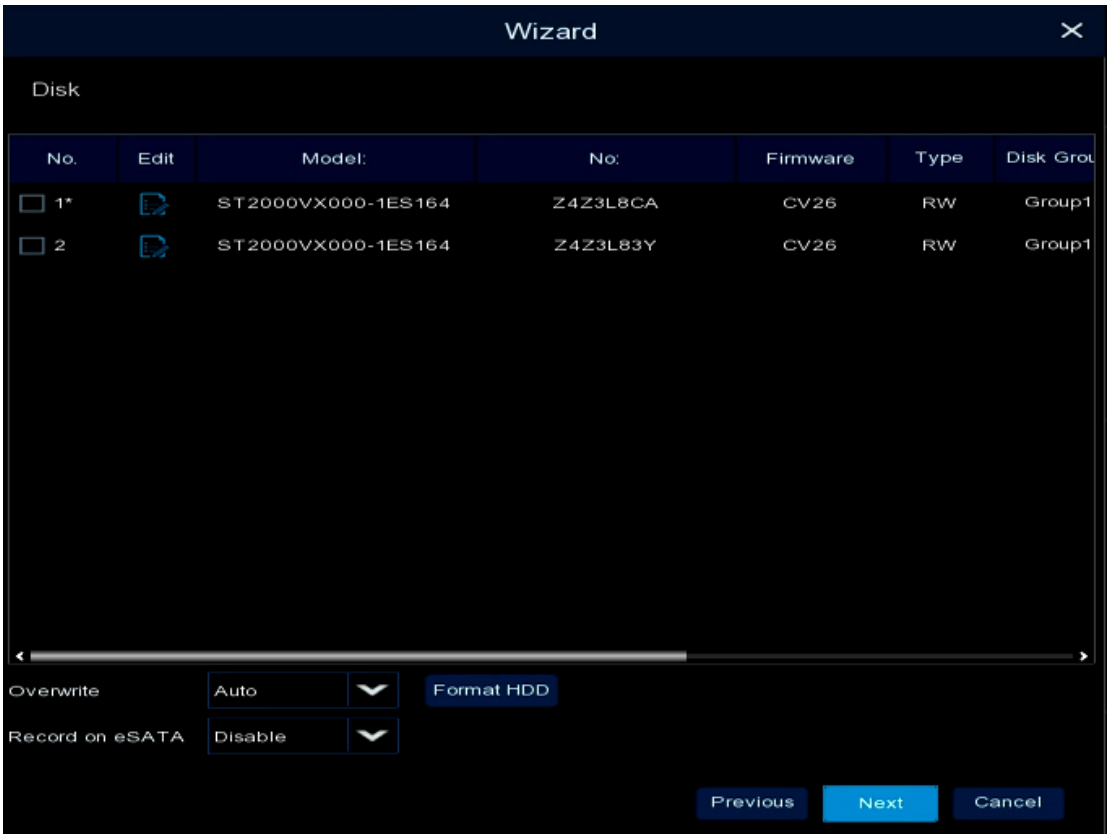
Daylight Saving Time: Choose to set up the daylight saving time in weeks or in days.

Start Time/End Time: Set the start time and end time for DST.

4. Add IP cameras to the NVR. By default, the system will automatically detect the IP cameras connected to the PoE ports of the NVR. Please refer to *4.1.1.2 IP Channels* for more details.



5. Configure the Disk settings. For the first time use HDD or a new HDD, users have to format the HDD before use. Select the HDDs you want to format by checking the checkbox in the **No** column and then click the **Format HDD** button. You can also setup to overwrite the HDD. Click **Next** to proceed.



Overwrite: Select **Auto** to enable the overwrite function; **Off** to disable the overwrite function. If **Auto** is selected, the NVR will overwrite the oldest files on the HDD when HDD is full. If Off is selected, please check the HDD status regularly, to make sure the HDD is not full.

The **1/3/7/14/30/90** Days stands for the last number of days to keep in the HDD. For example, if 3 Days is selected, the last 3 days recordings will be kept in the HDD.

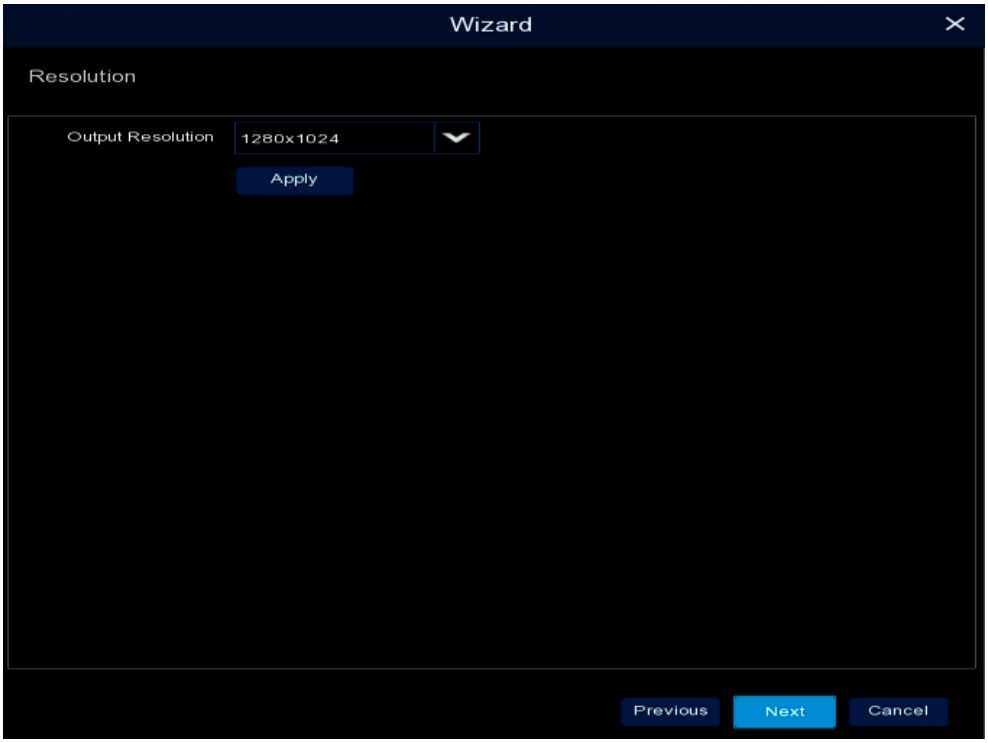
Format HDD: The first time use HDDs have to be formatted before you can use it. Select the desired HDDs and then click the **Format HDD** button to format the selected HDDs. Note that only the HDDs with "Unformat" status displayed in the State column are required to format or the recording function will not work. WARNING: This will effectively ERASE the ENTIRE hard disk!! Please backup the data from HDDs before formatting the HDDs.

Note:

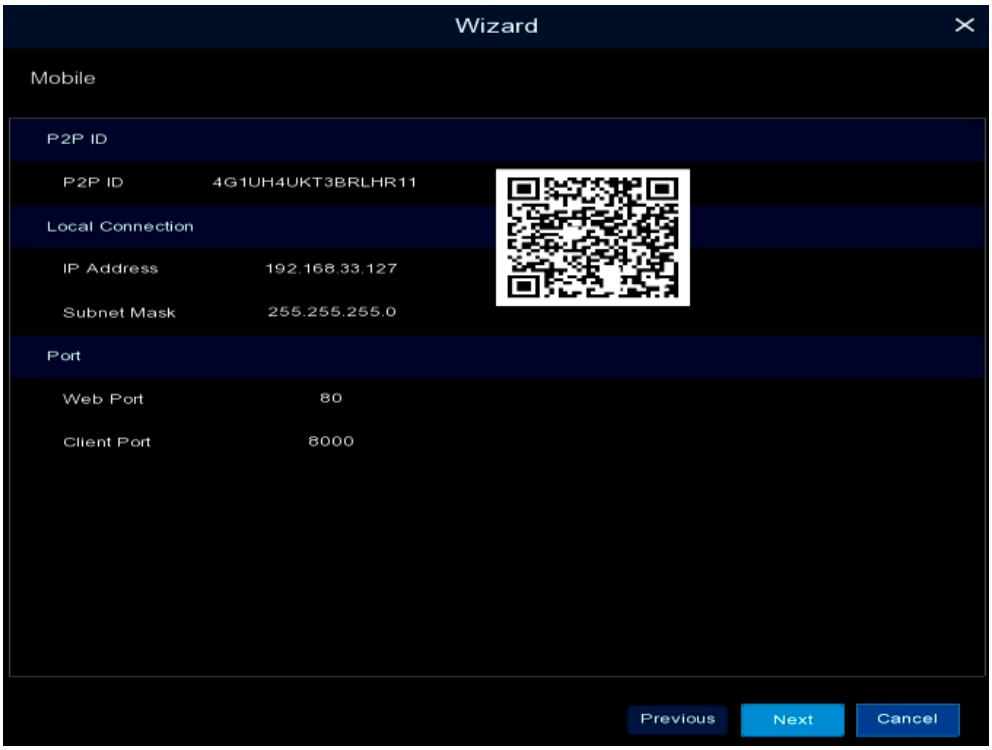
1. Only the HDDs with "OK" in the State column can perform the recording function. If not, format the HDDs before start using the recording function.
2. The "Free Time" on the HDD list indicates the remaining time for the HDD to record based on the pre-setup resolution, streaming and fps.

Record on eSATA: If you have connected an external eSATA storage device to the NVR, you can enable the eSATA backup storage function.

6. The NVR will apply the resolution best suit the connected monitor. If you want to change the output resolution, select an output resolution that matches your monitor. Click the **Apply** button. Click **Next** to proceed.



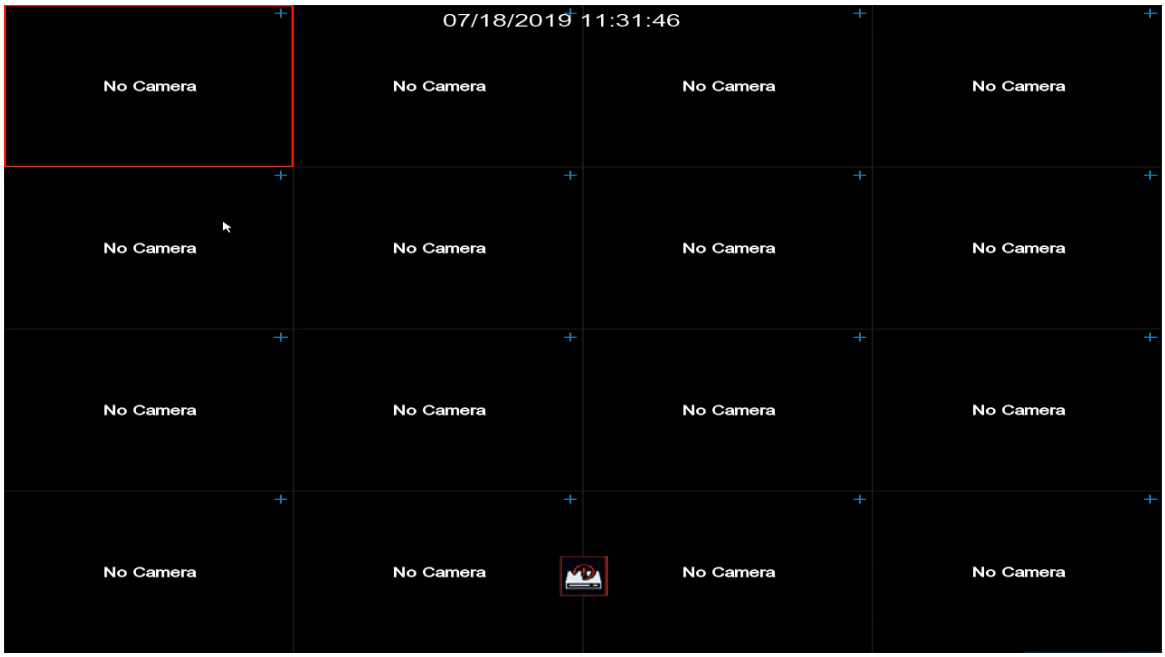
7. Mobile information. You can scan the QR code with **EverFocus eFVMS App** installed on your mobile device to add the NVR to your app and then remotely access the NVR (please refer to *4.9.5.1 System Info* for more details). Click **Next** to proceed.



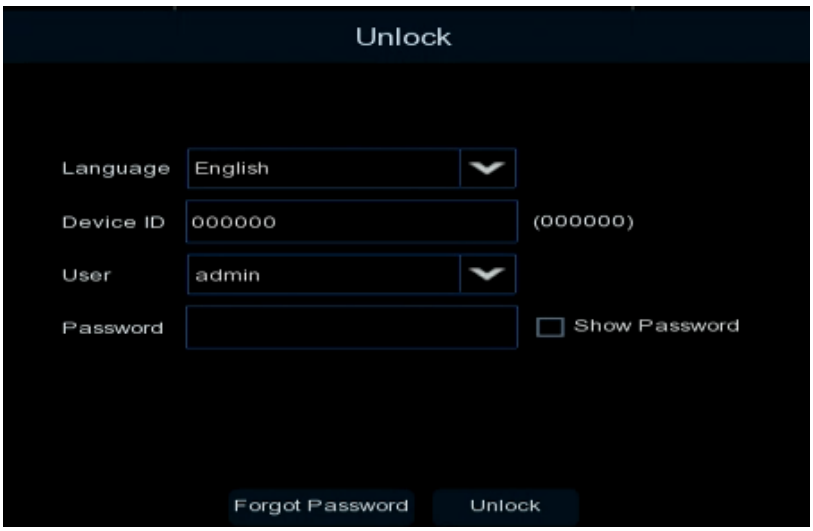
8. The setup information through this wizard will be displayed on the Summary page. Click **Finish** to close the wizard.

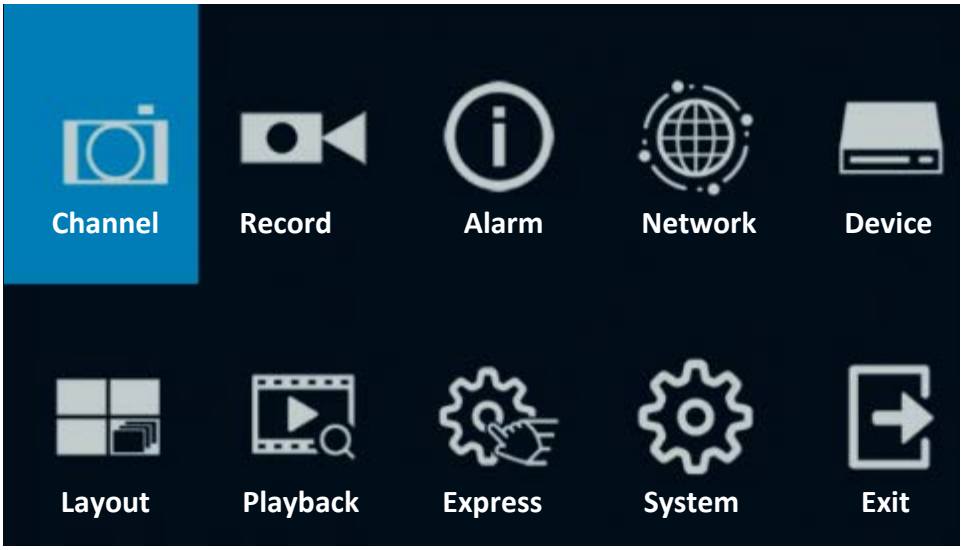
Note: You can check "Do not show this window next time" if you do not want to run the startup Wizard to make any settings when you restart the NVR next time.

9. After clicking the **Finish** button, the system will enter the Live View window (refer to *3.4 Live View Window*).

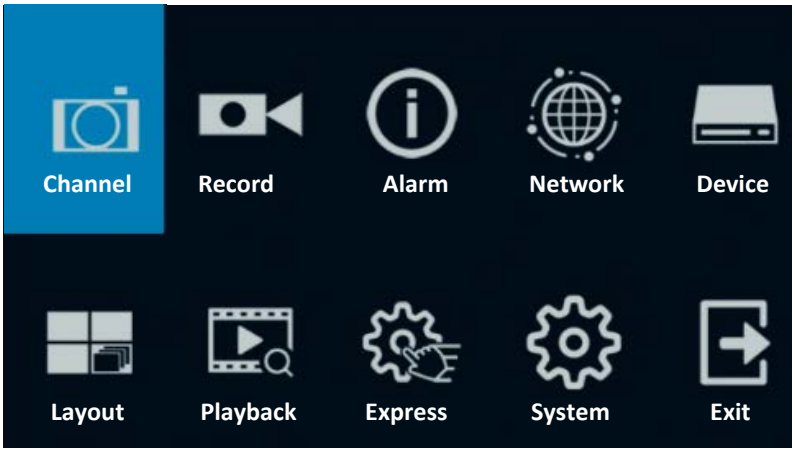


10. To start using the NVR, click any function and the **Unlock** window appears. Input the password of the NVR and then click the **Unlock** button to unlock the screen, the OSD Setup menu appears. You can start using the NVR. Please refer to *4. OSD Menu* for more details.





3.3 General Operation on the OSD Menu



【OSD Menu】

1. On the Live View window, right click the mouse, the OSD Menu appears.
2. Click on any icons to enter the setup menus.
3. To exit the OSD menu, right click the mouse. You can also exit each sub menu by right clicking the mouse.

【Text Box】

Click on the box and an on-screen keyboard will appear.

【On-Screen Keyboard】

Click on a button to input that character.

	Switch to capital letters
	Confirm the selection
	Delete the letter backwards
	Move to the left or right
	Enter a space

【Drop-Down Box】

Click on the down arrow to see all selections, then directly click on an option to select it.

【Check Box】

Click on the box to enable it (checked) or disable it (unchecked).

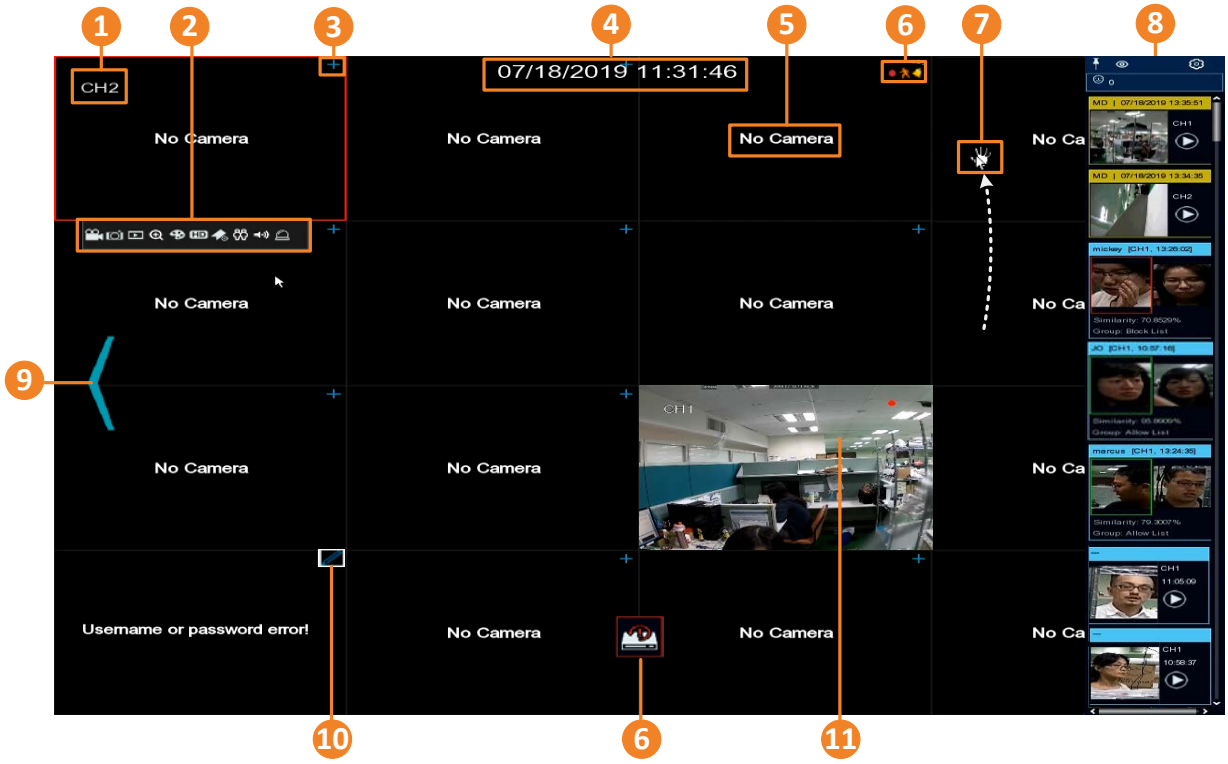
【Button】

Click the button to execute the function.

【Slider】

Slide the bar to the left or right for adjusting the value.

3.4 Live View Window

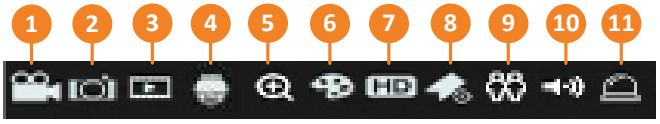


No	Name	Description
1	**Channel Number**	The system will automatically display the channel number once the channel has been connected to an IP camera. To configure the channel number (name), please refer to **Alias** in *4.1.1.1.3 Manually Add IP Cameras*.
2	**Live Channel Tool Bar**	Left click any channel can display its Live Channel Tool Bar to perform functions including Manual Record, manual Snapshot, Quick Playback and etc.. Please refer to *3.5 Live Channel Tool Bar* for more details.
3	**Quick Add**	Click to open the **Quick Add** menu to add IP cameras. Please refer to *4.1.1.2 IP Channels* for more details.
4	**System Date and Time**	Displays system date and time. To change system date and time, go to OSD Menu > System > General > Date and Time.
5	**Channel State**	Displays the status of channel connection.

6	**Status Icons**	The Status Icons displayed on the upper-right corner of each channel are designed to alert users when any of the following situations occur: Channel recording Motion event is detected External I/O alarm is triggered HDD error HDD full HDD unformatted HDD is ready only S Intelligent event is triggered and on recording S Intelligent event is triggered.
7	**Drag Channel Icon**	You can drag and drop a channel to the desired position on the layout. Click on a channel and hold it, a **Drag Channel** icon will display. Drag and drop the channel to the desired channel position on the layout.
8	**Live Alarm Panel**	This panel is designed to display the real-time alarm in thumbnails. You can quickly check or play back the alarm using this panel. Please refer to *3.6 Live Alarm Panel* for more details.
9	**Layout Page Icons**	Move your mouse cursor to the left or right edge of the screen, the **Next** icon 〉 or **Previous** icon 〈 will appear. Click the Previous / Next icon to turn to the previous / next layout pages. For example, for 16CH device, if you select 9-Division, click the next layout page icon (on the right side) will display the next 9-division layout with channel 10-16.
10	**Edit**	When IP camera connection failed, the edit icon will appear. Click to open the **Edit IP Camera Profile** menu to edit the IP camera parameters. Please refer to *4.1.1.2 IP Channels* for more details.
11	**Live Channel**	Double-click on a channel can display the channel in full screen. To exit the full screen mode, double-click on the channel again. In full screen mode, you can: • Left-click to bring up the **Live Channel Tool Bar**. Please refer to *3.5 Live Channel Tool Bar* for more details. • Scroll the mouse to zoom in or zoom out the images, and then use your mouse to drag the image to the desired positions to spot on a specific area.

3.5 Live Channel Tool Bar

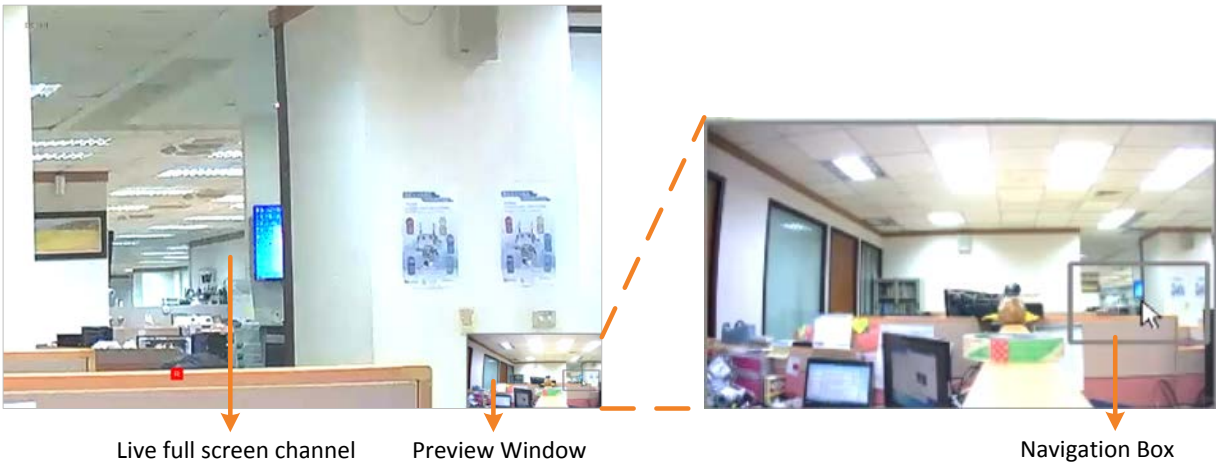
You can left-click any channel on the Live View Window to bring up its Live Channel Tool Bar.



No	Name	Description
1	**Manual Record**	Click the button to start manual recording. During the process of manual recording, the icon will display in red. Click the button again to stop manual recording.
2	**Manual Snapshot**	Click to take a snapshot of the channel. You can then using the Playback panel to playback the snapshot images. Please refer to *4.7.3.7 Snapshot*. To configure the snapshot parameters or set up the snapshot schedule, please refer to *4.2.3 Snapshot*.
3	**Quick Playback**	Click to playback the latest 5 minutes recording of this channel. Click **X** to exit the Quick Playback mode. To configure the quick playback start time, please refer to *4.8.1 Quick Playback*.
4	**PTZ**	This icon will only appear when a PTZ camera is connected to the channel. Click to bring up the PTZ Control window. Please refer to *3.5.2 PTZ Control Panel* for more details.
5	**Zoom**	Click to start the digital zoom function. Please refer to *3.5.1 Digital Zoom (PIP)* for more details.
6	**Image Settings**	Click to bring up the Color Setting window. You can adjust the Hue, Brightness, Contrast and Saturation for each channel individually.
7	**Stream Switch**	Click to switch between **HD** and **SD** stream displayed on the live view channel. To adjust the HD (main stream), SD (sub stream) settings, please refer to *4.2.1.1 Main Stream* and *4.2.1.2 Sub Stream*.
8	**Add Customized Tag**	You can add a tag of the selected time to this channel. Input a tag name and then click **Save**. To search for the tags, go to Playback > Tag, please refer to *4.7.3.5 Tag*.
9	**Face Recognition Statistics**	This icon will only appear when a face-recognition-supported IP camera is connected to the channel. Move the mouse cursor to the icon can display the number of faces recognized on this channel during the selected time. Please refer to *3.6 Live Alarm Panel*.
10	**Audio**	Click to turn on or turn off the audio, or adjust audio volume.
11	**Manual Alarm**	Click to manually trigger alarm output of the channel.

3.5.1 Digital Zoom (PIP)

You can use the Digital Zoom function to have a close-up view on the desired locations of a live channel.



To perform the digital zoom function:

1. On the Live View window, left-click on a channel to display its Live Channel Tool Bar and then click the **Zoom** icon, the channel will be displayed in full screen with a **Preview Window** on the bottom-right corner of the screen.
2. Scroll the mouse upward/downward to zoom in/out, a **Navigation Box** will be displayed on the **Preview Window**.
3. Drag the **Navigation Box** and drop it to the position where you want to have a close-up view.
4. To exit the Digital Zoom mode, right-click the mouse.
5. To return to the Live View window, double-click on the **Live full screen channel**.

Note: You can also perform the Digital Zoom function by scrolling the mouse directly on the Live View to zoom in or zoom out the images, and then drag the live view image to the desired positions to spot on a specific area.

3.5.2 PTZ Control Panel

With the PTZ Control Panel, you can control the connected PTZ cameras.

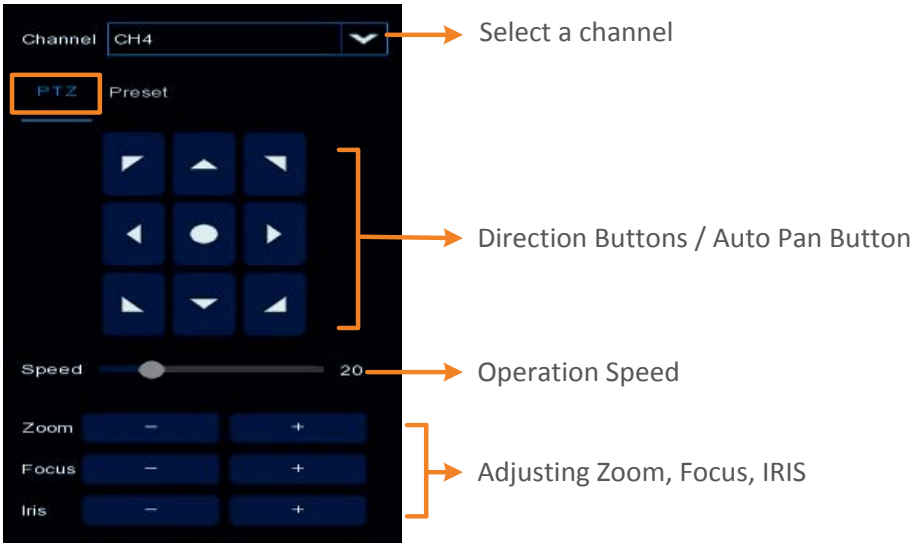
On the Live View window, select a PTZ camera by clicking on the channel, the selected channel will be highlighted with a red frame. Left-click on the channel to display its **Live Channel Tool Bar** and then click the **PTZ** icon to bring up the **PTZ Control panel**.

3.5.2.1 PTZ Control Panel

You can use the PTZ Control panel to control the connected PTZ camera.

Note that before using this function, you have to connect the PTZ cameras to the NVR and configure the related PTZ settings. Please refer to *4.1.4 PTZ*.

PTZ Control Panel



Channel: Click to select a PTZ camera you want to control.

PTZ: Click **PTZ** to enter the PTZ Control panel.

Direction Buttons: Click the direction buttons to force the PTZ camera to turn to the direction.

Auto Pan : Click to start the Auto Pan (360°) function. Click again to stop the Auto Pan function.

Speed: Switch the bar to the left or right to adjust the operation speed.

Zoom: Click + or – to zoom in or zoom out.

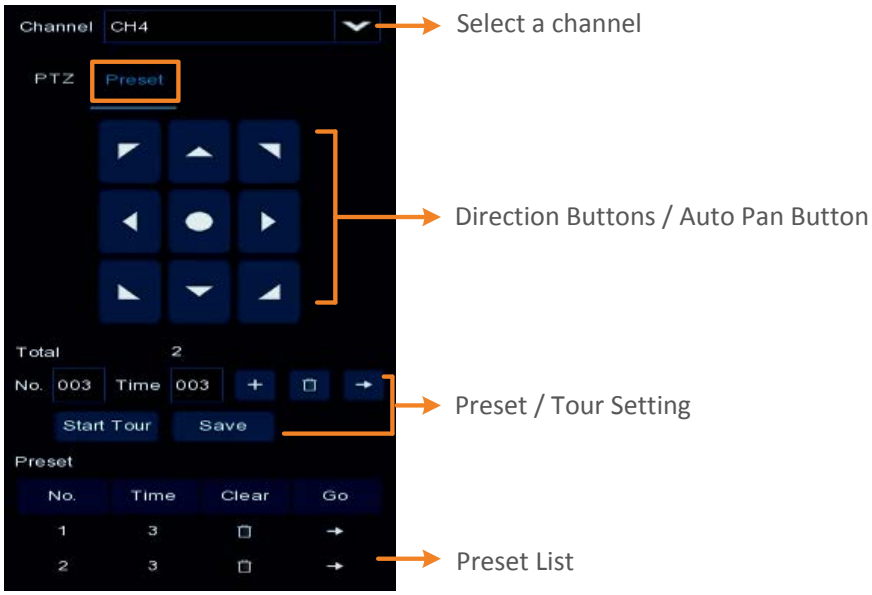
Focus: Click + or – to focus near or focus far.

Iris: Click + or – to adjust the Iris.

3.5.2.2 Preset Setting

Click **Preset** to enter the Preset Setting panel. On this panel, you can set up Preset positions, perform the Go to Preset function and also perform the Tour function.

Preset Setting Panel



To set up Preset Points:

1. Click on the **No.** input box and input a preset number (1-255).
2. Click on the **Time** input box to set up a dwell time for this preset number.
3. Use the direction buttons or Zoom/Focus/Iris buttons to search for the location for this preset number.
4. Click the + button to save this preset point and then jump to the next preset number for configuration. Follow **Step 2-3** to set up multiple preset points.
5. After setting up the preset points, click the **Save** button to save the settings.
6. To clear the setup preset points, select a preset number in the **No.** input box and then click the **Clear** button . Or you can also click the **Clear** button of a specific preset number on the Preset List.

To perform the Go to Preset Point function:

1. Set up the preset points in advance.
2. Input a preset number (1-255) in the **No.** input box, and then click the **Go** button .
3. You can also click the **Go** button of a specific preset number on the Preset List to go to the selected preset point.

To perform the Tour function:

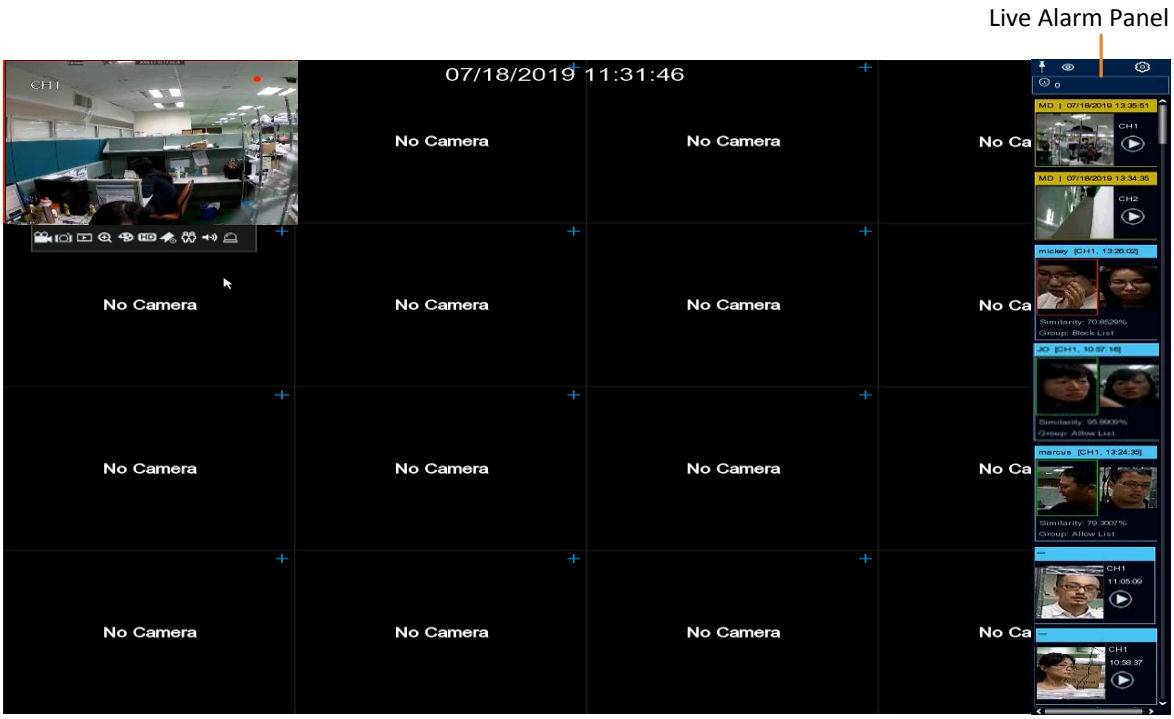
1. Set up the preset points in advance.
2. Click the **Start Tour** button, the PTZ camera will start cruising based on the pre-configured preset points with the dwell time**.**
3. To stop the Tour function, click the **Stop Tour** button.

3.6 Live Alarm Panel

The **Live Alarm Panel** is designed to display the real-time alarm in thumbnails. You can quickly check or play back the alarm using this panel.

Live Alarm Panel supports the following alarm functions. For the alarm functions to work, you have to pre-configure the required alarm settings:

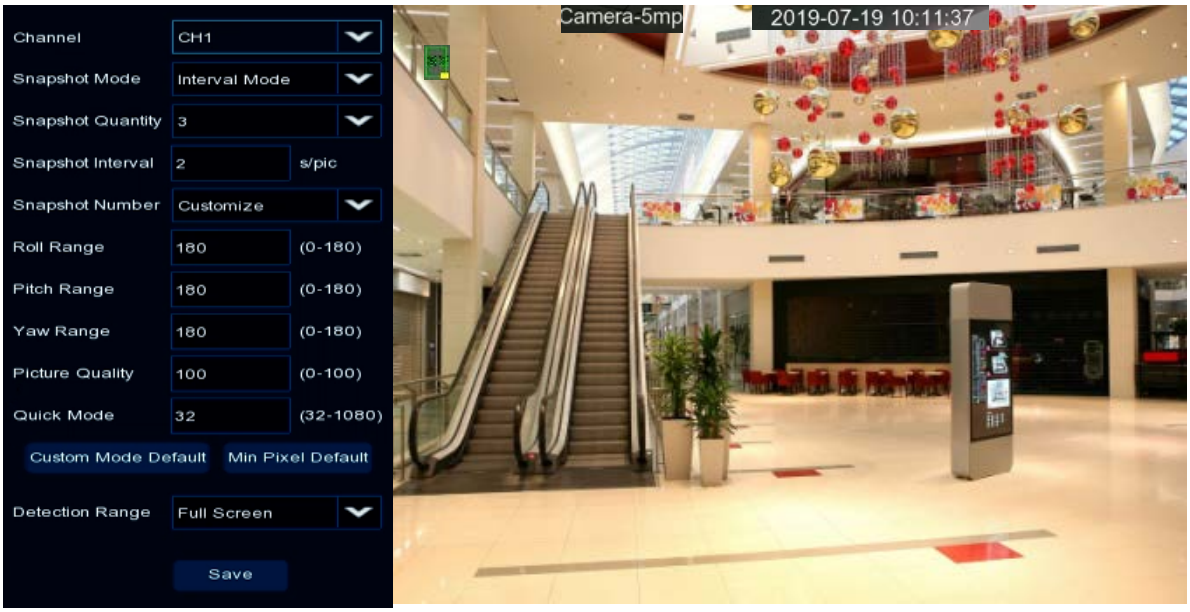
- Face Recognition
- Motion Detection
- IO Alarm
- IVS Alarm (Perimeter Intrusion, Object Detection, Pedestrian Detection, Line-Crossing, Face Recognition, Cross-Counting Detection, Sound Detection, Tamper Detection)



Here we take **Face Recognition** for example:

1. Ensure the face-recognition-supported IP cameras have been connected to the NVR.
2. To enable the Face Recognition function, go to OSD > Channel > Intelligent > Face Detection.

3. Check the **Switch** checkbox to enable the Face Recognition function of this channel.
4. Click the **Setup** icon to configure the Face Recognition settings. After configuring the settings, click **Save**.



Channel: Select a channel to configure the settings.

Snapshot Mode: Select a Snapshot Mode.

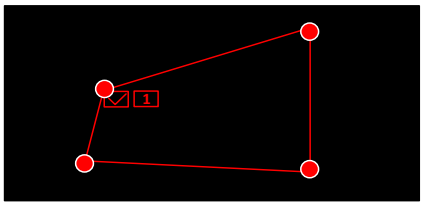
- Realtime: System will take two snapshot images. One is when alarm triggered. The other will be an optimal image that system recognized.
- Optimal: System will take one snapshot images that is recognized as the optimal one.
- Interval: Select this mode to further set up the Snapshot Quantity and Snapshot Interval.
  - Snapshot Quantity: Select the number of snapshot image to take per set up interval.
  - Snapshot Interval: Set up an interval to take the snapshot images.

Snapshot Number: Select a recognition mode.

- Custom Mode: Select this mode to take the frontal face image only. To view the default parameters, select **Customize** and then click the **Custom Mode Default** button.
- Min Pixel: Select this mode to apply the minimum parameters of the orientation angles (Roll, Pitch, Yaw) of the faces toward camera, Picture Quality and Quick Mode. To view the default parameters, select **Customize** and then click the **Min Pixel Default** button.
- Customize: Select this mode and then apply the orientation angles (Roll, Pitch, Yaw) of the faces toward camera, Picture Quality and Quick Mode.
  - Roll Range: Adjust the rotation angle (0-180).
  - Pitch Range: Adjust the horizontal angle (0-180).
  - Yaw Range: Adjust the vertical angle (0-180).
  - Picture Quality: Adjust the quality of the face snapshot images. The more the value, the better the image quality.
  - Quick Mode: Set up the maximum recognition pixel size within a 1080p image.
  - Custom Mode Default: Click to display the default parameters of the Custom Mode.
  - Min Pixel Default: Click to display the default parameters of the Min Pixel.

Detection Range: Select a detection area.

- Full Screen: Select **Full Screen** to detect the area of whole image.
- Customize: Select **Customize** and resize the area by dragging the red dots at the edge.

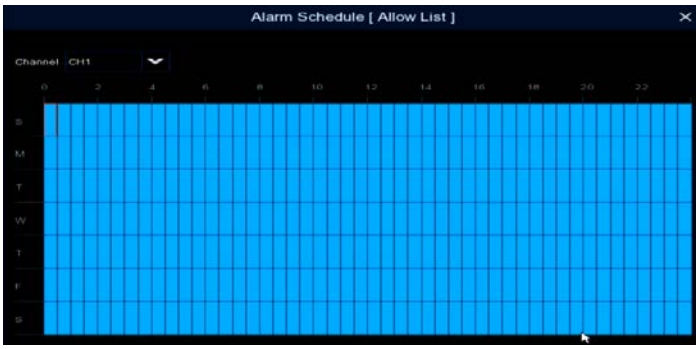


5. To display Face Recognition thumbnails on the Live Alarm Panel, go to OSD > Alarm > Intelligent > Face Recognition.

a. Configure the face group settings. Please refer to *4.3.3.2 Face Recognition* for more details.

b. Click the **Setting** icon in the **Alarm** column of each group. Enable the **Show Thumbnail** function so the Face Recognition thumbnail will be displayed on the Live Alarm Panel.

c. Click the **Setting** icon in the **Alarm Schedule** column of each group. Configure the alarm schedule time and then click the **Apply** button.



6. The Face Recognition configuration is complete. Go to the Live View page and when there are faces detected, the Face Recognition thumbnails will be displayed on the Live Alarm Panel.

Click to pin or unpin the Live Alarm Panel.

Click to hide or display the thumbnails.

Displays the number of detected faces within a time range. To modify the time range, click the **Setting** button on the upper-right corner and click **Statistics**.

Click to display the below window to:

Select the **Alarm** functions you want to display on the Live Alarm Panel and select the **Channels**. Click **Apply** to save the settings.

Select a time range to display the number of detected faces from Face Recognition.

When system detects faces edited in the Groups:

1. The detected face will be displayed on the left. The faces stored in the system database will be displayed on the right.
2. The name, channel and time will be displayed on the top. The similarity and the belonged group will be displayed on the bottom.
3. Double-click on the thumbnail can start playing back.

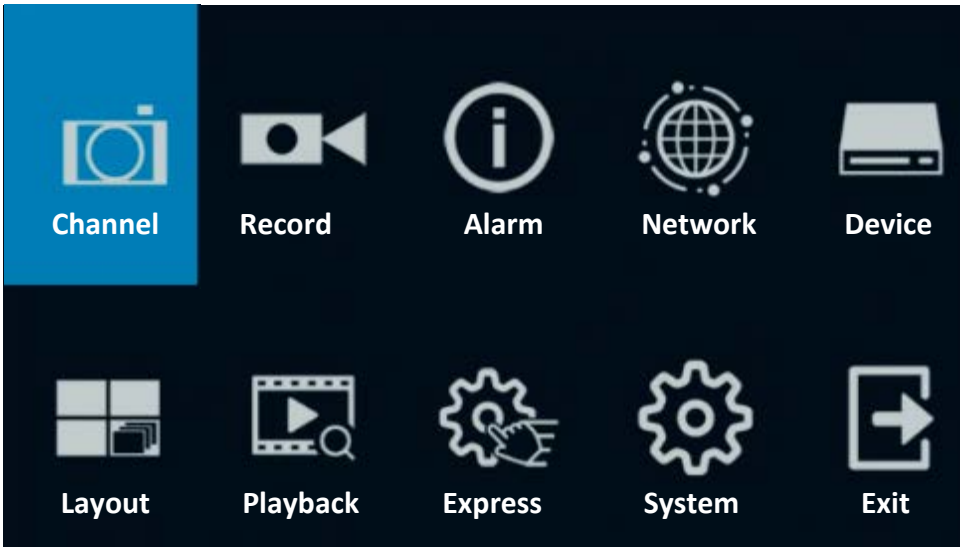
When system detects unknown faces:

1. The detected face will be displayed.
2. Click on this thumbnail can start playing back.

Chapter
4

4. OSD Menu

You can use the OSD Menu to configure system settings. To bring up the OSD Menu, right click on the screen.

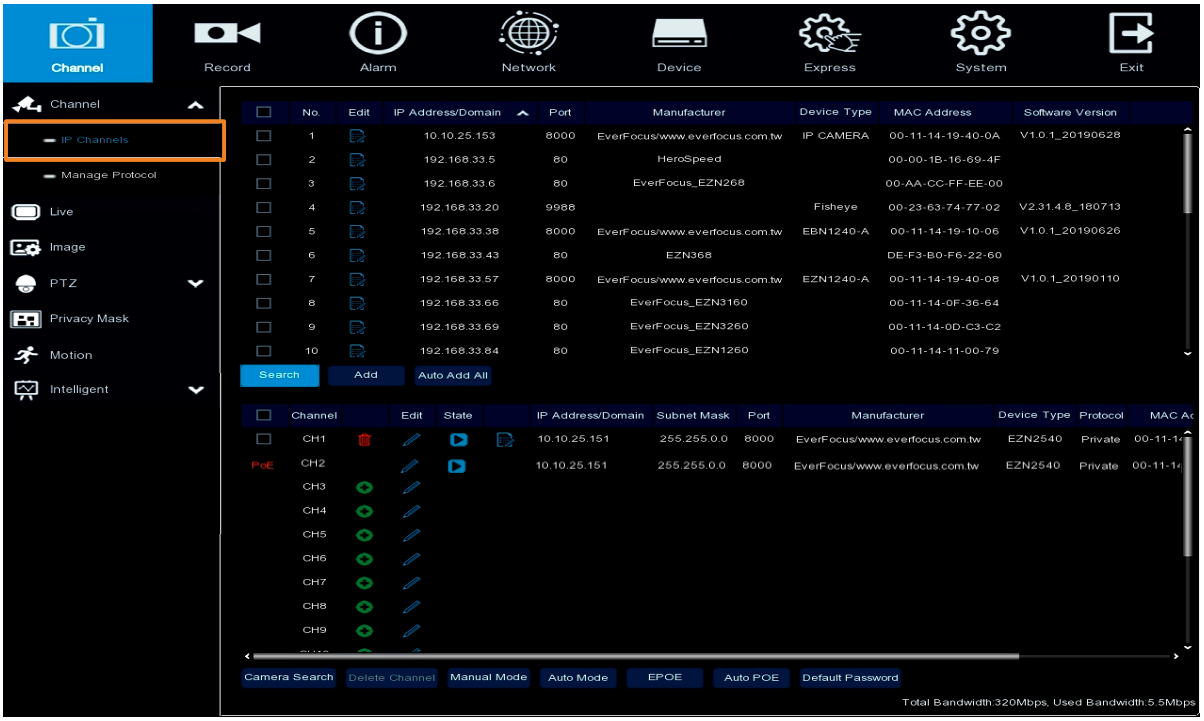


4.1 Channel

In this section, you can configure the settings including IP cameras, live view display, PTZ setup, motion setup, Intelligent functions and more.

4.1.1 Channel

4.1.1.1 IP Channels



Search: Click to search for the IP cameras connected to the local network. The searched IP cameras will be displayed on the upper list.

Add: Click to manually add IP camera on the local network one by one to the NVR. The added IP camera will be displayed on the lower list. Please refer to *4.1.1.1.3 Manually Add IP Cameras* for more details.

Add All: Click to automatically add the IP cameras on the local network to the NVR based on the supported number of IP camera of your device. Please refer to *4.1.1.1.2 Auto Add IP Cameras* for more details.

Camera Search: The added IP camera would not be able to connect to the NVR if its IP address is not on the same network segment with the NVR. Therefore, you can use this function to reassign an IP address to all added IP cameras with the same network segment as NVR's.

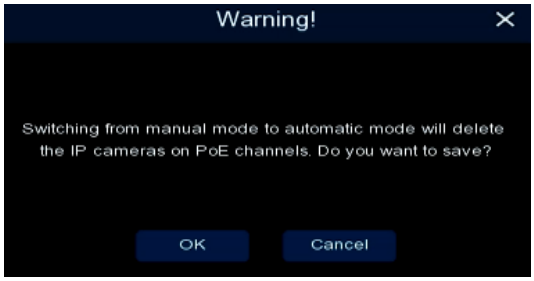
Channel Delete: On the added IP cameras list, check the IP camera boxes and then click the Channel Delete button to delete the selected IP cameras from the list.

Manual Mode: Click to enter the Manual Mode to add the IP cameras from the local network to the NVR. If you are in the Manual Mode and you want to add some IP cameras connected to the NVR via PoE ports, you can click the Edit button to switch the channel mode to Auto

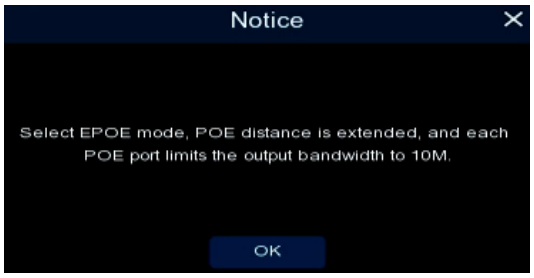
Mode, the system will automatically detect the PoE channels. However, if you are in the Auto Mode, clicking the Manual Mode button will switch all the available channels to Manual Mode, and then you can connect the IP cameras from the local network.

Auto Mode: Click to enter the **Auto Mode** for the system to automatically detect the IP cameras connected to the PoE ports of the NVR.

Note that if you have already added some IP cameras from the local network in the Manual Mode, clicking the Auto Mode button will delete all the connected IP cameras from the local network (see message window below). You can click the **Edit** button to switch the channel to Auto Mode to add the IP cameras connected to PoE ports of the NVR.

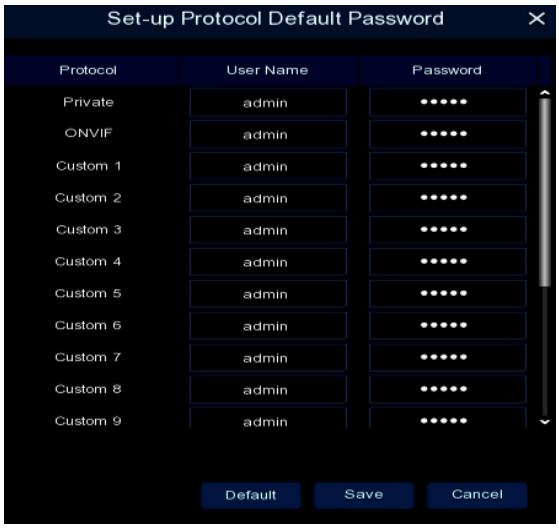


EPOE: Click this button and all the PoE ports will be limited with 10Mbps bandwidth output.



Auto POE: Click this button to disable the EPOE function.

Default Password: Click to bring-up the **Set-up Protocol Default Password** page. You can configure the default password for various protocols. When adding IP cameras to the NVR, the NVR will automatically apply the Default Password to the IP cameras based on their protocol. To configure Protocol settings, please refer to *4.1.1.3 Protocol Manage*.



You can also use the buttons on the **Added IP Camera list** to perform the functions:

PoE: This represents the IP camera is connected to the PoE port of the NVR.

Delete: Click to delete the IP camera.

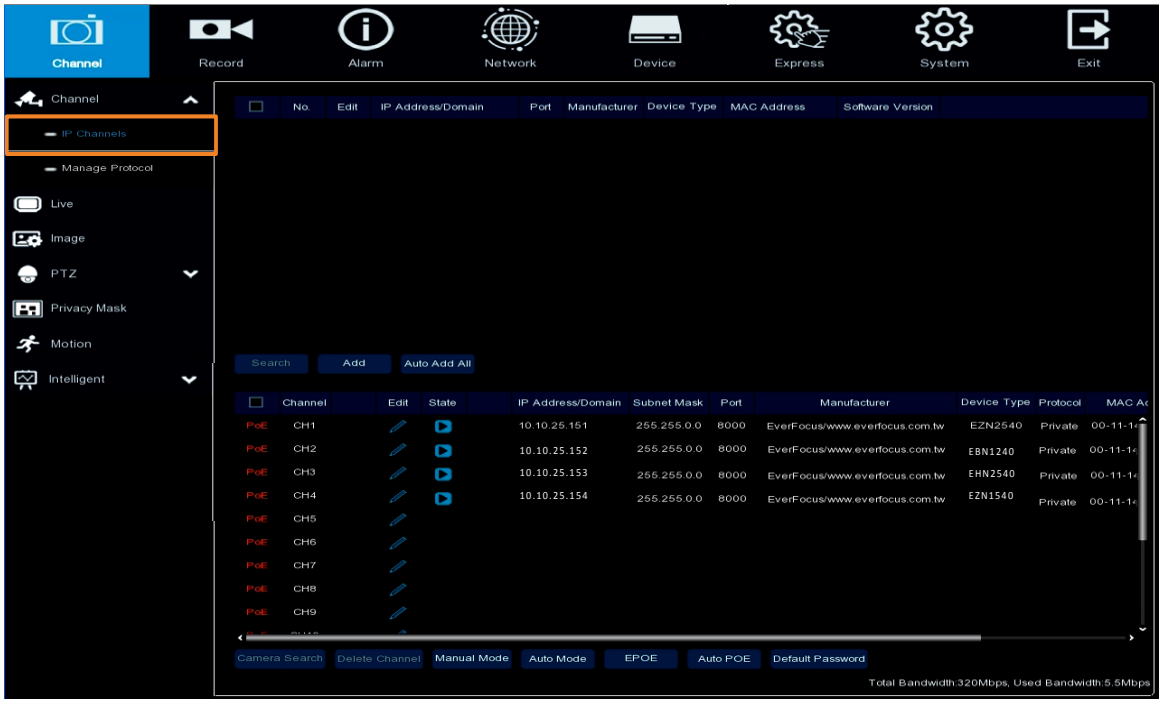
Add: Click to bring up the Add IP Camera window to add an IP camera from the local network. Please refer to *4.1.1.1.3 Manually Add IP Cameras* for more details.

Edit: Click to edit IP camera profile.

Modify: Click to modify IP camera settings.

State: Shows the status of the IP camera. indicates connection failed. indicates connection succeeded. Click the can pop-up a live window of the IP camera.

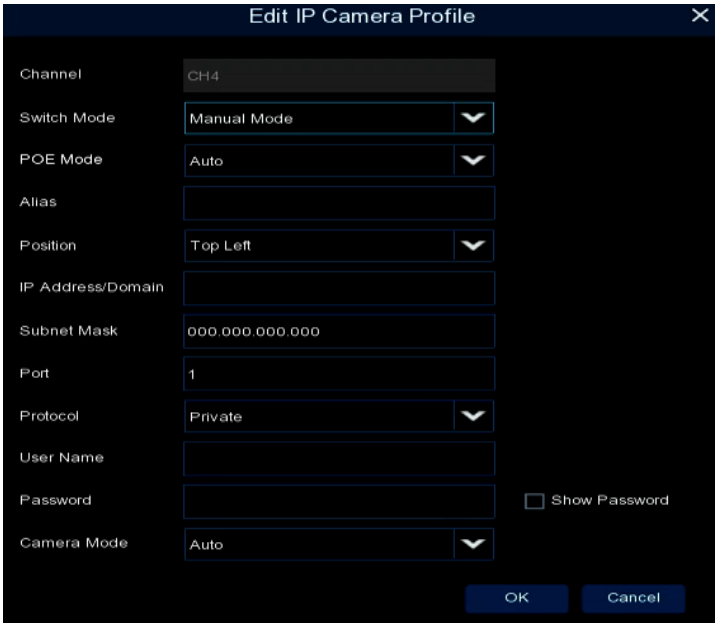
4.1.1.1.1 Adding PoE IP Cameras



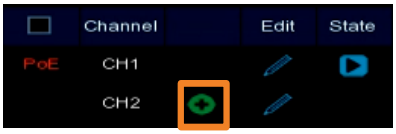
To add IP cameras connected to the PoE ports of the NVR:

1. Ensure the PoE IP cameras have been connected to the PoE ports of the NVR.
2. Click the **Auto Mode** button, the system will automatically detect the IP cameras connected to the PoE ports and the **Live Display** icon will be displayed in the State column.

3. If you still want to add some IP cameras via local network:
   a. Click the **Edit** button and then select **Manual Mode** from the Switch Mode drop-down list. Click **OK**.



   b. Now you can click the **Add** button to add an IP camera from the local network. Please refer to *4.1.1.1.3 Manually Add IP Cameras*.



Note:

If you want to add non-EF H.265 IP cameras to IRONGUARD NVRs through PoE ports, please refer to Chapter 7 at point 16.

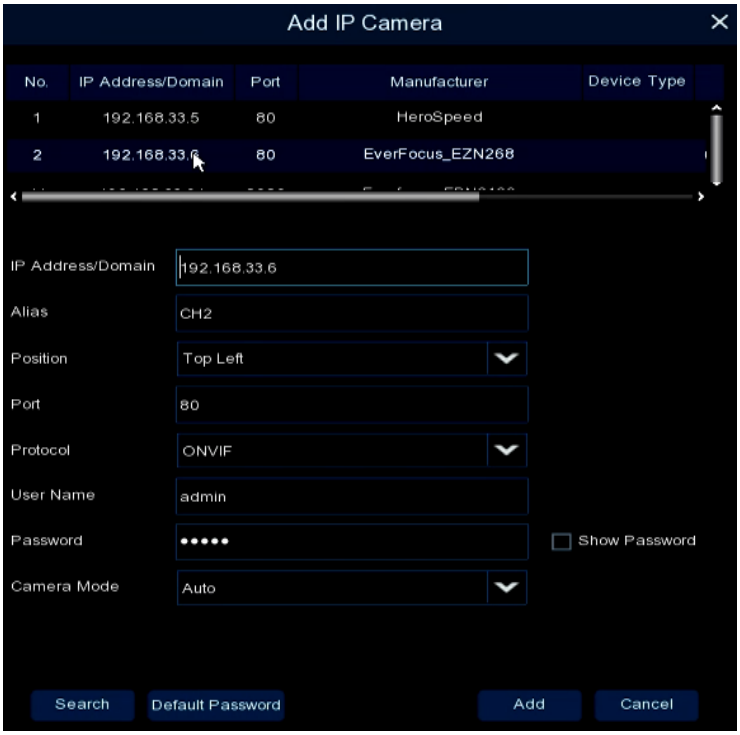
4.1.1.1.2 Auto Add IP Cameras

To automatically add IP cameras connected to the local network to NVR:

1. Click the **Search** button to search for the IP cameras connected to the local network.
2. Click the **Auto Add All** button. The NVR will automatically add the IP cameras to each channel based on the No. order.

4.1.1.1.3 Manually Add IP Cameras

1. Click **Add** to bring-up the Add IP Camera page.



2. Click **Search** to search for the IP cameras on the network. Note that the IP cameras that have been added to the NVR will not be displayed.
3. To select an IP camera, click an IP camera on the list, the clicked IP camera will be highlighted with a blue background.
4. Configure the IP camera settings at the lower section.

   IP Address/Domain: Input the IP address or domain name of the IP camera.

   Alias: Input a channel name for the IP camera. The channel name will be displayed on the upper-left corner of the channel.

   Position: Select a position to display the camera name on the live channel.

   Port: Port of the IP camera.

   Protocol: Select a protocol. For Custom protocol, please refer to *4.1.1.3 Protocol Manage*.

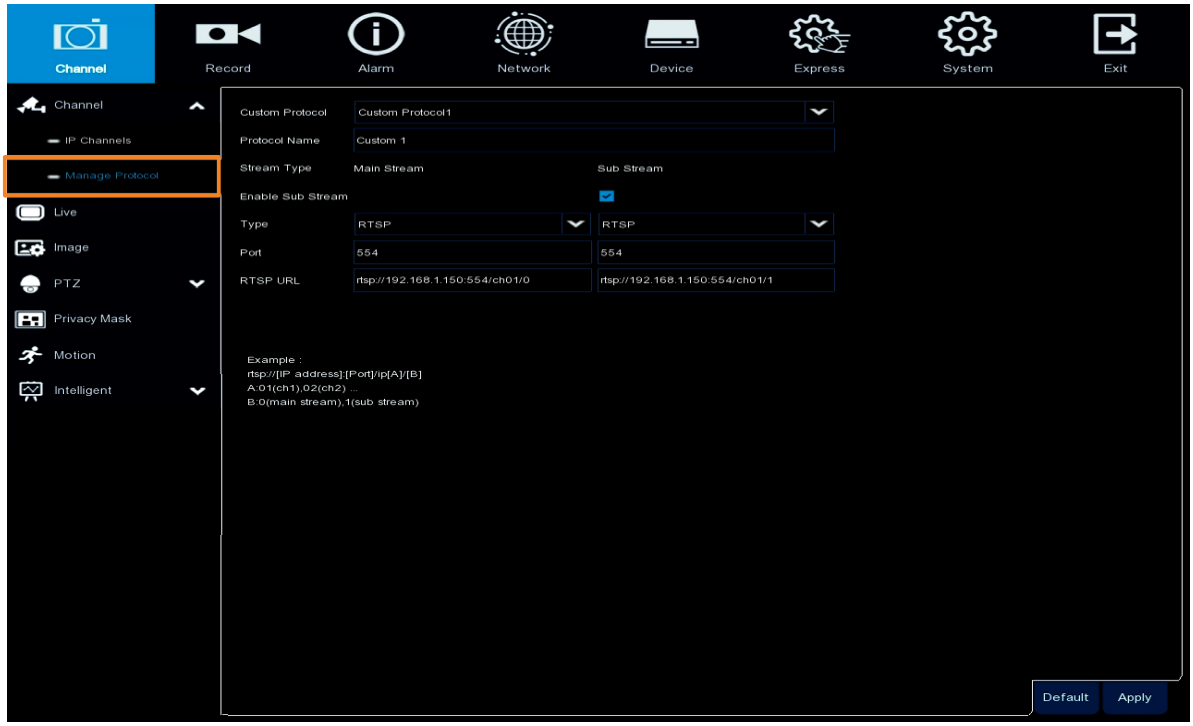
   User Name: Input the user name of the IP camera.

   Password: Input the password of the IP camera.

   Camera Mode: Select a camera mode. Options include Auto, Normal and Fisheye.
5. Click **Add** and the IP camera will be added to the channel.

4.1.1.2 Manage Protocol

On this page, you can edit RTSP (Custom 1-16) protocol for IP camera connection.



Custom Protocol: Select a custom RTSP protocol profile from the drop-down list to be configured. Up to 16 profiles can be configured.

Protocol Name: Input a name for this RTSP protocol profile.

Stream Type: Indicates Main Stream and Sub Stream are supported. You can separately configure the Main Stream and Sub Stream settings below.

Enable Sub Stream: Check the Sub Stream checkbox if you want to enable sub stream for this RTSP protocol.

- **Type:** Select RTSP.
- **Port:** Input the RTSP port of your IP camera. Keep 554 as the RTSP port.
- **Resources Path:** Input the RTSP URL syntax in the box. For example:

  rtsp://[IP Address]:[Port]/ip[A]/[B]

  rtsp://192.168.31.33:554/ip01/0

  * IP Address: The IP address of the NVR

  * A: Channel number. 01 (ch1), 02 (ch2), and so on

  * B: Stream Type: 0 (main stream), 1 (sub stream)

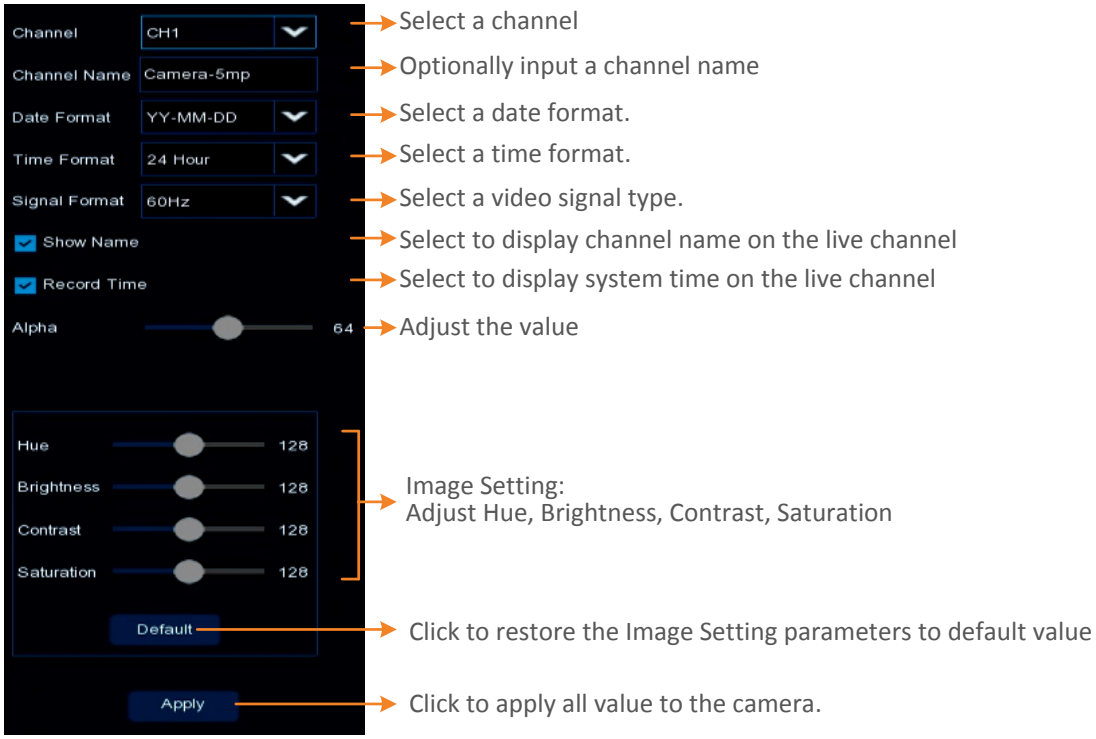
Click **Apply** to save the settings or **Default** to apply the default setting.

4.1.2 Live

You can configure IP camera Live display settings or image quality.

Channel: Displays the channel number.

Setup: Click ⚙ to enter the setup page.



Covert: Select to covert the camera stream on the live view. The channel will be black-out on the Live Window, however, the system will still record the streams.

Channel Name: Optionally change the channel name.

Show Name: Check the box to display the channel name on the live channel.

Date Format: For supported IP cameras only. Select a date format.

Time Format: For supported IP cameras only. Select a time format.

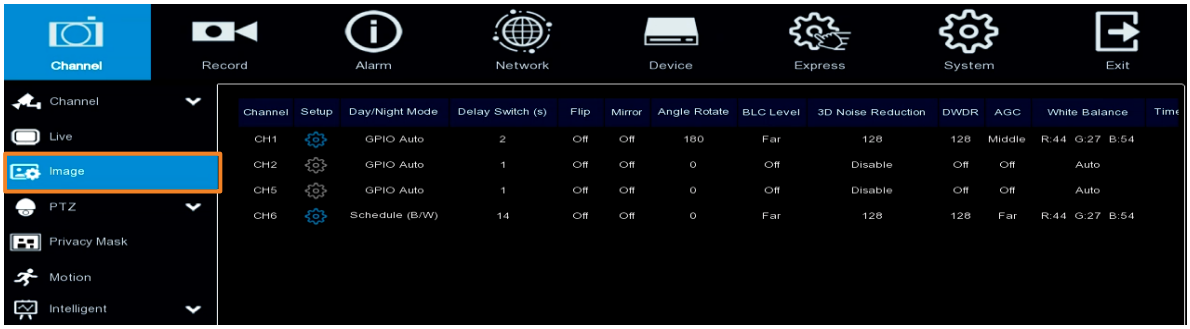
Record Time: Check the box to enable recording the time to the recording files.

Signal Format: For supported IP cameras only. Select a system format (50Hz or 60Hz).

Click **Apply** to save the settings.

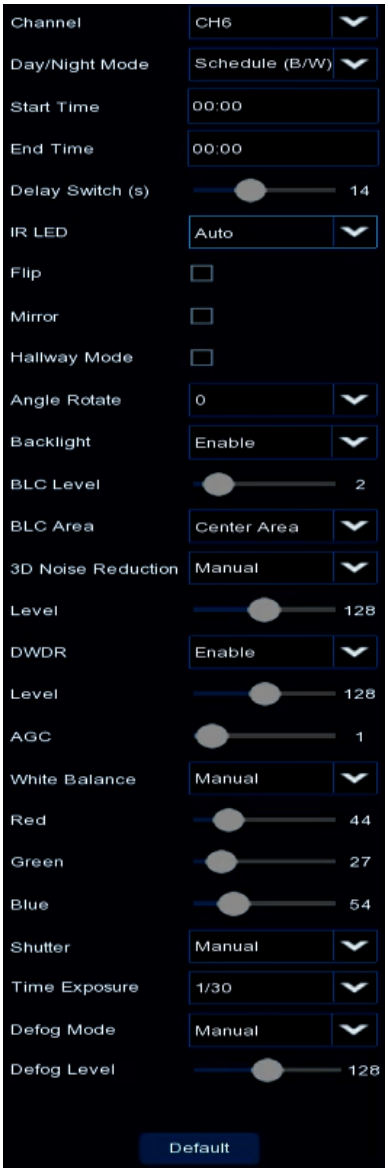
4.1.3 Image Control

You can configure the image settings for supported IP cameras.



Channel: Displays the channel number.

Setup: Click ⚙ to enter the setup page.



Channel: Select a channel number.

Day/Night Mode: Select a Day/Night mode.

- **GPIO Auto:** Select GPIO Auto for the camera to automatically switch to day or night mode. You can further set up a **Delay Switch (s)** time (second) in the below field.
- **Color Mode:** Select Color Mode for the camera to display color images.
- **Black White Mode:** Select Black White Mode for the camera to display B/W images.
- **Schedule (B/W):** Select Schedule (B/W) for the camera to display B/W images during the setup time range. Please select the **Start Time** and **End Time** in the below field.

Delay Switch (s): This function can only be activated if you select **GPIO Auto** for the **Day/Night Mode**. Set up a delay switch time (seconds) for the camera to auto switch between day and night modes.

IR-LED: Select **On** to turn on IR LEDs; select **Off** to turn off IR-LED; select **Auto** for the camera to automatically turn on / off the IR-LED based on the light sensor on the IP camera.

Flip: Check the box to enable the Flip function. The image will be rotated vertically around a horizontal axis.

Mirror: Check the box to enable the Mirror function. The image will be rotated horizontally around a vertical axis.

Hallway Mode: Check the box to enable the Hallway display function (16:9).

Angle Rotate: Select a rotate angle.

Backlight: Select Enable to enable the BLC (Backlight Compensation) function.

BLC Level: Adjust the level for the BLC function.

BLC Area: Select an area to apply the BLC function.

3D Noise Reduction:

- **Auto:** Select Auto for the camera to automatically turn on the 3DNR function.
- **Manual:** Select to turn on the 3DNR function based on the setup **Level**.
- **Disable:** Select to disable the 3DNR function.

WDR: Select Enable to enable the WDR function and then you will have to adjust a **Level** for the WDR function.

AGC: If you select **Manual** in the Shutter field, set up the AGC for the camera. The lower the AGC level, the lower the video signal and the noise.

White Balance:

- **Auto:** Select for the camera to automatically adjust the white balance.
- **Manual:** Select to adjust the Red, Green, Blue values yourself.
- **Indoor:** Select Indoor if your camera is installed in an indoor environment.

Shutter:

- **Auto:** Select for the camera to automatically adjust the Shutter.
- **Manual:** Select to manually adjust the shutter speed. Select a speed in the **Time Exposure** field. Also set up the **AGC** in the AGC field above.

Time Exposure: If you select **Auto** in the Shutter field, the camera will automatically apply a max. shutter speed. If you select **Manual** in the Shutter field, select a shutter speed from the drop-down list.

Defog Mode:

- **Auto:** Select Auto for the camera to automatically turn on the Defog function.
- **Manual:** Select to turn on the Defog function based on the setup Level.
- **Disable:** Select to disable the Defog function.

Click **Default** to restore to default settings.

4.1.4 PTZ

Please connect the PTZ cameras to the NVR and then configure the below PTZ settings. After configuring the PTZ settings, you can start using the PTZ Control panel to control the PTZ camera. Please refer to *3.5.2.1 PTZ Control*.

Channel: Displays the channel number.

Signal Type: Analog for analog PTZ cameras; Digital for IP PTZ cameras.

Protocol: Select a communication protocol between the PTZ camera and NVR. **Baudrate:** This field is to set the speed at which is used to transmit instruction or information from the NVR to the PTZ camera.

Data Bit / Stop Bit: The information between the NVR and PTZ camera is sent in individual packages. The Data Bit indicates the number of bits sent, while the End Bit indicates the end of the package and the beginning of the next (information) package.

Parity: For error check. Refer to the documentation of your PTZ camera to configure this setting

Address: Input the ID address of the PTZ camera. Note this address should match the one set up on the PTZ camera.

Copy: You can apply the same configurations from one channel to other channels.

To perform the Copy function:

1. Click the **Copy** button, the Parameter Copy window appears.
2. Select a channel from the **Source Channel** drop-down list and then select the parameters you would like to apply to other channels.
3. Select the desired channels from the **Target Channel** field.
4. Click the **Copy** button, the selected channels will be applied with the same parameters as the source channel.

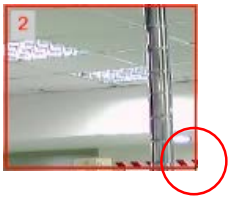
Click **Apply** to save the settings or **Default** to apply the default setting.

4.1.5 Privacy Mask

The Privacy Mask can block out sensitive areas from view. This feature is useful when users don't want the sensitive information visible. Up to four Privacy Masks can be configured per channel.

To configure privacy masks:

1. Select a channel from the Channel drop-down list.
2. Select **Enable Privacy Zone** to enable the function.
3. Select the areas (masks) to be configured. The selected areas will be displayed on the preview image. Up to 4 areas are available.
4. To resize the area, click and drag the bottom-right corner of the rectangle to resize. To drag an area to another location, click and drag the number to relocate the area.



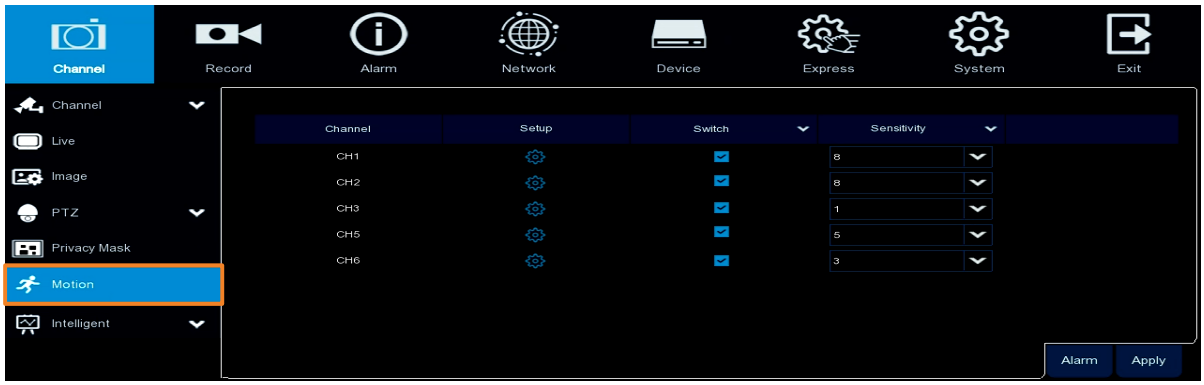
Click and drag to resize

Click and drag to relocate

5. Click the **Apply** button to save the settings.

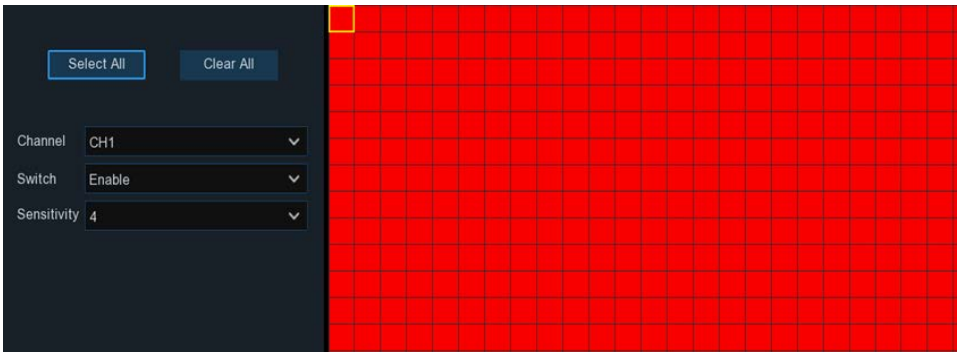
4.1.6 Motion

You can configure the motion settings and motion event notifications on this page. You can also enable the Push Notification function to send motion event alerts to your mobile devices (with eFVMS App installed). For more details on Push Notification, please refer to *Appendix B: Push Notification*.



To configure the Motion Detection settings:

1. Click  to bring-up the Motion Area Setup page.



   a. Select a channel from the **Channel** drop-down list.
   b. Select **Enable** from the **Switch** drop-down list to enable motion detection function.
   c. To set up motion detection sensitivity level, select a value from the **Sensitivity** drop-down list. The higher the value the higher the sensitivity.
   d. By default, the whole areas are marked in red. The red blocks represents the areas are applied with the motion detection function. You can click the mouse and drag it to draw multiple areas. To clear a certain area, use the same method to draw on the same area again, the motion area will be erased.
   e. To save the settings, right-click the mouse to return to the Motion Setup page and then click **Apply** to save the settings.

2. To further set up the motion event notifications, click the **Alarm** button to enter the Motion alarm setup page (please refer to *4.3.1 Motion*).
3. If you want to activate the motion recording function, you need to configure the recording schedule. Please refer to *4.2.2.2 Record Schedule*.

4.1.7 Intelligent

The optional intelligent functions, including Perimeter Intrusion Detection, Line Crossing Detection, Foreign/Missing Object Detection, Pedestrian Detection, Face Detection, Cross Counting, Sound Detection and Tamper Detection.

4.1.7.1 Perimeter Intrusion

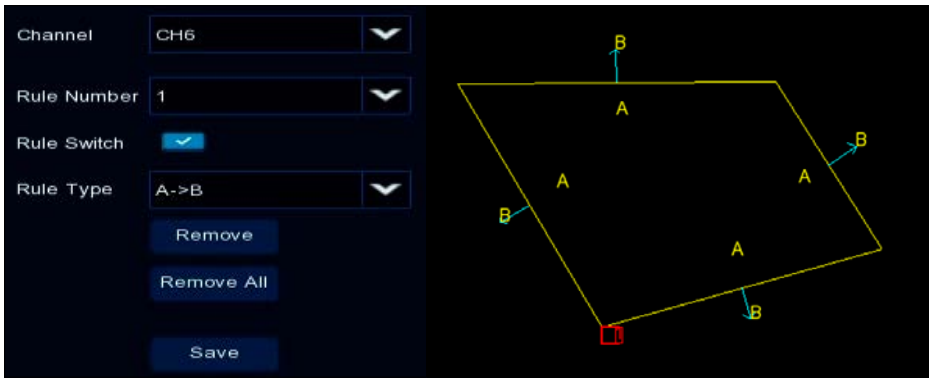
When objects (people, vehicle or other objects) enter in or out of a pre-defined region, the Perimeter Intrusion Detection event will be triggered. You can configure some event actions like event recording, Email alert or pop-up full screen when an event is triggered.

To configure the Perimeter Intrusion settings:

1. Check the **Switch** checkbox to enable the function of the channel.
2. Select a **Sensitivity** value from the drop-down list. The larger the value, the higher the sensitivity.
3. In the **Scene** field, select **Indoor** or **Outdoor** based on the location where your camera is installed.
4. In the **Setup** field, click to set up the detection areas. Please refer to *4.1.8.1.1 Configuring Perimeter Intrusion Areas* for more details.
5. Click the **Apply** button to save the settings.
6. To further set up the alarm notifications, click the **Alarm** button to enter the Alarm setup page. Please refer to *4.3.4 Intelligent Alarm*.
7. If you want to activate the intelligent recording function, you need to configure the recording schedule. Please refer to *4.1.8.9 Record Schedule*.

4.1.8.1.1 Configuring Perimeter Intrusion Areas

Click the **Setup** button to enter the Area setup page.

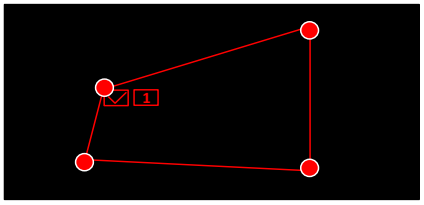


1. Select **1** from the **Rule Number** drop-down list to configure the first area.
2. Click the **Rule Switch** button to enable this rule.
3. Define a type for this rule:

   A→B: Detects movement from A to B.

   B→A: Detects movement from B to A.

   A←→B: Detects both movements from A to B and from B to A.
4. To draw an area:
   a. Use your mouse to click 4 points to draw a rectangle shape. The shape should be convex. Concave shape is not allowed.
   b. If you want to move the area to other position or re-size the area, select the area by checking the red box on the upper-left corner of the area, the borders of the area will change to red color. Drag and drop the area to a desired position. Drag the red dots at the edge of the area can re-size the area.



   c. Click the **Save** button to save the settings.
   d. Follow the steps above to configure more areas. Up to 4 areas can be configured.
   e. You can click the **Remove All** button to remove all the areas. To remove a certain area, select the area by checking the red box on the upper-left corner of the area, and then click the **Remove** button.

> **Note:** The detection areas should not be too narrow or small in order to enhance the detection rate.

5. To return to the Perimeter Intrusion setup page, right-click the mouse.

4.1.7.2 Line Crossing

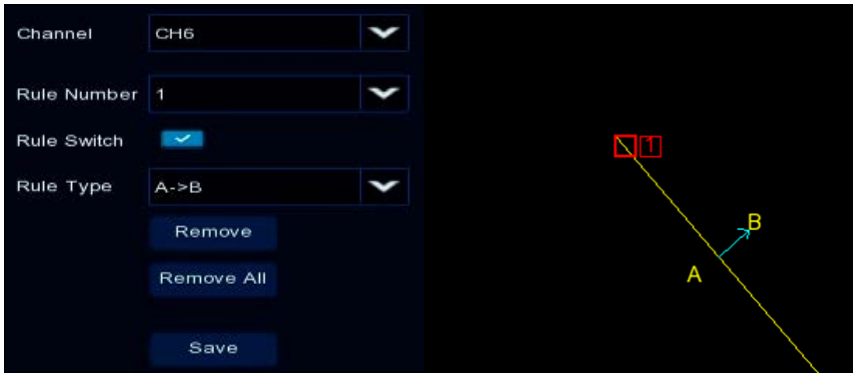
When objects (people, vehicle or other objects) cross a pre-defined line, the Line Crossing Detection event will be triggered. You can configure some event actions like event recording, Email alert or pop-up full screen when an event is triggered.

To configure the Line Crossing settings:

1. Check the **Switch** checkbox to enable the function of the channel.
2. Select a **Sensitivity** value from the drop-down list. The larger the value, the higher the sensitivity.
3. In the **Scene** field, select **Indoor** or **Outdoor** based on the location where your camera is installed.
4. In the **Setup** field, click to set up the detection lines. Please refer to *4.1.8.2.1 Configuring Line Crossing Detection Lines* for more details.
5. Click the **Apply** button to save the settings.
6. To further set up the alarm notifications, click the **Alarm** button to enter the Alarm setup page. Please refer to *4.3.4 Intelligent Alarm*.
7. If you want to activate the intelligent recording function, you need to configure the recording schedule. Please refer to *4.1.8.9 Record Schedule*.

4.1.8.2.1 Configuring Line Crossing Detection Lines

Click the **Setup** button to enter the Line setup page.

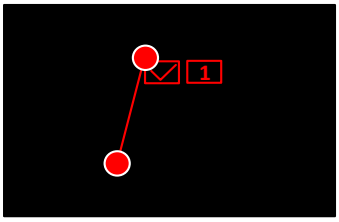


1. Select **1** from the Rule Number drop-down list to configure the first line.
2. Click the **Rule Switch** button to enable this rule.
3. Define a type for this rule:

   A→B: Detects movement from A to B.

   B→A: Detects movement from B to A.

   A←→B: Detects both movements from A to B and from B to A.
4. To draw a line:
   a. Use your mouse to click 2 points to draw a line.
   b. If you want to move the line to other position or re-draw the line, select the line by checking the red box on the upper-side of the line, the line will change to red color. Drag and drop the line to a desired position. Drag the red dots of the line can re-size the line.



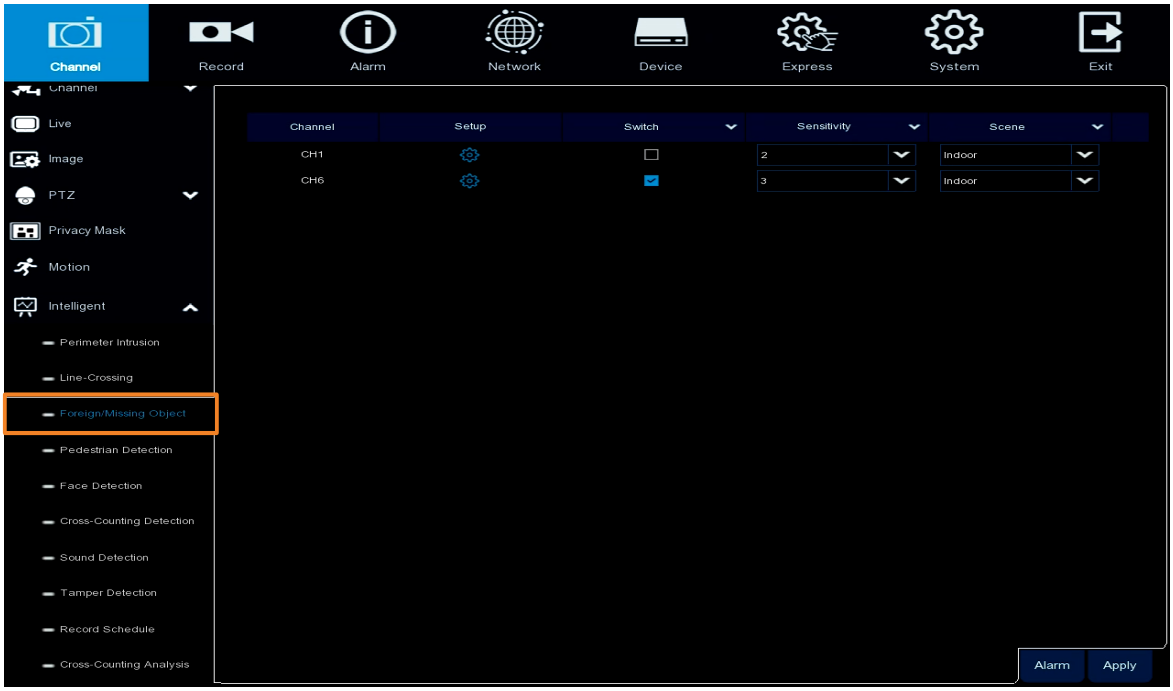
   c. Click the **Save** button to save the settings.
   d. Follow the steps above to configure more lines. Up to 4 lines can be configured.
   e. You can click the **Remove All** button to remove all the lines. To remove a certain line, select the line by checking the red box on the upper-side of the line, and then click the **Remove** button.

> **Note:** The detection lines should not be too short in order to enhance the detection rate.

5. To return to the Line Crossing setup page, right-click the mouse.

4.1.7.3 Foreign/Missing Object

When camera detects foreign (unattended) or missing objects in a pre-defined area, the Foreign/Missing Object event will be triggered. You can configure some event actions like event recording, Email alert or pop-up full screen when an event is triggered.

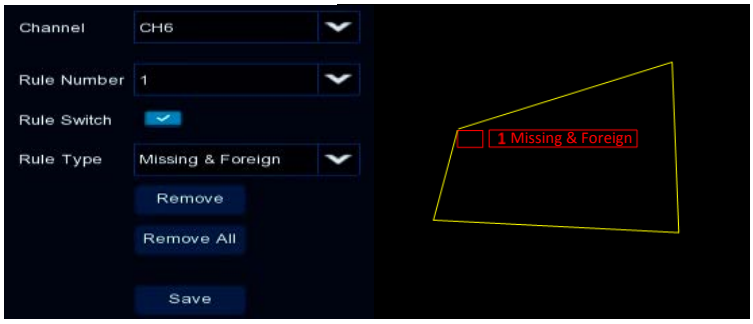


To configure the Foreign/Missing Object settings:

1. Check the **Switch** checkbox to enable the function of the channel.
2. Select a **Sensitivity** value from the drop-down list. The larger the value, the higher the sensitivity.
3. In the **Scene** field, select **Indoor** or **Outdoor** based on the location where your camera is installed.
4. In the **Setup** field, click to set up the detection areas. Please refer to *4.1.8.3.1 Configuring Foreign/Missing Areas* for more details.
5. Click the **Apply** button to save the settings.
6. To further set up the alarm notifications, click the **Alarm** button to enter the Alarm setup page. Please refer to *4.3.4 Intelligent Alarm*.
7. If you want to activate the intelligent recording function, you need to configure the recording schedule. Please refer to *4.1.8.9 Record Schedule*.

4.1.8.3.1 Configuring Foreign/Missing Areas

Click the **Setup** button to enter the Area setup page.

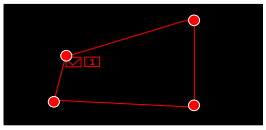


1. Select **1** from the **Rule Number** drop-down list to configure the first area.
2. Click the **Rule Switch** button to enable this rule.
3. Define a type for this rule.

   Foreign: NVR will only detect the unattended objects.

   Missing: NVR will only detect the missing objects.

   Missing & Foreign: NVR will detect both missing objects and unattended objects.
4. To draw an area:
   a. Use your mouse to click 4 points to draw a rectangle shape. The shape should be convex. Concave shape is not allowed.
   b. If you want to move the area to other position or re-size the area, select the area by checking the red box on the upper-left corner of the area, the borders of the area will change to red color. Drag and drop the area to a desired position. Drag the red dots at the edge of the area can re-size the area.



   c. Click the **Save** button to save the settings.
   d. Follow the steps above to configure more areas. Up to 4 areas can be configured.
   e. You can click the **Remove All** button to remove all the areas. To remove a certain area, select the area by checking the red box on the upper-left corner of the area, and then click the **Remove** button.

Note: For foreign/missing object, please draw an area slightly larger than or equal to the detected object, and the detected object cannot be covered.

5. To return to the Foreign/Missing Object setup page, right-click the mouse.

4.1.7.4 Pedestrian Detection

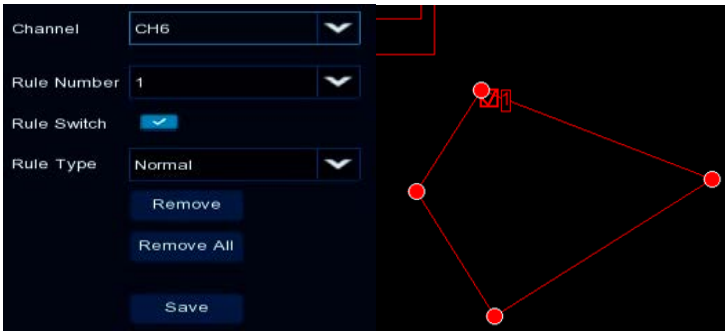
When camera detects moving people in a pre-defined area, the Pedestrian Detection event will be triggered. You can configure some event actions like event recording, Email alert or pop-up full screen when an event is triggered.

To configure the Pedestrian Detection settings:

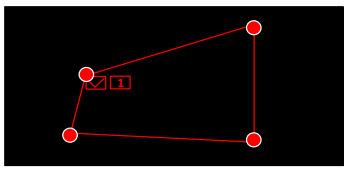
1. Check the **Switch** checkbox to enable the function of the channel.
2. In the **Level** field, select among Far, Middle and Near. **Far** level is recommended to detect objects in long distance. **Near** level is recommended to detect objects in short distance.
3. In the **Scene** field, select **Indoor** or **Outdoor** based on the location where your camera is installed.
4. In the **Setup** field, click ⚙ to set up the detection areas. Please refer to *4.1.8.4.1 Configuring Pedestrian Detection Area* for more details.
5. Click the **Apply** button to save the settings.
6. To further set up the alarm notifications, click the **Alarm** button to enter the Alarm setup page. Please refer to *4.3.4 Intelligent Alarm*.
7. If you want to activate the intelligent recording function, you need to configure the recording schedule. Please refer to *4.1.8.9 Record Schedule*.

4.1.8.4.1 Configuring Pedestrian Detection Area

Click the **Setup** button to enter the Area setup page.



1. Select **1** from the **Rule Number** drop-down list to configure the area.
2. Click the **Rule Switch** button to enable this rule.
3. Define a type for this rule. Only **Normal** type is available.
4. To draw an area:
   a. Use your mouse to click 4 points to draw a rectangle shape. The shape should be convex. Concave shape is not allowed.
   b. If you want to move the area to other position or re-size the area, select the area by checking the red box on the upper-left corner of the area, the borders of the area will change to red color. Drag and drop the area to a desired position. Drag the red dots at the edge of the area can re-size the area.



   c. Click the **Save** button to save the settings.
   d. You can click the **Remove All** button to remove all the areas. To remove a certain area, select the area by checking the red box on the upper-left corner of the area, and then click the **Remove** button.

Note: The detection areas should not be too narrow or small in order to enhance the detection rate. The whole target object (people) should be inside the area.

5. To return to the Pedestrian Detection setup page, right-click the mouse.

4.1.7.5 Face Detection

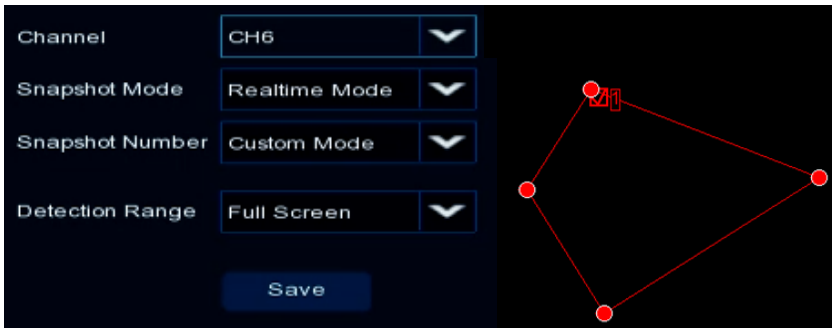
This page can be used to setup Face Recognition functions. Note that for Face Recognition function to work, a face-recognition-supported IP camera should be connected to the NVR. When camera detects faces of moving people, the Face Recognition event will be triggered. You can configure some event actions like event recording, Email alert or pop-up full screen when an event is triggered.

To configure the **Face Recognition** settings (face-recognition-supported IP camera required):

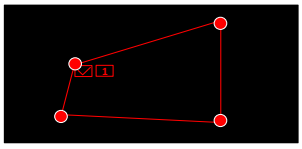
1. Check the **Switch** checkbox to enable the function of the channel.
2. In the **Setup** field, click ⚙ to set up the face recognition settings. Please refer to *4.1.8.5.2 Configuring Face Recognition Settings* for more details.
3. Click the **Apply** button to save the settings.
4. To further set up the alarm notifications, click the **Alarm** button to enter the Alarm setup page. Please refer to *4.3.3.2 Face Recognition Alarm Settings*.
5. If you want to activate the intelligent recording function, you need to configure the recording schedule. Please refer to *4.1.8.9 Record Schedule*.

4.1.7.5.1 Configuring Face Detection Area

Click the **Setup** button to enter the Area setup page.



1. Select **1** from the **Rule Number** drop-down list to configure the area.
2. Select **Enable** from the **Rule Switch** drop-down list to enable this rule.
3. Define a type for this rule. Only **Normal** type is available.
4. To draw an area:
   a. Use your mouse to click 4 points to draw a rectangle shape. The shape should be convex. Concave shape is not allowed.
   b. If you want to move the area to other position or re-size the area, select the area by checking the red box on the upper-left corner of the area, the borders of the area will change to red color. Drag and drop the area to a desired position. Drag the red dots at the edge of the area can re-size the area.



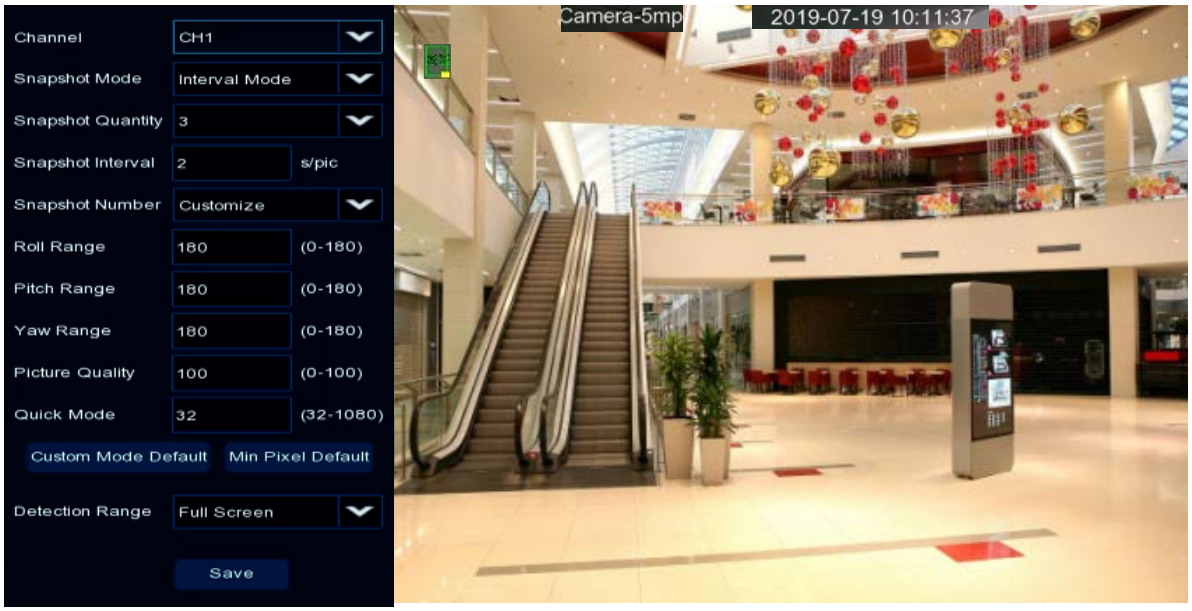
   c. Click the **Save** button to save the settings.
   d. You can click the **Remove All** button to remove all the areas. To remove a certain area, select the area by checking the red box on the upper-left corner of the area, and then click the **Remove** button.

Note: The configured areas should include the whole front face.

5. To return to the Face Detection setup page, right-click the mouse.

4.1.7.5.2 Configuring Face Recognition Settings

Click the **Setup** button to enter the setup page.



1. Configure the below settings.

   Channel: Select a channel to configure the settings.

   Snapshot Mode: Select a Snapshot Mode.

   - Realtime: System will take two snapshot images. One is when alarm triggered. The other will be an optimal image that system recognized.
   - Optimal: System will take one snapshot images that is recognized as the optimal one.
   - Interval: Select this mode to further set up the Snapshot Quantity and Snapshot Interval.
     - Snapshot Quantity: Select the number of snapshot image to take per set up interval.
     - Snapshot Interval: Set up an interval to take the snapshot images.

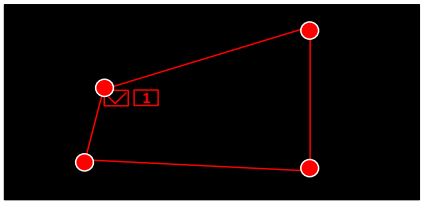
   Snapshot Number: Select a recognition mode.

   - Custom Mode: Select this mode to take the frontal face image only. To view the default parameters, select **Customize** and then click the **Custom Mode Default** button.
   - Min Pixel: Select this mode to apply the minimum parameters of the orientation angles (Roll, Pitch, Yaw) of the faces toward camera, Picture Quality and Quick Mode. To view the default parameters, select **Customize** and then click the **Min Pixel Default** button.
   - Customize: Select this mode and then apply the orientation angles (Roll, Pitch, Yaw) of the faces toward camera, Picture Quality and Quick Mode.
     - Roll Range: Adjust the rotation angle (0-180).
     - Pitch Range: Adjust the horizontal angle (0-180).
     - Yaw Range: Adjust the vertical angle (0-180).
     - Picture Quality: Adjust the quality of the face snapshot images. The more the value, the better the image quality.

- Quick Mode: Set up the maximum recognition pixel size within a 1080p image.
- Custom Mode Default: Click to display the default parameters of the Custom Mode.
- Min Pixel Default: Click to display the default parameters of the Min Pixel.

Detection Range: Select a detection area.

- Full Screen: Select **Full Screen** to detect the area of whole image.
- Customize: Select **Customize** and resize the area by dragging the red dots at the edge.

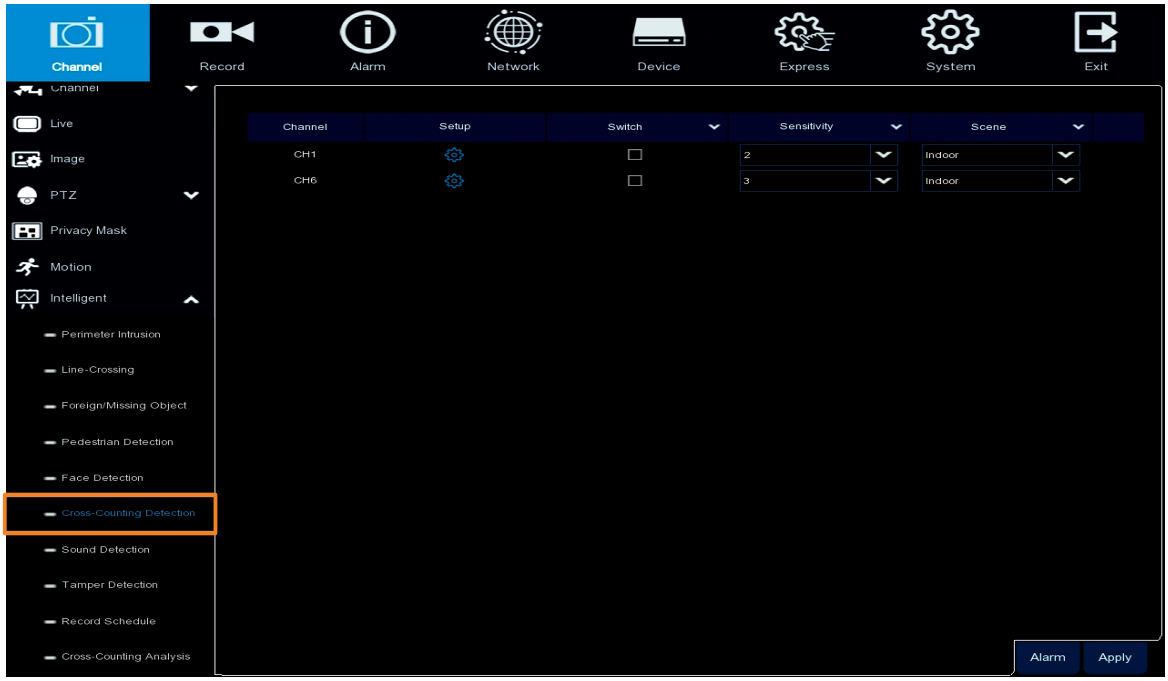


2. Click **Save** to save the settings.

4.1.7.6 Cross-Counting Detection

The NVR will count the times when objects (people, vehicle or other objects) cross a pre-defined line, and the Cross-Counting event will be triggered. You can configure some event actions like event recording, Email alert or pop-up full screen when an event is triggered.

You can search and view the statistical result of cross counting on the Intelligent Analysis page. Please refer to *4.1.8.10 Cross-Counting Analysis*.



To configure the Cross-Counting settings:

1. Check the **Switch** checkbox to enable the function of the channel.
2. Select a **Sensitivity** value from the drop-down list. The larger the value, the higher the sensitivity.
3. In the **Scene** field, select **Indoor** or **Outdoor** based on the location where your camera is installed.
4. In the **Setup** field, click to set up the detection line. Please refer to *4.1.8.6.1 Configuring Cross-Counting Detection Line* for more details.
5. Click the **Apply** button to save the settings.
6. To further set up the alarm notifications, click the **Alarm** button to enter the Alarm setup page. Please refer to *4.3.4 Intelligent Alarm*.
7. If you want to activate the intelligent recording function, you need to configure the recording schedule. Please refer to *4.1.8.9 Record Schedule*.

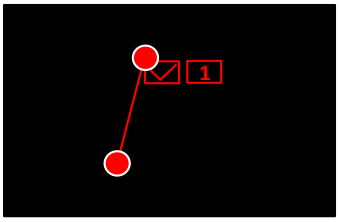
4.1.8.6.1 Configuring Cross-Counting Detection Line

Click the **Setup** button to enter the Line setup page.

1. Select **1** from the Rule Number drop-down list to configure the line.
2. Click the **Rule Switch** button to enable this rule.
3. Define a type for this rule.

   A→B: Detects movement from A to B.

   B→A: Detects movement from B to A.
4. To draw a line:
   a. Use your mouse to click 2 points to draw a line.
   b. If you want to move the line to other position or re-draw the line, select the line by checking the red box on the upper-side of the line, the line will change to red color. Drag and drop the line to a desired position. Drag the red dots of the line can re-size the line.



   c. Click the **Save** button to save the settings.
   d. You can click the **Remove All** button to remove all the lines. To remove a certain line, select the line by checking the red box on the upper-side of the line, and then click the **Remove** button.

> **Note:** The detection line should not be too short in order to enhance the detection rate.

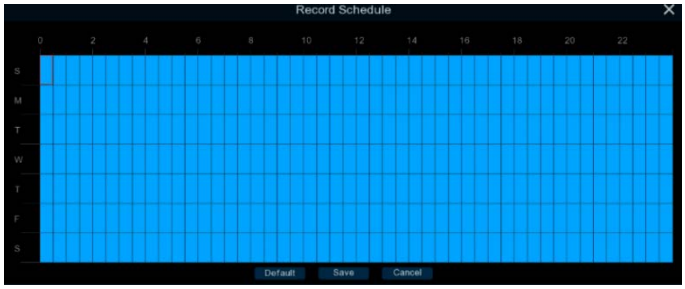
5. To return to the Line Crossing setup page, right-click the mouse.

4.1.7.7 Sound Detection

To perform the Sound Detection function, the audio devices have to be pre-installed to the IP cameras.

To configure the Sound Detection settings:

1. Check the **Switch** checkbox to enable the function of the channel.
2. In the **Rise** field, select **Enable** to enable the Sound Rise detection. And then further set up the **Rise Sensitivity** and **Sound Intensity**.
3. In the **Decline** field, select **Enable** to enable the Sound Decline detection. And then further set up the **Decline Sensitivity**.
4. If you want to enable recording when sound detection alarm is triggered, in the **Record Schedule** field, click ⚙ to set up the recording schedule. Click and drag on the schedule time blocks to draw the blocks with blue color, which will be applied with Sound Detection. To deselect the blocks, click and drag on the blue blocks to select again. Click **Save** to save the settings.



5. Click the **Apply** button to save the settings.
6. To further set up the alarm notifications, click the **Alarm** button to enter the Alarm setup page. Please refer to *4.3.4 Intelligent Alarm*.

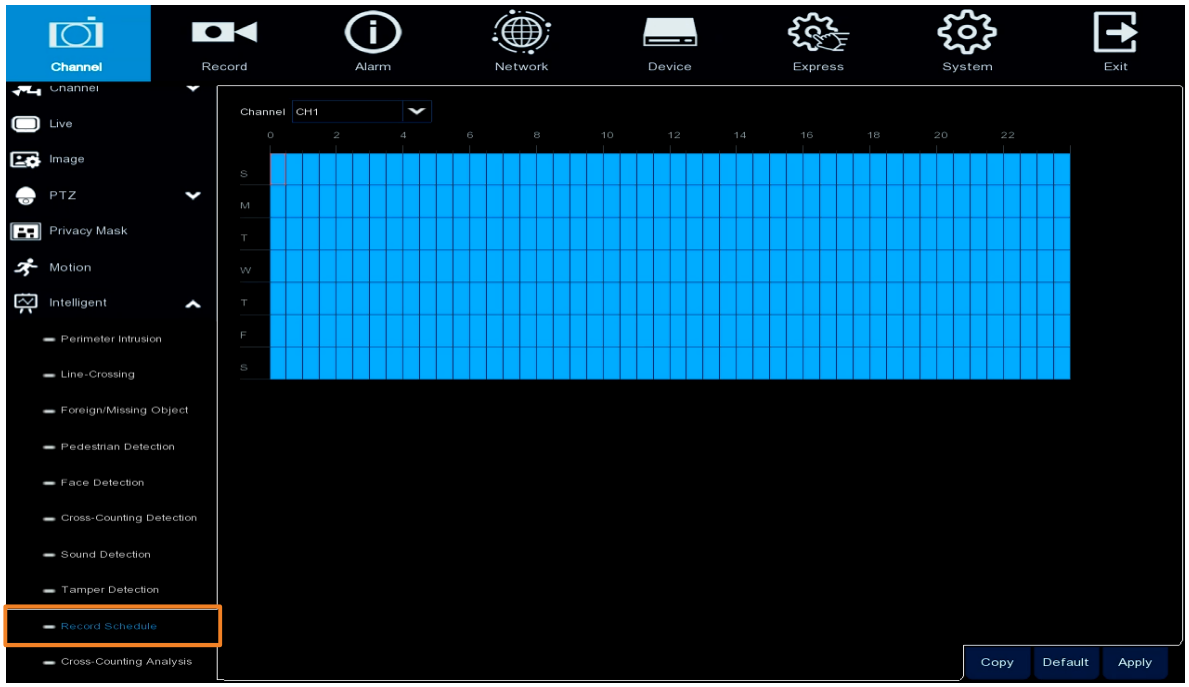
4.1.7.8 Tamper Detection

To configure the Tamper Detection settings:

1. Check the **Switch** checkbox to enable the function of the channel.
2. Select a **Sensitivity** value from the drop-down list. The larger the value, the higher the sensitivity.
3. Click the **Apply** button to save the settings.
4. To further set up the alarm notifications, click the **Alarm** button to enter the Alarm setup page. Please refer to *4.3.4 Intelligent Alarm*.
5. If you want to activate the intelligent recording function, you need to configure the recording schedule. Please refer to *4.1.8.9 Record Schedule*.

4.1.7.9 Record Schedule

In order to active the intelligent recording function, you need to configure the schedule recording for Intelligent events. The schedule will be activated 24 hours a day, 7 days a week.

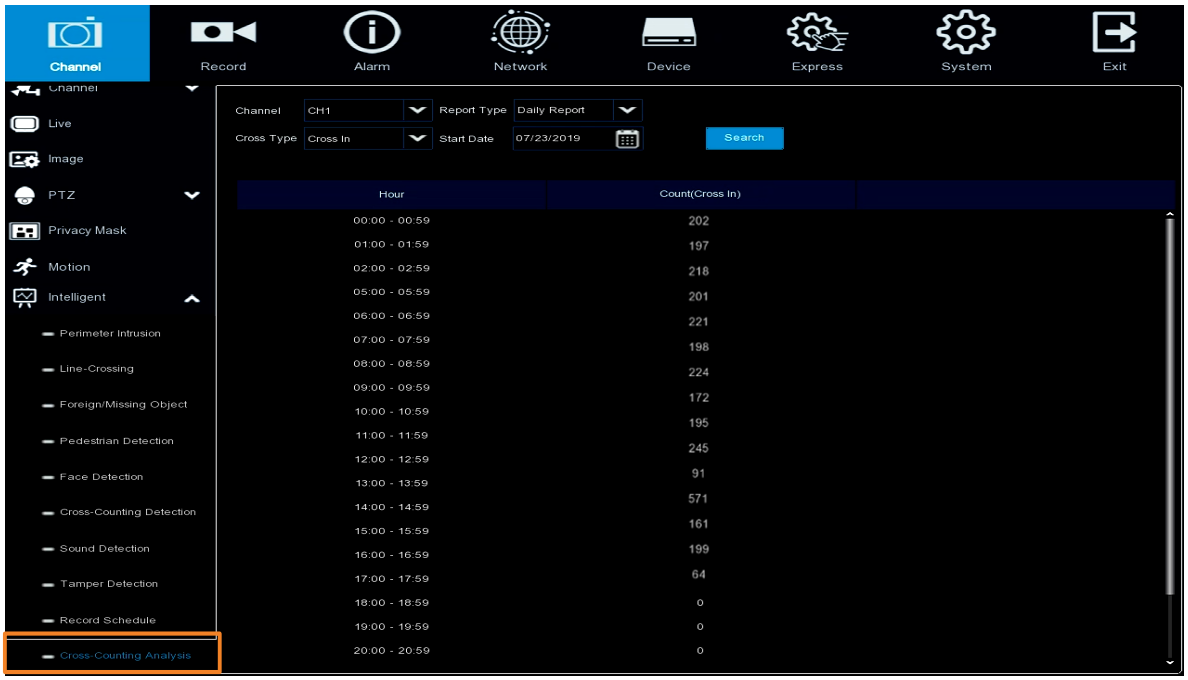


1. Select a channel and then move your mouse cursor over the schedule time blocks.
2. Click and drag on the schedule time blocks to draw the blocks with blue color, which will be applied with intelligent event recording function. To deselect the blocks, click and drag on the blue blocks to select again.
3. If you want to apply the same configurations from one channel to other channels, click the **Copy** button. Select a channel from the **Source Channel** drop-down list and then select the parameters you would like to apply to other channels. Select the desired channels from the **Target Channel** field and then click the **Copy** button.
4. Click **Apply** to save the settings.

4.1.7.10 Cross-Counting Analysis

On this page, you can search and view the statistical result of Cross-Counting Detection. For more details on Cross-Counting Detection, please refer to *4.1.8.6 Cross-Counting*.

Select the criteria and then click the **Search** button, the results will be listed at the lower section.



4.2 Record

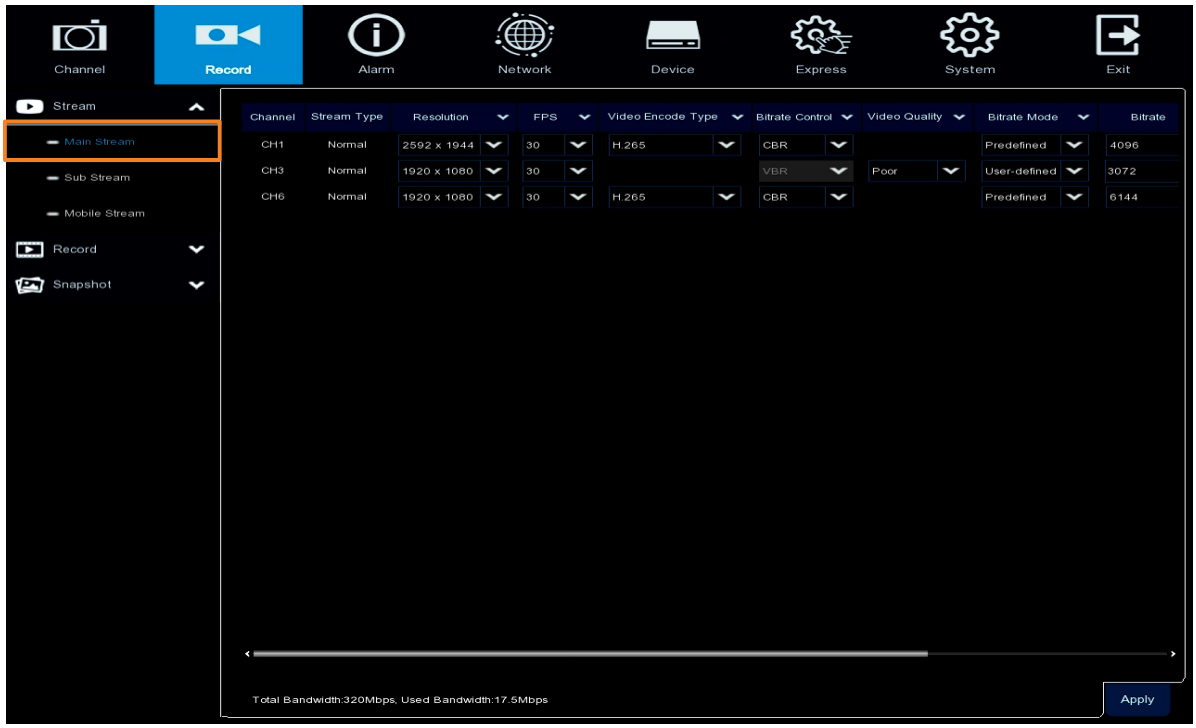
You can configure the recording settings on this page.

4.2.1 Stream

On this page, you can configure the recording video or network transmission picture quality. Generally, main stream defines the recording video quality which will be saved in the HDD; sub stream defines the video quality which is being viewed via remote access, for example web client and CMS; mobile stream defines the video quality which is being viewed via remote access through mobile devices.

4.2.1.1 Main Stream

Main stream defines the recording video quality which will be saved in the HDD.



Channel: Displays channel number.

Stream Type: Displays the stream type.

Resolution: Select a recording resolution.

FPS: Select a FPS (frames per second) for the recording.

Video Encode Type: Select H.264 or H.265 based on your IP cameras.

Bitrate Control: Select **CBR** (constant bitrate) if the scene is simple and less changing, such as a gray wall. Select **VBR** (variable bitrate) if the scene is complex, such as a department store. If VBR is selected, select a video quality next to Bitrate Control.

Video Quality: If **VBR** is selected in the **Bitrate Control** field, select a video quality for VBR.

Bitrate Mode: Select **User-defined** to set up bitrate manually; or **Predefined** to auto-select bitrate.

Bitrate: The Bitrate corresponds to the speed of data transfer that the NVR will use to record video. Recordings that are encoded at higher bitrates, will be of better quality.

Audio: Select this option if you want to record audio along with video. Please ensure the camera supports audio function.

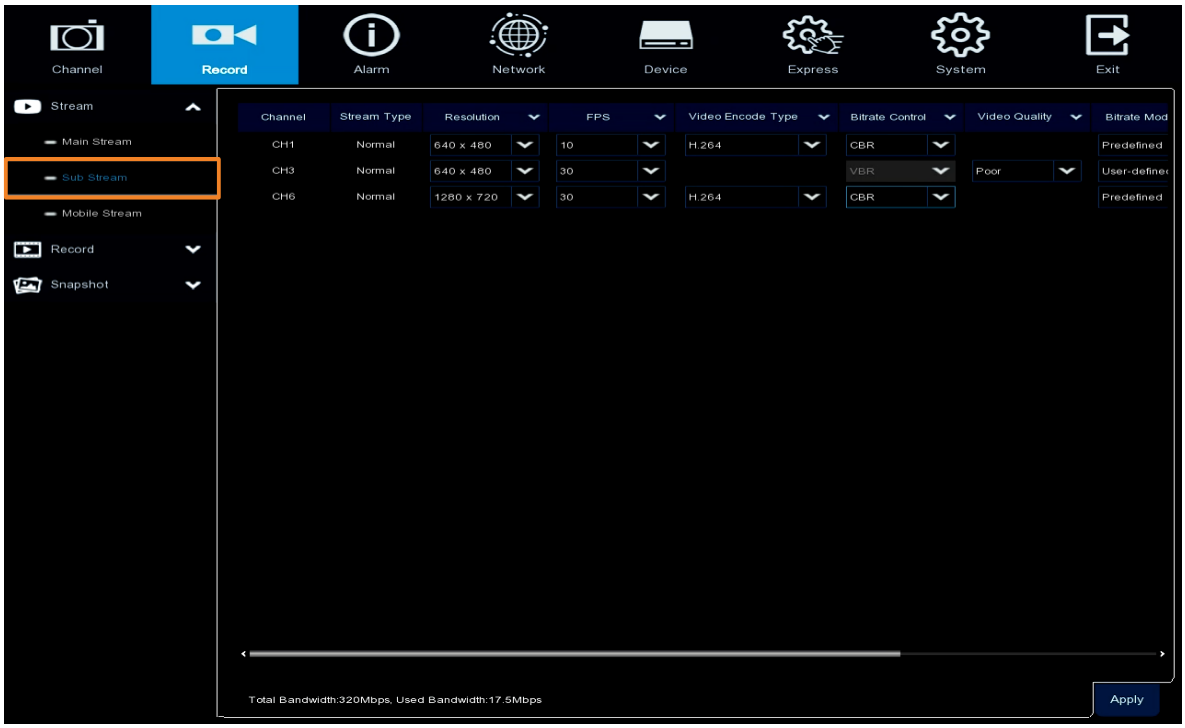
i-Frame Interval: This function is only available for certain IP cameras. Please consult EverFocus. Input an i-Frame interval.

I/O: Select this option if you want to enable external IO alarm for Main Stream recording.

Apply: Click to save the settings.

4.2.1.2 Sub Stream

Sub stream defines the video quality which is being viewed via remote access, for example web client and CMS.



Channel: Displays channel number.

Stream Type: Displays the stream type.

Resolution: Select a recording resolution.

FPS: Select a FPS (frames per second) for the recording.

Video Encode Type: Select H.264 or H.265 based on your IP cameras.

Bitrate Control: Select **CBR** (constant bitrate) if the scene is simple and less changing, such as a gray wall. Select **VBR** (variable bitrate) if the scene is complex, such as a department store. If VBR is selected, select a video quality next to Bitrate Control.

Video Quality: If **VBR** is selected in the **Bitrate Control** field, select a video quality for VBR.

Bitrate Mode: Select **User-defined** to set up bitrate manually; or **Predefined** to auto-select bitrate.

Bitrate: The Bitrate corresponds to the speed of data transfer that the NVR will use to record video. Recordings that are encoded at higher bitrates, will be of better quality.

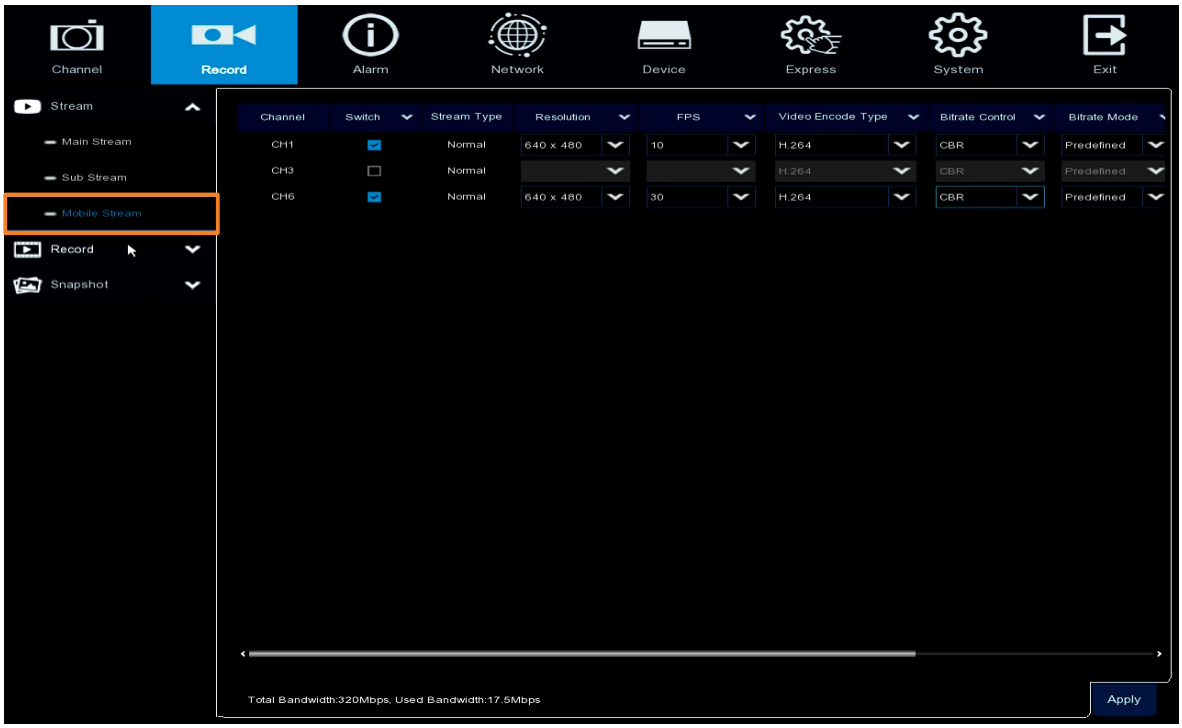
Audio: Select this option if you want to record audio along with video. Please ensure the camera supports audio function.

i-Frame Interval: This function is only available for certain IP cameras. Please consult EverFocus. Input an i-Frame interval.

Apply: Click to save the settings.

4.2.1.3 Mobile Stream

Mobile stream defines the video quality which is being viewed via remote access through mobile devices.



Channel: Displays channel number.

Switch: Check the box to enable the Mobile Stream function.

Stream Type: Displays the stream type.

Resolution: Select a recording resolution.

FPS: Select a FPS (frames per second) for the recording.

Video Encode Type: Select H.264 or H.265 based on your IP cameras.

Bitrate Control: Select **CBR** (constant bitrate) if the scene is simple and less changing, such as a gray wall. Select **VBR** (variable bitrate) if the scene is complex, such as a department store. If VBR is selected, select a video quality next to Bitrate Control.

Bitrate Mode: Select **User-defined** to set up bitrate manually; or **Predefined** to auto-select bitrate.

Bitrate: The Bitrate corresponds to the speed of data transfer that the NVR will use to record video. Recordings that are encoded at higher bitrates, will be of better quality.

Audio: Select this option if you want to record audio along with video. Please ensure the camera supports audio function and a microphone has been connected to the NVR.

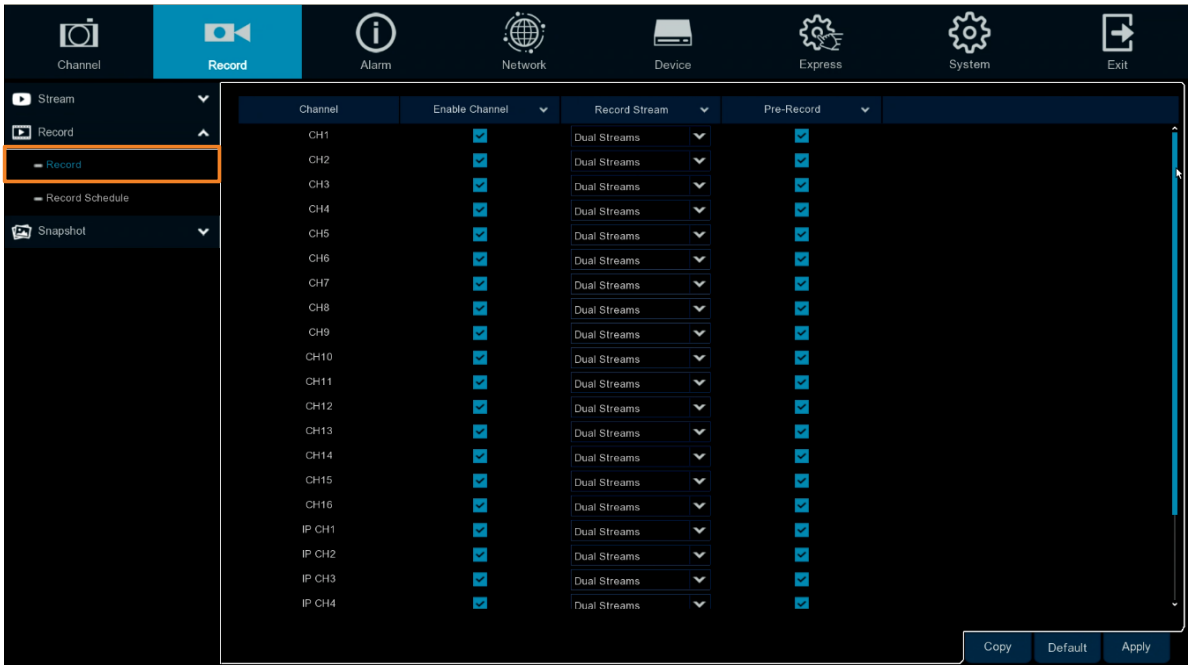
i-Frame Interval: Input an i-Frame interval.

Apply: Click to save the settings.

4.2.2 Record

On this page, you can configure the recording parameters and recording schedule for each channel.

4.2.2.1 Record



Channel: Displays channel number.

Enable Channel: Check the box to enable the function of the channel.

Record Stream: Select a recording stream for the channel. If you select **Dual Streams**, the system will record both Main Stream and Sub Stream. If you select **Main Stream**, the system will only record Main Stream.

Pre-Record: Check the box to enable the pre-record function. The NVR will start recording a few seconds before an alarm/event is triggered.

Copy: You can apply the same configurations from one channel to other channels. Select a channel from the **Source Channel** drop-down list and then select the parameters you would like to apply to other channels. Select the desired channels from the **Target Channel** field and then click the **Copy** button.

Default: Click to apply the default setting.

Apply: Click to save the settings.

4.2.2.2 Record Schedule

On this page, you can configure the recording schedule for Normal, Motion or I/O recordings.

Channel: Select a channel from the drop-down list.

Normal: Click the **Normal** button on the right-side and then move your mouse cursor over the schedule time blocks. Click and drag on the schedule time blocks to draw the blocks with green color, which will be applied with normal recording function.

Motion: Click the **Motion** button on the right-side and then move your mouse cursor over the schedule time blocks. Click and drag on the schedule time blocks to draw the blocks with yellow color, which will be applied with motion recording function. Note that for this function to work, you will have to configure the motion settings in advance (please refer to *4.1.6 Motion*).

IO: Click the **IO** button on the right-side and then move your mouse cursor over the schedule time blocks. Click and drag on the schedule time blocks to draw the blocks with red color, which will be applied with IO recording function. Note that for this function to work, you will have to configure the IO settings in advance (please refer to *4.3.3 IO*).

Copy: You can apply the same configurations from one channel to other channels. Select a channel from the **Source Channel** drop-down list and then select the parameters you would like to apply to other channels. Select the desired channels from the **Target Channel** field and then click the **Copy** button.

Default: Click to apply the default setting.

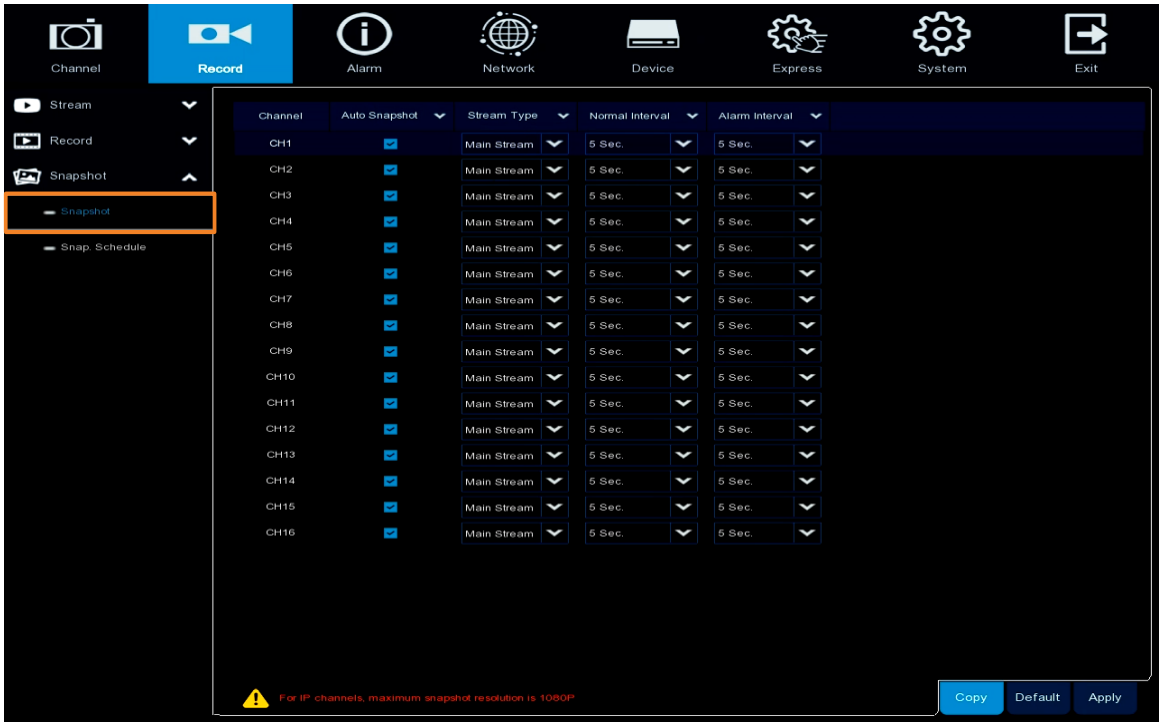
Apply: Click to save the settings.

4.2.3 Snapshot

On this page, you can configure the snapshot parameters or set up the snapshot schedule.

4.2.3.1 Snapshot

On this page, you can configure the snapshot parameters.



Channel: Displays the channel number.

Auto Snapshot: Check the box to enable the Auto Snapshot function. For this function to work, you will have to configure the Snapshot Schedule (refer to *4.2.3.2 Snap. Schedule)*.

Stream Type: Select main stream or sub stream for the snapshot image.

Normal Interval: Configure an interval to automatically take a normal snapshot. For this function to work, you will have to configure the Snapshot Schedule. Please refer to *4.2.3.2 Snap. Schedule*.

Alarm Interval: Configure an interval to automatically take a snapshot when motion, IO alarm is triggered. For this function to work, you will have to configure the Snapshot Schedule. Please refer to *4.2.3.2 Snap. Schedule*.

Copy: You can apply the same configurations from one channel to other channels. Select a channel from the **Source Channel** drop-down list and then select the parameters you would like to apply to other channels. Select the desired channels from the **Target Channel** field and then click the **Copy** button.

Default: Click to apply the default setting.

Apply: Click to save the settings.

4.2.3.2 Snap. Schedule

On this page, you can configure the snapshot schedule.

Channel: Select a channel from the drop-down list.

Normal: Click the **Normal** button on the right-side and then move your mouse cursor over the schedule time blocks. Click and drag on the schedule time blocks to draw the blocks with green color, which will be applied with normal snapshot function.

Motion: Click the **Motion** button on the right-side and then move your mouse cursor over the schedule time blocks. Click and drag on the schedule time blocks to draw the blocks with yellow color, which will be applied with motion snapshot function. Note that for this function to work, you will have to configure the motion settings in advance (please refer to *4.1.6 Motion*).

IO: Click the **IO** button on the right-side and then move your mouse cursor over the schedule time blocks. Click and drag on the schedule time blocks to draw the blocks with red color, which will be applied with IO snapshot function. Note that for this function to work, you will have to configure the IO settings in advance (please refer to *4.3.3 IO*).

Copy: You can apply the same configurations from one channel to other channels. Select a channel from the **Source Channel** drop-down list and then select the parameters you would like to apply to other channels. Select the desired channels from the **Target Channel** field and then click the **Copy** button.

Default: Click to apply the default setting.

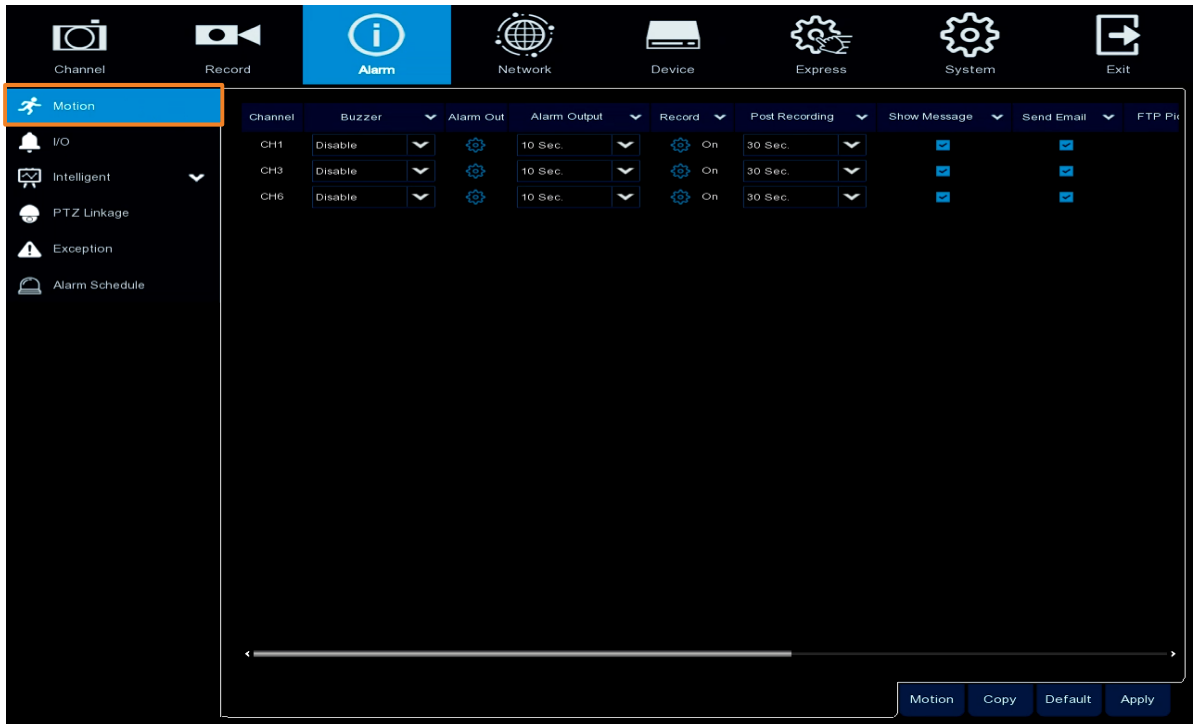
Apply: Click to save the settings.

4.3 Alarm

You can configure the alarm settings on this page.

4.3.1 Motion

After configuring the Motion Detection settings, you can further configure the Motion Alarm settings. To configure the Motion Detection setting, click the **Motion** button to enter the Motion Detection setup page (please refer to *4.1.6 Motion*).



Channel: Displays the channel number.

Buzzer: Select a time for NVR buzzer to sound when a motion event is triggered. Select **Disable** to disable the function.

Alarm Out: Select an external alarm output device connected to the NVR (Local), IPCam (CH) or both (All).

Alarm Output: Select an alarm output time (duration) when events occur. When an event is triggered, the alarm will last based on the setup time.

Record: Click  and select the desired channel(s) you want to record when a motion event is triggered. Note that for recording function to work, the Record Schedule function has to be configured (please refer to *4.2.2.2 Record Schedule*).

Post Recording: Select a post recording time when a motion event is triggered.

Show Message: Check the box to display the motion icon  on the live channel when a motion event is triggered.

Send Email: Check the box to enable the Email alert function. When a motion event is triggered, the NVR will send an email alert with a snapshot to the pre-configured Email receiver. Note that for this function to work, you have to set up the Email function in advance (refer to *4.4.3 Email*).

FTP Picture Upload: When an event is triggered, the NVR will upload alarm images to FTP server. Note that for this function to work, you have to set up FTP configurations in advance. You can also configure the snapshot image resolution and quality, please refer to *4.4.4.1 FTP*.

FTP Video Upload: When a motion event is triggered, the NVR will upload alarm videos to FTP server. Note that for this function to work, you have to set up FTP Schedule in advance, please refer to *4.4.4.2 FTP Schedule*.

Picture to Cloud: When a motion event is triggered, the NVR will upload alarm images to Cloud (Dropbox). Note that for this function to work, you have to set up Cloud in advance, please refer to *4.5.2 Cloud*.

Video to Cloud: When a motion event is triggered, the NVR will upload alarm videos to Cloud (Dropbox). Note that for this function to work, you have to set up Cloud in advance, please refer to *4.5.2 Cloud*.

Full Screen Trigger: If this function is enabled and a motion event is triggered, the triggered channel will be displayed in full screen.

Motion: Click the **Motion** button to enter the Motion Detection setup page (please refer to *4.1.6 Motion*).

Copy: You can apply the same configurations from one channel to other channels. Select a channel from the **Source Channel** drop-down list and then select the parameters you would like to apply to other channels. Select the desired channels from the **Target Channel** field and then click the **Copy** button.

Default: Click to apply the default setting.

Apply: Click to save the settings.

4.3.2 IO

After connecting the external IO devices to the NVR or IPCam, you can further configure the IO Alarm settings.

Alarm In: Displays the alarm input number. Local: the IO devices connected to the NVR. CH: the IO devices connected to the IP cameras.

Alarm Type: Select an alarm type for the alarm input. Options include Normally-Open, Normally-Close and Off.

Buzzer: Select a time for NVR buzzer to sound when an IO event is triggered. Select **Disable** to disable the function.

Alarm Out: Select an external alarm output device connected to the NVR (Local), IPCam (CH) or both (All).

Alarm Output: Select an alarm output time (duration) when events occur. When an event is triggered, the alarm will last based on the setup time.

Channel: Click ⚙ and select the desired channel(s) you want to record when an IO event is triggered. Note that for IO recording function to work, the Record Schedule function has to be configured (please refer to *4.2.2.2 Record Schedule*).

Post Recording: Select a post recording time when an IO event is triggered.

Show Message: Check the box to display the IO event icon on the live channel when an IO event is triggered.

Send Email: Check the box to enable the Email alert function. When an IO event is triggered, the NVR will send an email alert with a snapshot to the pre-configured Email receiver. Note

that for this function to work, you have to set up the Email function in advance (refer to *4.4.3 Email*).

FTP Picture Upload: When an event is triggered, the NVR will upload alarm images to FTP server. Note that for this function to work, you have to set up FTP configurations in advance. You can also configure the snapshot image resolution and quality, please refer to *4.4.4.1 FTP*.

FTP Video Upload: When a motion event is triggered, the NVR will upload alarm videos to FTP server. Note that for this function to work, you have to set up FTP Schedule in advance, please refer to *4.4.4.2 FTP Schedule*.

Picture to Cloud: When an event is triggered, the NVR will upload alarm images to Cloud (Dropbox). Note that for this function to work, you have to set up Cloud in advance, please refer to *4.5.2 Cloud*.

Video to Cloud: When an event is triggered, the NVR will upload alarm videos to Cloud (Dropbox). Note that for this function to work, you have to set up Cloud in advance, please refer to *4.5.2 Cloud*.

Full Screen Trigger: If this function is enabled and an IO event is triggered, the triggered channel will be displayed in full screen.

Copy: You can apply the same configurations from one channel to other channels. Select a channel from the **Source Channel** drop-down list and then select the parameters you would like to apply to other channels. Select the desired channels from the **Target Channel** field and then click the **Copy** button.

Default: Click to apply the default setting.

Apply: Click to save the settings.

4.3.3 Intelligent Alarm

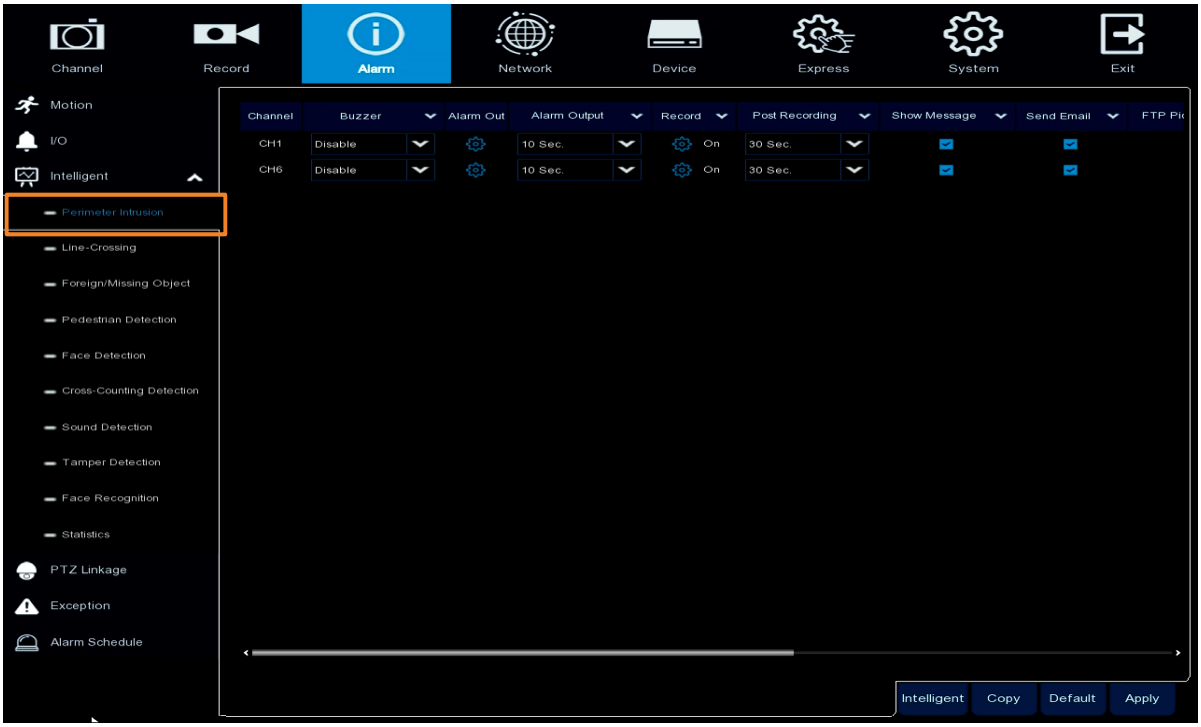
After configuring the Intelligent function settings, you can further configure the Alarm settings for each intelligent function. To configure the Intelligent functions, click the **Intelligent** button to enter each intelligent function setup page (please refer to *4.1.8 Intelligent*).

4.3.3.1 IVS Alarm Settings

The Intelligent Alarm setup configurations for the following intelligent functions are similar.

Perimeter Intrusion, Line Crossing, Foreign/Missing Object, Pedestrian Detection, Face Detection, Cross-Counting Detection, Sound Detection and Tamper Detection.

Here we use **Perimeter Intrusion** alarm setup page for example.



Channel: Displays the channel number.

Buzzer: Select a time for NVR buzzer to sound when an event is triggered. Select **Disable** to disable the function.

Alarm Out: Select an external alarm output device connected to the NVR (Local), IPCam (CH) or both (All).

Alarm Output: Select an alarm output time (duration) when events occur. When an event is triggered, the alarm will last based on the setup time.

Record: Click ⚙ and select the desired channel(s) you want to record when an event is triggered on this channel. Note that for recording function to work, the Record Schedule function has to be configured (please refer to *4.1.8.9 Record Schedule*).

Post Recording: Select a post recording time when an event is triggered.

Show Message: Check the box to display an Intelligent event icon "S" or intelligent messages on the live channel when an event is triggered.

Send Email: Check the box to enable the Email alert function. When an event is triggered, the NVR will send an email alert with a snapshot to the pre-configured Email receiver. Note that for this function to work, you have to set up the Email function in advance (refer to *4.4.3 Email*).

FTP Picture Upload: When an event is triggered, the NVR will upload alarm images to FTP server. Note that for this function to work, you have to set up FTP configurations in advance. You can also configure the snapshot image resolution and quality, please refer to *4.4.4.1 FTP*.

FTP Video Upload: When a motion event is triggered, the NVR will upload alarm videos to FTP server. Note that for this function to work, you have to set up FTP Schedule in advance, please refer to *4.4.4.2 FTP Schedule*.

Picture to Cloud: When an event is triggered, the NVR will upload alarm images to Cloud (Dropbox). Note that for this function to work, you have to set up Cloud in advance, please refer to *4.5.2 Cloud*.

Video to Cloud: When an event is triggered, the NVR will upload alarm videos to Cloud (Dropbox). Note that for this function to work, you have to set up Cloud in advance, please refer to *4.5.2 Cloud*.

Full Screen Trigger: If this function is enabled and an event is triggered, the triggered channel will be displayed in full screen.

Intelligent: Click the button to enter each Intelligent setup page (please refer to *4.1.8 Intelligent*).

Copy: You can apply the same configurations from one channel to other channels. Select a channel from the **Source Channel** drop-down list and then select the parameters you would like to apply to other channels. Select the desired channels from the **Target Channel** field and then click the **Copy** button.

Default: Click to apply the default setting.

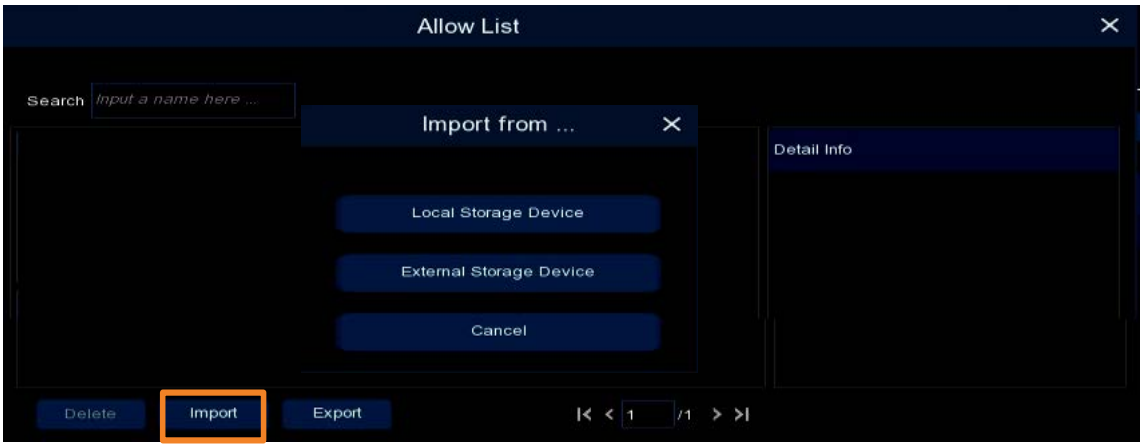
Apply: Click to save the settings.

4.3.3.2 Face Recognition Alarm Settings

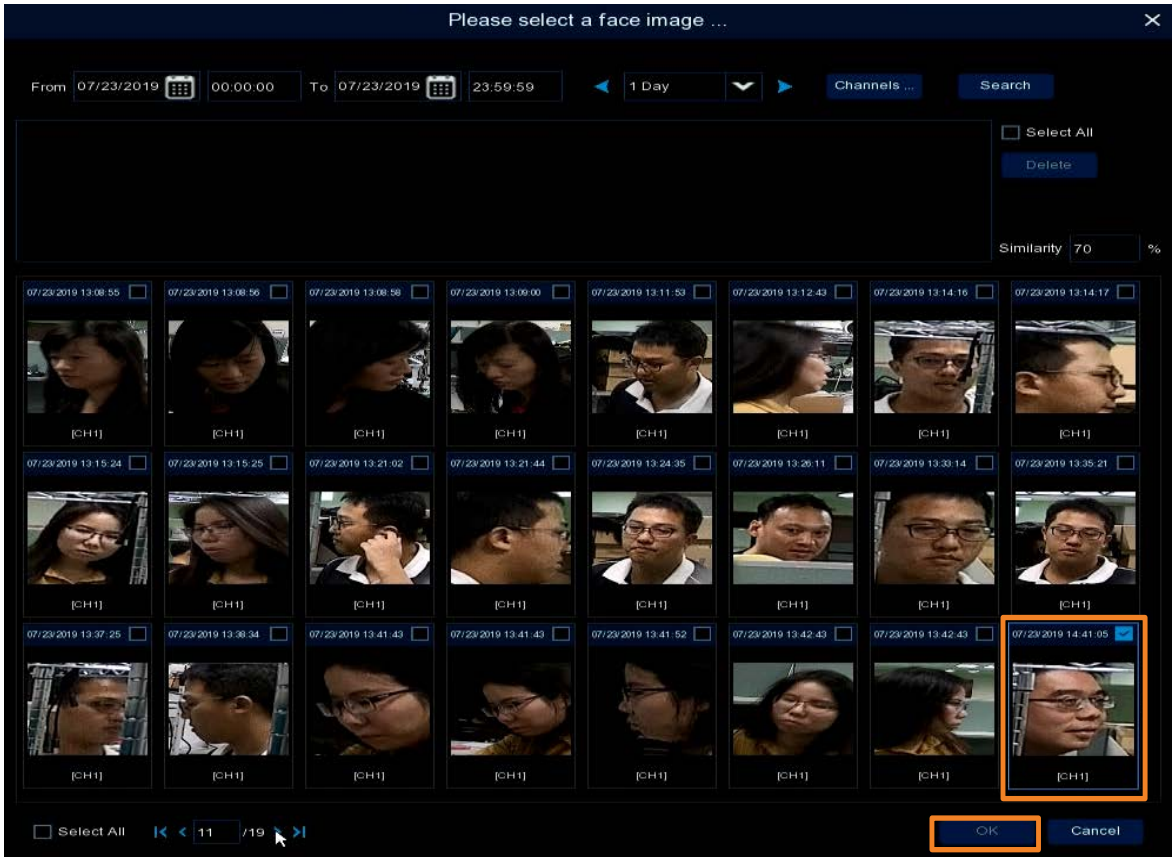
Facial recognition can help verify personal identity to accurately authenticate the users.

For this function to work, you will have to edit the database and group the users in advance.

1. Create a group. By default, Allow List, Block List and Stranger groups have been created. You can click the **Add** button to add more groups. Select a **Policy** and input a **Similarity** for the added groups.
2. To add account users to the group:
   a. Enable the Face Recognition function for the system to detect faces and take snapshot images in database. Please refer to *4.1.7.5 Face Detection*.
   b. To add users to a group, click the **Edit** button of a group. Click the **Import** button and then click **Local Storage Device** to display the snapshot images from the local storage.

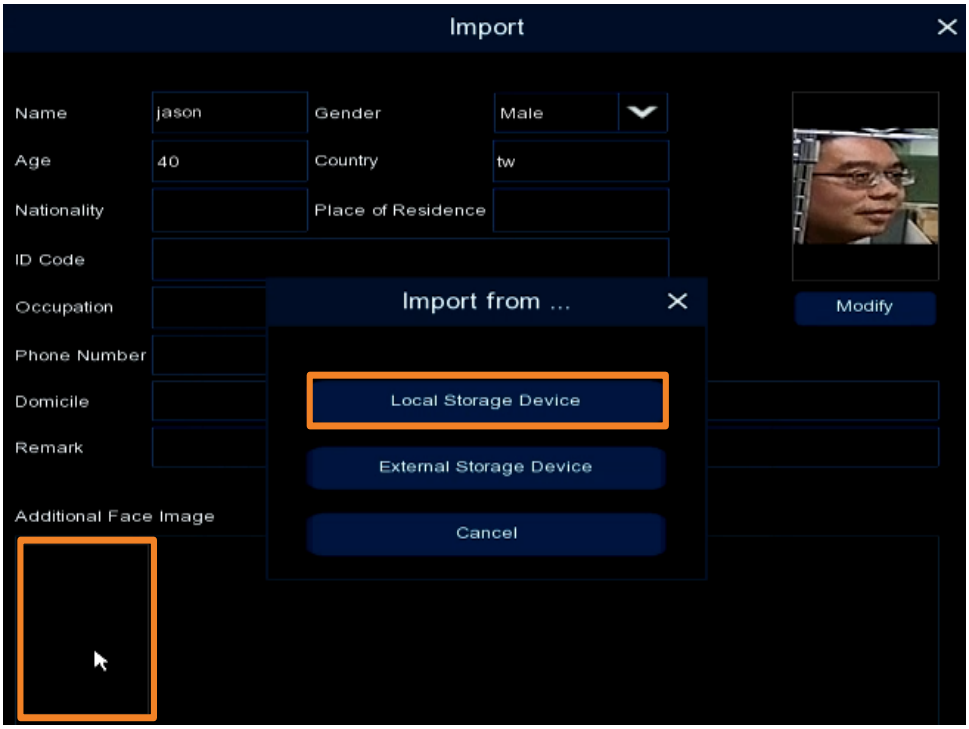


   c. Select a person you want to edit to the face recognition database and then click **OK**.

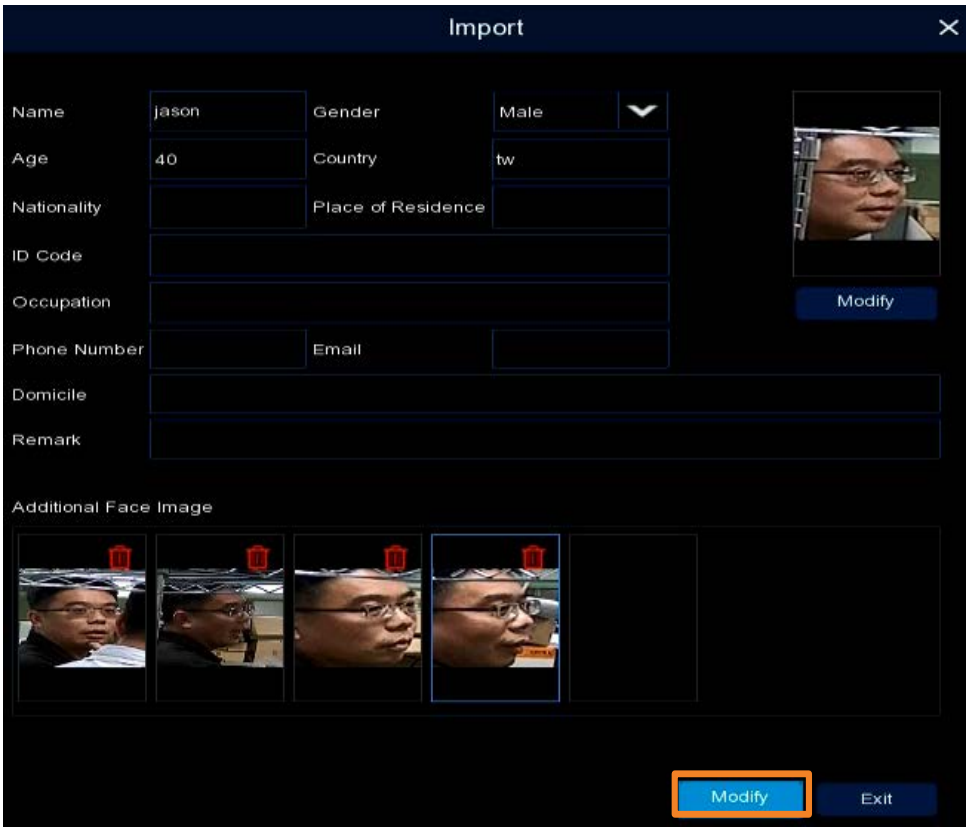


d. Input the info of the person and then click **Import**.

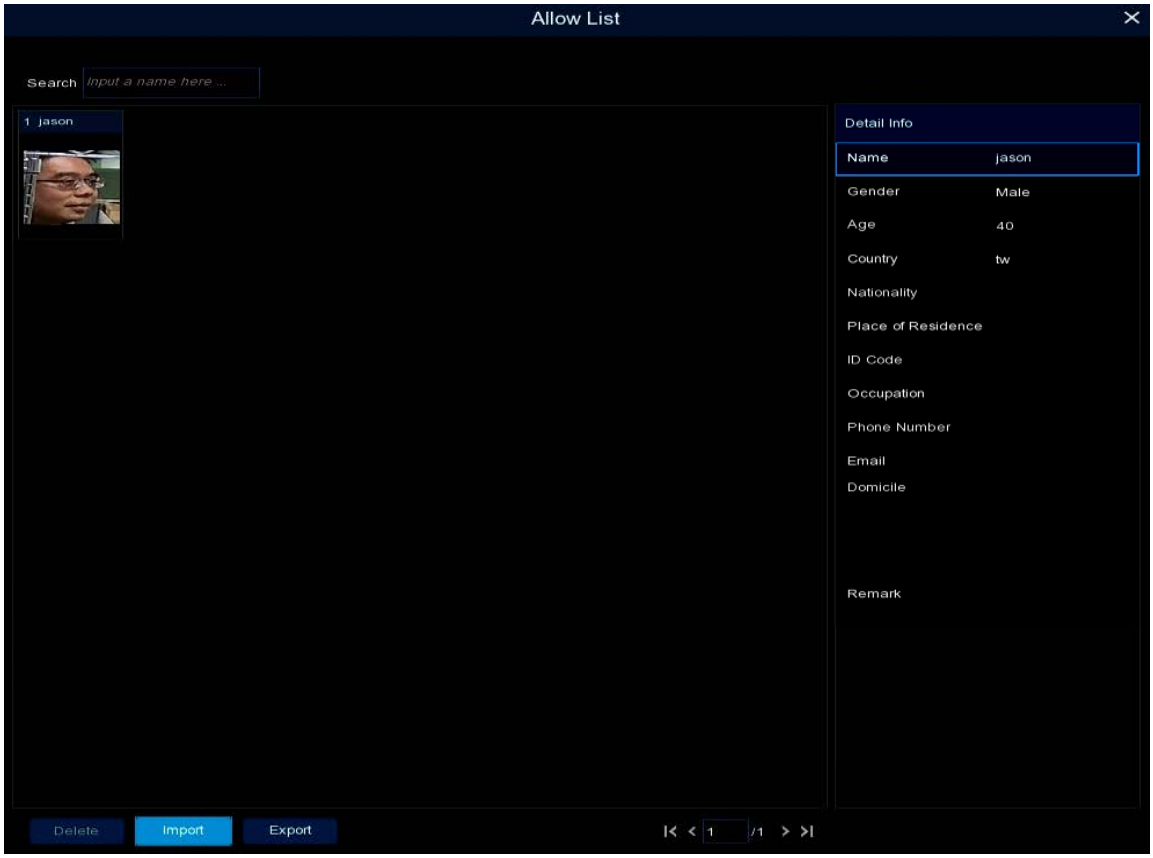
e. To add more face images of this person in order to raise the face recognition accuracy, click the **Additional Face Image** field and then click **Local Storage Device** to add more images.



f. Click **Modify** to confirm setting.



g. The user has been added to the system.



h. Follow **Step 1** to add more users.

3. To set up the Alarm Output function, click the **Alarm** button of the group and then configure the Alarm function.

Channel: Displays the channel number.

Buzzer: Select a time for NVR buzzer to sound when an event is triggered. Select **Disable** to disable the function.

Alarm Out: Select an external alarm output device connected to the NVR (Local), IPCam (CH) or both (All).

Alarm Output: Select an alarm output time (duration) when events occur. When an event is triggered, the alarm will last based on the setup time.

Save Face: Check the checkbox to save face images when the system detects faces.

Save Background: Check the box to save background.

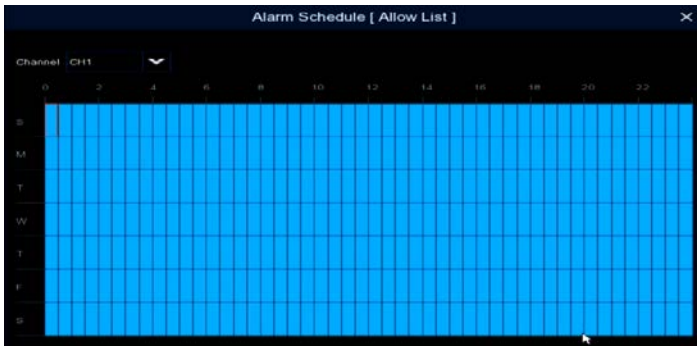
Show Thumbnail: Check the box to display the face thumbnails on the Live Alarm Panel.

Send Email: Check the box to enable the Email alert function. When an event is triggered, the NVR will send an email alert with a snapshot to the pre-configured Email receiver. Note that for this function to work, you have to set up the Email function in advance (refer to *4.4.3 Email*).

FTP Picture Upload: When an event is triggered, the NVR will upload alarm images to FTP server. Note that for this function to work, you have to set up FTP configurations in advance. You can also configure the snapshot image resolution and quality, please refer to *4.4.4.1 FTP*.

Picture to Cloud: When an event is triggered, the NVR will upload alarm images to Cloud (Dropbox). Note that for this function to work, you have to set up Cloud in advance, please refer to *4.5.2 Cloud*.

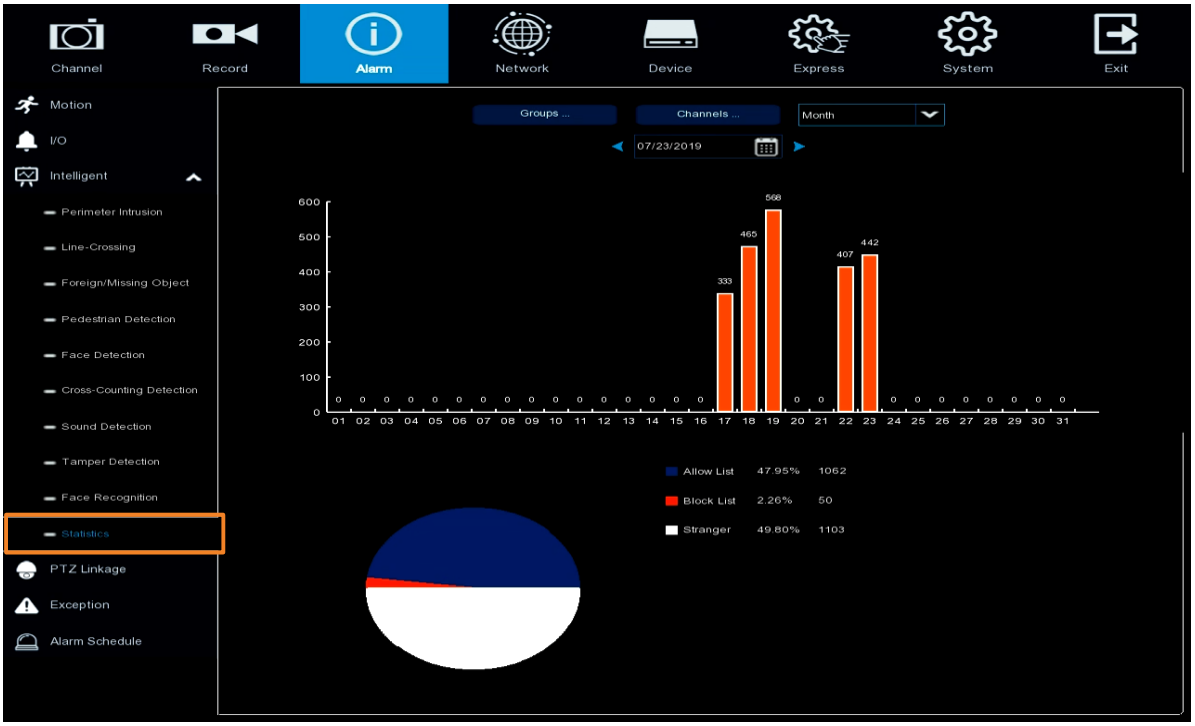
4. To configure the Alarm Schedule of the Face Recognition function, click the **Alarm Schedule** button to configure the alarm schedule.



5. Click the **Apply** button to save the settings.
6. The Face Recognition configuration is complete. Go to the Live View page and when there are faces detected, the Face Recognition thumbnails will be displayed on the Live Alarm Panel.

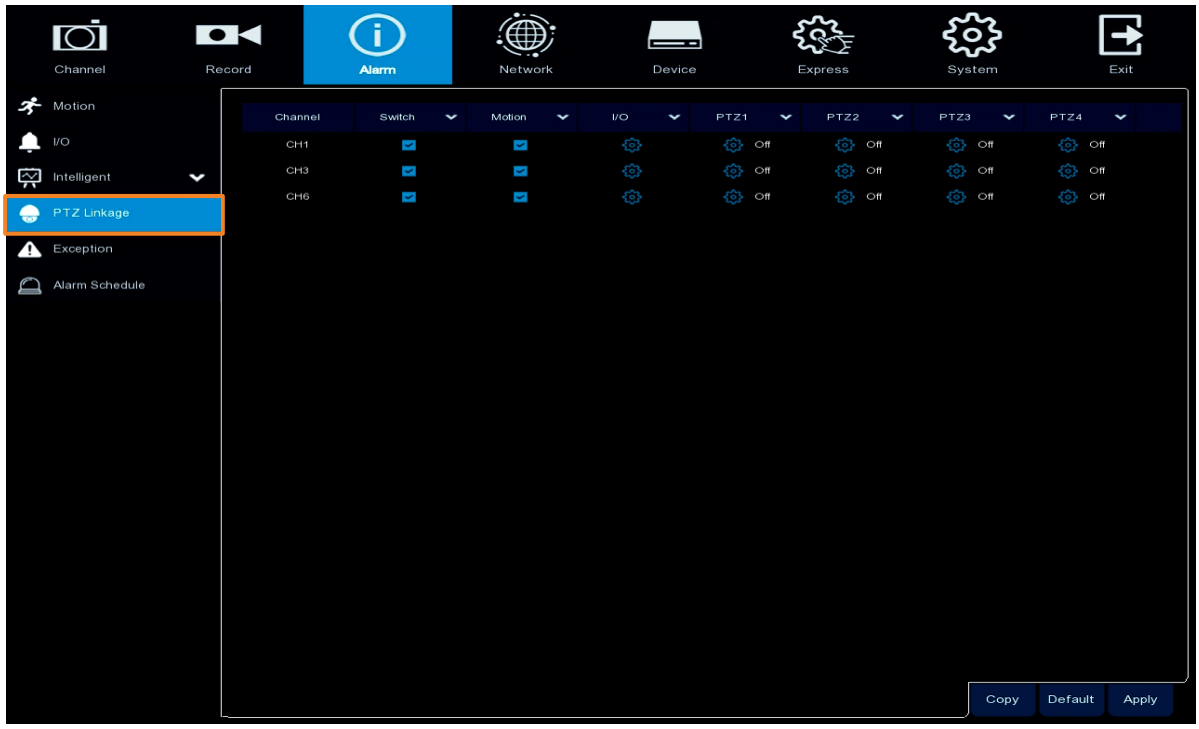
4.3.3.3 Statistics

You can search for the Facial Recognition statistics on this page.



4.3.4 PTZ Linkage

You can associate an alarm trigger (motion or I/O) with a specific camera and then activate a PTZ camera to go to a preset position when the alarm is triggered.



Channel: Displays the channel number.

Switch: Check the box to enable the PTZ Linkage function.

Motion: Check the box to trigger the PTZ Linkage function when a motion event occurs.

IO: Check the box to trigger the PTZ Linkage function when an IO event occurs. Select an external alarm output device connected to the NVR (Local), IPCam (CH) or both (All).

PTZ1-4: Associates the PTZ camera with preset points. Please set up the preset points of your PTZ cameras in advance (please refer to *3.5.2.2 Preset Setting*). After setting up the preset points, click to configure a PTZ camera and the preset number. If the PTZ camera is assigned to CH2, select CH2 from the channel dropdown list and then select a desired preset point. When an even is triggered, the configured PTZ camera will turn to the preset point.

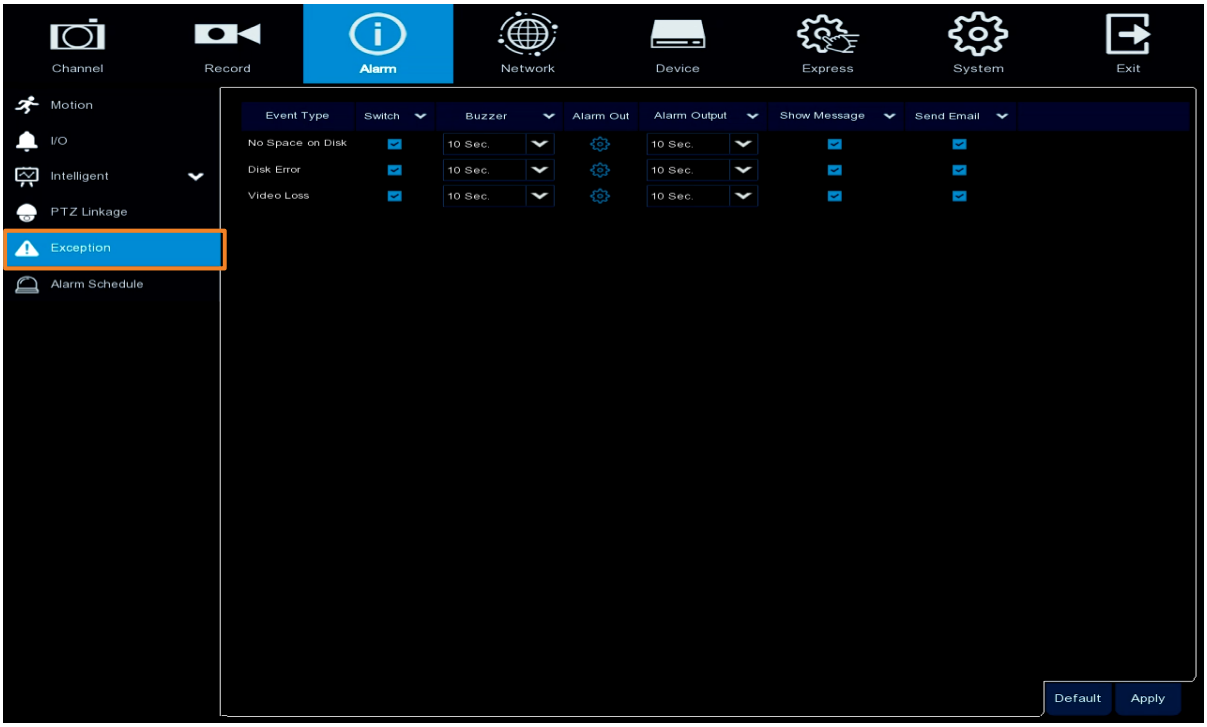
Copy: You can apply the same configurations from one channel to other channels. Select a channel from the **Source Channel** drop-down list and then select the parameters you would like to apply to other channels. Select the desired channels from the **Target Channel** field and then click the **Copy** button.

Default: Click to apply the default setting.

Apply: Click to save the settings.

4.3.5 Exception

You can configure the system alarm settings on this page.



Event Type: Displays the event types.

- No Space on Disk: When an HDD is full.
- Disk Error: When the HDD is not detected properly.
- Video Loss: When a camera is not connected properly.

Switch: Check the box to enable the function.

Buzzer: Set up the time for buzzer to sound when an event is triggered. To disable the Buzzer function, select **Disable**.

Alarm Out: Select an external alarm output device connected to the NVR (Local), IPCam (CH) or both (All).

Alarm Output: Select an alarm output time (duration) when events occur. When an event is triggered, the alarm will last based on the setup time.

Show Message: Check the box to display an alarm message on the upper-right corner of the live channel when an event is triggered.

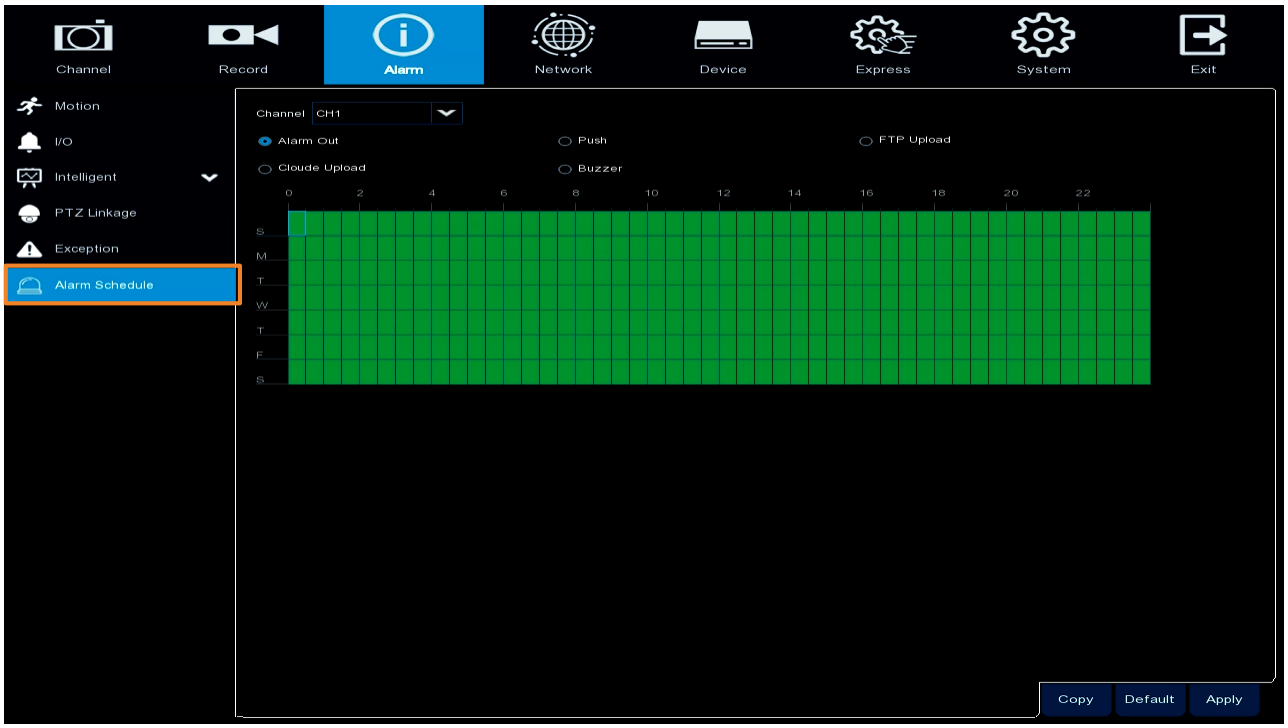
Send Email: Check the box to enable the Email alert function. When an event is triggered, the NVR will send an email alert with a snapshot to the pre-configured Email receiver. Note that for this function to work, you have to set up the Email function in advance (refer to *4.4.3 Email*).

Default: Click to apply the default setting.

Apply: Click to save the settings.

4.3.6 Alarm Schedule

You can configure the schedule to activate the alarm functions including IO Alarm Output, Push Notification, FTP Upload, Cloud Upload and Buzzer.



4.4 Network

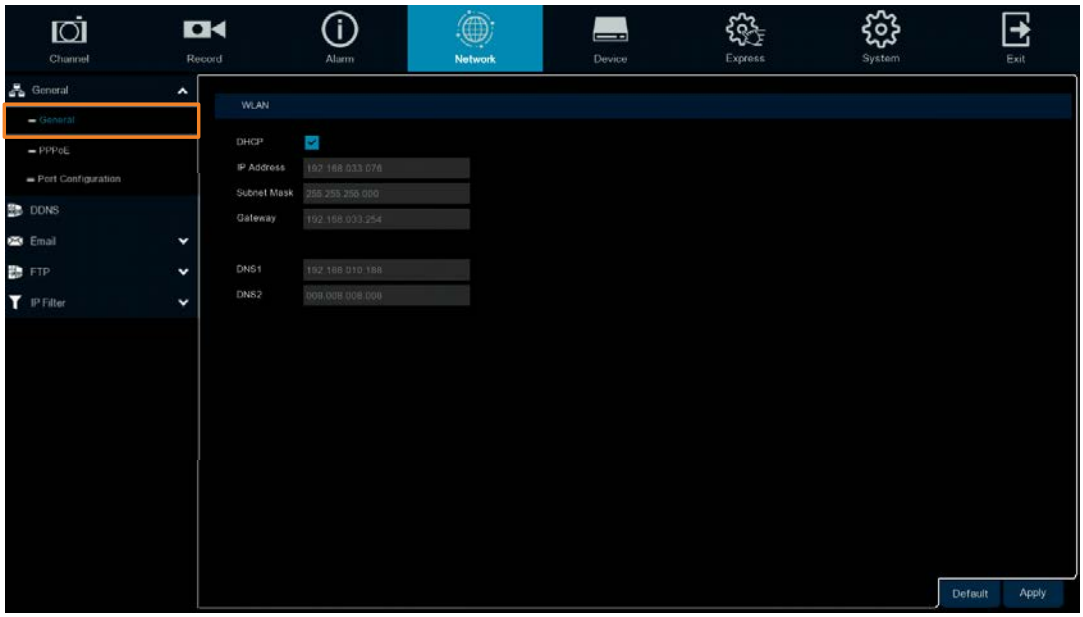
You can configure the network settings on this page.

4.4.1 General

This page allows you to configure network parameters, such as DHCP and PPPoE.

4.4.1.1 General

The DHCP setting lets the system use an automatically assigned (dynamic) IP address. This address can change under certain circumstances, for instance, when the NVR's network switch/hub has to be rebooted. DHCP server in LAN will automatically assign an IP configuration for the network connection.



DHCP: Check the box to enable the DHCP function. The router will automatically assign all the below IP parameters to the NVR.

IP Address: The IP address of the NVR. The IP address consists of four groups of numbers, separated by periods. For example, "192.168.001.100".

Subnet Mask: Subnet mask is a network parameter which defines a range of IP addresses that can be used on a network. The subnet address also consists of four groups of numbers, separated by periods. For example, "255.255.000.000".

Gateway: This address allows the NVR to access the Internet. The format of the Gateway address is the same as the IP Address. For example, "192.168.001.001".

DNS: DNS1 is the primary DNS server and DNS2 is a backup DNS server. Usually, it's enough to just enter the DNS1 server address.

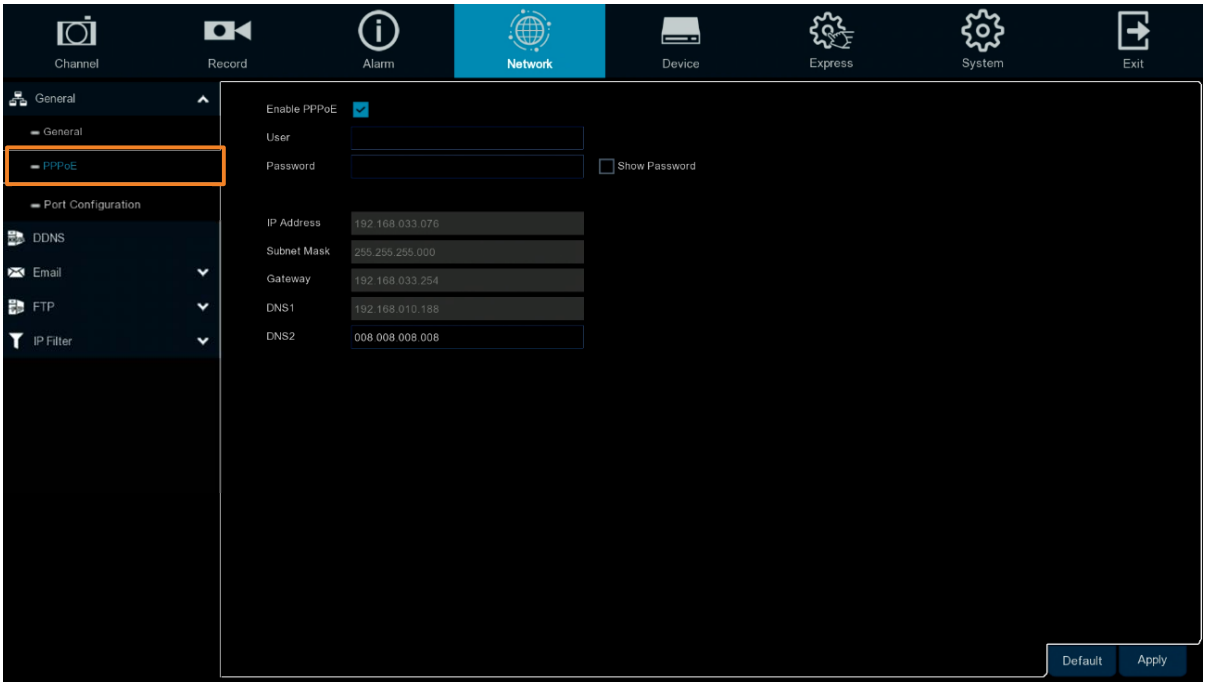
Default: Click to apply the default setting.

Apply: Click to save the settings.

4.4.1.2 PPPoE

This is a DSL-connection application. The ISP will ask the user to input a username and password. Contact your ISP for these details.

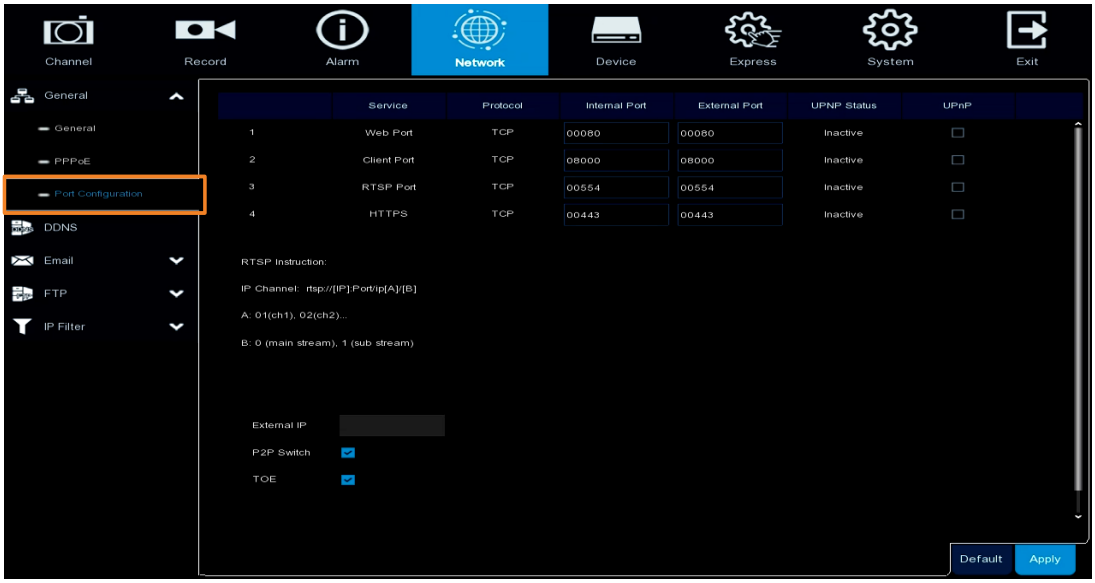
Note: If PPPoE is selected as the IP type, the supplied **IP Utility** program will not be able to detect the device.



Check the **Enable PPPoE** box, and then enter the User name and Password provided by the ISP. Click the **Apply** button, the system will reboot to activate the PPPoE setting.

4.4.1.3 Port Configuration

On this page, you can configure the port settings or enable/disable the UPnP or P2P function.



Web Port: The Web port can be used to remotely login the NVR (e.g. using the Web Client). If the default port 80 is already taken by other applications, please change it.

Client Port: The Client port can be used to send information through (e.g. using the mobile app). If the default port 9000 is already taken by other applications, please change it.

RTSP Port: The RTSP port allows the NVR to transmit real-time streaming to other devices (e.g. using a streaming media player).

HTTPS: The Hypertext Transfer Protocol Secure (HTTPS) is a combination of the Hypertext Transfer Protocol and the SSL/TLS protocol that provides encrypted communication and secure identification of a network web server.

UPnP: Check the box to enable the UPnP function. If you want to remotely login the NVR using Web Client, you need to enable the UPnP function and also enable the Port Forwarding function on your router.

Note:

1. For the UPnP function to work, an UPnP-enabled router is required.
2. If your router does not support UPnP, ensure the **Port Forwarding** function is manually enabled on your router.

External IP: After enabling the UPnP function, the external IP address will be displayed.

P2P Switch: Check the box to enable the P2P function. If **P2P** function is enabled, a QR code will be displayed on the System Info page. You can scan the QR code with **EverFocus eFVMS App** installed on your mobile device to add and remote access the NVR. Please refer to *4.9.5.1.1 Performing the P2P Function*.

TOE: Check the box to enable the TOE function.

Default: Click to apply the default setting.

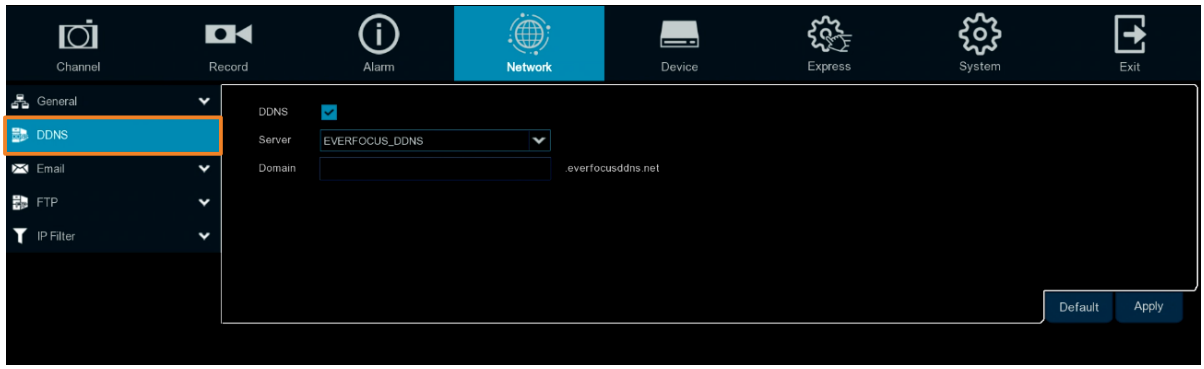
Apply: Click to save the settings.

4.4.2 DDNS

You can configure the DDNS setting on this page. DDNS (Dynamic Domain Name System) is a service used to map a domain name to the dynamic IP address of a network device. You can set up the DDNS service for remote access to the NVR.

DDNS assigns a domain name (URL) to the NVR, so that the user does not need to go through the trouble of checking if the IP address assigned by DHCP Server has changed. Once the IP is changed, the NVR will automatically update the information to the DDNS to ensure it is always available for remote access.

Note that before enabling the following DDNS function, user should have applied for a host name from the DDNS service provider's website. We highly recommend that you use xxxx.everfocusddns.net for the simplicity of setting up your NVR. Please refer to **EverFocus DDNS** on the next page.



DDNS: Check the box to enable the DDNS function.

Server: Select a DDNS service provider from the drop-down list. Note that before enabling the following DDNS function, user should have applied for a host name from the DDS service provider's website.

Domain: Input the domain name obtained from the DDNS service provider.

User: Input the user name of the DDNS account.

Password: Input the password of the DDNS account.

Test DDNS: Click the button to test whether the DDNS function is working normally.

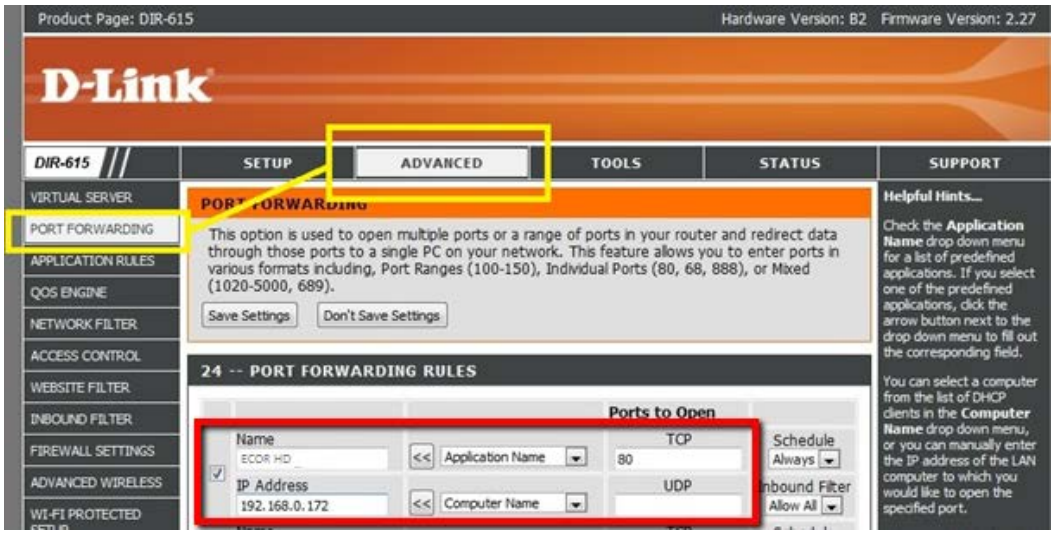
Default: Click to apply the default setting.

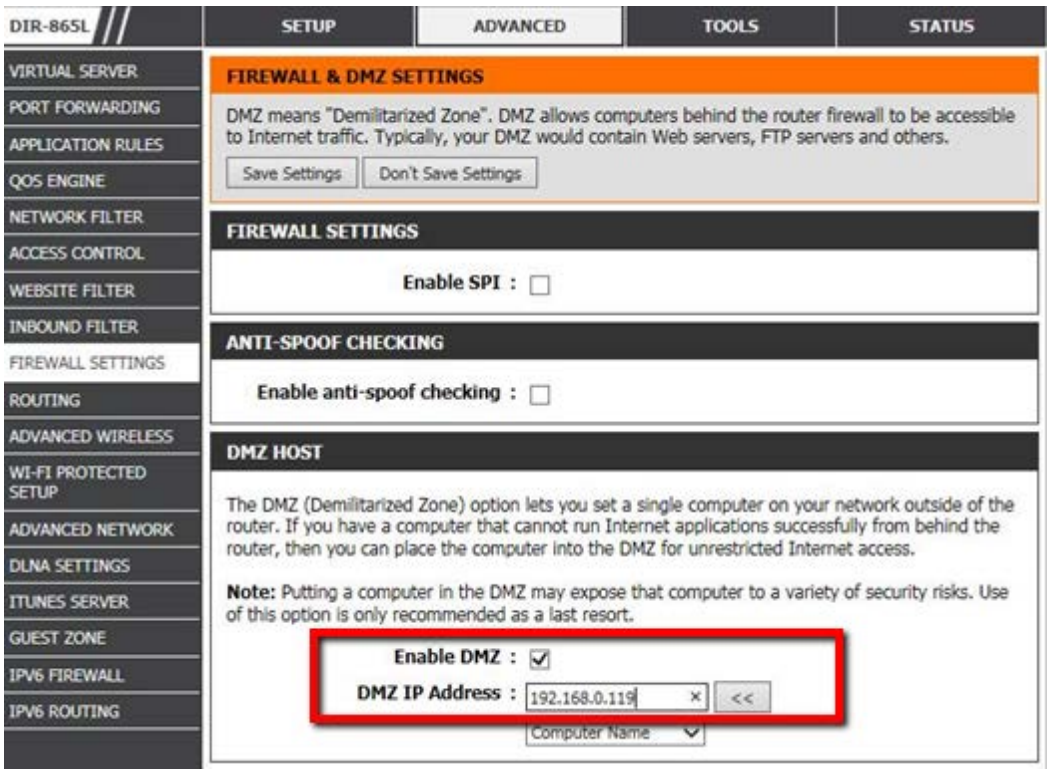
Apply: Click to save the settings.

EverFocus DDNS

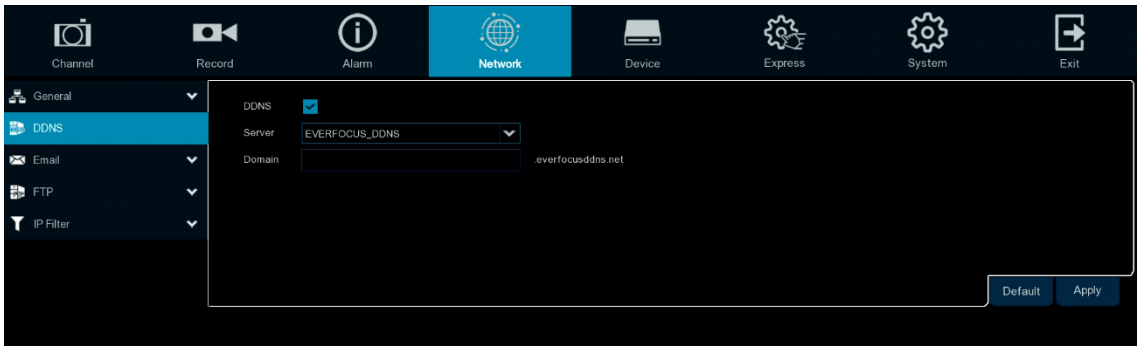
Please follow the steps below to set up EverFocus DDNS.

1. In order to allow remote access to the NVR from outside of the local network, enable either the **Port Forwarding** or **DMZ** function of your router. Please refer to the manual of your router for more details.





2. Go to http://www.everfocusddns.net to check an available host name for the NVR. Note that the host name of the NVR cannot include a space, underline or any special characters particularly _~ ! @ # $ % ^ & * ( ) + < > " ; : . ,
3. Register the host name on the DDNS setup page for the NVR.



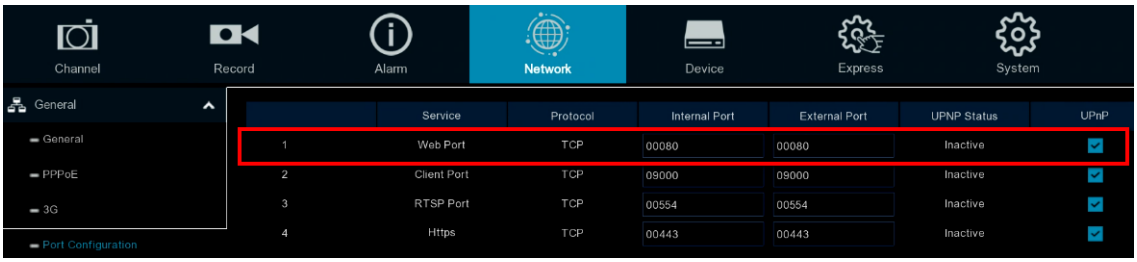
a. Check DDNS to enable the DDNS function.

b. Select **EVERFOCUS DDNS** from the Server drop-down list.

c. Input the host name in the **NVR Name** field.

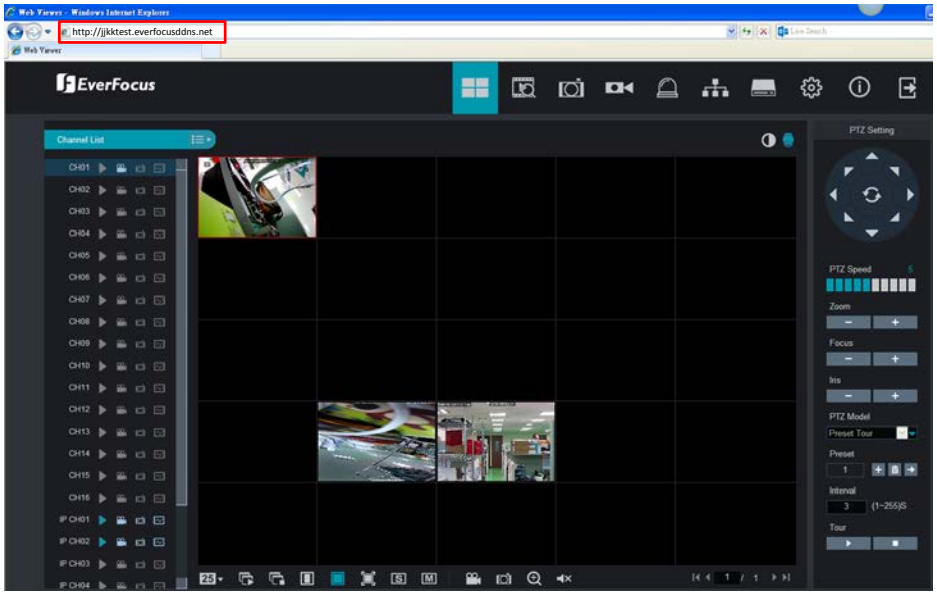
d. Click the **Apply** button.

4. Configure the NVR **Network** settings, keep Web port "80" and enable the UPnP function. Click the **Apply** button.



5. The DDNS setup is now complete. Open a browser and enter the domain name (http://[host name].everfocusddns.net) in the address field. The Web interface of the NVR should be displayed.

   For example, if you've obtained the host name "jjkktest" from EverFocus DDNS server, enter http://jjkktest.everfocusddns.net in the address field of the browser.

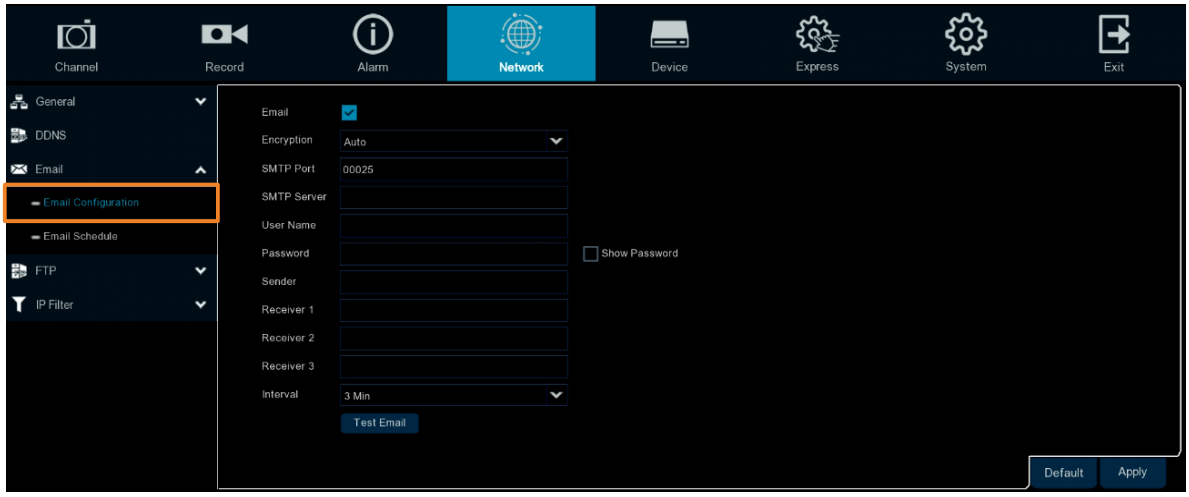


4.4.3 Email

You can configure the email settings for email alerts, or configure the Email schedule on this page.

4.4.3.1 Email Configuration

You can configure the email settings for email alerts. When events occur, the NVR will send Email alert with a snapshot image (.jpg) to the receiver(s).



Email: Check the box to enable the Email function.

Encryption: Select an encryption if your Email server requires the **SSL** or **TLS** verification. Select **Auto** if you are not sure. Select **Disable** to disable this function.

SMTP Port: Enter the port number used by the SMTP server.

SMTP Server: Enter the SMTP server address of your Email.

User Name: Input your Email address.

Password: Input the password of the sender.

Sender: Input the Email address of the sender (the NVR).

Receiver1-3: Input the Email address of the receiver. You can input 3 receiver email addresses.

Interval: Configure an interval to send Emails when events occur.

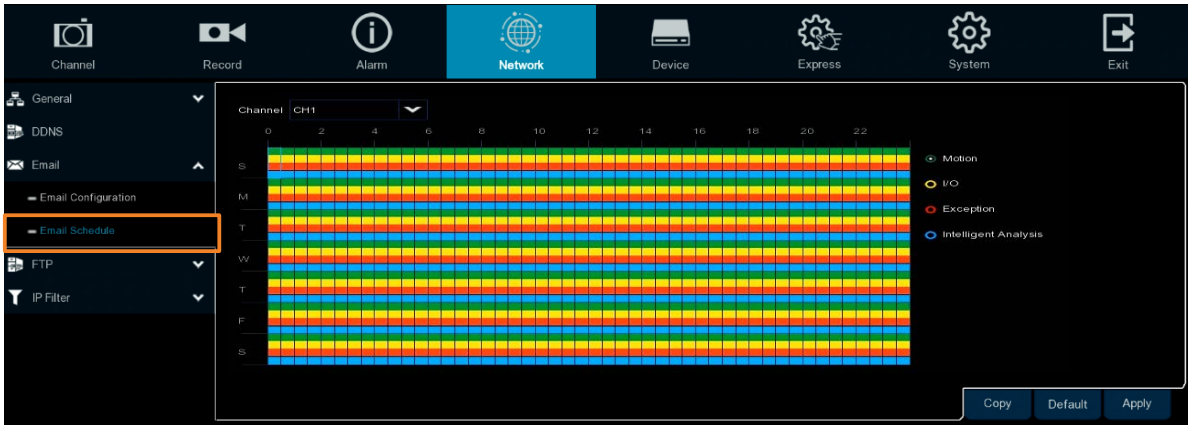
Test Email: Click to test whether the Email function is working normally.

Default: Click to apply the default setting.

Apply: Click to save the settings.

4.4.3.2 Email Schedule

You can configure the email schedule on this page. The selected event Email alerts will be sent out by the scheduled time. For example, if you set up Motion on Sunday between 6-8am, the Motion Email alerts will only be sent out between 6-8am on Sunday.



Channel: Select a channel to configure the email schedule individually.

Motion: Click the **Motion** button on the right-side and then move your mouse cursor over the schedule time blocks. Click and drag on the schedule time blocks to draw the blocks with green color, which will be applied with motion email alert function. To enable Motion alarm, please refer to *4.1.6 Motion*.

IO: Click the **IO** button on the right-side and then move your mouse cursor over the schedule time blocks. Click and drag on the schedule time blocks to draw the blocks with yellow color, which will be applied with IO email alert function. To enable IO alarm, refer to *4.3.3 IO*.

Exception (HDD full, HDD error or Video Loss): Click the **Exception** button on the right-side and then move your mouse cursor over the schedule time blocks. Click and drag on the schedule time blocks to draw the blocks with red color, which will be applied with exception email alert function. To enable Exception alarm, please refer to *4.3.6 Exception*.

Intelligent Analysis: Click the **Intelligent Analysis** button on the right-side and then move your mouse cursor over the schedule time blocks. Click and drag on the schedule time blocks to draw the blocks with blue color, which will be applied with Intelligent Analysis email alert function. To enable Intelligent Analysis alarm, please refer to *4.3.4 Intelligent Alarm*.

Copy: You can apply the same configurations from one channel to other channels. Select a channel from the **Source Channel** drop-down list and then select the parameters you would like to apply to other channels. Select the desired channels from the **Target Channel** field and then click the **Copy** button.

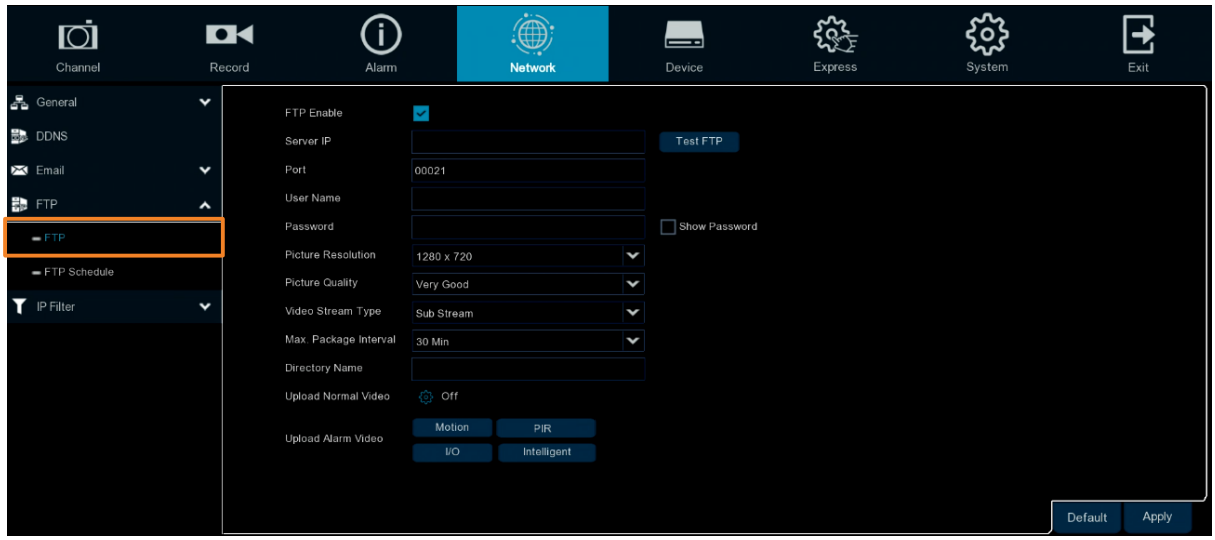
Default: Click to apply the default setting.

Apply: Click to save the settings.

4.4.4 FTP

4.4.4.1 FTP

You can configure the FTP server setting on this page. When there is a Motion or I/O event occurs, the system will send an instant snapshot image to the FTP. For system alarm such as HDD lost and Video loss, the system will send alarm log to the FTP as well.



FTP Enable: Check the box to enable the function.

Server IP: Input the FTP server IP.

Test FTP: Click to test the FTP server connection.

Port: Keep the port 21.

User Name: Input the user name of the FTP server.

Password: Input the password of the FTP server.

Picture Resolution: Select a resolution of the snapshot images for FTP uploading.

Picture Quality: Select a quality of the snapshot images for FTP uploading.

Video Stream Type: Select a stream type of the recordings for FTP uploading.

Max. Package Interval: Select a max. package interval for FTP uploading.

Directory Name: Input a directory of the FTP server.

Upload Normal Video: Select the desired channel(s) for uploading the normal recordings. For this function to work, please setup the FTP Schedule (refer to *4.4.4.2 FTP Schedule*) in advance.

Upload Alarm Video: To enable uploading alarm videos to the FTP Server, click the Motion, PIR, IO or Intelligent buttons to enter each alarm setup page, and then check the **FTP Video Upload** box to enable the function. For this function to work, please setup the FTP Schedule (refer to *4.4.4.2 FTP Schedule*) in advance.

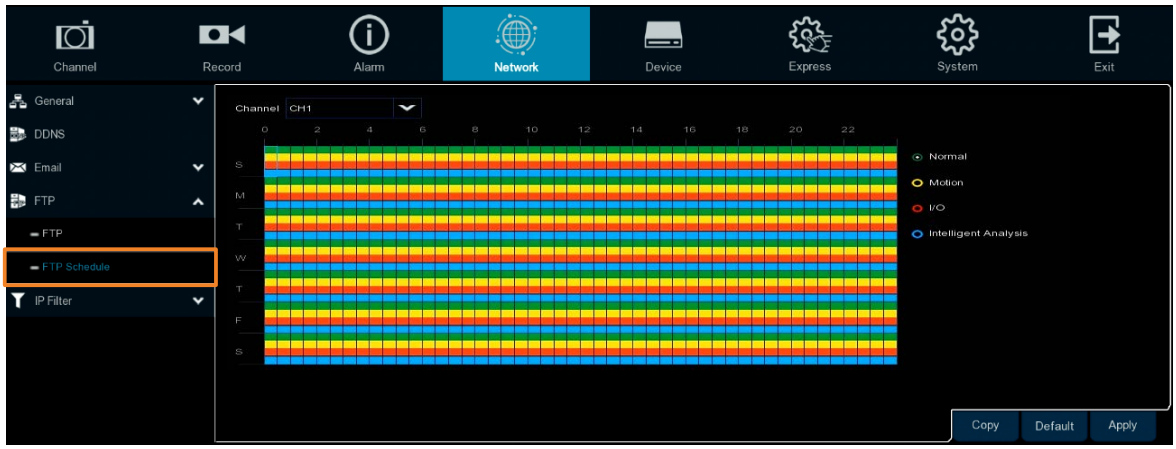
Default: Click to apply the default setting.

Apply: Click to save the settings.

4.4.4.2 FTP Schedule

You can configure the FTP schedule on this page. The selected event recordings will be uploaded to the FTP by the scheduled time. For example, if you set up Motion on Sunday between 6-8am, the Motion recordings will be uploaded to FTP between 6-8am on Sunday.

Note that for the FTP Schedule function to work, you have to enable **FTP Video Upload** function on the related alarm setup page (Motion, PIR, IO, Intelligent).



Channel: Select a channel to configure the FTP schedule individually.

Normal: Click the **Normal** button on the right-side and then move your mouse cursor over the schedule time blocks. Click and drag on the schedule time blocks to draw the blocks with green color, which will be applied with normal recording FTP upload function. Note that for this function to work, you have to select the desired channel(s) for uploading the normal recordings (please refer to **Upload Normal Video** in *4.4.4.1 FTP*.

Motion: Click the **Motion** button on the right-side and then move your mouse cursor over the schedule time blocks. Click and drag on the schedule time blocks to draw the blocks with yellow color, which will be applied with motion FTP upload function. To enable Motion alarm, please refer to *4.1.6 Motion*.

IO: Click the **IO** button on the right-side and then move your mouse cursor over the schedule time blocks. Click and drag on the schedule time blocks to draw the blocks with red color, which will be applied with IO FTP upload function. To enable IO alarm, refer to *4.3.3 IO*.

Intelligent Analysis: Click the **Intelligent Analysis** button on the right-side and then move your mouse cursor over the schedule time blocks. Click and drag on the schedule time blocks to draw the blocks with blue color, which will be applied with Intelligent Analysis FTP upload function. To enable Intelligent Analysis alarm, please refer to *4.3.4 Intelligent Alarm*.

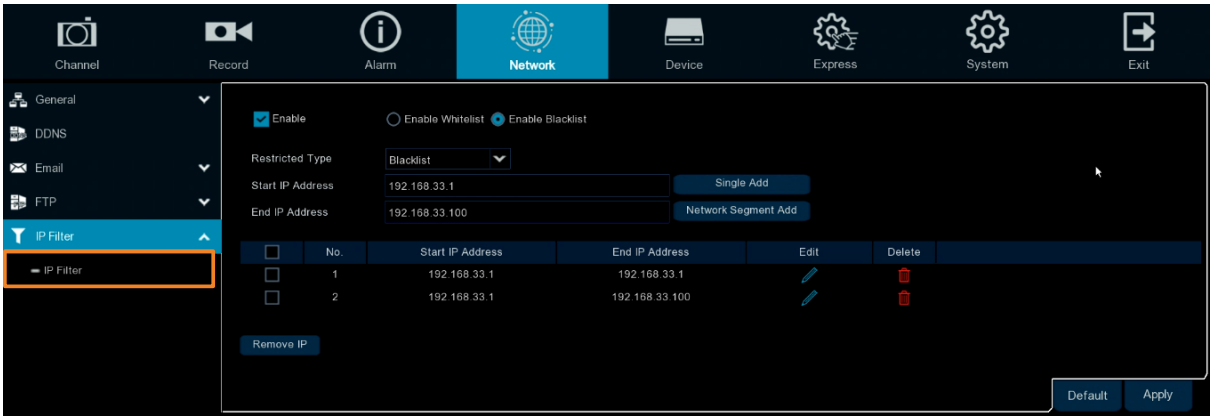
Copy: You can apply the same configurations from one channel to other channels. Select a channel from the **Source Channel** drop-down list and then select the parameters you would like to apply to other channels. Select the desired channels from the **Target Channel** field and then click the **Copy** button.

Default: Click to apply the default setting.

Apply: Click to save the settings.

4.4.5 IP Filter

You can configure the IP Filter settings on this page. This function allows you to allow or deny some specific IP address to access the Web interface of the NVR. By default, all IP addresses are allowed.



To set up IP Filter:

1. Check the **Enable** box and then select either one from the two options below. You can only activate one option for the NVR.

   Enable Whitelist: Enable the whitelist configured below.

   Enable Blacklist: Enable the blacklist configured below.

2. Edit the Whitelist or Blacklist.
   a. If you want to edit whitelist, select **Whitelist** from the **Restricted Type** drop-down box; if you want to edit blacklist, select **Blacklist** from the **Restricted Type** drop-down box.
   b. To add a single IP address to the list, input an IP address in the **Start IP Address** input box and then click the **Single Add** button, the IP address will be added.
   c. To add a range of IP addresses to the list, input the start IP address in the **Start IP Address** input box and the end IP address in the **End IP Address** input box, and then click the **Network Segment Add** button, the range of IP addresses will be added.
   d. You can click the **Edit** icon to edit the IP address, or click the **Delete** icon to delete the IP address from the list.
3. Click the **Apply** button to save the settings.

4.5 Device

You can configure the internal HDD and Cloud storage function on this page.

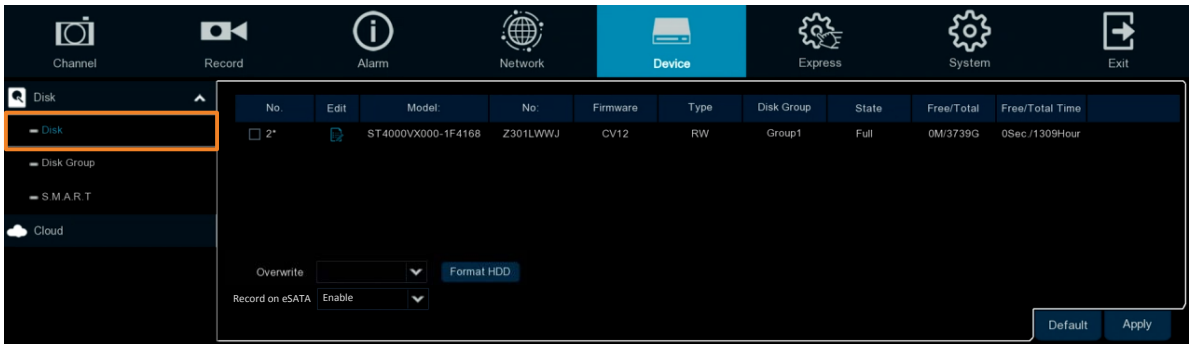
4.5.1 Disk

4.5.1.1 Disk

You can configure the HDD settings on this page. Please connect the HDD(s) to the NVR in advance and ensure the power and SATA cables are properly connected between the NVR and HDD(s). After connecting the HDD(s) to the NVR, the NVR will automatically detect the connected HDD(s) and listed all the connected HDD(s) in the below field.

For the first time connected HDDs, the status will show “Unformat” in the state column, users will have to format the HDDs before you can use it.

The HDD(s) marked with * in the No. column indicates the HDD(s) is/are being used at present.



Edit: Click the **Edit** button and the below window appears. You can assign each HDD to different Disk Type (Read/Write, Read only or Redundancy) and Disk Group (Group 1 ~ 16).

A Redundant HDD can be used to automatically backup video footage on the recording (read-write) hard drive. When a redundant HDD is set, the system can be set to record cameras in parallel to both the recording hard drive and the redundant hard drive in case of hard drive failure.

Checkbox: You can select the HDDs in the **No** column to select the HDD(s), and then you can set up the Overwrite or eSATA function, or Format the HDD.

Overwrite: Select **Auto** to enable the overwrite function; **Off** to disable the overwrite function. If **Auto** is selected, the NVR will overwrite the oldest files on the HDD when HDD is full. If Off is selected, please check the HDD status regularly, to make sure the HDD is not full.

The **1/3/7/14/30/90** Days stands for the last number of days to keep in the HDD. For example, if 3 Days is selected, the last 3 days recordings will be kept in the HDD.

Format HDD: The first time use HDDs have to be formatted before you can use it. Select the desired HDDs and then click the **Format HDD** button to format the selected HDDs. Note that only the HDDs with "Unformat" status displayed in the State column are required to format or the recording function will not work. WARNING: This will effectively ERASE the ENTIRE hard disk!! Please backup the data from HDDs before formatting the HDDs.

Note:

1. Only the HDDs with "OK" in the State column can perform the recording function. If not, format the HDDs before start using the recording function.
2. The "Free Time" on the HDD list indicates the remaining time for the HDD to record based on the pre-setup resolution, streaming and fps.

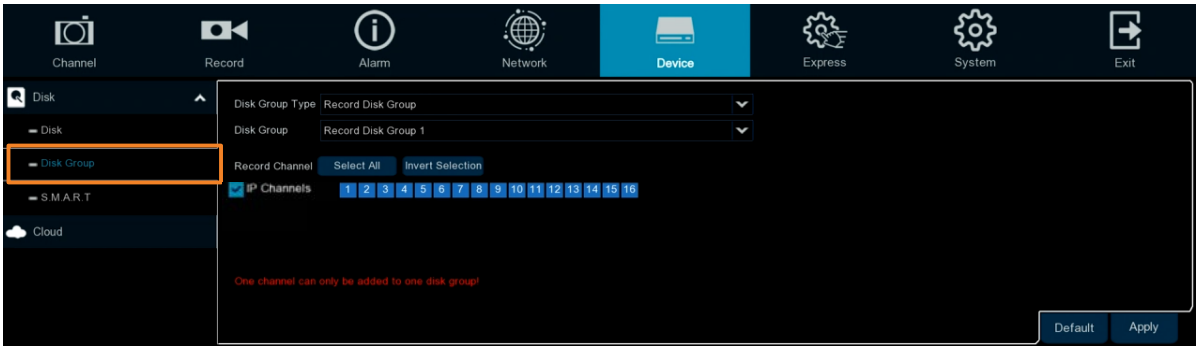
Record on eSATA: If you have connected an external eSATA storage device to the NVR, you can enable the eSATA backup storage function.

Default: Click to apply the default setting.

Apply: Click to save the settings.

4.5.1.2 Disk Group

You can assign the HDDs to different groups. HDD groups allow you to balance recordings across multiple hard drives. For example, you can record channels 1~4 to one hard drive and 5~8 to a second hard drive. This can reduce the amount of wear on the hard drives and may extend the life of the hard drives.



Disk Group Type: Select a Disk Group type. The Disk Group Type has to be pre-configured on the Disk page (please refer to *4.5.1.1 Disk*).

Disk Group: Select a Record Disk Group. The Record Disk Group has to be pre-configured on the Disk page (please refer to *4.5.1.1 Disk*).

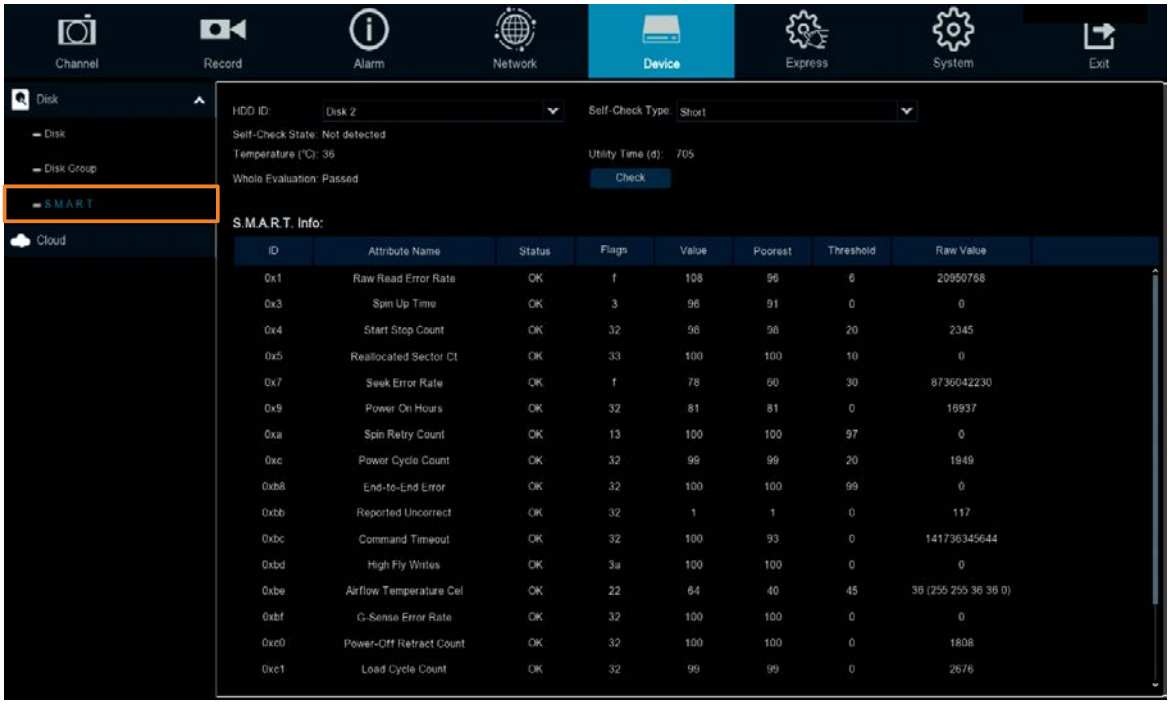
Record Channel: Select the desired channel(s). The recordings of the selected channels will be recorded to the selected Disk Group.

Default: Click to apply the default setting.

Apply: Click to save the settings.

4.5.1.3 S.M.A.R.T

You can check the S.M.A.R.T. info of each HDD on this page.

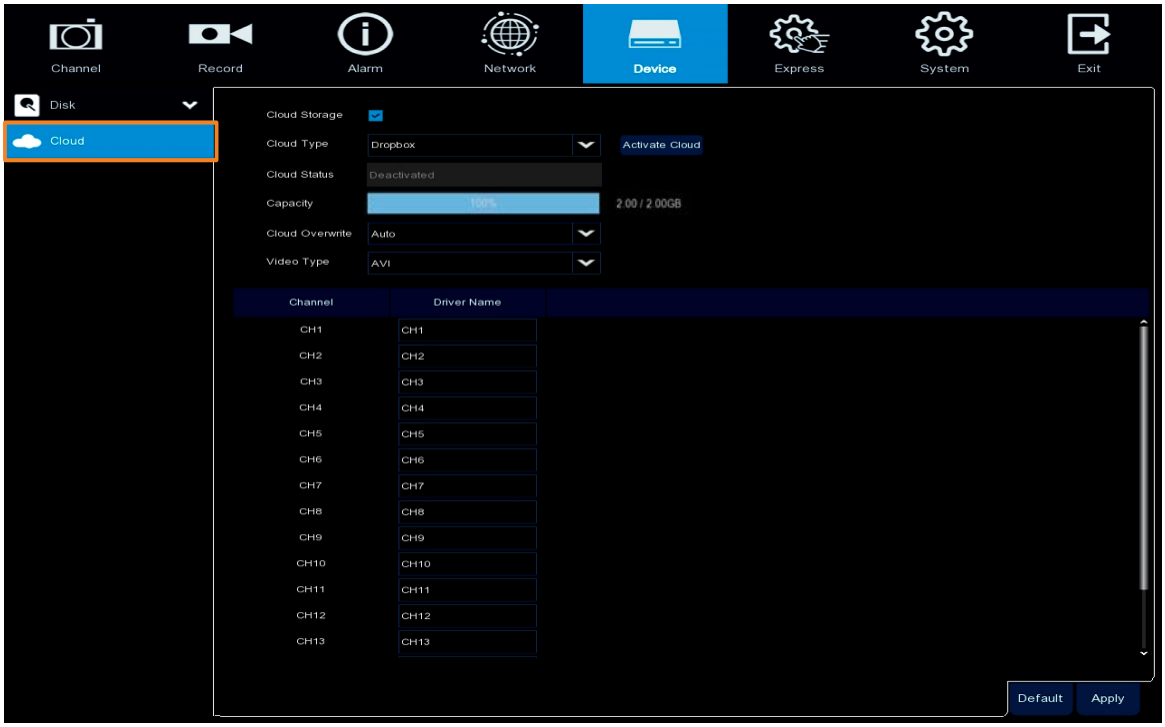


To check the S.M.A.R.T. info of the HDD, select an HDD from the **HDD ID** drop-down list, select a check type from the **Self-Check Type** drop-down list, and then click the **Check** button. The S.M.A.R.T. info will be listed in the S.M.A.R.T. info field.

If the evaluation is not passed but you still want to use the disk for recording, you can check the checkbox of **Whole evaluation not passed. Continue to use the disk**. And then click the **Save** button to save the settings. Click Cancel to cancel and leave the page.

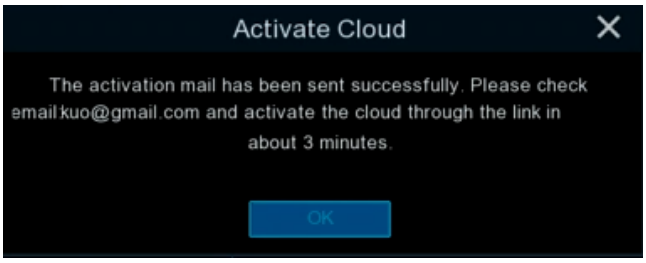
4.5.2 Cloud

You can configure the Cloud settings (Dropbox cloud storage) on this page. After configuring the settings, the system will automatically send the Motion and I/O alarm snapshot images or recordings to the associated Dropbox when alarm events occur.

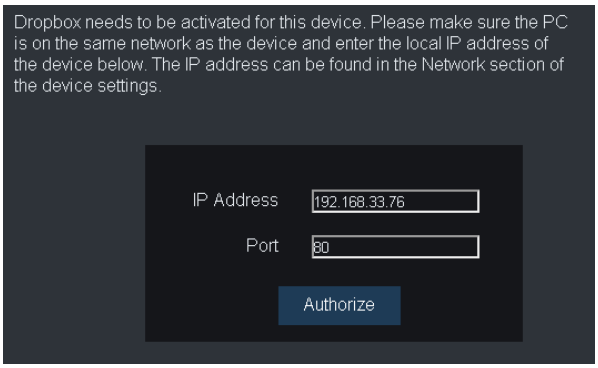


To perform the Cloud function:

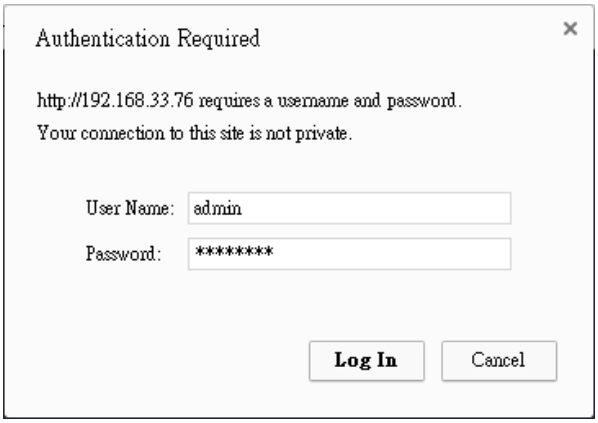
1. Register an account on Dropbox website. It's recommended to create the account with the same Email address and password used for your NVR.
2. Ensure the NVR network is working properly.
3. Configure the SMTP function (refer to *4.4.3 Email*).
4. Configure the Cloud settings and then click the **Apply** button.
   a. Check the **Cloud Storage** checkbox to enable the Cloud function.
   b. Select a **Cloud Overwrite** option.
   c. Select a **Video Type**.
5. Click the **Activate Cloud** button to activate the Cloud function. The below message will pup-up on the screen. Check your email and complete the cloud activation within 3 minutes.



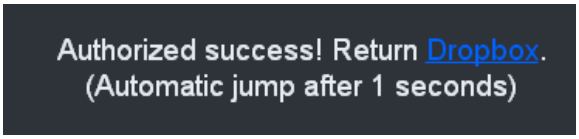
6. Go to your email box and click on the provided link, the below message appears. Input the IP address of the NVR and keep the 80 port. Click **Authorize**.



7. Input the user name and password of the NVR and then click **Log In**.



8. The Cloud activation is complete.

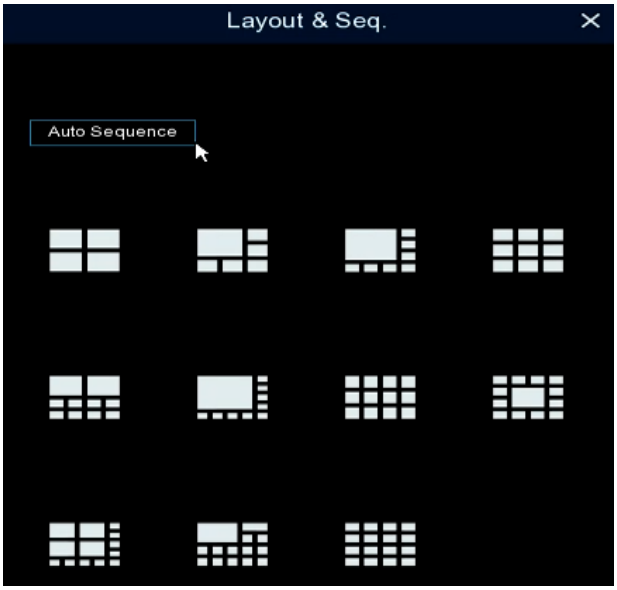


4.6 Layout

You can select the desired **Layout** or activate the **Auto Sequence** function on this page.

To select a layout, directly click on the layout icon.

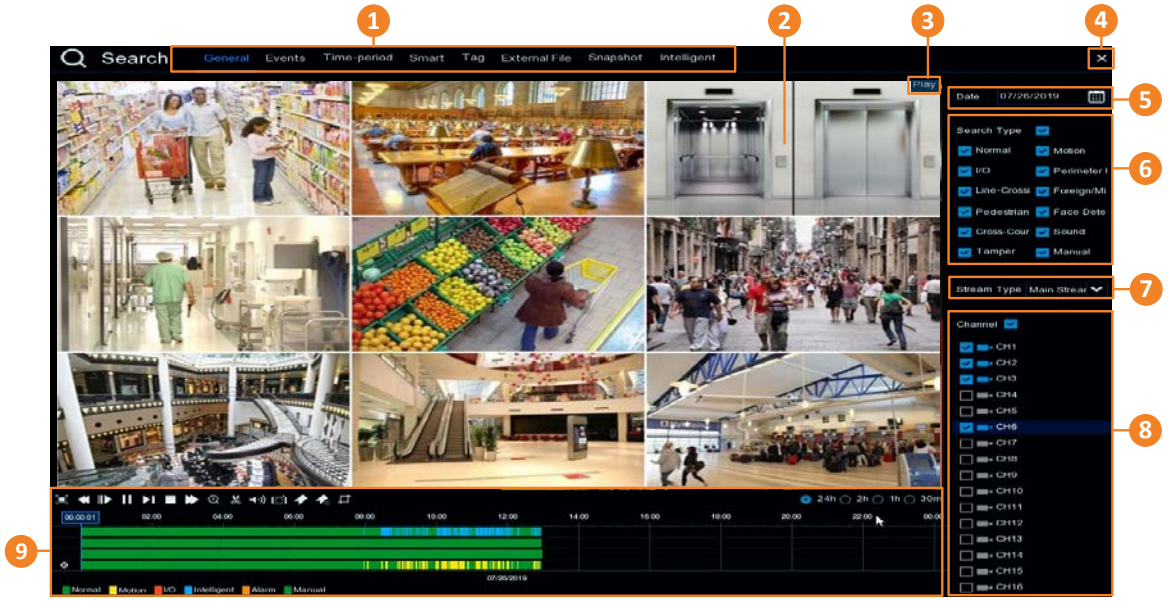
To start displaying the sequence mode, click the **Auto Sequence** button. To stop the sequence mode, click the button again. To configure the sequence settings, please refer to *4.9.1.3 Video Output*.



4.7 Playback

4.7.1 General Operation

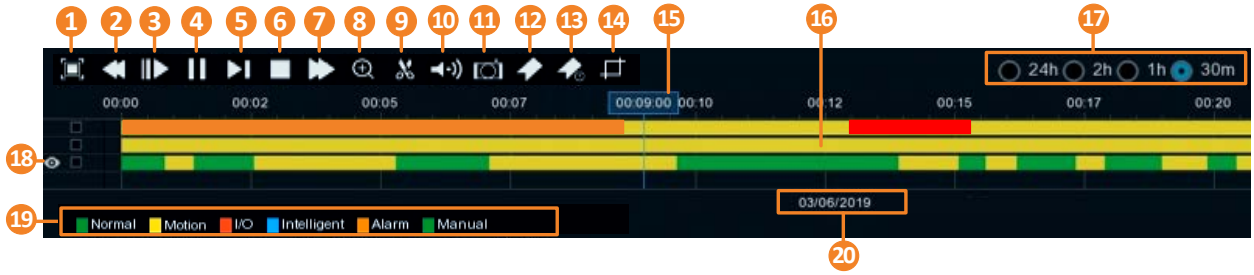
You can search and then play back the recordings on this page.



No.	Name	Description
1	**Search Mode**	Click to enter each Search mode (General, Events, Time-period, Smart, Tag, External File and Snapshot) to search and play back the recordings. Please refer to *4.7.3 Search Mode* for more details.
2	**Playback Layout**	The layout divisions will be automatically assigned by the system based on the number of selected channels. For example, if 1 channel is selected, the system will automatically assign single-division; if 2~4 channels are selected, 4-division will be assigned; if 5~9 channels are selected, 9-division will be assigned; if 10~16 channels are selected, 16-division will be assigned.
3	**Status Icon**	Displays the playback status, such as speed, play, stop or step.
4	**Close Button**	You can click the **Close** button to close the Playback window and return to the Live View window. You can also close the Playback window by right-clicking the mouse.
5	**Date**	Click the **Calendar** button to display the calendar and select a date.
6	**Search Type**	Select the desired search types for playback.
7	**Stream Type**	Select a stream type of the source recordings. For this function to work, you will have to configure the record stream setting to Dual Streams (please refer to *4.2.2.1 Record*).
8	**Channel Selection**	Select the desired channel(s) to search and play back.
9	**Playback Control Panel**	You can use the playback control panel for playback operation. Please refer to *4.7.2 Playback Control Panel* for more details.

4.7.2 Playback Control Panel

You can use the playback control panel to operate the below functions:



1	**Full Screen**	Click to display the Playback Layout in full screen. Right-click the mouse to exit the Full Screen. Please refer to *4.7.2.1 Full Screen on Playback Window*.
2	**Fast Backward**	Click to rewind (x2, x4, x8, x16). The rewind speed will be displayed on the **Status Icon** located on the upper-right corner of the Playback Layout.
3	**Slow Play**	Click to start slow playback (1/2, 1/4, 1/8, 1/16). The slow play speed will be displayed on the **Status Icon** located on the upper-right corner of the Playback Layout.
4	**Play / Pause**	Click to start or pause playing back.
5	**Step Forward**	Click to playback frame by frame.
6	**Stop**	Click to stop playing back.
7	**Fast Forward**	Click to Fast Forward (x2, x4, x8, x16). The fast forward speed will be displayed on the **Status Icon** located on the upper-right corner of the Playback Layout.
8	**Zoom**	Click to use the Digital Zoom function. To perform this function, select a channel by clicking on the channel and then click the **Zoom** button, the selected channel will be displayed in single-channel. And you can start using the Digital Zoom function. For Digital Zoom operation, please refer to *3.4.1 Digital Zoom (PIP)* for more details.To exit Digital Zoom mode, click the **Zoom** button again.
9	**Video Clip**	Click to quickly save a video clip (AVI) to a USB storage device. Please refer to *4.7.2.2 Backup Video Clips*.
10	**Audio**	Scroll the slider bar to increase or decrease volume.
11	**Manual Snapshot**	Click to capture a snapshot image (.jpeg) of a channel and store it to the USB storage device. To perform this function: 1. Insert a USB storage device to the NVR. 2. Select a channel by clicking on the channel and then click the **Manual Capture** button. Note: For the first-time-use USB device, select a directory and then click **OK**.

12	**Add Default Tag**	Click to add a default tag to the current playback time, which will be applied with a default Tag Name "Tag". You can then search for the tag on the Tag window. Please refer to *4.7.3.5 Tag*.
13	**Add Customized Tag**	Click to add a customized tag to the current playback time, which can input a tag name to the tag. You can then search for the tag on the Tag window. Please refer to *4.7.3.5 Tag*.
14	**Screenshot**	Click to cut a screenshot and save it to the USB storage device. You can also take a screenshot of a face and import the face image to the group of Face Recognition.
15	**Time Indicator**	Indicates the current playback time.
16	**Time Bar**	You can use your mouse to drag the time bar to the left or right to search the desired time for playing back. Single-click on the time bar at a certain time will start playing back from the clicked time. The colors on the time bar represent different recording types (refer to **No.18**). Note that for the Motion, PIR, Intelligent and Alarm recording to work, you have to configure the related settings in advance. For Motion recording, please refer to *4.1.6 Motion*. For PIR recording, please refer to *4.1.7 PIR*. For Intelligent recording, please refer to *4.1.8.9 Record Schedule*. For Alarm recording, please refer to *4.3.6 Exception*.
17	**Time Span**	You can click to select a time span.
18	**Selected Channel**	The selected channel will be applied with an **Eye** icon . You can perform the Zoom, Audio or Manual Snapshot functions for the selected channel.
19	**Time Bar Color Indicator**	The colors indicate the recording types. Green: Normal recordings or manual recordings. Yellow: Motion recordings. Red: I/O recordings. Purple: PIR recordings. Blue: Intelligent recordings. Orange: Alarm recordings.
20	**Playback Date**	Displays the selected playback date.

4.7.2.1 Full Screen on Playback Window

On the Playback Control Panel, click the **Full Screen** button  to display the Playback Layout in full screen. To exit the Full Screen, click the **Full Screen** button again on the Playback Control Panel. You can also exit the Full Screen by right-clicking the mouse.

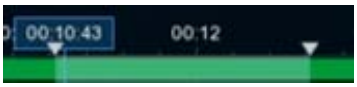
Under Full Screen mode, you can move your mouse to the right to display the right-side **Search Panel**; or move your mouse to the bottom side to display the **Playback Control Panel**.

Playback Control Panel

4.7.2.2 Backup Video Clips

To backup video clips:

1. Ensure the USB storage device has been inserted to the NVR.
2. On the Playback Control Panel, click the **Video Clip** button . The button will then change to a **Copy** button , and a copy range will be displayed on the time bar.

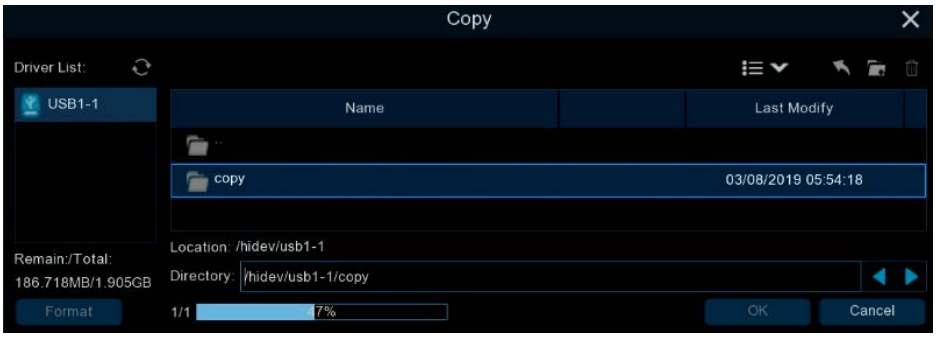


3. Check the left-side channel box if you want to back-up with the same start time and end time of the selected channel(s).

4. To set up the start time and end time, drag the **Triangle** icons to the left or right.

5. Click the **Copy** button , the below Copy Type window appears.

6. Click the **Save** button, the Copy window appears. You can also create a directory for the video clip(s) by clicking the **Directory** button on the upper-right corner.

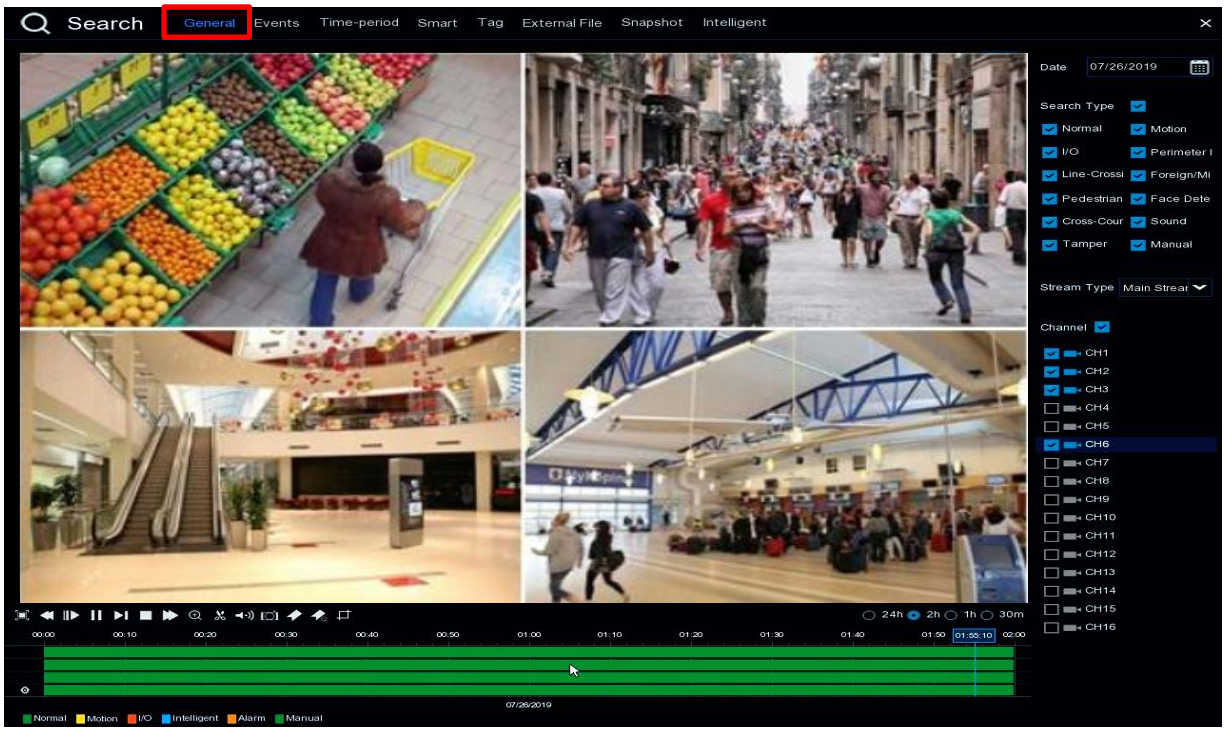


7. Click the **OK** button, the backup process begins. After the backup process is complete, click the **Cancel** button to return to the **Playback** window.

4.7.3 Search Mode

4.7.3.1 General

You can use this page to search, play back and backup all types of recordings. Click the **General** tab to enter the General Playback mode.



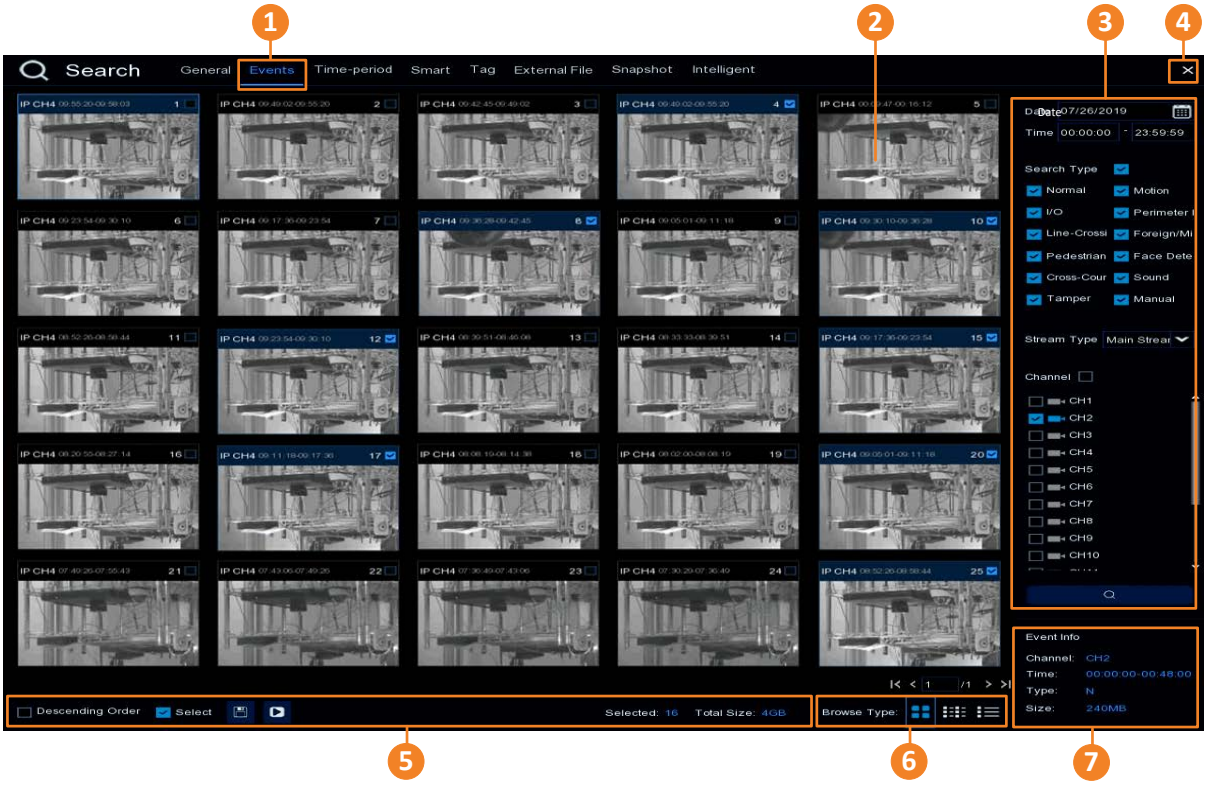
1. Click the **Calendar** button to select a date.
2. Select the desired Search Type(s).
3. Select a **Stream Type**. For this function to work, you will have to configure the record stream setting to Dual Streams (please refer to *4.2.2.1 Record*).
4. Select the desired channel(s).
5. Click the **Play** button to start playing back.
6. Use the Playback Control Panel to operate the Playback function. Please refer to *4.7.2 Playback Control Panel* for more details.

Note: The layout divisions will be automatically assigned by the system based on the number of selected channels. For example, if 1 channel is selected, the system will automatically assign single-division; if 2~4 channels are selected, 4-division will be assigned; if 5~9 channels are selected, 9-division will be assigned; if 10~16 channels are selected, 16-division will be assigned.

4.7.3.2 Events

You can use this page to search, play back and backup the event recordings to the USB storage device. The Event Playback page gives you a summary of all events on the list. You can display the events with Thumbnail, List or Details list type.

Event Search and Backup



No.	Name	Description
1	**Event Tab**	Click to enter the Event Playback page.
2	**Event List**	The searched events will be listed on the Event List. You can display the Event List in Thumbnail, List or Details mode. Please refer to **No.6**.
3	**Search Panel**	You can use this panel to search for the event recordings based on the selected attributes including date and time, record mode and channels.
4	**Close Button**	You can click the **Close** button to close the Playback window and return to the Live View window. You can also close the Playback window by right-clicking the mouse.

5	**Function Bar**	Descending order: Click to display the events in descending order. Select: Check the box to select all the events on the list. Uncheck the box to deselect all the events on the list. Copy: Select the event(s) on the Event List and then click the **Copy** button to backup the selected event recordings to the USB storage device. Play: Click an event on the Event List and then click the **Play** button to play back the clicked event recording. Selected: The number of selected event(s) on the Event List will be displayed here. Total Size: The total size of selected event(s) on the Event List will be displayed here.
6	**Browse Type**	Click to display the Event List with Thumbnail, List or Details mode.
7	**Event Info**	Click an event on the Event List, the information of the clicked event will be displayed here.

1. To search for events:
   a. Click the **Calendar** button to select a date.
   b. Click the **Time** column to select a time range.
   c. Select the desired **Search Type**(s).
   d. Select a **Stream Type**. For this function to work, you will have to configure the record stream setting to Dual Streams (please refer to *4.2.2.1 Record*).
   e. Select the desired channel(s).
   f. Click the **Search** button  , the search results will be displayed on the Event List.
   g. You can click the left or right buttons to browse between pages, or input the page number you want to browse.

   h. You can switch the Event List display mode by clicking the Thumbnail, List or Details icons.

 **Thumbnail:** Click to display the events with thumbnail images.

 **List:** Click to display the events in list.

Details: Click to display the events in detailed list.

Playback: Click the Playback icon can play back the event.

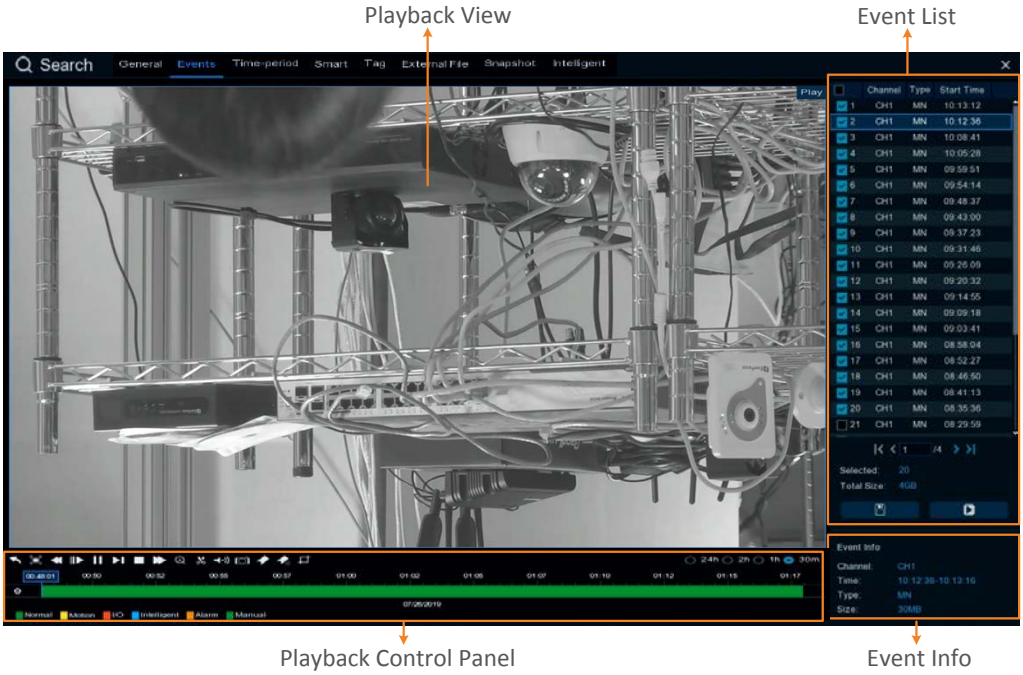
Lock: Click the icon to lock or unlock the event. The locked events will be stored in the hard disk and will not be overwritten.

i. On the Event List, click on an event and its information will be displayed at the lower-right corner.

2. To back up event recordings to the USB storage device:
   a. Ensure the USB storage device has been inserted to the NVR.
   b. On the Event List, select the desired event(s) and then click the **Copy** button.

3. To play back an event recording, you can try either way:
   - On the Event List, double-click on an event, the Event Playback page appears
   - On the Event List, click on an event and then click the **Play** button on the Function bar, the Event Playback page appears
   - On the Event List (Detail list), click the **Playback** button of an event, the Event Playback page appears

Event Playback page



【**Event List**】 You can perform the below functions using the Event List.

Playback: There are two ways:

- Double-click on an event can start playing back the event recording.
- Click on an event and then click the **Playback** button to start playing back.

Copy: Check the event boxes to select the events and then click the **Copy** button can back-up the event recordings to the USB storage device.

【**Playback View**】 You can perform the below functions using the Playback View.

Digital Zoom: Scroll the Playback View to zoom in or zoom out the images. You can also use your mouse to drag the image to the desired positions to spot on a specific area.

Digital Zoom (PIP): Click the **Zoom** button on the Playback Control Panel and then scroll mouse upward/downward to zoom in/out, a **Navigation Box** will be displayed on the **Preview Window**. For more details about the operation, please refer to *3.4.1 Digital Zoom (PIP)*.

Return to the Event Search Page: Right-click on the Playback View can return to the Event Playback page. You can also click the **Return** button on the Playback Control Panel to return to the Event Playback page.

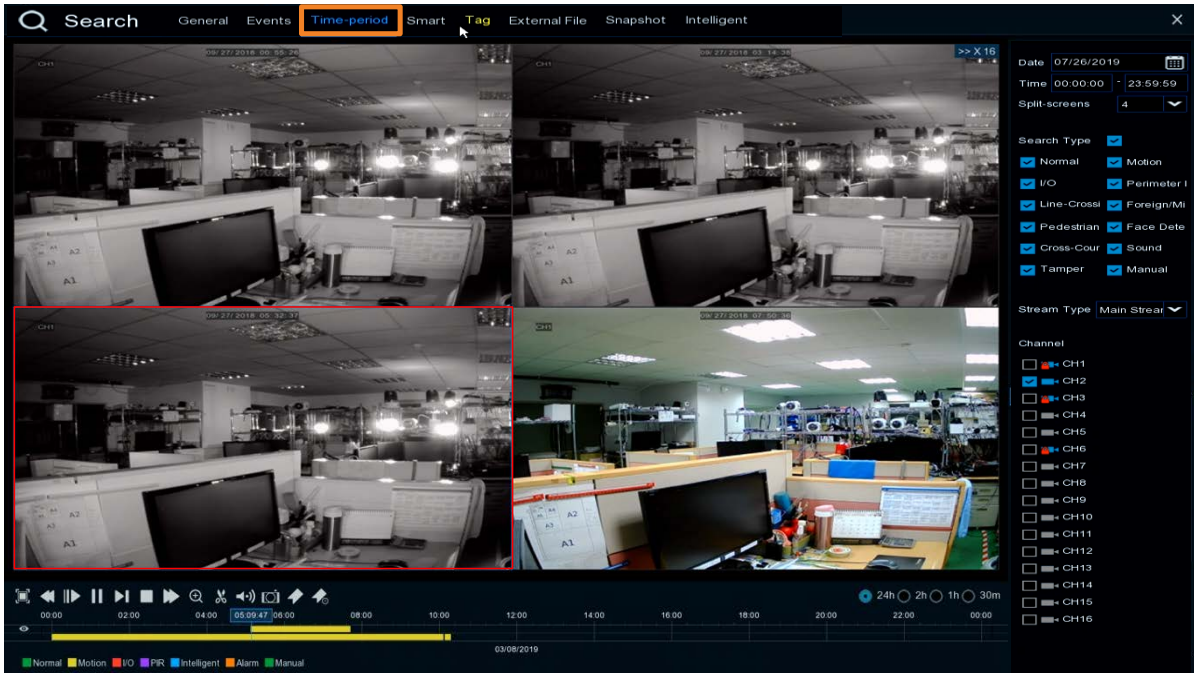
【**Event Info**】 On the Event List, click on an event, the information of the clicked event will be displayed here.

【**Playback Control Panel**】 You can use this panel to operate the playback function. Please refer to *4.7.2 Playback Control Panel* for more details.

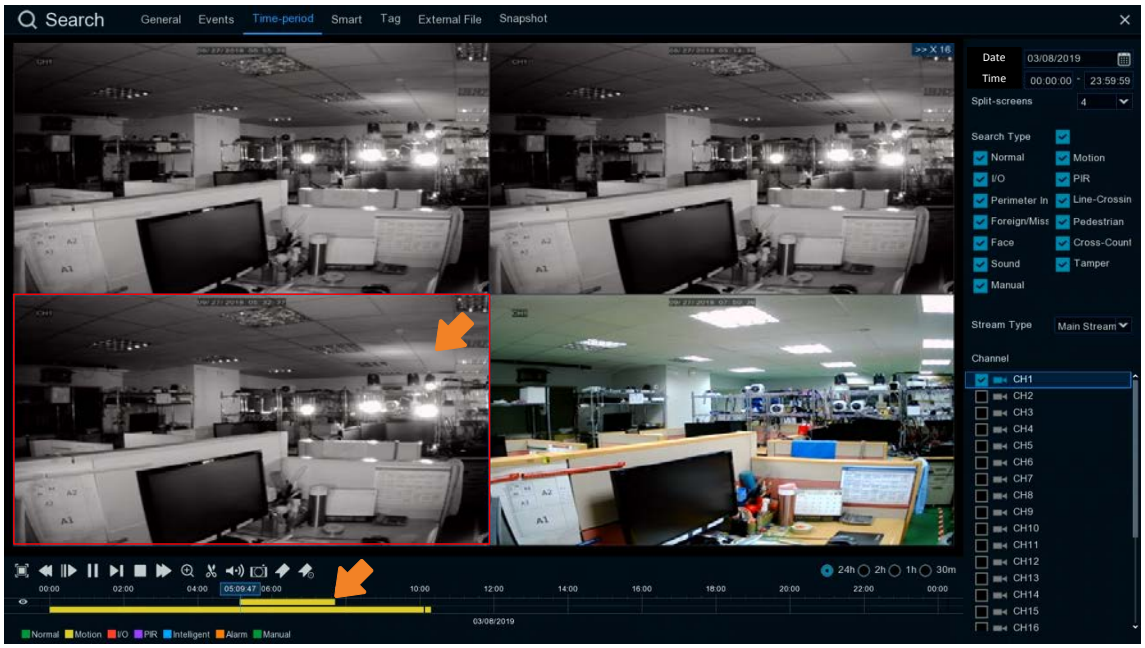
4.7.3.3 Time-Period

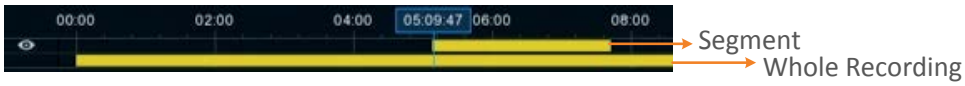
Click the Time-Period tab to enter this page. Time-Period function allows you to divide a recording into several segments with equal time-length; and then play back the segments simultaneously.

For example, for a 60-minute recording, if you select 4 split-screen, the recording will be divided into 4 segments with 15-minute in length each. If you select 6 split-screen, the recording will be divided into 6 segments with 10-minute in length each.



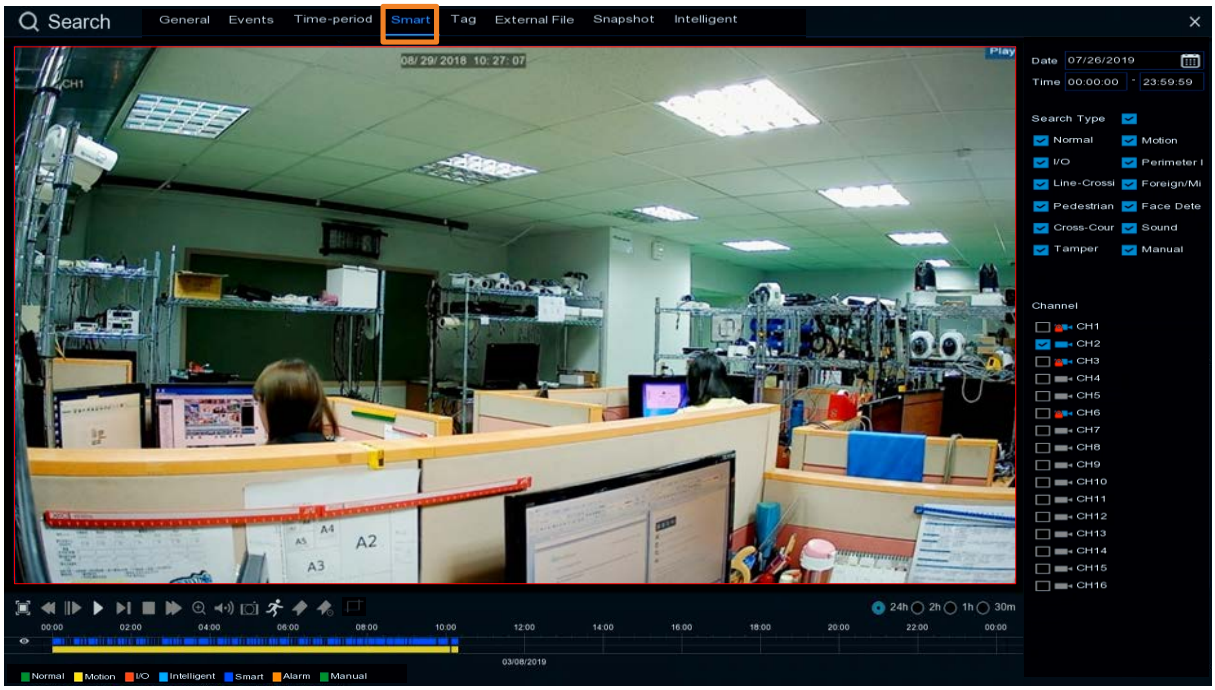
1. Click the **Sub-period** tab on the top to enter the Sub-Period Playback page.
2. Click the **Calendar** button to select a date.
3. Click the **Time** column to select a time range.
4. Select a split number from the Split-screens drop-down list.
5. Select a **Search Type**.
6. Select a **Stream Type**. For this function to work, you will have to configure the record stream setting to Dual Streams (please refer to *4.2.2.1 Record*).
7. Select a channel for Sub-period playback by checking the checkbox of the channel.
8. Click the **Play** button on the Playback Control Panel to start playing back. Please refer to *4.7.2 Playback Control Panel* for more details about Playback Control Panel.
9. You can also single-click on each segment on the playback layout to view the time range of the clicked (selected) segment. Please refer to the image below.


Search
General
Events
Time-period
Smart
Tag
External File
Snapshot
Date
03/08/2019
Time
00:00:00
23:59:59
Split-screens
Search Type
Normal
Motion
I/O
PIR
Perimeter In
Line-Crossin
Foreign/Miss
Pedestrian
Face
Cross-Count
Sound
Tamper
Manual
Stream Type
Main Stream
Channel
CH1
CH2
CH3
CH4
CH5
CH6
CH7
CH8
CH9
CH10
CH11
CH12
CH13
CH14
CH15
CH16
24h
2h
1h
30m
Normal
Motion
I/O
PIR
Intelligent
Alarm
Manual


00:00
02:00
04:00
05:09:47
06:00
08:00
Segment
Whole Recording

4.7.3.4 Smart

Smart Playback allows you to easily search and play back the motion events in one or more specific areas of a channel.



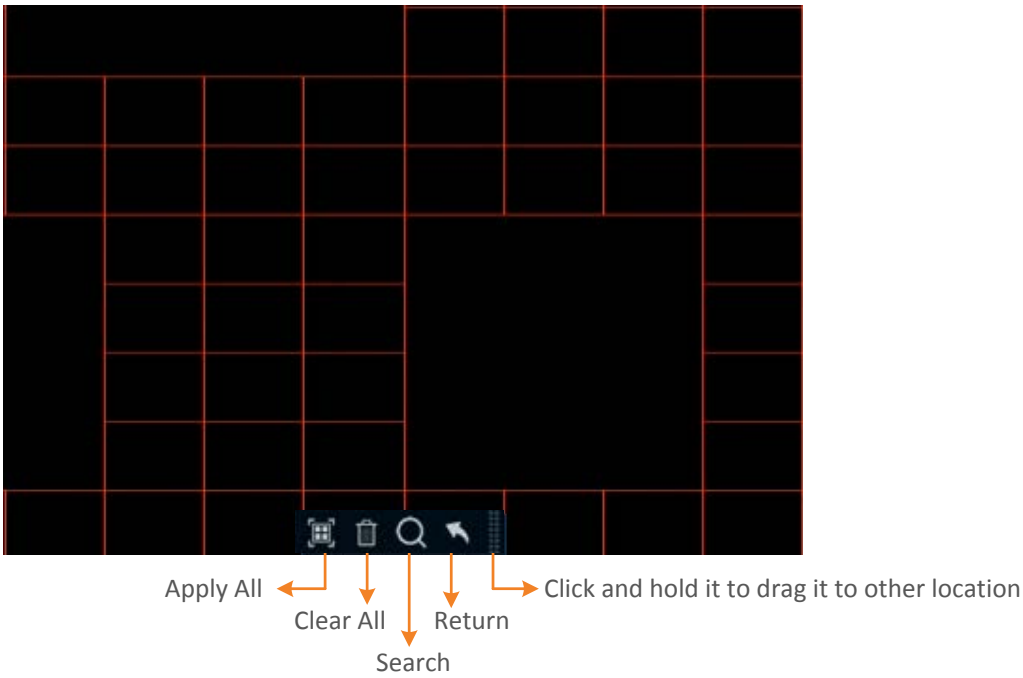
To perform the Smart Playback function:

1. Click the **Calendar** button to select a date.
2. Click the **Time** column to select a time range.
3. Select the **Search Type**.
4. Select a channel for smart playback by checking the checkbox of the channel.
5. Click the **Play** button on the Playback Control Panel to start playing back.
6. By default, the whole area of the live image is defined as the smart area. To re-define the smart area(s), click the **Motion** button on the Playback Control Panel to enter the Smart Area Define page. Please refer to **Defining Smart Areas** below.
7. Click the **Search** button on the Smart Area Define page to return to the Smart Playback page and then click the **Play** button to start playing back. You can see the searched Smart Motion Detection recordings displayed on the time bar in blue color (upper one).

8. You can operate the smart playback function using the Playback Control Panel. Please refer to *4.7.2 Playback Control Panel* for more details.

Defining Smart Areas:

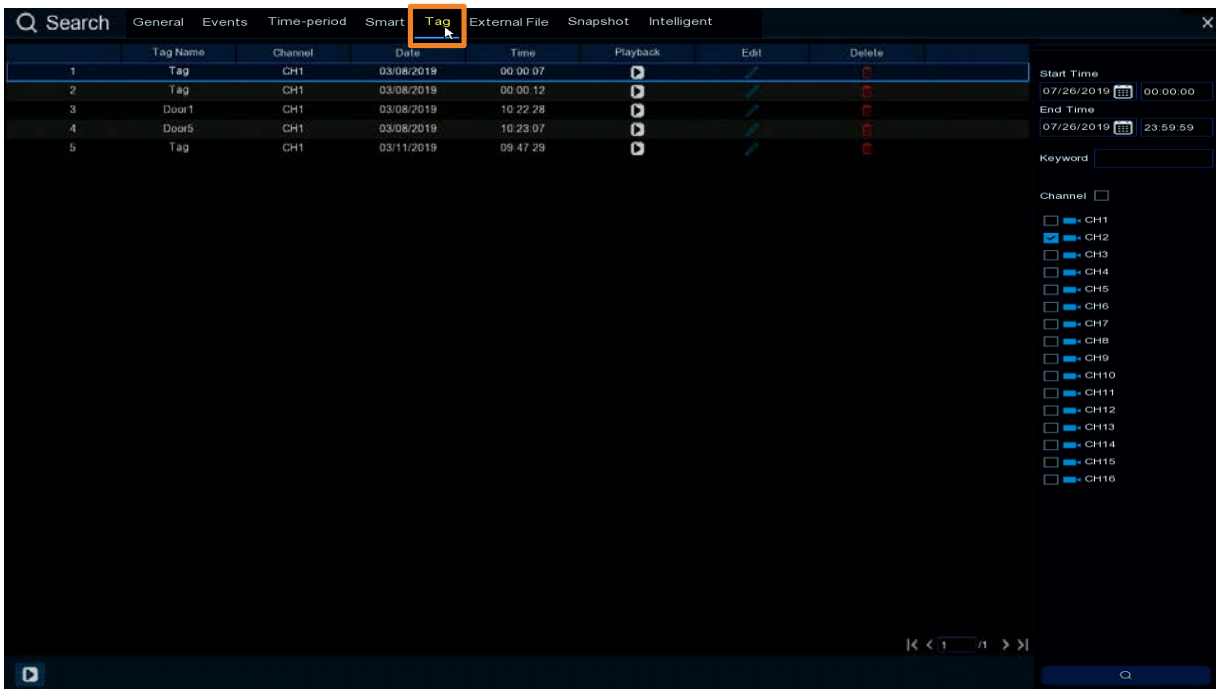
1. Follow **Step 1 ~ Step 6** above to enter the Smart Area Define page.



2. To define the smart area(s), click the mouse and drag it to draw an area. The area applied with the smart function will be shown with red grids. You can follow this method to draw several areas. To clear a certain area, use the same method to draw on the same area again, the smart area will be erased.
3. Click the **Search** button to start searching the motion events on the smart areas for playing back.

4.7.3.5 Tag

You can search for the tagged recordings and then play back the recordings.



After adding tags to the recordings, you can use the Tag playback window to search for the tagged recordings.

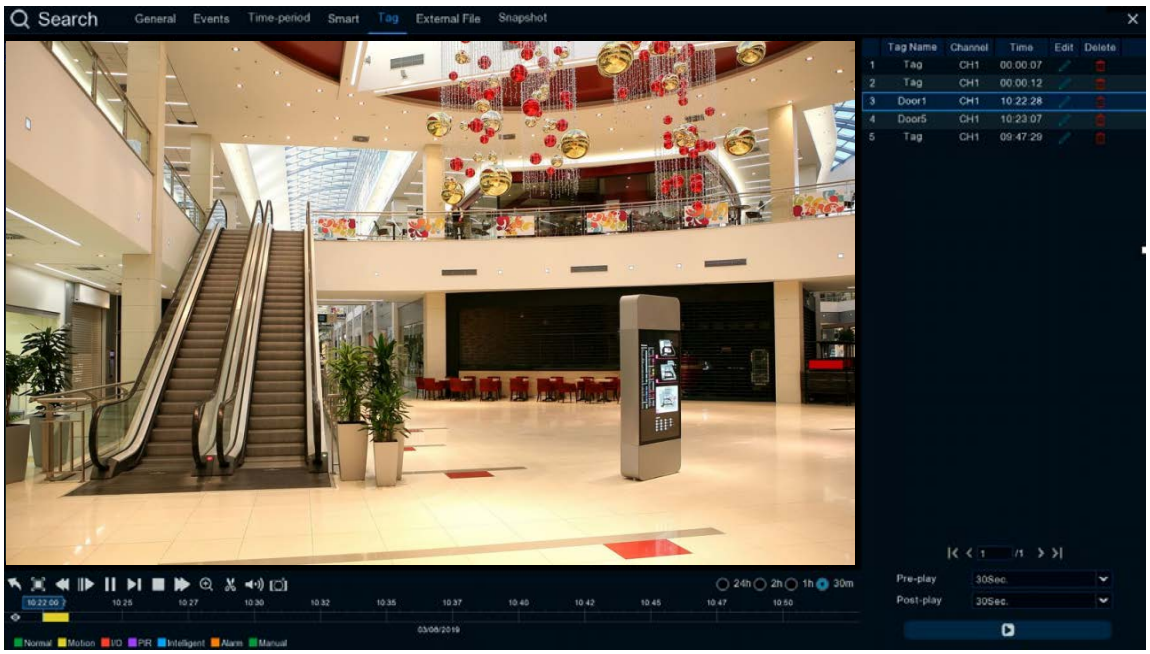
There are two ways to add a tag:

1. On the Live View window, click the **Add customized Tag** icon on the Live Channel Toolbar. Please refer to *3.5 Live Channel Toolbar* for more details.

2. On the Playback windows (General, Events, Time-period, Smart), click the **Add Default Tag** or the **Add customized Tag** icon on the Playback Control Panel. Please refer to 4.7.2 Playback Control Panel for more details.

To play back the tagged recordings:

1. On the Tag playback window, select a **Start Time** and **End Time**.
2. Optionally input a keyword of the tag if you want to find the tags with customized names.
3. Select the desired channel(s).
4. Click the **Search** button , the searched tags will be displayed on the list.
5. To play back the tagged recordings, you can either double-click on the tag recording or select a tag recording and then click the **Play** button on the lower-left corner. The below playback window appears.



a. By default, the NVR will play back the tagged recordings for 1 minute starts from 30 seconds ago of the tagged time. You can optionally adjust the playback time by selecting the **Pre-play** or **Post-play** options and then click the **Playback** button.

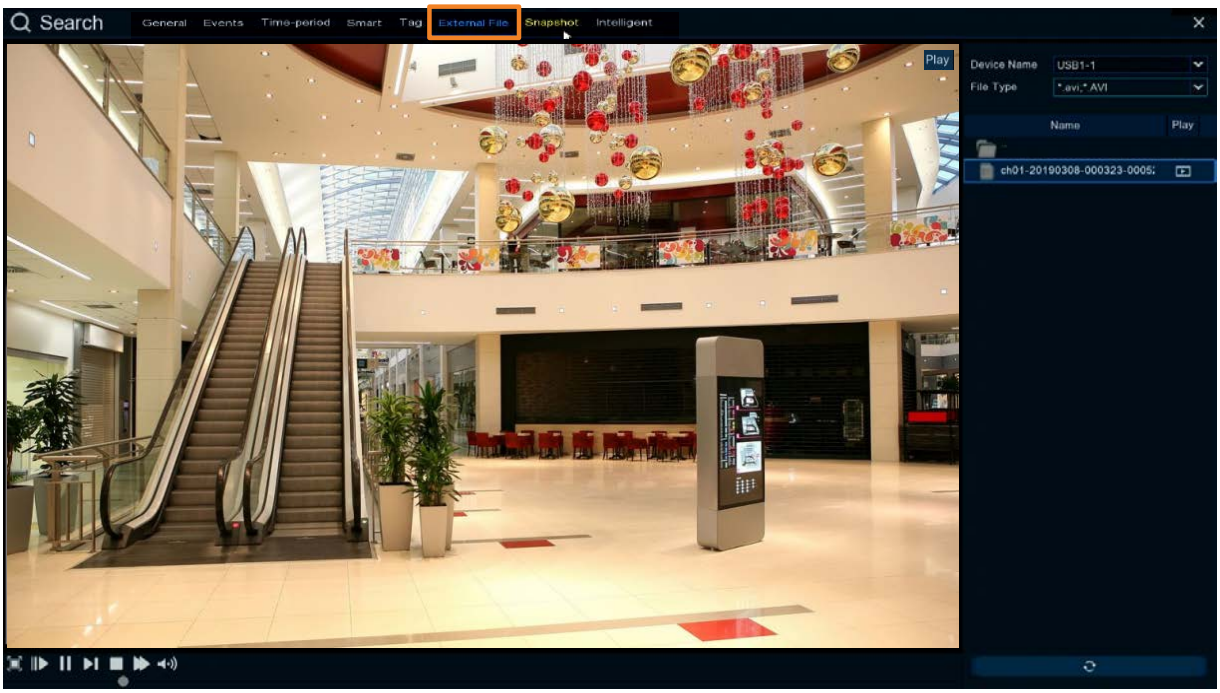
b. You can edit the tag names by clicking the **Edit** icon, or delete the tags by clicking the **Delete** icon.

c. You can now operate the tag playback function using the Playback Control Panel. Please refer to *4.7.2 Playback Control Panel* for more details.

d. To return to the Tag playback window, click the **Close** button or right-clicking the mouse.

4.7.3.6 External File

You can play back the recordings (.avi) stored in the USB storage device using the External File Playback window.

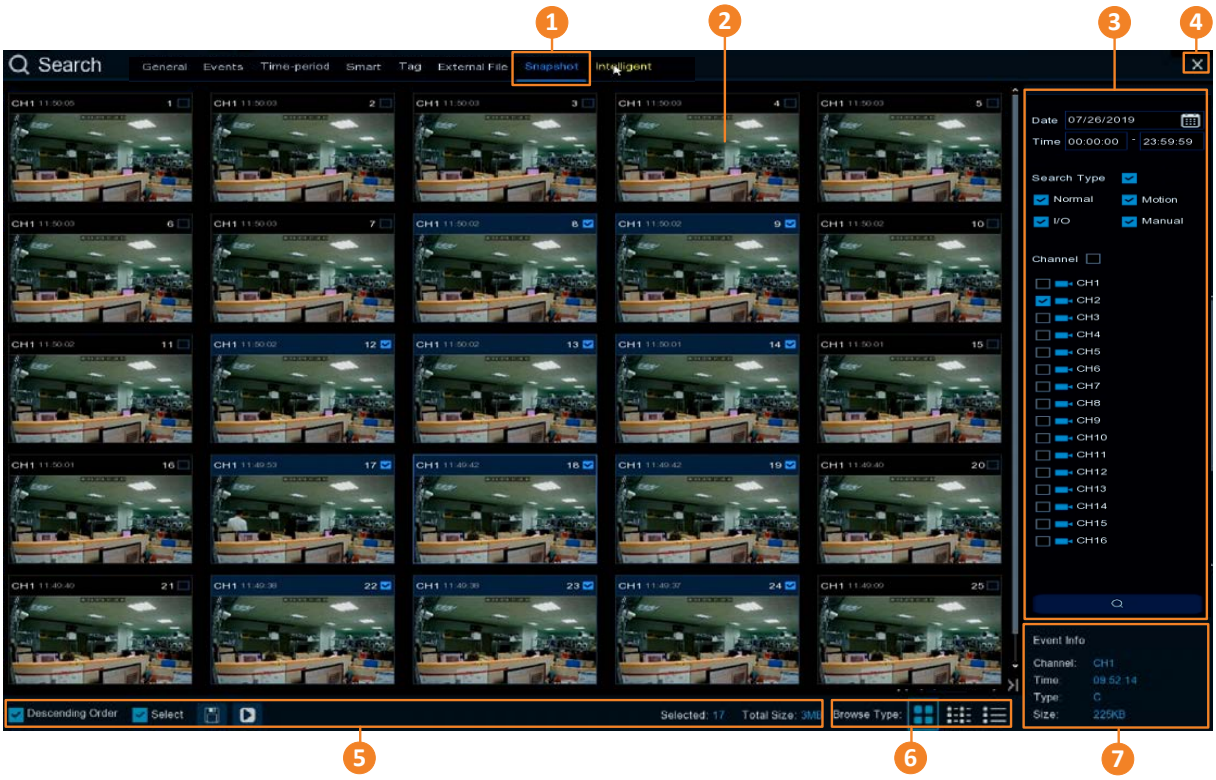


To play back the recordings (.avi) stored in the USB storage device:

1. Ensure the USB storage device has been inserted to the NVR.
2. Select the USB device from the **Device Name** drop-down box.
3. Double-clicking the recordings on the right-side panel, the recording will be played back.

4.7.3.7 Snapshot

You can use this page to search and play back the snapshot images and backup the images to a USB storage device.



No.	Name	Description
1	**Snapshot**	Click to enter the Snapshot Playback window.
2	**Snapshot List**	The searched snapshot images will be listed on the Snapshot List. You can display the Snapshot List in Thumbnail, List or Details mode. Please refer to **No.6**.
3	**Search Panel**	You can use this panel to search for the snapshot images based on the selected attributes including date and time, record mode, and channels.
4	**Close Button**	You can click the **Close** button to close the Snapshot Playback window and return to the Live View window. You can also close the Snapshot Playback window by right-clicking the mouse.

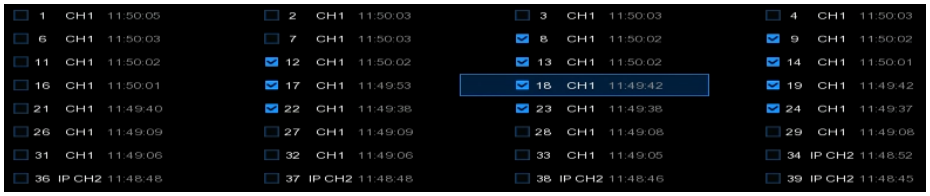
5	**Function Bar**	Descending order: Click to display the snapshots in descending order. Select: Check the box to select all the snapshots on the list. Uncheck the box to deselect all the snapshots on the list. Copy: Select the snapshot(s) on the list and then click the **Copy** button to backup the selected snapshot images to the USB storage device. Play: Click a snapshot on the list and then click the **Play** button to play back the snapshot images starting from the clicked one. Selected: The number of selected snapshot(s) on the list will be displayed here. Total Size: The total size of selected snapshot(s) on the list will be displayed here.
6	**Browse Type**	Click to display the snapshot list with Thumbnail, List or Details mode.
7	**Event Info**	Click an image on the Snapshot List, the information of the clicked snapshot image will be displayed here.

1. To search for snapshot images:
   a. Click the **Calendar** button to select a date.
   b. Click the **Time** column to select a time range.
   c. Select the desired **Search Type**(s) and channel(s).
   d. Click the **Search** button  , the search results will be displayed on the Snapshot List.
   e. You can click the left or right buttons to browse between pages, or input the page number you want to browse.

   f. You can switch the Snapshot List display mode by clicking the Thumbnail, List or Details button.

 **Thumbnail:** Click to display the events with thumbnail images.

 **List:** Click to display the snapshots in list.



Details: Click to display the snapshots in detailed list.

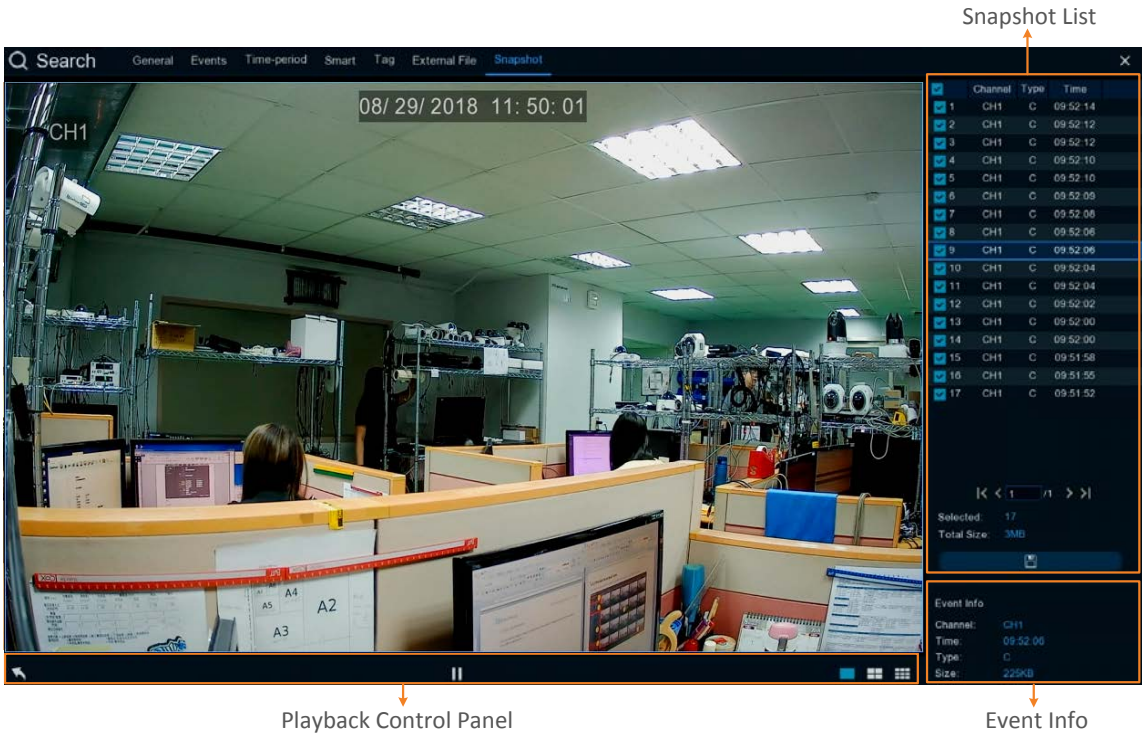
	Channel	Type	Date	Time	Size	Playback
1	CH1	Manual	08/29/2018	11:50:05	245KB	
2	CH1	Manual	08/29/2018	11:50:03	245KB	
3	CH1	Manual	08/29/2018	11:50:03	245KB	
4	CH1	Manual	08/29/2018	11:50:03	245KB	
5	CH1	Manual	08/29/2018	11:50:03	245KB	

Playback: Click the **Playback** icon in the Playback column can display the snapshot image. You can then click the buttons to display the next or previous snapshot image.

g. On the Snapshot List, click on a snapshot image and its information will be displayed at the lower-left corner.

2. To back up snapshot images to the USB storage device:
   a. Ensure the USB storage device has been inserted to the NVR.
   b. On the Snapshot List, select the desired snapshot(s) and then click the **Backup** button.
3. To play back a snapshot images continuously:
   a. On the Snapshot List, click on a snapshot and then click the **Play** button on the Function bar, the Image Playback page appears.
   b. The system will automatically play back the snapshot images starting from the clicked one to the last one.

Snapshot Playback page



【**Snapshot List**】 You can perform the below functions using the Event List.

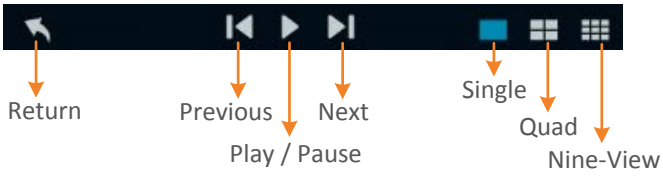
Image Display: Click a snapshot image on the list can display the image on the viewing window.

Continuous Playback: Click a snapshot image on the list and then click the **Play** button on the Playback Control Panel, the snapshot images will be automatically playing back continuously starting from the clicked one to the last one.

Copy: On the Snapshot List, check the snapshot boxes to select the snapshots and then click the **Copy** button  can back-up the snapshot images to the USB storage device.

【**Event Info**】 On the Snapshot List, click on a snapshot, the information of the clicked snapshot image will be displayed here.

【**Playback Control Panel**】 You can use this panel to operate the playback function.



Return: Click to return to the Picture search page.

Previous: Click to display the previous image.

Play / Pause: Click to start playing back or pause playing back the continuous snapshot playback.

Next: Click to display the next image.

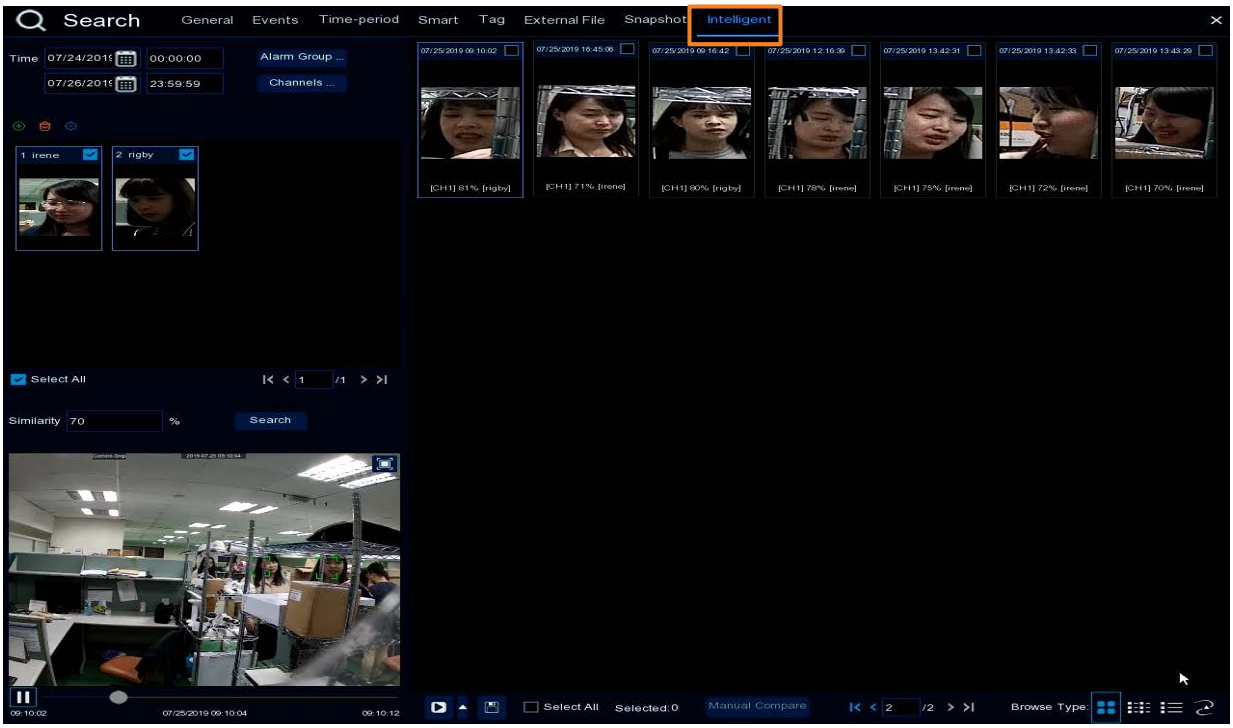
Single: Click to display the snapshot images in single view.

Quad: Click to display the snapshot images in quad view (displaying 4 images at a time).

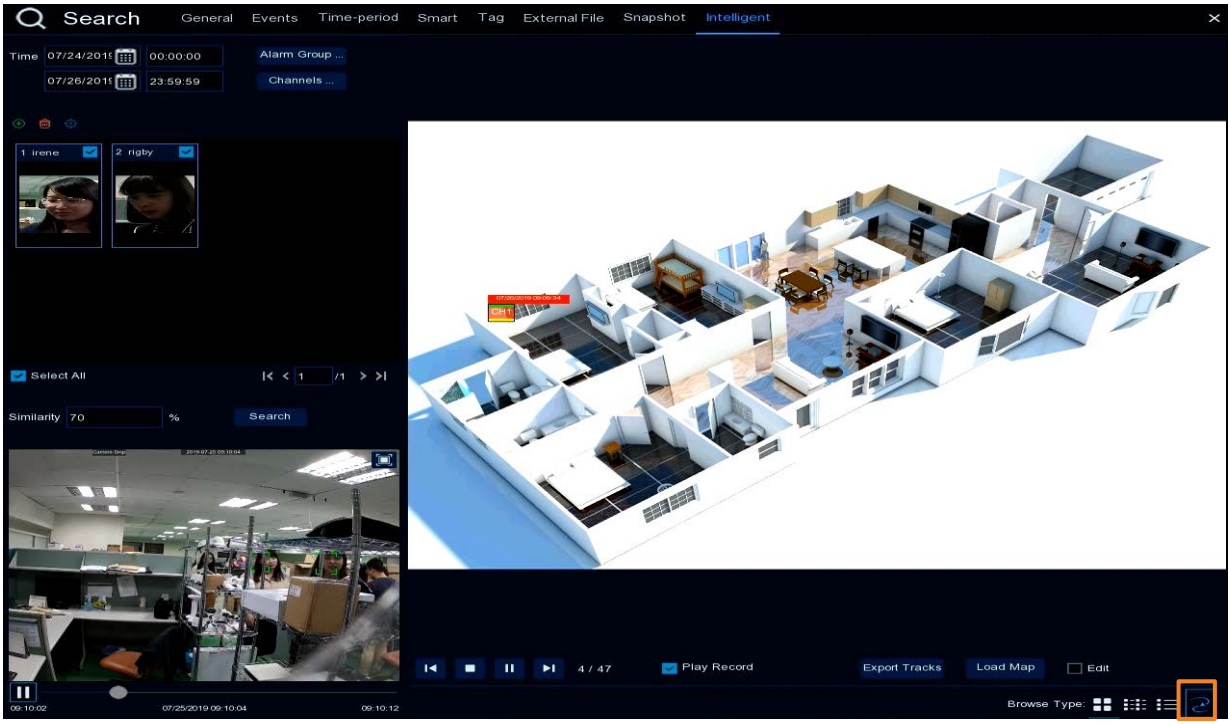
Nine-View: Click to display the snapshot images in nine-view (displaying 9 images at a time).

4.7.3.8 Intelligent

You can use this page to playback the Face Recognition alarm recordings.



You can also add an E-map to display the location of the alarm channel.

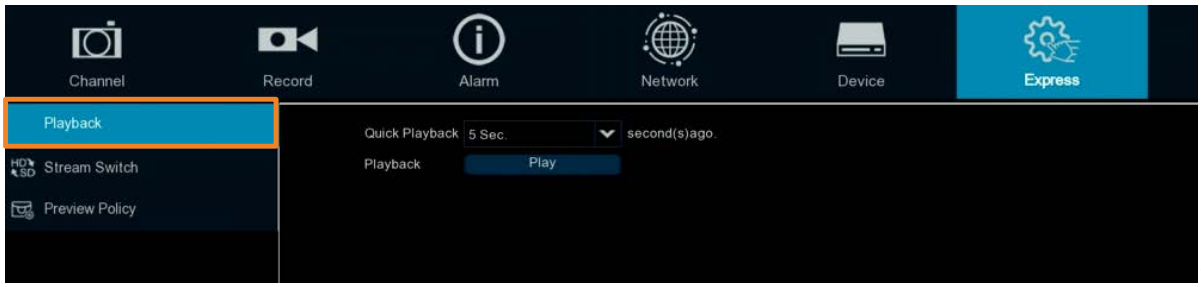


4.8 Express

4.8.1 Quick Playback

You can configure the start playback time for the Quick Playback function. Select a time from the drop-down box to set up playing back from how many time ago.

After the configuration, you can activate the function by clicking the **Quick Playback** icon on the **Live Channel Tool Bar** on each channel (please refer to *3.4 Live Channel Tool Bar*).

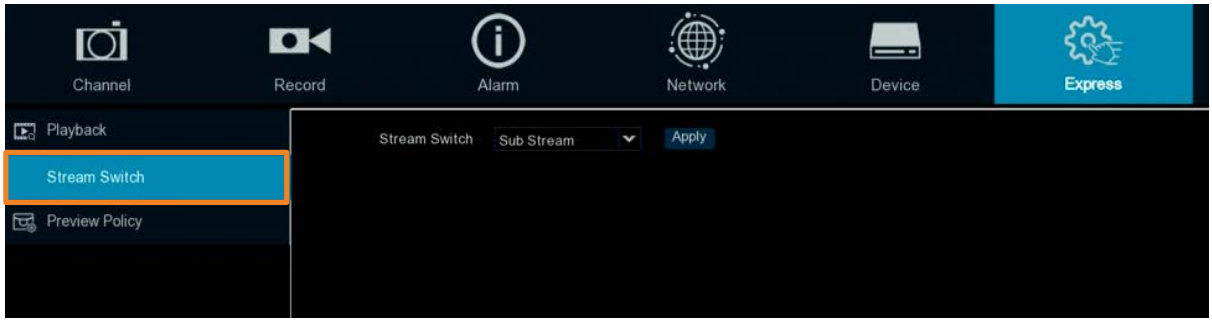


f

4.8.2 Stream Switch

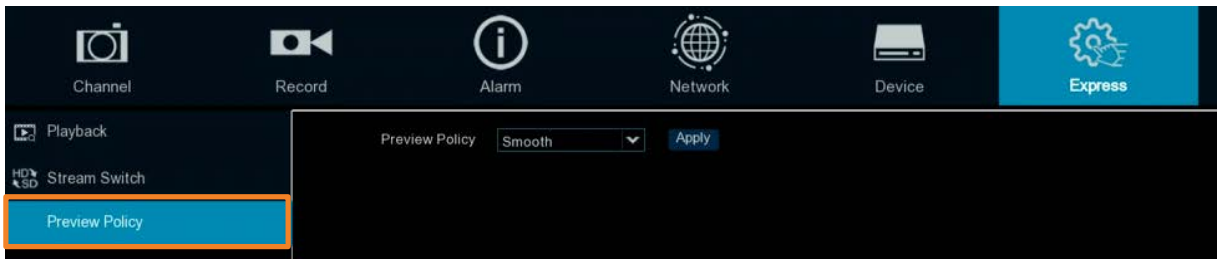
This function is only available for IP cameras. You can set up a stream mode for all IP channels on the live view window. Select **Main Stream** or **Sub Stream** and then click the **Apply** button.

To adjust the Main Stream or Sub Stream configurations, please refer to *4.2.1 Stream*.



4.8.3 Preview Policy

You can set up a displaying quality for all channels on the live view window. Select among realtime, balanced or smooth view. The view modes affect only the live view video quality by bit rate and frame rate but do not affect the recording quality.



4.9 System

You can configure most of the system settings on the Main Menu.

4.9.1 General

4.9.1.1 General

You can configure the general system settings on this page.

Device Name: Input a desired name for your NVR. The name can include both letters and numbers.

Device ID: Enter the desired ID for your NVR. The device ID is used to identify the NVR, and can only be composed of numbers. For example, 2pcs NVRs are installed in the same place, the Device ID is 000000 for one of the NVRs, and 111111 for another NVR. When you want to operate the NVR with a remote controller, both of the NVR may receive the signal from controller & act at the same time. If you want to control only the NVR with ID 111111, you can input the Device ID 111111 in login page with remote controller for further operations.

Language: Select a language.

Video Format: Select **NTSC** or **PAL** for the system.

Record Mode: Select a record mode, **Normal (4k)** or **5MP Mode**. The recording FPS options will be different when **Normal Mode (4k)** or **5MP Mode** is selected. For more details about recording FPS, please refer to *4.2.1 Stream*.

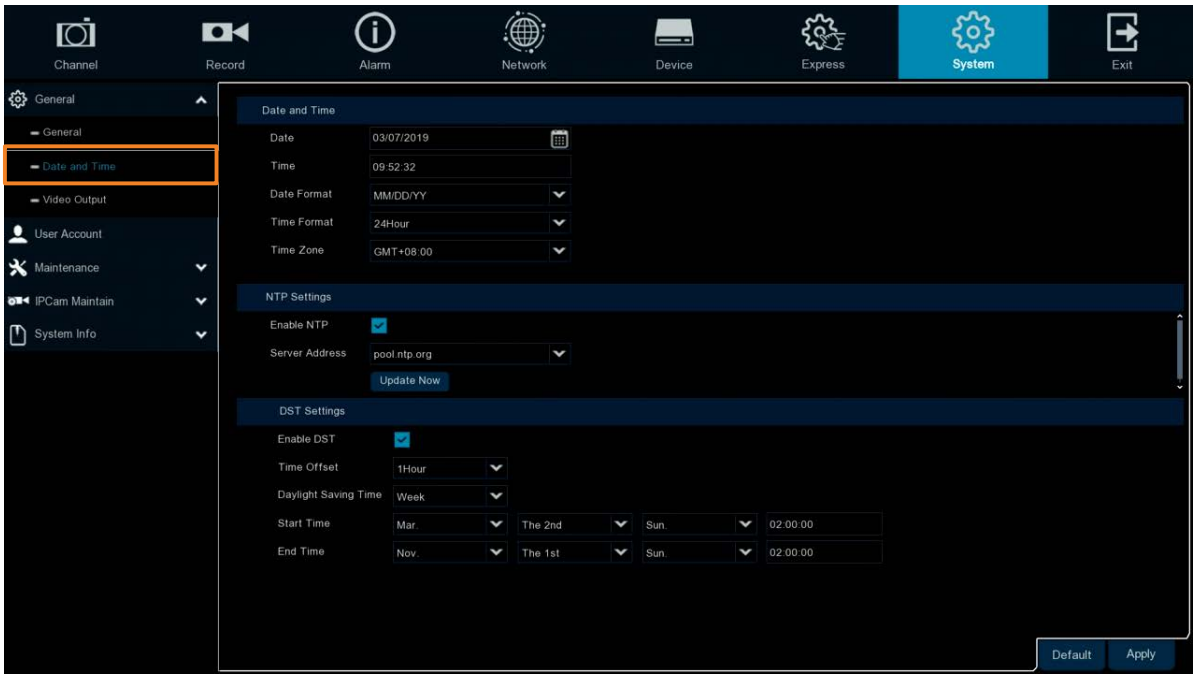
Menu Timeout: Select a timeout time for the OSD menu to automatically exit. Select **Off** for the OSD menu to display continuously.

Start Wizard: Check the box to enable starting the Startup Wizard every time when system starts.

Default: Click to apply the default setting.

Apply: Click to save the settings.

4.9.1.2 Date and Time



【Date and Time】

Date: Set up the date for the system.

Time: Set up the time for the system.

Date Format: Select a format for the date.

Time Format: Select a format for the time.

Time Zone: Select a time zone relevant to your region.

【NTP Settings】

The NTP (Network Time Protocol) function allows your NVR to automatically sync its clock with a time server. This gives it the ability to constantly have an accurate time setting (your NVR will periodically sync automatically).

Enable NTP: Check the box to enable the NTP function. When NTP function is enabled, the system will calibrate the system time at 00:07:50 daily and every time when the system is started up.

Server Address: Select a NTP server.

Update Now: Click to calibrate the system time.

【DST Setting】

The DST (Daylight Saving Time) function allows you to select the amount of time that Daylight Saving has increased by in your particular time zone or region.

Enable DST: Check the box to enable the DST function.

Time Offset: Select the amount of time that Daylight Saving has increased by in your time zone. This refers to the difference in minutes, between Coordinated Universal Time (UTC) and the local time.

Daylight Saving Time: Select **Week** or **Date** to configure the start/end time below.

Week: Select a month, a particular day and time when Daylight Saving starts and ends. For example, 2am on the first Sunday of a particular month.

Date: Select the start date (click the calendar icon), end date and time when Daylight Saving starts and ends.

Start Time: Select a start time for the DST to start.

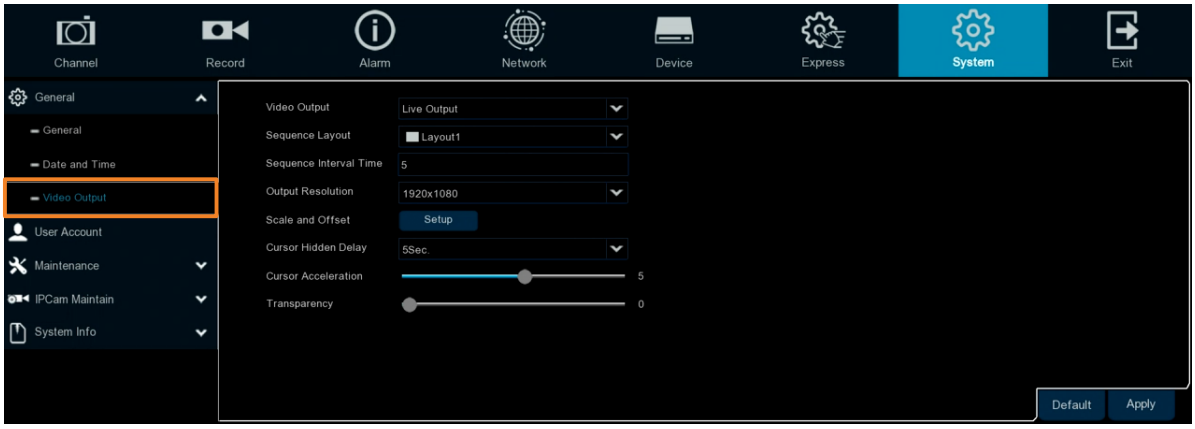
End Time: Select an end time for the DST to stop.

Default: Click to apply the default setting.

Apply: Click to save the settings.

4.9.1.3 Video Output

You can configure the monitor output settings on this page.



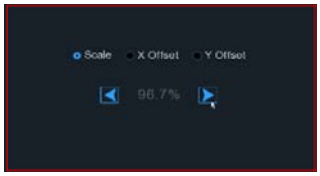
Video Output: Select **Live Output** (Main Monitor) and then configure the below settings.

Sequence Layout: Select a layout for the sequence mode. For example, if you select Layout4, the NVR will display a quad view layout for all channels in sequence order. To start the sequence mode, go to OSD menu > Layout and then click the **Auto Sequence** button. Click the button again to stop sequence mode.

Sequence Interval Time: Input a sequence interval time in second. By default, 5 seconds is set up.

VGA/HDMI Resolution: Select a live resolution to be displayed on the output monitor. 1920 x 1080 will suit most TVs. If your NVR supports 4K output resolution, you can select either 2K (2560 x 1440) or 4K (3840 x 2160) to take advantage of the higher resolution that your 4K TV provides.

Scale and Offset: The NVR supports to adjust the size and position of the display screen to match your monitor or TV. Click the **Setup** button to adjust.



Scale: To adjust the size of the displayed screen by scale.

X Offset: To move the displayed screen to the left or right.

Y Offset: To move the displayed screen to the top or bottom.

Click once or long press the left button of your mouse on the arrow to adjust the size and position, or you can scroll the wheel of the mouse to adjust. Click the right button of your mouse to exit, and click **Apply** to save your modifications.

Cursor Hidden Delay: Click the drop-down menu to select the time your NVR will hide the mouse cursor when idle. You can also disable this function by selecting **Off** (password protection will be temporarily disabled).

Cursor Acceleration: To adjust the speed to move the mouse cursor.

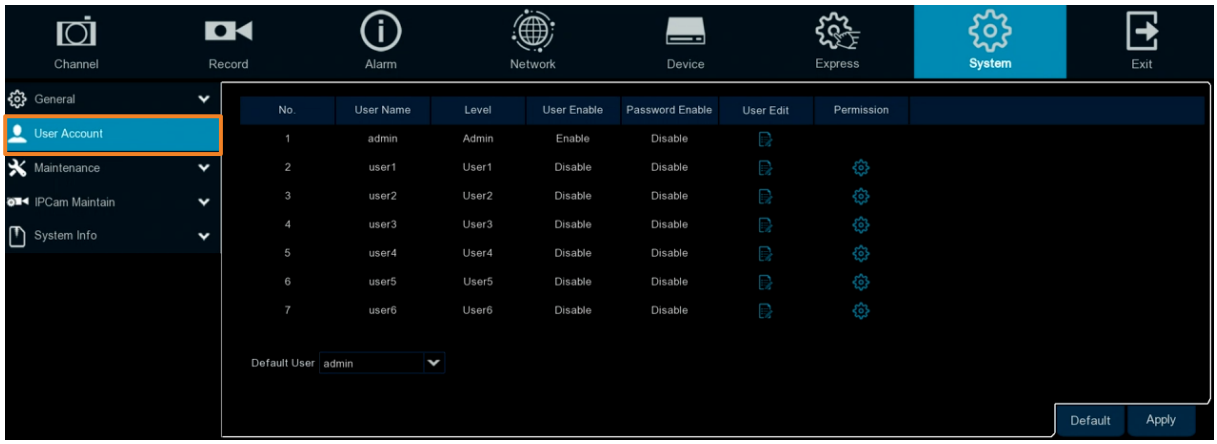
Transparency: Slide the bar to the left or right to adjust the transparency for the OSD menu.

Default: Click to apply the default setting.

Apply: Click to save the settings.

4.9.2 User Account

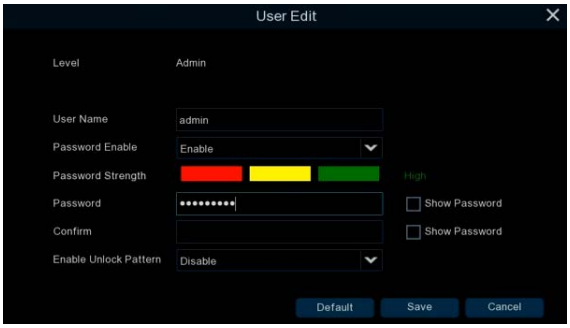
You can configure the user settings on this page. Up to 7 user accounts (1 administrator and 6 users) can be configured.



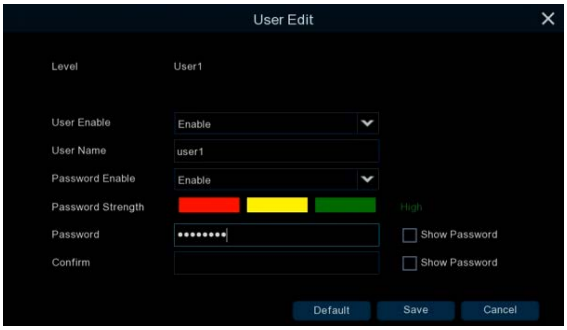
Default User: Select an user account as the default account.

User Edit: Click to bring-up the User Edit window. You can edit the user name/password in this window. Input the user name with alphabetic or numeric characters; and the passwords have to be numeric (0-9) and at least 5 characters. Select **Enable** from the **User Enable** drop-down list to enable the user account. Select **Enable** from the **Password Enable** drop-down list to enable the password (if Disable is selected, the user can login without password). Click **Save** to save the settings.

Admin Account

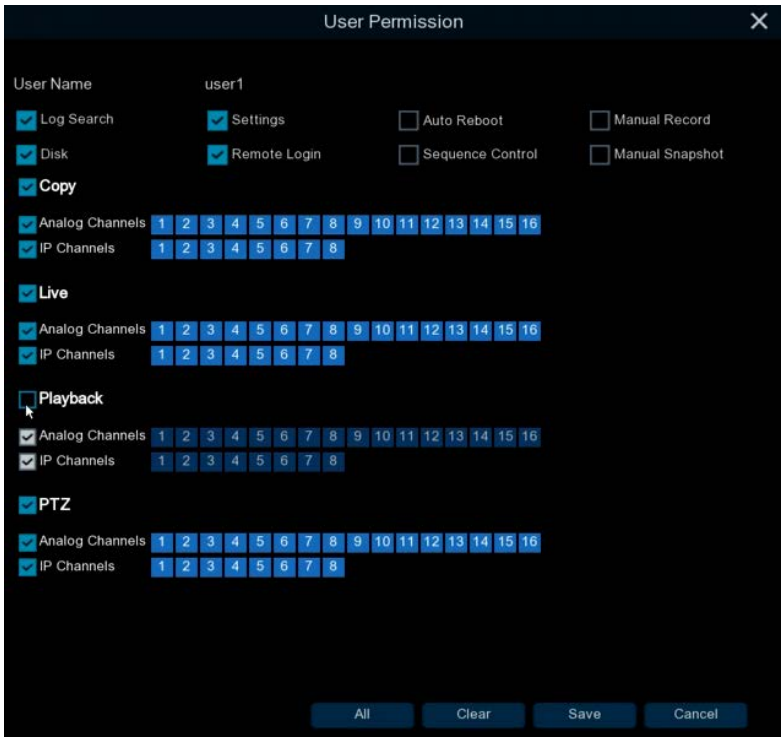


User Account



- **Enable Unlock Pattern:** Enable or disable the Unlock Pattern function.

Permission: Click to display the User Permission window. The Administrator account has full privileges so the functions cannot be configured. In the User Permission window, check the boxes to grant functions for the selected user account. You can also set up the Copy/Live/Playback/PTZ functions to specific channels. After the configuration, click **Save** to save the settings.



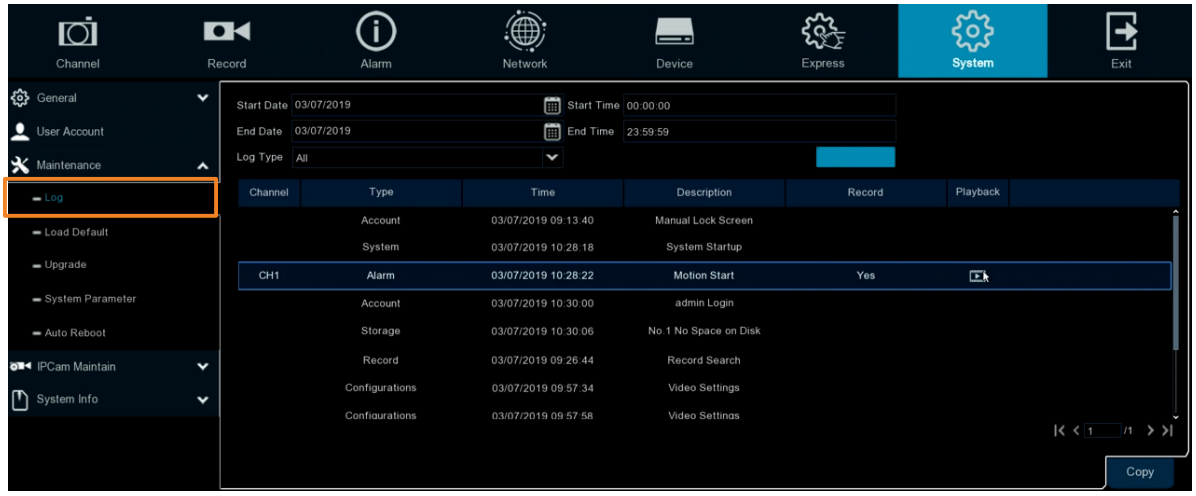
- **Log Search:** Allow users to check all the system logs.
- **Settings:** Allow users to set all the parameter settings.
- **Auto Reboot:** Allow users to auto reboot the device.
- **Manual Record:** Allows users to manually start/stop recording.
- **Disk:** Allow users to manage and control the HDD and USB storage device.
- **Remote Login:** Allow users to login the system remotely.
- **Sequence Control:** Allow users to use the sequence function.
- **Manual Snapshot:** Allow users to use the manual snapshot function.
- **Copy:** Check the **Copy** box to enable the function; and then select the desired channels to backup. This user account will be granted with the Backup function for the selected channels.
- **Live:** Check the **Live** box to enable the function; and then select the desired channels for live view display. This user account will be granted with the live view display function for the selected channels.
- **Playback:** Check the **Playback** box to enable the function; and then select the desired channels for playback. This user account will be granted with the playback function for the selected channels.
- **PTZ:** Check the **PTZ** box to enable the function; and then select the desired channels for PTZ function. This user account will be granted with the PTZ control function for the selected channels.

4.9.3 Maintenance

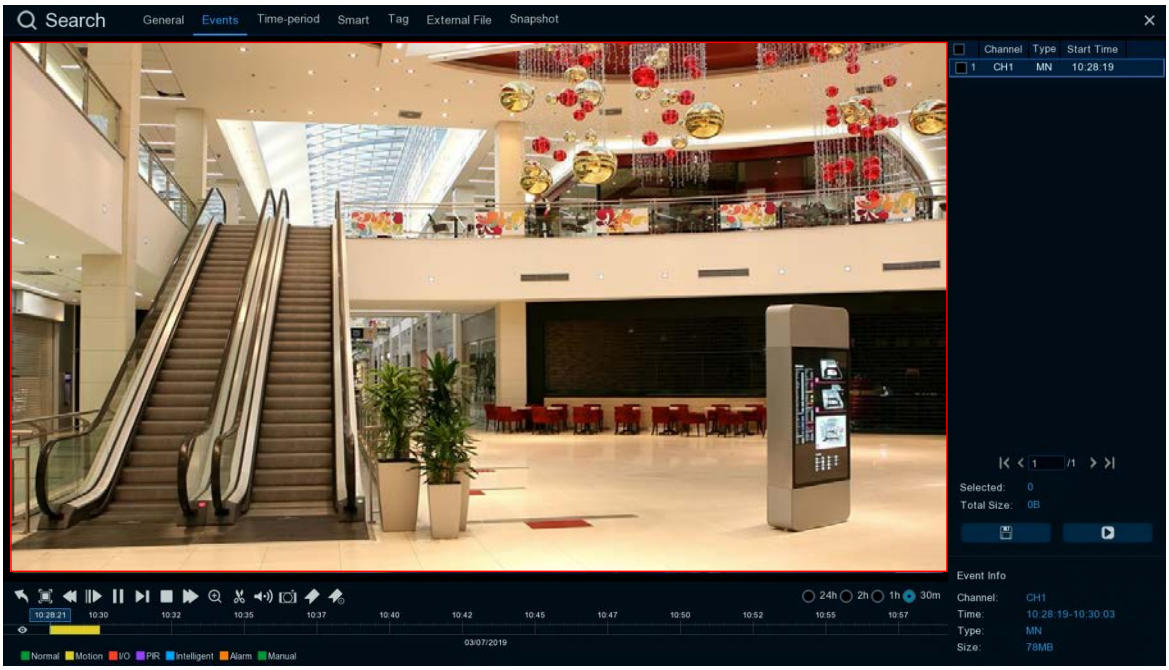
On this page, you can search and view the system log, load default settings, upgrade the system, export and import system parameters and manager system auto reboot.

4.9.3.1 Log

You can search for logs on this page. Select the start time, end time, log type and then click the **Search** button, the searched logs will be displayed on the list below. Double-click on a log from the list can bring up the Log Details window.

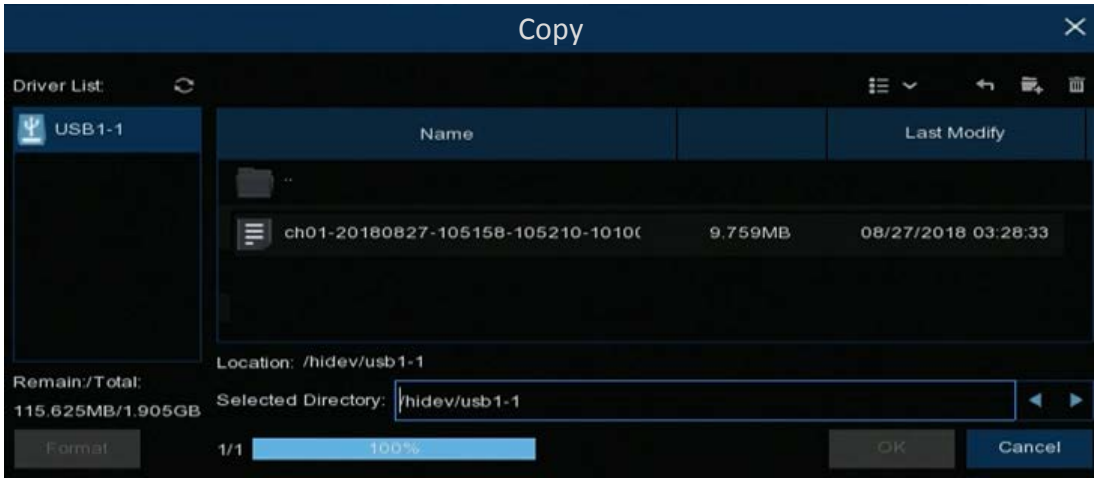


You can click the **Playback** icon in the Playback column to play back the event recording. About the playback control bar, please refer to *4.7.2 Playback Control Panel*. To exit the playback mode, right click the mouse.



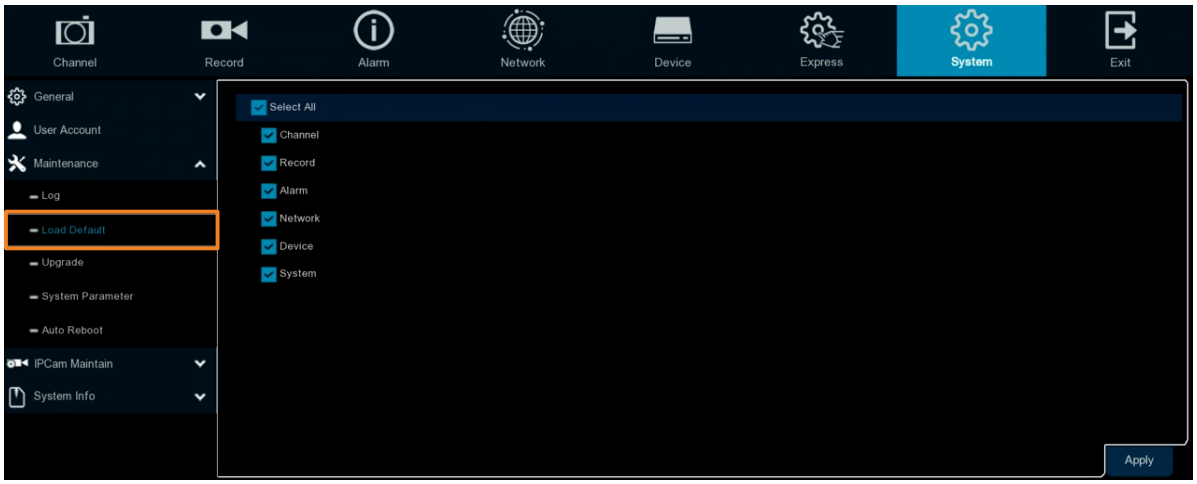
Copy: Click to save all the searched logs to the USB storage device.

Click the **Copy** button, the Copy window appears. You can also create a directory for the video clip(s) by clicking the **Directory** button on the upper-right corner. Click the **OK** button, the copy process begins. After the copy process is complete, click the **Cancel** button to return to the **Log** page.



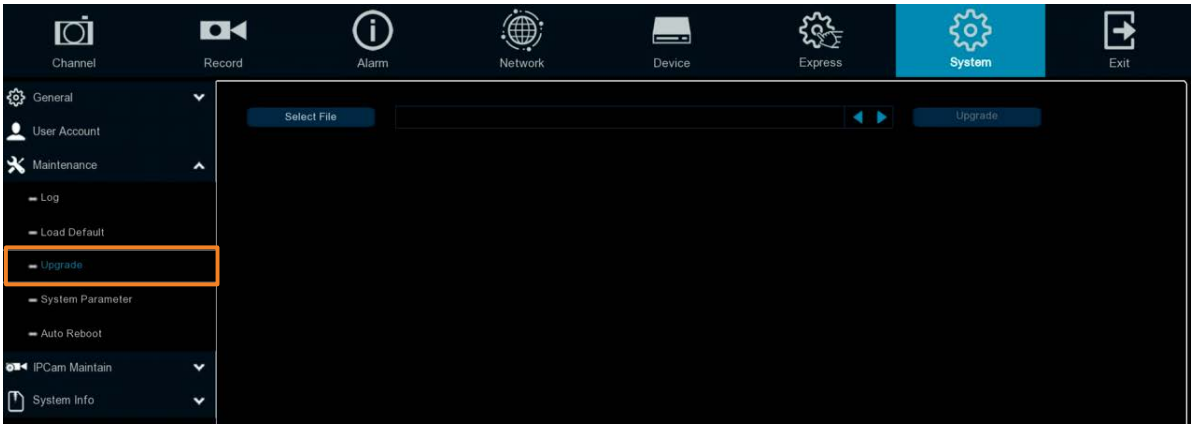
4.9.3.2 Load Default

Select the desired items to be restored to factory default and then click **Apply**. Restoring default settings will not delete recordings and snapshots saved to the hard drive.



4.9.3.3 Upgrade

You can upgrade system firmware using this page.

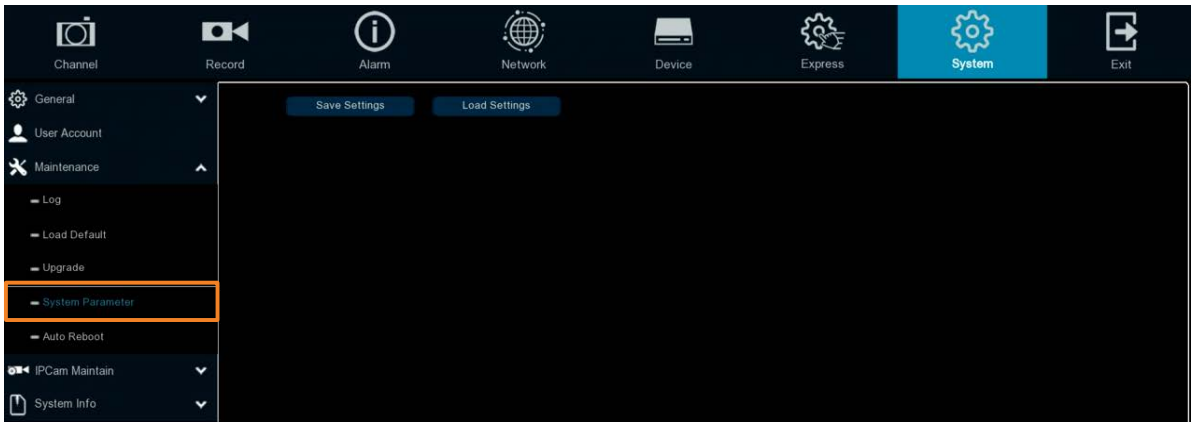


1. Restore the firmware file (.sw) in a USB storage device and insert the USB storage device to the NVR.
2. Click the **Select File** button to select the firmware file from the USB storage device.
3. Click the **Upgrade** button to start system upgrade.

Note: Do not take out the USB storage device or turn off the power during system upgrading. When the upgrade is done, the system will restart automatically.

4.9.3.4 System Parameter

You can export the system parameters you have configured to a USB storage device, or import a system parameters file from USB storage device to the NVR.

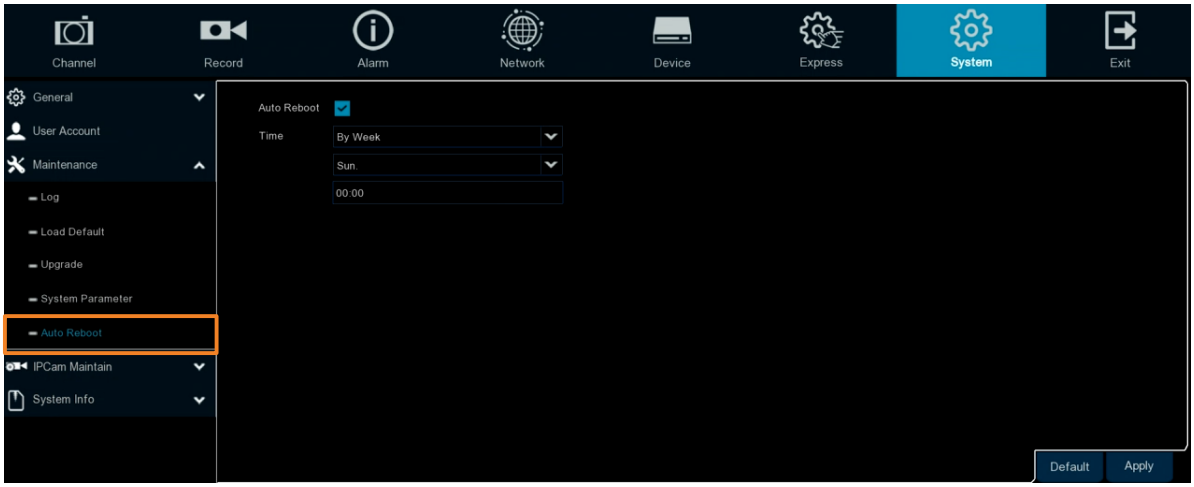


Save Settings: Click to save the NVR current system settings to the USB device. You will be required to input the Admin password to authenticate.

Load Settings: Once you have exported system parameters file, you can import the file on another NVR. Stored the file to your USB storage device and then insert the USB storage device to the NVR, click **Load Settings** to navigate the file. You will be required to input the Admin password to authenticate.

4.9.3.5 Auto Reboot

This menu allows the system to auto reboot the NVR regularly. It is recommended to leave this function enabled, as it maintains the operational integrity of your NVR.



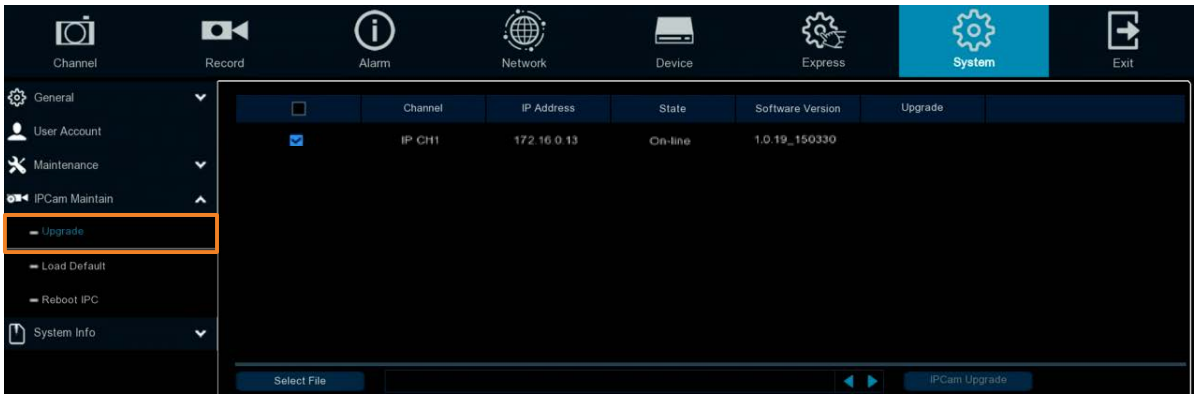
Check the **Auto Reboot** box to enable the function and then set up the reboot time for the system to regularly reboot at the setup time. Click the **Apply** button to save the settings.

4.9.4 IPCam Maintain

This menu allows you to upgrade the IP camera's firmware and restore default settings of IP camera.

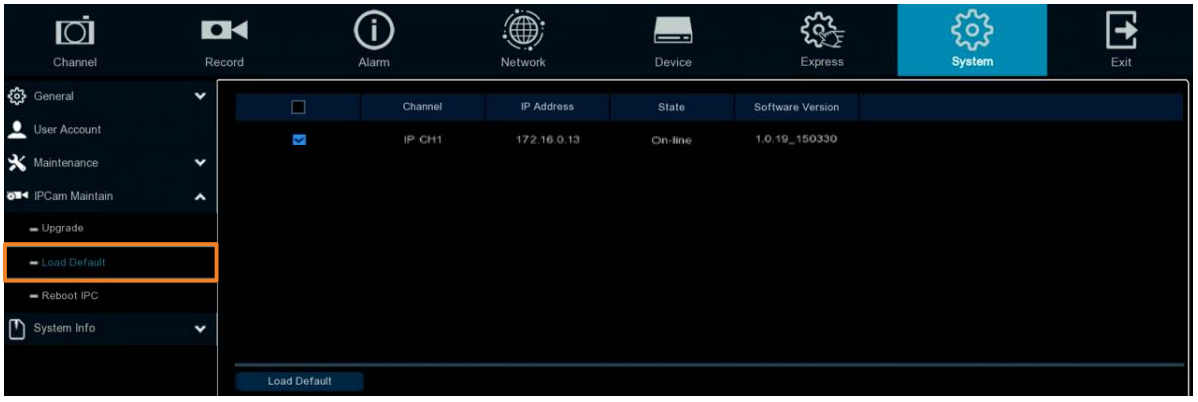
4.9.4.1 Upgrade

This menu allows you to upgrade the IP camera's firmware.



1. Select one of the IP cameras you want to upgrade firmware by checking the checkbox.
2. Click the **Select File** button to select the update file from your USB storage device.
3. Click the **IPCam Upgrade** button to start upgrading the selected IP camera. You will be required to input the Admin password to authenticate.

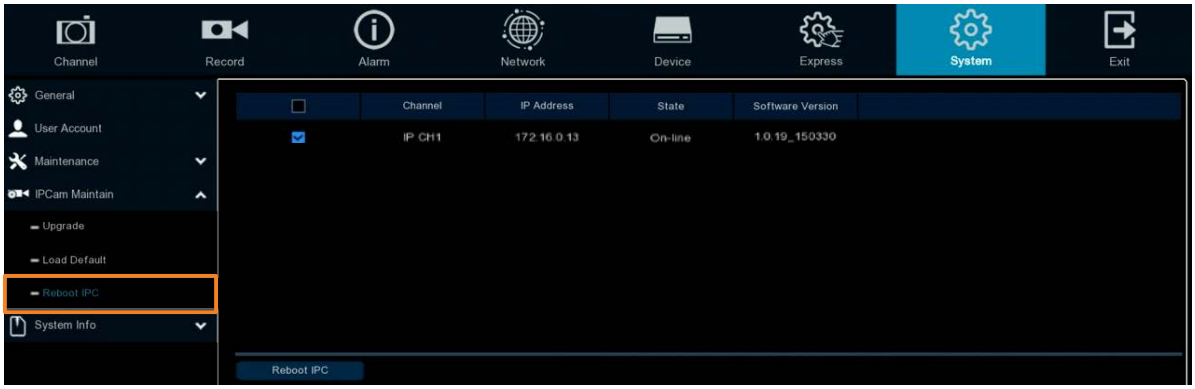
4.9.4.2 Load Default



1. Select one of the IP cameras you want to load factory default by checking the checkbox.
2. Click the **Load Default** button to start loading default. You will be required to input the Admin password to authenticate.

4.9.4.3 Reboot IPC

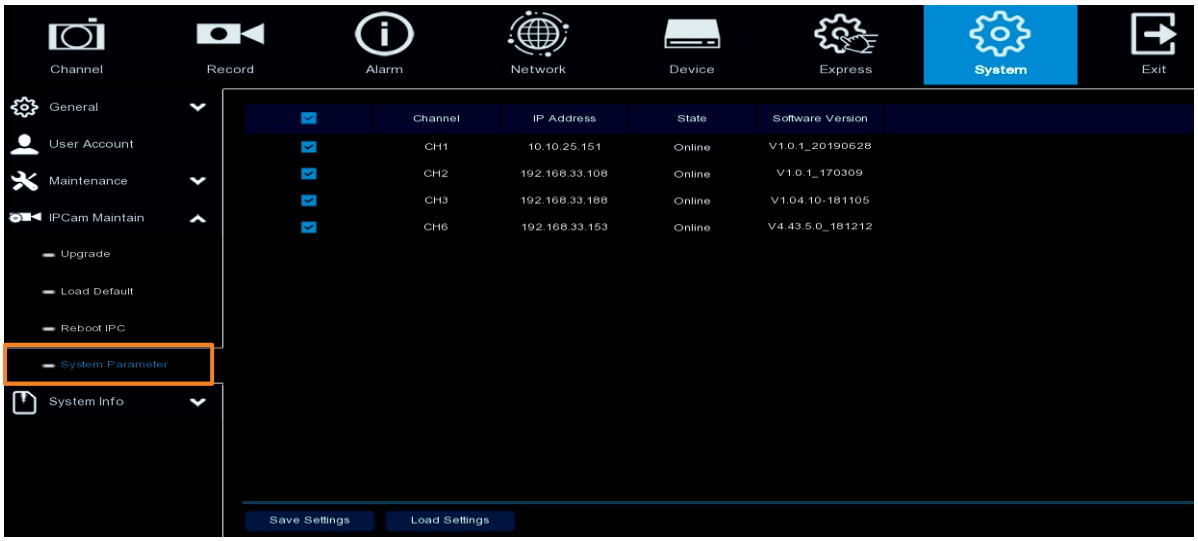
On this page, you can reboot the IP cameras.



1. Select one of the IP cameras you want to reboot by checking the checkbox.
2. Click the **Reboot IPC** button to start rebooting. You will be required to input the Admin password to authenticate.

4.9.4.4 System Parameter

You can export the IP camera parameters to a USB storage device, or import a IP camera parameters file from USB storage device to the NVR.



Save Settings: Click to save the IP camera settings to the USB device. You will be required to input the Admin password to authenticate.

Load Settings: Once you have exported IP camera parameters file, you can import the file on another NVR. Stored the file to your USB storage device and then insert the USB storage device to the NVR, click **Load Settings** to navigate the file. You will be required to input the Admin password to authenticate.

4.9.5 System Info

This menu allows you to view the system information, channel information, record information and network status.

4.9.5.1 System Info

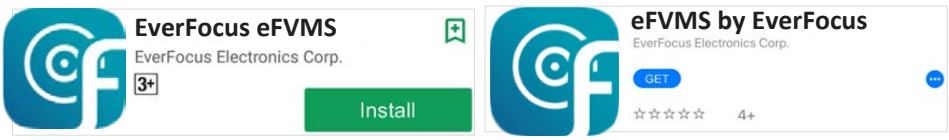
View system information such as device ID, device model name, IP address, MAC address, firmware version and more.

If **P2P** function is enabled, a QR code will be displayed on the Info page. You can scan the QR code with **EverFocus eFVMS App** installed on your mobile device to add and remote access the NVR. To enable the P2P function, please refer to *4.4.1.4 Port Configuration*.

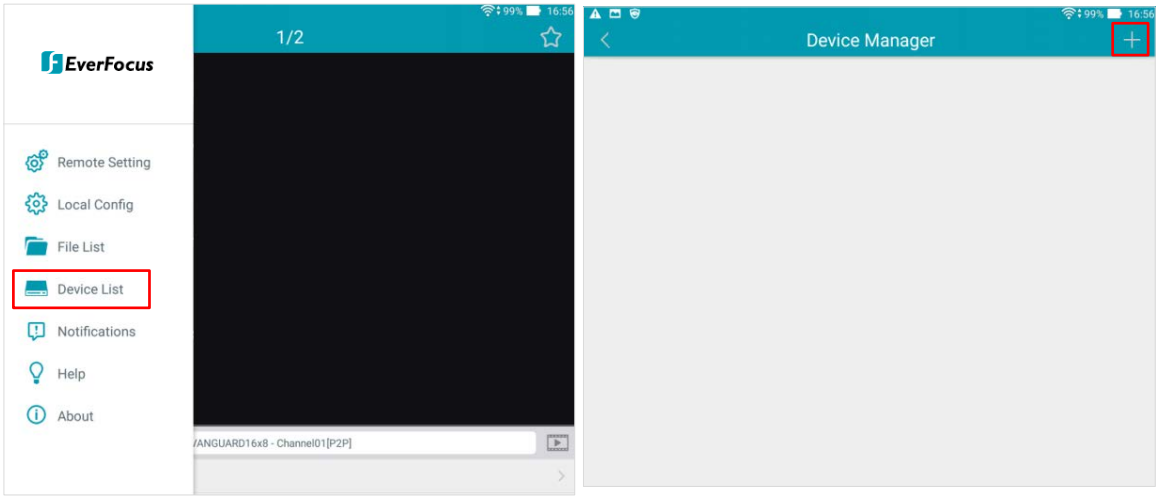
4.9.5.1.1 Performing the P2P Function

The **P2P** function allows users to add NVRs to EverFocus' **eFVMS App** through QR code.

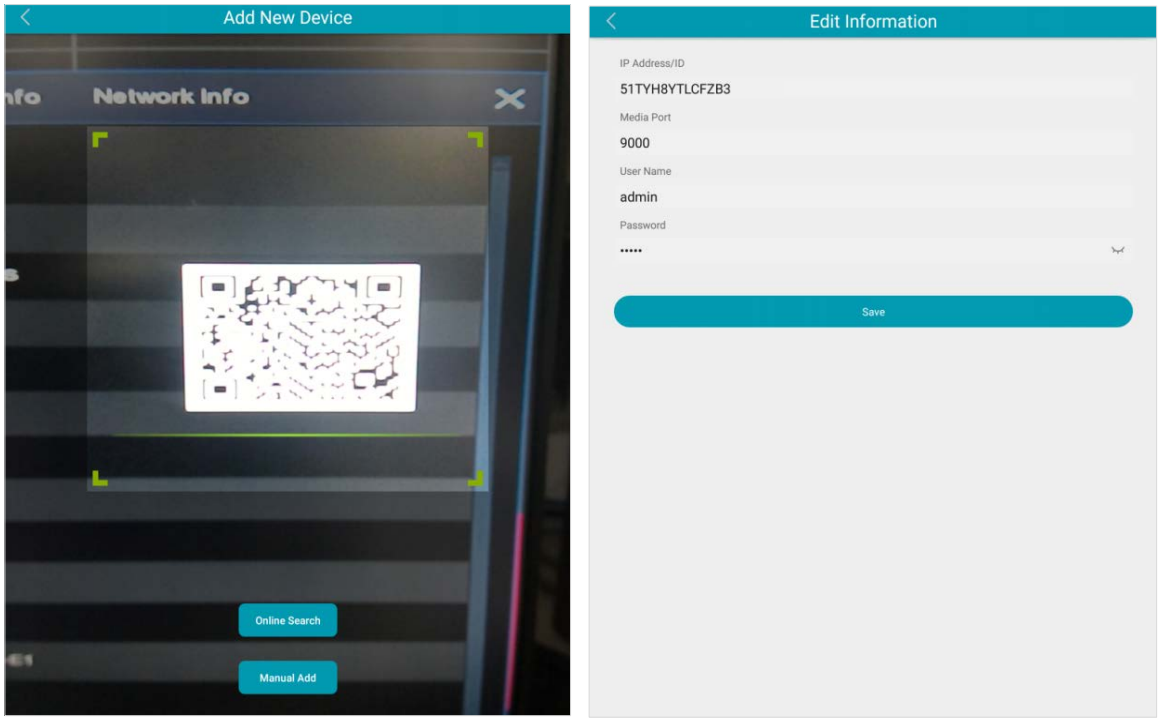
1. Install **EverFocus eFVMS App**. For Android users, go to Google Play Store. For iOS users, go to Apple Store. After the installation process is complete, start the eFVMS App.



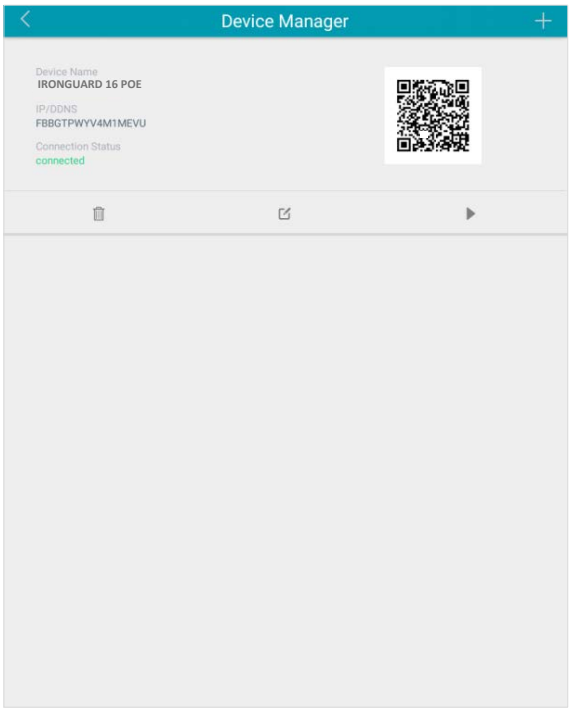
2. To add a NVR through P2P, tap **Menu** > **Device List**, and then tap the "**+**" button on the upper-right corner.

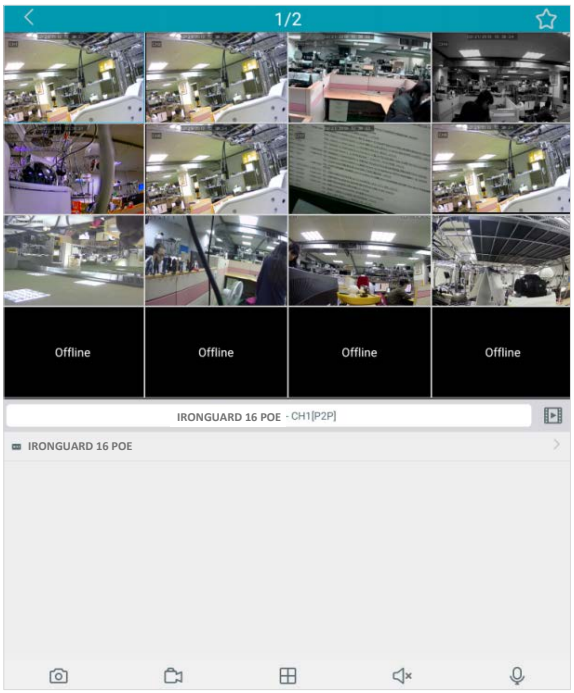


3. Scan the NVR's **QR code** on the System Info page of the NVR OSD menu. Input the NVR ID, password and Media Port 9000. Tap the **Save** button.



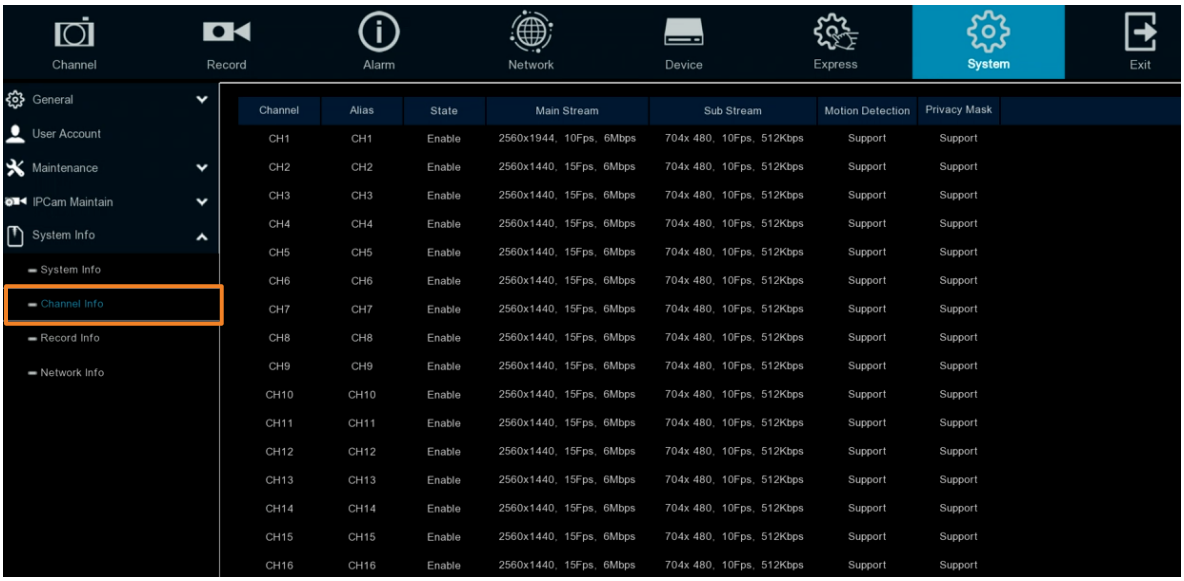
4. The NVR is now added and connected to the App. You can start accessing the NVR.





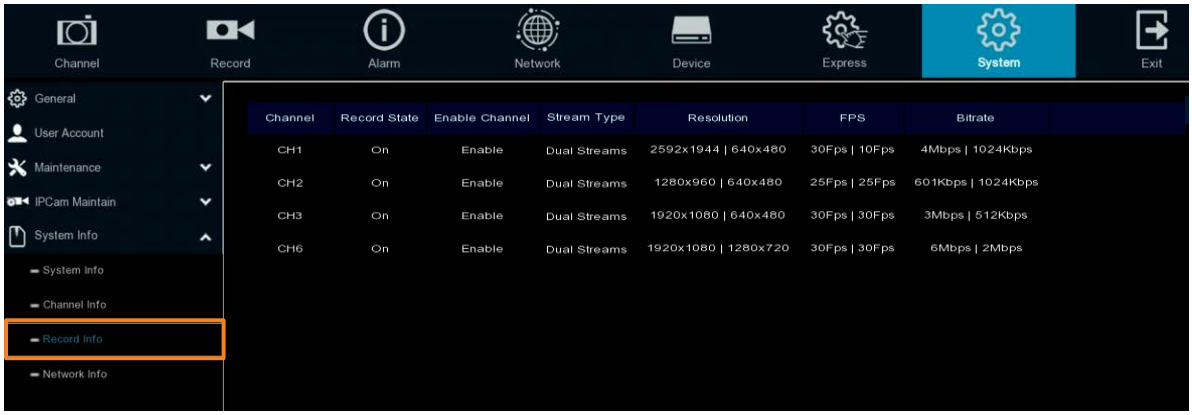
4.9.5.2 Channel Info

You can see the channel info on this page.



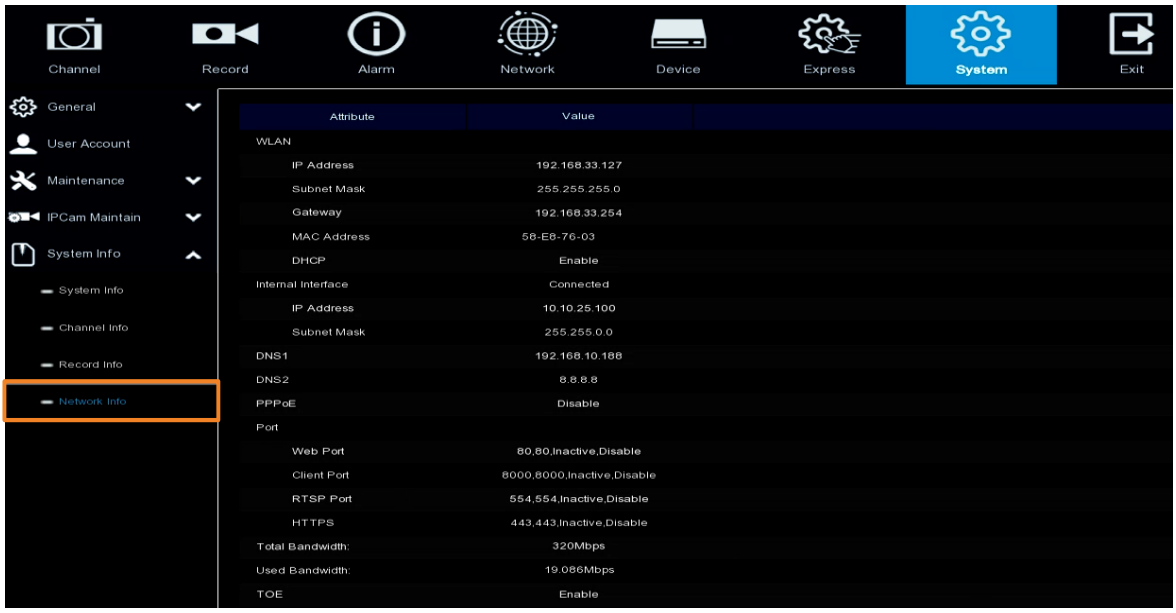
4.9.5.3 Record Info

You can see the record info on this page.



4.9.5.4 Network Info

You can see the network state on this page.

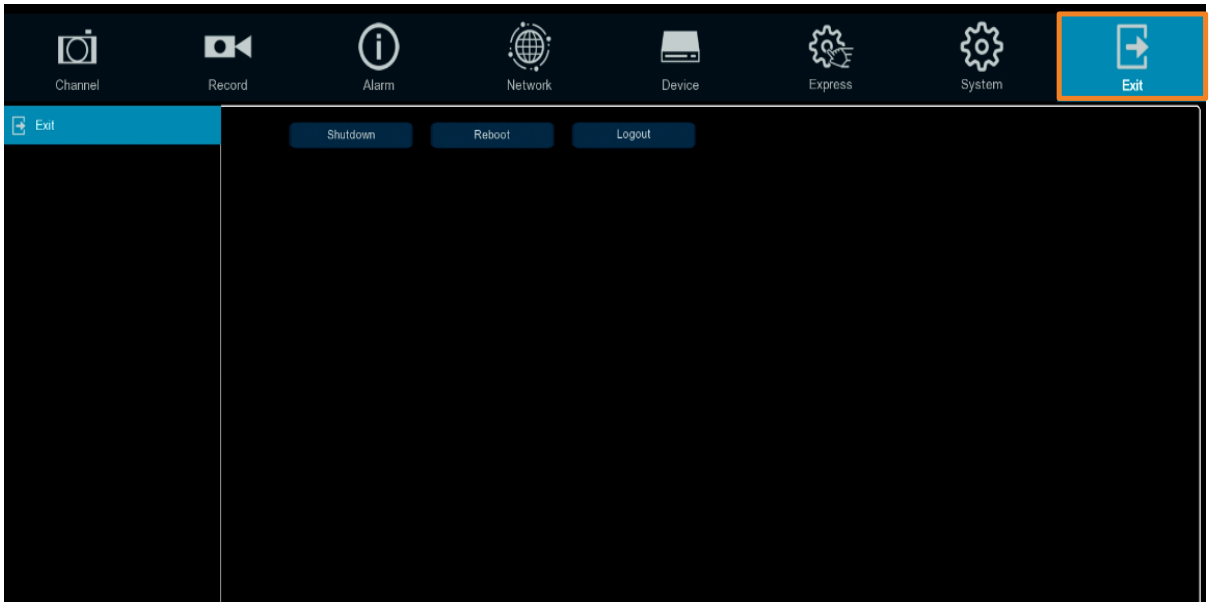


Total Bandwidth: It shows the NVR's total input bandwidth for IP cameras.

Used Bandwidth: It shows the used bandwidth of IP cameras.

4.10 Exit

You can Shutdown, Reboot ore Logout the system using this page.



Chapter
5

5. Remote Access to the NVR

5.1 Accessing the NVR on the Network

Follow the steps below to access the NVR through a Web browser.

1. Open a Web browser and in the address bar type the IP address of the NVR.

   Local connection:

   http:// (IP address from the NVR's Network Menu): IP port used

   e.g. http://192.168.1.163:2468

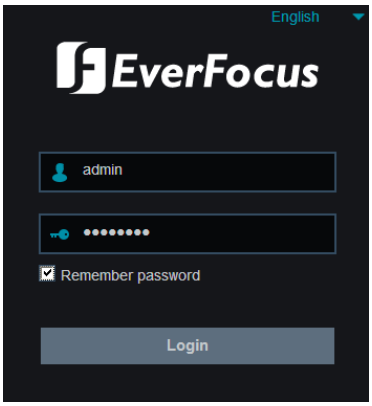
   Internet connection:

   http:// (IP address given by your Internet Service Provider): IP port used

   e.g. http://57.182.67.204:2468

2. If your computer is connected to the internet, it will download and install "ActiveX" plug-in automatically.

3. The Login window pops up. Type the User Name and Password. Click **Login**.



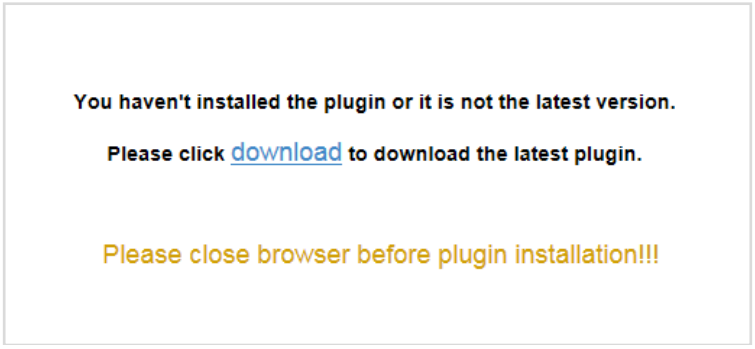
Username: Input the user name.

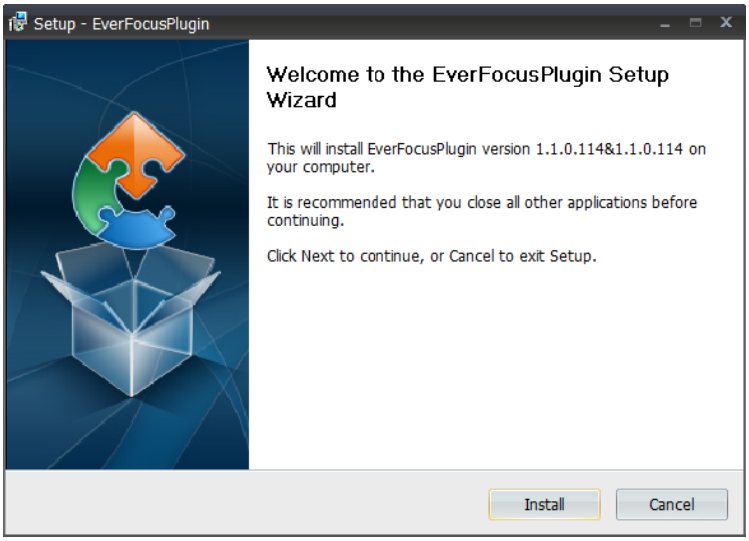
Password: Input the password.

Remember password: If you want the web browser to keep the password so you will not be able to input the password when you restart the Web page, check this checkbox.

Note for the first time login:

- When the Plug-in block appears on the browser, click **download** to install the plug-in. Reload the webpage and you should see the live view page now.

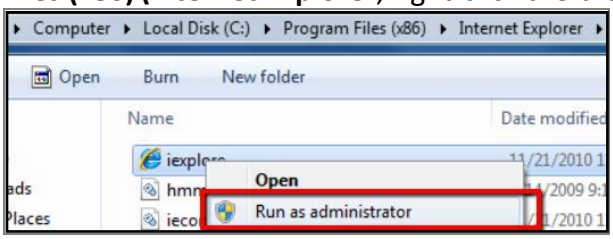




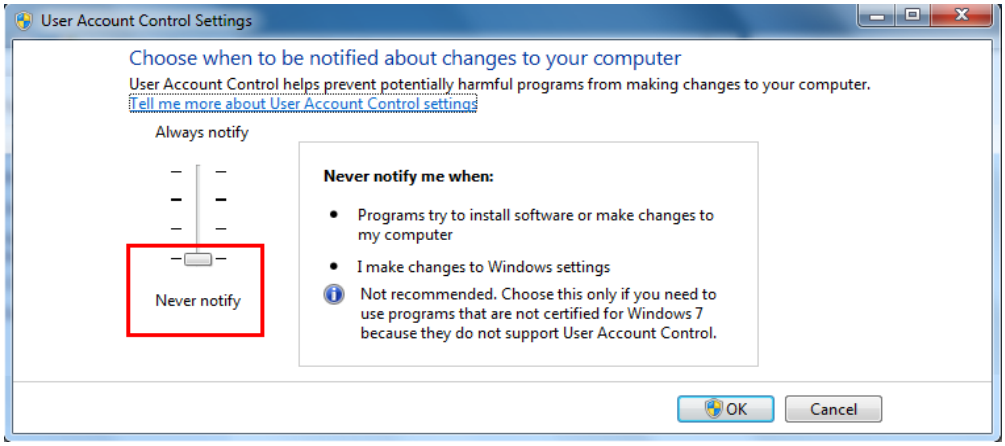
If you encounter the following problem or still can't access the remote Web interface, please follow the instructions below:

- If the ActiveX is not downloaded successfully, please check if your browser's safety level or firewall setting is set too high. Enable the following options on the Security Settings window (IE Browser < Tools < Internet Options < Security < Internet < Custom Level).
  - ✓ Automatic prompting for ActiveX controls
  - ✓ Script ActiveX controls marked safe for scripting

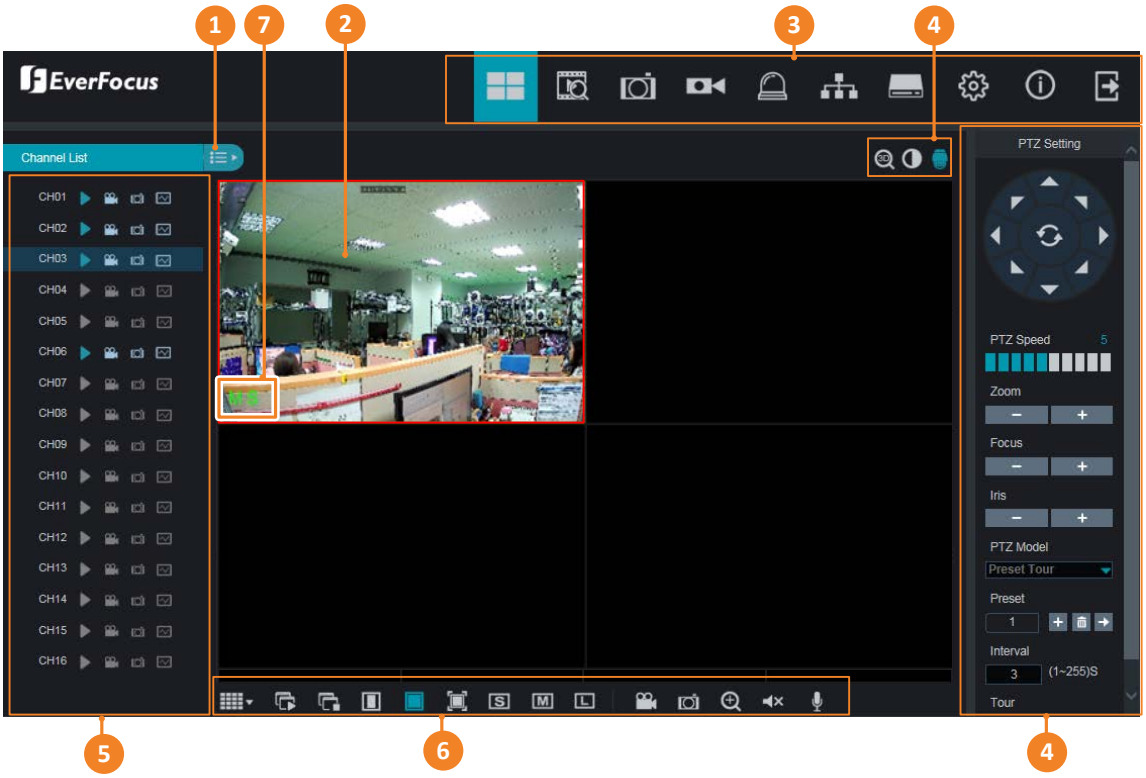
- If your PC or laptop is running with Windows, it's required to run the browser as administrator when first entering the remote web page of the device. Go to **C:\Program Files (x86)\Internet Explorer**, right-click the browser and then click **Run as administrator**.



- If you are unable to backup or record during remote operation, you may need to turn off the firewall and turn **User Account Control** off.
  To turn **User Account Control** off, on the computer, click **Start > Control Panel > System and Security > Action Center** (click Change User Account Control Settings), the **User Account Control Settings** window appears. Adjust the slide bar to **Never Notify** and then click **OK**. Restart your computer if requested.



5.2 Remote Live View Window



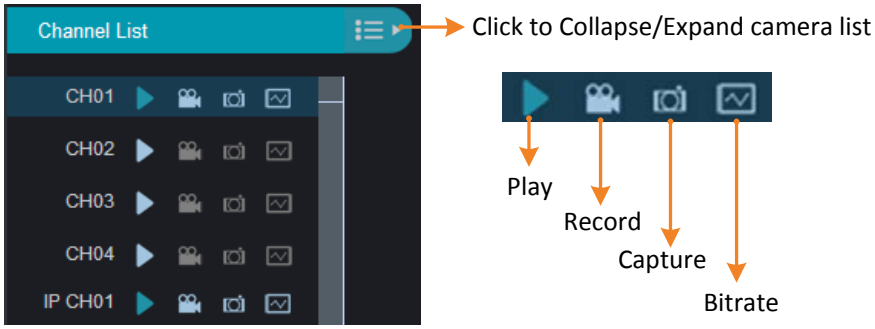
No.	Name	Description
1	**Camera List Button**	Click to hide or display the Camera List. Please refer to *5.2.1 Camera List*.
2	**Live Channel**	You can perform the following functions on each channel: a. Double-click on a channel can display the channel in full screen. To exit the full screen mode, double-click on the channel again. b. You can drag and drop a channel to the desired position on the layout. Click and hold on a channel, a Drag Channel icon will display. Drag and drop the channel to the desired position on the layout.
3	**Menu Bar**	Click to enter each menu bar. Please refer to *5.3 Menu Bar*.
4	**Color / PTZ Setting**	Click to display or hide the Color / PTZ Setting Panel on the right-side of the Live View window. Please refer to *5.2.3 PTZ Setting Panel* and *5.2.4 Color Panel* for more details.
5	**Camera List**	Displays the IP cameras. You can click on the icons to perform some functions. Please refer to *5.2.1 Camera List*.
6	**Live View Function Icons**	You can perform some functions for all the cameras on the Live View window. Please refer to *5.2.2 Live View Function Icons* for more details.

7	**Status Icon**	The Status Icons displayed on the bottom-left of each channel are designed to alert users when any of the following situations occur:

R	The channel is on normal **recording**.
H	No HDD / HDD error / HDD not formatted
M	Motion event is triggered.
M	Motion event is triggered. Motion event is recording.
I	Alarm event is triggered.
I	Alarm event is triggered. Alarm event is recording.
S	Intelligent event is triggered.
S	Intelligent event is triggered. Intelligent event is recording.
C	Tamper alarm is detected.

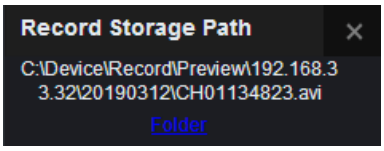
5.2.1 Camera List

The Camera list lists the IP camera channels. You can use the camera list icons to perform some functions. If the channel is not connected or the channel has been disabled, the icons will be gray-out.

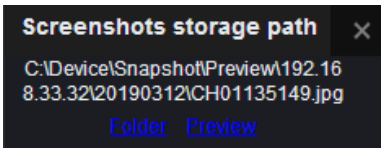


Play: Click to display / hide the camera stream on the Live window.

Record: Click to start manual record of the channel, click again to stop, a message window appears on the bottom-left corner of the screen. Click **Folder** to open the folder to find the recording file.



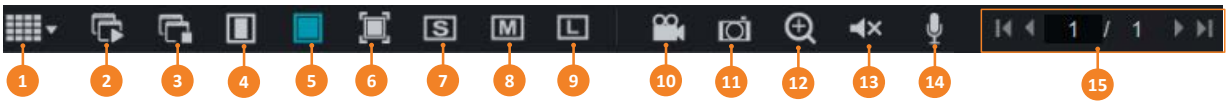
Snapshot: Click to take a manual snapshot of the channel, a message window appears on the bottom-left corner of the screen. Click **Folder** to open the folder to find the snapshot image. Or click **Preview** to preview the snapshot image.



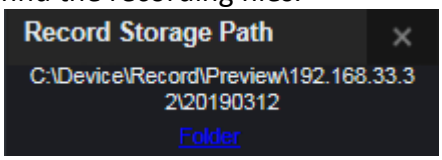
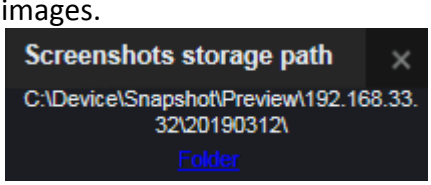
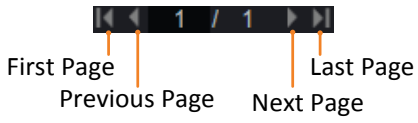
Bitrate: Click and then select Main Stream or Sub Stream for this channel.

5.2.2 Live View Function Icons

You can perform some functions for all the cameras on the Live View window.



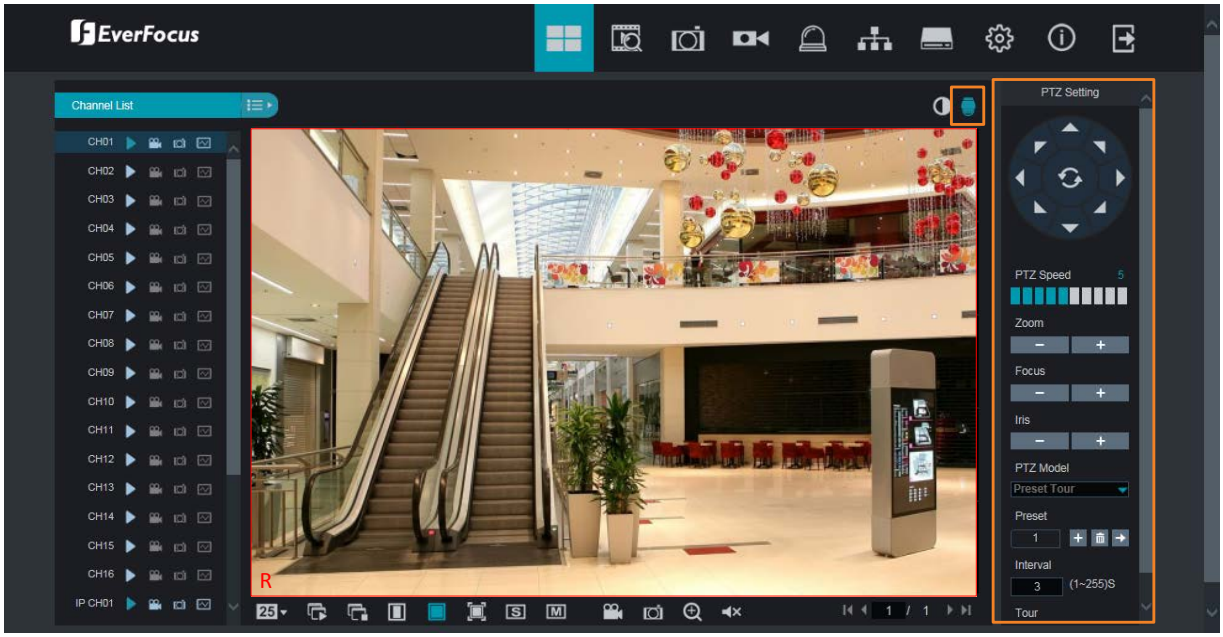
No.	Name	Description
1	**Divide Screen**	Click to select a layout.
2	**Play**	Click to display all camera streams on the Live window.
3	**Stop**	Click to close all camera streams displayed on the Live window.
4	**Original Aspect Ratio**	Click to display all the live streams with original aspect ratio.
5	**Stretch**	Click to stretch all the live streams on the Live window.
6	**Full Screen**	Click to display the Live View window in full screen mode. To exit full screen mode, press the **ESC** button on the keyboard.
7	**Sub Stream**	Click to switch all live streams to Sub Stream. If you want to set up some streams for Main and some for Sub streams, on the Camera List, you can click the **Stream** icon of the specific channels and then select Main Stream or Sub Stream.
8	**Main Stream**	Click to switch all live streams to Main Stream. If you want to set up some streams for Main and some for Sub streams, on the Camera List, you can click the **Stream** icon of the specific channels and then select Main Stream or Sub Stream.
9	**Mobile Stream**	Click to switch all live streams to Mobile Stream.

10	**Video Clips**	Click to start manual recording of all channels on the Live window. Click the button again to stop, a message window appears on the bottom-left corner of the screen. Click **Folder** to open the folder to find the recording files. 
11	**Snapshot**	Click to take a snapshot (.bmp) of all channels on the Live window, a message window appears on the bottom-left corner of the screen. Click **Folder** to open the folder to find the snapshot images. 
12	**Digital Zoom**	Click to enable the Digital Zoom mode. To exit the Digital Zoom mode, click the button again. To perform the Digital Zoom function: a. On the Live View window, select a channel by clicking on the channel. b. Click the Digital Zoom button. c. Use your mouse to draw an area where you want to have a close-up view. The area will be zoom-in. d. Right-click to exit the Digital Zoom mode.
13	**Audio**	Click to turn on or off the audio of the selected channel. To perform this function, on the Live window, select a channel by clicking on it, the selected channel will be highlighted with a red frame, click the **Audio** button to enable the audio function. You can adjust the bar to the left or right to adjust volume.
14	**Intercom**	Click to turn on or off the intercom function. This is a voice communication system. You can simply communicate with the client edge at EF CMS or EF VMS app. If you already connect to the HDMI cable, the sound will be sent directly, if you don't connect to the HDMI cable, you have to connect to the headphones or loudspeaker on NVR.
15	**Layout Page**	Click the left or right buttons to change among the layout pages. For example, for 16-channel model, if you select 4-Division, click the **Next Page** button will display the next 4-division layout with channel 5-8, channel 9-12, and so on. 

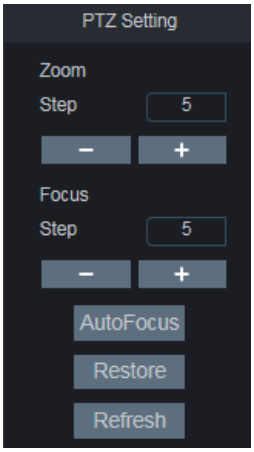
5.2.3 PTZ Setting Panel

For PTZ cameras, you can use this panel to control the PTZ (analog and IP) camera; for motorized cameras, you can use this panel to adjust camera zoom or focus.

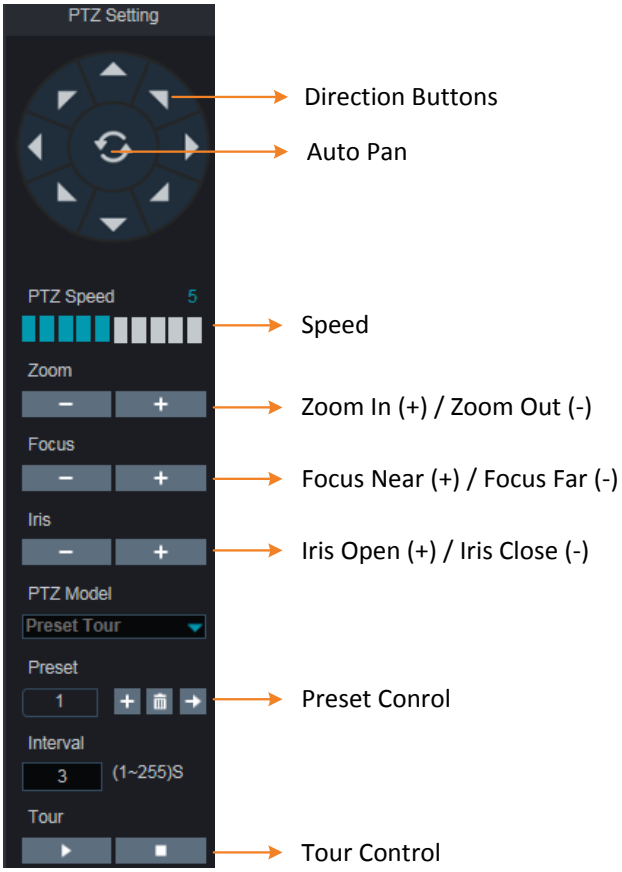
On the Live View window, click the **PTZ Setting** button to display the PTZ Setting Panel. Click the **PTZ Setting** button again can hide the PTZ Control Panel.



For motorized cameras, select a motorized camera by clicking on the live channel, the selected channel will be highlighted with a red frame. You can double-click on the channel to display the channel in full screen. Click the **PTZ Setting** button, the below PTZ Setting panel appears. You can adjust camera zoom or focus using this panel.



For PTZ cameras, select a PTZ camera by clicking on the PTZ channel, the selected channel will be highlighted with a red frame. You can double-click to display the channel in full screen for operation. Click the **PTZ Setting** button, the below PTZ Setting panel appears. You can use this panel to control PTZ cameras.



Direction Buttons: Click the direction buttons to force the PTZ camera to turn to the direction.

Auto Pan: Click to start the Auto Pan function. Click again to stop the Auto Pan function.

Speed: Slide the bar to the left or right to adjust the control speed.

Zoom: Click + or – to zoom in or zoom out.

Focus: Click + or – to focus near or focus far.

Iris: Click + or – to adjust the Iris.

Preset Control: You can set up preset points here and then operate the Preset function. Please see the below steps for more details.

Tour Control: After setting up the preset points, you can perform the Tour function. Click ▶ to start the Tour function, click ■ to stop the Tour function.

To set up Preset Points:

1. Select a preset number (1-255) by clicking on the Preset input box.

2. Use the direction buttons or Zoom/Focus/Iris buttons to search for the location for this preset number.
3. Click the **+** button to add this preset point, and the number will jump to the next preset number for configuration. Follow **Step 2-3** to set up multiple preset points.
4. To clear the setup preset points, select a preset number and then click the button.

To perform the Go to Preset Point function:

1. Select a preset number (1-255) by clicking on the Preset input box.
2. Click the **Go to** button .

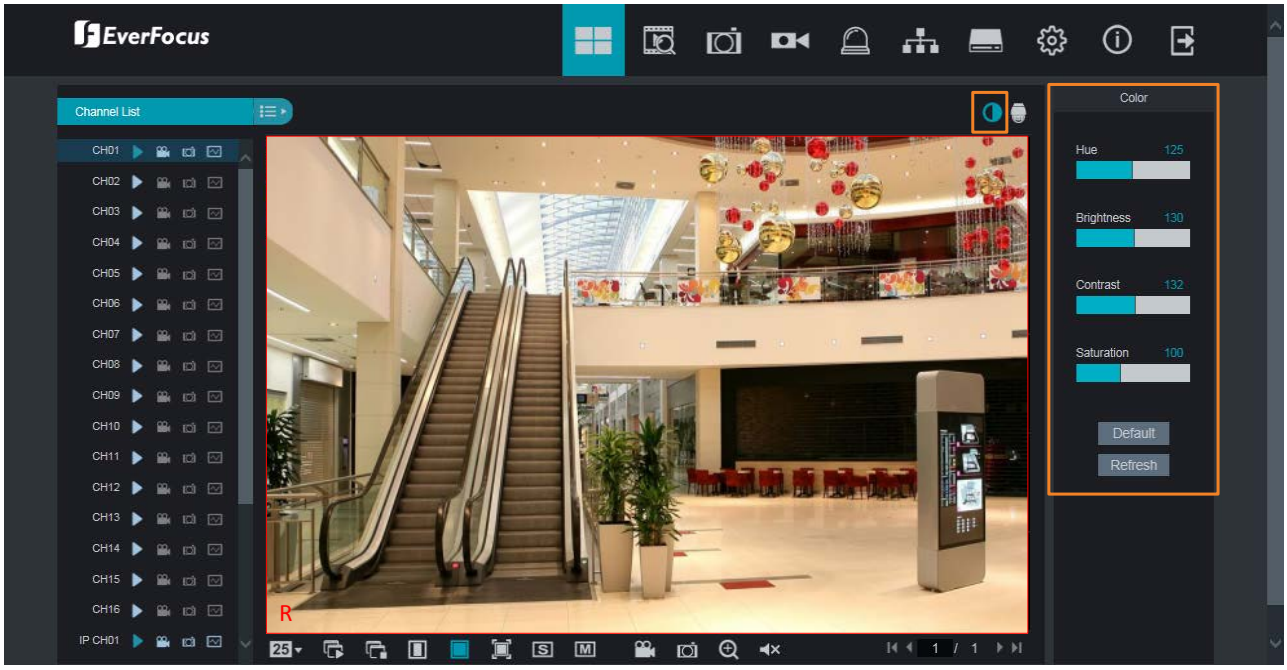
To perform the Tour function:

1. Set up the preset points in advance. Please refer to the steps of "To set up Preset Points" above.
2. Input an interval time in the **Interval** box.
3. Click the **Start Tour** button , the PTZ camera will start cruising based on the pre-configured preset points with the dwell time**.**
4. To stop the Tour function, click the **Stop Tour** button .

5.2.4 Color Panel

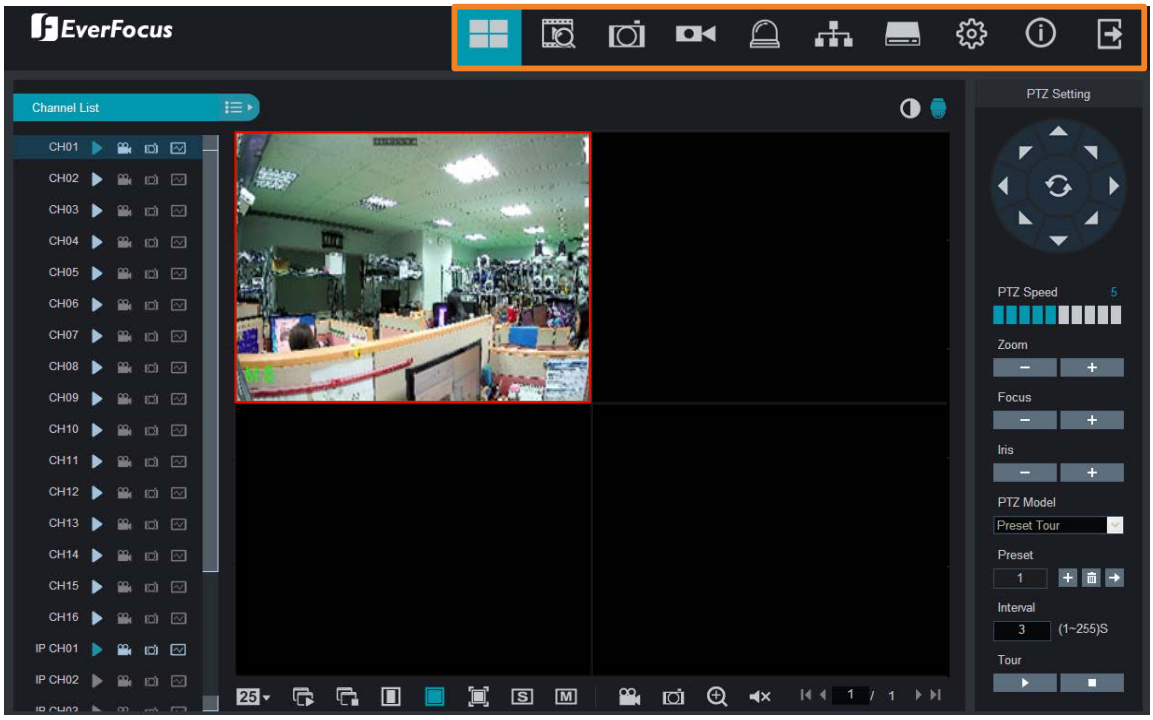
You can adjust Hue, Brightness, Contrast and Saturation value for each channel on the Live View window using the Color Panel. Click the **Default** button to restore all the value to factory default.

On the Live View window, select a camera by clicking the channel, the channel will be highlighted with a red frame. Click the **Color** button to display the Color Panel and then you can start adjust color settings. Click the **Color** button again can hide the Color Panel.



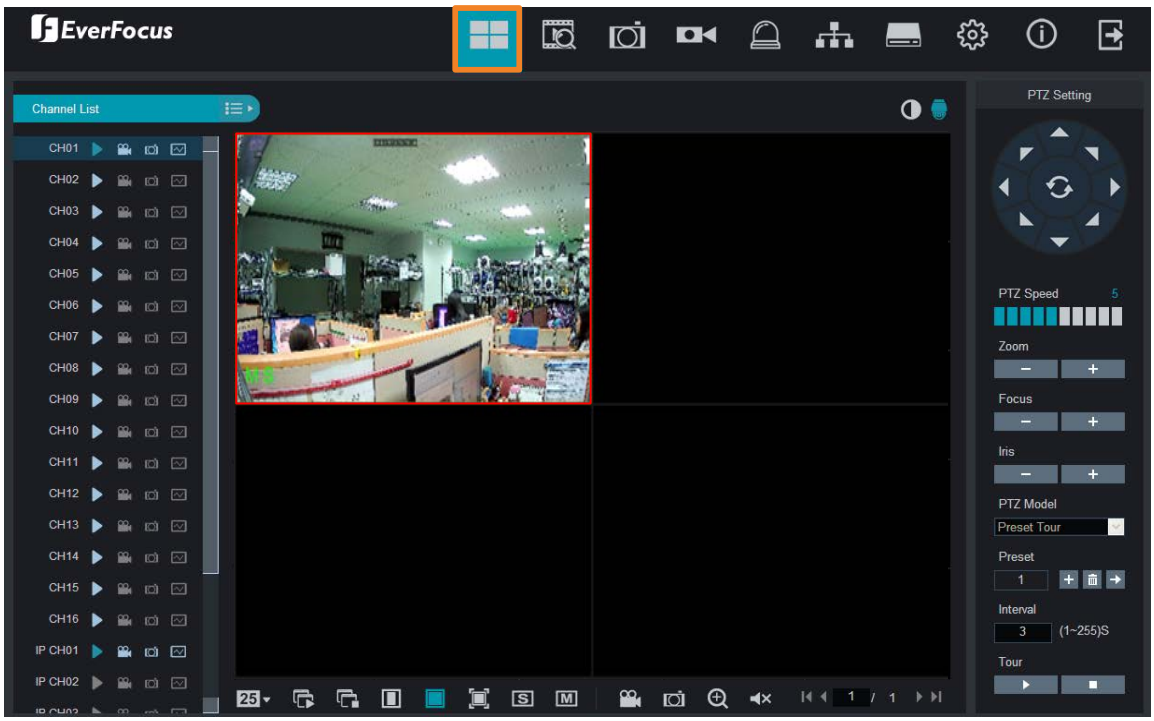
5.3 Menu Bar

Click any icon on the top navigation bar to enter each menu page.



5.3.1 Live

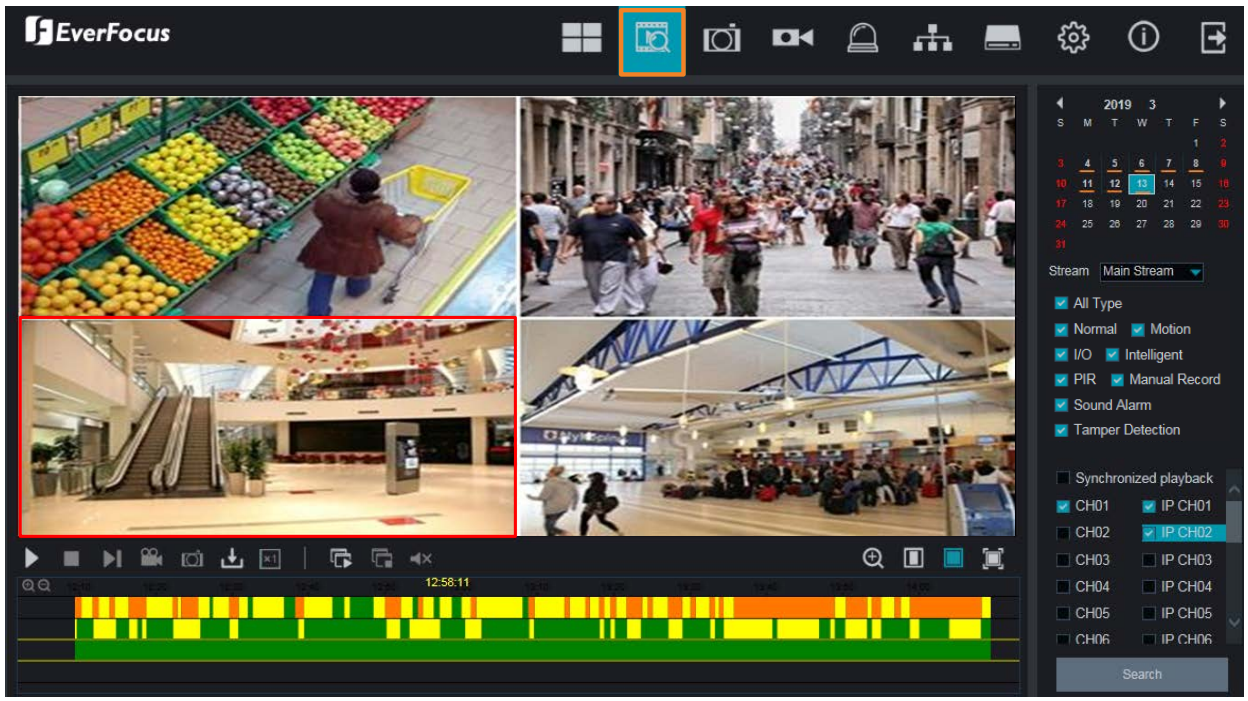
Click the **Live** icon to enter the Live View page. Please refer to *5.2 Remote Live View window*.



5.3.2 Playback

Click the **Playback** icon on the top navigation bar. The Playback window displays. Up to 16 multi-channel playback is supported.

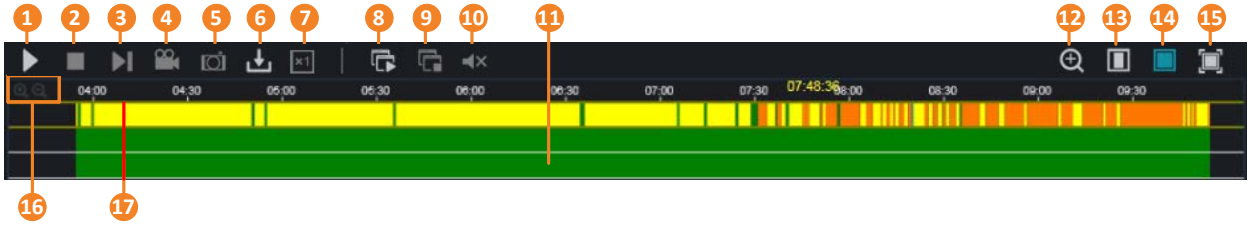
The layout divisions will be automatically assigned by the system according to the channels you select. For example, if 1 channel is selected, the system will automatically assign single-division; if 2~4 channels are selected, 4-division will be assigned; if 5~9 channels are selected, 9-division will be assigned; if 10~16 channels are selected, 16-division will be assigned.

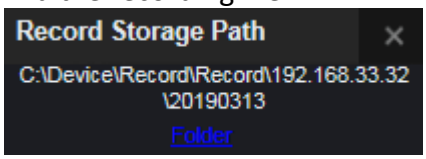
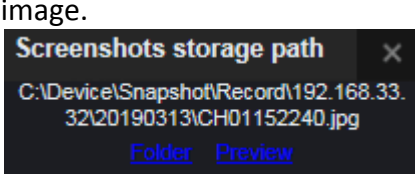


To start playing back:

1. Select a date on the calendar (the date with an orange bar on the bottom indicates there are recordings on the date).
2. Select a stream type from the Stream drop-down list for playing back. Note that if you want to search for **Sub Stream** recordings, you have to select **Dual-Stream** mode in *5.3.4.2.1 Record*.
3. Select the desired recording type(s). The options include Normal, Motion, IO, Smart, PIR, Manual, Sound Alarm, Tamper Detection and All.
4. You can optionally enable the **Synchronized playback** function to enable multiple channel simultaneously playback at the same time. If this function is unselected, you can separately control each channel for playing back (each channel can be played back with individual time).
5. Select the desired channels you would like to play back.
6. Click the **Search** button, the recordings will be displayed on the time bar of the Playback Panel in different colors. Green: Normal and Manual recordings; Yellow: Motion recordings; Red: I/O recordings; Purple: PIR recordings; Blue: Intelligent, Sound, Tamper.
7. Click the **Play** button to start playing back.

You can use the **Playback Panel** to operate the below functions:



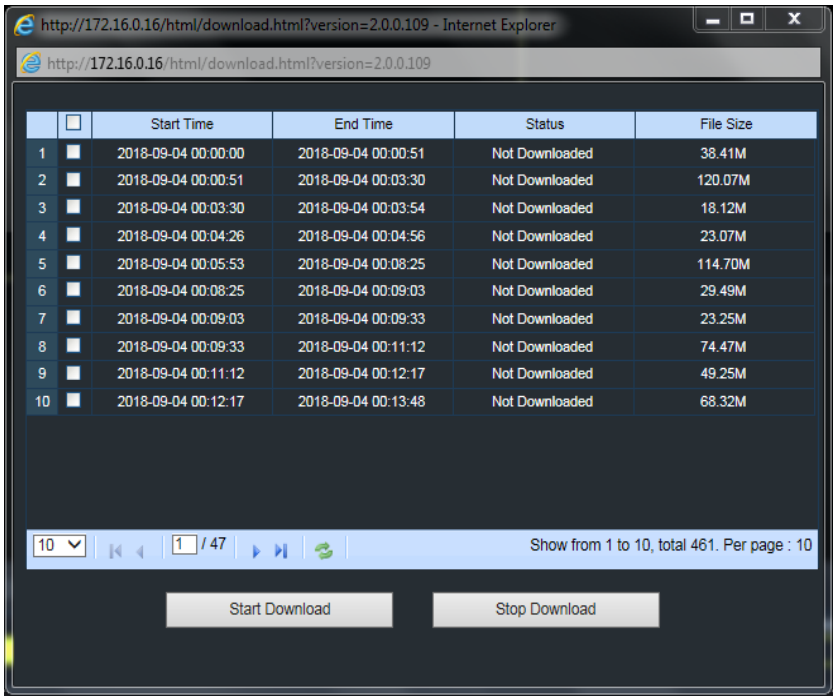
No.	Name	Description
1	**Play/Pause**	Click to Play or Pause playing back.
2	**Stop**	Click to Stop playing back.
3	**Step Forward**	Click the button to play the recording frame by frame. Note this button is only functional under single channel playback.
4	**Video Clips**	Click to start manual recording of a channel (.avi). Click the button again to stop. On the playback window, click on a channel and then click the **Record** button, a message window appears on the bottom-left corner of the screen. Click **Folder** to open the folder to find the recording file. 
5	**Snapshot**	Click to start manual snapshot (.jpg) of a channel. Click the button again to stop. On the playback window, click on a channel and then click the **Snapshot** button, a message window appears on the bottom-left corner of the screen. Click **Folder** to open the folder to find the snapshot image. Or click **Preview** to preview the snapshot image. 
6	**Download**	Click to download recordings for a single channel. To perform the Download function, please refer to *5.3.2.1 Download*.
7	**Playback Speed**	Click to select a playback speed.
8	**Play All Windows**	Click to start playing back all the windows. This function is useful under the Multi-Channel Playback Separately mode (disable **Synchronized playback**).

9	**Stop Playback All**	Click to stop playing back all the windows. This function is useful under the Multi-Channel Playback Separately mode (disable **Synchronized playback**).
10	**Audio**	Click to switch on/off the speaker. You can also adjust the volume.
11	**Time Bar**	Double click on the time bar at a certain time will start playing back from the clicked time. The colors on the time bar represent different recording types. Green: Normal and Manual recordings; Yellow: Motion recordings; Red: I/O recordings; Purple: PIR recordings; Blue: Intelligent, Sound, Tamper.
12	**Digital Zoom**	Click to enable the Digital Zoom mode. To exit the Digital Zoom mode, click the button again. To perform the Digital Zoom function: a. Select a window you want to perform the digital zoom by clicking on the window. b. Click the Digital Zoom button to enable the function. c. Use your mouse to draw an area where you want to have a close-up view on the stream. The area will be zoom-in. d. Right-click to exit the Digital Zoom mode.
13	**Original Aspect Ratio**	Click to play back all the streams with original aspect ratio.
14	**Stretch**	Click to stretch all the streams on the Playback window.
15	**Full Screen**	Click to display the Playback window in full screen mode. To exit full screen mode, press the **ESC** button on the keyboard.
16	**Time Span Buttons**	You can adjust the time span on the Time Bar by clicking the buttons.
17	**Time Indicator**	Indicates the playback time.

5.3.2.1 Download

You can download the searched recordings for a single channel on the Playback window.

1. Select a window you want to download the recordings by clicking on the window. The selected channel will be highlighted with a red frame.
2. Click the **Download** button, the corresponding recordings to this channel will be displayed.



3. Select the desired recordings you want to download, and then click **Start Download**. To change the storage path or the file format, please refer to *5.3.8.5 Local Setting.*

Chapter
6

6. Specification

Model Name	IRONGUARD 16 PoE
Video	
Compression Format	H.265 / H.264
Video Format	NTSC / PAL
Video Inputs	16
Live Resolution	1024x768, 1280x720, 1280x1024, 1440x900, 1920x1080, 2560x1440, 3840x2160
Live Performance	4K: 4ch realtime / 4MP:8ch realtime / 3MP: 10ch realtime / 2MP: 16ch realtime
Video Outputs	1 x HDMI (up to 4K) 1 x VGA
Display Division	1/4/6/8/9/10/13/14/16/17/19/22/25/32/36
Recording	
Recording Resolution	8MP (4K), 5MP, 3MP, 2MP (1080P), 1.3MP (960P),1MP (720P)
Recording Bandwidth	Max 320Mbps
Playback	
Synchronized Playback	16CH
Playback Performance	4K: 4ch realtime / 4MP:8ch realtime / 3MP: 10ch realtime / 2MP: 16ch realtime
Audio	
Audio Input	1 x Line-In
Audio Output	1 x Audio-Out
Alarm	
Alarm Input	16
Alarm Output	1
Storage Device	
Internal 3.5'' HDD	2 x SATA HDD
External HDD	1 x e-SATA
Storage Capacity	8TB/disk
DVD Burner	Not supported
Network	
Ethernet	10/100/1000 Ethernet
Protocol	-
Interface	
USB	2 x USB2.0 (for mouse) 1 x USB3.0 (for backup/upgrade)
RS-485	1 x RS-485
Ethernet	1 x RJ-45
PoE	16 x PoE port; single port up to 802.3at (30w) * Every 16 PoE ports shares 200W of power budget

Functions	
User Interface	GUI (Graphical User Interface)
User Access	2 Levels of User Access Defined
Control PTZ via OSD	Supported (via both local and remote interfaces)
AI Function	Face Recognition (only work with supported IP cameras)
Video Analytics	Perimeter Intrusion Detection, Line Crossing Detection, Foreign/Missing Object Detection, Pedestrian Detection, Cross-Counting Detection, Sound Detection, Tamper Detection
Other Functions	Video Loss Detection, Motion Detection, Event Log, Schedule Setting
General	
Power Input	110~240VAC ,PoE Switch: 48V
Power Consumption	12W max. (excluding HDD)
Operating Temperature	0°C ~ 40°C / 32°F ~ 104°F (20 ~ 80% humidity)
Dimensions (W x D x H)	380 x 340 x 50mm / 14.96" x 13.39" x 1.97"
Weight (without HDDs)	2.3kg / 5.07lb
Language	English, Japanese, Traditional Chinese, German, Russian, Dutch, Italian
Regulatory	CE, FCC, BSMI(by Project), UI (by Project)
Remote Client System Minimum Requirement	
Operating System	Win7 (32 and 64-bit) / Win10 (32 and 64-bit)
CPU	Intel Core I3-2100
RAM	2GB
VGA	Intel HD 2000
LAN Speed	10 / 100 / 1000 Mbps (RJ45)
Web Browser	IE11 and later
Other Remote Application	1. EverFocus CMS 2. EverFocus eFVMS (mobile app)

Chapter
7

7. Troubleshooting

If you have problems with the system, run through the following checklist to see if you can solve the problem.

1. Q: What can I do if the system does not detect the HDD?
A: Check if the power supply system is properly connected and power cord and power cables are securely connected, and if something wrong with the HDD interface. Or you may check if your HDD is supported by referring to the specifications or descriptions.

2. Q: I have changed the password but forget the new password, how can I access the system?
A: If you have configured the email settings, you can click “Forget Password” on the login window and the system will send the password or a super password to the setup email address. If you have never configured the email settings, please mail the MAC Address, Serial Number and the Model Name to ts@everfocus.com.tw to get a temporary password.

3. Q: We see abnormal video signal or even no video signal by connecting the NVR and camera together. Power supply for both devices is OK. What is wrong?
A: Check network cable at NVR side to see if the cable is firmly connected and if it is worn out and needs to be replaced.

4. Q: How to prevent NVR from being influenced by heat?
A: The NVR needs to dissipate heat while it is running. Please place the NVR in a place with good air circulation and away from heat sources to ensure stability and life of the NVR.

5. Q: The remote control doesn’t work while the monitor screen is OK and panel keys are functional. Why?
A: Operate again by aiming the remote control at the IR receiver on front panel. If it still doesn’t work, please check if the batteries in the remote control are running out of power. If not, check if the remote control is broken.

6. Q: I want to take out HDD from my PC and install it in NVR. Can it work?
A: All HDDs supported by the system can be used. But remember, once NVR runs, the data on your HDD will be formatted.

7. Q: Can I playback while recording?

A: Yes. The system supports the function of playing while recording.

8. Q: Can I clear some records on HDD of NVR?

A: In consideration of the file security, you may not clear part of records. If you want to remove all the records, you can format HDD.

9. Q: Why can't I log in NVR client?

A: Please check if the network connection settings are correct and RJ-45 port is with good contact. And check if your account and password are correctly input.

10. Q: Why can't I find any records during playback?

A: Please check if the data line connection for HDD is OK and system time is properly adjusted. Try a few times and restart. If it still doesn't work, check if the HDD is broken.

11. Q: Why NVR cannot control PTZ?

A: Please check if:

a) PTZ in the front side is malfunctioned.
b) Setting, connection and installation of PTZ decoder are not correct.
c) PTZ setting of NVR is not correct.
d) Protocol of PTZ decoder does not match the NVR's.
e) Address of PTZ decoder does not match the NVR's.
f) If many decoders are connected, the farthest side of AB line of PTZ decoder should be added 120Ω resistance to realize reflection suppression and impedance matching. Otherwise, PTZ control will be unstable.

12. Q: Why doesn't dynamic detection work?

A: Please check if the motion detection alarm setting at IP camera side is correct and if the sensitivity is set too low.

13. Q: Why doesn't alarm work?

A: Please check if the alarm setting, alarm connection and alarm input signals are correct.

14. Q: Why does buzzer keep alarming?

A: Please check the alarm setting, check if motion detection function is enabled and object motion is detected all the time and if I/O alarm is set as Always Off. Besides, refer to corresponding HDD alarm setting.

15. Q: Why can't I stop recording by pressing "STOP" button or click "Stop Recording" in context menu?

A: Pressing Stop button can only stop manual record. If you want to stop Scheduled recording in certain time quantum, please change the setting to No Record. To stop Startup recording, please change record mode to scheduled recording or manual recording. Then you may stop recording by the prescribed methods

16. Q: How to add non-EF H.265 IP cameras to IRONGUARD NVRs through PoE ports?

A: IRONGUARD series NVRs supports auto connect and detect PoE IP cameras. The supported IP cameras include all EverFocus Value series H.265 IP cameras.

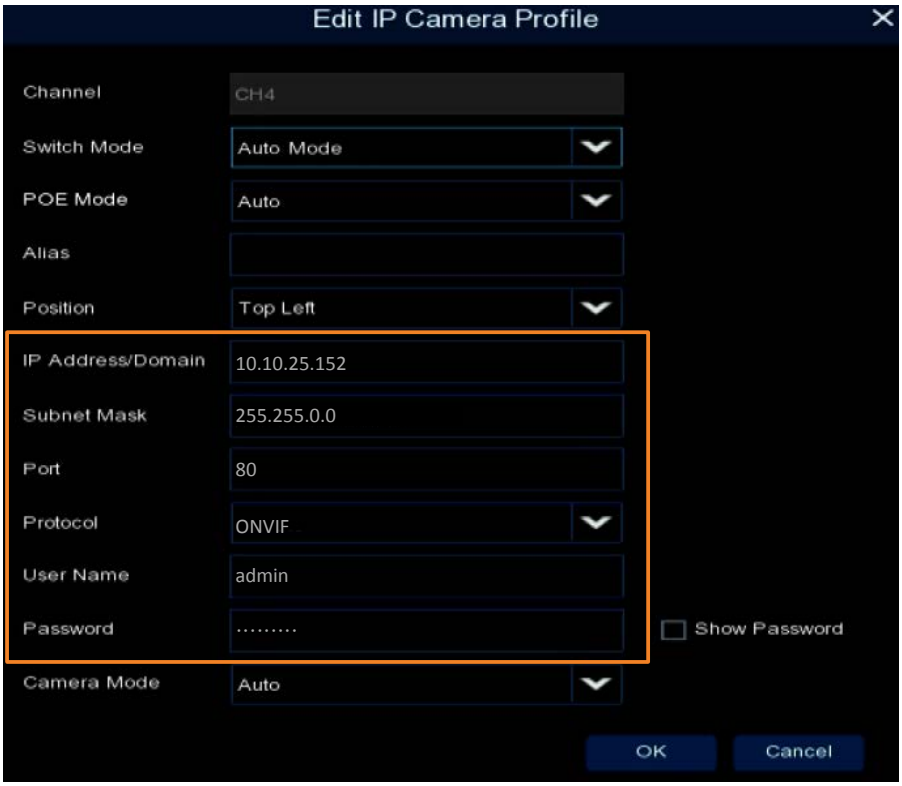
If you want to add EverFocus H.264 IP cameras or 3rd-party IP cameras through PoE ports, please follow the steps below:

(1.) Configure a static IP address for your IP cameras. You can either use the EverFocus IP Utility or the Web interface of the IP camera to configure the IP address.
Due to the default local area network (through PoE) of the NVR is set to 10.10.25.100, please configure the static IP address of your IP cameras between 10.10.25.151 and 10.10.25.166.

(2.) Connect the IP cameras to the PoE ports of the NVR.

(3.) To configure the PoE settings, 1) enter the IP Channels page (OSD > Channel >IP Channel), 2) click the Auto Mode button 3) click the Edit button to edit the IP camera information (refer to Step 4).

(4.) To edit IP camera information, input the IP address, Subnet Mask, Port number (default: 80), Protocol (select ONVIF), User Name and Password. Click OK.



(5.) The IP camera streams will display on the channel.

Chapter
8

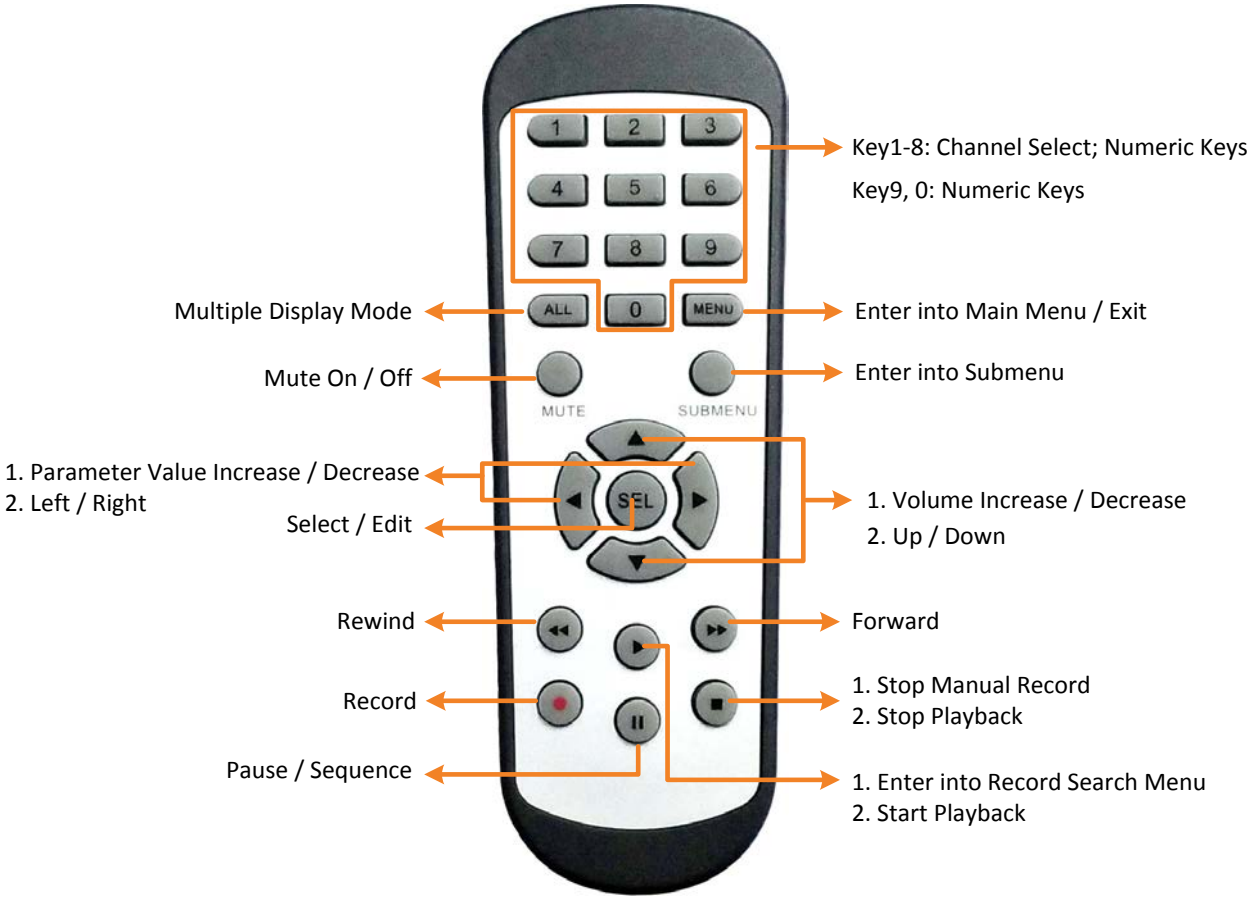
8. Usage Maintenance

1. To shut down NVR, please firstly shut down the system and then turn off the power. Do not turn off the power directly or HDD data will be lost or damaged.
2. Please keep NVR away from heat sources or places.
3. Clean the internal dust regularly. Make sure the good ventilation of NVR so as to ensure the good heat dissipation.
4. Please do not hot plugging cables at ports, or the ports may be damaged.
5. Please check the HDD cable and data cable regularly to see if they are ageing.
6. Please prevent the audio and video signals of NVR from being intervened by other electronic devices, and prevent the HDD from being damaged by static electricity and induced voltage.
7. If the network cable is frequently plugged, it is suggested to replace connecting line regularly, or the input signal may be unstable.
8. This is A class product. It may bring wireless interference in life. Under this situation, it need users to make measurements.

Appendix
A

Appendix A: IR Remote Control

The IR remote control is an accessory to enhance the convenient operation of the NVR. You can perform all the settings and operations from the remote control.

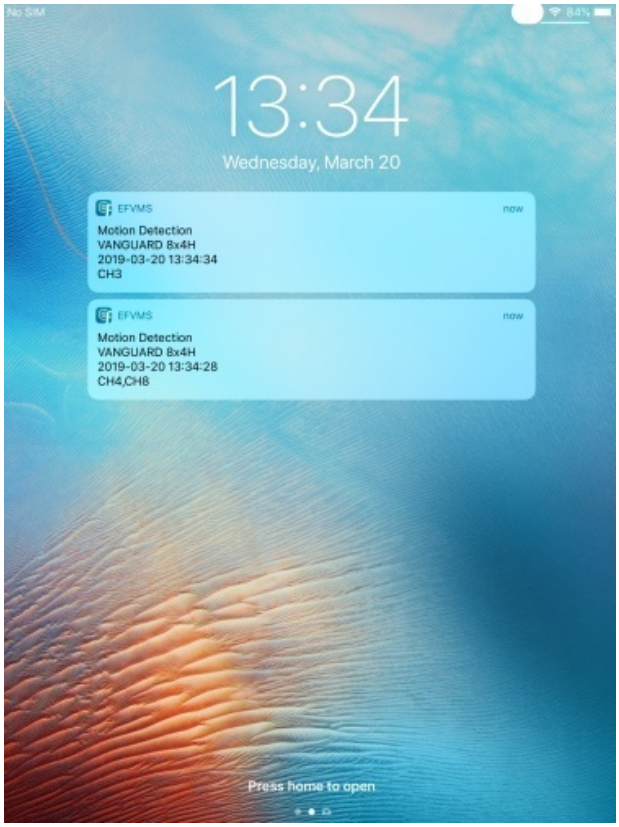


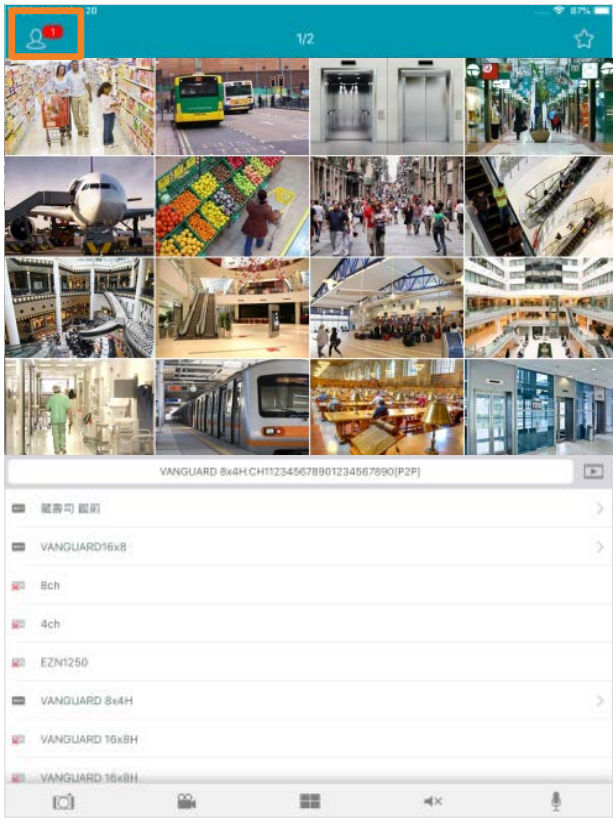
Appendix

B

Appendix B: Push Notification

You can enable the Push Notification function to send motion or I/O event alerts to your mobile devices (with eFVMS App installed).

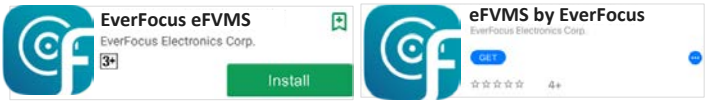




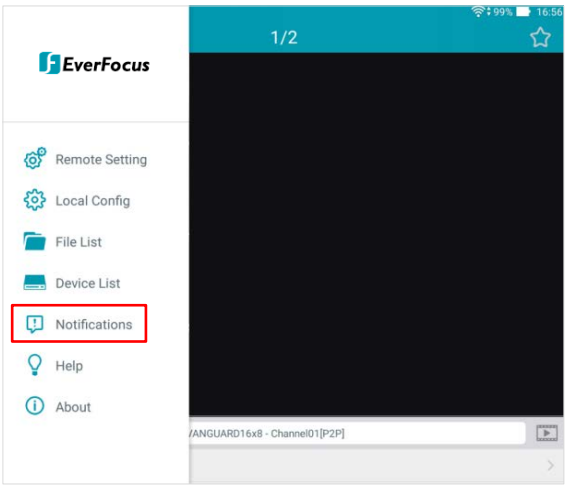
To use the Push Notification function, you have to set up the motion detection settings or I/O alarm settings and enable the Push Notification function on the EverFocus **eFVMS App**. Please refer to the below instructions.

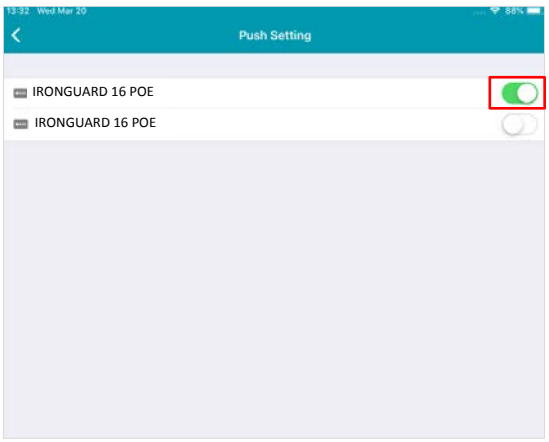
To enable the Push Notification function:

1. On the NVR end, configure the motion alarm settings (refer to *4.3.1 Motion*) or I/O alarm settings (refer to *4.3.3 I/O*).
2. On your mobile device, install **eFVMS App**. For Android users, go to Google Play Store. For iOS users, go to Apple Store. After the installation process is complete, start the eFVMS App.

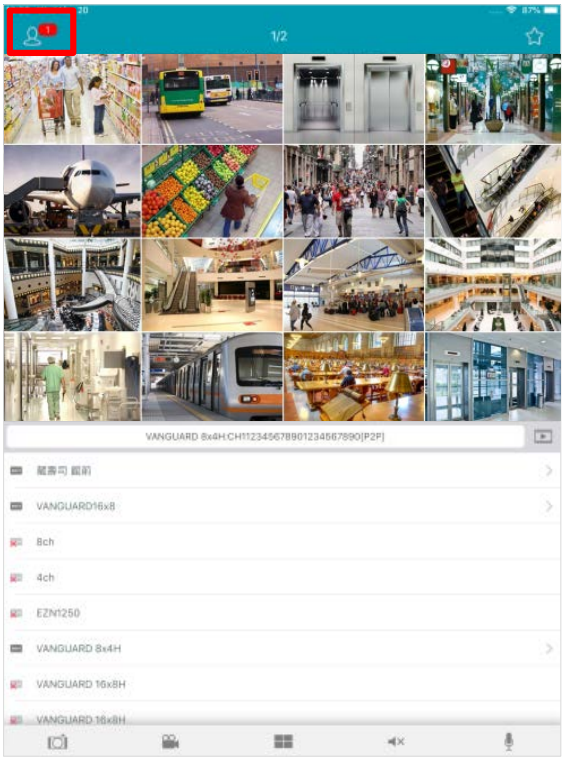


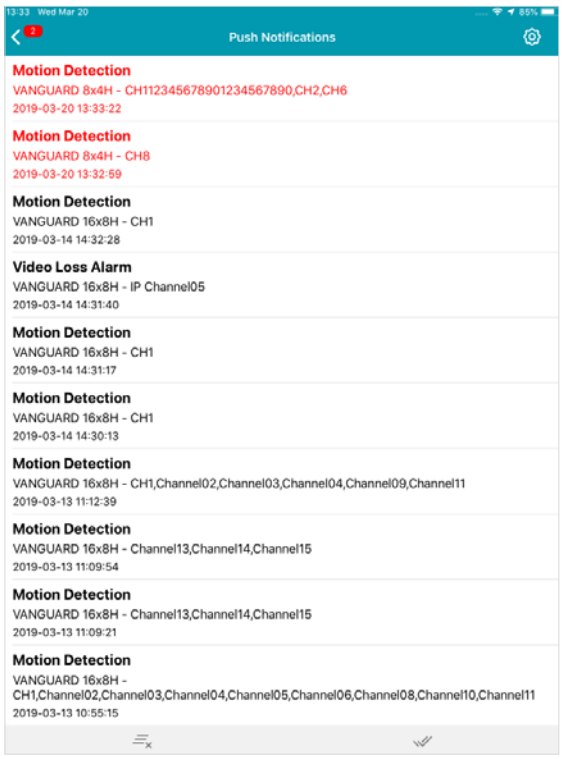
   a. Go to **Menu** > **Notifications**, and then switch the button to the right to enable the Push Notification function.





   b. The Push Notification setting is complete. You can start receiving motion or I/O alarms from the NVR.





c. You can tap on the alarms on the Alarm List to enter the Live page or Playback page.

For alarms occur within one minute from the current time, tap to enter the Live page

For alarms occur more than one minute from the current time, tap to enter the Playback page

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In the European Union there are separate collection systems for used electrical and electronic product.
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Bitte entsorgen Sie dieses Gerät bei Ihrer örtlichen kommunalen Sammelstelle oder im Recycling Centre.
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