# **USER MANUAL**

Long Range Wifi HaLow™ Kit

802.11ah Wireless NVR

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# **Safety Precautions**

Please read the following safety instructions carefully to avoid personal injury and damage to this product or any other device connected to it.

# 1.Power Supply (Note: Please use the power supply provided with the product or the one specified by the manufacturer.)

Do not use a non-specified power supply to operate the device.

# 2.Do not push any objects into the openings of the NVR to avoid electric shock or other accidents

Do not push any objects into the openings of the NVR to avoid electric shock or other accidents.

#### 3.Do not place the device in a dusty environment

Do not place the device in a dusty environment.

#### 4.Do not place the device in a rainy or humid environment.

Do not place the device in a rainy or humid environment, such as a basement. If the device accidentally comes into contact with water, please unplug the power cord and immediately contact the local dealer.

#### 5. Keep the surface of the device clean and dry

Clean the outer casing of the NVR with a soft, damp cloth (do not use liquid spray cleaners).

#### 6.If any issues are found, do not operate the device.

If the NVR emits abnormal odors or sounds, please unplug the power cord and contact an authorized dealer or service center.

#### 7.Do not attempt to remove the top cover

**Warning:** Do not remove the cover of the NVR to avoid electric shock.

#### 8. Handle with care.

If the NVR is unable to function properly due to impact with a hard object, please contact an authorized dealer for repair or replacement.

# 9.Use standard lithium batteries (note: please use the included batteries or the batteries specified by the manufacturer).

After cutting off the power supply, if the system clock cannot continue to work, please replace the standard 3V lithium battery on the mainboard. Warning: Before replacing the battery, please turn off the NVR, otherwise serious electric shock may occur. Please dispose of used batteries properly.

#### 10.Place the device in a well-ventilated area.

The NVR system includes an HDD which generates a lot of heat during operation. Therefore, in order to cool the system during operation, do not block the ventilation

ports (at the top, bottom, sides, and rear). Install or place the device in a well-ventilated area.

- 11. The included power adapter is only intended for use with one NVR unit. Do not connect more devices, otherwise the NVR may repeatedly restart due to insufficient power supply.
- 12.Prevent the device from being exposed to water droplets or splashes. Do not place objects containing water, such as vases, on the device.

#### 13.Warning:

Do not swallow batteries, there is a risk of chemical burns.

This product contains a coin/button cell battery.

If swallowed, the coin/button cell battery can cause serious internal burns within 2 hours, and may lead to death.

New and used batteries should be kept away from children.

If the battery compartment is not securely closed, stop using the product and keep it away from children.

If you suspect that a battery may have been swallowed or inserted into any part of the body, seek medical attention immediately.

# **Chapter 1 Product Overview.**

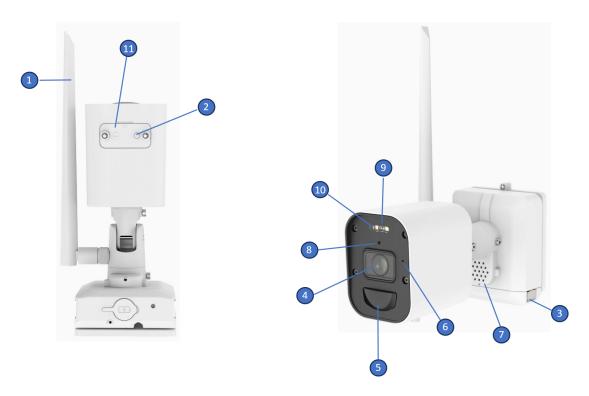
# 1.1 NVR Rear Panel



Number	Physical Interface	Connection Instructions
1	HDMI Interface:	Connect to an HDMI display. Supports all major resolutions up to 4K.
2	LAN Interface:	Use an Ethernet cable to plug into your router or switch.
3	USB Interface:	Rear: USB 2.0, use a flash drive for primary storage or for a USB mouse
		Front: USB 2.0, use for firmware updates or for a USB mouse
4	Power Jack	Connect the 12VDC 2A power supply
5	Reset Button	Press and hold for 10 seconds while powered on to set to factory default
6	SD Card Interface	Use a microSD card for primary storage (up to 512GB, Class 10 speed).
		SD card interface is not active if a hard drive is in use.
7	Antenna	Used to transmit/receive wireless signals from the cameras

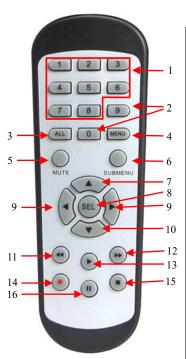
# 1.2 Camera

The current HaLow™ wireless NVR is only compatible with the included battery-powered cameras.



1	Antenna	Used to transmit/receive wireless signals	
2	Pairing Button	Press once to wake camera, <u>press</u> and hold to pair with NVR	
3	Battery Compartment	Removable, can be charged using a Micro USB cable/charger, 10W max	
4	Lens	Captures images	
5	PIR	Passive Infrared sensor measures heat from objects, used for motion detection	
6	Microphone	Camera microphone, can be used for two-way talk	
7	Speaker	Camera speaker, can be used for alarm and two-way talk	
8	Photo Sensor	Used for day/night switching to infrared night-vision mode	
9	Infrared Light	Activates during low light levels and provides night-vision	
10	White Light  Two white lights, can be manually enabled through the NVR and used for active deterrence alarms.		
11	SD Card Slot	Remove the cover to expose the slot for a microSD card. The camera will record to the SD card at the same time recording to the NVR. This can be used for redundancy in case of a hard disk failure on the NVR.	

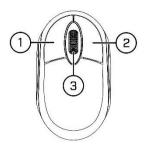
# 1.3 Remote Control (for reference only, please refer to the actual product).



Number	Key	Key Function
	Name	
1	1-8	Channel selection 1-8; Number keys
2	9、0	Number keys; 0 key switches the output
		device
3	ALL	Multi-channel Display
4	Menu	Enter Main Menu/Return
5	Mute	Mute Function
6	Submenu	Enter Sub-Menu
7	<b>A</b>	Up key; Volume adjustment
8	SEL	Select/Edit key; Confirm selection
		operation
		Left/Right key; Decrease/Increase the
9	4	parameter value on the control bar. Volume
9		adjustment can also be performed on the
		playback page
10	▼	Down key; Volume adjustment.
11	44	Rewind key.
12	<b>&gt;&gt;</b>	Fast-forward key.
13	<b>&gt;</b>	Enter the video playback menu; Play key.
14	•	Record key.
15		Stop manual recording; Stop playback.
16	II	Pause key/Loop key.

# **Chapter 2 Common Operations of NVR.**

# 2.1 Use the provided mouse



#### 1. Left icon:

- Click to select menu options.
- When viewing in real-time in a split-screen view, double-clicking on a channel will display
  it in full-screen mode. Double-clicking on the channel again will return to the split-screen
  view.
- Clicking on a channel opens the camera quick toolbar on the real-time viewing screen.
- Click and hold to drag the slider and zoom in menu mode.

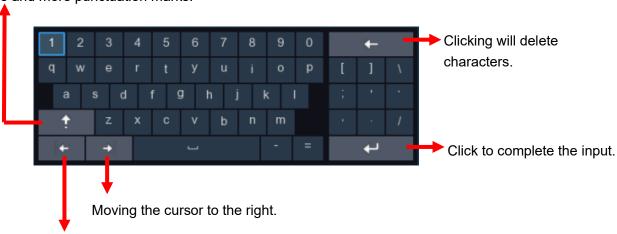
#### 2. Scroll wheel:

o In the menu, scroll up/down to move the menu content.

# 2.2 Use the virtual keyboard

When you need to input data, click on the input position and the virtual keyboard will appear on the screen automatically.

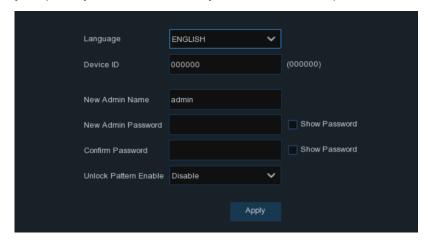
Clicking will switch the keyboard to uppercase and more punctuation marks.



Moving the cursor to the left.

#### 2.3 Password

When running the NVR for the first time, you must immediately set your own password to protect your privacy. Be sure to record your username and password and keep them in a safe place.



**Device ID:** Select the language for the interface.

**Device ID:** Enter the device ID in parentheses. The default ID is 000000. For more information about device ID, please refer to section 4.7.1.1 General Configuration.

New Admin name: Set your own administrator username.

**New Admin Password:** Set the administrator password. The password should be between 8-15 characters, cannot be the same as the username, and must be a combination of <u>at least two of the following:</u> letters, numbers, and special characters.

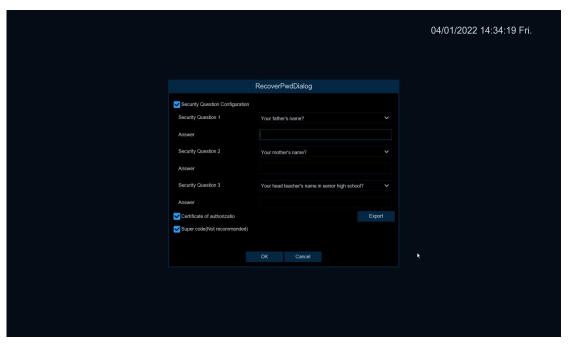
Confirm Password: Please enter the login user password again.

**Unlock Pattern Enable:** Enable the gesture password. Click the edit icon on the right to start setting the gesture password, and confirm twice to successfully set the gesture password.



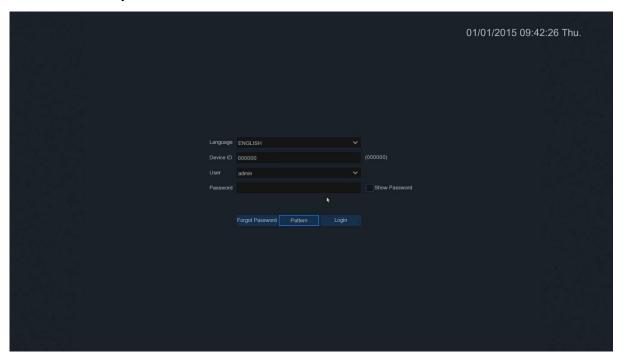


Click on "Apply " to confirm the settings and enter the password recovery settings page. You can enable the corresponding password recovery method by checking the box, or click "Cancel" directly to disable the password recovery function.

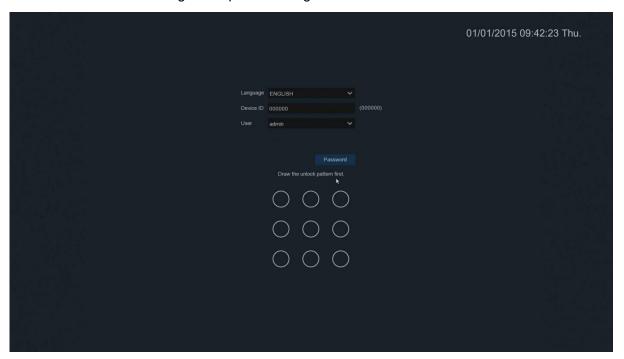


- Security Question Configuration: Question verification and modification of the <u>primary</u> <u>user</u> password function requires the selection of three out of 15 commonly used questions. These questions will be used to set up answers for password retrieval, and the maximum length of the answers is 64 characters.
- ② Certificate of authorization: To use the key to modify the <u>primary user password</u>, you need to click on "Export" to download the key file "certificate.txt" to a USB flash drive after enabling the function.
- ③ Super code (Not recommended): The function of using a super verification code to modify the <u>primary user</u> password is available. It calculates a super verification code based on the current NVR MAC address and system time. However, the NVR MAC address is broadcasted in the network, and the NVR system time can be directly obtained when using the super verification code to modify the <u>primary user</u> password, which poses a certain security risk. Therefore, it is not recommended for users to enable this function.

Please proceed to the login interface. Enter your username and password, and click " Login " to access the NVR system.



Pattern: Please enter the gesture password login interface.



**Note:** If you forget both login passwords, you will not be able to access the system. If you have enabled the password retrieval function, you can click on **"Forgot Password"** to reset your password.

# **Chapter 3: NVR Startup**

# 3.1 Startup wizard

The startup wizard will help configure the system and NVR for quick operation.

## 3.1.1 Startup wizard

Click on "Start Wizard" to proceed to the next step.



## 3.1.2 Network Configuration



If you are connected to a router that allows the use of **DHCP**, please check the **DHCP** box. The router will automatically assign all network parameters for your NVR. If you do not check **DHCP**, you will need to manually configure the following network parameters:

**IP Address**: The identification of the NVR in the network is represented by four groups of numbers separated by periods, ranging from 0 to 255. For example, "192.168.001.100"...

**Subnet Mask**: The subnet mask is a network parameter that defines the range of IP addresses that can be used in a network. If an IP address is like a street where you live, then a subnet mask is like a community. The subnet address is also composed of four groups of numbers separated by periods. For example, "255.255.000.000".

Gateway: The gateway address allows the NVR to access the internet. The format of the gateway address is the same as that of the IP address. For example, "192.168.001.001".

DNS1/DNS2: DNS1 is the primary DNS server and DNS2 is the backup DNS server. Usually, it is sufficient to enter the address of the DNS1 server only.

#### **Port**

Web Port: This is the port you will use to remotely login to the NVR (for example, using a web client). If the default port 80 is already in use by another application, please change it. The ONVIF port number is synchronized with the web port number, so changing the web port will also change the ONVIF port accordingly.

Client Port: This is the port used by the NVR to send information (for example, using a mobile application). If the default port 9000 is already in use by another application, please change it.

RTSP Port: This is the port on which the NVR is allowed to transmit real-time streams to other devices (for example, using a media player).

Https Port: The HTTPS port is the web browsing port used primarily for HTTPS services, which is another form of HTTP that provides encryption and is transmitted through a secure port.

Note: The web port, RTSP port, and HTTPS port all share the same port, which is 80 by default.

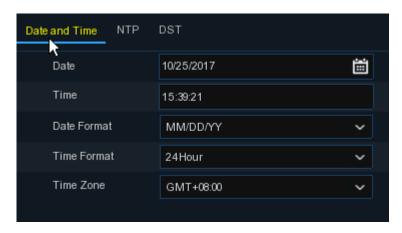
1.

#### 3.1.3 Date/Time

Through this menu, you can configure the date, time, date format, time format, time zone, NTP, and daylight saving time.

#### **Date and time**

Click on the calendar icon to set the current system date.



**Date:** Click on the calendar icon ito set the system date.

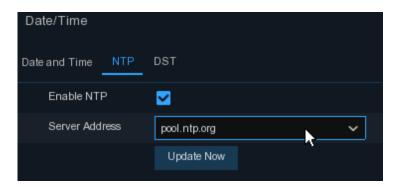
**Time:** Click to set the system time.

**Date format:** Select the preferred year, month, and day display format from the dropdown menu. **Time format:** Select the preferred 24-hour or 12-hour display format for time from the dropdown menu.

Time zone: Set the correct time zone for your location.

## NTP (Network Time Protocol)

NTP (Network Time Protocol) is a feature that allows you to automatically synchronize the date and time on the NVR over the internet. Therefore, the NVR needs to be connected to the internet for this feature to work.



Check the " NTP " box and select an NTP server.

#### **DST (Daylight Saving Time)**

Daylight Saving Time represents the practice of setting the clock ahead by one hour during the summer months to extend the amount of daylight.



DST (Daylight Saving Time): Enable this option when DST is in effect in your location.

Time Offset: Select the amount of time that needs to be offset during DST.

Time Mode: Select whether DST is set on a weekly or daily basis.

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

#### 3.1.4 Disk



When a hard drive is first installed in the NVR, it needs to be formatted. To format the hard drive, select the hard drive and click on the "Format HDD" icon."

Overwrite: When the hard drive is full, use this option to overwrite old records on the hard drive. For example, if you select the 7-day option, only the records from the last 7 days will be kept on the hard drive. If you want to avoid overwriting old recordings, select "Disable". If you have disabled this function, please check the hard drive status regularly to ensure that the hard drive is not full.

#### 3.1.5 Display Output Resolution

Select the output resolution that matches your display. The NVR's HDMI interface supports automatic adjustment of the output resolution during system startup to match the optimal resolution of the display.



#### 3.1.6 Mobile Communication

If your NVR comes with a P2P ID, you can remotely access and view the NVR by scanning the QR code using a device-specific mobile app.

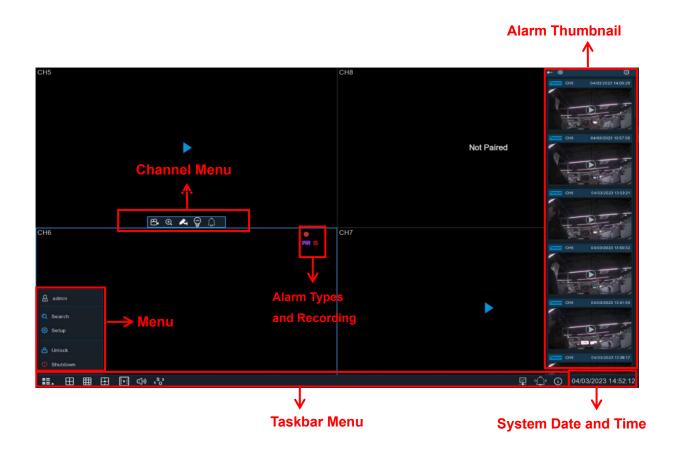


## **3.1.7 Summary**

You can check the system summary information that was set in the "Startup Wizard" and complete the wizard. If you do not want the startup wizard to appear on the next system reboot, check " Don't show this window next time". Click on the "Finish" icon to save and exit.



#### 3.2 Introduction to the Real-time View Interface



#### **Status Icon**

- Indicates that a smart alarm has been triggered.
- Indicates that a smart alarm has been triggered.
- This icon is displayed when the camera detects PIR (passive infrared).
- This icon indicates that the hard drive is not functioning properly.
- This icon indicates that the hard drive is not formatted.
- This icon indicates that the hard drive is full.
- This icon indicates that the hard drive is not found.
- This icon indicates that the hard drive is in read-only mode.

Off -line: Paired camera is offline.

NOt Paired: No paired cameras.

#### 3.2.1 Camera Quick Toolbar

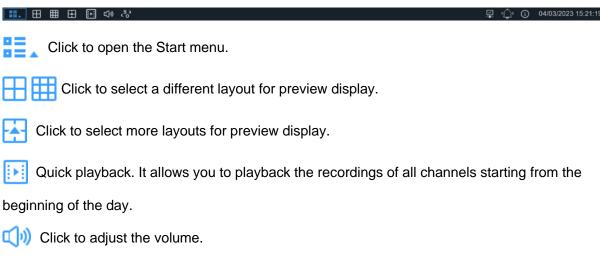
Click the left mouse button on the connected camera in the preview screen to display the "Quick Toolbar".



- 🦰 Click to start manual recording on the channel immediately. If manual recording is in progress, the icon will be red. Click again to stop manual recording.
- Click to zoom in on the channel. Scroll the mouse wheel to zoom in or out of the picture, and hold down the left mouse button to drag the picture.
- Click to turn on the white light.
- Click to turn on the speaker.

Click to pair with the camera. The pairing time is 30 seconds. Press and hold the pairing button on the battery-powered camera that has been powered on to pair it successfully during the pairing time.

#### 3.2.2 Taskbar



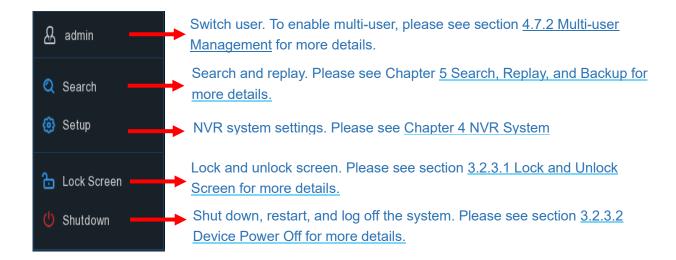
- Click to toggle between original aspect ratio and stretched aspect ratio for the preview display.
- Not connected to the network.
- If the network is disconnected, this icon will be displayed.
- This icon indicates a successful network connection.
- Correct, this icon indicates that the network connection has been established

successfully.

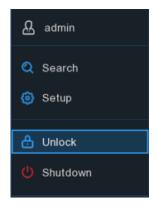
You can view system information, channel information, recording information, and network status by clicking on the corresponding icon in the taskbar.

#### 3.2.3 Start menu

Through the Start menu, you can switch users, search and replay, access the system settings menu, lock and unlock the screen, shut down, restart, and log off the system.



#### 3.2.3.1 Unlock and Lock Screen



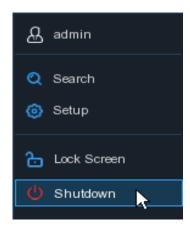
When the NVR is not operated via the menu for 1 minute, please refer to section 4.7.1.1 General Configuration for Menu Timeout (min). The screen will be locked to protect unauthorized OSD operations.

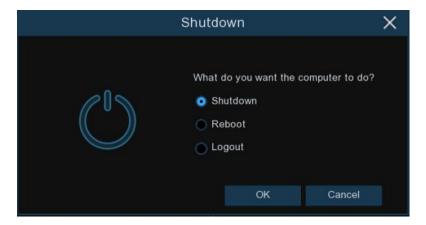
If necessary, the screen can also be manually locked. To do so, go to the Start menu, then click the Lock screen icon to immediately lock the system.

If the system is already locked, you can click the Unlock icon do unlock the system and perform further operations.

#### 3.2.3.2 Device Power Off

Click the **Shutdown** button in the Start menu, and then select the action you want to perform. Click the **OK** button, and the system will prompt you to enter the administrator password for authentication.





If you choose to log off the system(**Logout**), the live view on the screen will disappear. You will need to log in to the system again to perform further operations.



# **Chapter 4 NVR System Settings**

You can configure channel, recording, alarm, network, device, and system parameters from the **Start Menu** -> **Setup**.

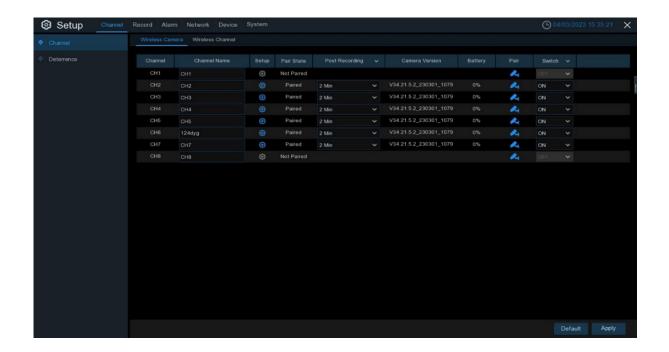


#### 4.1 Channel

In this section, you can configure cameras, real-time preview display, code pairing, adjust the image of IP cameras, and more.

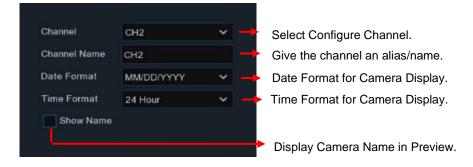
#### 4.1.1 Channel

#### 4.1.1.1 Wireless Channel



**Channel Name:** Channel Name Settings.

**Setup:** Click the icon to enter the settings page.



Pair State: Display Pairing Status - Paired/Unpaired.

Post Recording: The recording time after triggering an alarm for battery-powered cameras. During the recording time, the battery-powered camera will not go to sleep. You can choose between 10s, 20s, 30s, 40s, 50s, 1 minute, or 2 minutes. If the battery-powered camera is connected to a charging power source and the NVR is connected to a hard drive, you can choose the Continuous mode.

Camera version: Camera Software Version Number.

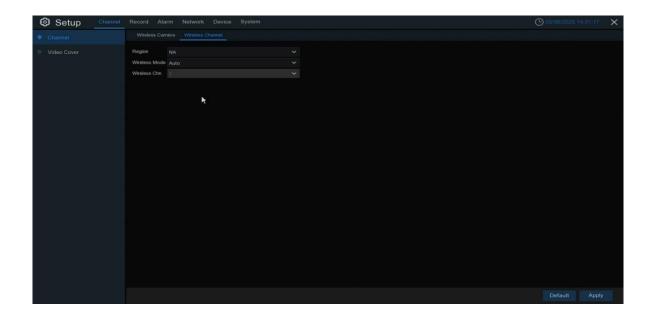
**Battery:** Battery-Powered Camera Remaining Power Level.

**Note:** Post Recording and Battery will not be displayed when the battery-powered camera is unpaired.

Pair: Click the Pairing button on the interface, and then click the pairing button on the camera to pair them.

Switch: Select OFF to unbind the NVR from the camera.

#### 4.1.1.2 Wireless Channel

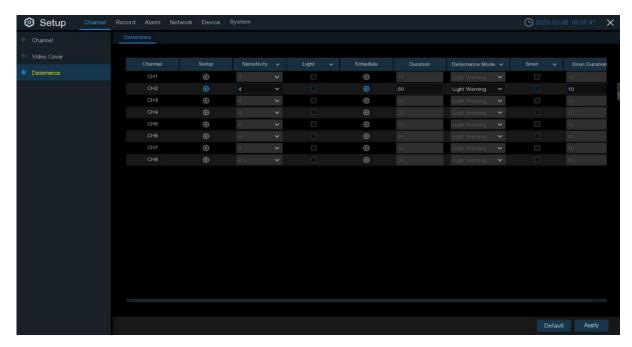


Region: NA/EU/MKK depending on the region.

**Wireless Mode:** You can choose between automatic channel allocation and manual channel setting modes.

**Wireless Channel:** Wireless channel selection can only be set when you choose manual mode in Wireless Mode.

#### 4.1.2 Deterrence Warning



**Channel:** Channel Name

**Light Switch:** Turn on or off the white light warning.

**Duration:** Duration of White Light.

Deterrence Mode: Set the mode of the white light, which can be constant light mode (Light

Warning) or flashing mode (Light Strobe).

Strobe Frequency: Flashing Frequency of White Light.

**Siren Switch:** Enable/Disable Alarm Warning.

Siren Duration: Duration of White Light and Alarm Sound.

**Schedule**: Click the icon (i) to open the settings page.



When the schedule is marked in light blue, it means that the channel can trigger the white light deterrence alarm during that time slot.

**Default:** Restore Default Settings.

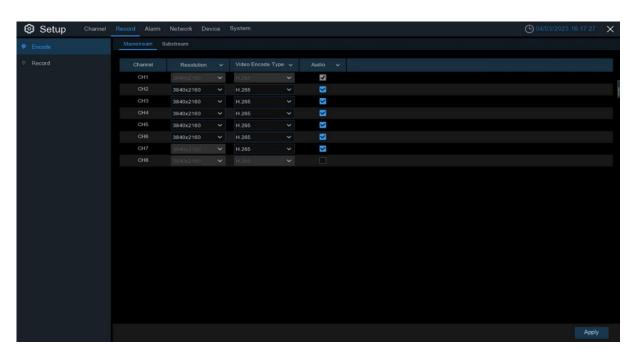
## 4.2 Recording

Through this menu, you can configure recording parameters.

# 4.2.1Encoding

This menu allows you to configure the image quality of the recorded video or the network transmission. "Main stream" refers to the quality of the recorded video that is saved on the HDD, while the sub-stream is the quality of the preview video accessed remotely (e.g. through the web client and CMS). The mobile stream defines the preview quality viewed via remote access on a mobile device. In the Audio menu, you can set the switch of the audio of the connected network camera, the volume of the input/output, and the audio type.

#### 4.2.1.1 Main Stream

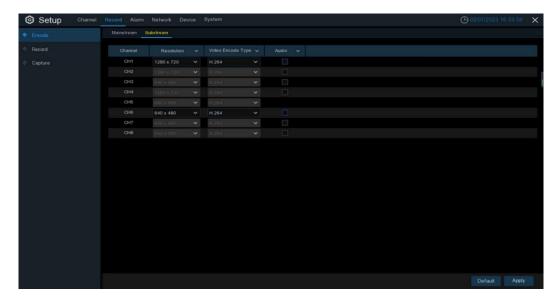


**Resolution:** This parameter represents the resolution of the preview image. If the recording page's resolution is set to Auto, this parameter cannot be set.

Video Encode Type: Channel decoding type, with options of H.264 and H.265.

Audio: Enabling this option will support audio synchronous recording.

#### **4.2.1.2 Sub-Stream**



**Resolution:** This parameter represents the resolution of the preview image.

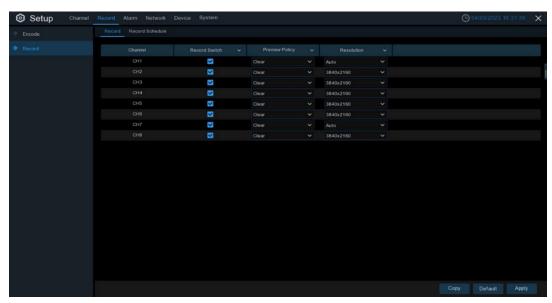
Video Encode Type: Channel decoding type, with options of H.264 and H.265.

Audio: Enabling this option will support audio synchronous recording.

# 4.2.2 Recording

This menu allows you to configure recording parameters.

## 4.2.2.1 Recording Settings

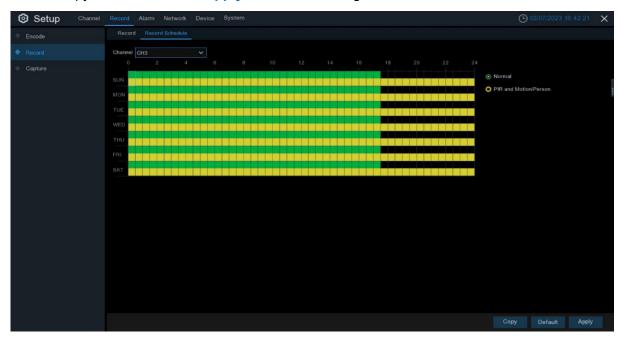


**Record Switch:** Select to enable recording in this channel.

Preview Policy: Channel preview strategy, with options of Clear and Smooth.Resolution: Recording resolution, when Auto is selected, the resolution on the Stream page cannot be set.

#### 4.2.2.2 Recording Schedule

This menu allows you to specify when the NVR records video and determine the recording mode for each channel. The recording schedule allows you to set a recording schedule, such as regular (continuous) recording every day (or hour), PIR and motion detection recording times. To set the recording mode, click on the mode radio button ("Regular", "PIR and motion detection"), and then drag the cursor to mark the area. The recording schedule is only valid for one channel. If you want to use the same recording schedule for other channels, click on the Copy (Apply) button to use the copy function. Click on Apply to save the settings.



**Channel**: Select the channel to set its recording parameters.

**Normal**: When the area is marked in green, it means that the channel records continuously during that time slot. The regular recording setting area appears when the channel's **Post Recording** is set to **Continuous** mode.

**PIR and Motion/Person**: When the area is marked in yellow, it means that the channel records PIR and motion/person during that time slot.

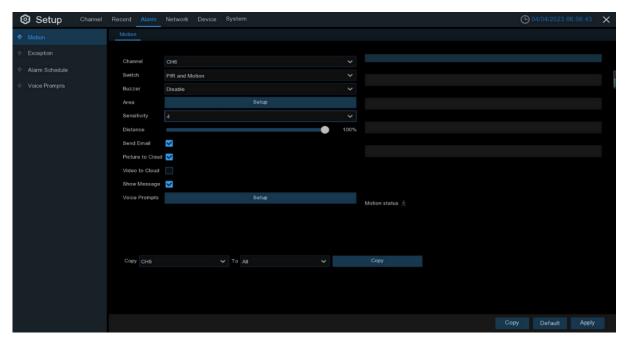
**NOTE:** To use PIR and motion/person recording, you must enable and configure the channel's parameters settings in the "Alarm" menu. Please refer to section <u>4.3.1 Motion Detection</u>.

**No Record**: The time slot marked in black represents no recording schedule during that time period.

#### 4.3 Alarm

Configure alarm parameters.

#### 4.3.1 Motion Detection



Channel: Channel name

**Switch:** Detection type selection: **Disable** means the detection function is turned off, **PIR and Motion** means PIR and motion detection are turned on, **PIR and Person** means PIR and person detection are turned on. The default is **PIR and Person**.

**Buzzer:** The NVR can use its internal buzzer to emit an alarm sound. You can set the duration of the buzzer in seconds when motion is detected.

**Area:** If you want to modify the position or size of the rectangle, click on the red border inside the rectangle. The border will turn red. You can move the lines by pressing and holding the left mouse button, or you can drag the end of a line to change its length or position.

Once you have finished setting the region, right-click to return and then click "Apply" to save the changes and apply the area settings.



**Sensitivity:** The motion detection sensitivity can be adjusted from 1 to 8, with higher values indicating greater sensitivity and more easily triggered motion detection.

**Distance:** The PIR detection range refers to the coverage area of the PIR sensor, and the larger the value, the wider the coverage range.

**Send Email:** You can configure the NVR to send automatic email notifications to a specified email address when motion is detected.

**Picture to Cloud:** After triggering the alarm, the alarm images can be uploaded to cloud storage. For more details, please refer to section <u>4.5.2 Cloud Storage</u>.

**Video to Cloud:** To upload the alarm video to cloud storage after triggering an alarm, please refer to section <u>4.5.2 Cloud Storage</u> for details.

Show Message: Check this box to display an ? icon on the live view screen when motion is detected.

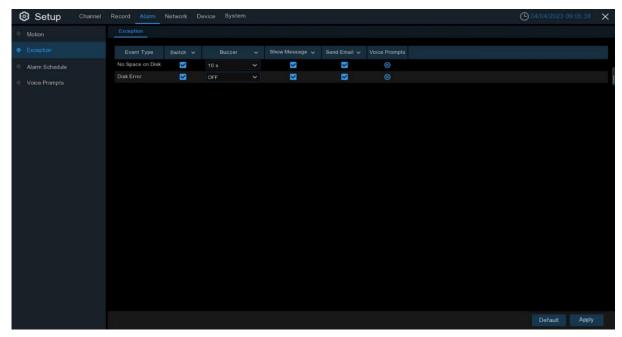
**Voice Prompts:** When the alarm is triggered, a voice prompt can be played with an imported audio file (requires IPC support for voice prompt function). For more information, please refer to section 4.3.4 Voice Broadcast.

Copy: Copy current channel's settings to other channels.

**Note:** When you enter this page, if the camera paired with the channel on the display screen detects an alarm, the speaker will sound a "beep" alert.

#### 4.3.2 Abnormal Alarm

This menu can be used to set the event types for the NVR.



**Event Type**: Select event type from the following options:

- No Space on Disk: When the hard drive is full.
- Disk Error: If the hard drive is not detected as ready.

Switch: Check to enable event alerts.

**Buzzer**: Set the duration of the buzzer when an event occurs (Off/10s/20s/40s/1Min). Select OFF to disable the buzzer.

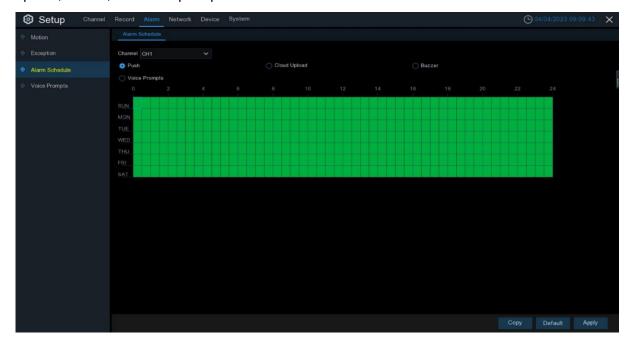
**Show Message:** : Check to display messages on the screen when events such as insufficient disk space, disk error or video loss occur.

Send Email:: Enable NVR to automatically send you an email when an event occurs.

**Voice Prompts:** Voice prompt: When the alarm is triggered, import an audio file for the voice prompt (requires IPC support for voice prompt function). For details, see section <u>4.3.4 Voice</u> <u>Broadcasting.</u>

#### 4.3.3 Alarm schedule

In this menu, you can set the alarm schedule for features such as push notifications, cloud upload, buzzer, and voice prompt.



Channel: Select the channel and set its capture parameters.

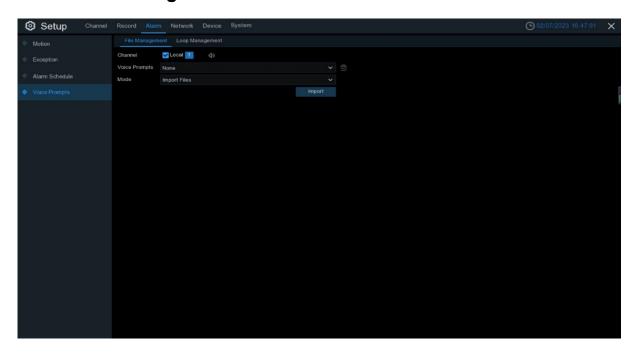
**Copy:** Copy the current channel's settings to other channels.

When the time period is marked green, it means that the channel's functions are enabled during that time period.

### 4.3.4 Voice broadcasting

This function enables the system to link the alarm signal with the voice broadcasting device when an alarm occurs, and automatically or manually play the associated audio to the "intruder" on site. (The voice broadcasting option is available in the Alarm settings for each type of alarm.)

#### 4.3.4.1 File management



Click on "import" to import the audio for broadcasting, which supports three ways of importing audio: "Import File", "Local Conversion", and "Internet Server Conversion".

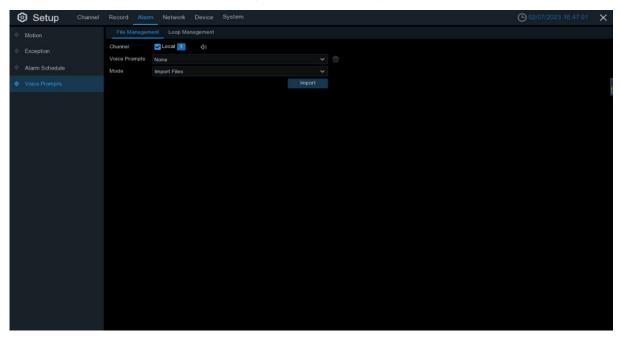
**Import File:** Local import (supports importing audio files in MP3, WMA, and WAV formats). **Local Conversion:** Local conversion (enter the text content to be converted, the device's built-in conversion algorithm will convert it to an audio file, and automatically save it to the hard drive for storage).

**Internet Server Conversion:** Network server conversion (by entering the text content to be converted locally, sending it to the network server for conversion into an audio file, and automatically saving it to the local hard drive for storage).

On the page, Local Conversion and Internet Server Conversion will have language selection and text input boxes in addition to Import File. The language selection box for Local Conversion is in English and grayed out, so users cannot select other languages. The maximum allowable input length for the text input box is 1024 bytes. For Import File, the file size for face and license plate libraries is allowed to be 1500K, while non-face and non-license plate libraries are allowed to be 15M.

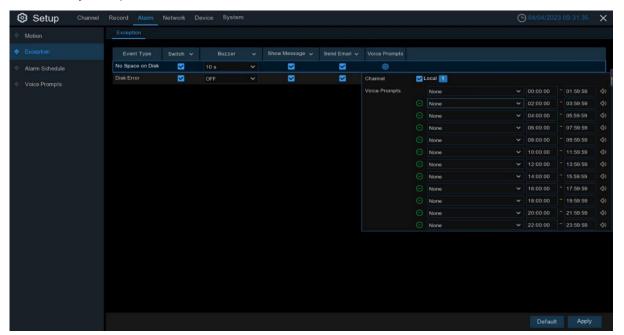
After importing the audio for broadcasting, you can select which audio to play in the **Voice Prompts** section.

The voice broadcast mode currently only supports Local playback for wireless NVRs.



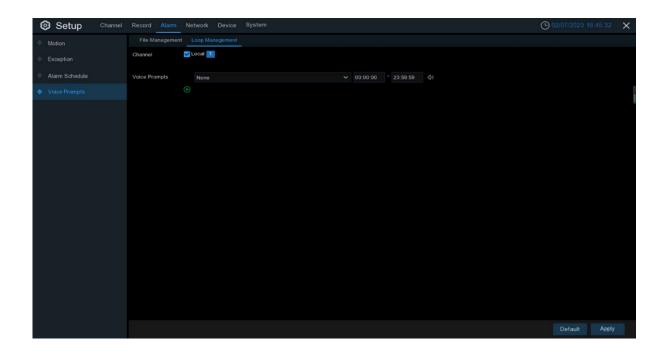
**Local:** For local playback, when selecting this playback mode, the device needs to be connected to an audio output device. You can use an HDMI cable to connect to a monitor and then connect the audio output device to the monitor.

Voice broadcast settings based on time periods: A maximum of 12 time periods can be set for voice broadcasting for one type of alarm, and there should be no conflicts in the start and end times of any time period.



3.

## 4.3.4.2 Loop playback management



Voice Prompts Select the audio file and set the time period. When there is no alarm for voice broadcasting or when previewing the audio file, the selected audio file will be loop played during the time period. A maximum of 12 time periods can be set for voice broadcasting.

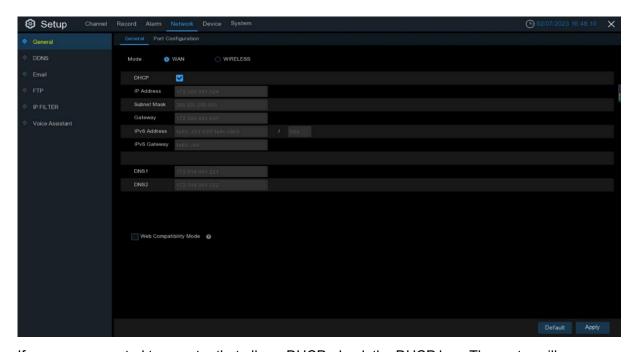
Local: Local playback (when selecting this playback mode, the device needs to be connected to an audio output device).

#### 4.4 Network

Through this menu, you can configure network parameters such as DHCP. The most common type is DHCP. Your network type is most likely DHCP unless the network is manually addressed.

#### 4.4.1 General

#### 4.4.1.1 General configuration



If you are connected to a router that allows DHCP, check the DHCP box. The router will automatically assign all network parameters to the NVR. Unless you manually set the following parameters for the network:

**IP Address**: The IP address is the identifier of the NVR in the network. It consists of four sets of numbers between 0 and 255, separated by periods. For example, "192.168.001.100".

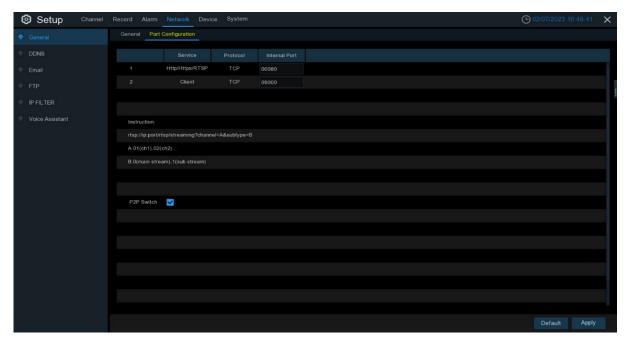
**Subnet Mask:** The subnet mask is a network parameter that defines the range of IP addresses that can be used in the network. If the IP address is like the street you live on, then the subnet mask is like your neighbors. The subnet address also consists of four sets of numbers separated by periods. For example, "255.255.000.000".

**Gateway:** This address allows the NVR to access the network. The format of the gateway address is the same as that of the IP address. For example, "192.168.001.001".

**DNS1/DNS2:** DNS1 is the primary DNS server, and DNS2 is the secondary DNS server. Usually, it is sufficient to enter the DNS1 server address.

**Web Compatibility Mode:** If HTTPS is enabled and a Win7 computer is used to log in, this option needs to be checked to switch to the HTTPS page.

### 4.4.1.2 Port configuration



Web Port: This is the port you will use to remotely log in to the NVR (for example, using a web client). If the default port 80 is already occupied by other applications, please change it.

Client Port: This is the port that the NVR uses to send information (for example, using a mobile application). If the default port 9000 is already being used by other applications, please change it.

RTSP Port: This is the port that the NVR is allowed to use to transmit real-time streams to other

devices (for example, using a streaming media player).

Https Port: The HTTPS port is used for HTTPS service, which provides encryption and

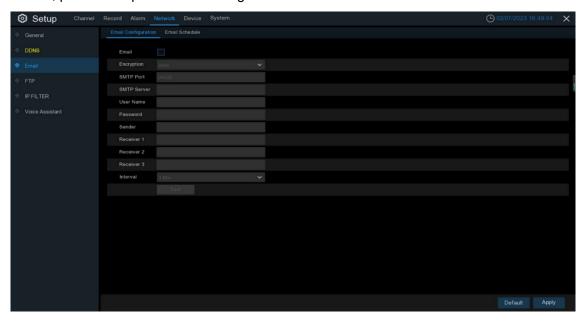
transmission through a secure port as an alternative to HTTP.

**Note:** In version 8.2.2, the WEB port, RTSP port, and HTTPS port are combined into one and share the same port, which is 80 by default.

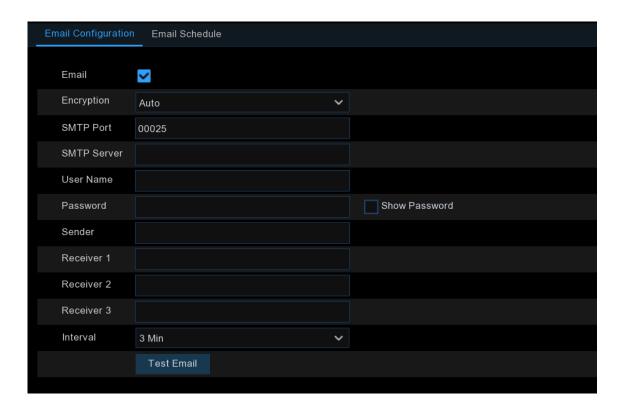
**P2P Switch:** P2P switch, which will not work if P2P is turned off.

## 4.4.2 Email

This menu allows you to configure email settings. If you want to receive system notifications via email when an alarm is triggered, the hard disk is full, the hard disk is in error state, or video loss occurs, please complete these settings.



## 4.4.2.1 Email configuration.



Email: Check to enable.

**Encryption**: If your email server requires SSL or TLS authentication, enable it. If you are unsure, set it to "Auto".

**SMTP Port**: Enter the SMTP port of your email server.

**SMTP Server:** Enter the SMTP server address of your email.

**User Name**: Enter your email address. **Password**: Enter your email password.

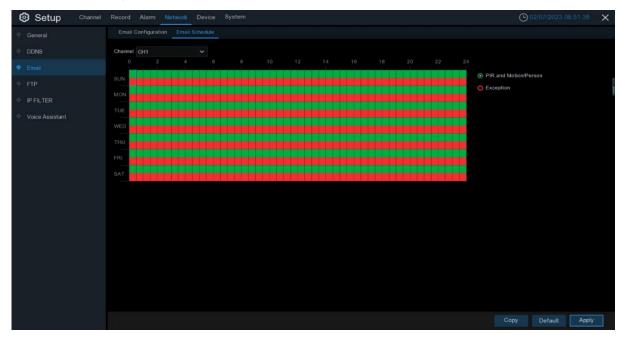
Receiver 1~3: Enter the email addresses that you want to receive event notifications from the NVR.

Interval: Configure the time interval between notification emails from the NVR.

To ensure that all settings are correct, click "Test Email". The system will send an email to your inbox. If you receive the test email, it indicates that the configuration parameters are correct.

### 4.4.2.2 Email schedule

You need to configure a schedule to implement email notifications.



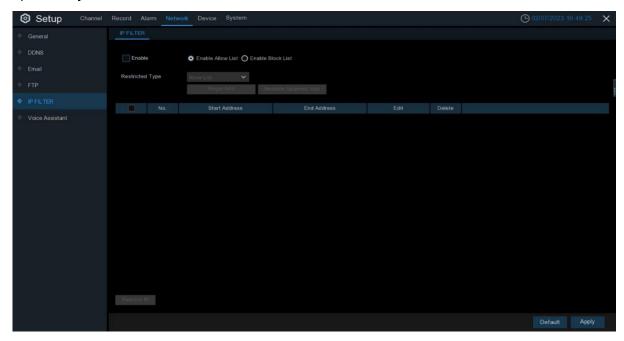
The colors on the email schedule have the following meanings:

PIR and Motion/Person: Green area

**Exception:** Red area

## 4.4.3 IP Filtering

The IP filtering function allows you to set a blacklist or whitelist. When selecting the whitelist option, only IP addresses in the whitelist can connect to the device. When selecting the blacklist option, only IP addresses in the blacklist cannot connect to the device.



**Enable:** Turn on or off the filtering function. When enabled, you can choose to enable the blacklist or whitelist.

Restricted Type: Choose the type of list to be set (blacklist or whitelist).

**Start Address:** Enter the starting address.

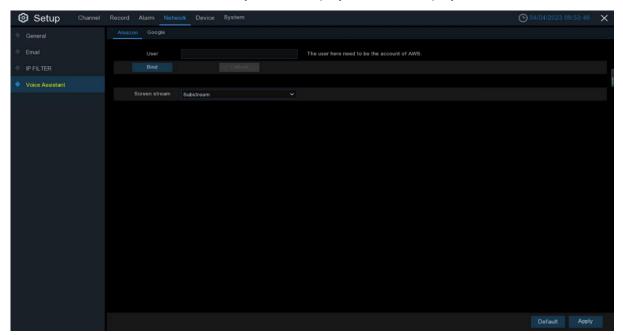
End Address: Enter the ending address.

## 4.4.4 Voice Assistant

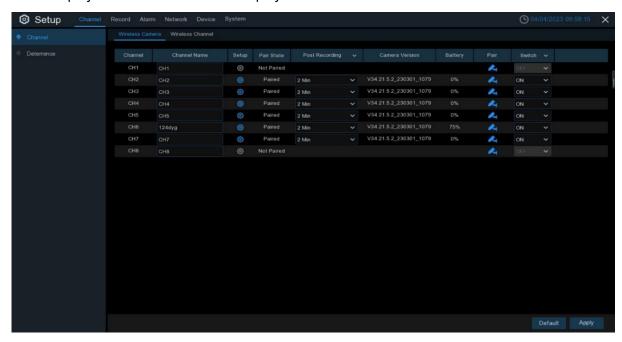
The voice assistant feature allows the NVR to be connected to Google Cast or Amazon Fire TV Stick, and real-time monitoring images can be projected onto a TV display through voice control.

### 4.4.4.1 Amazon

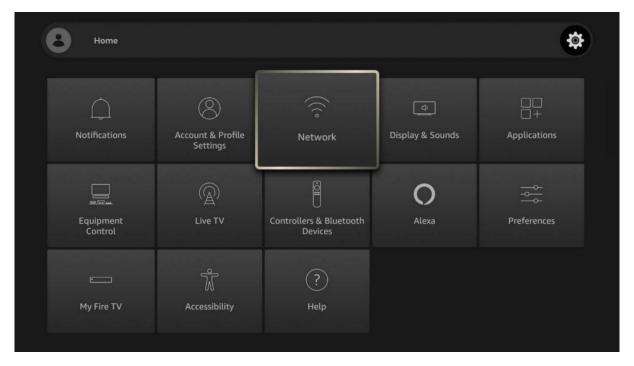
1. Enter your Amazon account, click the "Bind" button to connect and bind your Amazon account, and then select the video stream that you want to play on the TV display.



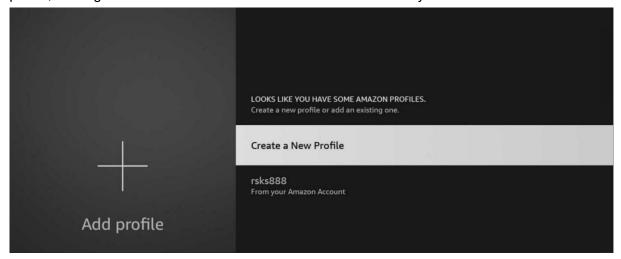
2. Go to the "Channel-Wireless Channel" menu, and give a channel name that can be easily called to play the channel on the TV display.

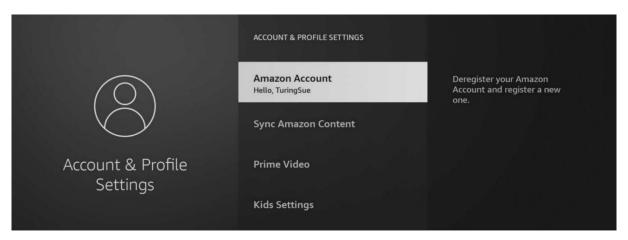


3. Connect the Fire TV Stick to the TV display and turn it on. Connect the Fire TV Stick to the Wi-Fi network that is on the same local area network as the NVR.

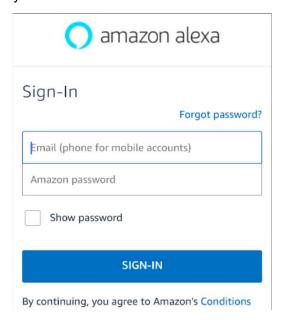


4. To use the Voice Assistant function, you need to either use an existing profile or add a new profile, and log in with the same Amazon account that is bound to your NVR.

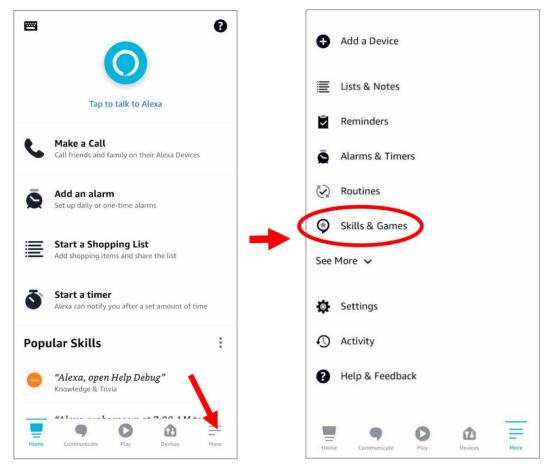




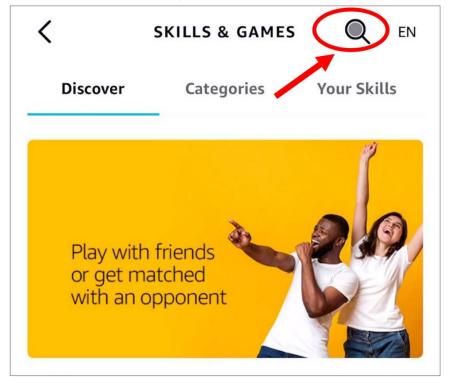
5. Please search and install Amazon Alexa from the app store on your phone, and log in with the same Amazon account that you used to bind to the NVR.



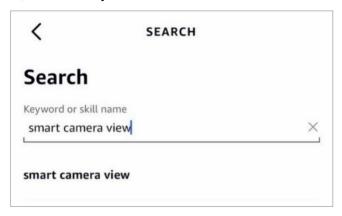
6. Click on "More," and then click on "Skills & Games."



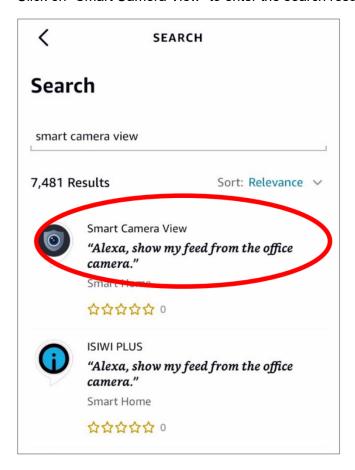
7. Click on the search icon in the upper right corner.



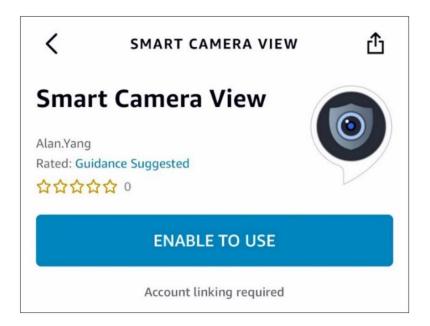
8. Enter the keyword "Smart Camera View" and search for it.



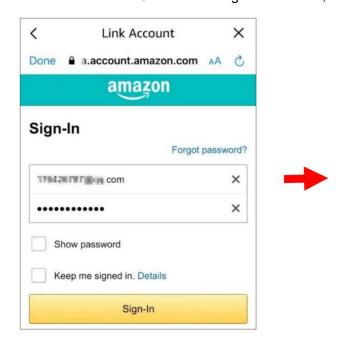
Click on "Smart Camera View" to enter the search results list.



#### Click "ENABLE TO USE"

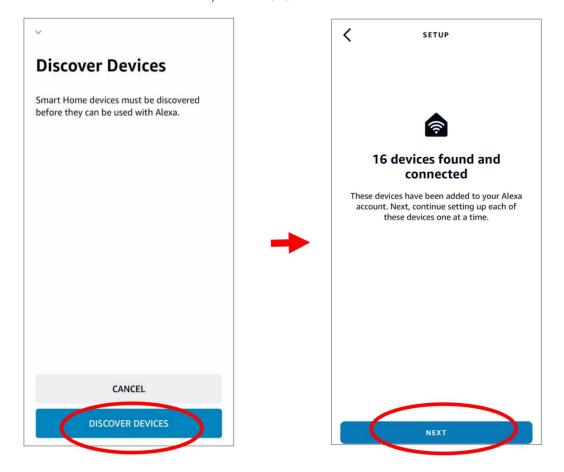


9. You need to link your Amazon account. Log in with the same Amazon account that you used to bind with the NVR. Once the linking is successful, click "Done".

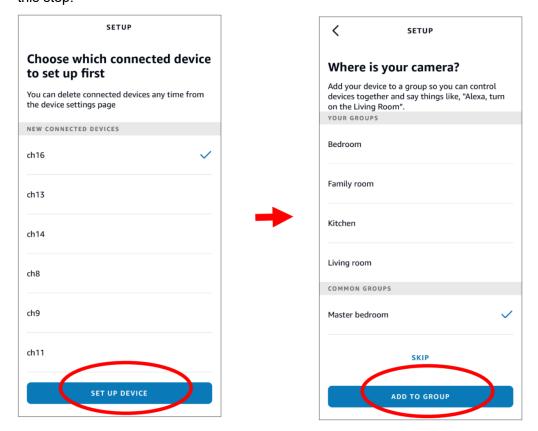




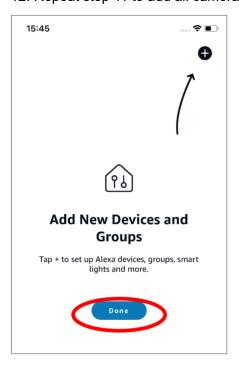
10. Click "DISCOVER DEVICES" and wait for the application to search for the camera. Once the device is found and connected, click " Next ".



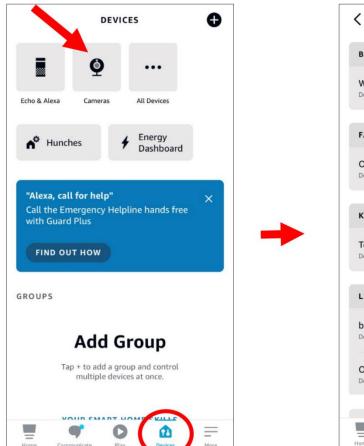
11. Select one of the devices and click " **SET UP DVICE** ". You can add the IPC to a group or skip this step.



12. Repeat step 11 to add all cameras, then click "Done" to finish.



13. All added cameras will be listed under "Devices". Click on the camera icon to view all the added cameras.

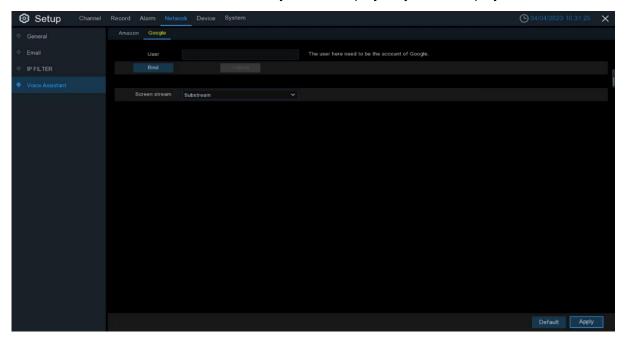




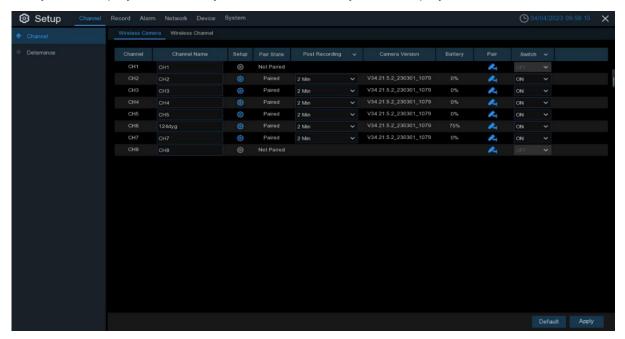
- 14. Press and hold the voice button on the Fire TV stick remote, and clearly state your command. The command will be something like: "Show The XXX camera/Show XXX". XXX refers to the name of the camera channel. For example, if the channel name is "Office", you can say "Show the Office camera".
- 15. Wait for a moment, and you will see real-time images from the camera in your TV monitor.
- 16. If you want to exit the camera live stream, simply say "Stop".
- 17. If the channel name is changed, you will need to search for and add the camera again.

## 4.4.4.2 Google

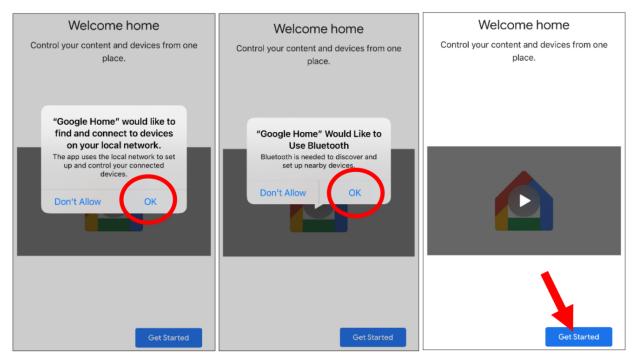
1. Enter your Google account and click the "Bind" button to connect and bind your Google account. Then select the video stream that you want to play on your TV display.



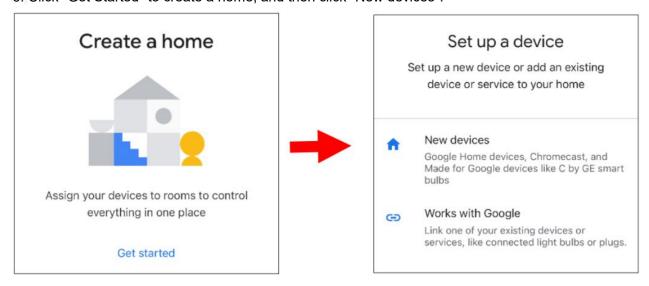
2. To enter the "Channels - Wireless Channels" menu, and provide a channel name that can be easily called to play the channel you want to watch on your TV display.



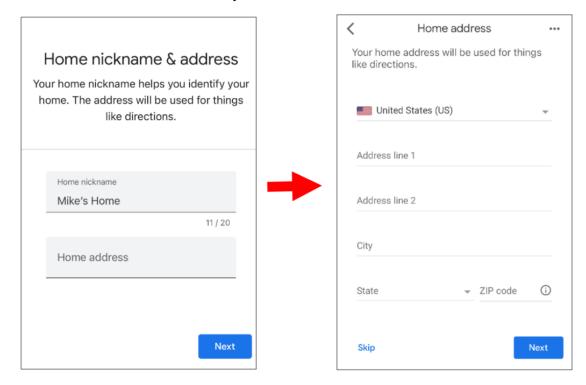
- 3. Connect your Chromecast to your TV display and power it on.
- 4. Then search and install the Google Home app from the app store onto your phone. Run the installed Google Home application, click "OK" to allow the app to use your local network and Bluetooth, and then click "Get Started".



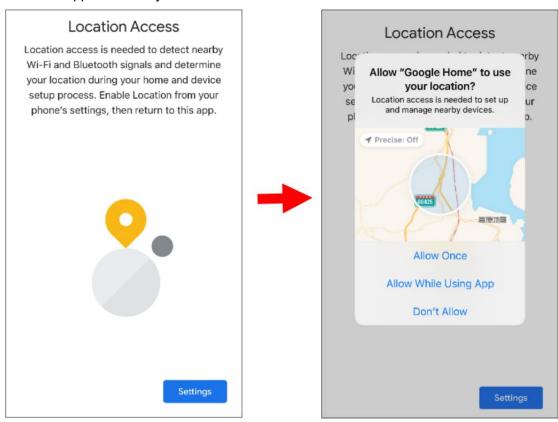
- 5. Login to your Google account that you have bound to the NVR.
- 6. Click "Get Started" to create a home, and then click "New devices".



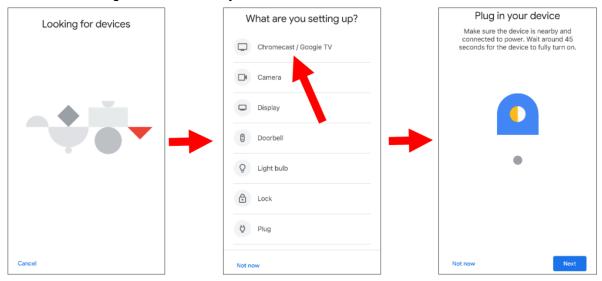
Enter a nickname and address for your home, and then touch "Next".



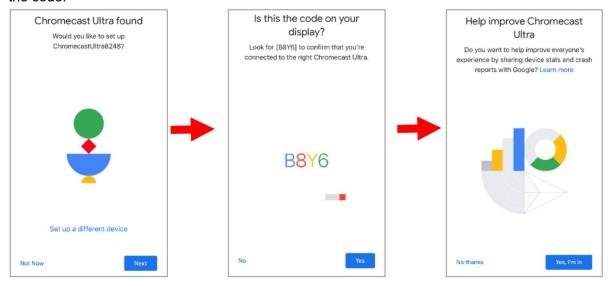
### Allow the app to access your location.



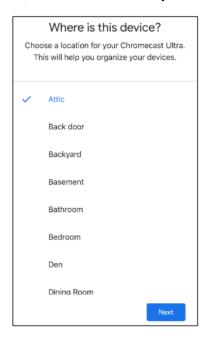
7. The app will automatically try to search for devices from your local network. Select your Chromecast/Google TV. Make sure your Chromecast is turned on, and then touch "Next".



8. Your Chromecast will be found, and you can click "Next" to connect it. Click "Yes" to confirm the code.



9. Select the location of your Chromecast, and then click "Next".



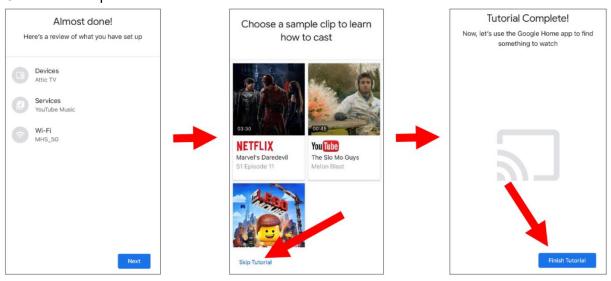
10. Select the Wi-Fi network for your Chromecast, and enter the Wi-Fi password to connect. Make sure the Wi-Fi you choose is the same as the one on your phone, and is on the same local network as the NVR. Click "Continue" to proceed to the next step.



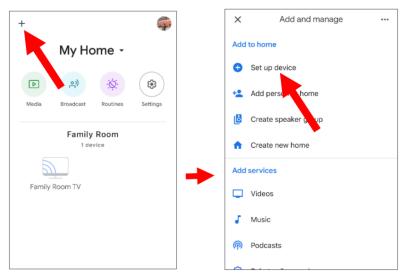
### 11. Click "No Thanks" or "Sign Up" to log in to your Google account.



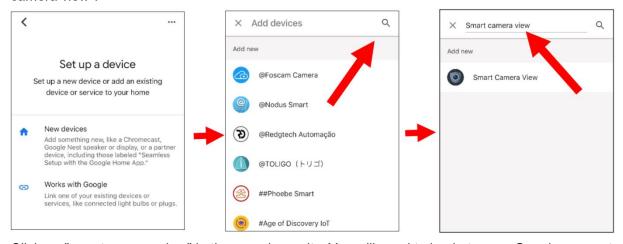
### Click Next->Skip->Finish Tutorial



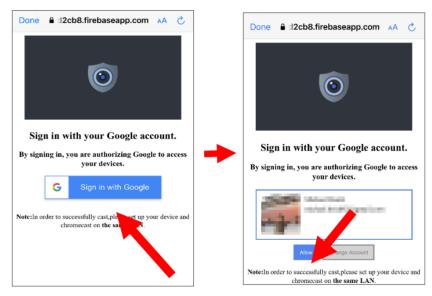
12. Now the Chromecast has been added to your Google Home. Click the "+" icon in the top left corner, select "Set up device" under "Home control".



Select "Works with Google", click the search icon in the upper right corner, and then enter "smart camera view".



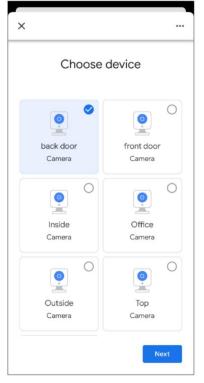
Click on "smart camera view" in the search results. You will need to log in to your Google account and allow Google to access your devices.

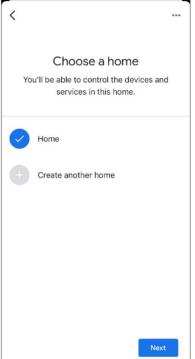


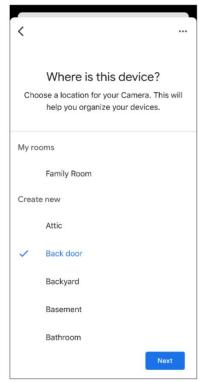
Wait for a moment, the app will connect to your Google Home.



13. Now the cameras available in the NVR will be displayed. Select one of the cameras, and then touch the "Next" button. Step by step, select a home and location for the camera.







14. Repeat step 13 to add all cameras.



- 15. Search and install the Google Assistant app from the app store onto your phone.
- 16. Run Google Assistant, log in to your Google account that is the same as the one bound to the NVR.
- 17. Now you can use text or voice commands to stream the camera to your TV monitor, such as "Show/Play \*\*\* camera on XXX TV", where \*\*\* is the channel name of the camera, and XXX is the name of your TV.



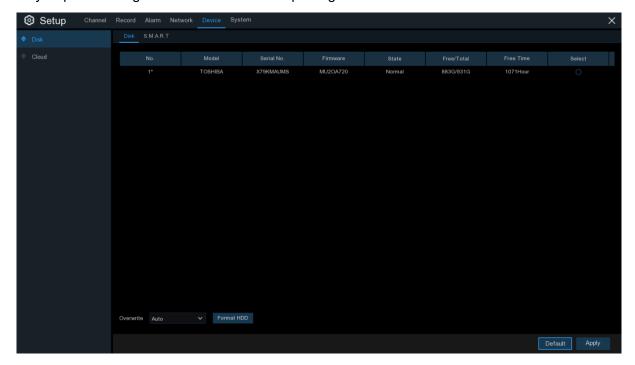
# 4. 5 Device

In this section, you can configure internal HDD and cloud storage functions.

### 4.5.1 Disk

### 4.5.1.1 Disk

This menu allows you to check and configure the internal hard disk. Formatting the hard disk is only required during the first boot or when replacing it with a new one.

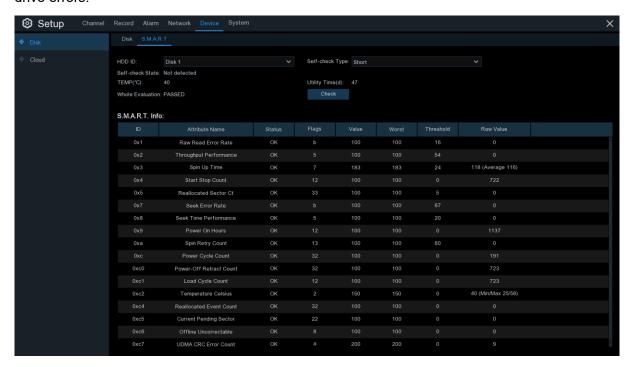


Format HDD: Select the hard disk you want to format, then click "Format HDD". To begin formatting, you will need to enter your username and password and then click "OK".

Overwrite: Use this option to overwrite old records on the hard disk when it becomes full. For example, if you choose the 7-day option, only the recordings from the last 7 days will be kept on the HDD. If you do not want any old recordings to be overwritten, choose "Disabled". If this feature is disabled, check the hard disk status regularly to ensure it is not full.

### 4.5.1.2 S.M.A.R.T

This feature allows you to display technical information about the installed hard disk within the NVR. You can also perform tests (there are three types available) to assess and detect potential drive errors.



**Self-check Type:** There are three types available:

**Short:** This test verifies the primary components of the hard disk drive, such as the read/write head, electronics, and internal memory.

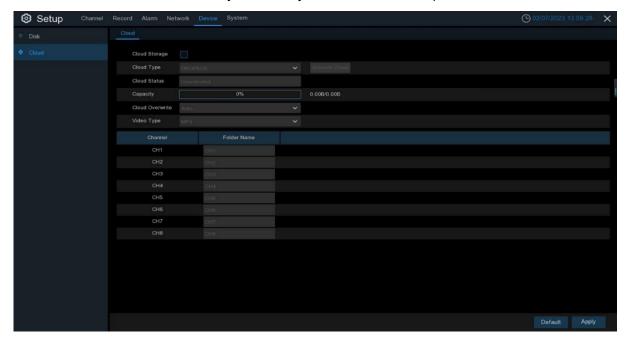
**Long:** This is a longer test that not only verifies the above components, but also performs a surface scan to detect problematic areas (if any) and force bad sector relocation.

**Conveyance:** This is a very fast test that verifies the mechanical components of the hard disk drive are functioning properly.

**NOTE:** Your NVR will continue to function normally while the tests are being performed. If S.M.A.R.T errors are detected on the hard disk, it can still be used but there is a risk of losing recorded data. It is recommended to replace the hard disk with a new one.

## 4.5.2 Cloud storage

Your NVR can upload snapshots or videos to cloud services such as Dropbox or Google Drive. These are free services that allow you to easily store and share snapshots.



Before enabling cloud storage services, we recommend creating a Dropbox account using your email username and password. Once created, log in to <a href="https://www.dropbox.com">www.dropbox.com</a> with your email address and password and agree to the terms before clicking the login button.

**Cloud Storage:** Check to enable this feature.

**Cloud Type:** Choose the cloud storage type, either Dropbox or Google.

Cloud Status: Shows the activation status of cloud storage, either "Unactivated" or "Activated".

**Capacity:** Displays the cloud storage capacity as a percentage bar indicating the percentage of used memory, with remaining capacity/total capacity shown to the right.

Cloud Overwrite: Set the frequency of cloud storage overwriting.

Video Type: Set the video format for uploading to the cloud.

**Folder Name:** Set the name of the **folder** that will store channel videos and images.

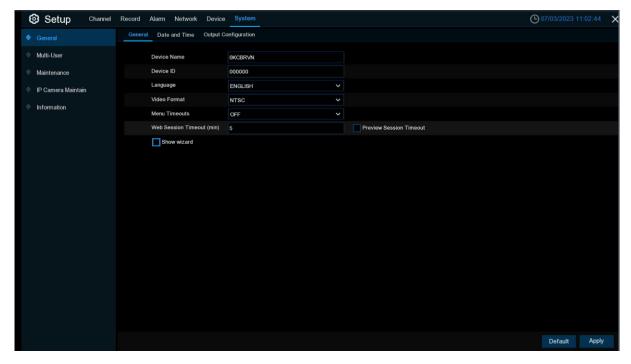
Activate Cloud: Click to activate this feature. After a moment, you will see a message on the screen indicating that an activation link has been sent to your email (see section 4.5.3.1 for email settings). Check your email and click the link to activate. You will be redirected to the Dropbox website. Click "Allow" to complete the activation.

## 4.6 System settings

System settings allow you to change system information such as date, time, and region, as well as modify passwords and permissions.

### 4.6.1 General

### 4.6.1.1 General settings



**Device Name:** Enter the desired name for your NVR. The name can include letters and numbers. **Device ID:** Enter the device ID for your NVR. The device ID is used to identify the NVR and can only consist of numbers. For example, if you have installed two NVRs in the same location, one NVR may have a device ID of 000000 and the other NVR may have a device ID of 111111. When you want to operate the NVR using a remote controller, both NVRs may receive the signal from the controller and operate simultaneously. If you want to control only the NVR with the device ID of 111111, you can enter the device ID of 111111 on the login page using the remote controller for further operations.

**Language:** Select the language you want to display the system menus in. Multiple languages are available.

Video Format: Select the appropriate video format for your region.

**Menu Timeouts:** Click the dropdown menu and select the time for the NVR to exit the main menu when idle. The system default is 1 minute, but the timeout can be adjusted to 30 seconds,

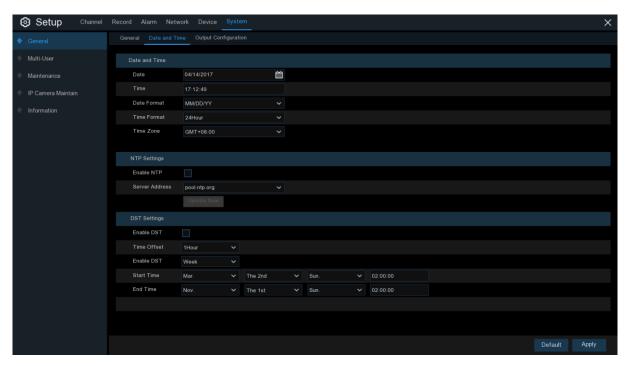
1 minute, 2 minutes, 5 minutes, 10 minutes, or turned off. You can also disable this feature by selecting "Off" (password protection will be temporarily disabled).

**Web Session Timeout(min):** The timeout duration for web sessions, allowing communication between the web and NVR within the set time range. If the set time is exceeded without any action on the web end, the web will prompt a timeout and the web session communication with the NVR will end.

**Preview/Playback Session Timeout:** The timeout duration for web preview/playback sessions. This feature works in conjunction with the Web Session Timeout (min).

**Show Wizard:** Check this option if you want the startup wizard to be displayed every time the NVR is opened or restarted.

### 4.6.1.2 Date and Time



#### **Date & Time**

Date: Click the calendar iii to change the date.

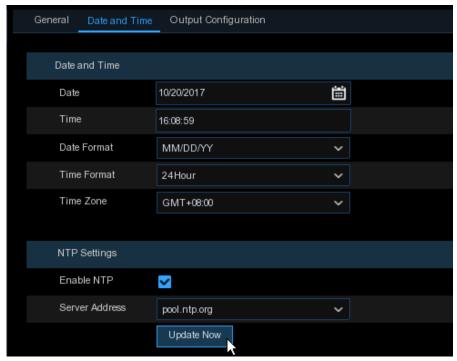
Time: the time box to change the time.

Date Format: Select the preferred date format.Time Format: Select the preferred time format.

**Time Zone**: Select the time zone that is relevant to your location or city.

#### **NTP Settings**

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



Check to enable NTP and select a server address, then click "Update now" to manually synchronize the date and time.

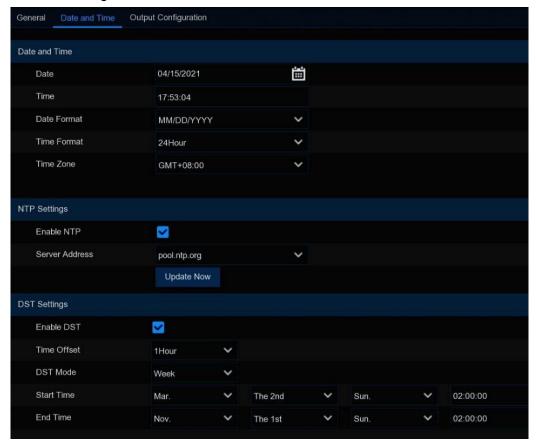
Click "Apply" to save the settings.

After enabling the NTP function, the system will update the system time at 00:07:50 every day or update the system time every time the device boots up.

#### **DST**

#### **DST Settings**

The DST (Daylight Saving Time) function allows you to set different DST settings for different countries or regions.



**Enable DST**: Check this option if your time zone or region uses daylight saving time.

**Time Offset**: Select the amount of time added to your time zone during daylight saving time. This is the minute difference between Coordinated Universal Time (UTC) and the local time.

**Enable DST**: You can choose the start and end times for daylight saving time using either of the following methods:

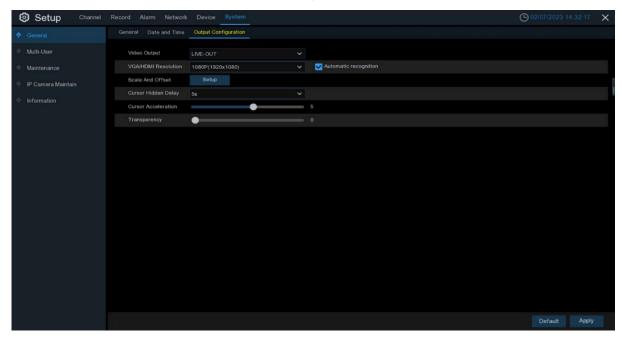
**Week:** Choose the month, specific week, and time when daylight saving time starts and ends. For example, 2:00 am on the first Sunday of a certain month.

**Date:** Select the start date (click the calendar icon important in the start and end of daylight saving time.

Start Time / End Time: Set the start and end times for daylight saving time.

### 4.6.1.3 Output settings

Set video output parameters in the Output settings.



Select the LIVE-OUT mode from the Video Output dropdown menu.

**VGA/HDMI Resolution**: Select the display resolution that suits your TV. 1920 x 1080 will be suitable for most TVs. If the NVR supports 4K output resolution, you can choose 2K (2560 x 1440) or 4K (3840 x 2160) resolution to adapt to higher resolution displays.

**Scale And Offset**: The NVR supports adjusting the size and position of the display screen to match the display or TV. Click the "Settings" button to adjust.



**Scale:** Adjust the screen size displayed proportionally.

**X Offset:** Move the screen to the left or right.

Y Offset: Move the screen up or down.

Click once or press and hold the left mouse button on the arrow to adjust the size and position, or use the mouse wheel to adjust. Click the right mouse button to exit, and click "Apply" to save the changes.

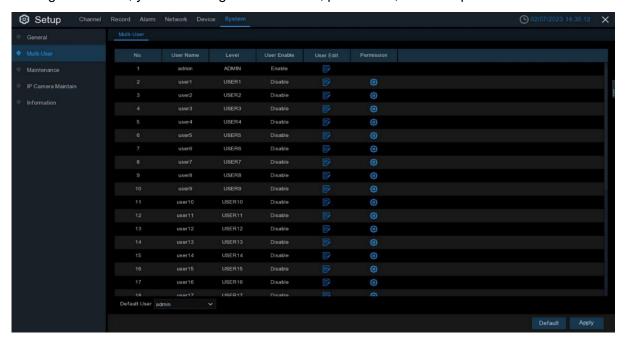
**Cursor Hidden Delay**: Click the dropdown menu and select the time to hide the mouse cursor when the NVR is idle. You can also disable this function by selecting "Off".

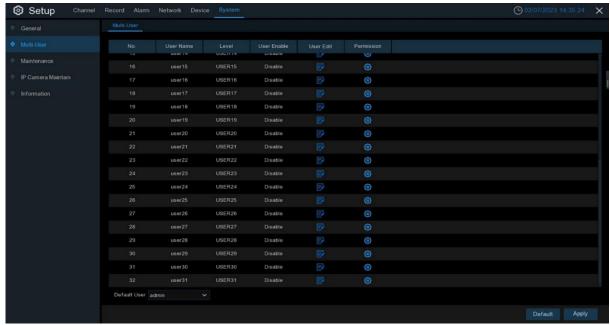
Cursor Acceleration: Adjust the speed of cursor movement.

**Transparency**: Click and hold the slider to the left or right to change the transparency of the menu bar and main menu on the screen.

## 4.6.2 Multi-user management

Through this menu, you can configure usernames, passwords, and user permissions.





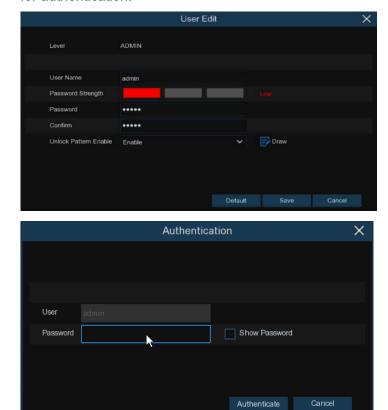
The system supports the following types of users:

- ADMIN —System Administrator: The administrator can fully configure the system and can change the administrator password and user password, as well as enable/disable password protection.
- USER Ordinary User: Users can only access preview, search, playback, and other functions. You can set up multiple user accounts with different levels of system access permissions.

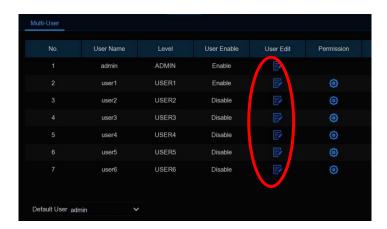
**Default User:** The default user that logs in when the NVR restarts.

### 4.6.2.1 Change Password

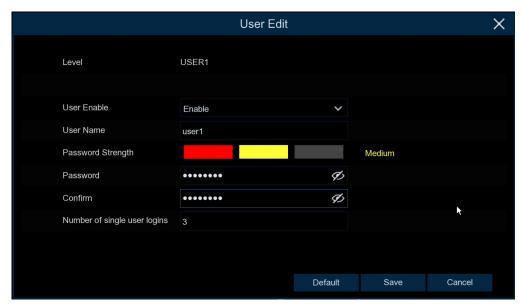
To change the password for an administrator or user, click the "User Edit" icon. The password must be at least 8 characters long and must include two characters from the set of numbers, uppercase letters, lowercase letters, and punctuation marks. Enter the new password again to confirm it, enter the number of single user logins (any number between 1 and 5), and then click "Save". After saving the new configuration, the system will prompt you to enter the old password for authentication.



### 4.6.2.2 Add New User



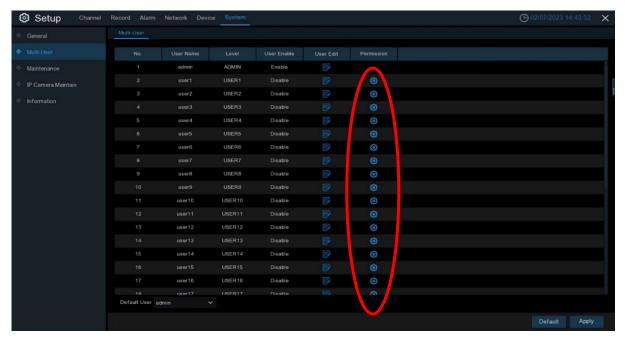
Select one of the currently inactive users and click the "User Edit" icon



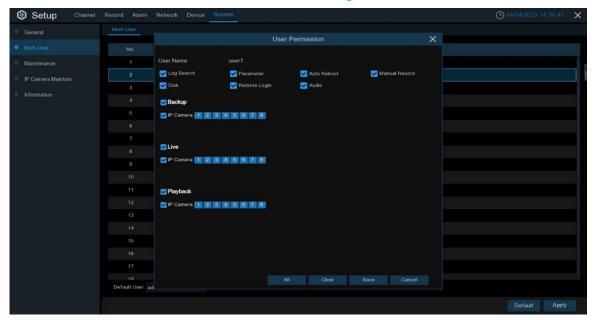
- 2. From the "User Enable" drop-down menu, select "Enable" to enable the user.\
- 3. Click on "User Name" to edit the username.
- 4. Click on "Password" to enter the desired password
- 5. Click "Confirm" and re-enter the password for confirmation.
- 6. Click "Save" and enter the administrator password for authentication.

### 4.6.2.3 Set user permissions.

The administrator account is the only account with full control over the system. You can enable or disable access to certain menus and features for each user.



1. Click on the edit icon under the Permissions tab." 🔞.



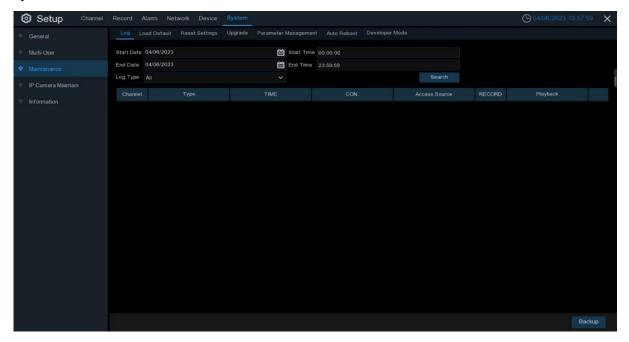
2. Set the user's permissions by checking the corresponding boxes for each function. Click 'All' to select all boxes or click 'Clear' to deselect all boxes.

The administrator can set the general user's permissions as needed. he following permissions can be selected:

- Log search: able to view all system logs.
- Parameter settings: able to configure parameters for all pages.
- Automatic restart: able to perform system maintenance tasks such as upgrading the system version, restoring factory settings, restarting the device, and shutting down the device.
- Manual recording: able to manually start and stop recording.
- Disk management: able to manage and control the operation of hard disks and USB flash drives.
- **Remote login**: whether to have permission to remotely access the NVR.
- > Audio: able to control channel audio and intercom.
- ▶ Backup: by enabling the checkbox in front of 'Backup' and selecting the channels that can be backed up, ordinary users have the permission to backup recordings of the selected channels.
- Preview: by enabling the checkbox in front of 'Preview' and selecting the channels that can be viewed, ordinary users have the permission to monitor the live preview of the selected channels.
- Playback: by enabling the checkbox in front of 'Playback' and selecting the channels that can be viewed, ordinary users have the permission to playback recordings of the selected channels.
- 3. Click 'Save' to save your changes.

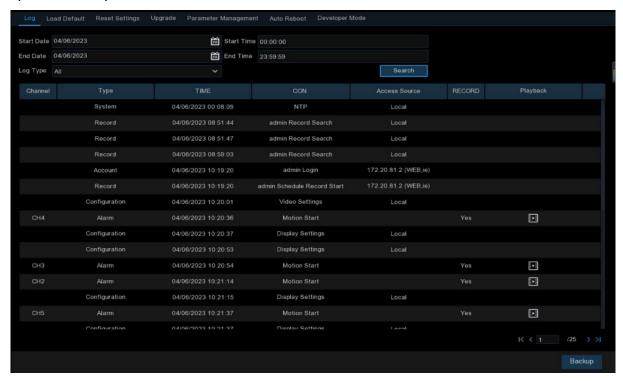
# 4.6.3 System Maintenance.

In this menu, you will be able to search and view system logs, restore factory settings, upgrade the system, export and import system parameters, and configure the automatic restart of the system.



### 4.6.3.1 Logs

The system logs will display important system events such as motion alarms and system warnings. You can easily export backup files of the system logs to a USB flash drive within a specified time period.

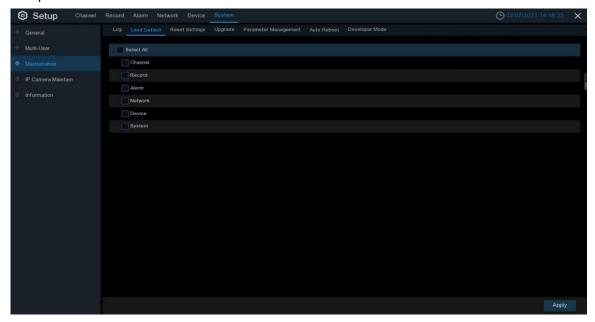


#### Log Search and Backup:

- 1. Click on the area next to **Start Date** and **Start Time**, and select the start date and time to search from the screen calendar.
- 2. Click on the area next to **End Date** and **End Time**, and select the end date and time to search from the screen calendar.
- 3. Select the event type to search for from the drop-down list next to **Log Type**, or select **All** to view the entire system log for the selected time period.
- 4. Click **Search** to search for the logs.
- 5. Browse through the system logs from the selected time period:
- o Click on Playback to playback the event immediately.
- Use the / buttons in the lower-right corner K < / > > K of the menu to switch between pages of system log events.
- 6. Click **Backup** to create a backup of the system logs. Make sure your flash drive is connected to the USB port of the NVR.
- 7. The backup drive menu will appear. Navigate to the folder where you want to save the backup file, and click **OK** to begin.

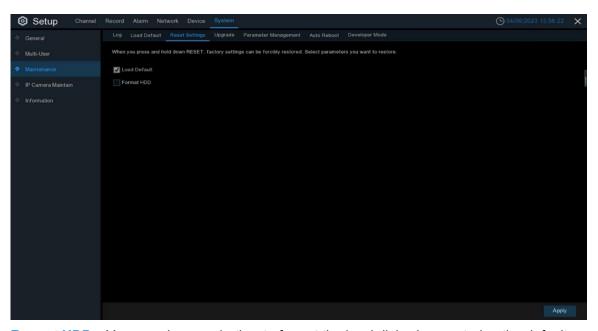
## 4.6.3.2 Restore Factory Settings

Reset the NVR settings to the default settings. You can choose to reset all settings at once or only the settings on a specific menu. Restoring the default settings will not delete the recordings and photos saved on the hard disk.



Select the items to be restored, or select 'Select All' to choose all items. Click on 'Apply' to load the default settings for the selected items.

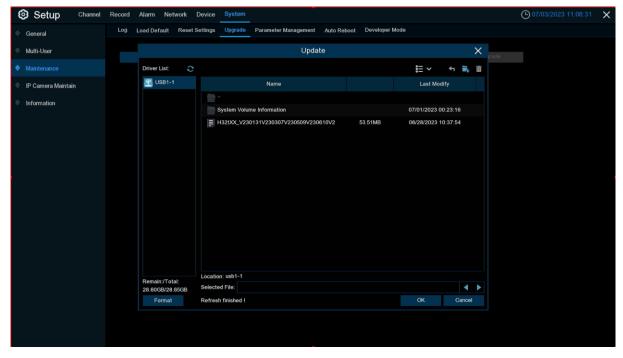
## 4.6.3.3 Reset Settings



**Format HDD:** You can choose whether to format the hard disk when restoring the default settings.

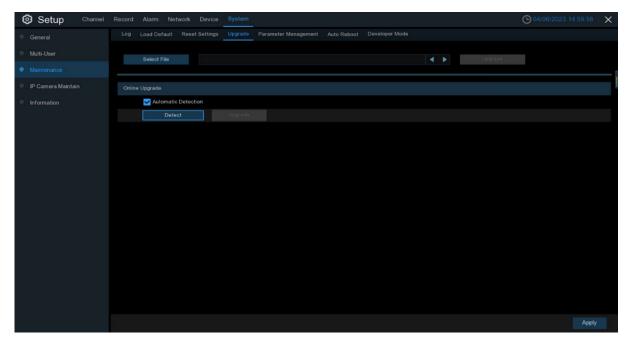
## 4.6.3.4 System Upgrade

## 4.6.3.4.1 USB disk file upgrade



- 1. Copy the firmware file (.sw file) to a FAT32 formatted USB drive and then insert the flash drive into the USB port of the NVR.
- 2. Click on Select File to select the firmware file in the USB flash drive, then click OK.
- 3. Click on the 'Upgrade' button to start the system upgrade. The system upgrade will take approximately 5-10 minutes. Do not turn off the power of the NVR or remove the USB drive from the NVR during the firmware upgrade process.

## 4.6.3.4.2 Online Upgrade



Through burning the upgrade file URL and online upgrade switch parameters, the terminal can be upgraded online via a network server (HTTP or FTP).

- (1) When **automatic detection** is enabled, the terminal will first determine whether it is an automatic maintenance restart when powered on. If it is an automatic maintenance, it will skip checking for new upgrade packages (the judgment method: if the current system time is within 30 minutes later than the automatic maintenance time, it is considered an automatic maintenance). If it is not an automatic maintenance restart, it will wait for 5 minutes before checking for new upgrade packages. If there is a new package, the upgrade status bar will display 'Online Upgrade'. When the user selects this channel and clicks upgrade, it will download the upgrade package.
- (2) When automatic detection is enabled, it will periodically check for new upgrade packages during operation. If there is a new package, the upgrade status bar on the upgrade page will display 'Online Upgrade'. When the user clicks upgrade, it will download the upgrade package. The detection period is a random number between 18 and 23 hours after the restart time (including automatic maintenance) (the random number is in seconds and is randomly obtained when powered on). This period is obtained randomly at power-on, and during operation, the period will not change and will continue to be checked with this period until the system stops running (because the upgrade terminal period is also 18-23 hours, to prevent too much bandwidth being occupied by simultaneously downloading upgrade packages, the first detection period of the front-end device before upgrading will subtract 5 hours from the random value based on 18-23 hours, which is earlier than the later periods based on this random value).
- (3) During system operation, the user can click to check for new upgrade packages on the upgrade page. After clicking, a pop-up box will prompt that the **detection** is in progress. After the

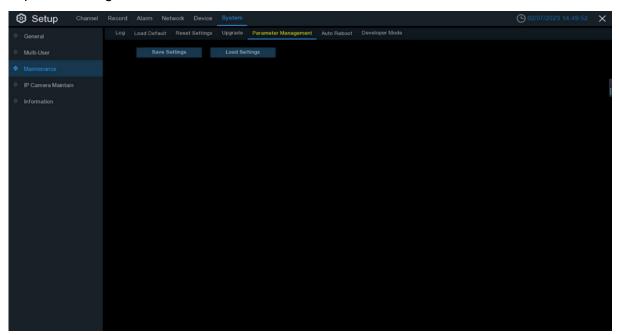
detection is completed, the upgrade status bar will display the result. When a new **upgrade** package is detected and the user clicks upgrade, it will download the upgrade package. Note: manual detection does not affect periodic detection.

(4) When switching from opening to closing **automatic detection**, periodic detection will be stopped. When switching from closing to opening **automatic detection**, periodic detection will be started, and the detection period will be a random number between 18 and 23 hours after this time point. When opening, it will be delayed by 1 minute before checking for new upgrade packages (the delay of 1 minute is to prevent users from repeatedly switching between opening and closing. Note: if the user closes it during the delay, it will exit the timing and will not check for new upgrade packages. After opening again, it will start timing again).

Note: the neutral program currently does not support FTP online upgrade.

#### 4.6.3.5 Parameter Management

You can export the configured main menu parameters to a USB drive and also import the exported settings file from the USB drive to the NVR.

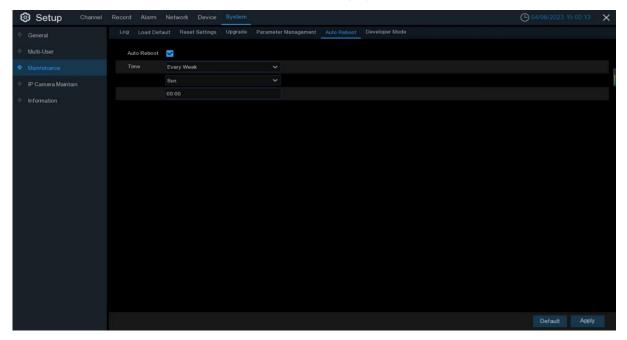


**Save Settings**: Clicking this button will save the current system settings of the NVR to a USB device. You will need to enter the administrator password for authentication.

**Load Settings**: After creating the system parameter export file, you can import the parameters on another NVR. Click on the **Load Settings** button to bring up the USB drive menu and select the parameter file. You will need to enter the administrator password for authentication.

#### 4.6.3.6 Automatic Maintenance

This menu allows the system to automatically restart regularly. It is recommended to keep this feature enabled as it can maintain the operational integrity of the NVR.

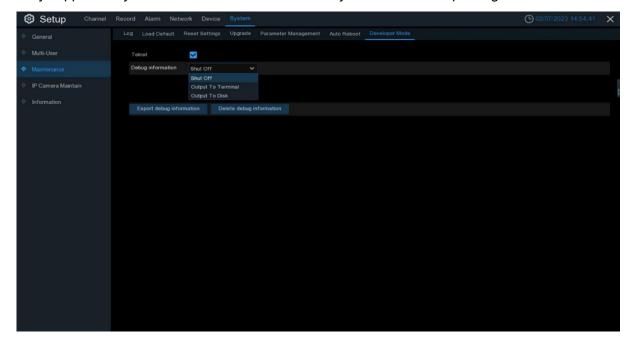


Auto Reboot: Check to enable.

Time: You can set the NVR to reboot daily, weekly, or monthly.

## 4.6.3.7 Developer Mode

Only supported by some devices. This menu allows you to save serial port logs to a USB drive.



Telnet: When enabled, you can log in to the device using Telnet.

**Debug information:** You can choose the location where serial port logs are saved.

**Shut Off:** Do not save serial port logs.

Output To Terminal: Output serial port logs to the terminal.

Output To Disk: Save serial port logs to the hard disk.

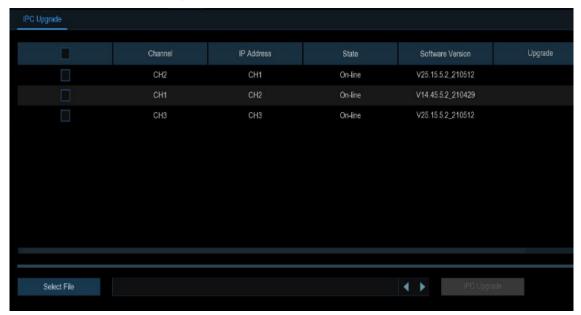
**Export debug information:** Export serial port logs to a USB drive.

Delete debug information: Delete collected serial port logs.

#### 4.6.4 Network Camera Maintenance

#### 4.6.4.1 Upgrade Wireless Cameras

With this menu, you can upgrade the firmware of wireless cameras.



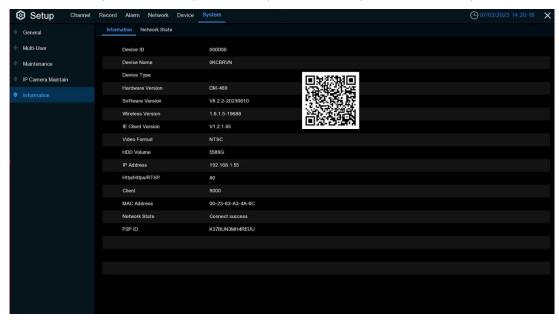
- 1. Select the wireless camera to upgrade the firmware.
- 2. Click Select File and choose the update file from the USB drive, then click OK.
- 3. Click the 'IPC Upgrade' button to start the upgrade process. You will need to enter the administrator password for authentication. During the upgrade, do not turn off the power of the NVR, wireless camera, or remove the USB drive. Once the operation has started wait until you see the Upgrade Success dialog box before leaving this page.

## 4.6.5 System Information

With this menu, you can view system information, channel information, recording information, and network status.

## 4.6.5.1 System Information

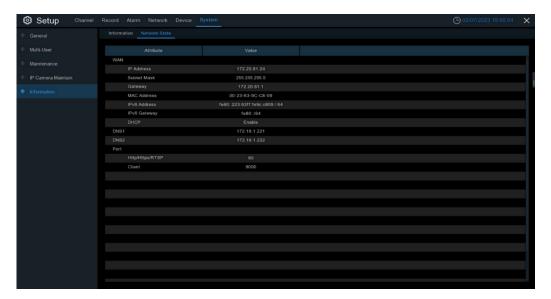
View device ID, device model, IP address, MAC address, firmware version, and other information.



If your NVR supports P2P function, you can find the P2P ID and P2P QR code on the information page. You can use the app to scan this QR code to remotely preview the NVR.

## 4.6.5.2 Network Status

View network information.



## Chapter 5: Search, Playback, and Backup

The search function allows you to search and playback previously recorded videos and snapshots stored on the NVR hard drive. You can select to playback videos that match your recording schedule, manually recorded videos, or only motion events. The backup function allows you to save important events (videos and snapshots) to a USB flash drive.

### 5.1 Use the search function

Click on the search icon Search to enter the search interface.



- 1. Search options: The system provides various search and playback methods, including General, Event, External File, and Slice.
- 2. Search date: Search and playback based on date.
- 3. Search type: The system provides different search types to narrow down the search range.
- 4. Channel selection: Select the channels you want to search and play.
- 5. Video playback control: Control the playback of the video.



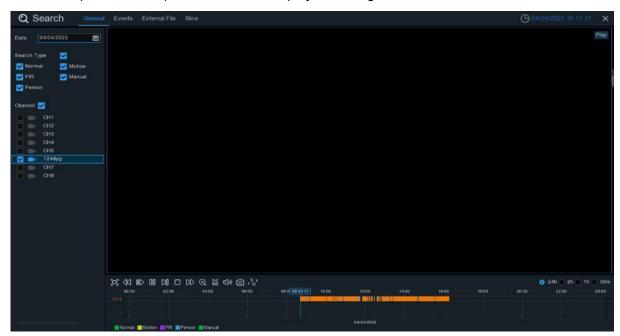
- Expand video playback to full screen.
- Fast rewind, with speeds of x2, x4, x8, and x16.
- Slow motion, with speeds of 1/2, 1/4, 1/8, and 1/16.
- Play the recording.

Pause the recording.		
Frame-by-frame playback: Click once to play one frame of the video.		
Stop the recording.		
Fast forward, with speeds of x2, x4, x8, and x16.		
Click to zoom in, and then click and drag the camera image during playback to zoom in on the selected area. Right-click to return to normal playback.		
Quickly save a section of video to a USB flash drive. See more about <u>7.1.1.1 Video clip</u> <u>backup</u> .		
Save the clipped video.		
(I) Volume control: Scroll the scrollbar to increase or decrease the volume.		
Snapshot: Capture an image to your USB flash drive. If the video playback is in split-		
screen view, move the mouse cursor over the channel to capture and then click the icon		
to save the snapshot.		
Click to switch between the original ratio screen or the stretched screen.		
6. <b>Timeline:</b> Continuous recordings are displayed as color bars, representing different types of recordings (the legend is displayed in the lower right corner of the screen). Use the time		
frame ( 24h 2h 1h 30m ) option to view smaller or larger time periods.		
Recordings of different types are displayed in different colors:		
Normal Motion PIR Alarm Person Manual		
Green represents normal recording;		
Yellow represents motion detection recording;		
Purple represents PIR alarm recording;		
Blue represents human body alarm recording;		
Orange represents multiple alarm recordings triggered at the same time;		
Dark green represents manual recording.		

7. Recording playback status: Displays the status of the recording playback.

## 5.1.1 Playback interface search and playback recordings

This menu provides an option to search and play recordings for a selected date.



- 1. Click on the icon iii to select a search date in the calendar.
- 2. Choose a search type.
- 3. Select the channel you want to search or choose to search all connected channels.
- 4. The search results will be displayed on a timeline from 00:00 to 24:00.
- 5. Click on the icon to start playing.
- 6. Use the icons on the video playback controls to control the playback.
- 7. Use the time frame ( 24h 2h 2h 1h 30m ) to select a smaller or larger time period to view.
- 8. If you want to quickly save a segment of the video during playback, you can use the video clip backup function 🎇 .
- 9. Click to switch between the original aspect ratio and stretched aspect ratio.

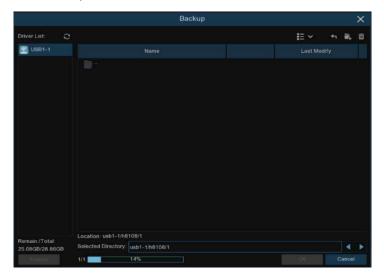
## 5.1.1.1 Video clip backup



- 1. Insert your USB flash drive into the NVR.
- 2. Start video playback.
- 3. Click an on the clip icon .
- 4. Check the channel you want to backup video clips from.
- 5. Move the mouse cursor to the timeline where you want to start the video clip.
- 6. Hold down the left mouse button and drag the cursor to the timeline where you want to end the video clip.
- 7. When the icon 🎇 changes from to 🌅 , click on icon 🛅 to save the video clip.
- 8. Choose the file type for the backup file and click on the "Save" icon to save the video clip. Make sure your USB drive has enough space to save the video clip.

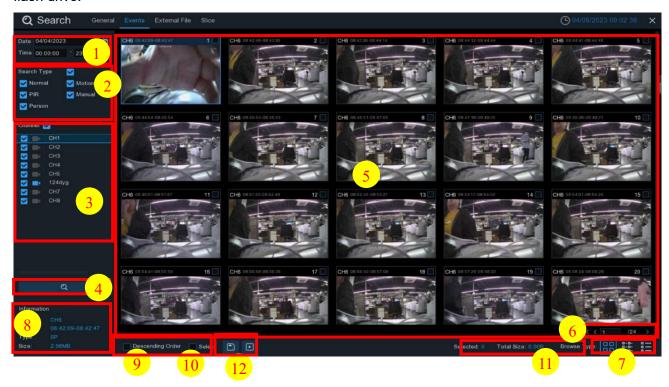


- 9. The backup drive menu will appear. Navigate to the folder where you want to save the backup file.
- 10. Click "OK" to begin. The progress bar at the bottom of the window will show the progress of the backup.



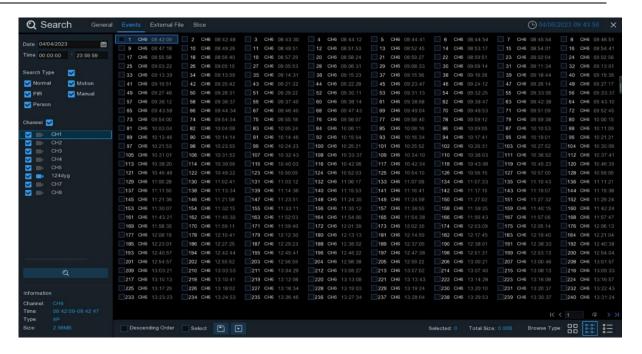
## 5.1.2 Event Search, Playback, and Backup

Through event search, you can view a list of recorded videos that conveniently summarizes the channel, start and end times, and recording type. You can also quickly backup events to a USB flash drive.

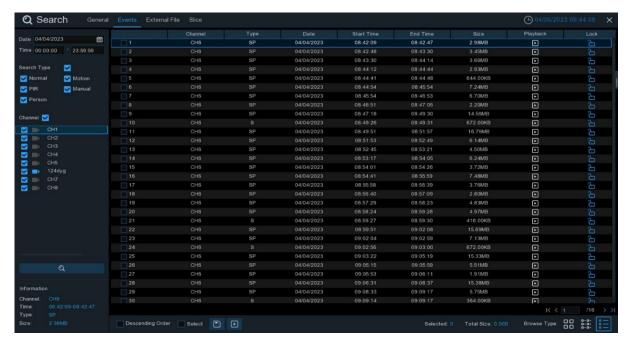


#### **Event Search, Playback, and Backup:**

- 1. Click on the icon to select the date and time you want to search for.
- 2. Select the recording type you want to search for, or select "All".
- 3. Select the channel you want to search for, or check "All Channels" for all channels.
- Click on (2) the icon to begin the search.
- 5. Events that match the search criteria will be displayed in a list format. You can double-click on an event to immediately play the video.
- 6. Click on the icon in the bottom right corner event pages or enter the page number you want to browse.
- 7. You can switch to a list view by clicking on the icon in the bottom right corner of the screen:
  - Thumbnail View: You can view snapshots of events.
  - List View: Events will be displayed in a list.



Detailed View: You can view detailed information about events.



- 8. When you click the left mouse button on an event, the system will display event information in the lower left corner of the screen.
- 9. Descending Order: Sort the file list in descending order.
- 10. Selection: Check the checkbox after "Event ID" to select the file, or check the checkbox after "Select" to select all events on the page.

- 11. The number of selected files and total size information will be displayed in the lower right corner of the screen.
- 12. After selecting "File", click on the icon to save the video to a USB drive, or click on the icon to enter the event playback control window to play the video.

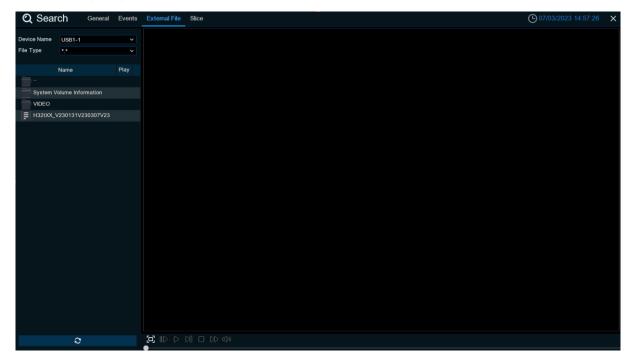
## **5.1.2.1 Event Playback Control**



- 1. Event List: You can select events here.
- 2. Click on the icon to save the selected event video to a USB drive, or click on to start playing the video.
- 3. The event you are playing will be displayed on the timeline.
- 4. Use the time frame options ( 24h 2h 1h 30m ) to view smaller or larger time periods.

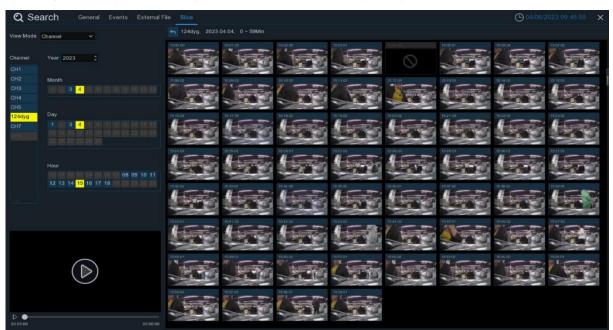
## 5.1.3 External Files

This is where you can play videos from an external USB drive. Select a file on the left to automatically play it.



## 5.1.4 Slice Playback

This page allows you to refine your video search to display every minute.



Select the stream, channel, month, day, and hour in order to display 60 one-minute videos from the current hour on the right side of the page. Clicking on a video will allow for simple playback in the lower left corner, while clicking on will allow for normal playback.

View Mode: If you select Channel, you must first select the channel before searching, and if you select Time, you must first select the time before searching.

# **Chapter 6: Remote Access via Web Client**

Access your NVR remotely via a PC at any time using the web client. Before accessing the web client, make sure that the NVR's internet configuration is correct.

## 6.1 Basic System Requirements for Web Client

The minimum hardware and operating system requirements for running the web client are as follows.

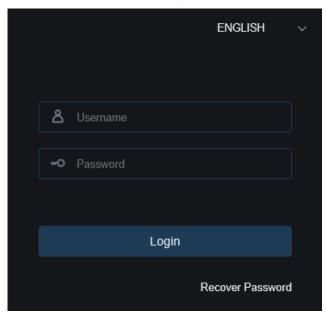
Item	Minimum	Value Recommended Value	
CPU	Intel® Core™ i5 CPU	Intel® Core™ i5 CPU or higher	
RAM	4GB or more	1000G or more	
Hard Drive	500G or more	1000G or more	
Graphics Memory	2G or more	4G or more	
Display Resolution	1280*1024	1920*1080	
OS	Windows 7 or later Mac OS X® 10.9 or later		
DirectX	DirectX 11		
Direct3D	Acceleration Function		
Ethernet Adapter	10/100/1000M Ethernet adapter		
IE Browser	Microsoft IE browser (Version: 11, 10)		
Firefox Browser	Version 52 or later		
Google Chrome	Version 57 or later		
Browser			
Apple Safari	Version 12.1 or later		
Edge Browser	Version 79 or later (using chromium kernel)		

## 6.2 Web Plugin Download and Installation

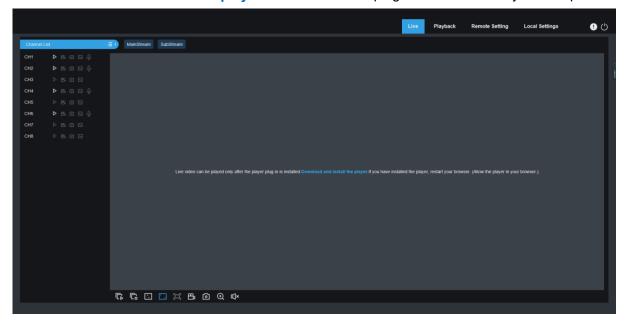
To access the web client, please follow the steps below:

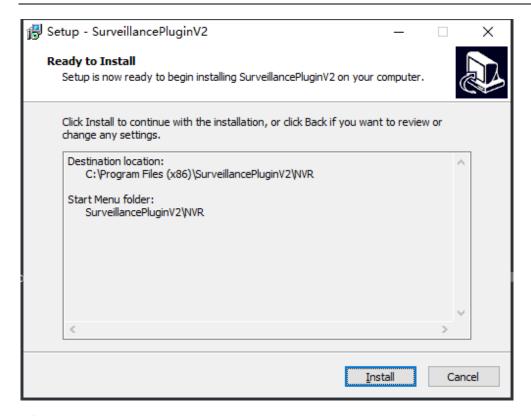
#### For IE Browser:

1. Open the browser on your PC, enter the IP address or DDNS domain name (hostname) of the NVR in the URL box, and log in to the web client with your username and password.



**2.** The first time you run the web client, the system will prompt you to install the web client plugin. Click "Download and install the player" to download the plugin and install it on your computer.





**3.** After installing the plugin, refresh the page and click "Allow" in the pop-up window at the bottom of the page to use the playback function normally.

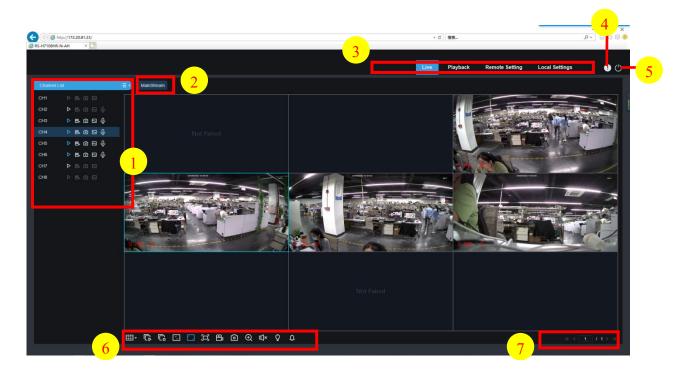
**Note:** When using Apple Safari/Google Chrome/Firefox/Microsoft Edge browser, there is no need to download the plugin, you can directly access the NVR.

## **6.3 Web Client Management:**

The web client supports full control of the NVR with an administrator account. Please ensure that you protect your username and password to prevent unauthorized access.

#### 6.3.1 Preview Interface

This is the first screen that opens after logging in to the web client. Here you can open or close real-time preview, manually record videos to your local computer, take screenshots, adjust colors, etc.



#### 1- Channel List: Open the channel list for quick camera access.

- Click the icon to display the channel list.
- Click the icon to close the channel list.
- Open/Close the live video stream. When the real-time video stream is open, the icon will be displayed in blue.
- Manual recording icon. Click to start manually recording the streaming video. Click again to stop recording. The manual recording is saved to your computer. The icon is displayed in blue during recording.
- Manual snapshot icon. Click to save the current live display snapshot to your computer.

Bitrate icon. The camera is set to use main stream, sub-stream, or mobile stream video settings. Halow's web client only supports main stream preview.

#### 2- Real-time Video Stream Options:

Main Stream: View all live videos with high-quality main stream video settings.

#### 3- Main Menu:

Preview: View real-time videos from the cameras.

**Playback:** View recorded videos saved on the NVR hard drive.

Remote Setting: Access the NVR setting menu.

**Local Setting:** Set the download location for recordings and snapshots taken through the web client, and select the "File Type" of video files.

- **4- Information:** Hover your mouse over it to view the system user, IE version, and plugin version information.
- 5- Logout.
- 6- Preview Control Buttons:



- Close all channel previews.
- Original ratio: display the live video in the original ratio.
- Stretch: Stretch the real-time video to fit the entire area of each channel on the screen.
- Enlarge the web client to full screen.
- Manual recording: click to start manual recording for all displayed channels. Click again to stop recording. The manual recording is saved to your computer.
- Manual snapshot: click to take a snapshot of all displayed channels and save it to your computer.
- Digital zoom: click an active image and then click and drag over an area of the active image to zoom in. Right-click to return to normal display.
- Volume control: Adjust the Level to adjust the volume.



White light control, manually turn on the white light deterrent.

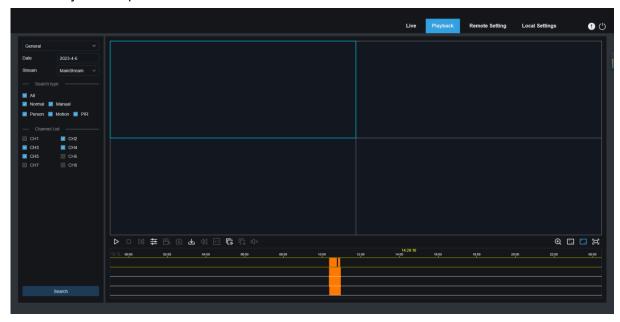


Alarm bell control, manually turn on the alarm bell warning.

7- Navigation: Displays the current channel page number being displayed. Use the directional keys to switch between pages.

## 6.3.2 Playback

You can search and play back recorded videos stored in the NVR's hard drive and download videos to your computer.



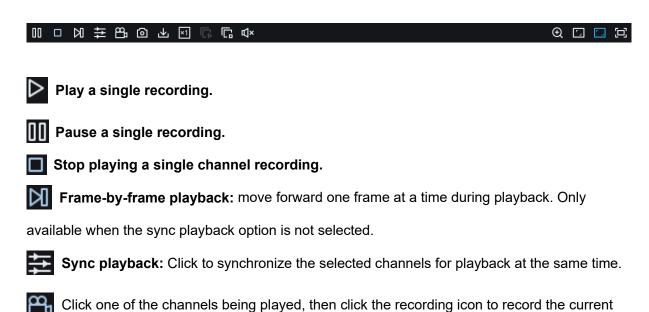
#### **Search for recordings:**

- 1. Click the playback icon in the upper right corner to enter the playback interface
- 2. Select the date to query the recording on the calendar. Days with recordings will be displayed with a red underline
- 3. In the "Type" section, select the type of recording you want to search for, or select "All" to search for all types of recordings.
- 4. Select the video stream you want to search for and play. If you want to play back sub-stream recordings, make sure that the NVR is set to DualStream recording in section <u>4.2.2.1 of the recording settings</u>.
- 5. Check the channels you want to playback recordings for (up to four channels can be searched and played back simultaneously).
- 6. Click the Search icon to search for recordings.

7. The recordings that match your search will be displayed on the timeline. Click on the video segment you want to start playing, then click the play icon to play the recording.

## 6.3.2.1 Playback Control Icons

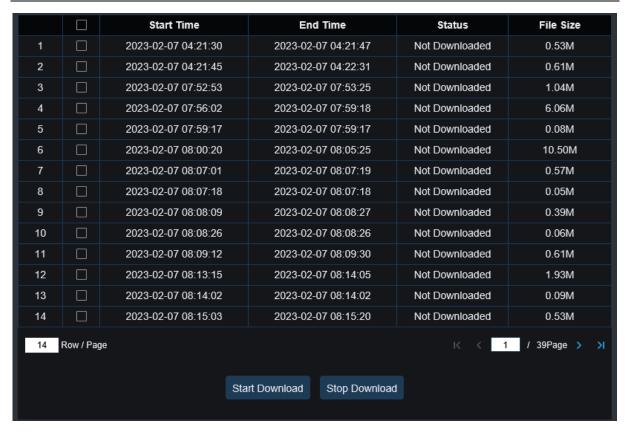
save it to your computer.



video to your computer. Click again to stop recording.

Click one of the channels being played, then click the capture icon to take a snapshot and

Open the "Download" menu to download the selected type and time of recordings for the selected channels.

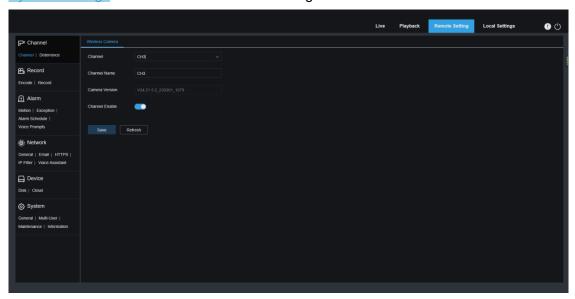


Select the file you want to download and click the start download icon to begin. You will see the download status. Click the stop download icon to stop the download.

- Playback speed: Click to select the playback speed.
- Play all channels: Click to play all channels you have selected to search. Only available when the sync playback option is not selected.
- **Stop playing all channels:** Click to stop playing all channels. Only available when the sync playback option is not selected.
- **Digital zoom:** Click on the video being played, then click and drag over an area of the video to zoom in. Right-click to return to normal display.
- Original ratio: display the video being played in the original ratio.
- Stretch: Stretch the played video to fit the entire area of each channel on the screen.
- Enlarge the web client to full screen for playback.

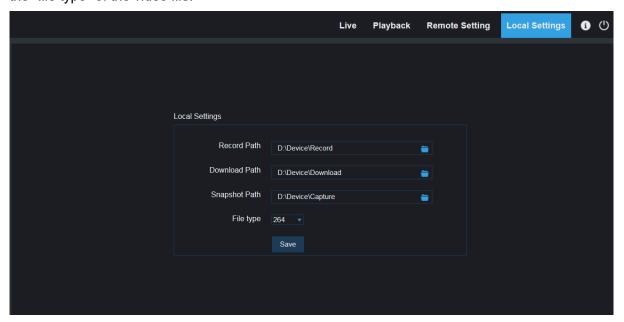
## 6.3.3 Remote Settings

Here, you can remotely configure the settings of the NVR. Please refer to "Chapter Four NVR System Settings" for more details on NVR settings.



## 6.3.4 Local Settings

Set the download location for videos and snapshots captured through the web client by selecting the "file type" of the video file.



**Record Path:** Click **to** browse and select the folder on your computer where you want to save manually recorded videos.

**Download Path:** Click to browse and select the folder on your computer where you want to save downloaded videos.

Snapshot Path: Click to browse and select the folder on your computer where you want to save manually captured snapshots.

File Type: Select your preferred file type for manually recorded videos.

Save: Click to save your changes.

# Chapter 7 Viewing Backup Videos on PC/Mac

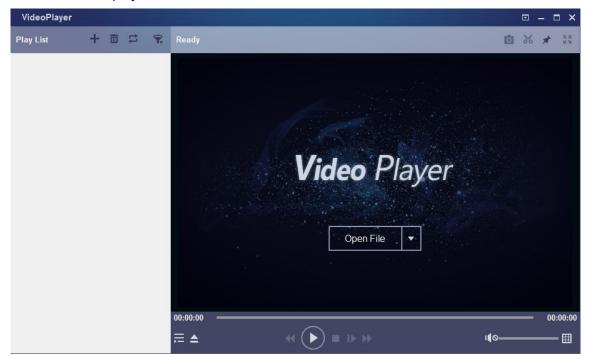
This section will help you play backup files using the powerful video player.

Mac users should install the application "VideoPlayer\_x.x.xx\_xxxx\_xx\_x.dmg", for example: VideoPlayer\_1.0.15\_2017\_01\_6.dmg.

#### Minimum system requirements for computers:

- Intel Pentium 4 or higher
- Microsoft systems XP / Vista / 7 / 8 / 10
- 256MB RAM
- 16MB free disk space

1. Install the video playback software and run it



- 2. Copy the backup files to your computer.
- 3. Click on the "Open File" icon or click on the "+" icon in the playlist to load one or more video files. The player supports adding and playing files in ".rf", ".avi", ".mp4", ".264", and ".265" formats. Click on the folder icon to load a backed-up video folder.

## **Video Player Control**





#### 1. Playlist

- Add files
- Delete files
- Play modes: play a single file and stop; play all listed files in sequence; repeat play a single file; repeat play all files
- Filter by file name
- 2. Show/hide playlist
  - Click to open file or load folder

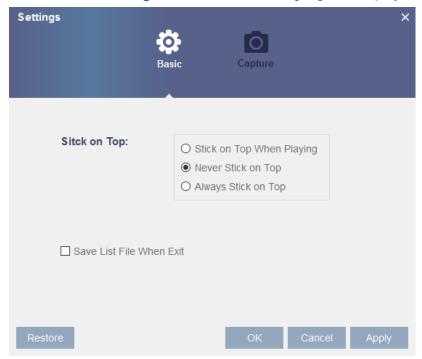
#### 3. Play control

- Play
- Pause
- Stop
- Frame-by-frame playback: Click once to play one frame of video
- Slow motion playback: can be set to play at 1/2, 1/4, 1/8, and 1/16 speed
- Fast forward: can be set to play at x2, x4, x8, and x16 speed

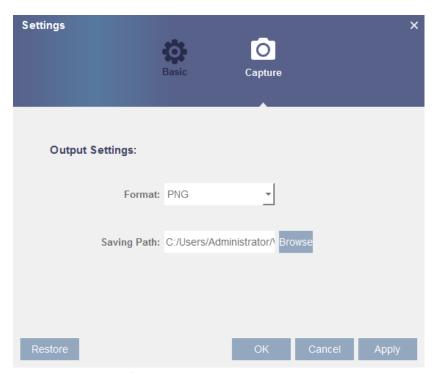
#### 4. Volume control

Multi-screen playback: It allows playing multiple videos at once. When selecting "Multi-screen playback", videos from the "Playlist" can be dragged to the "Play" interface.

- 5. Snapshot
  - 🐹 Save a video clip to your computer by starting and stopping the clip with one click.
  - keep the video player on top.
  - Maximize the video window to full screen.
- 6. Advanced Settings menu: Select the language of the player and configure its functions.



Basic Settings: Set the topmost mode.

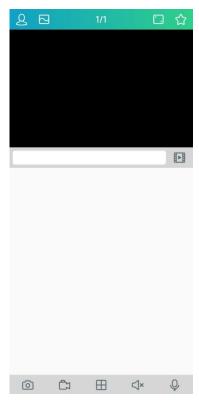


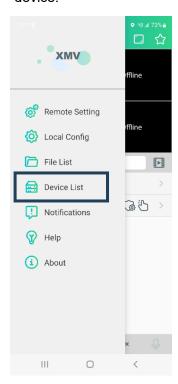
**Capture Settings:** Set the format and save path for snapshots.

# Chapter 8 Remote Access via Mobile Devices

The NVR supports remote access via mobile devices based on the Android and iOS operating systems.

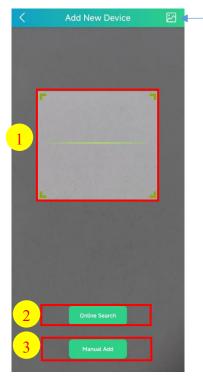
- 1) For Android devices, search for "XMV" in the Google Play Store and install it. For iOS devices, search for "XMV" in the App Store and install it.
- 2) Run the application and the real-time viewing screen will be displayed.







4) Select "Manual Add", enter the NVR information, and add the new device.



Click this icon to scan a QR code from a saved image on your mobile device.



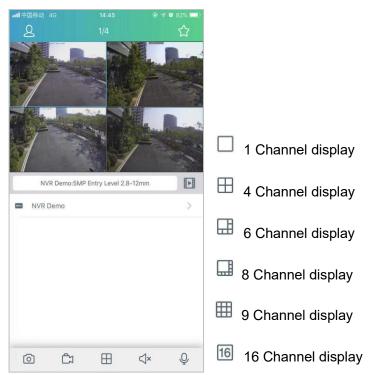
- 1. Scan QR Code: Scan the QR code to add the device.
- 2. Online search: Search for and add devices on the same local network as the device.
- 3、Manual add:

IP Address/ID: Enter the IP address or P2P ID.

Media Port: Enter the media port in the NVR network settings.

Username/Password: Enter the NVR username and password.

5) After all settings are completed, click "Save" to save. When the device is connected properly, the app will switch to the live view



**NOTE**: This application can display up to 16 channels on one screen. You can swipe the screen to move to the next screen to view another 16 channels. A total of 80 channels can be displayed.

- Snapshot: Capture an image of the selected channel and save it to the app file list. The captured image can be downloaded to the phone from the file list.
- Recording: Record the selected channel and save it to the app file list. The recorded video can be downloaded to the phone from the file list.
- Audio: Turn on or off the sound.
- Intercom: Two-way intercom between devices (if your NVR supports it).
- PTZ Control (if your IPC supports it).
- Close Channel: Press and hold the video image, this icon will appear above the window, drag the video to this icon to close the video preview.

## **Chapter 9 Appendix**

## 9.1 Frequently Asked Questions

- 1. What should I do if the hard drive is not detected? Answer: If the system does not detect the hard drive, please check if the data cable and power cable of the hard drive are properly connected, if there is a problem with the interface of the hard drive on the motherboard, or refer to the specification to see if the hard drive you are using is supported.
- 2. What should I do if I accidentally forget the system password after changing it? Answer: Use the password recovery options configured during initial setup (ie: security questions or certificate of authorization). If those were not setup, then the last resort is to set the unit to factory defaults using the reset button the rear panel of the NVR.
- 3. Why is there no video signal or abnormal image output on the monitor after the NVR is connected to the camera with both ends powered normally?
  Answer: Please check if the network cable connection at the NVR end is good, if the network cable is too old and aging, or if the N/P selection is consistent.
- 4. What are the effects of heat dissipation on the NVR during operation? Answer: The operation of the NVR will generate some heat. Please place the NVR in a safe and well-ventilated place to prevent the temperature from being too high for a long time, which may affect the stability and service life of the system.
- 5. Can I use a hard drive from my personal computer in the NVR? Answer: It can be used as long as it is a hard drive that the system can support. However, please note that once the NVR is running, the data on your hard drive will be lost.
- Can playback be done simultaneously with recording?
   Answer: Yes, the system can support recording while playback is in progress.
- 7. Can specific recorded footage on the NVR's hard drive be deleted?

  Answer: Considering file security, you cannot delete only a portion of the recorded footage. If you need to delete all recorded footage, you can choose to format the hard drive.

#### 8. Why can't I log into the NVR client?

Answer: Please check if the network connection configuration is correct, that the RJ-45 connection is secure, and if the account and password entered are correct.

9. Why can't I find any recorded footage information during playback?

Answer: Please check if the data cable connection to the hard drive is good and if the system time has been illegally adjusted. If the problem persists after multiple attempts, check if the hard drive is damaged.

#### 10. Why can't the NVR control the PTZ?

Answer: Please check:

- a) Front PTZ failure.
- b) Incorrect settings, connection, or installation of the PTZ decoder.
- c) Incorrect PTZ settings in the NVR.
- d) PTZ decoder protocol and NVR protocol do not match.
- e) PTZ decoder address and NVR address do not match.
- f) If multiple decoders are connected, a  $120\Omega$  resistor should be added at the far end of the PTZ decoder AB line for reflection suppression and impedance matching. Otherwise, PTZ control instability may occur.

#### 11. Why isn't motion detection working?

Answer: Check if the motion detection time and area settings are correct, and also check if the sensitivity setting is too low.

#### 12. Why isn't the alarm working?

Answer: Check if the alarm settings and alarm connection are correct, and if the alarm input signal is correct.

#### 13. Why is the buzzer always beeping?

Answer: Check the relevant alarm settings, whether motion detection is enabled and there is continuous motion detected, whether the I/O alarm is set to normally closed, and also check the hard drive alarm settings.

14. Why does the system remain in recording mode even after pressing the "STOP" button or clicking "Stop Recording" in the shortcut menu?

Answer: Pressing "STOP" or clicking "Stop Recording" can only stop manual recording; to stop scheduled recording, modify the recording status for a specific time period to not record. To stop startup recording, change the recording mode to scheduled or manual recording, and then follow the above steps to stop recording. Alternatively, you can set the channel status to closed in the recording settings to stop recording.

## 9.2 Use and Maintenance

- 1. When shutting down the hard disk recorder, please first close the system in the software interface and then turn off the power. Do not directly turn off the power switch to avoid data loss or even damage to the hard disk.
- 2. Ensure that the hard disk recorder is kept away from high temperature heat sources and places.
- 3. Regularly clean the dust deposited inside the body, and keep the hard disk recorder's chassis well ventilated to facilitate heat dissipation.
- 4. For audio and video signal lines and interfaces such as RS-232 and RS-485, do not plug or unplug them while they are powered on, as this can easily damage these ports.
- 5. Regularly check whether the hard disk power cable and data cable inside the body have been used for too long and are aging.
- 6. Try to avoid other electrical circuits and devices from affecting the audio and video signals to prevent damage to the hard disk from electrostatic or induced voltage.
- 7. If the ne twork cable interface is frequently plugged and unplugged, it is recommended that users replace the connection cable regularly to avoid unstable input signals.
- 8. His is an A-level product. In a living environment, this product may cause electromagnetic interference. In this case, users may need to take practical measures to deal with the interference.

## 9.3 Random attachment (subject to actual object)







□ Power Adapter



☐ Quick Guide

## Warning:

There is a risk of explosion if the wrong battery is replaced.

Dispose of used batteries according to the instructions.



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