User Manual

Model: FN7104W-B4

Version: 1.3

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Security Warning

- Please change the password of your Foscam NVR App account, and NVR and cameras user name regularly. The password should contain a combination of numbers, letters and special characters.

- Please keep the user name and password of your cameras, NVR and Foscam NVR App account safe.

- Please update your camera to the latest firmware regularly for an optimal user experience.

Preface

Welcome to use our product, Network Video Recorder (NVR) Kit. This document mainly focuses on the installation and configuration of NVR Kit application system. With high performance video, user-friendly GUI, and practical industrial designs. This series NVR Kit is suitable for civil applications such as homes, stores, internet cafes, and small businesses in addition to mainstream security and surveillance applications.

Default Settings

NVR / Camera: Default administrator&password is admin & random code (on the MAC sticker).

Declaration

- The feature of product on this manual is just for reference. Please prevail in physical product.
- The manual provides multiple product models for reference. The specific operations are not listed one by one. Please follow the operations depending on the actual product.
- Because the actual environment may be discrepant, the actual values of some data may be different from the values provided in the manual. If there are any question or dispute, the final interpretation of prevails.
- If you do not follow the manual during operation, you will bear any loss caused thereof.

Important Safety Instructions

This chapter describes how to use the product properly so as to prevent danger and property loss. Be sure to follow the security instructions when operating this product.

The CR2032 model lithium battery is used inside the device. If other types of batteries are used, there is a danger of explosion. When replacing the battery, do not put the old battery into fire or handle it with household garbage. Please dispose of used batteries in accordance with local laws and regulations

Installation Environment

- Ensure device is installed in the well-ventilated, dust-free environment.
- It is recommended to use a voltage stabilizer for supply of power. If the power supply was unmatched, the device might work abnormally or stop working.
- Check that the voltage of the extra power supply is the same with the NVR's requirement, and the ground connection is working properly.
- The distance between the NVR and other device or wall should be more than 6cm / 2.4in away to facilitate heat dissipation.

Precautions

- Please keep the device horizontally and avoid inclination or inversion.
- Do not install the wireless NVR in humid and dusty environment.
- Put the wireless NVR in drafty environment in case of ventilation port being blocked.
- Don't touch the power switch with wet hand or damp items to avoid shock.
- Do not splash liquid or metal filing on the NVR To avoid short-circuit fault or blaze.
- Explosion may happen because of improper replacement of battery, do not replace it by yourself; If you need, make sure it is the same type of battery. And do not open or repair it.
- Do not take the device apart when it is operating (or connecting to power).
- Please use suitable and professional hard disk to ensure continues and stable recording.
- Lightning protection is needed when device is connected to communication cables. Ethenet cable which comes form outside, connecting to the wireless NVR directly is forbidden.
- Check the power supply to avoid damage because of voltage mismatch.

- Make sure the wireless NVR working within suitable temperature and humidity environment.

  Short circuit may occur when dust become wet on circuit board. Please clean the dust on circuit board, connectors, and NVR case.

1 Overview

1.1 Product Introduction

The series of product is a NVR Kit. This advanced product series receives a high quality video stream that is transmitted digitally by the IP Camera (IPC). The product can perform live video preview, recording, playback, remote access, and backup simultaneously.

1.2 Key Features

Network Monitoring

You can access the NVR system remotely through the browser on a PC and Foscam APP, or access the NVR system locally by using the display or monitor.

Multi-screen Preview

Multi-screen preview indicates that several pages are displayed on the screen of the monitor based on the same scale.

Recording

The NVR supports recording and storing video files on a Hard Disk Drive (HDD). Stored videos files can be queried or played back through local GUI.

Recording can be classified into schedule recording, manual recording, and alarm recording from low priority to high priority. If recording of any two types is enabled at the same time, only the recording of a higher priority takes effect.

- Manual recording
  You can manual enable recording in the corresponding channel.
- Schedule recording
  You can select the scheduled time segment to enable or disable recording.
- Motion detect recording
  After the motion detect is enabled and recording is selected, motion detect recording is enabled when motion detection is triggered in the detection time segment and detection area.
- Alram recording

After the Shelter is enabled and recording is selected, If the video is occluded, the video channel will have an alarm flag alert that triggers an alarm and alarm logging will be enabled

Note

When NVR system time and IPC time are different, the NVR recording will based on the NVR system time.

Playback

You can play recording video files stored in the Hard disk. Recording includes schedule recording, manual recording, Motion recording and alarm recording. Single-screen playback and four-screen synchronous playback are supported.

Alarm

Motion Detection Alarm

You can configure motion detection information about the corresponding channel in the NVR system. When an object moves in the detection time segment and detection area, an alarm is triggered, the NVR system enables motion detection recording, sends pictures to your mailbox, and uploads pictures to your FTP server.

Manage

You can search for IPC devices in the LAN through the NVR and add IPC devices to the NVR channel. Through the NVR, you can also manage IPC devices.

HDD Management

When the HDD becomes exceptional (for example, HDD Loss, HDD Full, and HDD Error), the NVR buzzer sounds an alarm.

When the HDD is full, you can select the cycle cover the earliest recording or stop recording.

Other Functions

- Support the logging function.
- Support local GUI output and perform shortcut operations through the mouse (left click to select, right click to return to the previous menu).
- Three roles can access the NVR, which are respectively visitor, operator, and administrator. The rights of the three roles vary from low to high.

1.3 Relevant Version

Name	Recommended Configuration
Monitor	You are recommended to equip a 16:9 monitor with the resolution higher than 1920 *1080.
Network	10/100M Ethernet or above.

1.4 Icons Description

- In the live view mode, there are icons at the right top of the full screen.

  HDD: The HDD is full, and the recording has been stopped.

  HDD: A HDD is not inserted into the NVR or the HDD connected to the NVR is abnormal.

- In the live view mode, there are icons at the right bottom of the screen for each channel,

  REC: NVR is recording for the IPC.

  : The alarm of the IPC is triggered.

- The icon at the right top of the windows: Exit current menu to upper level menu.

1.5 Common Operations

Starting Up the NVR

Turn on the power, The Power indicator LED should turn green indicating that the device begins to start up.

Note

If the power LED indicator on the front panel is off, please check if the power supply is plugged into an electrical outlet;

Shutting Down the NVR

Proper ways to shut down the NVR in the GUI interface: After login, right-click the mouse, you can click **Quit > Power** in the shortcut menu. Then turn off the power switch on the rear panel, the power LED indicator on the front panel turns off.

Note

Don't turn off the power directly when you turning on.

Reset

You can reset the NVR device to restore the factory settings. You can choose any one of the following methods operate.

- Reset button: Press and hold it for 3 seconds to reset all parameters to factory defaults on the bottom of the NVR.
- Local GUI: Right-click the mouse, Choose **Menu > Manage > Maintain** in the Menu interface, then click **Restore device default** in the Maintain interface.

1.6 USB Mouse Operation

Plug USB mouse into one of the USB interfaces on the rear panel of the NVR.

The operation of the mouse on the local GUI is shown as below.

Name	Action	Description
Left-Click	Single-Click	Menu or window: select and enter.
	Double-Click	Preview mode or Playback mode: Switch between single-screen and multi-screen.
	Click and Drag	Time or Area box: Select the time or zone range. Time bar: Drag time bar. Live view: Moving channel arrangement order
Right-Click	Single-Click	Live view: Show menu. Menu: Exit current menu to upper level menu.

Note

The Single-Click mentioned in this article is refer to the left mouse click.

2 GUI

You can visit the local NVR device via the display or monitor, and view or manage NVR system.

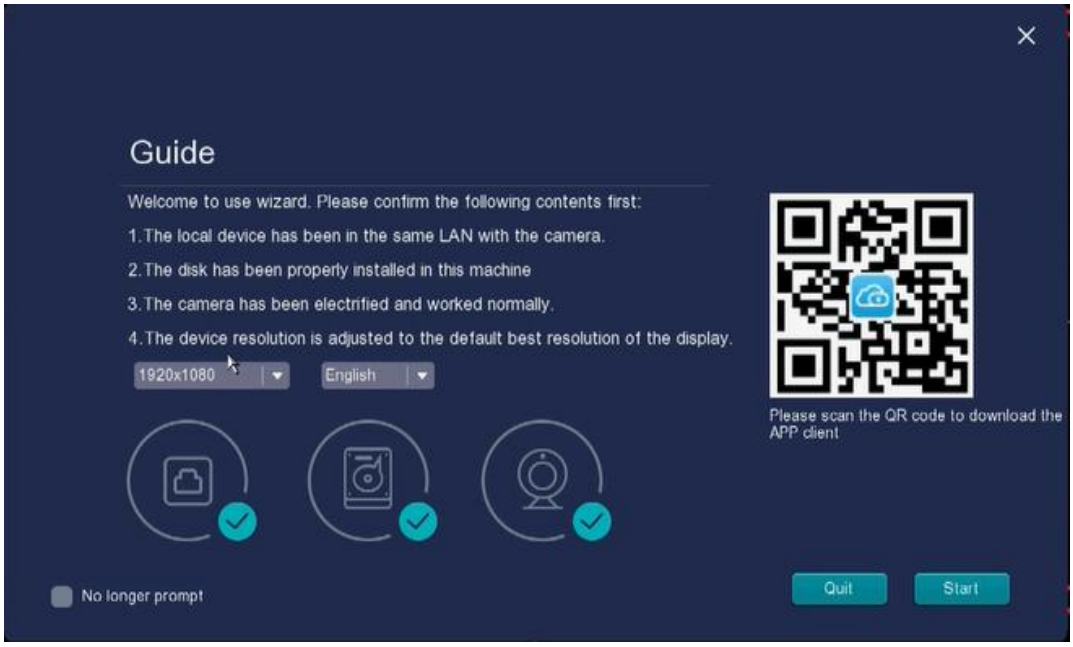
NVR device is connected to the network, mouse, and mobile storage devices have been successfully installed. Make sure the video output device is connected successfully.

2.1 Login

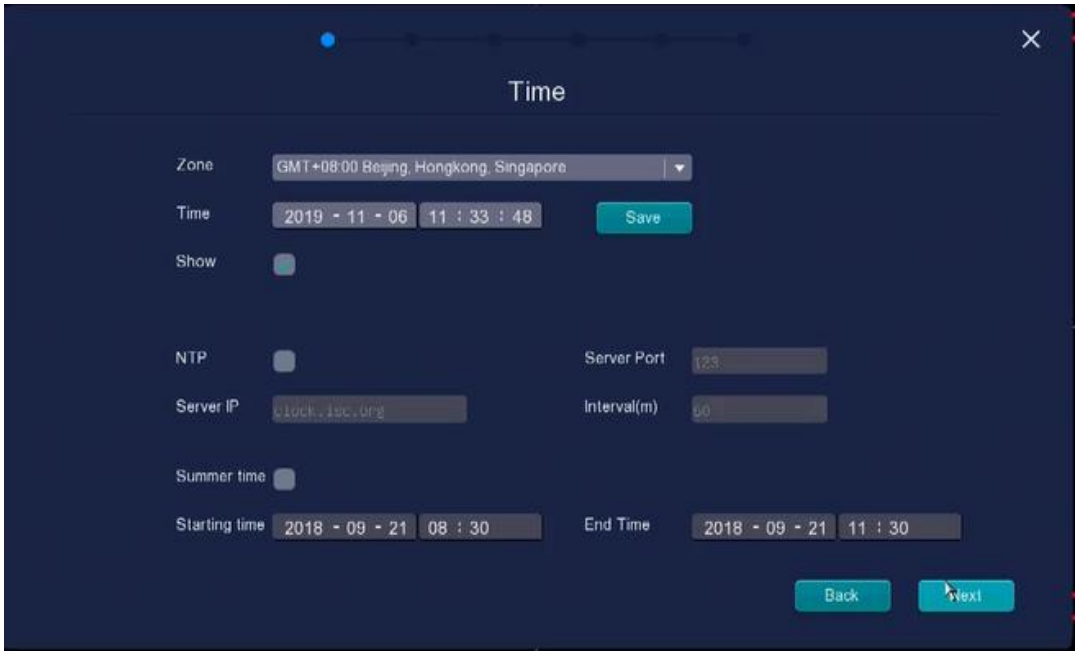
When you set it up, you will be asked to log in first.

2.2 Guide

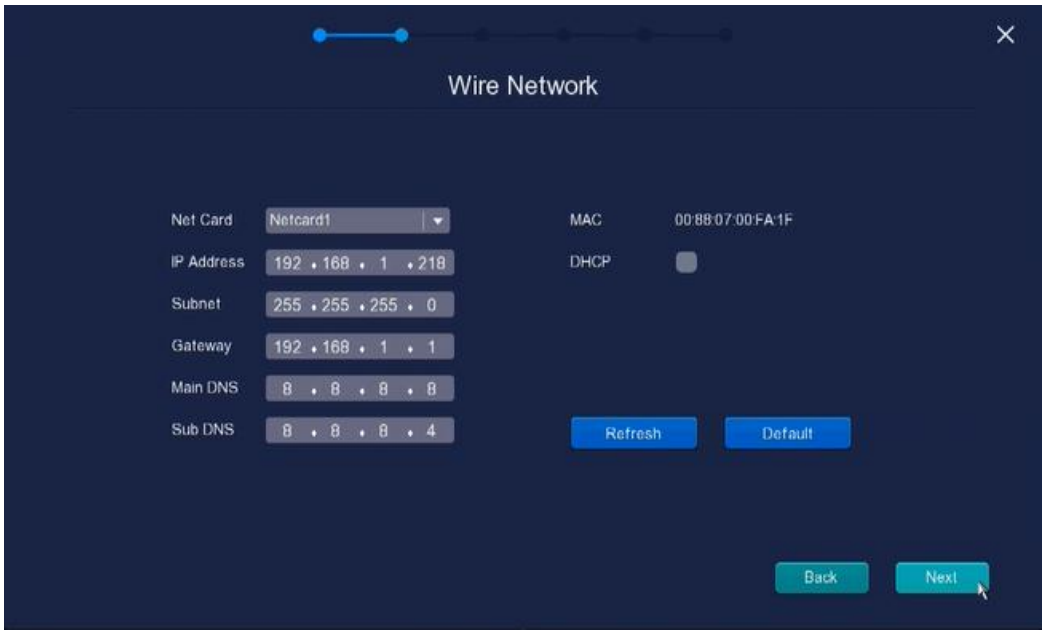
By default, the Guide starts once the NVR has loaded. The Guide can walk you through some important settings of the NVR. If you don't want to use the Guide at that moment, right click the mouse to quit.



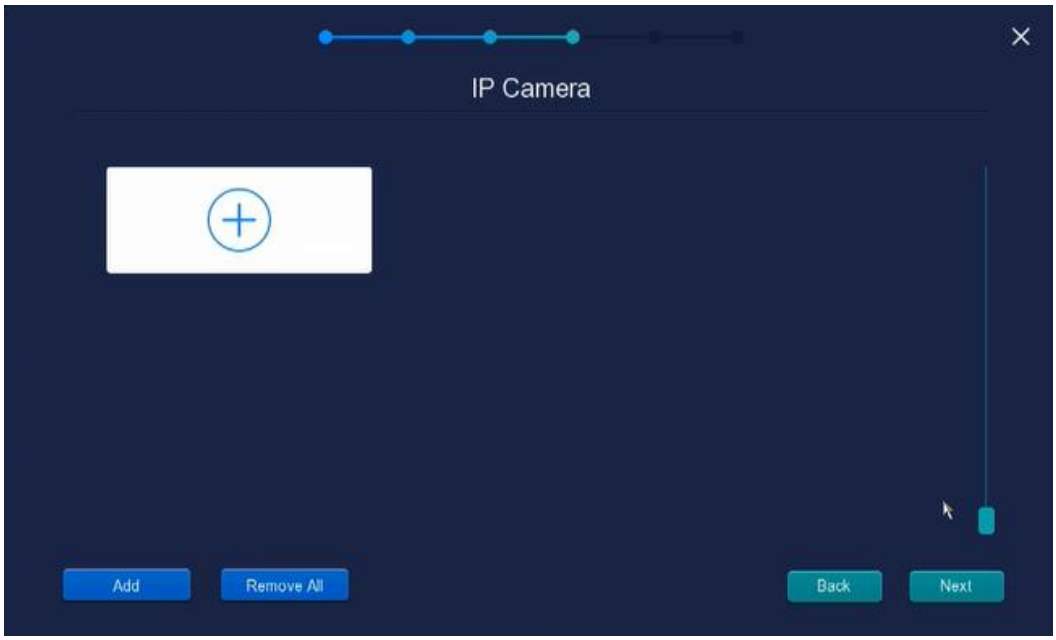
Time: Select the Time you need to set the Zone, time, NTP, Summer, etc..



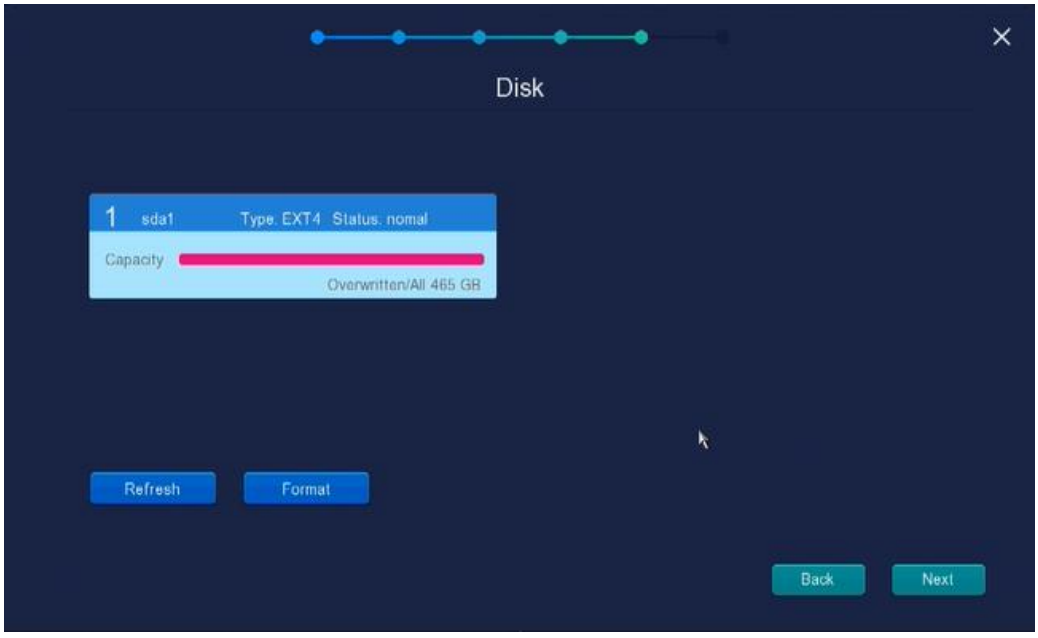
Wire Network: Wire Network configure default, click Next.



Add device: Click next step, click ⊕, add device.



Disk: you can see Disk information, refresh and Format.



Record Time: On this page you can select record time, as, All day, Daytime, Night and Custom.

2.3 Shortcut Menu

After login, right-click the mouse, you will enter the shortcut menu.

IP Camera

Click **IP Camera** to enter the **IP Camera** interface, On this page you can see device status such as

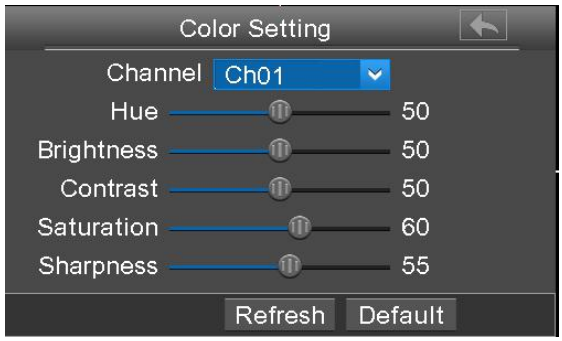
channel, IP, port NO, supports protocol Modify device, Remove and Add IP Camera. Please refer to the details 2.4.3 Channel > IP camera.

Menu

Click **Menu** to enter the **Menu** interface, it includes Manage, Network, Channel, Record, Alarm. Upgrade, please refer to 2.4 Menu.

Color Settings

Click **Color Settings** to choose a channel to alter the color, then adjust the parameters of hue, brightness, contrast, saturation and sharpness.

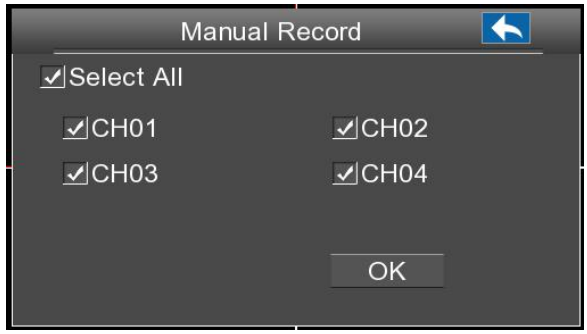


Playback

You can display the video of every a channel for playback. For details, please refer to 2.4.2 Playback.

Manual Record

Click **Manual Record** to set manual record for single channel or all channels.



[**Enable Manual Record**]

Check the **Channel** checkbox, Click **OK** button to take effect.

Right-click the mouse to back to the Live view interface. In the live view interface, there are icon REC at the right bottom of the screen for the channel.

[**Disable Manual Record**]

Uncheck the channel checkbox, Click **OK** button to take effect.

Right-click the mouse to back to the Live view window. In the live view mode, The icon REC disappeared at the right bottom of the screen for the channel.

Adding Devices

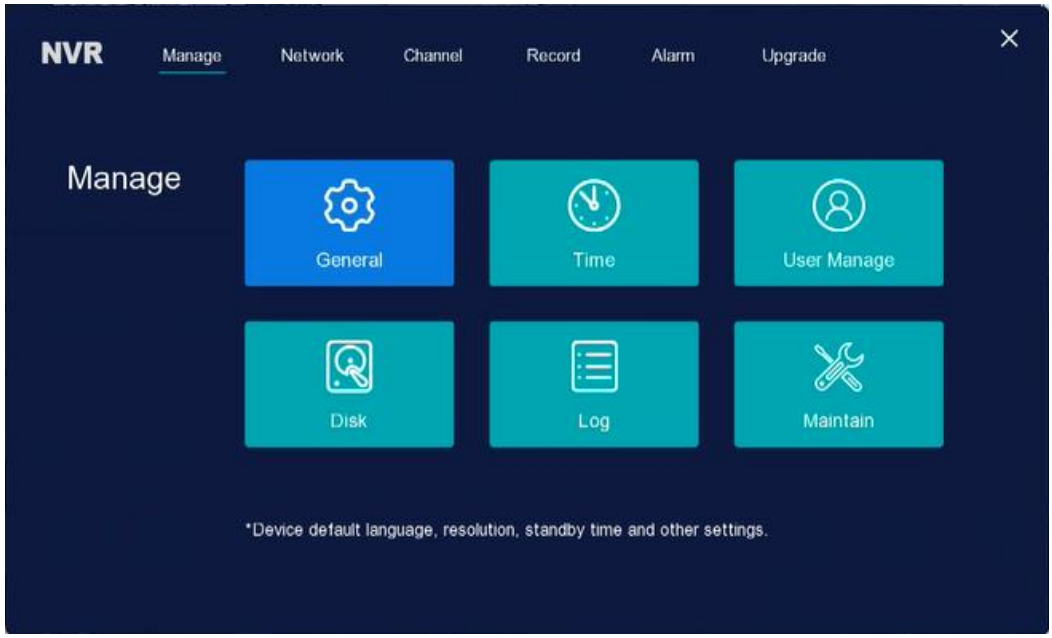
You can add and connect the IP Camera, configure the connection of IP cameras, delete the connection of IP camera. For details, please refer to 2.4.1 Adding Devices.

Shutdown

Click **Shutdown** to enter the Shutdown page. You can log out, reboot or shut down the NVR system.

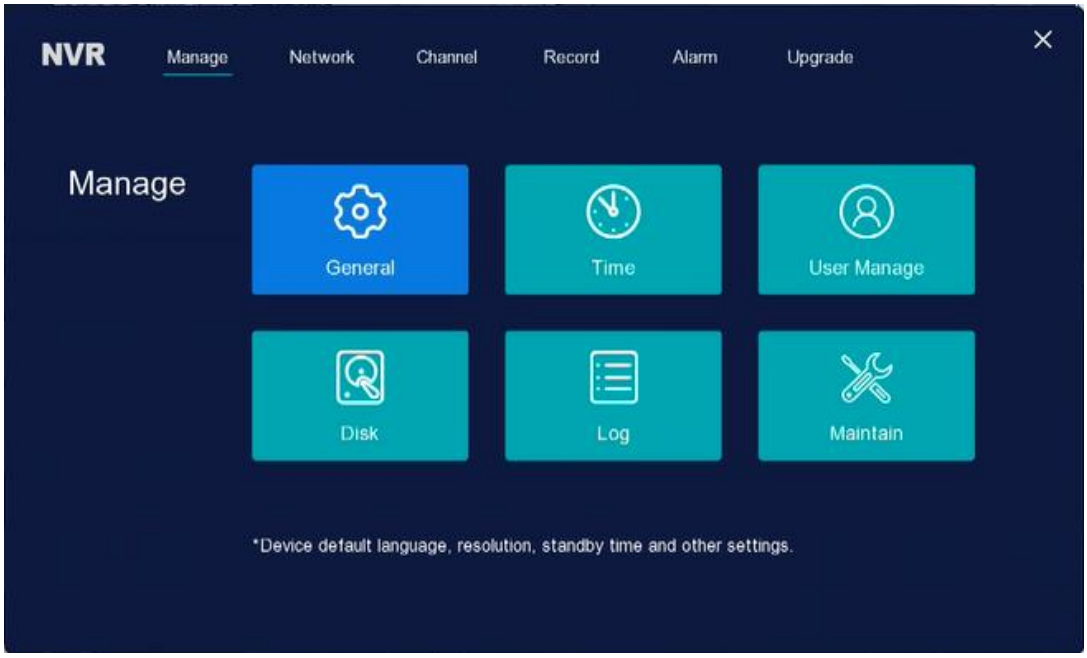
2.4 Menu

Right-click in live view mode and select **Menu** from the **Shortcut Menu**, the **Menu** interface is displayed.



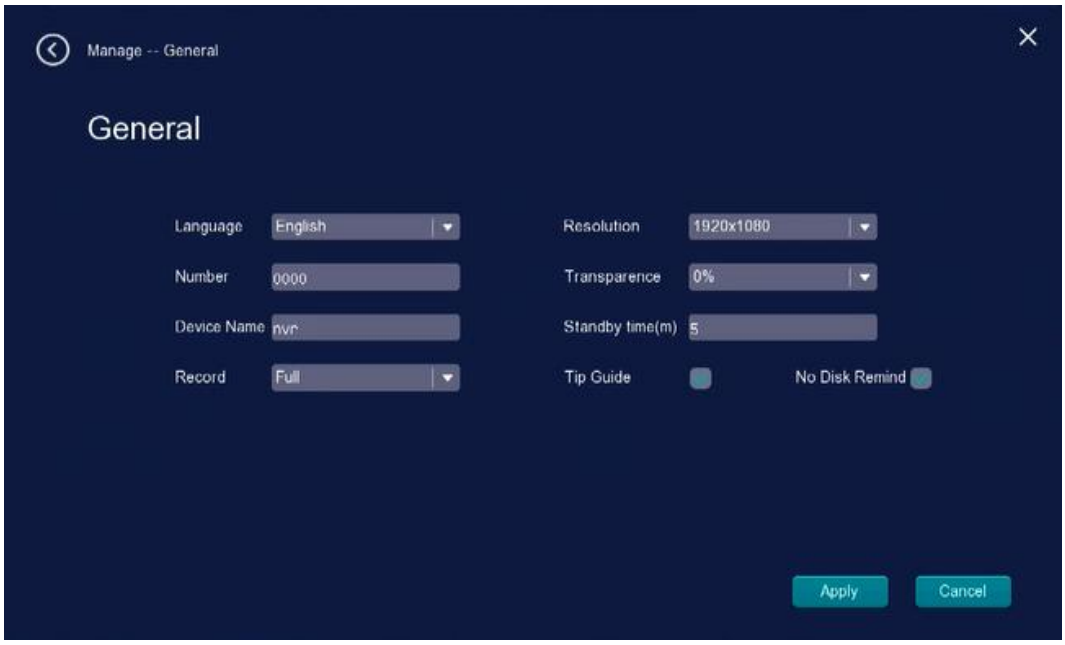
2.4.1 Manage

Right-click in live view mode and select **Menu > Manage** in the Menu interface. The **Manage** interface is displayed.



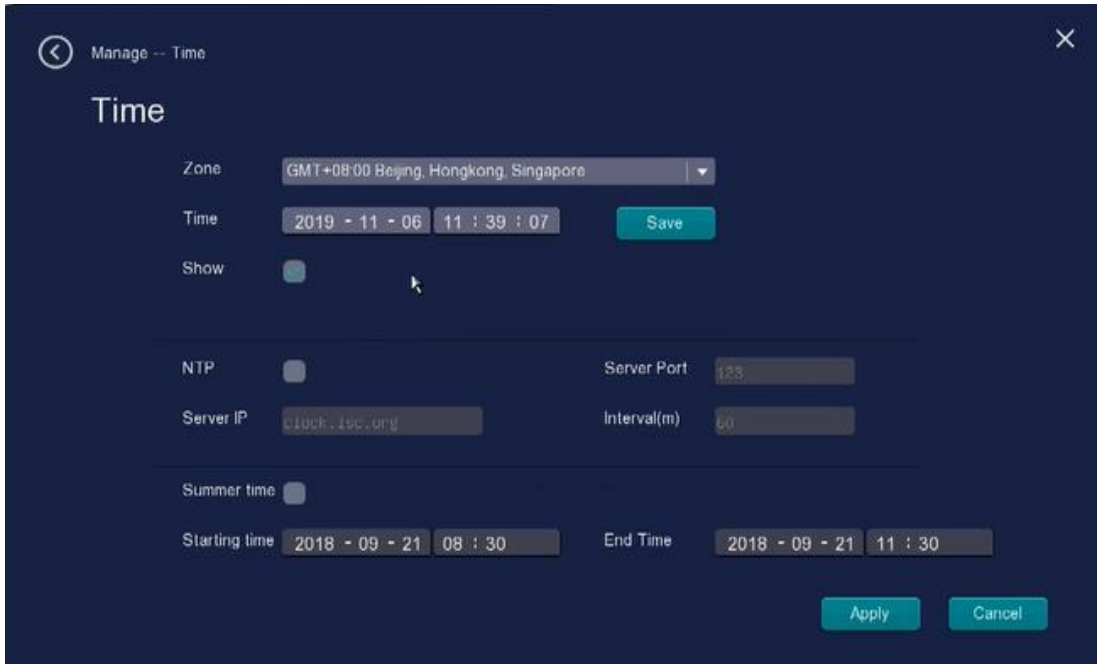
General

Click **General** to enter the **General** interface, On this page you can change Language, resolution, Number, Transparence, Device Name, Standby time, Record, Tip Guide and NO Disk Remind.



Time

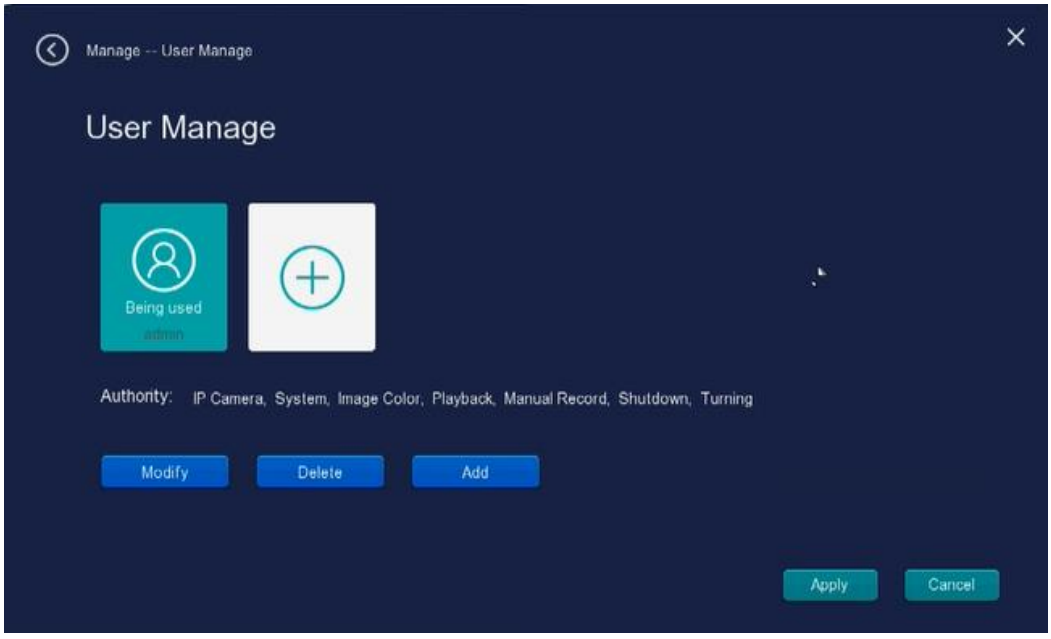
Click **Time** to enter the **Time** interface, On this page you can change Zone, Time, show, NTP, Server Port, Server IP, Interval, Summer time, Starting time and End Time.



User Manage

Click **User Manage** to enter the **User Manage** interface, On this page you can see User information

(Authority: IP Camera, System, Image Color, Playback, Manual Record, Shutdown, Turning), Modify user, Delete user and Add user.



▲Modify

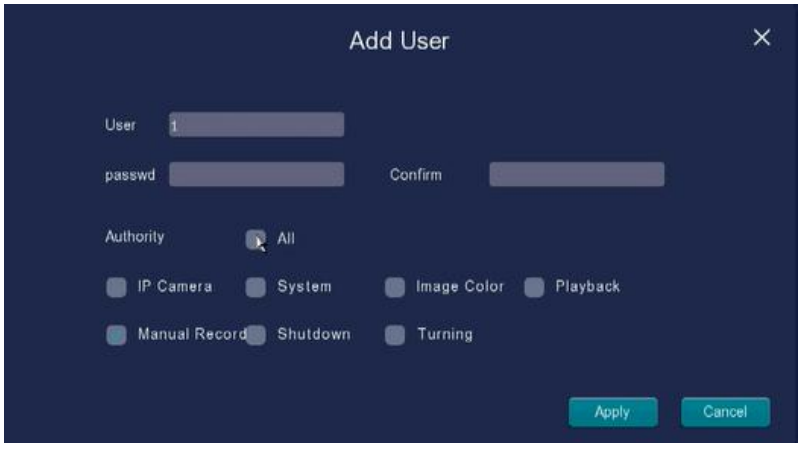
Click **Modify** to enter the **Modify User** interface, On this page you can change user password and Authority Option.

▲Delete

Click the **Delete** button to delete a user**.**

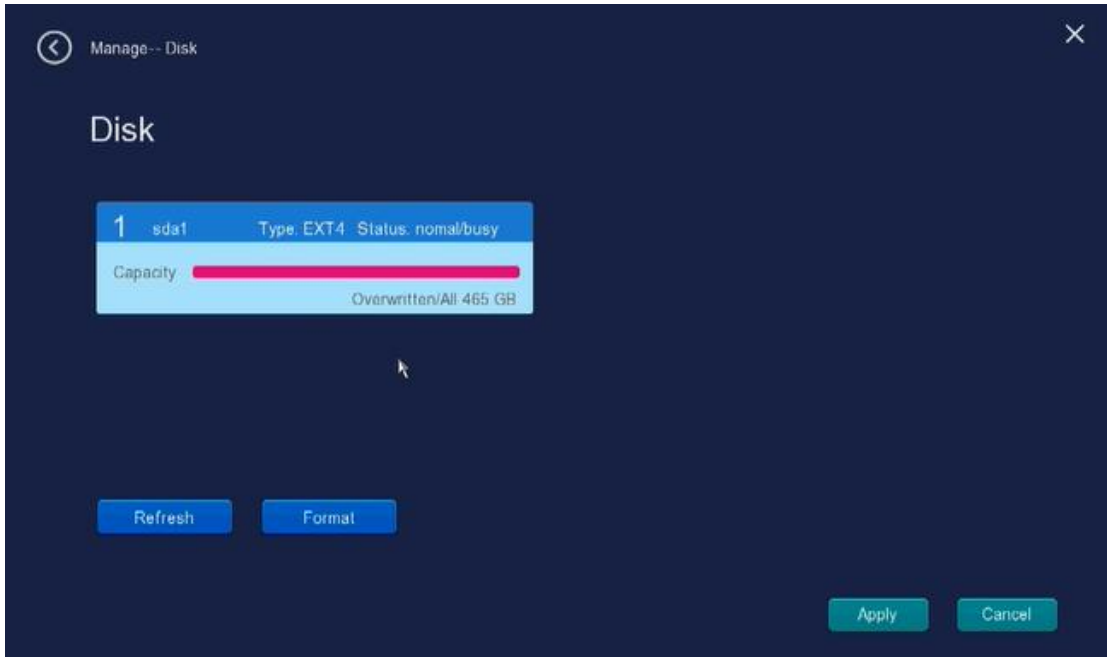
▲Add

Click **Add** to enter the **Add User** interface, On this page you can Add to user, user password and Authority Option.



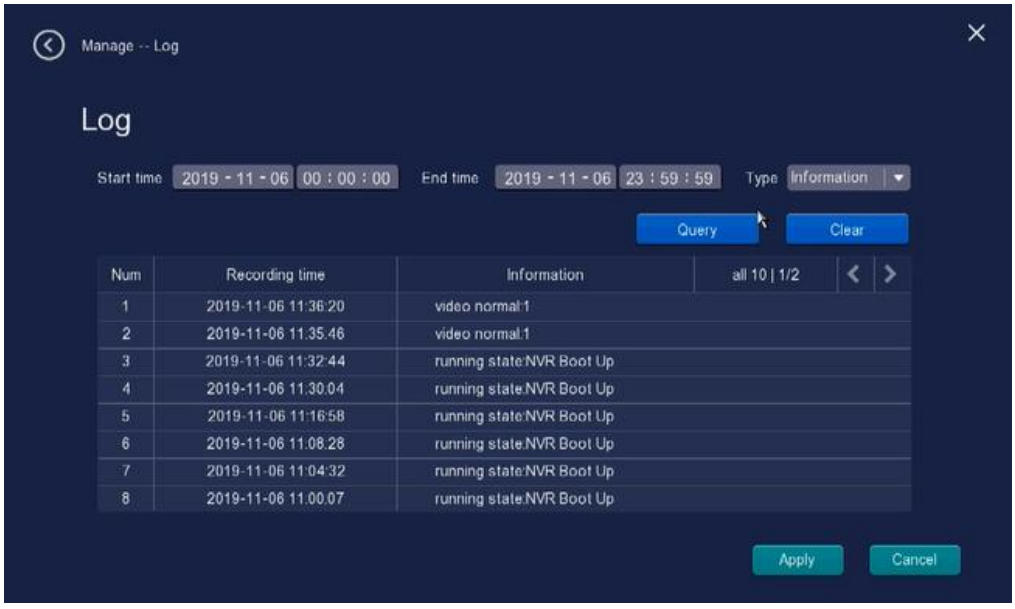
Disk

Click **Disk** to enter the **Disk** interface, On this page you can see Disk information, refresh and Format.



Log

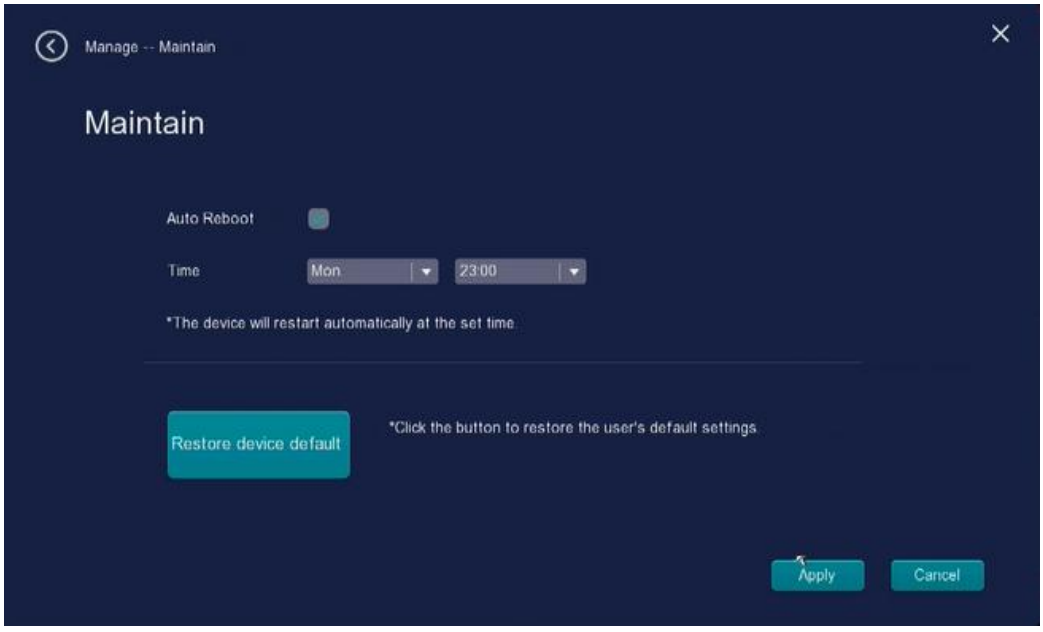
Click **Log** to enter the **Log** interface, The log record shows Recording time and accessed information.



You can Click **Query** and **Clear** to query and clear the log records.

Maintain

Click **Maintain** to enter the **Maintain** interface, you can setting the device default value: Auto Reboot, Time and Restore device dafault.



2.4.2 Network

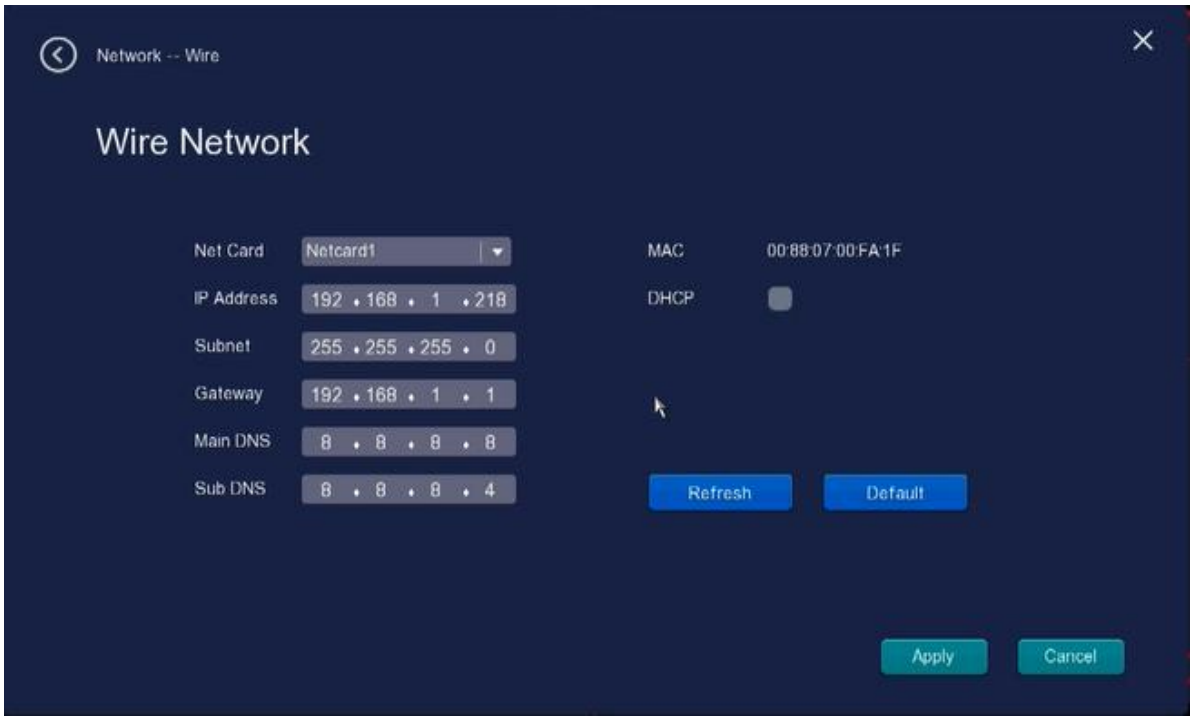
Right-click in live view mode and select **Menu** > **Network** in the Menu interface. The Network interface is displayed.You can configure the information of Wire, Wifi, Moblie, E-Mail and Remote.

Wire

Click **Wire** to enter the **Wire** interface, On this page you can show Net Card, MAC, IP Address, DHCP, Subnet, Gateway, Main DNS, Sub DNS information.

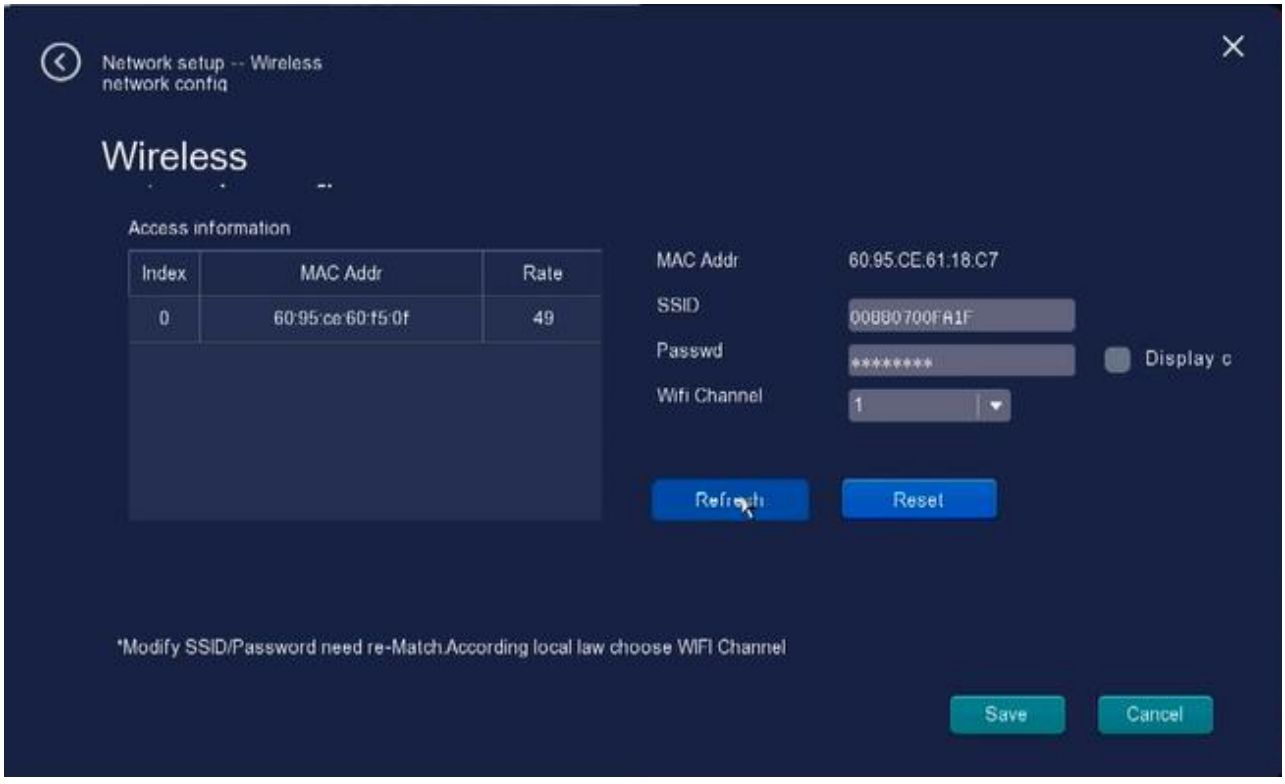
In LAN, there are two ways for wireless NVR to connect to Internet. Manual setting: Fill in IP address, DNS data, and click **Apply**. DHCP: open DHCP, device will connect to Internet automatically, no need data setting.

If user doesn’t familiar about the network environment, please prefer use DHCP first.



Wifi

Click **Wifi** to enter the **Wireless** interface, On this page it will show you MAC address, Rate, SSID, SSID Password and Wifi Channel various information about your connected camera.



Note

Modify SSID or Password need re-Match. For the operation, please refer to the Quick Setup Guide.

Please according local law choose WiFi Channel.

Mobile

If you would like to Access the NVR in Foscam App

1.you can simply go to the App Store or Google Play and search for the term "Foscam". Download the APP to your smartphone, or click **Network** > **Mobile** to enter the **P2P** interface scan the QR Code on the left, download the app, install.

2. Check the network to make sure the machine can access the Internet.

3. Open the app, scan the QR code on the right, add the device.

For the operation, please refer to the Quick Setup Guide.

Email

Select the **EMail** page, you can configure the E-mail information of the NVR.

The system can be configured to send an email to the designated users if an alarm or motion event is detected etc..

Before configuring the Email settings, the NVR must be connected to a local area network (LAN) that maintains an SMTP mail server.

1---- **Server IP** Enter Server IP for sender.

2---- **Sender Email** ID account of the sender email address

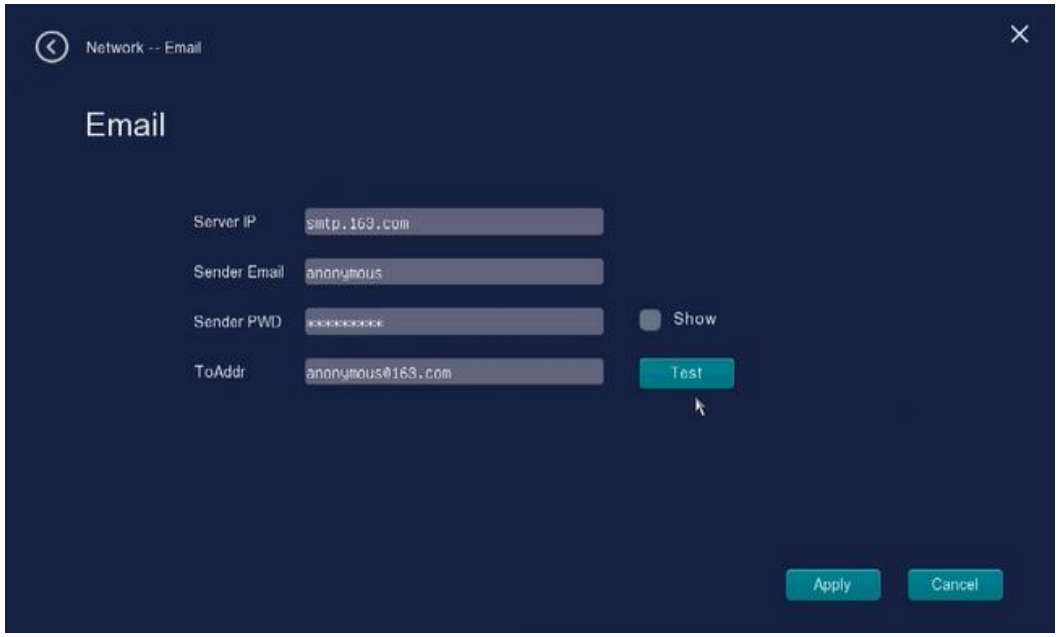
3---- **Sender password** account password of the sender

4---- **To Address** Mailbox for sender must support SMTP

5----**Test** Click Test to see if Mail has been successfully configured.

6---- **Apply** Click Apply to take effect.

If the test success, you can see the success information, at the same time the receivers will receive a test mail.

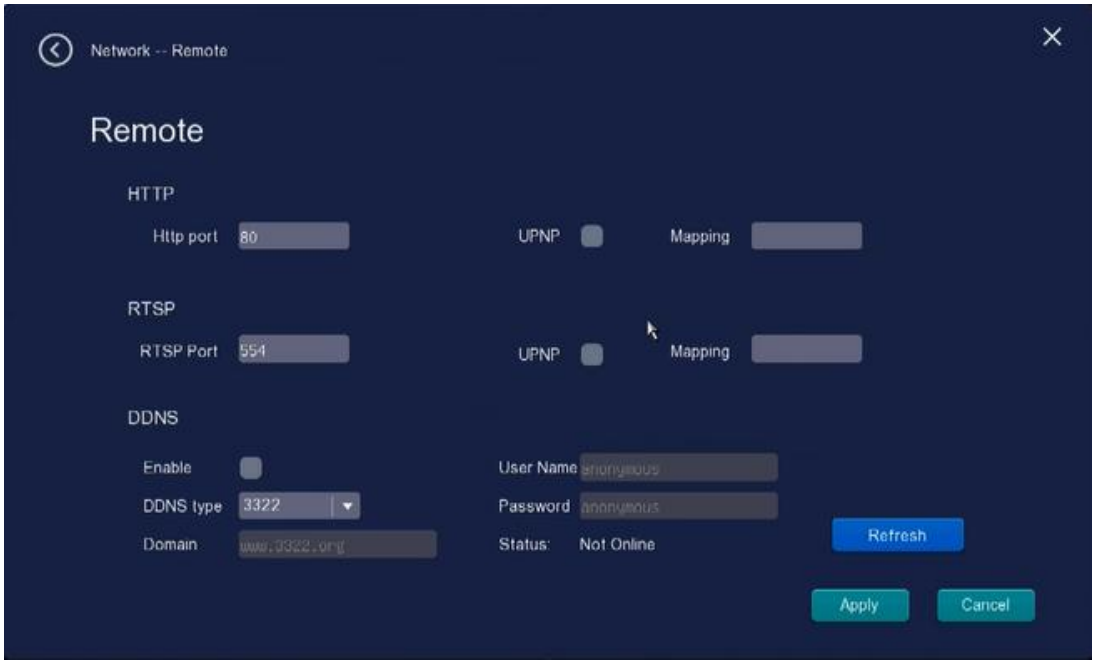


Remote

This NVR supports HTTP Port . HTTP Port is used to access the camera NVR remotely.

▲**HTTP port:** By default, the HTTP is set to 80. Also, they can be assigned with another port number between 1 and 65535. But make sure they can not be conflict with other existing ports like 25, 21.

▲**RTSP Port:** The default port is 554

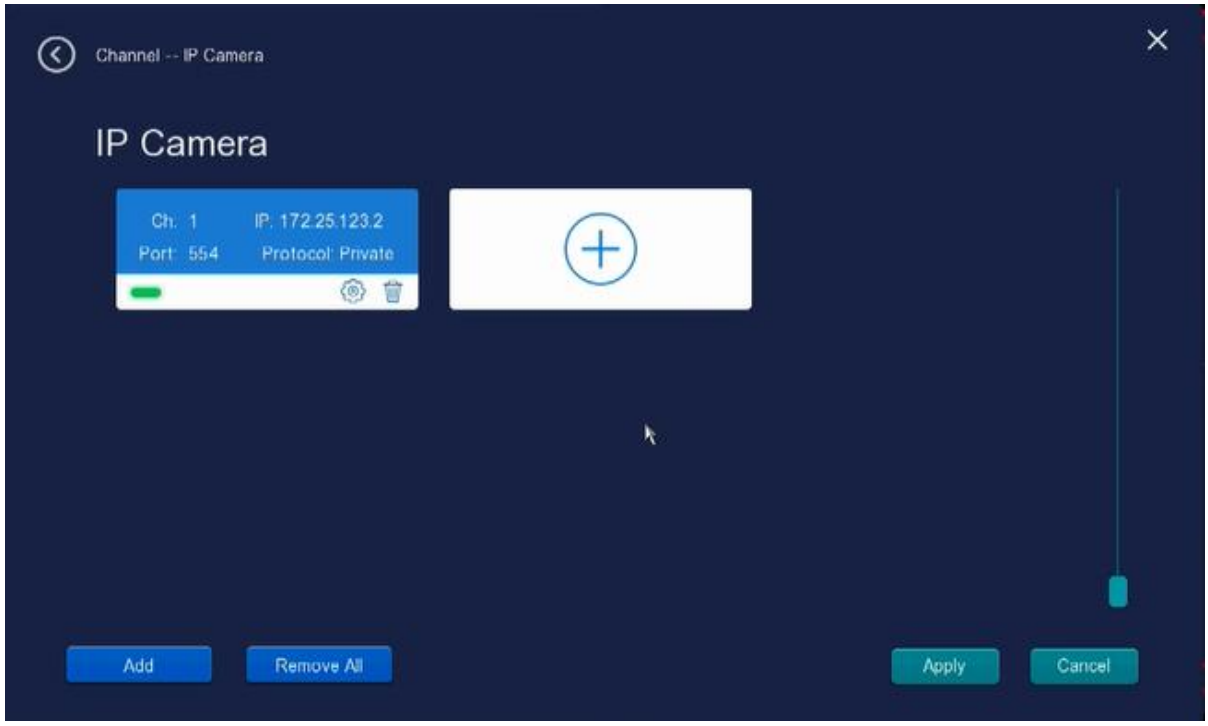


2.4.3 Channel

Right-click in live view mode and select **Menu** > **Channel** in the Menu interface. The Channel interface is displayed. You can configure the information of IP camera, Channel name, Image, Bridge, mask.

IP camera

Click **IP Camera** to enter the **IP Camera** interface, On this page you can see device status such as channel, IP, port NO, supports protocol Modify device, Remove and Add IP Camera.

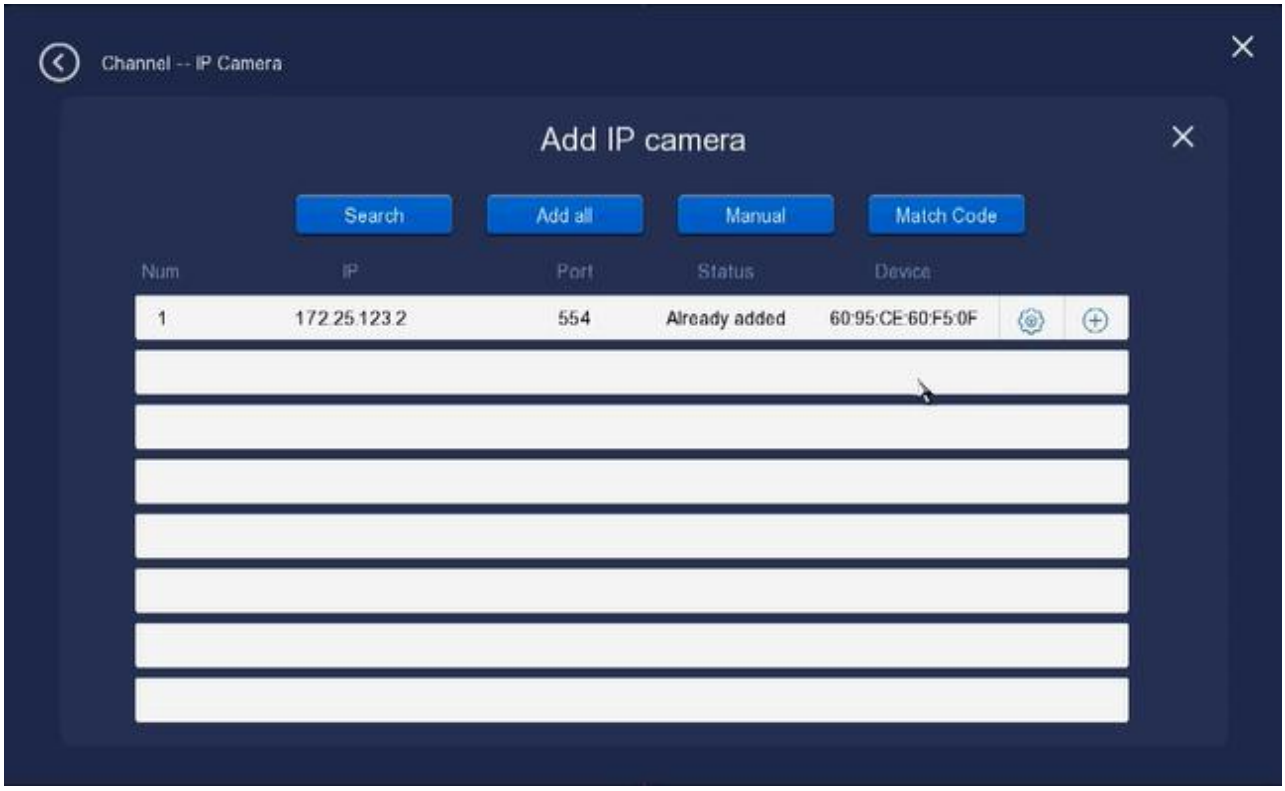


Modify device: Click to enter the Modify IPC interface, On this page you can change your camera protocol，IP addr , port NO, User nane and user passwd

Remove: Click to delete the IPC

Code matching and Add IP Camera: Click to enter Add IP Camera interface, you can Code matching and IPC adding.

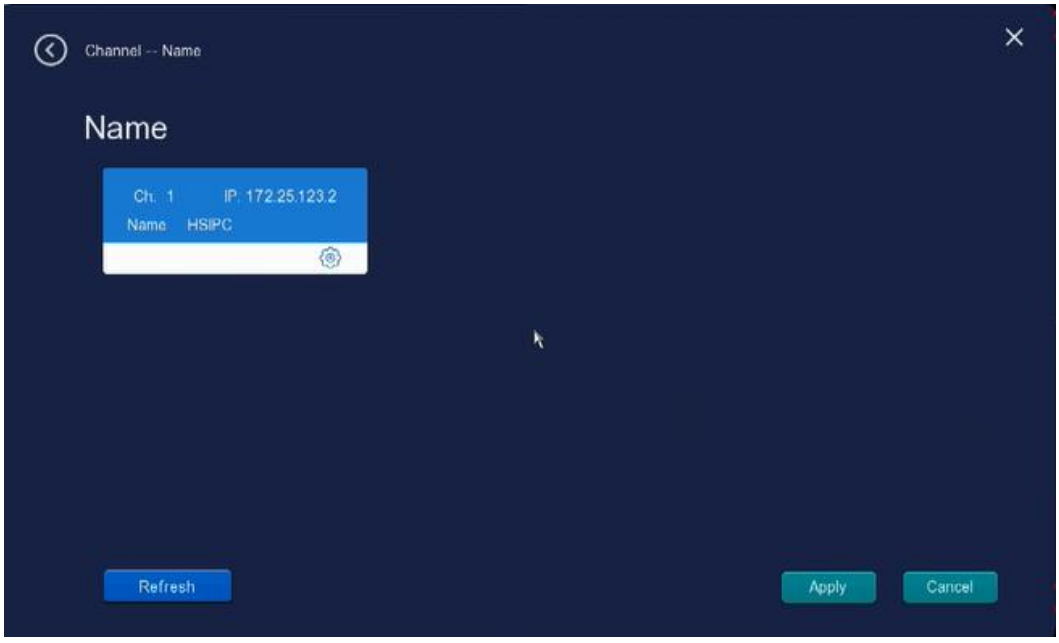
1. Right-click on main interface, select **IP Camera** > **Add** > **Match Code**
2. If just match one device, please connect IPC and NVR with IP cable in WAN port. For multiple matching, please connect IPC to switch, and connect NVR to switch in WAN port.
3. Click **Match Code**, system will match the code between IPC and NVR.
4. When finished code matching, click **Search**, then select **Add All**. User also can click to add it and view picture.



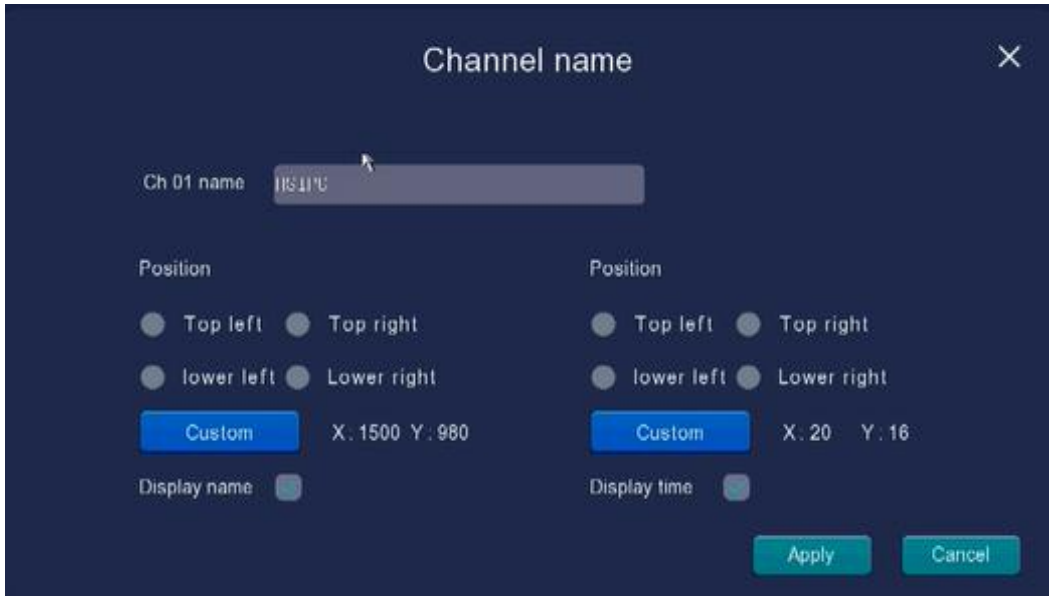
Note: The NVR and IP Camera are already paired at the factory. If you need to rematch, please refer to the follow steps above.

Channel name

Click **Channel name** to enter the **Channel name** interface, On this page you can see device status such as channel NO, IP, device name, Modify the name, change display name position and display time position.



Click to enter the Modify the name interface, On this page you can change your channel name, display name position and display time position.



Image

Click **Image** to enter the **Image** interface, On this page you can Adjust the image color mode of each monitor channel: Scene, Face, Infrared, Mirror, Bright, Contrast, Contrast, Saturation and Sharpness dafault.

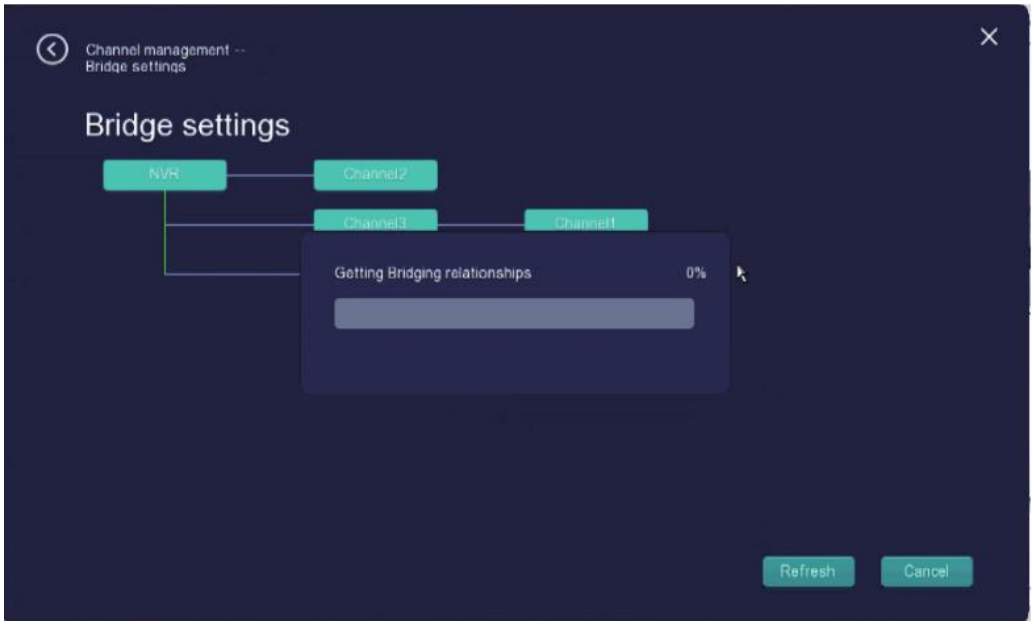
Bridge

By new mesh network auto-bridging function, without any manual setting, wireless camera in further area will have a judgment about the WIFI signal and auto connect to the camera which have a better WIFI signal, to achieve more stable and reliable video transmission.

Auto bridging is designed to expand the coverage area of wireless signal, instead of enhancing the signal. When camera is a little far away from NVR, or there are too many interference factors/sources between them, camera in further area will auto bridge/connect to the one nearby to transmit the video data.

① Check the bridging information Right click → Channel → Bridge.

② Then, bridging relationship will be showed on the interface automatically.



③ Picture above shows 2 auto bridging connect types One by one: CH1 → CH3 → NVR

Connected directly to NVR: CH4 → NVR

Note: please ensure there is no obstacle in two cameras, let them be visible in pairs,which means when person in one camera installing position, he/she can see the other camera, as it will beneft for image to transmit stably.

Mask

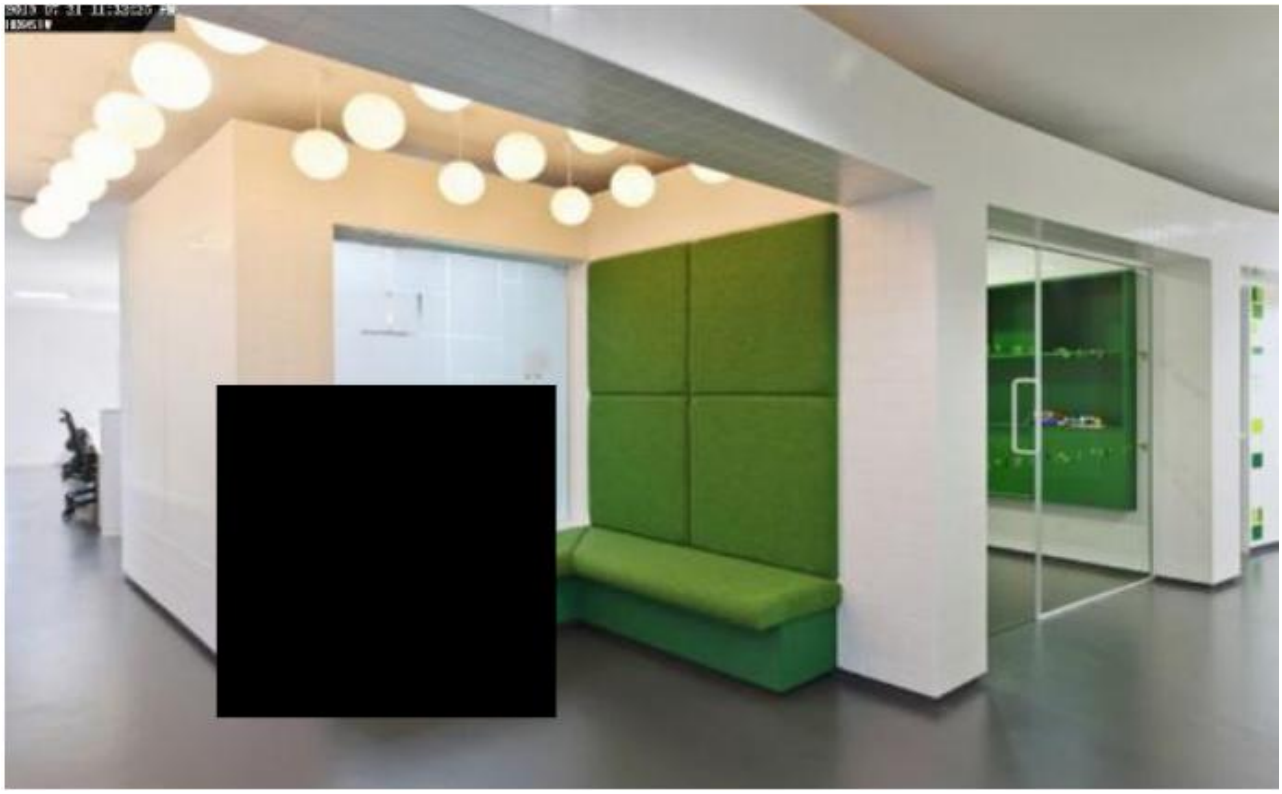
This page is used to Adjust the occlusion area of the monitoring channel.

Allow On Screen Display Mask

There are two options: Channel and Enable. Select the channel you want to set,and then select Enable and click draw up to four mask areas on the video, the mask area will be black on the video.

Double click mouse and return to the **Mask** page, click **Apply** to take effect.

Back to the surveillance window, you can see the mask area as the following picture:



2.4.4 Record

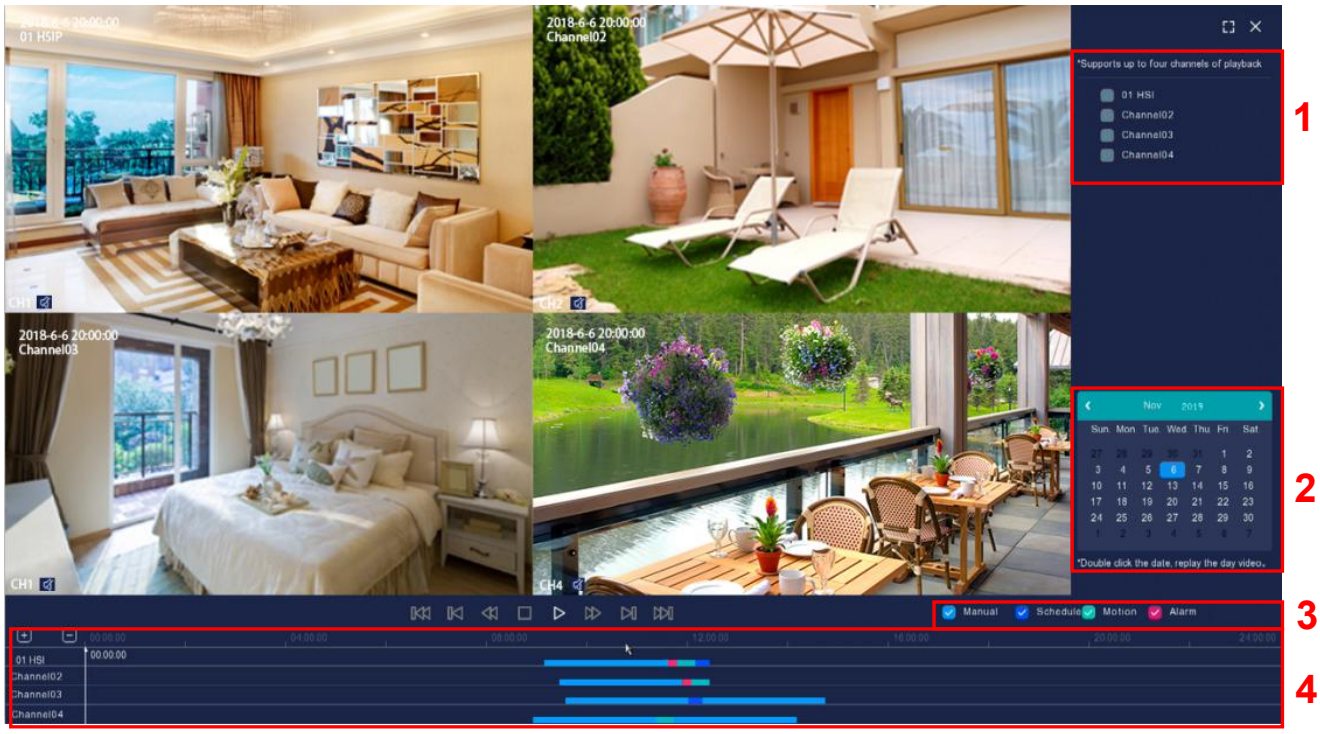
Right-click in live view mode and select **Menu** > **Record** in the Menu interface. The Record interface is displayed. You can configure the information of Playback, Record time and Backup.

Playback

Click **Playback** to enter interface is displayed. It supports single-screen or four screens.

On this page you can view the record files stored in the hard disk.

It supports single-screen or four screens.



1. Check the checkbox from Channels. You can select up to four channels for playback at the same time.
2. Select a date with recording in calendar.
3. Check the checkbox from video type, there are four video type here,as: Manual, Schedule, Motion and Alarm
4. Select the matched recorded files. If there are results, then they will be shown in the time bar area.
5. Click the icon to play the recording video.

Manage the recording

Button	Description
	After select the matched recorded file, click the button to play.
	Stop
	Fast backward. The fast backward speed can be 4 times, 8 times or 16 times of the normal playing speed. Click this button. The multiple of normal playing speed is displayed in the lower left corner of the fast backward icon. For example, indicates the current fast backward speed is twice times of

	the normal speed.
	Fast forward. The fast forward speed can be twice, 4 times, 8 times or 16 times of the normal playing speed. Click this button. The multiple of normal playing speed is displayed in the lower right corner of the playback page. For example, indicates the current playing speed is four of the normal speed.
	Slow progress. The slow progress speed can be 1/2 times, 1/4 times, 1/8 times or 1/16 times of the normal playing speed. Click this button. The multiple of normal playing speed is displayed in the lower right corner of the slow icon. For example, indicates the current playing speed is 1/2 times of the normal speed.
	Slow back. The Slow back speed can be 1/2 times, 1/4 times, 1/8 times or 1/16 times of the normal playing speed. Click this button. The multiple of normal playing speed is displayed in the lower right corner of the slow back icon. For example, indicates the current playing speed is 1/4 times of the normal speed.
	Step. The Step
	Frame retreat. View the image of each frame.

Record Time

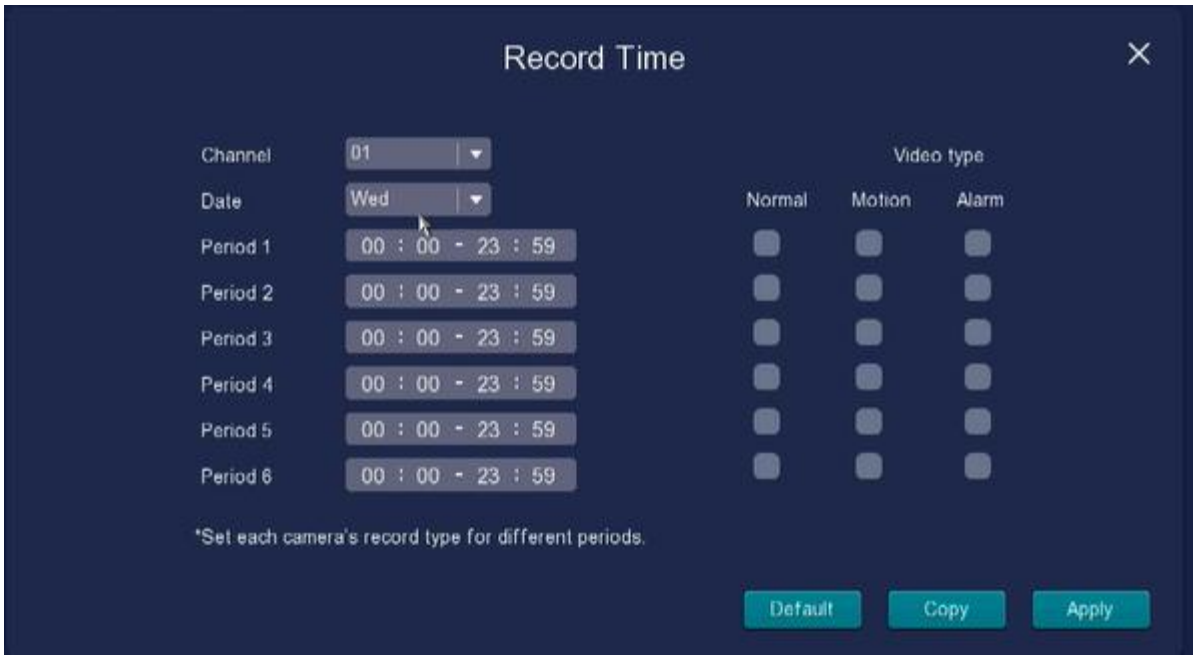
Click **Record Time** to enter **Record Time** interface. On this page you can select record time, as, All day, Daytime, Night and Custom.

All day: 24 hours record

Daytime: 8:00-20:00 record

Night: 20:00-The next day 8:00 record.

Custom: You can select the Channel, date and time, Video type manually.



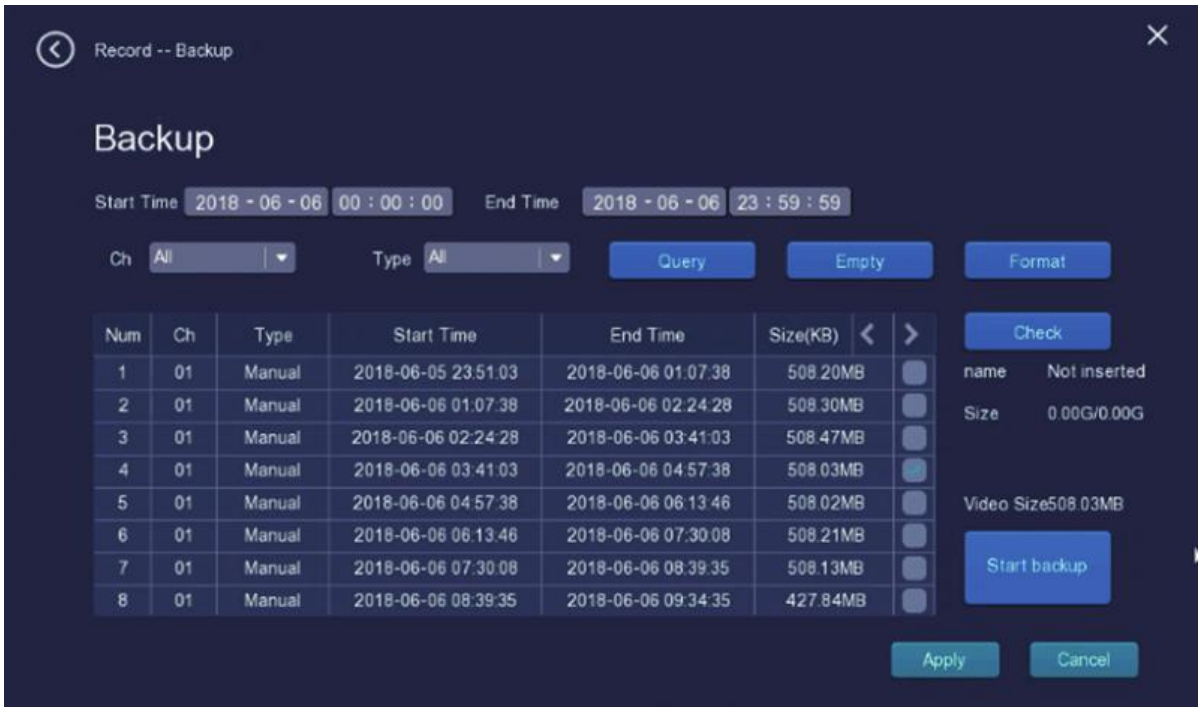
Note: You can set each camers's record type for different periods.

Backup

Click **Backup** to Backup stored video data to other srorage devices.

step: Insert U disk to NVR USB port → Right-click→ **Menu** → **Record** → **Backup** → choose time, channel and type→ **Query** → select target file → **Start Backup** (some wireless NVR will just 1 USB port, please pull out mouse and insert backup device in 45S after click Start Backup.

Note: If target file can not be searched out, please click **Empty** → **Add**. Please remove the fles which is no need before backup. Ensure insert device (like USB) in 45 second, as system reserved searching time for it is 45 second.

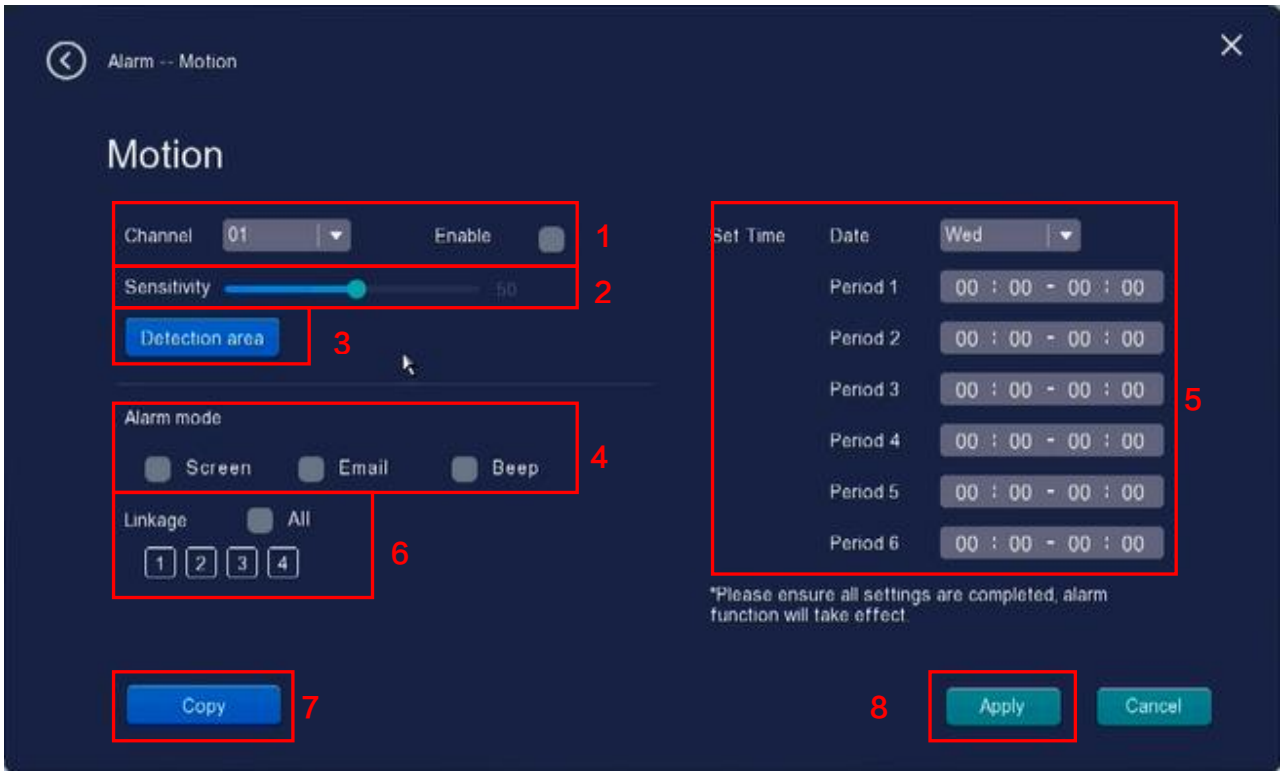


2.4.5 Alarm

Right-click in live view mode and select **Menu** > **Alarm** in the Menu interface. The Alarm interface is displayed. You can configure the information of MotionDetect, Shelter, Video loss and Local alarm.

Motion Detect

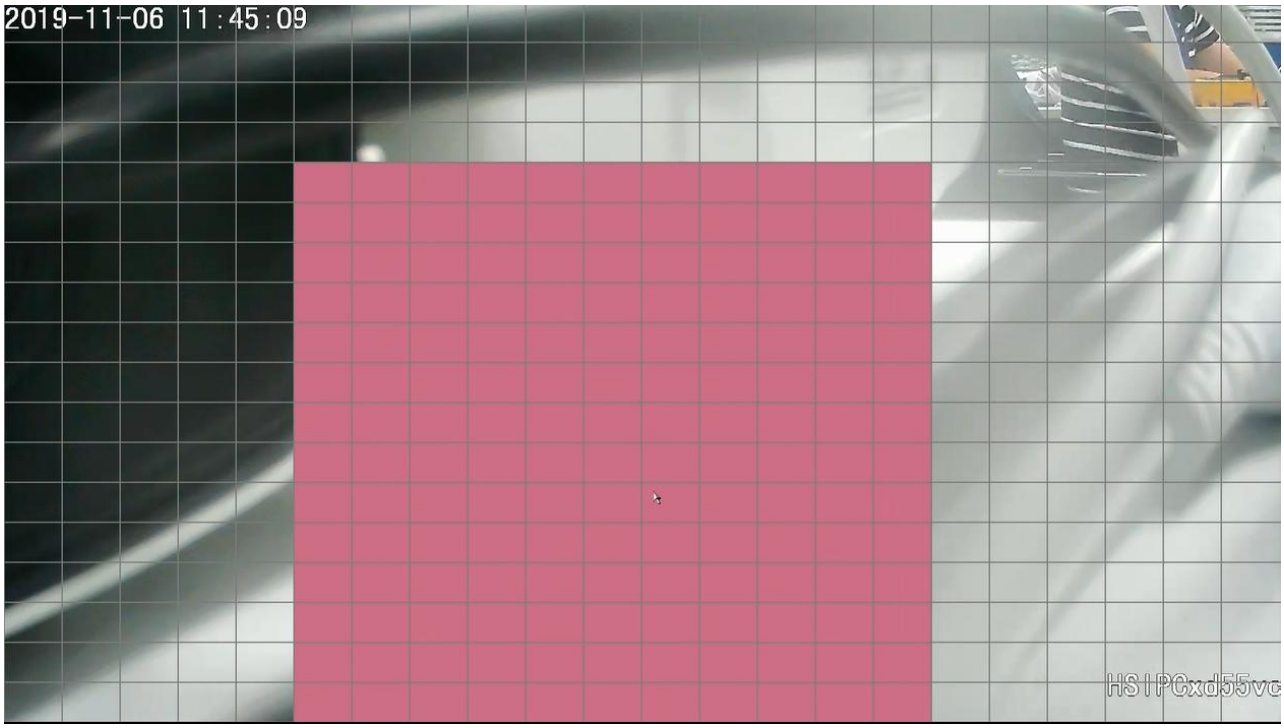
Click **Motion Detect** to enter the **Motion** interface, On this page you can setting Channel Enable, Sensitivity, Detection area, Alarm mode, Linkage and Set Time.



Step 1: Choose Channel for recording and Enable motion detection function.

Step 2: Sensitivity----The higher the sensitivity, the camera will be more easily alarmed. Select one motion sensitivity.

Step 3: Detection area----Set detection area----Click set Detect area and it pop up a window, then you can draw the detection area. Click right mouse click after settings. When something moving in the detection area, the NVR will alarm.



Step 4: There are three alarm mode:

A Screen

If you select Screen, when the motion has been detected, push the message to the Screen show.

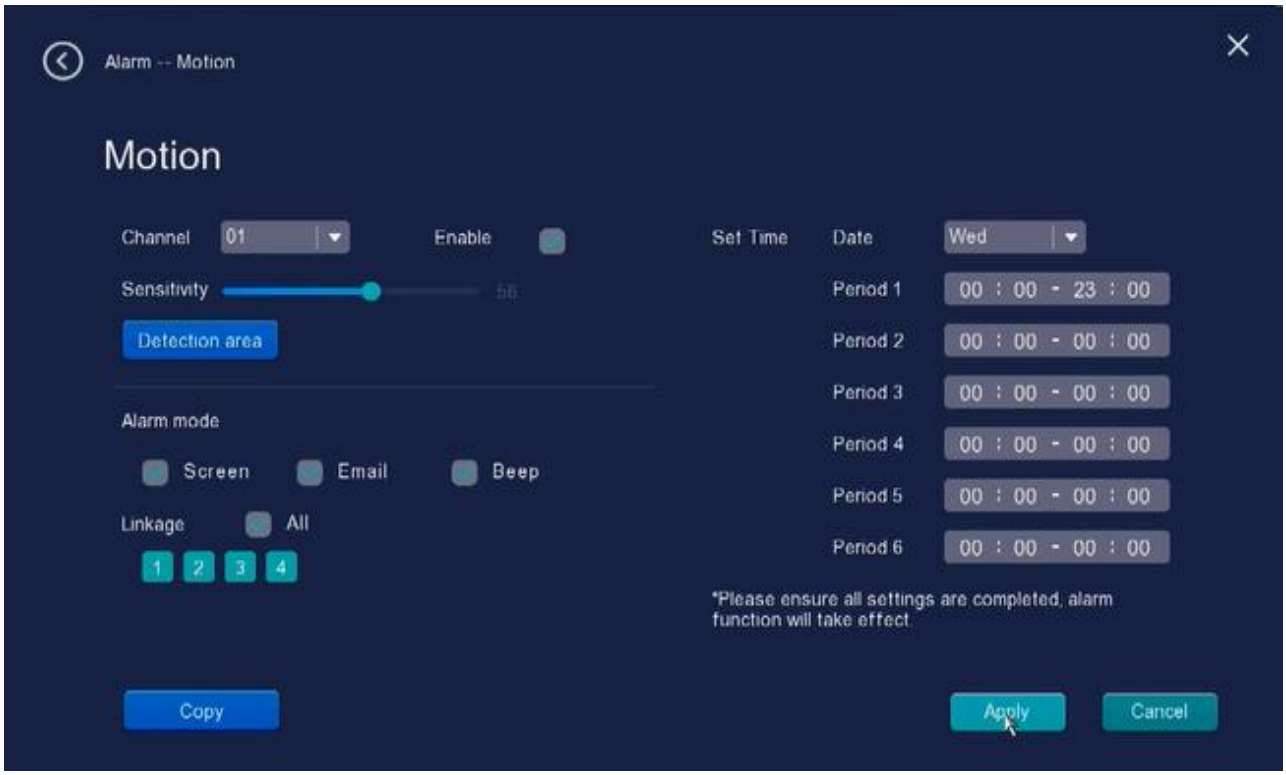
B Email

If you want to receive alarm emails when motion is detected, you must select Send E-mail and set Mail Settings first.

C Beep

If you select this checkbox, when the motion has been detected, the people around the NVR will hear beep alarm sound.

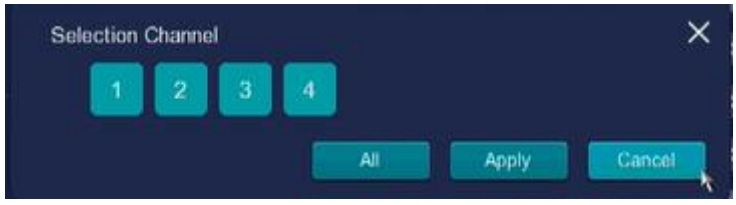
Step 5: Set Time---- Select the week day date and set time, For example, select Wed and time: 00:00-23:00, that means during Wed 00:00-23:00, when something moving in the detection area, the NVR will alarm.



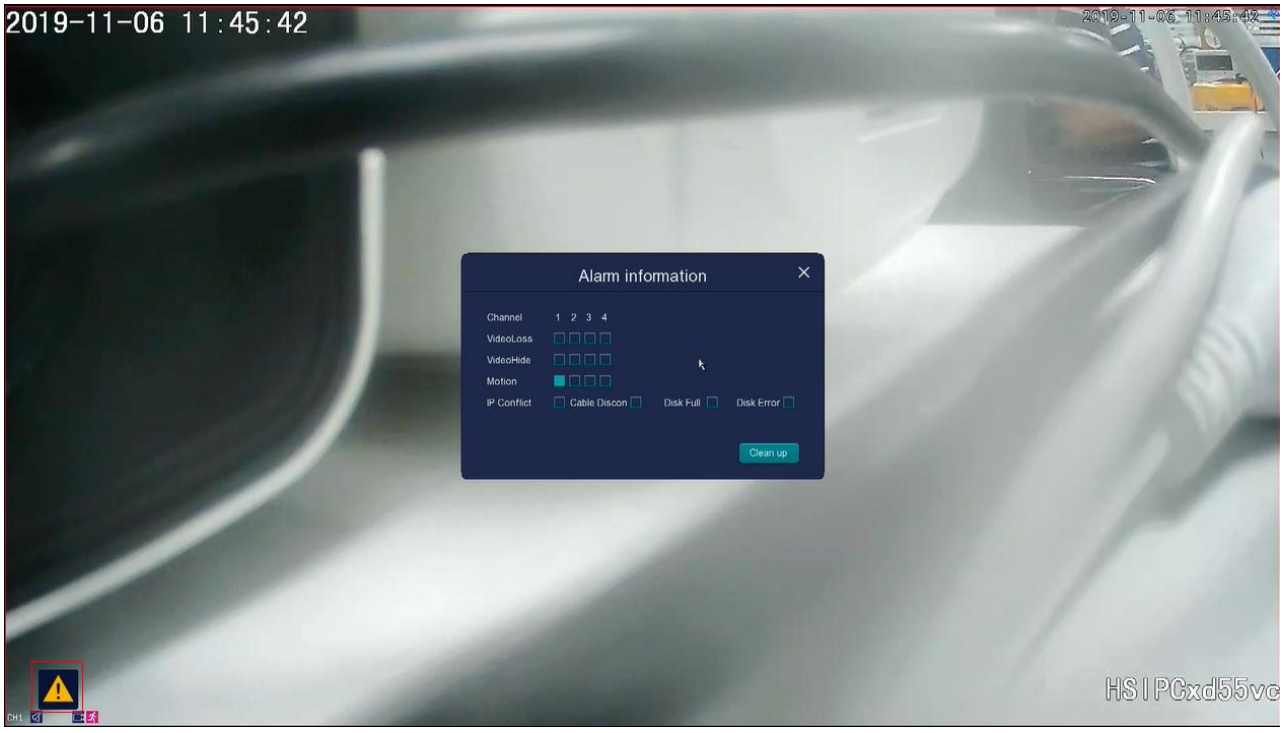
Step 6: Linkage----Choose Channels for recording, when Motion Detection Alarm is triggered, when something moving in the detection area. the NVR after alarm, recording at Select Channel camera, if you not Select Channel NO, the NVR after alarm, Channel camera Unable to record alarm

Step 7: Click Apply button to take effect.

Step 8: Copy---- If you want to set other channels to be the same, you can click the "Copy" button.



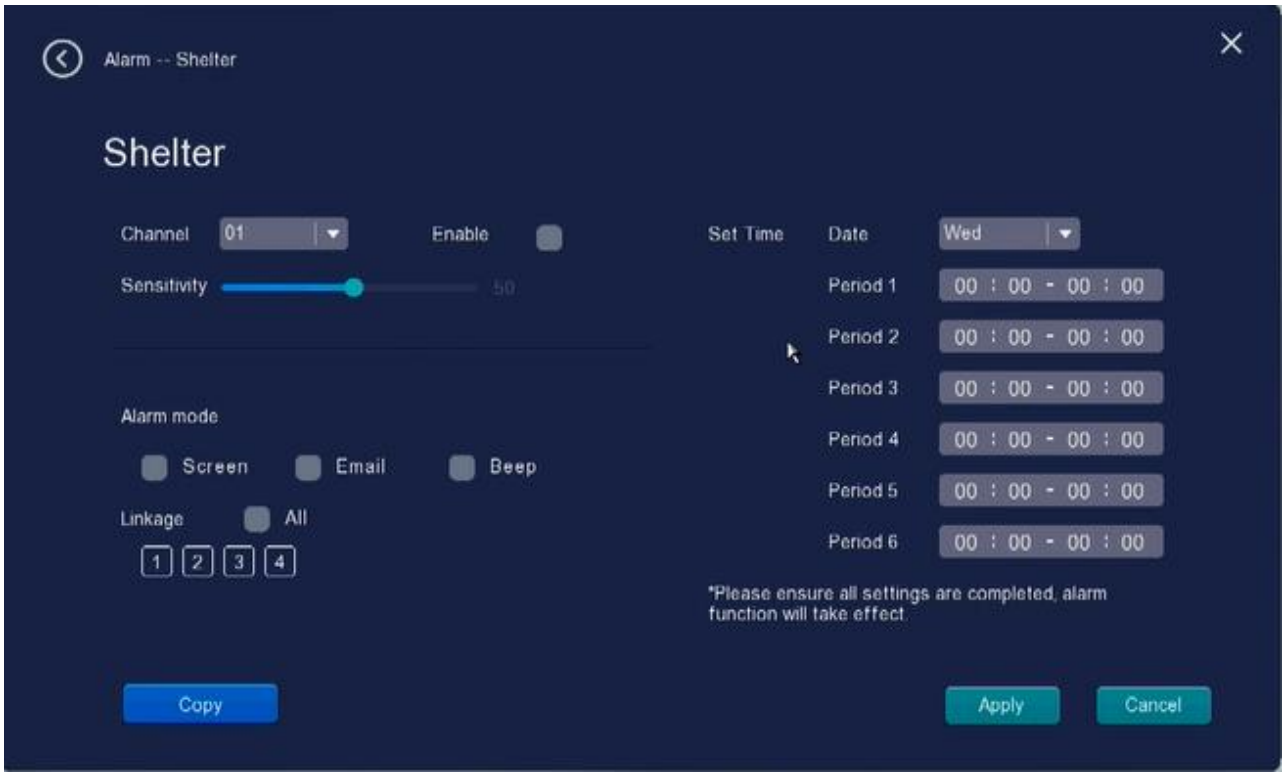
Note: You must set the detection area and detection schedule, or else there is no alarm anywhere and anytime. Please ensure all settings are completed alarm function will take effect.



Shelter

Click **Shelter** to enter the **Shelter** interface, On this page you can setting Channel Enable, Sensitivity, Detection area, Linkage and Set Time.

Shelter---Lens shelter alarm. When the lens is blocked by more than half, the alarm will be triggered. Select the alarm method to improve safety.



Step 1: Choose Channel for recording and Enable shelter detection function.

Step 2: Sensitivity---- The higher the sensitivity, the camera will be more easily alarmed. Select one shelter sensitivity.

Step 3: Alarm mode---- There are three alarm mode:

A Screen

If you select Screen, when the shelter has been detected, push the message to the Screen show.

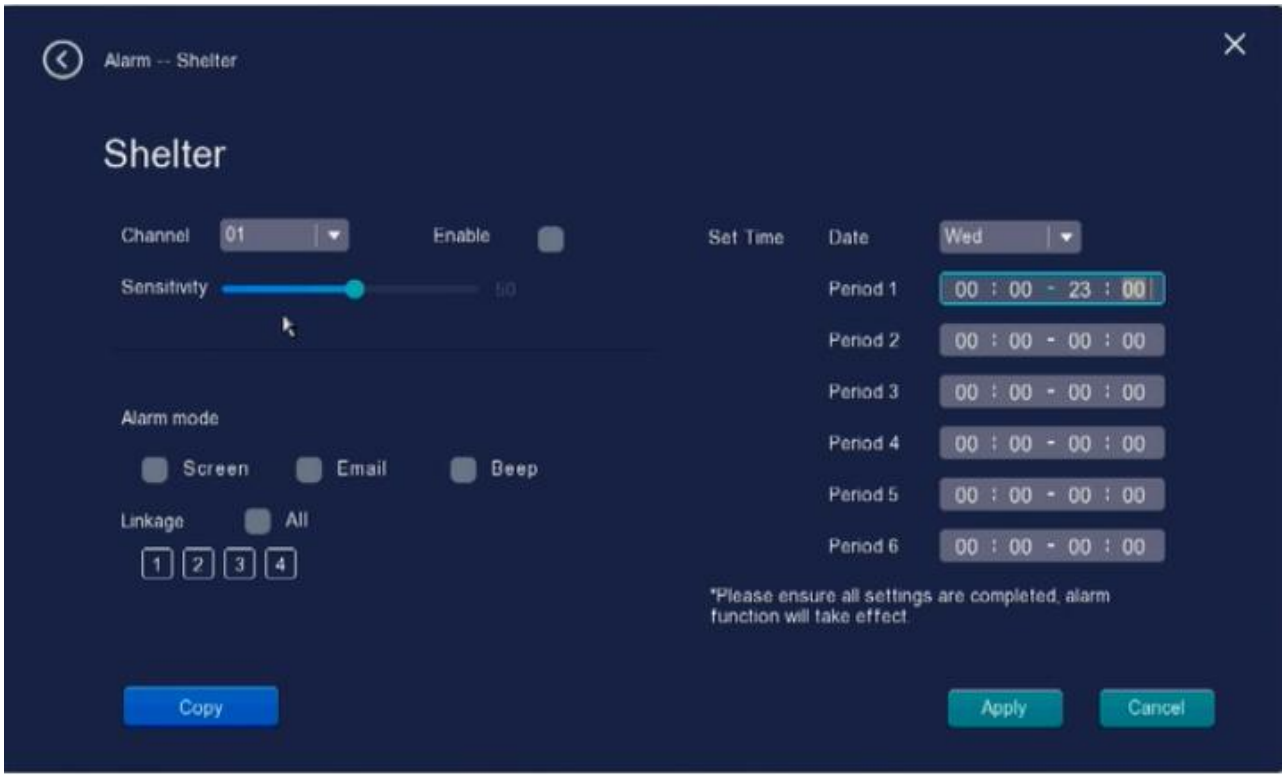
B Email

If you want to receive alarm emails when shelter is detected, you must select Send E-mail and set Mail Settings first.

C Beep

If you select this checkbox, when the shelter has been detected, the people around the NVR will hear beep alarm sound.

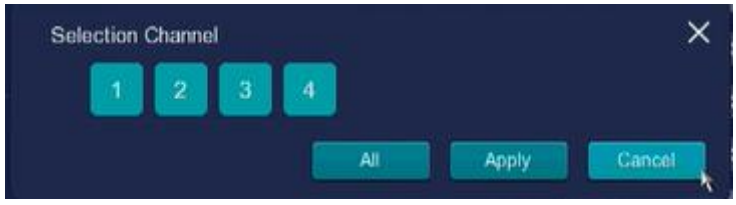
Step 4: Set Time---- Select the week day date and set time, For example, select Wed and time: 00:00-23:00, that means during Wed 00:00-23:00, when something moving in the detection area, the NVR will alarm.



Step 6: Linkage----Choose Channels for recording, when Motion Detection Alarm is triggered, when something moving in the detection area. the NVR after alarm, recording at Select Channel camera, if you not Select Channel NO, the NVR after alarm, Channel camera Unable to record alarm

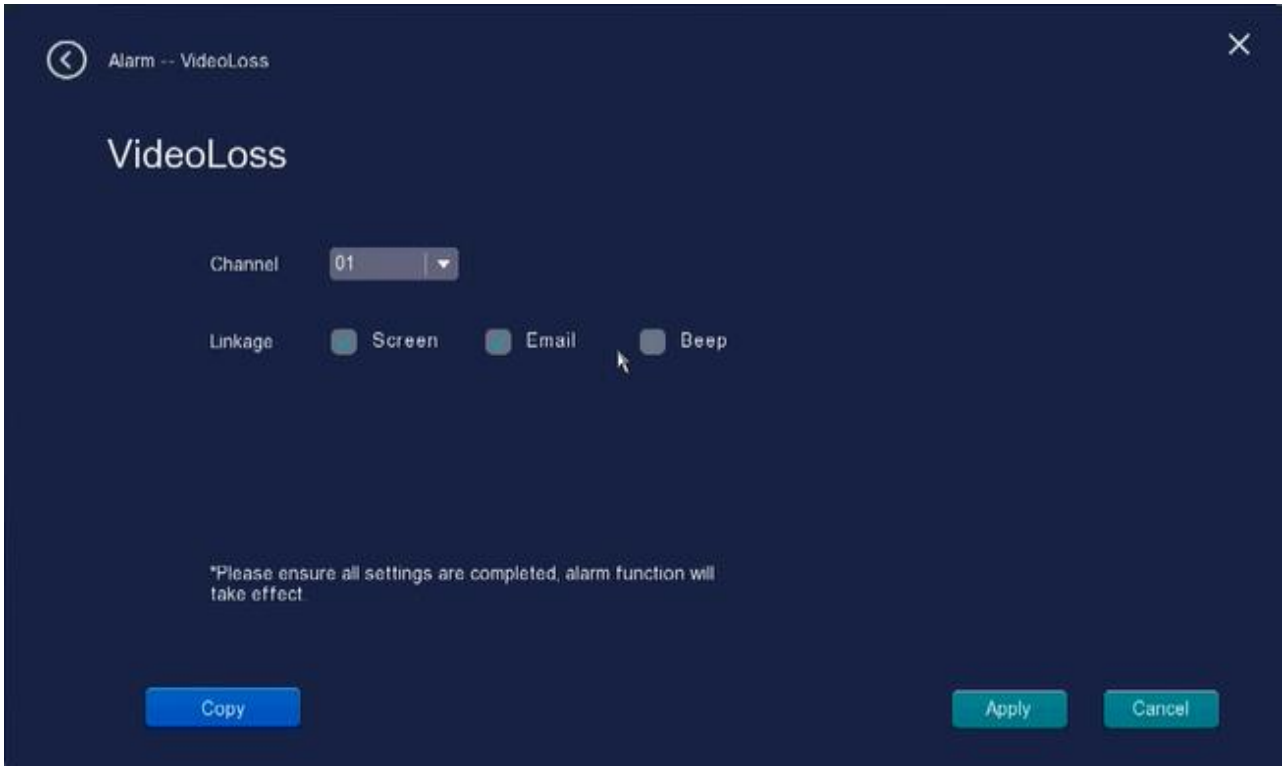
Step 7: Click Apply button to take effect.

Step 8: Copy---- If you want to set other channels to be the same, you can click the "Copy" button.



Video loss

Click **Video loss** to enter the **Videoloss** interface, On this page you can setting Channel NO and Linkage



Linkage---- There are three alarm mode:

A Screen

If you select Screen, when the Video loss has been detected, push the message to the Screen show.

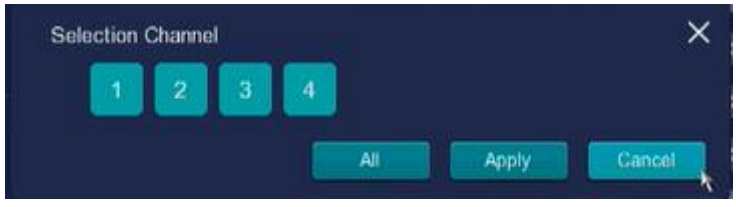
B Email

If you want to receive alarm emails when the Video loss is detected, you must select Send E-mail and set Mail Settings first.

C Beep

If you select this checkbox, when the Video loss has been detected, the people around the NVR will hear beep alarm sound.

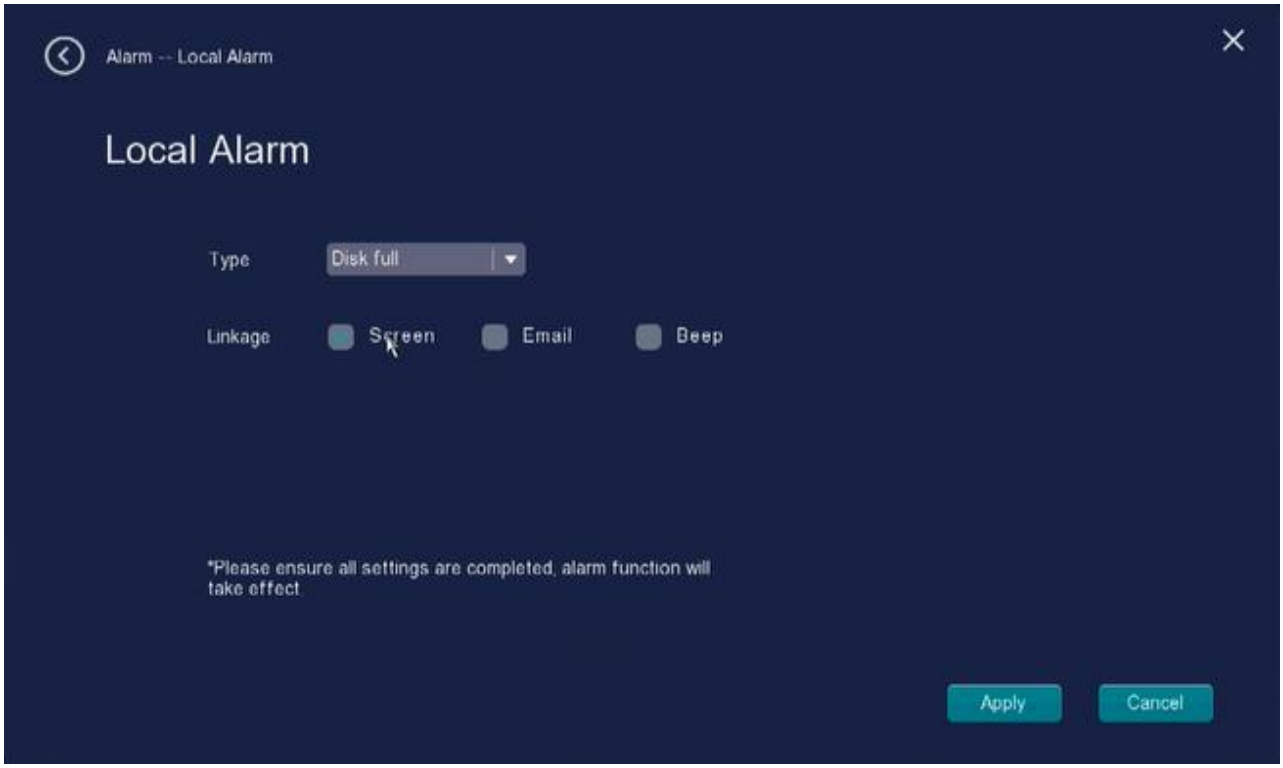
Copy---- If you want to set other channels to be the same, you can click the "Copy" button.



Local Alarm

Click **Local Alarm** to enter the **Local Alarm** interface, On this page you can setting Alarm Type and

Linkage



Tppe---- There are four alarm mode: Disk error, Disk full, IP conflict and cable disc.

Linkage---- There are three alarm mode:

A Screen

If you select Screen, when the select type alarm has been detected, push the message to the Screen show.

B Email

If you want to receive alarm emails when the select type alarm is detected, you must select Send E-mail and set Mail Settings first.

C Beep

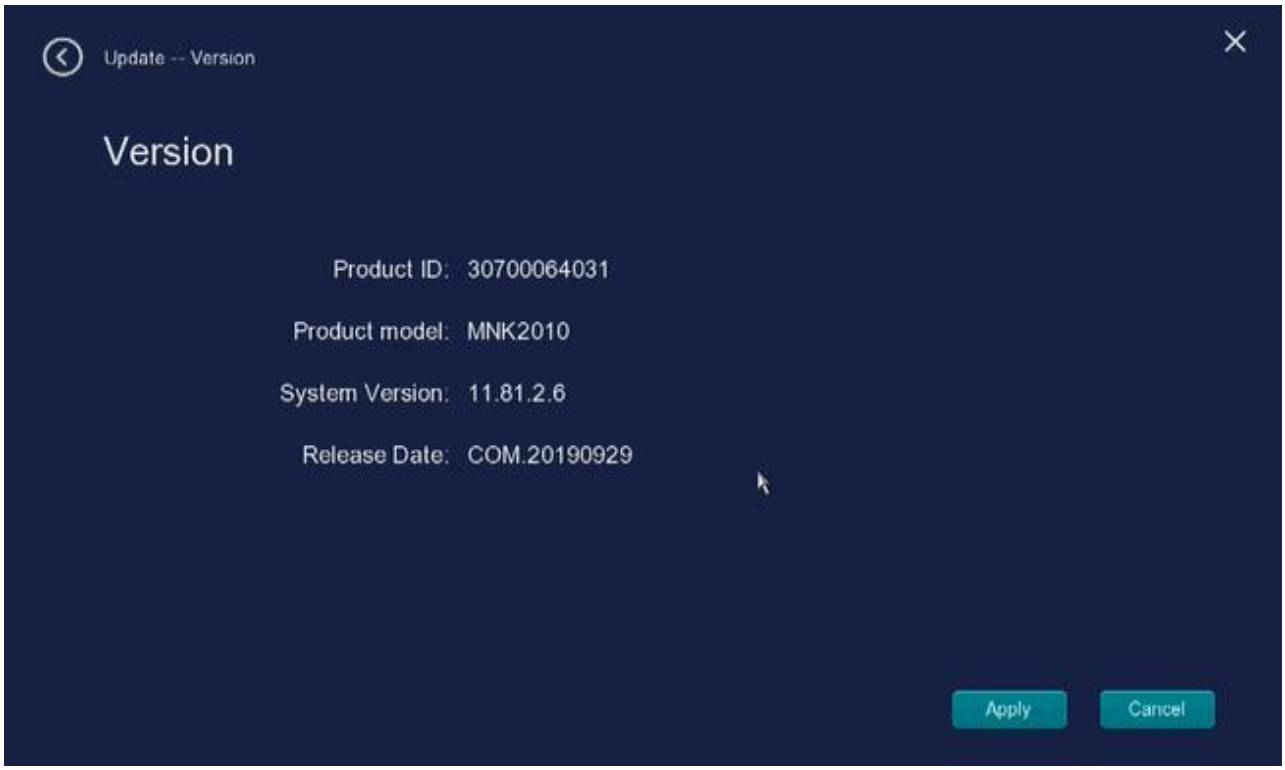
If you select this checkbox, when the select type alarm has been detected, the people around the NVR will hear beep alarm sound.

2.4.6 Upgrade

Right-click in live view mode and select **Menu** > **Upgrade** in the Menu interface. The Upgrade interface is displayed. You can configure the information of Sys version, NVR upgrade and IPC upgrade.

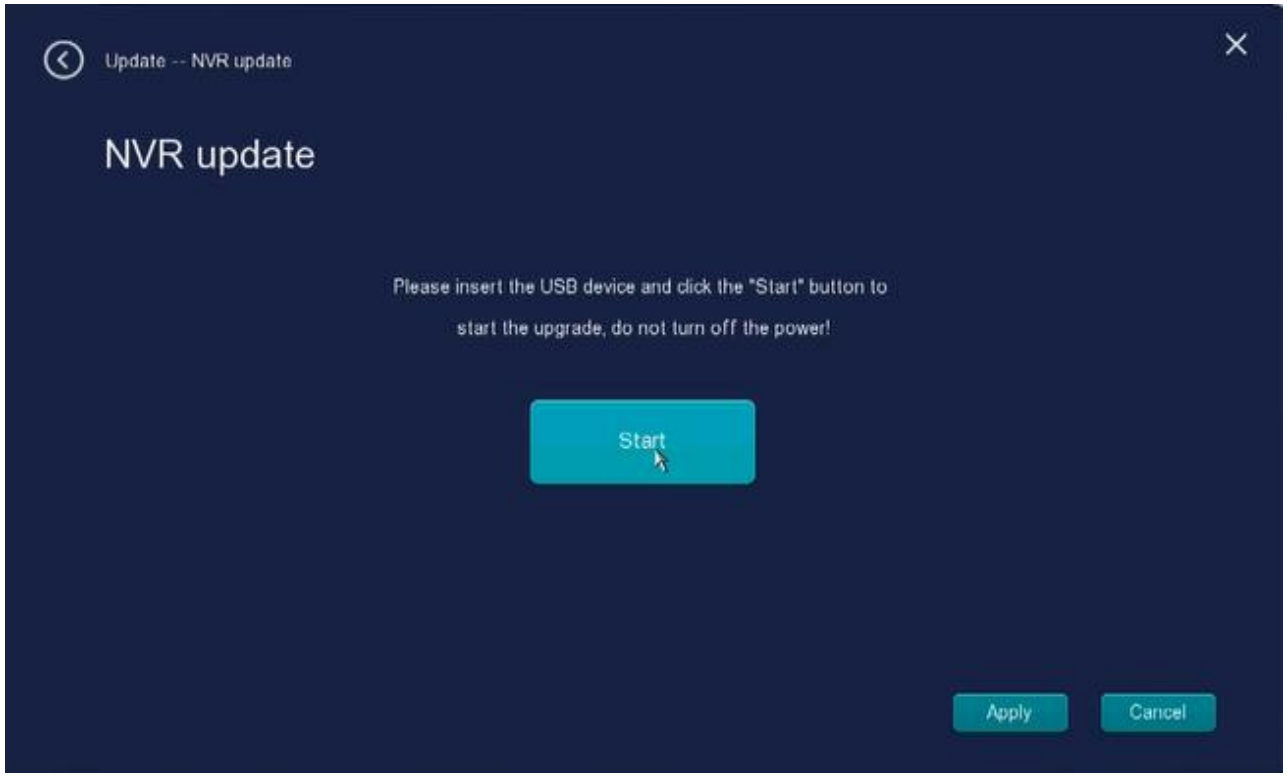
Sys version

Choose **Menu > Upgrade > Sys Version** in the Menu interface. The **Version** interface is displayed. You can view the Product ID, Product model, System Version and Release Date.



NVR upgrade

Download the frmware to the U disk → Insert U disk to NVR USB port → Right-click→ Menu → Upgrade→ NVR Upgrade → click Start to upgrade your NVR.

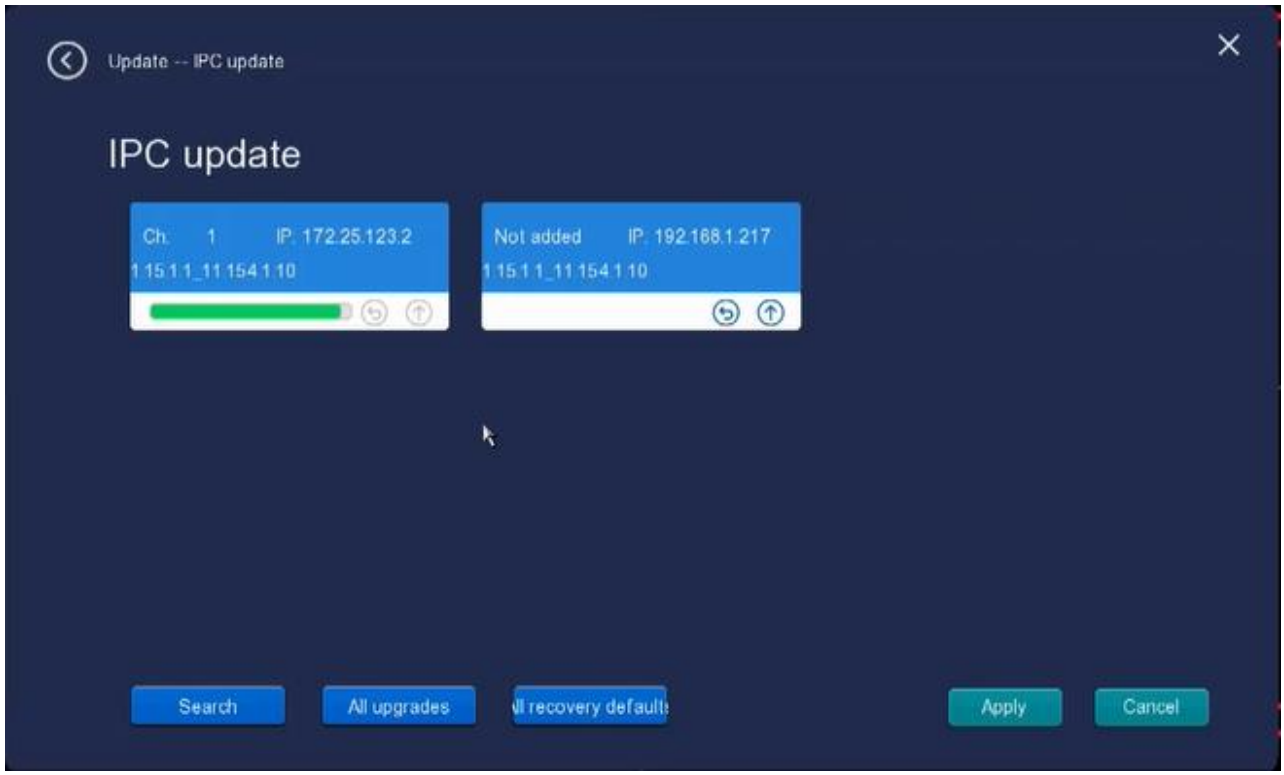


NOTE:

Don't shut down the power during upgrade. After upgrading, NVR restarts.

IPC upgrade

Download the frmware to the U disk → Insert U disk to NVR USB port Choose → Right-click→ **Menu** → **Upgrade**→ **IPC Upgrade** in the Menu interface. The IPC update interface, you can choose Search, All upgrade and All recovery default.



Search---- Click this button, you can choose channel IPC update.

Click ⓘ to update the IPC;

Click ⓘ to restore default.

All upgrades---- Click this button, update all IPC cameras.

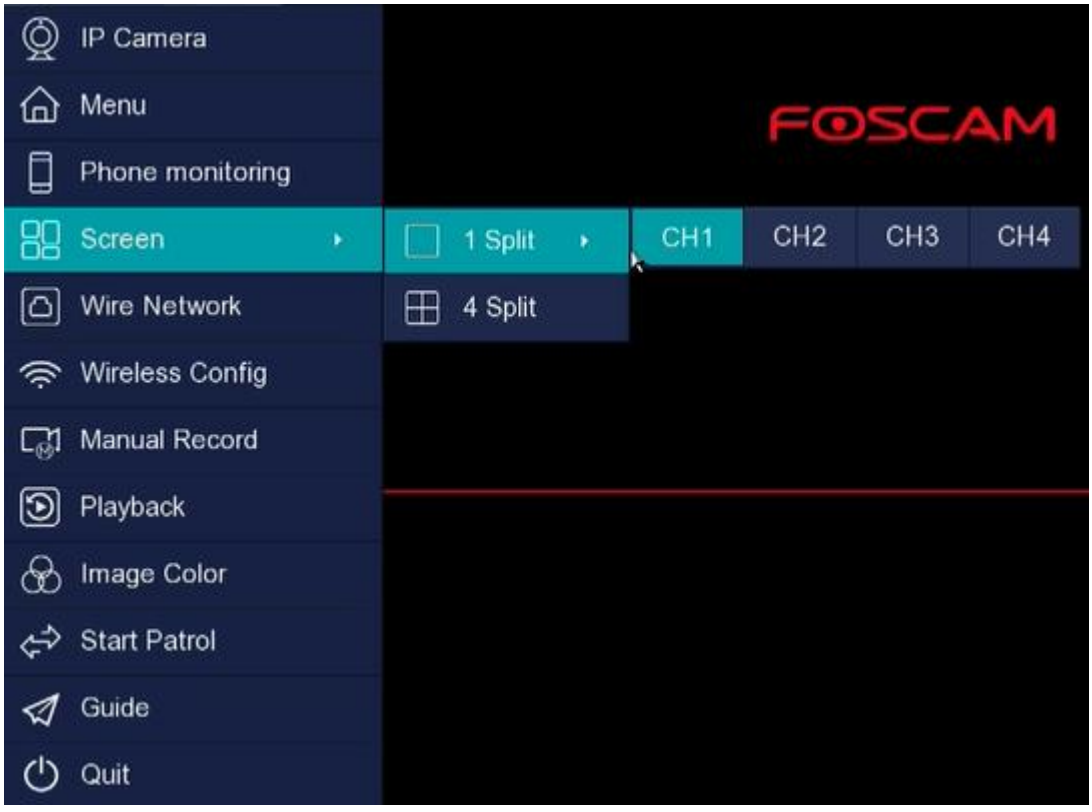
All recovery default---- Click this button, all the IP cameras recovery default

2.5 Phone monitoring

Right-click in live view mode and select **Phone monitoring** from the **Shortcut Menu**, the **P2P** interface is displayed. Please refer to 2.4.2 Network > Mobile

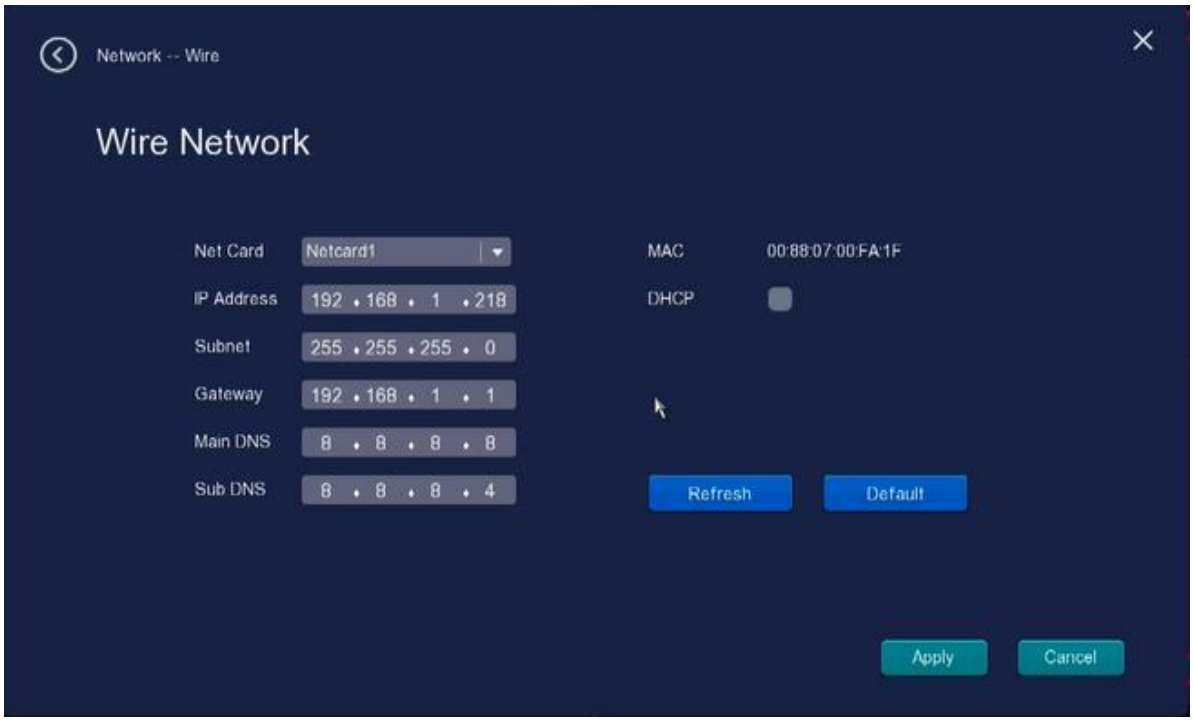
2.6 Screen

Right-click in live view mode and select Screen from the Shortcut Menu, you can choose single-screen or four screens.



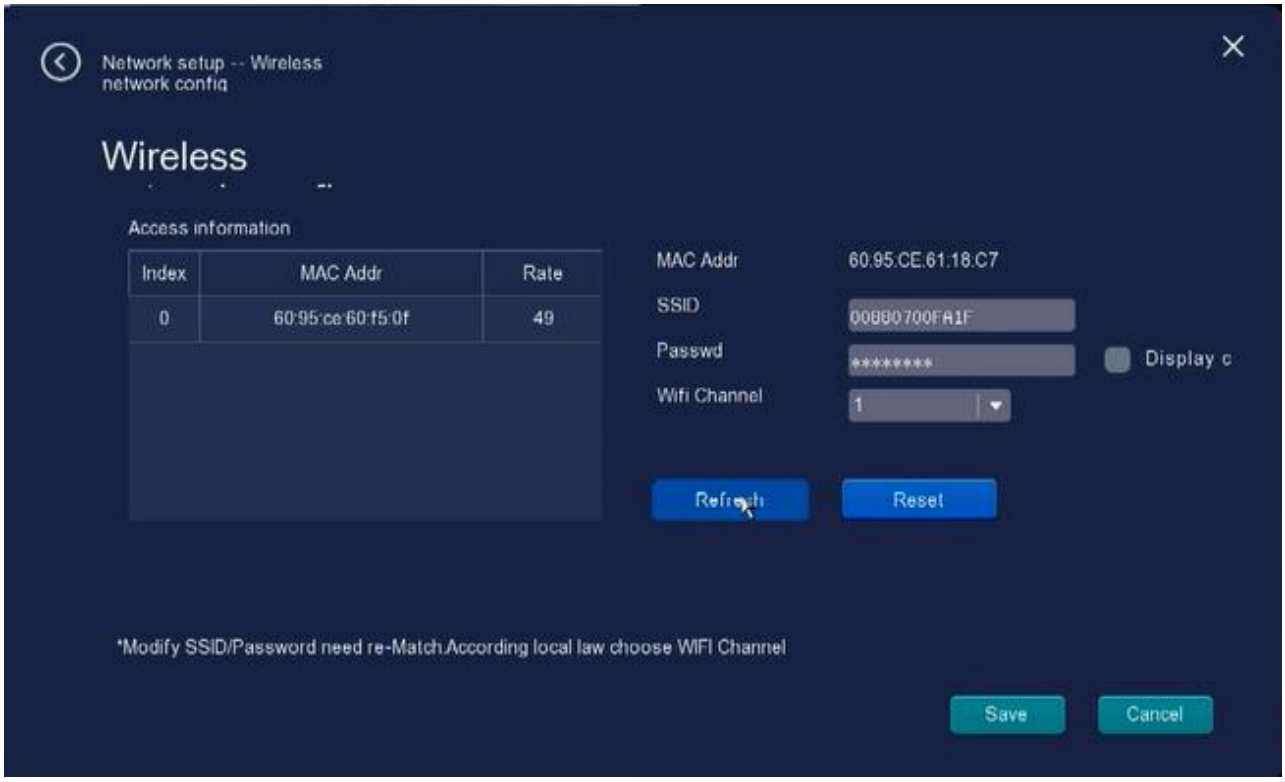
2.7 Wire Network

Right-click in live view mode and select **Wire Network** from the Shortcut Menu, the **Wire Network** interface is displayed. Please refer to 2.4.2 Network > Wire.



2.8 Wireless Config

Right-click in live view mode and select **Wireless Config** from the Shortcut Menu, the **Wireless** interface is displayed. Please refer to 2.4.2 Network > Wifi



2.9 Manual Record

Right-click in live view mode and select **Manual Record** from the Shortcut Menu, the **Manual Record** interface is displayed. you can selection channel Manual Record.

2.10 Playback

Right-click in live view mode and select **Playback** from the Shortcut Menu, the **Playback** interface is displayed. Please refer to 2.4.4 Record > Playback

2.11 Image Color

Right-click in live view mode and select **Image Color** from the Shortcut Menu, the **Image** interface is displayed. Please refer to 2.4.3 Channel > Image

2.12 Start Patrol

Right-click in live view mode and select **Start Patrol** from the Shortcut Menu, the Patrol turning interface is displayed.

Step 1: Choose Enable shelter Patrol turning.

Step 2: Cycle---- You can fill in between 3 and 60 seconds. For example, select 6 seconds, that means Patrol turning a channel cruise playback interface every 6 seconds.

Step 3: Mode---- 1 Split

2.13 Guide

Right-click in live view mode and select **Guide** from the Shortcut Menu, the **Guide** interface is displayed. Please refer to 2.2 Guide

2.14 Quit

Right-click in live view mode and select **Quit** from the Shortcut Menu, the **Quit** interface is displayed.

Logout: After logout, the monitor turns to the live view mode and if you want to do some operation, you need to input user name and password tog in again.

Choose logout , then click Log Out in the System interface. Click OK button in the pop-up message box, the NVR system will log out.

Note: After you have logged out the system, menu operation on the screen is invalid. It is required to input a user name and password to unlock the system.

Reboot: Choose Reboot, then click Reboot in the System interface. Click OK button in the pop-up

message box, the NVR system will reboot

Power: Choose Power, then click Power in the System interface.Click OK button in the pop-up message box, the NVR system will shut down.

Note: It is recommended that cut off the power after shutting down

3 Appendix

3.1 HDD Capacity Calculation

This chapter describes how to determine the size of the HDD you need when you install the NVR for the first time.

The NVR adopts the MPEG4/H.264 compression technology and its dynamic range is large. Therefore, the capacity of the HDD depends on the estimated size of files generated in each channel every hour according to code streams.

Computational formula of HDD Capacity:

Whole HDD Capacity(M)= number of the channels * time in need (hour) * spent of HDD Capacity per hour (MB/hour)

The meanings of parameters are as follows:

- Number of the channels: Number of channels where you need to enable recording.
- Time in need (hour): Time you need to record.
- Spent of HDD Capacity per hour

Spent of HDD Capacity per hour(M/hour) = $\frac{BitRate}{8bit} * 3600(\sec ond)$

You can obtain the **Bit Rate** by using the following methods:

-In the GUI interface, choose **Menu > Settings > Video** , view the value of the **Bit Rate**.

-In the Web interface, choose **Parameter Configuration > Local settings > Encoding Scheme**, view the value of the **Bit Rate**.

[Example]

If you select 4M for the bit rate and select four channels for recording and one week of recording is needed, you can calculate the HDD capacity by using the following formula:

Recording time(hour) =7days*24 hours=168 hour

Spent of HDD Capacity per hour(M/hour)= $\frac{4Mbit}{8bit} * 3600$ =1800M/hour

Whole HDD Capacity(M)=4*168(hour)*1800 (M/hour) =1209600M,

1209600M= $\frac{1209600M}{1024}$ =1181.25G

According to the preceding calculation result, you are advised to buy a HDD of 1.5 TB or above.

3.2 Specifications

NVR	Model	FN7104W-B4-1T
Video Input	**IP Video Input**	4 Channels HD IP camera input
Video Output	**HDMI Output**	1×HDMI
	VGA Output	1×VGA
	Display Resolution	1920 * 1080, 1280 * 1024, 1440 * 900 , 1024* 768
Recording	**Recording Resolution**	1080p per channel (4ch@1080P)
	Record Mode	Manual / Time Scheduled / Motion Detect
	Compression Format	H.264+
Playback	**Synchronous Playback**	4 channel 1080p synchronous video playback
	Playback Mode	Fast forward / Fast backward / Frame forward / Slow Play
HDD	**HDD**	1TB security grade hard drive (pre-installed)
	Capacity	Up to 6TB
External Interface	**Network Interface**	1× 10/100 Mbps RJ45 port
	USB Interface	2× USB2.0 interface for mouse and external storage
	Button	1× Reset button
Network	**Ethernet**	One 10/100Mbps RJ45 port
	Wireless Standard	IEEE802.11b/g/n
	Wireless Security	WPA, WPA2
	Network Protocol	IP、TCP、UDP、SMTP、DHCP、RTSP、Mesh
Software	**Computer Operating System**	Microsoft Windows XP, 7, 8, 8.1, 10, Mac OS

	Internet Viewing	N/A
	Smart phone	iOS, Android
Language	**Language**	13 languages（Chinese、English、Russian、Japanese、Arabic、Spanish、German、Portuguese、French、Korean、Italian、Thai、Romanian）
Physical and Environmental	**Power Supply**	DC 12V/2A
	Dimension(LxWxH)	234mm*234mm*52mm
	Net Weight (g)	660g
	Operating Temperature	-10°C ~ 50° (14°F ~ 122°F)
	Operating Humidity	20% ~ 85% non-condensing
	Storage Temperature	-20°C ~ 60°C (-4°F ~ 140°F)
	Storage Humidity	0% ~ 90% non-condensing

Camera	**Model**	**FI9900W**
Image Sensor	**Sensor Type**	1/2.7" CMOS
	Video Quality	1080p (1920*1080)
	Wide Dynamic Range	N/A
	Backlight Compensation	√
Lens	**Lens Type**	f:4mm, F:2.0
	IR Range	20m
	Infrared Mode	Automatic or manual
	Diagonal Angle of View	94°
	Horizontal View Angle	80°
Connectivity	**Ethernet**	√
Software Features	**Video Format**	H.264+
	Multi-Stream	Dual streams
	Motion Detection	√
	Day/Night	√

Physical and Environmental	**Waterproof**	IP66
	Net Weight	360g
	Power	DC12V
	Power Consumption	<6W
	Dimension(LxWxH)	97(L)x67(W)x64(H)
	Certification	FCC、IC、CE、RoHS、IP66
	Warranty	Limited 2-year warranty
	Operating Temperature	-20°C~ 55°C (-4°F ~ 131°F)
	Operating Humidity	20% ~ 85% non-condensing
	Storage Temperature	-20°C ~ 60°C (-4°F ~ 140°F)
	Storage Humidity	0% ~ 90% non-condensing

3.2 FAQ

1. No image displayed on the monitor after starting up normally.

- Verify the device is connected with the monitor via HD-OUT or VGA cable.
- Verify the connection cable is good.
- Verify Input mode of the monitor is correct.

  Please check the input mode of the monitor matches with the output mode of the device (e.g. if the output mode of NVR is HD-OUT output, then the input mode of monitor must be the HD-OUT input). And if not, please modify the input mode of monitor.

2. No record file found in the NVR local HDD, and prompt "No record file found".

- Verify the system time setting is correct.

Choose **Menu > Settings > General** in the GUI interface, and verify the time is correct.

- Verify the search condition is correct.

Choose **Menu > Playback** in the GUI interface, and verify the channel and time are correct.

- Verify the HDD status is normal.

Choose **Menu > About > HDD Info** in the GUI interface, view the HDD status.

3. Why recording is not performed after motion detection is enabled?

On the "Motion Detection" page, check whether the following are correctly set:

- Check whether the motion detection channel is correct.
- Check whether a trigger time segment is set.
- Check whether a detection area is set.
- Check whether recording is selected.

4. The screen of the display is incomplete.

Confirm the current resolution and check the resolution supported by the display. If the resolution is 1920*1080, the display needs to support the resolution 1920*1080.

5. Why can't video files be downloaded during video playback or downloaded files cannot be played back properly?

To save consumed resources, the server limits concurrency of video playback and file download. In this case, stop video playback and then download files or play back videos after video files are downloaded.

3.4 Glossary

Acronym	Term	Description
DDNS	Dynamic Domain Name Server	Dynamic DNS is a method, protocol, or network service that provides the capability for a networked device, such as a router or computer system using the Internet Protocol Suite, to notify a domain name server to change, in real time (ad-hoc) the active DNS configuration of its configured hostnames, addresses or other information stored in DNS.
DHCP	Dynamic Host Configuration Protocol	DHCP is a network application protocol used by devices (DHCP clients) to obtain configuration information for operation in an Internet Protocol network.
HDD	Hard Disk Drive	A storage medium which stores digitally encoded data on platters with magnetic surfaces.
PPPoE	Point-to-Point Protocol over Ethernet	It is a network protocol for encapsulating Point-to-Point Protocol (PPP) frames inside Ethernet frames. It is used mainly with ADSL services where individual users connect to the ADSL transceiver (modem) over Ethernet and in plain Metro Ethernet networks.
PTZ	Pan, Tilt, Zoom	PTZ cameras are motor driven systems that allow the camera to pan left and right, tilt up and down and zoom in and out.
NTP	Network Time Protocol	A protocol designed to synchronize the clocks of computers over a network.
NVR	Network Video Recorder	A NVR can be a PC-based or embedded system used for centralized management and storage for IP cameras.

3.5 CE & FCC

Electromagnetic Compatibility (EMC)

FCC Statement

This device compiles with FCC Rules Part 15. Operation is subject to the following two conditions.

- This device may not cause harmful interference.
- This device must accept any interference received, including interference that may cause undesired operation.

This equipment has been tested and found to comply with the limits for a Class A digital device, pursuant to Part 15 of the FCC Rules. These limits are designed to provide reasonable protection against harmful interference when the equipment is operated in a commercial environment. This equipment generates, uses, and can radiate radio frequency energy and, if not installed and used in accordance with the installation manual, may cause harmful interference to radio communications. Operation of this equipment in a residential area is like to cause harmful interference, in which case the user will be required to correct the interference at his own expense.

FCC Caution

Any changes or modification not expressly approved by the party responsible for compliance could void the user's authority to operate this equipment.

CE Mark Warning

This is a Class A product. In a domestic environment, this product may cause radio interference, in which case the user may be required to take adequate measures.

3.6 WARRANTY

FOSCAM values your business and always attempts to provide you the very best of service.

No limited hardware warranty is provided by FOSCAM unless your **Foscam** product ("product") was purchased from an authorized distributor or authorized reseller. Distributors may sell products to resellers who then sell products to end users. No warranty service is provided unless the product is

returned to an authorized return center in the region where the product was first shipped by FOSCAM or to the point-of-purchase, which may have regional specific warranty implications.

If you purchase your Foscam product from online store, please contact the point-of-purchase and ask for return / replacement / repair service.

Limited Hardware Warranty

- The products are warranted to be free from manufacturing defects in materials and workmanship starting from the shipping date of **Foscam**.

  This limited hardware warranty does not cover:
- Software, including the software added to the products through our factory-integration system, software, etc.
- Usage that is not in accordance with product instructions.
- Failure to follow the product instructions.
- **Normal wear and tear.**

Return Procedures

- Please read **Foscam** warranty policy & policy of your reseller first before sending items back to point-of-purchase.
- Customer must first contact point-of-purchase to obtain a Return Merchandise Authorization (RMA) number before returning the product. If the product you received is suspected to be defective and the product warranty has not expired, The RMA number will allow your reseller to track your return much easier and help them expedite processing your request.
- After receiving your RMA case number, pack the item(s) very well with the original box and all the original accessories included such as power adapters, brackets, cables, manuals.
- Write your RMA number and the return reason (the problem of the product) on the warranty card along with the complete package to send them back.

Replacement Services

- **If customers ask for replacement service, please contact point-of-purchase and follow their policy.**
- Our technicians will inspect all items returned for replacement requests. If the retuned product is found in working order, we will return the same item received. However customers shall be responsible for all shipping & handling charges incurred for getting the units back to customers.
- If returned products are found defective, we will replace the product and assume the shipping cost

for sending back the replacement unit to customers.

- If for any reason, we are unable to provide a replacement of the original returned item(s). You will have a choice for a "Substitute" item at the same equal value.
- We do not provide exchange and replacement due to normal hardware upgrade according the market after 14 days after the product is delivered.
- Our technicians will test the product before send out the replacement, any other demand for more than two times replacement for the same product during replacement limit will be rejected.
- **Replaced products are warranted from the balance of the former warranty period.**

Warranty Forfeiture

- Warranty is void if purchase from unauthorized distributor or reseller.
- Warranty is void if trade-mark, serial tags, product stickers have been removed, altered or tampered with.
- Warranty is void for mishandling, improper use, or defacing the product.
- Warranty is void for physical damage, altered, either internally or externally, improper or inadequate packaging when returned for RMA purposes.
- Warranty is void if damage has resulted from accident, dismantle, abuse, or service or modification by someone other than the appointed vendor, souse, fission or the spare part has been over the period of warranty.
- Warranty is void if product is damaged due to improper working environment or operation. (For example, improper temperature, humidity, unusual physical or electrical stress or interference, failure or fluctuation of electrical power, static electricity, using wrong power adapter, etc.)
- Warranty is void if damaged by the use of parts not manufactured or sold by FOSCAM.
- Damage caused by improper installation of third-party products.
- Warranty is void if damaged for irresistible cause, such as earthquake, fire, lightning, flood, etc.
- Product beyond limited warranty.

Shipping Fee

- If products are defective or damaged under normal use or operation in the replacement limit, distributors or resellers are responsible for the shipping cost the product back to customers, customers should assume the shipping cost send the product to the point-of-purchase.
- During replacement limit, if customers ask for replacement due to the product does not fit for customer's personal expectation, customers should responsible for both shipping fee.
- Customers shall be responsible for both shipping fee if their product beyond the replacement limit but still in warranty limit.

Repair Service Out Of Warranty

- FOSCAM provide extra repair service for product that out of warranty, it is chargeable. The total fee contains device cost and service fee. Device cost (including accessories) is the standard uniform price provide by FOSCAM.
- Different region may have different service fee, please contact the point-of-purchase to confirm that before you ask for this service.
- Our technicians will quote the total price after detect the product, If customers refused to repair after the quotation, customers need pay for the test fee, $3.5/hour. If agree with the quotation, test will be free.
- Repaired product out of warranty will obtains 3-month warranty from the date of the product back to customers.

Limitation of Liability

- **Foscam** is not responsible for other extra warranty or commitment promised by resellers, if your reseller promised some extra commitment or warranty; please ask for written documents to protect your rights and interests.
- **Foscam** does not offer refunds under any circumstances. Please contact the point-of-purchase and follow their refund / return policy.
- **Foscam** shall not be liable under any circumstances for any consequential, incidental, special or exemplary damages arising out of or in any connection with this agreement or the products, including but not limited to lost profits, or any claim based on indemnity or contribution, or the failure of any limited or exclusive remedy to achieve its essential purpose or otherwise. Purchaser's exclusive remedy, as against **Foscam**, shall be the repair or replacement of defective parts. If **Foscam** lists a product on its website specification in error or that is no longer available for any reason, **Foscam** reserves the right to explain it without incurring any liability.

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3.7 Statement

You are advised to be cautious in daily life, keep personal account information carefully, do not share personal account easily. Change passwords of your account and equipment periodically, and upgrade equipment firmware to strengthen security consciousness.

Our company makes no warranty, implied or otherwise, that this product is suitable for any particular purpose or use. You need to abide by the relevant laws and regulations of the use restrictions when using products. Our company takes no responsibility of illegal activities by using our products.

Our company takes no responsibility of the loss by force majeure, such as failure or faults of telecom system or the Internet network, computer viruses, malicious attacks of hackers, information damage or loss, and faults of computer system.

My company does not need to take any responsibility of the special, incidental or corresponding loss by the products of our company or any software provide by our company, including but not limited to operating loss, profit or purpose. The company only takes the responsibility applicable to national and local legal requirements.

Our company takes no responsibility of the loss caused by the following at ant time:

1) loss of purchases;

2) loss of intangible property damage, such as data, programs;

3) loss of compensation claimed by third-party customers.

Delete images, format the memory card or other data storage devices does not completely remove the original image data. You can restore deleted files from discarded the storage device by commercial software, but which will potentially lead to personal image data used maliciously by others. The privacy of the data security belongs to user responsibility, the company takes no responsibility.

Parts mentioned in this statement should not be understood by the configuration description of the product purchased by the customer, the product configuration must accord to the specific models purchased by the customer.

Without the prior written permission of my company, all the contents of relevant operating instructions manual affiliated to the product must not be reproduced, transmitted, transcribed or stored in a retrieval system, or translated into other languages.

Our company will reserve the right to improve and modify the product and corresponding manuals.

The company reserves the right of final interpretation on our products.

3.8 Obtaining Technical Support

While we hope your experience with the NVR is enjoyable and easy to use, you may experience some issues or have questions that this User's Guide has not answered.

If you have problem with device, please first contact reseller for solving the problems.

If our reseller cannot provide service, please contact our service department:

support@foscam.com

CE Certificate statement Website:

https://www.foscam.com/company/ce-certificate.html

Exporter and Importer Information Opened to Public:

https://www.foscam.com/company/open-information.html

www.foscam.com

Due to product upgrades and other reasons, this guide may be slow to update, resulting in slight inconsistencies with the ofcial website information. Please take the ofcial website (www.foscam.com) information as the current standard.

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