FOSCAM
home security

User Manual

Model: FN8108W-B4-1T

Model: FN9108W-B4-2T

Model: FN9108E-B4-2T/FN9108E-T4-2T/FNA108E-B4-2T/FNA108E-T4-2T

Model: FN9108H/ FN9108HE/FNA108H/FNA108HE

Model: FNA216H/FNA216HE

Version: 1.2

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Security Warning

- Please change the password of your Foscam 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 App account safe.
- Please update your device to the latest firmware regularly for an optimal user experience.

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 CR1220 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

Preface

Welcome to use our product, Network Video Recorder (NVR) or NVR Kit. This document mainly focuses on the installation and configuration of NVR application system. With high performance video, user-friendly GUI, and practical industrial designs. This series NVR 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: For your security, please set a new user name and password for your NVR before Login.

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.
- The NVR in the FN9108W-B4 and FN8108W-B4 kit can add the IPC in the kit or the other Foscam models can be added by LAN in the kit, and the IPC in the kit can only be used for the NVR in the kit.

Installation Environment

Precautions

- Foscam cameras and NVRs require good security practices to safeguard your privacy. You should regularly change your camera or NVR password which is the combination of numbers, letters and symbols.
- You should update your camera or NVR regularly. Make sure your camera or NVR has the latest firmware installed for your specific model and better experience.

- Please keep the device horizontally and avoid inclination or inversion.
- Do not install the NVR in humid and dusty environment.
- Put the 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 ling 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 the battery.
- 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.
- Check the power supply to avoid damage because of voltage mismatch.
- Make sure the NVR working within suitable temperature and humidity environment.
- Short circuit may occur when dust become wet on circuit board.
- Please clean the dust on connectors and NVR case.
- Operating Temperature: 0°C ~ 50°C (32°F ~ 122°F).Do not install the wireless NVR in humid and dusty environment.

1 Overview

1.1 Product Introduction

This document introduces a series of NVR products, including: FN8108W-B4 Kit, FN9108W-B4-2T, FN9108E-B4-2T, FN9108E-T4-2T, FNA108E-B4-2T, FNA108E-T4-2T, FN9108H, FN9108HE,FNA108H,FNA108HE,FNA216H,FNA216HE. 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 Video Management System (VMS) 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, 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.

- 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.
- Alarm 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, four screens or nine screens 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.

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. The maximum resolution of NVR support displays is 3840 * 2160.
Network	10/100M Ethernet or above.

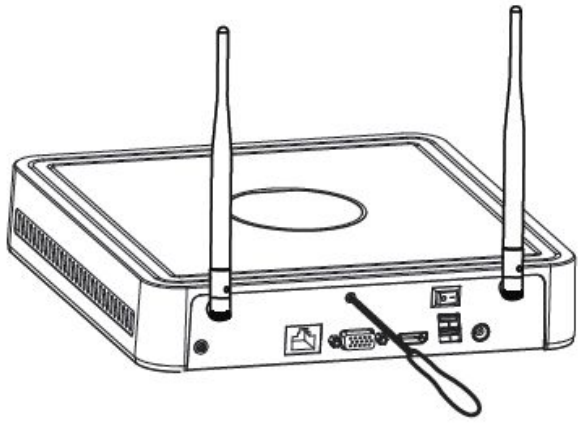
1.4 Hard Disk Installation

If your NVR is FN9108H, FN9108HE, FNA108H, FNA108HE, FNA216H and FNA216HE, you must install the hard disk to the NVR. FN8108W-B4-1T, FN9108W-B4-2T, FN9108E-B4-2T, FN9108E-T4-2T, FNA108E-B4-2T, FNA108E-T4-2T,FN9108 has a hard drive installed at the factory.

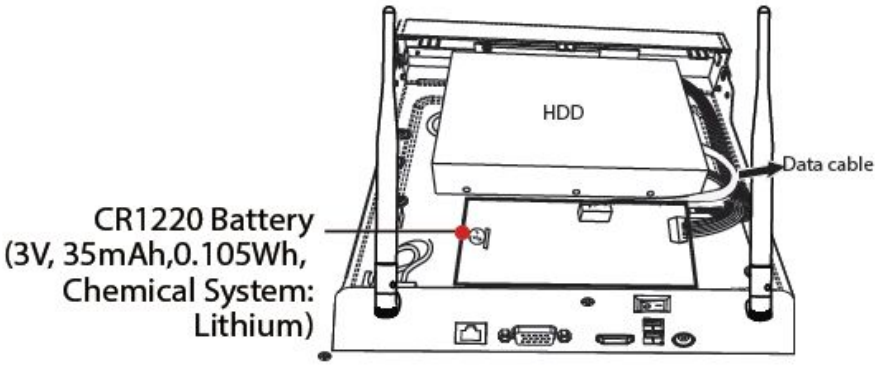
WARNING

- Before installing a hard disk drive (HDD), please make sure the power is disconnected from the NVR.
- It is recommended that a hard drive be used in 7200 high-speed or above.

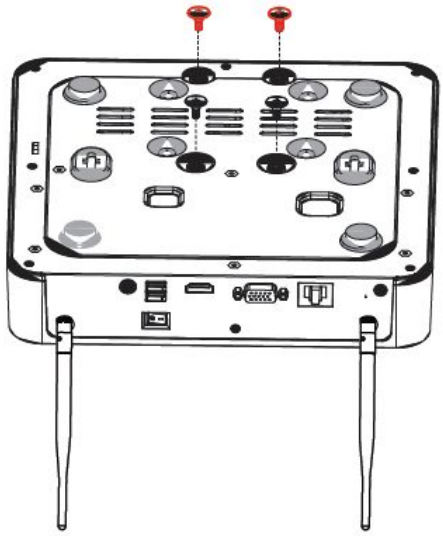
Step 1: Remove the cover from the NVR by unfastening the screws on the rear and bottom.



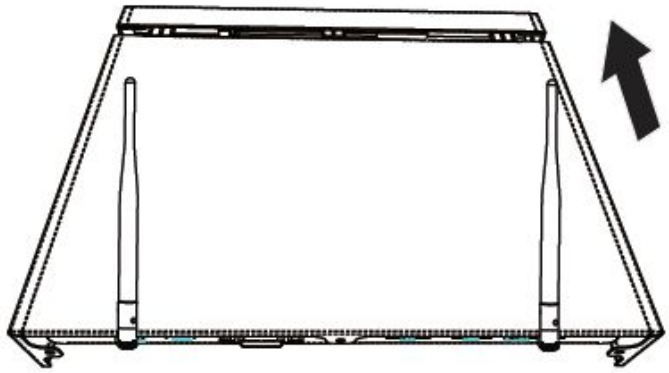
Step 2: Connect one end of the data cable and power cable to the motherboard of NVR and the other end to the HDD.



Step 3: Place the HDD on the bottom of the device and then fasten the screws on the bottom to fix the HDD.



Step 4: Re-install the cover of the NVR and fasten screws.



2 GUI

Please refer to the ***Quick Setup Guide*** if you install the NVR for the first time. You can visit the local NVR device via the display or monitor, and view or manage NVR system.

2.1 Before Starting

You need to know some basic information before you log on to the NVR system with the monitor or display.

2.1.1 Icons Description

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

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

  : Human Detection Alarm. Identify whether someone is moving within the range of the camera. Only FN7108W-B4 kit supports this function.

  : Motion Detection Alarm. The motion is detected during the detection time in the detection area, the NVR will alarm.

  : NVR is recording for the IPC.

  : You can click this icon to control whether IPC records sound.

  : Shows the strength of the IPC wireless network.Only FN7108W-B4 kit supports this function.

2.1.2 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 **Shutdown** in the shortcut menu. Choose **Shutdown**, click the **OK** button in the confirmation box. 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 **Main Menu > Restore** in the Menu interface, then choose to restore defaults in the **Restore factory settings** interface.

2.1.3 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.

2.2 Login

For your security, please set a new password for your NVR before Log In.

Login page.

Enter the Username and Password, then click on the **OK** button. You will be taken to the Setup Wizard.

2.3 Guide

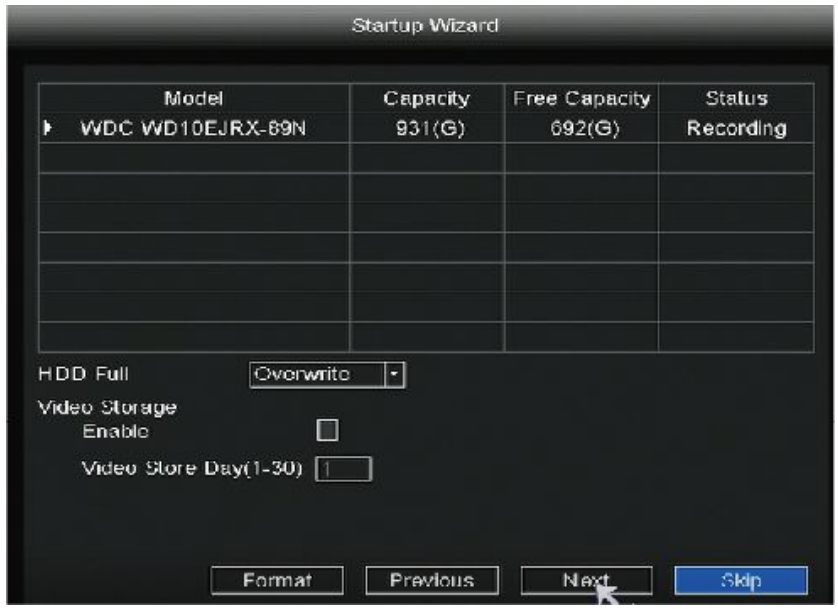
By default, the Guide starts once the NVR has loaded. The Guide can walk you through some important settings of the NVR. If you don't want to use the Guide at that moment, right click the mouse to quit.

1. Setting the system time, date format, language, resolution of the monitor and so on.

2. Format HDD.

Click the **Format** button to set up the HDD. Note that this will delete all files on the HDD.

HDD Full Setting. Select Stop Record or Overwrite.



Note

Some NVR models do not come with a hard drive at the factory; please purchase one separately.

3. Network

You can set up the network information for the NVR.

4. P2P.

If you want to know the UID of the device, please scan the QR code. If you don't want to use the Setup Wizard next time, check **Not show again** check box. Click the Finish button to complete the setup wizard.

Note

The P2P in this article is only an example, please refer to the actual situation.

You can also Right-click "**Main Menu > Configuration**", uncheck the **Startup Wizard** checkbox. Click the **Save** button.

2.4 Shortcut Menu

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

Only FN7108W-B4 kit

FN8108H/FN8108HE

Right-click in live view mode and select screen from the Shortcut Menu, you can choose 4-screen, 8-screen or 9 screens.

2.4.1 Channel Config

Channel

Config(FN9108H/FN9108HE/FN9108E/FNA108H/FNA108HE/FNA108E/FNA216H/FNA216HE)

Right-click in live view mode and select **Channel Config** to enter the **Channel Config** interface, On this page you can see device status such as channel, Status, IP Address, MAC Address, Add IP Camera, Modify IP, Delete/Modify/move up/move down added device.

You can add an IP Camera that is connected to the internet on the NVR.

Step 1: Right-click on main interface, select Channel Config.

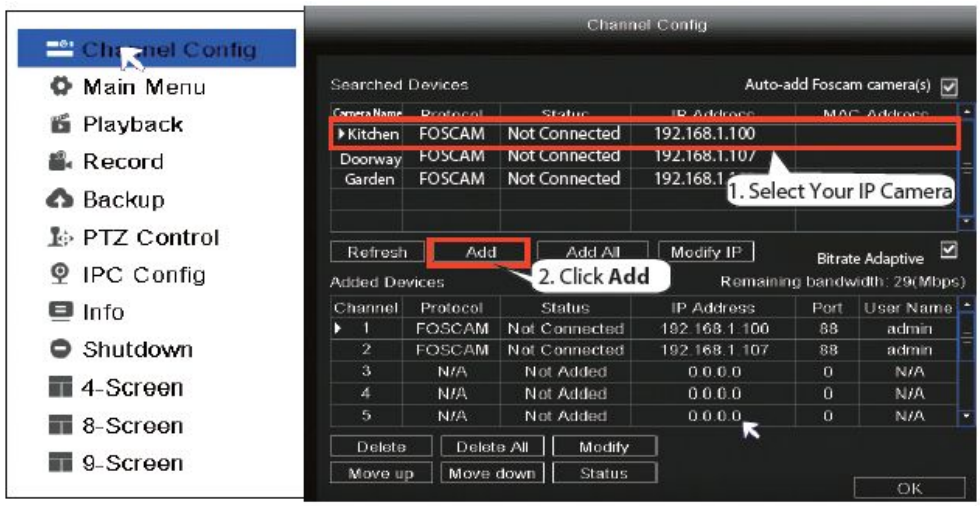
Step 2: Select your IP Camera or Auto added IPC.

Step 3: Click **Add**.

Step 4: Enter username and password of the camera. If your camera is in the factory default state, you do not need to enter the user name and password.

Step 5: Click OK.

Note: If the camera is added during factory default status, the username and password will be the same as the NVR.



Select a protocol depending on which IP Camera you have.

- FOSCAM protocol: The High Definition (HD) IP Cameras for Foscam.

- ONVIF protocol: IP Cameras which support ONVIF protocol.

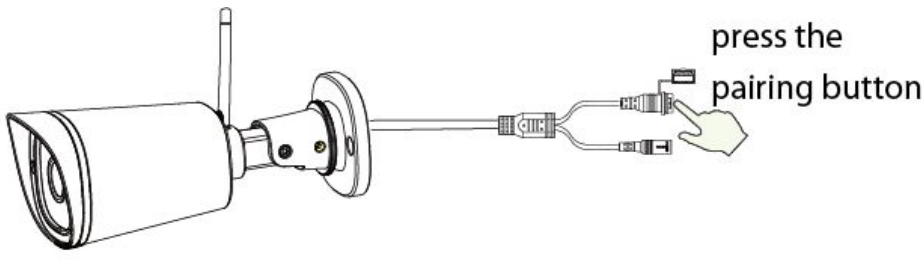
Pair IP Camera(Only FN8108W-B4-1T and FN9108W-B4-2T kit)

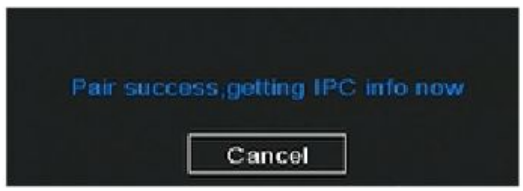
Right-click in live view mode and select **Pair IP Camera** to enter the **Pair IP Camera** interface, On this page you can see device status such as channel, Status, MAC Address, Remove and Add IP Camera.

Note

The NVR and IP Camera are already paired. If you need to match more cameras (Only FI9911W or FI9925W), please refer to the following steps.

Click **Pair** button and press the Reset button of the camera tail cable at the same time, until it prompts that the pairing is successful. When finished code matching, The live view interface will show you the video feed of each IP Camera.



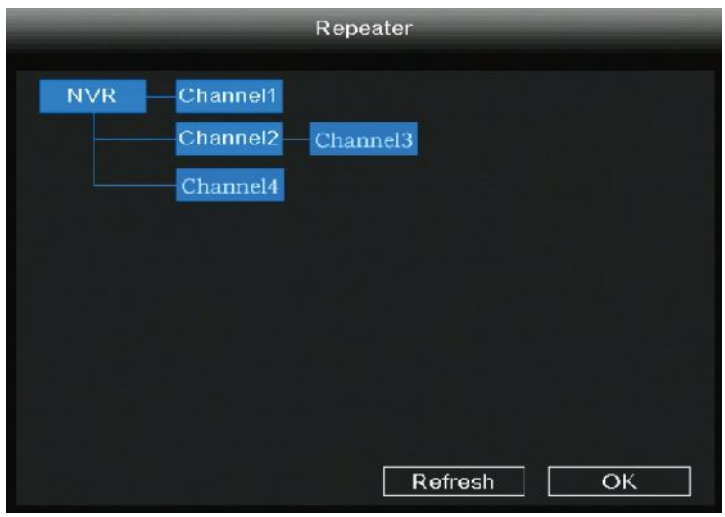


Auto Bridge

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.

Right-click in live view mode to enter the **Pair IP Camera** interface, click **Repeater** button. Then, bridging relationship will be showed on the interface automatically.



2.4.2 Main Menu

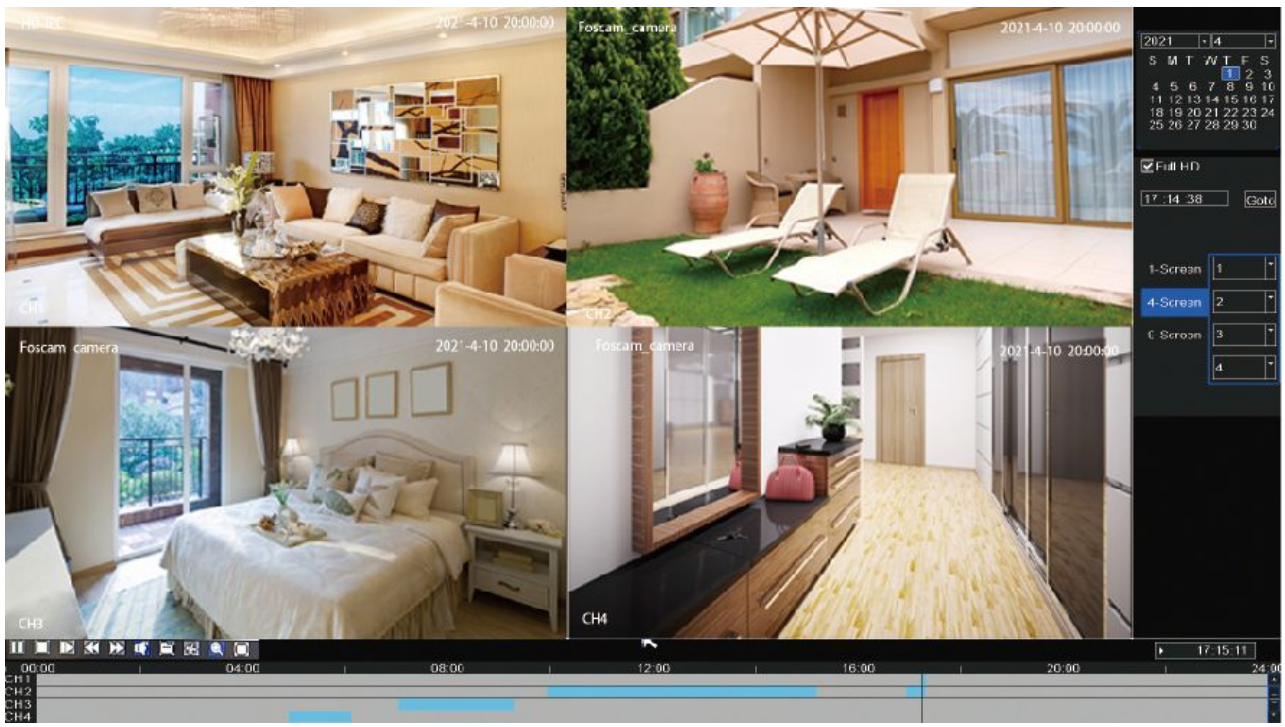
Right-click in live view mode and select **Main Menu** to enter the **Main Menu** interface, it includes Configuration, Display, Record, Backup, Network, HDD, User, Event, Restore, Upgrade, IPC Config, please refer to **2.5 Main Menu**.

2.4.3 Playback

You can display the video of every a channel for playback.

Right-click in live view mode and select **Playback** to enter interface. It supports single-screen, four screens or nine screens.

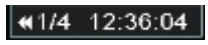
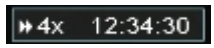
On this page you can view the record files stored in the hard disk.



1. Select a date with recording in calendar.
2. Check the checkbox from Channels. You can select up to nine channels for playback at the same time.

Manage the recording

Button	Description

/	After select the matched recorded file, click the button to play or pause.
	Stop
	Single Frame
	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 right of the fast backward icon. For example,  indicates the current fast backward speed is four 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 of the playback page. For example,  indicates the current playing speed is four of the normal speed.
	Audio
	Backup. Click this button and you will go to the backup page
	Cut. See below the table for details.
	Log. Click this button and you will go to the log page.
	Full Screen

Cut

Step 1: Click , you will go to the **Cut** interface.

Step 2: Choose the **Channel**, **Type**, **Date**.

Step 3: Click **Search** to find the recordings available.

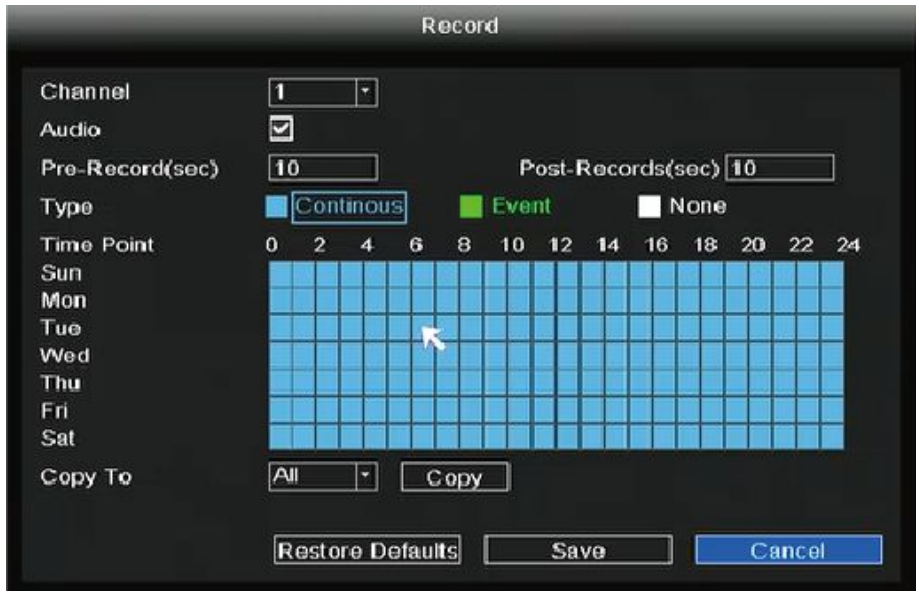
Step 4: Select **Add Flag**, then double-click left mouse to select the start time and end time.

Step 5: Insert USB flash drive to the USB port located at the rear of your NVR.

Step 6: Click **Backup** button to save the video information to the USB flash drive. Tips are available after the backup is complete

2.4.4 Record

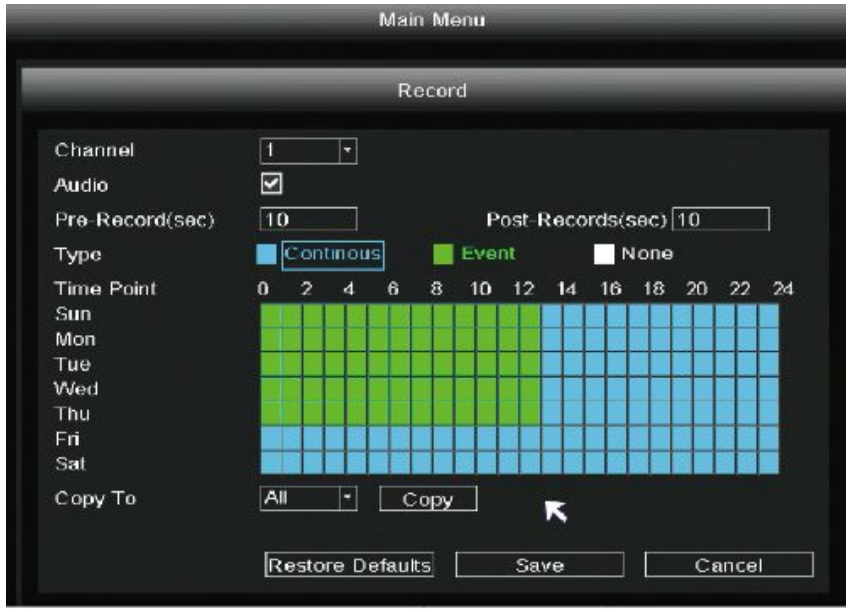
Right-click in live view mode and select **Record** to enter **Record** interface. Choose recording channel, click **Save** button (Actually, the Wi-Fi NVR system have default set 24h scheduled recording).



In the Live View mode, the icon is at the bottom right of the screen for each channel, indicating recording is on going.

If you want to modify it to alarm recording, please use the left mouse button to select the time

(turned to green), if the other channels operate in the same way, select **copy** button.



If you want to check the record, right-click in live view mode and select "**Main Menu** > **Playback"**. Choose channel and date, then click timeline to check record.

2.4.5 Backup

Insert USB flash drive to the USB port located at the rear of your NVR.

Right-click in live view mode select **Backup** to enter the **Backup** interface.

Step 1: Choose channel, type and time.

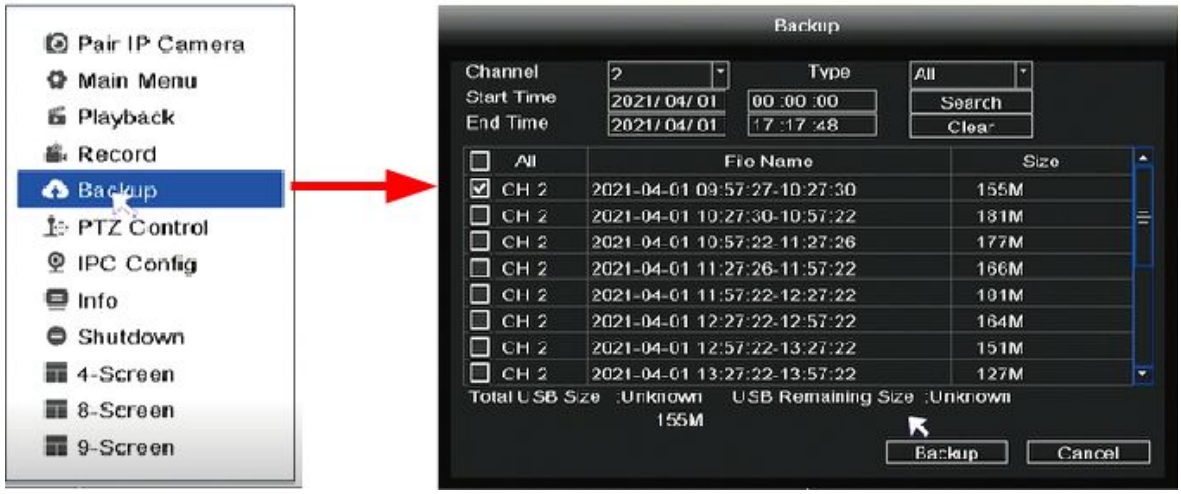
Step 2: Click **Search** button.

Step 3: Select target file.

Step 4: Click **Backup** button to finish backup.

Note

If target file can not be searched out, please click empty to add. Please remove the files which is no need before backup. Ensure insert device (like USB) in 30 second, as system reserved searching time for it is 30 second.



2.4.6 PTZ Control

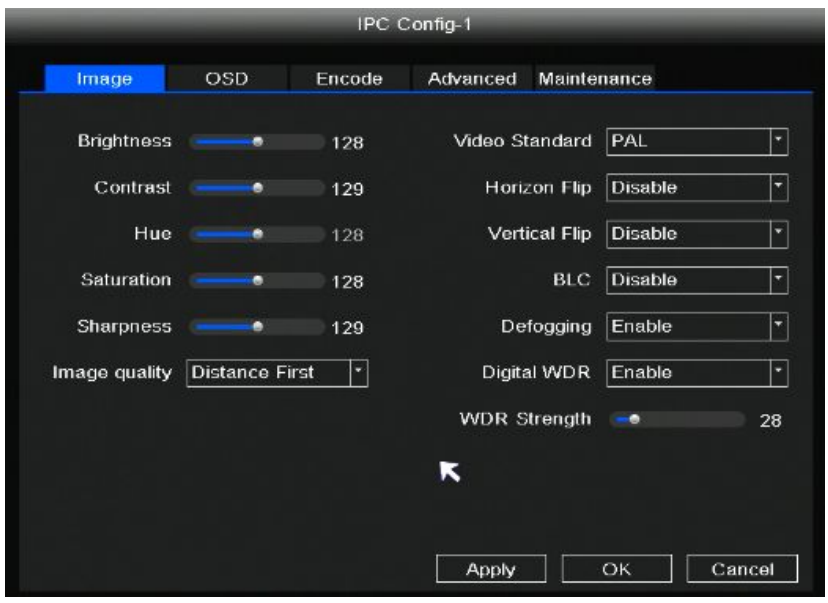
NVR can operate the lens steering of IPC, which must support PTZ function.

2.4.7 IPC Config

Right-click in live view mode and select **IPC Config** to enter the **IPC Config-1** interface. You can set the Image, OSD, Encode, Advanced, Maintenance for the IPC.

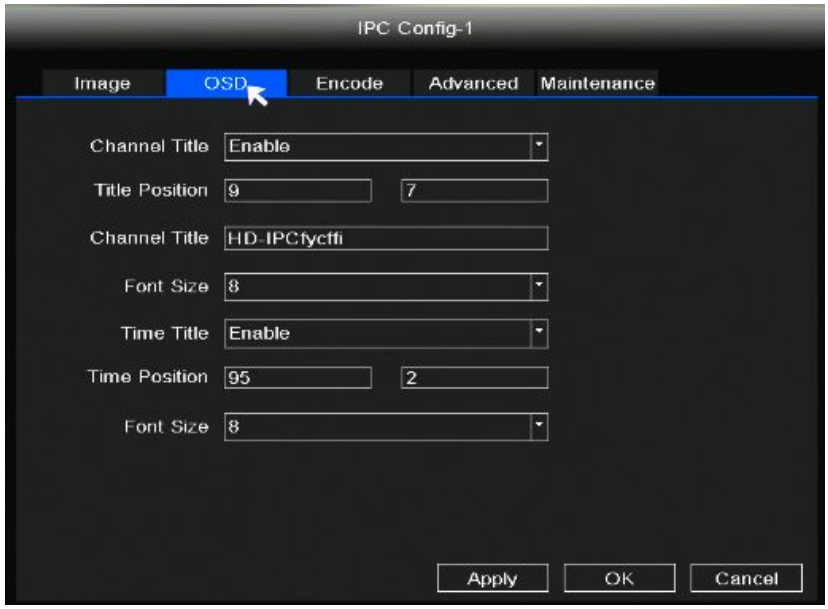
Image

Choose **Image** to enter the **Image** interface, On this page you can adjust the image color mode of the monitor channel.



OSD

Choose **OSD** to set the information on the screen for the IPC.

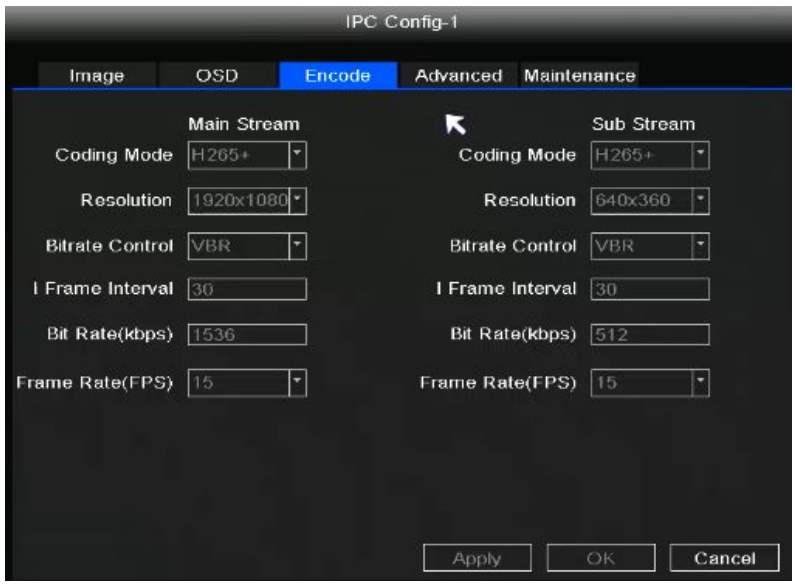


Encode

Choose **Encode** to set the information for the main stream and the sub stream.

Note

FN7108W-B4 kit will automatically configure the main/sub stream information according to the network environment, so it is not editable here.



Advanced

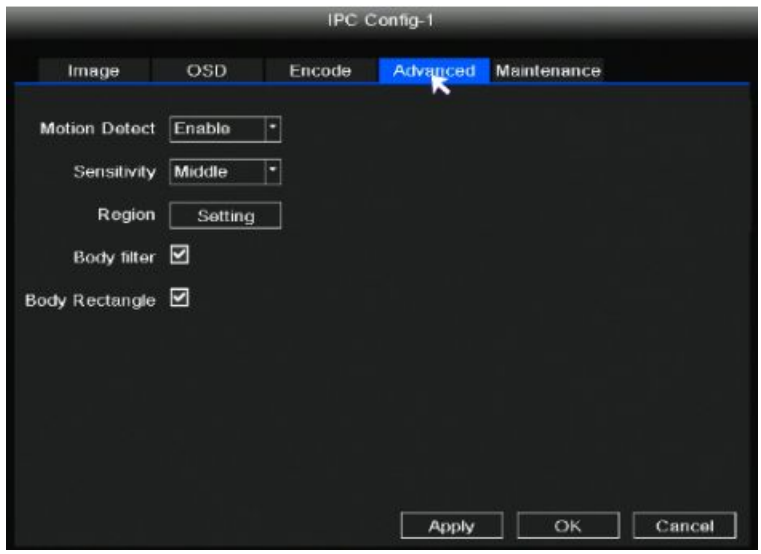
Step 1: Choose **Advanced** to set the Motion Detection Record for the IPC.

Step 2: Right-click in live view mode and select "**Main Menu > IPC Config > Advanced**".

Step 3: Choose **Enable** from the Motion Detect.

Step 4: Set Sensitivity, Region, Body Filter, Body Rectangle.

Step 5: Click **Apply** button.



Maintenance

Choose **Maintenance** to set up the upgrade information for the IPC.

Step 1: Download the firmware to the USB flash drive.

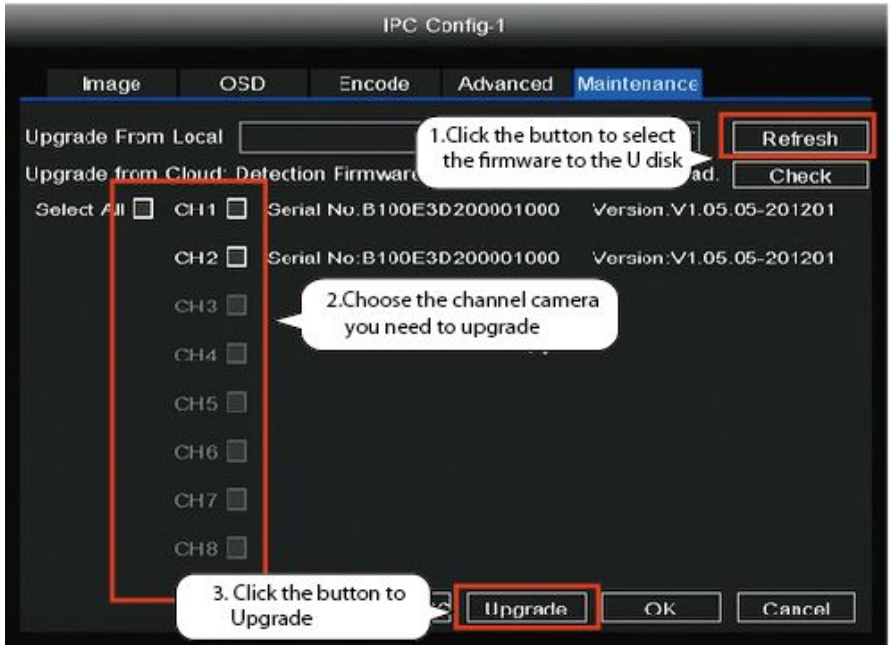
Step 2: Insert USB flash drive to NVR USB port.

Step 3: Right-click in live view mode and select "**Main Menu > IPC Config > Maintenance**".

Step 4: Click **Refresh** button.

Step 5: Choose the channel to update this camera or click **Select All** to upgrade your all cameras.

Step 6: Click **Refresh** button.



Note

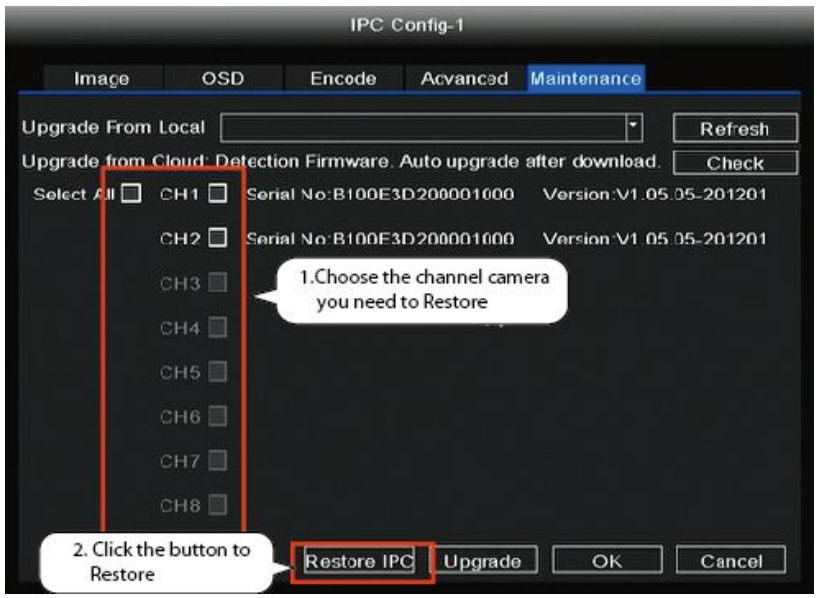
- The upgrade file must be placed under the root directory of the USB flash drive.
- Don't lose power for during upgrade.

IPC Restore default:

Step 1: Right-click in live view mode and select "**Main Menu > IPC Config > Maintenance**".

Step 2: Click **CH** to restore default this camera or click **Select All** to restore default your all cameras.

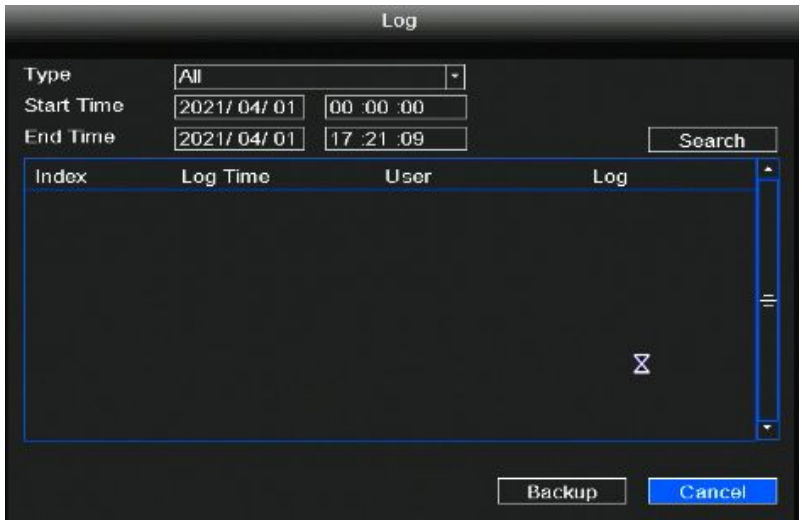
Step 3: Click **Restore IPC** button.



2.4.8 Info

Right-click in live view mode and select "**Info > log**", you can search the log information of the NVR. The log record shows recording time and accessed information.

If you want to back up the log information, please insert USB flash drive to the USB port located at the rear of your NVR, and then click the **Backup** button.



Right-click in live view mode and select "**Info > Version**", you can view the version information of the NVR.

Note

The data in the figure is only an example, please refer to the actual situation.

2.4.9 Shutdown

Right-click in live view mode select **Shutdown** to enter the **Shutdown** interface. You can restore, logout, reboot or shutdown the NVR system.

Click **Restore,**The **Restore factory settings** interface is displayed. You can check some information to restore the factory settings, as shown in the figure below.

Note

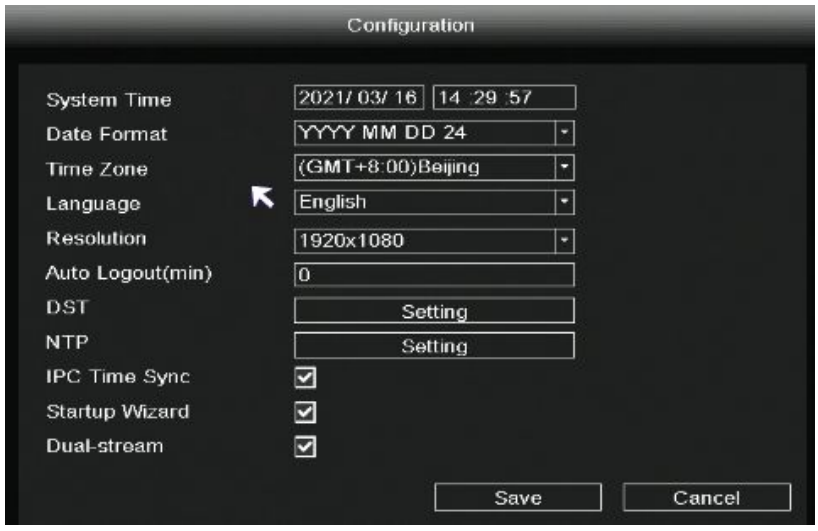
Each model is slightly different, please refer to the actual interface.

2.5 Main Menu

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

2.5.1 Configuration

Right-click in live view mode and select “**Main Menu > Configuration**” in the Main Menu interface. The **Configuration** interface is displayed. You can set the system time, date format, language, resolution of the monitor and so on.

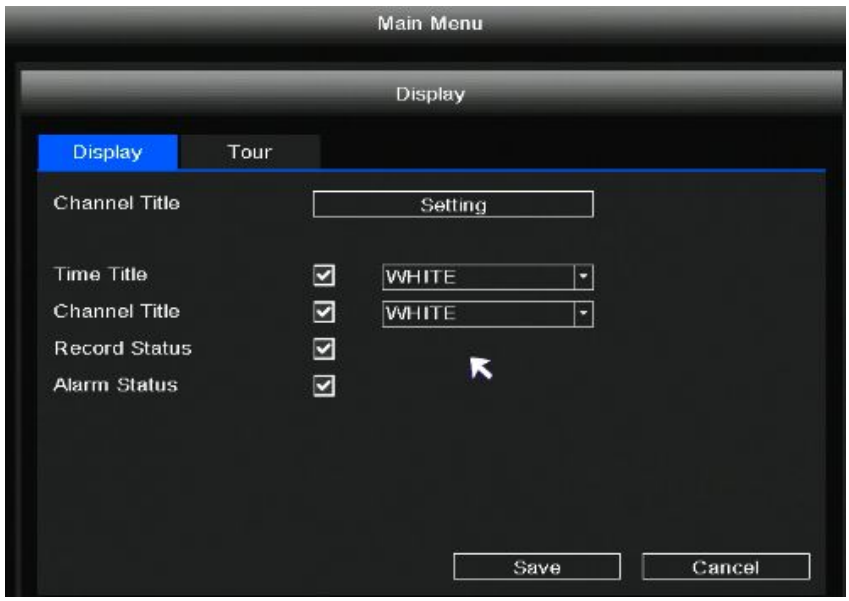


If you don't want to display the startup wizard every time you turn it on, please uncheck the **Startup Wizard** checkbox.

2.5.2 Display

Display

Right-click in live view mode and select “**Main Menu > Display**” in the Main Menu interface. The **Display** interface is displayed. You can set the Channel Title, Time Title, Channel Title, Record Status, Alarm Status.



Tour

Right-click in live view mode and select “**Main Menu > Display > Tour**” in the Main Menu interface. The **Tour** interface is displayed.

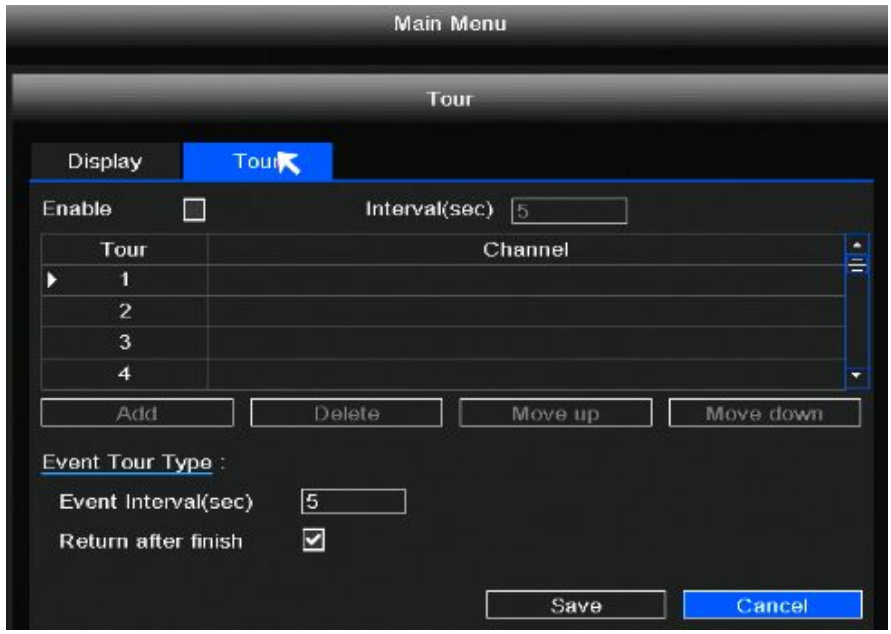
After the user sets the Tour function, NVR will play several channels of video on the display at the same time according to the interval time set by the user. After each channel plays for a few seconds, it will automatically jump to the next group of channels for cyclic playback.

Step 1: Check the Enable.

Step 2: Set the Interval(sec).

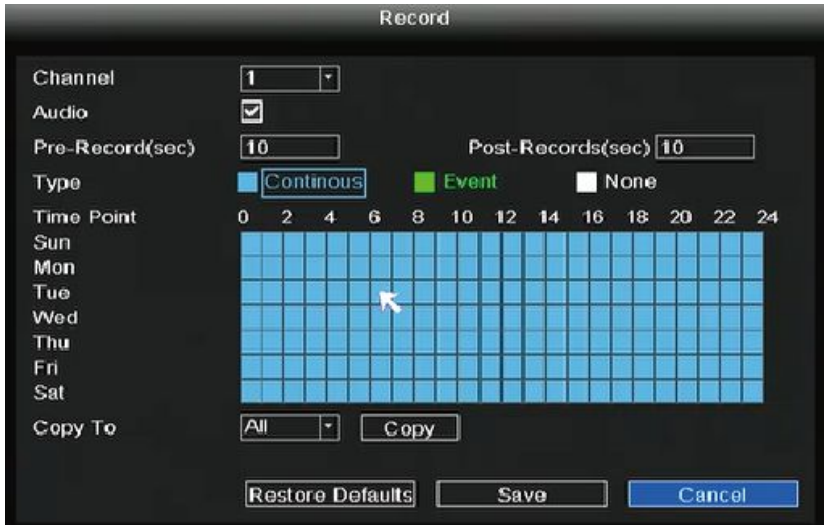
Step 3: Click the add button to select which channel videos can be played within each group.

Step 4: Click **Save** button.

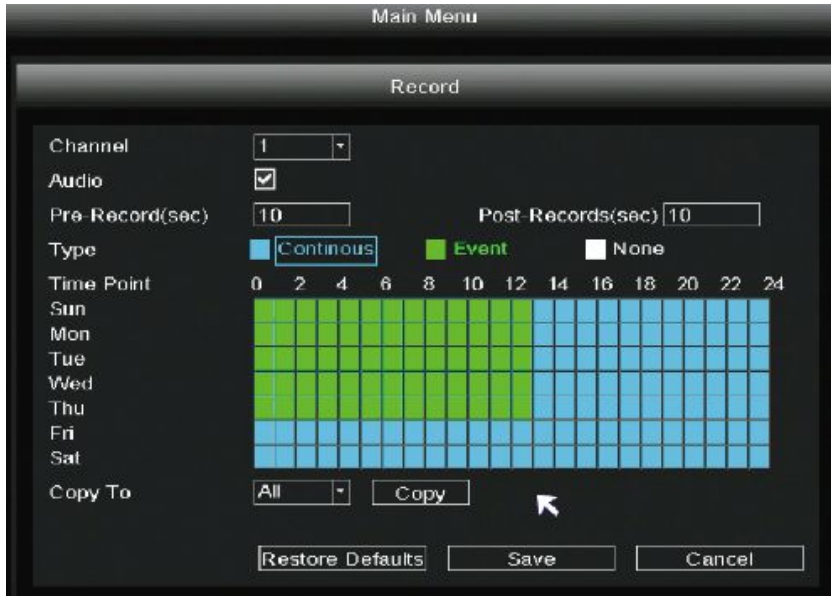


2.5.3 Record

Right-click in live view mode and select "**Main Menu > Record**" in the Main Menu interface. The **Record** interface is displayed. Choose recording channel, click **Save** button. (Actually, the Wi-Fi NVR system have default set 24h scheduled recording).



If you want to modify it to alarm recording, please use the left mouse button to select the time (turned to green), if the other channels operate in the same way, select copy.



2.5.4 Backup

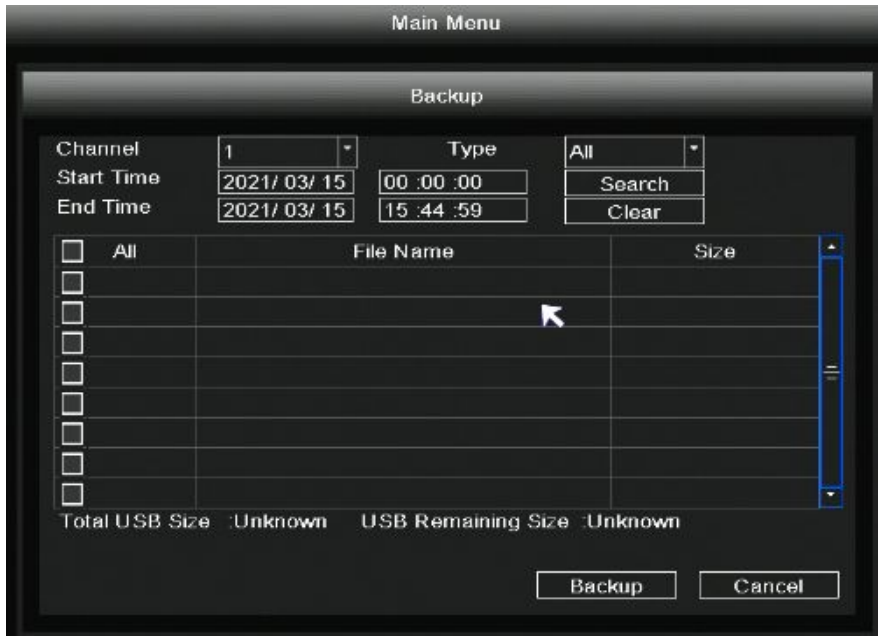
Step 1: Insert USB flash drive to the USB port located at the rear of your NVR.

Step 2: Right-click in live view mode and select "**Main Menu > Backup**" in the Main Menu interface. The **Backup** interface is displayed.

Step 3: Choose channel, type and time, Click **Search** button.

Step 4: Select target file.

Step 5: Click **Backup** button.



Note

If target file can not be searched out, please click Empty →Add. Please remove the files which is no need before backup. Ensure insert device (like USB) in 30 second, as system reserved searching time for it is 30 second.

2.5.5 Network

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

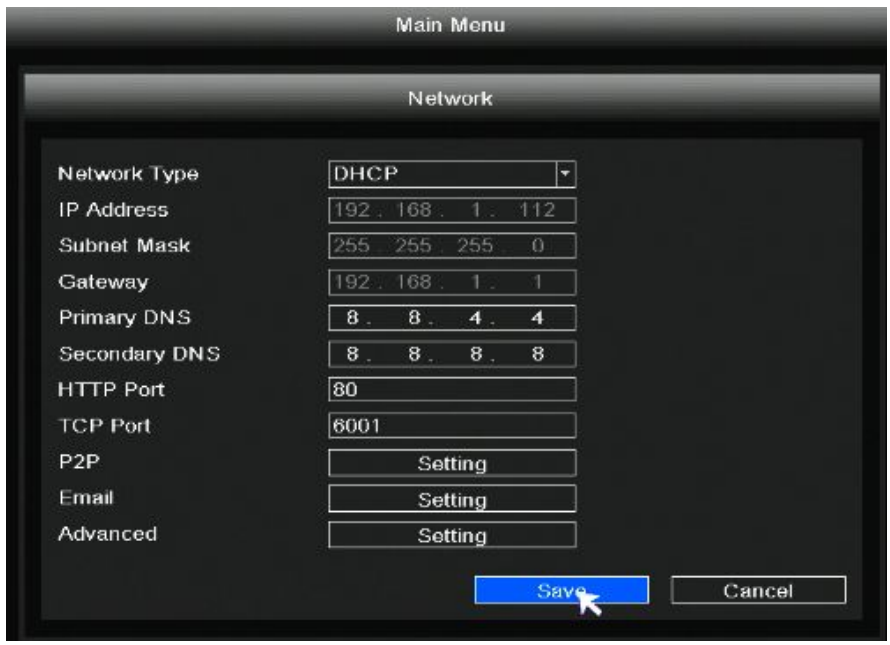
Note

The UID information here is only an example, please refer to the actual device.

There are two ways for NVR to connect to Internet.

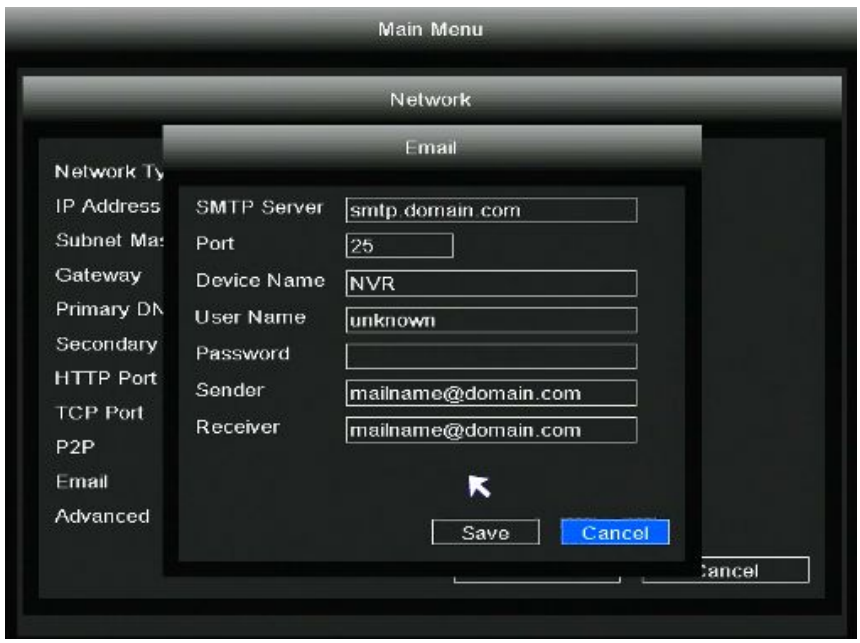
- DHCP: Select **DHCP** from the **Network Type**, the device will connect to Internet automatically, no need data setting.
- Manual setting: Select **STATIC** from the **Network Type**, fill in IP address, DNS data, and so on, click **Save** button.

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

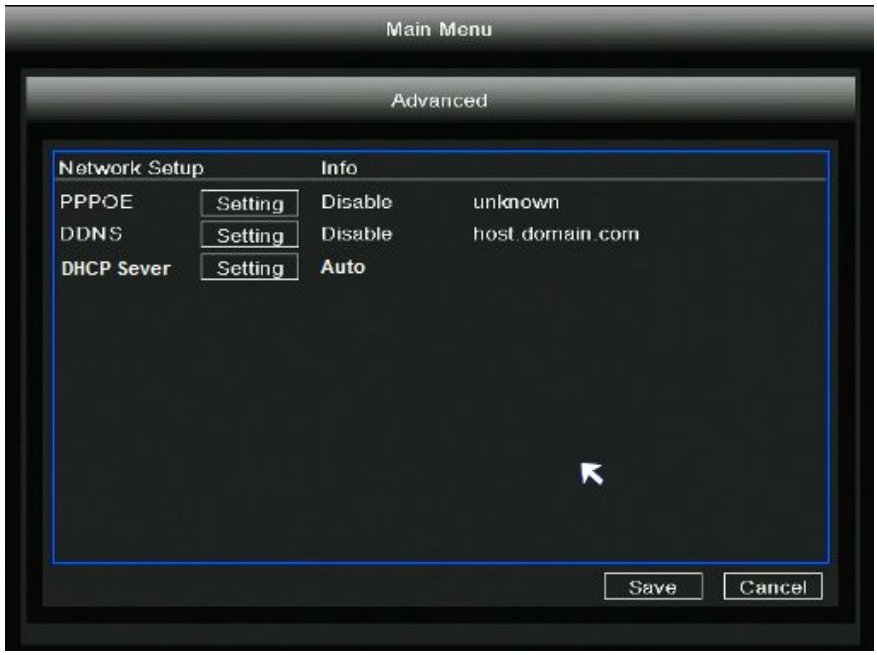


Click **Setting** in **P2P**, you can scan the UID of the device through the app, add and remotely manage the device.

Click **Setting** in **Email**, you can set Email information.



Click **Setting** in **Advanced**, you can set **PPPOE**, **DDNS**, **DHCP Sever**.



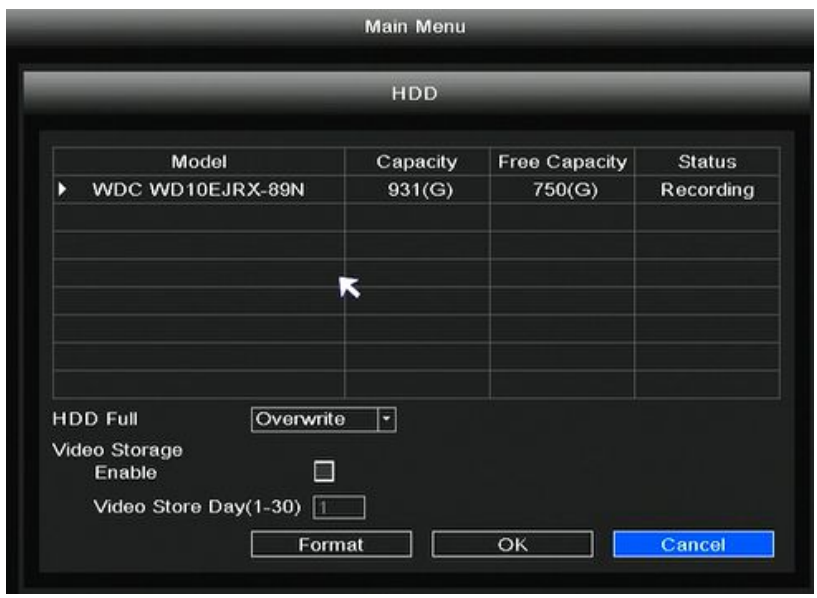
2.5.6 HDD

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

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

You can set the video storage time.

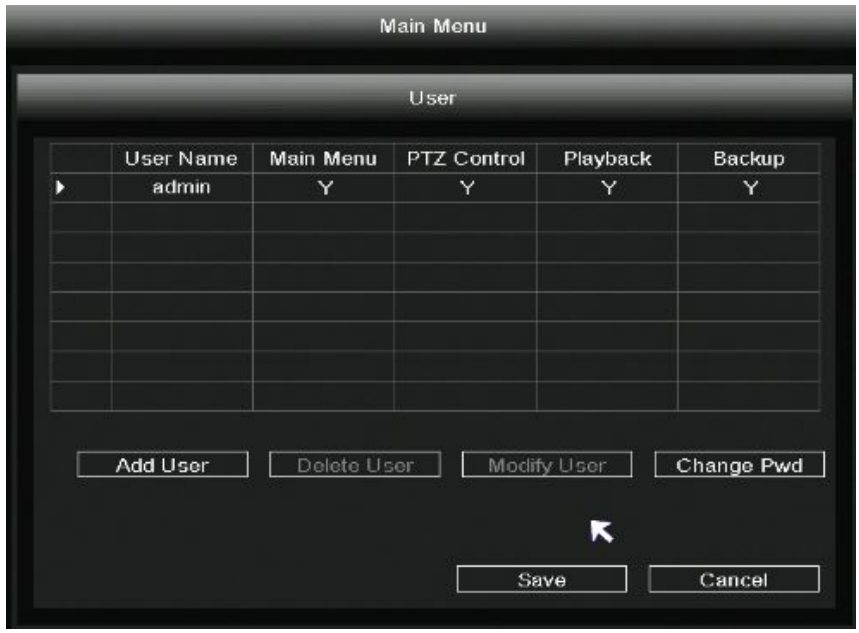
Click the **Format** button, you can also format the hard drive.



2.5.7 User

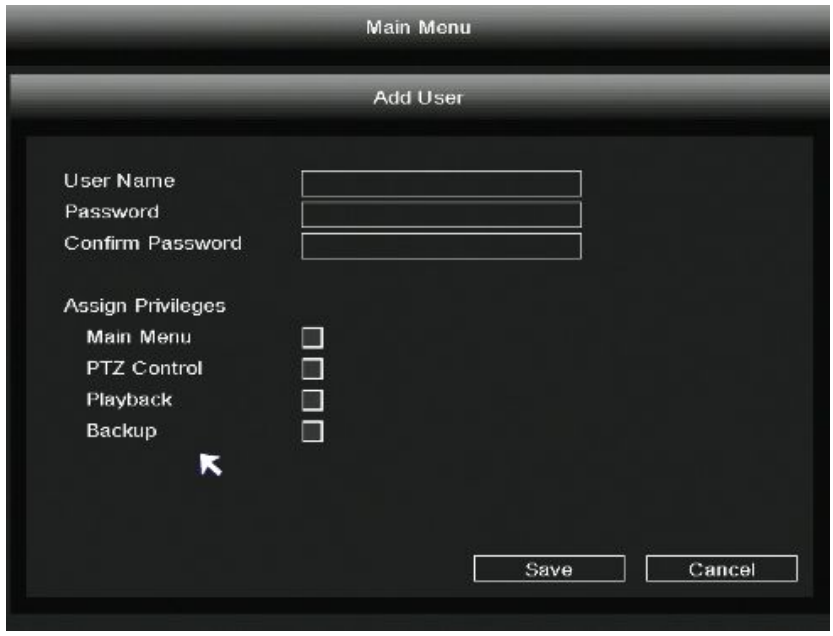
Right-click in live view mode and select “**Main Menu > User**” in the Main Menu interface. The **User** interface is displayed.

You can add user, delete user, modify user and change password.



Add User

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



Modify User

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

Delete User

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

Change Pwd

Click **Change Pwd** button to change password.

2.5.8 Event

Motion Detect

Right-click in live view mode and select “**Main Menu > Event**” in the Main Menu interface. The **Motion Detect** interface is displayed. On this page you can setting Channel, Scheduled, Delay and Event Trigger mode.

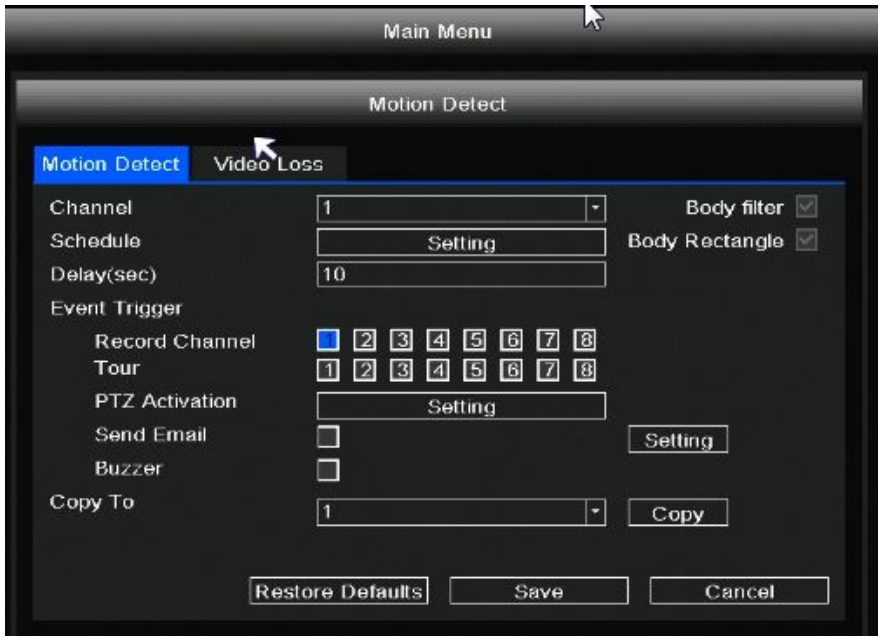
Set the event alarm according to the following method:

Step 1: Choose target channel.

Step 2: Setting Schedule and Delay.

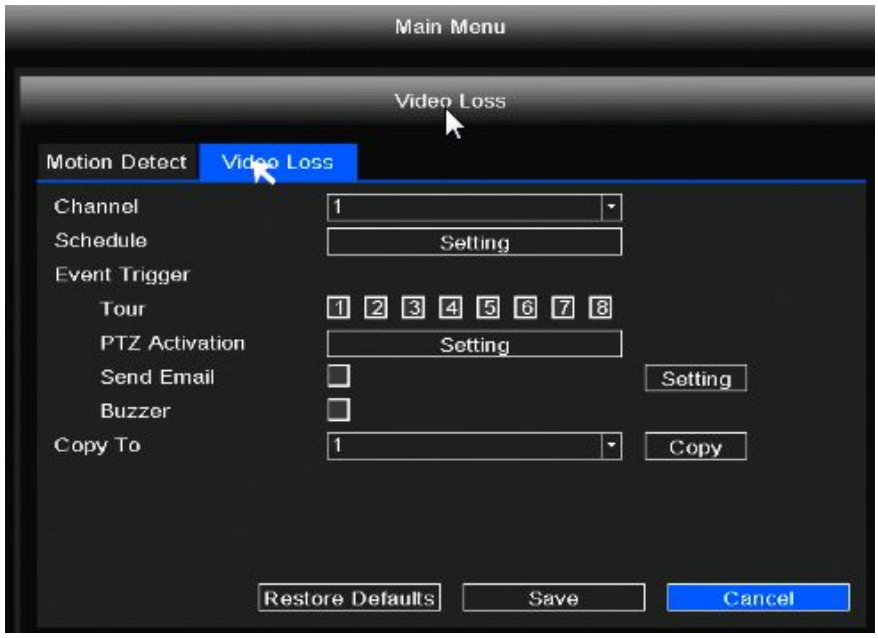
Step 3: Select the Event Trigger. You can choose the following alarm triggering methods: Record Channel, Tour, PTZ Activation, Send Email, Buzzer. If you want to set other channels to be the same, you can select the "Copy To" , then click **Copy** button.

Step 4: Click **Save** button to take effect.



Video Loss

Click **Video Loss** to enter the **Video Loss** interface. When there is no video in the channel, the NVR alarm function is triggered. On this page you can setting Channel, Schedule, and Event Trigger.



If you want to set other channels to be the same, you can select the "Copy To" , then click **Copy** button.

2.5.9 Restore factory settings

Right-click in live view mode and select “**Main Menu > Restore factory settings**” in the Main Menu interface. The **Restore factory settings** interface is displayed. On this page you can choose which you can restore the factory settings.

2.5.10 Upgrade

You can upgrade your NVR system with local Software.

Step 1: Download the firmware to the USB flash drive.

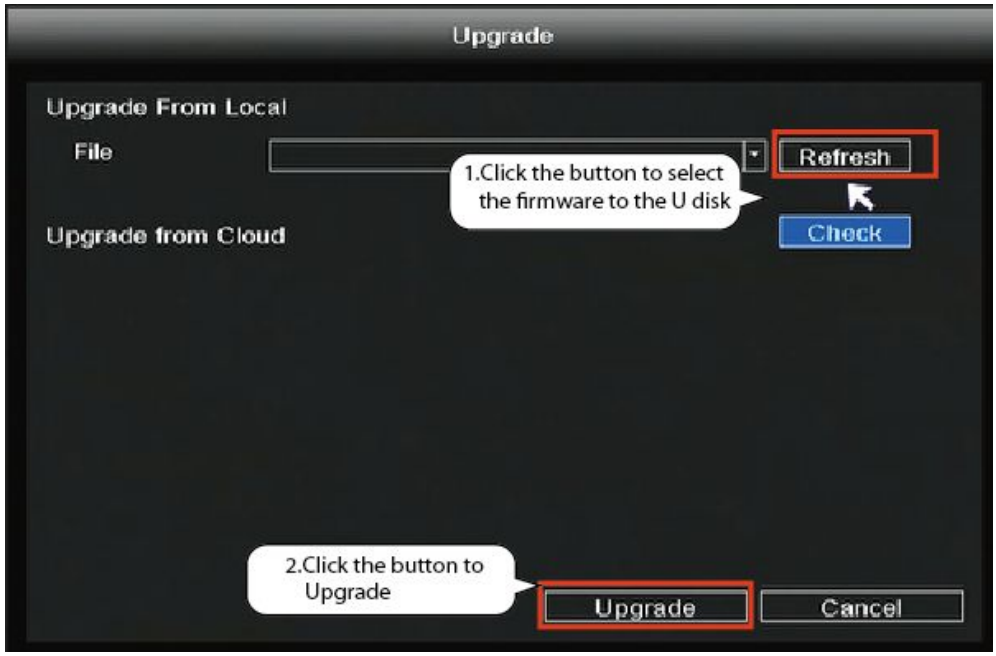
Step 2: Insert USB flash drive to the USB port located at the rear of your NVR.

Step 3: Right-click in live view mode and select “**Main Menu > Upgrade**” in the Main Menu interface.

Step 4: Click **Refresh** button in the **Upgrade** interface.

Step 5: Select the firmware from the USB flash drive.

Step 5: Click Upgrade to upgrade your NVR.



Note

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

2.5.11 IPC Config

Right-click in live view mode and select "**Main Menu > IPC Config**", you can set the Image, OSD, Encode, Advanced, Maintenance for the IPC. For detailed operation, please refer to 2.4.7 IPC Config.

2.5.12 Channel Config

Right-click in live view mode and select "**Main Menu > Channel Config**" to enter the **Pair IP Camera** interface . please refer to 2.4.1 Channel Config.

3 Access the NVR in Foscam App

3.1 Download the Foscam APP

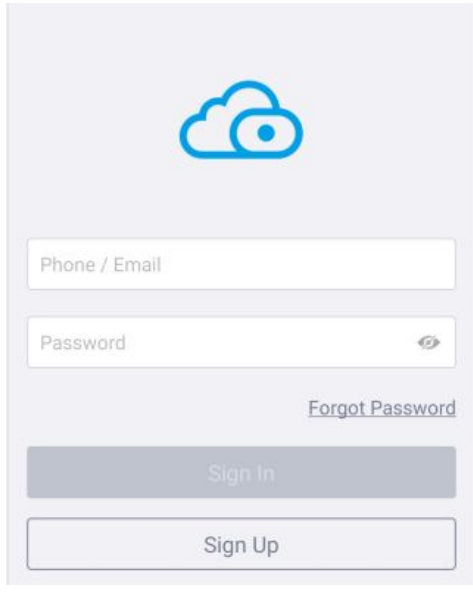
Please refer to the ***Quick Setup Guide*** if you install the NVR for the first time. You can start to learn about software operation after finish quick installation.

Scan the QR code below to download and install the Foscam APP.

3.2 Create A Foscam Account

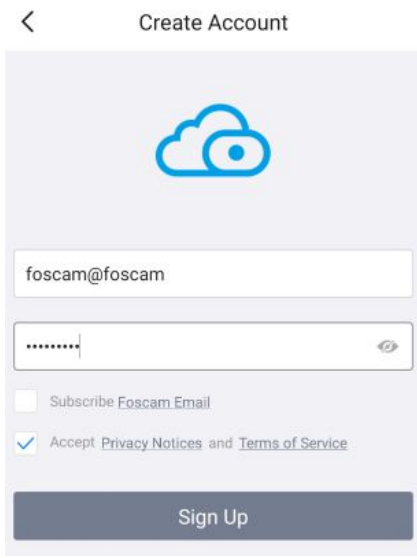
You can create a Foscam account for the first time. Run the Foscam APP, and then register for a Foscam account.

Step 1: Click Foscam app icon to enter the login page. Click **Sign Up** to create account.



Step 2: You need to choose your region, then enter the mailbox name and new password.

Step 3: Check **Accept Privacy Notices and Terms of Service**, and click **Sign Up**.



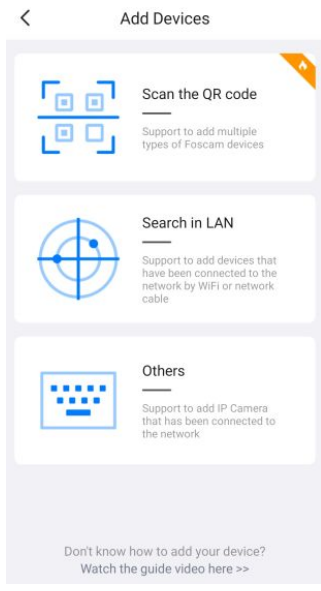
Step 4: The system will send activation information to your mailbox, and you need to log in to your mailbox to activate your account.

3.3 Add Device in Foscam App

Open the foscam APP and please sign in if you have one already. After logging into Foscam APP, select "+" icon on the upper right corner. The Add Devices interface is displayed.

Note

Please make sure that the NVR and your phone are both in the same Local Area Network (LAN).



You have the following methods to add devices.

- Select "Scan the QR code" and scan the QR code that labeled at the bottom of your NVR.

- Select “Search in LAN” to search for the device.
- Select “Others”, You can manually add device information in three ways: UID/DDNS/IP Address.

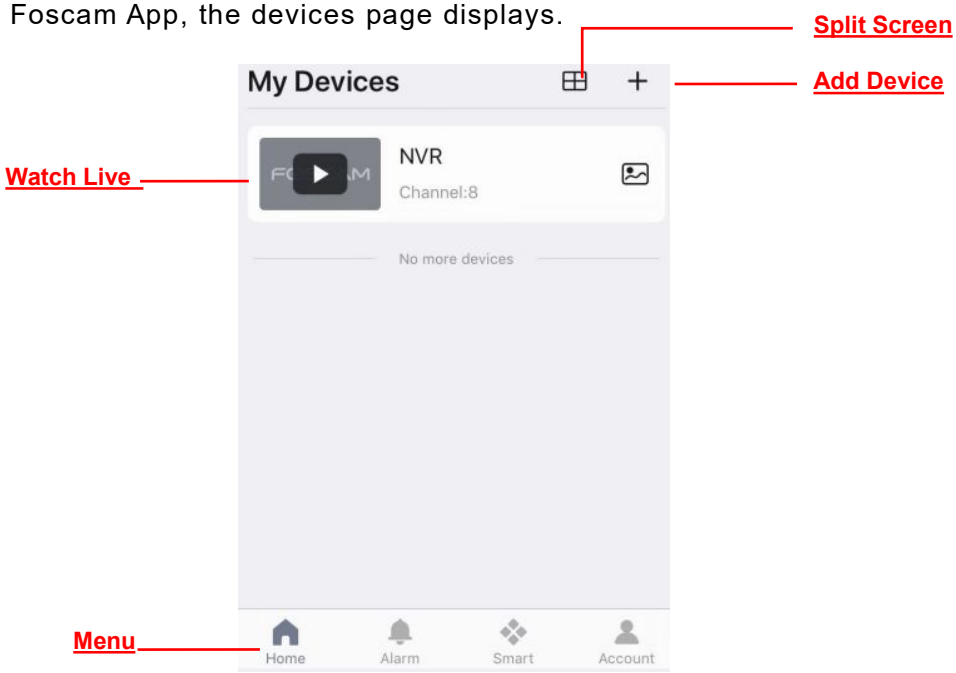
Note

Neither FN7108W-B4 kit nor FN8108H/8108HE supports DDNS connection.

After the addition is successful, NVR video will be displayed in the Foscam app.

3.4 Foscam APP Surveillance Window

You can start to learn about software operation after finish quick installation.When you launch the Foscam App, the devices page displays.

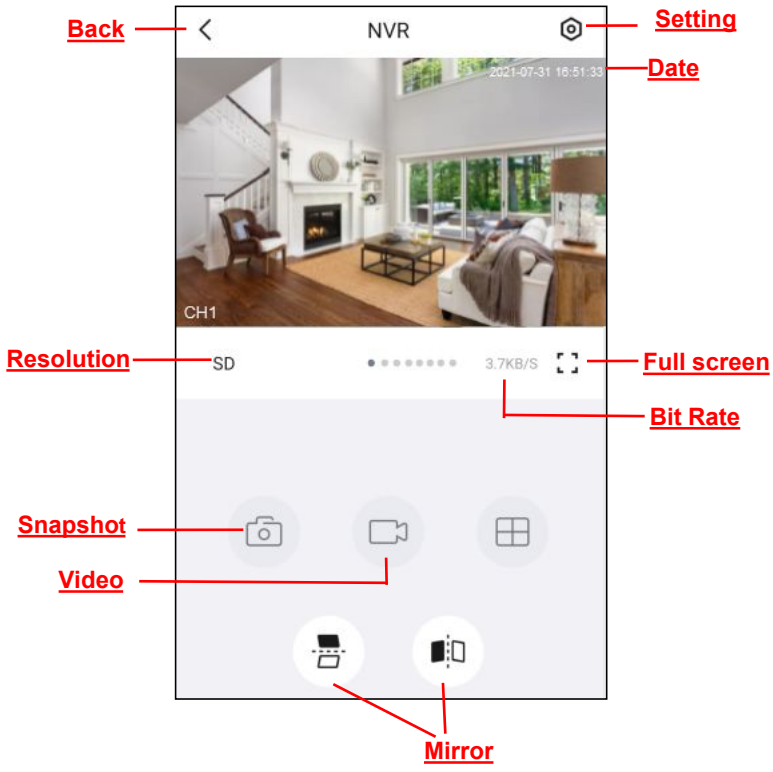


Click button, you can watch the live interface of 4 devices.

Tap **Live** to view and listen to a live video.

3.5 Watch Live

Click device in list to enter preview interface, select a channel to view it’s picture, as follow shows:



Back: To stop viewing and listening to the live feed, tap the Back.

Resolution: There are two types to identify different streams you have set. If select the FHD Mode, the clearer video will become, and it will take up more bandwidth; If select the SD Mode, the video will not be as clear as FHD Mode, and it will take up less bandwidth.

If you want to catch the smaller details, pinch and drag any image as you do with photos on your smart phone.

Snapshot： Click this button to Snapshot the image.

Video： Click this button to start the recording function.

Setting: Click this button to set more.

Date： Display the date.

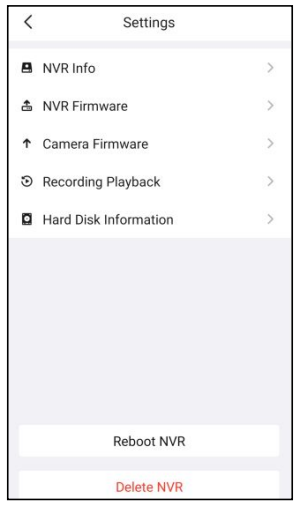
Full screen: Click this full screen button, you can live in full screen.

Bit Rate: You can see the current connection bit rate.

Mirror: You can flip the image horizontally/vertically with this button.

3.6 Setting

Tap the button, goes to Settings to make advanced NVR settings.



3.6.1 NVR Info

You can modify the NVR name. You can also see the basic information of the NVR through this, such as NVR model, UID, MAC ID, NVR firmware version information, IPC firmware version information.

Note

The data in the figure is only an example, please refer to the actual situation.

3.6.2 NVR Firmware

You can see the current NVR's firmware version and whether there is new software that

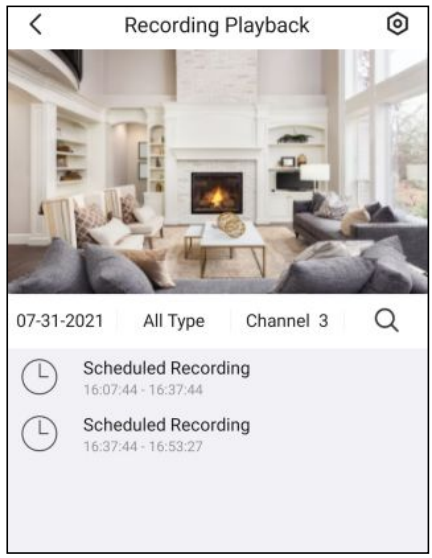
needs to be upgraded. If there is new firmware, you can click the “Upgrade” button to upgrade.

3.6.3 Camera Firmware

You can see the current camera's firmware version and whether there is new software that needs to be upgraded. If there is new firmware, you can click the “Upgrade” button to upgrade.

3.6.4 Recording Playback

You can query the recording playback content according to the time, type, and channel.

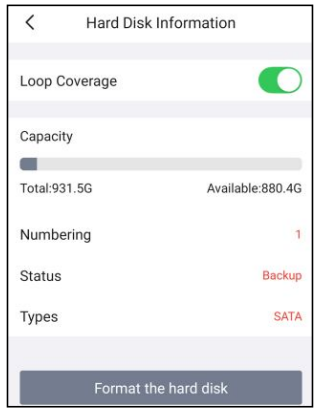


3.6.5 Hard disk information

When the HDD is full, you can check the **Loop Coverage** to select the cycle cover the earliest.

You can see the HDD information of the NVR.

You can format the hard information by clicking the **Format the hard disk** button.

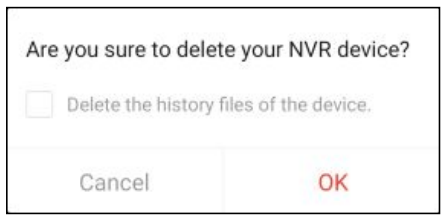


3.6.6 Reboot NVR

Click **Reboot NVR** to reboot the NVR. This is similar to unplugging the power to the NVR.

3.6.7 Delete NVR

You can click **Delete NVR** button to delete the NVR from the app, or delete and keep history files from the app.



4 Surveillance Software Foscam VMS

Foscam VMS is a new tool for PC. It does not require plug-ins and is compatible with Windows & Mac, It supports all Foscam HD cameras and up to 36 cameras at the same time.

It is recommended that you first use the cloud account registered by the Foscam app, and then use the local account.

4.1 Software Installation

If you would like to manage multiple cameras, we suggest you install the Foscam VMS.

You can download and install the “Foscam VMS” in the following ways.

- Windows: foscam.com/vms
- Mac version from the APP store: https://apps.apple.com/cn/app/foscamvms/id1521202507?mt=12

After the installation is complete, the picture shown below will appear.

Note

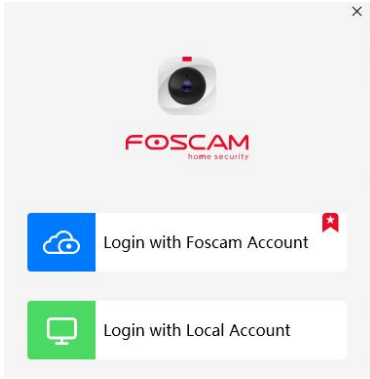
Please make sure that the NVR and the computer are both in the same Local Area Network (LAN).

4.2 Create A Local Account

You can create a local administrator account.

For security, it is strongly recommended to create local accounts and password management, which prevents the entry of intruders.

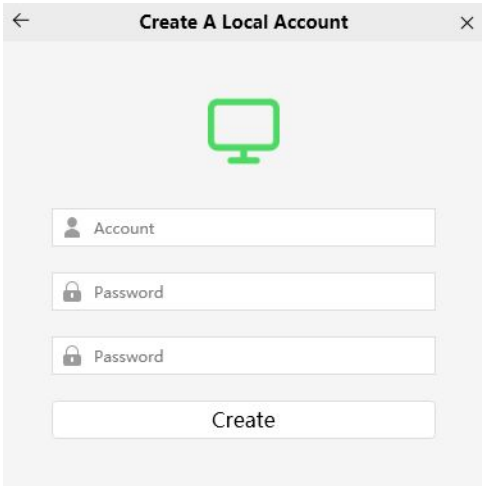
Step 1: Click **Foscam VMS** to run Foscam VMS.



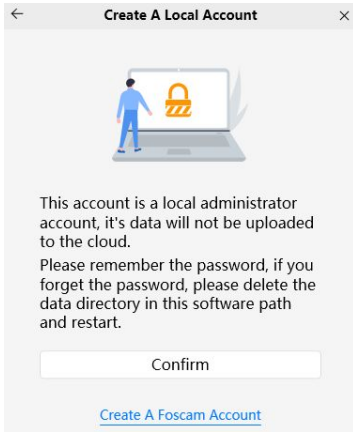
Note

If you have created an account in the Foscam app, you can click **Login with Foscam Account** to log in.

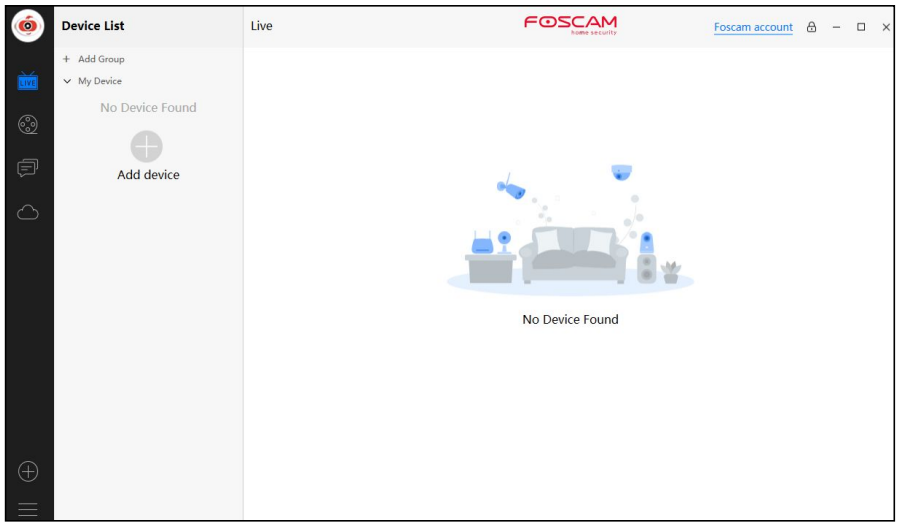
Step 2: Click **Login with Local Account** to enter the **Create A Local Account** interface.



Step 3: Enter the account and password, then click **Create** button.



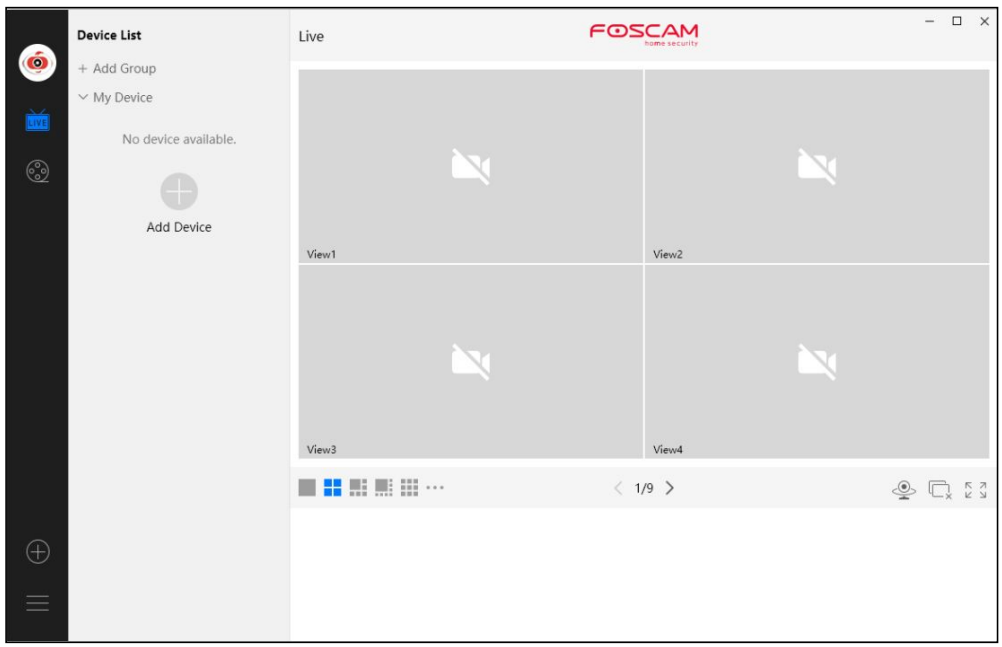
Step 4: Click **Confirm** button to enter the main interface.



4.3 Add Device

If your NVR is wired connect, you can choose the following method to add to Foscam VMS.

4.3.1 LAN Add

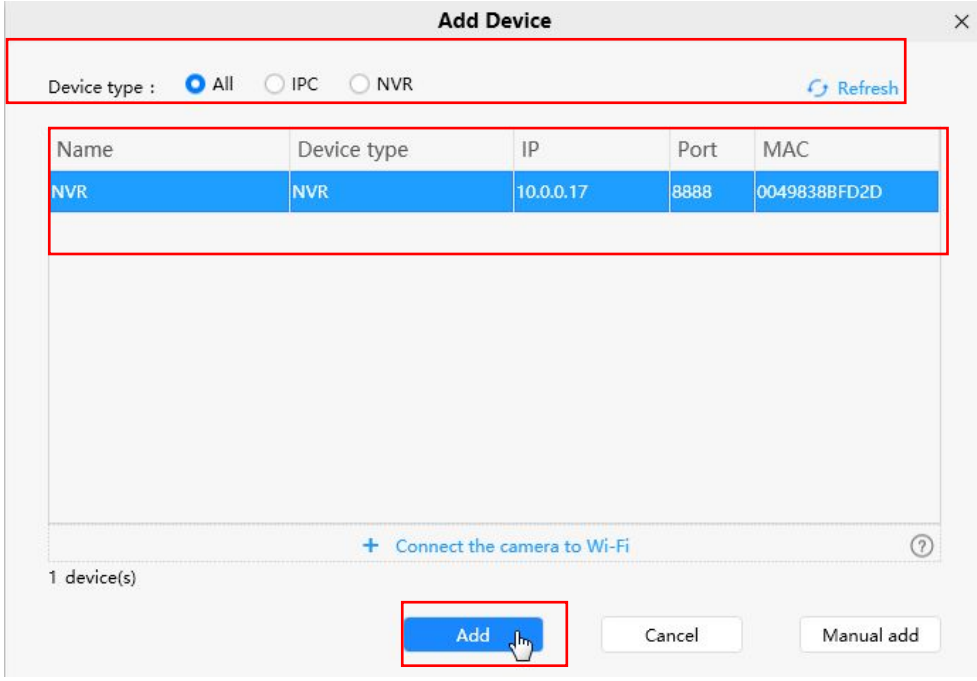


Click **Add Device** button, then follow below steps:

Step1 Select “ALL” from the device types.

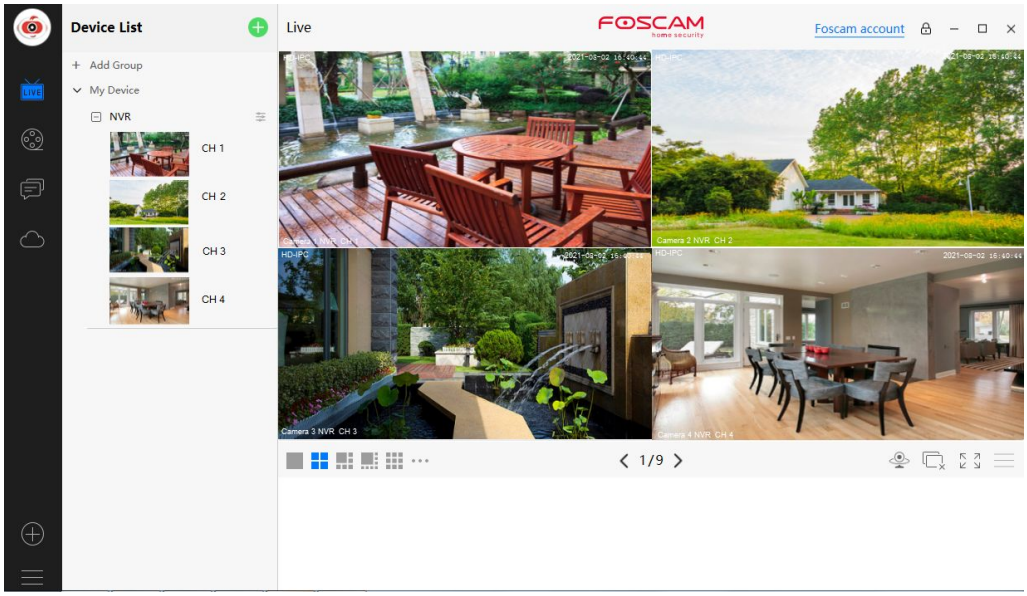
Step2 Click the IP address of the NVR on the list, then the name of the NVR and the IP information will be entered automatically.

Step 3 Click Add.



Step 4 Enter the username and password of the NVR.

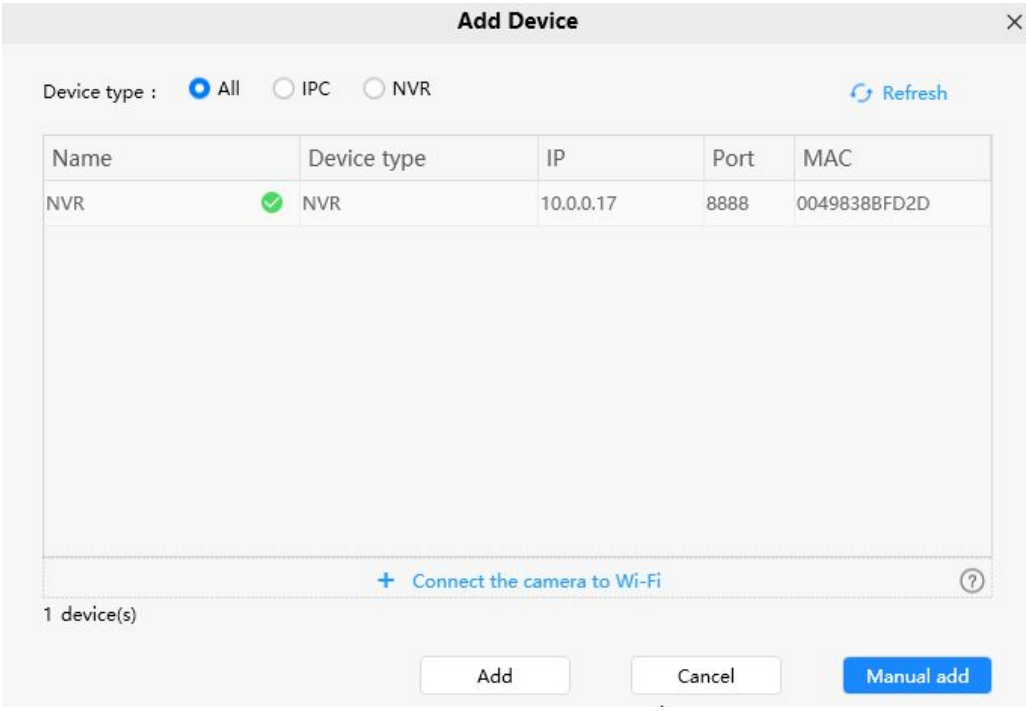
Step 5 Click **Add** button to finish adding.



4.3.2 Manual add

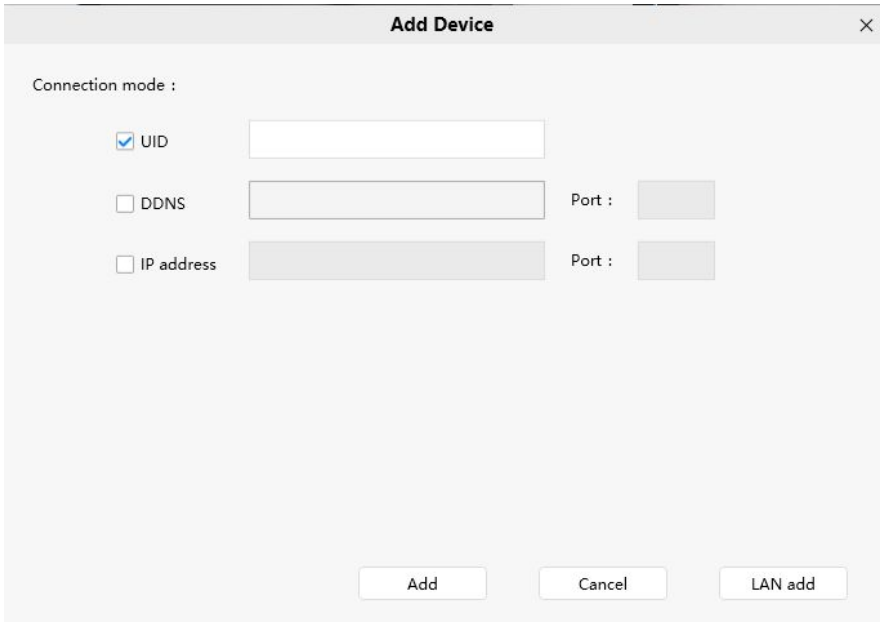
You can add the NVR use manual add.

Step 1 Click **Manual add** first.

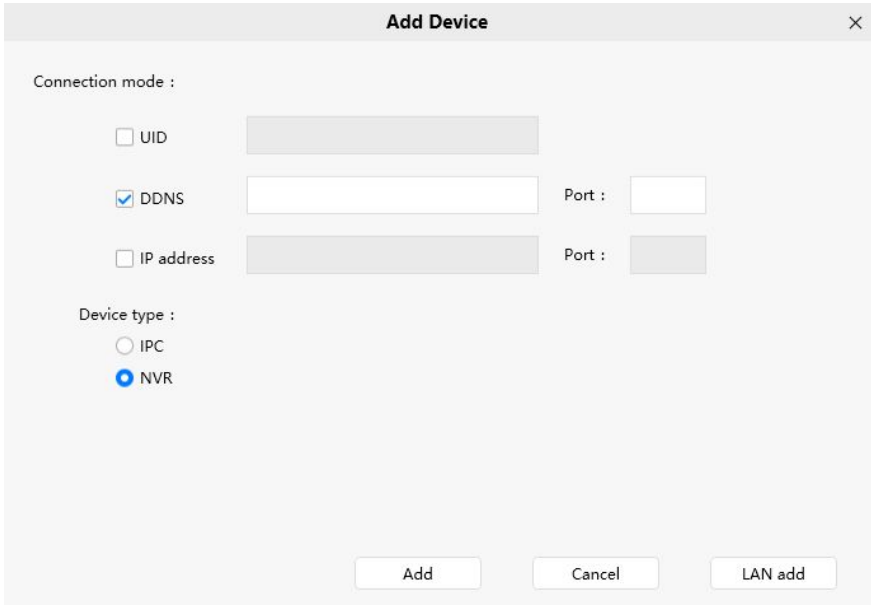


Step 2 There are three ways to connect mode, you can choose any one.

- Check **UID** from Connection mode. Enter the UID of the device.



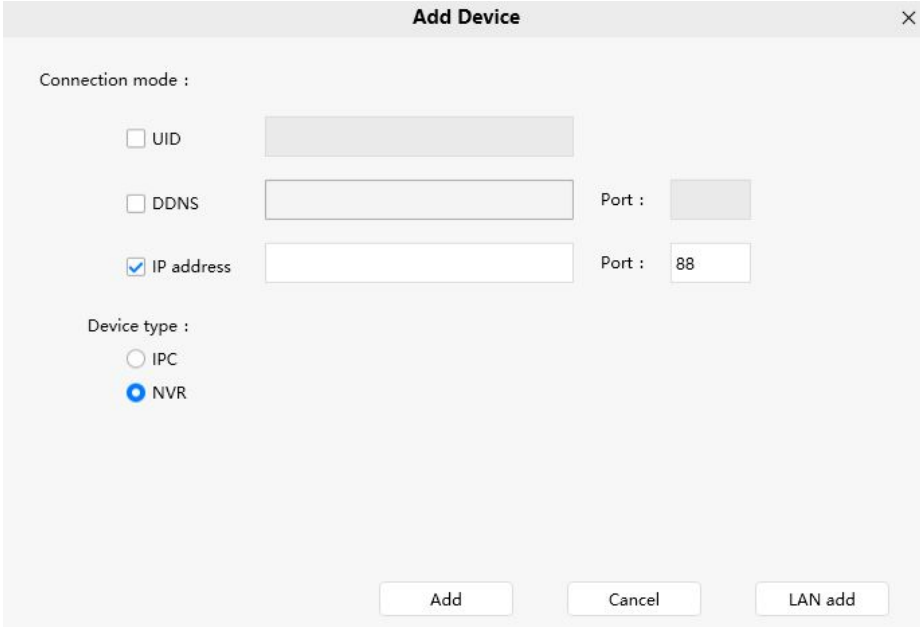
● Check **DDNS** from the Connection Mode. Enter the DDNS and Port of the NVR. Select **NVR** from the Device types.



Note

Neither NVR kit nor NVR supports DDNS connection.

● Check **IP address** from the Connection Mode. Enter the IP and Port of the NVR. Select **NVR** from the Device types.

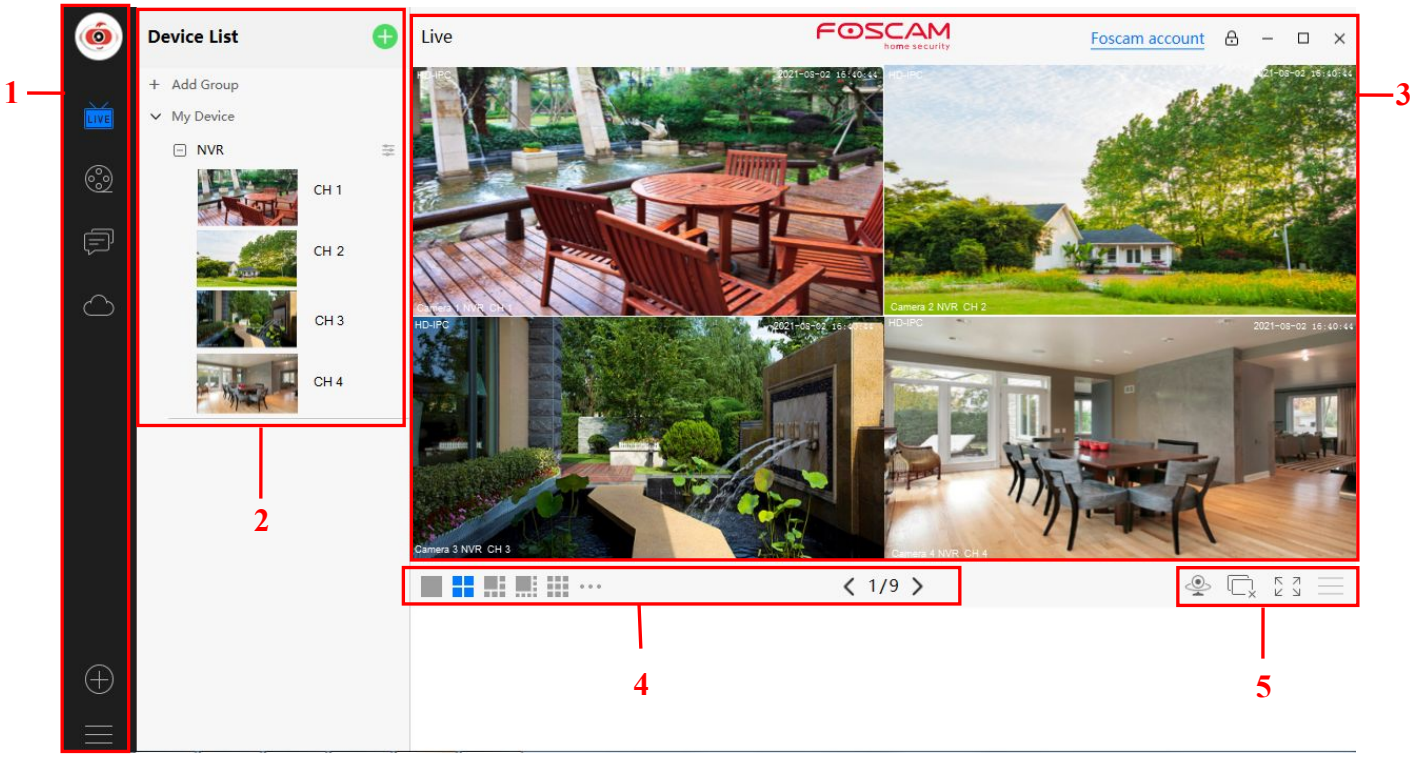


Step 3 Click **Add** button.

Step 4 Enter **Device account** and **Password** of the NVR.

Step 5 Click **Add** button to finish adding device.

4.4 Surveillance Software GUI



First time you login the software, the whole video window is gray, you need to connect the NVR and add NVR to it.

Section1 Menu Bar

Path to surveillance window. Click this button enter to Device List and back to the surveillance

window.

Playback the video recording, you can choose Cloud Playback, SD Card Playback, NVR HDD Playback or Local Playback.

Login your Foscam cloud account to view alerts.

Login your Foscam cloud account.

Add Device, please refer chapter **4.3 Add Device** for the detail setting.

More, You can Setting Personal Account, Preference, My coupon, Log Query, Left

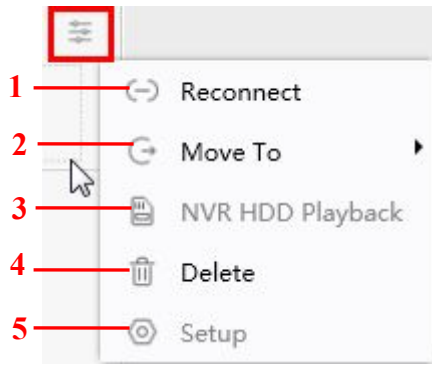
Bar and Switch Account.

Section2 Left Bar

Add Group: Click the + Add Group button, you can group the device list according to your needs.

Left Bar of Live: You can view the list of connected NVR.

Select the icon on the right side of the NVR list to do the following.



1-----Reconnect

Click Reconnect button and the device will reconnect.

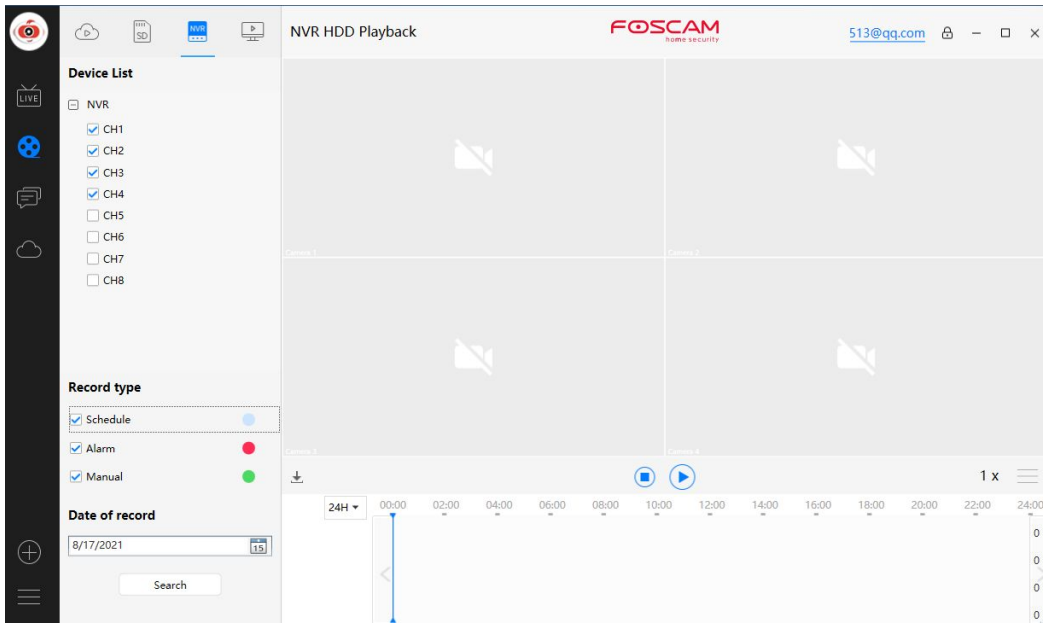
2----- Move To

Click this button, you can move the device to your group list.

3-----NVR HDD Playback

If you have an HDD on your device, click this button to enter the NVR HDD Playback.

You can query the recording information of the hard disk by channel, record type, and date of record.



4-----Delete

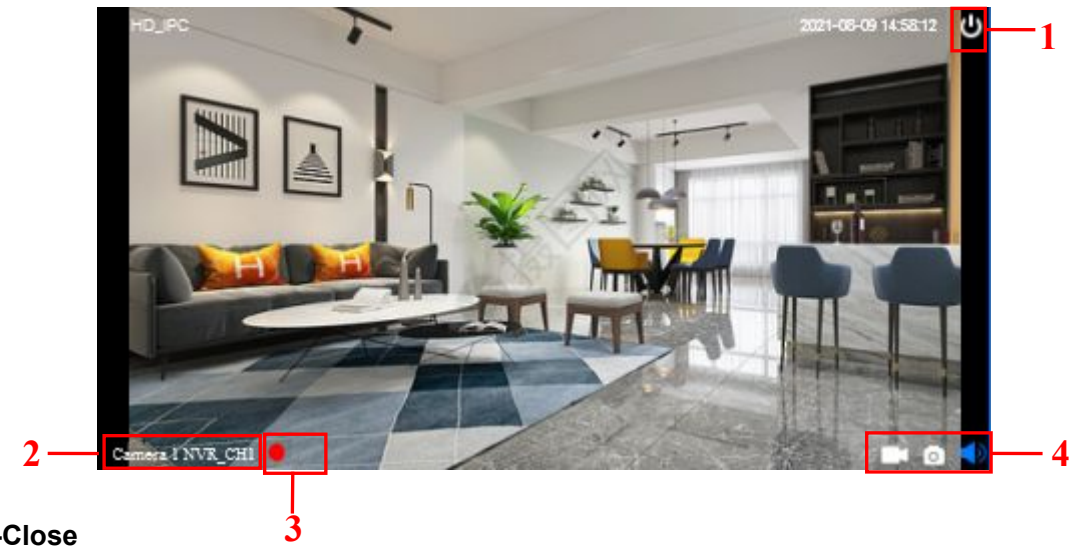
Click the button, Delete the device.

5----- Setup

Click Setup button, goes to Device Settings Control Panel to make advanced NVR settings.

Section3 Live Window

When the mouse is placed on the video, the icon shown on the following figure appears.



1-----Close

Click the icon to close this channel live window

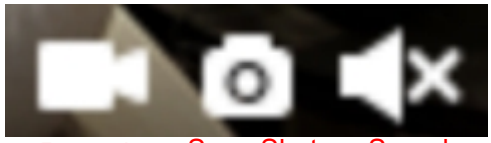
2-----Device Name

Show view channel and camera name.

3-----Recording and Alarm status

This icon will turn to red, it indicates that the camera is recording

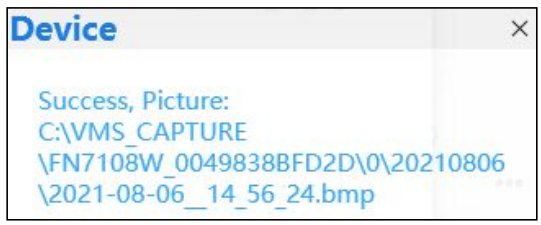
4----- Record / Snap Shot / Sound



Record Snap Shot Sound

Record ----- Click it and do manually recording. When recording, icon 1 will turn to blue. Click it again and stop recording. The recording files will be stored to C:\VMS_RECORD automatically.

Snap Shot ----- Click it to make snapshot. After snapshot, the button banner will prompt **Captured Successfully**. And you can find the picture on default path C:\VMS_CAPTURE.



Sound ----- Click the icon then you will hear sound captured by the camera's built-in microphone. You may need to plug in earphones or enable the computer speakers to hear from the camera's microphone. Make sure the camera supports audio. Click again and stop audio.

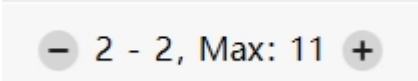
Section4 The number of split-screen

Click this button to select the number of split-screen on one page.

The client can monitor many cameras at one page, here you can choose the display number. The maximum number is 16.

Section5 Live Cruise / Close All / Full Screen / Hide Bar

Live Cruise ----- Click this button to Live Cruise, you can click button to add a loop page for live Cruise or click button to reduce the loop page for live Cruise.



Close All ----- Click this button to close all the cameras

Full Screen ----- Click this button to enter full screen, then click to exit full screen.

Hide Bar ----- Click this button, Hide and show Pan / Tilt control Bar

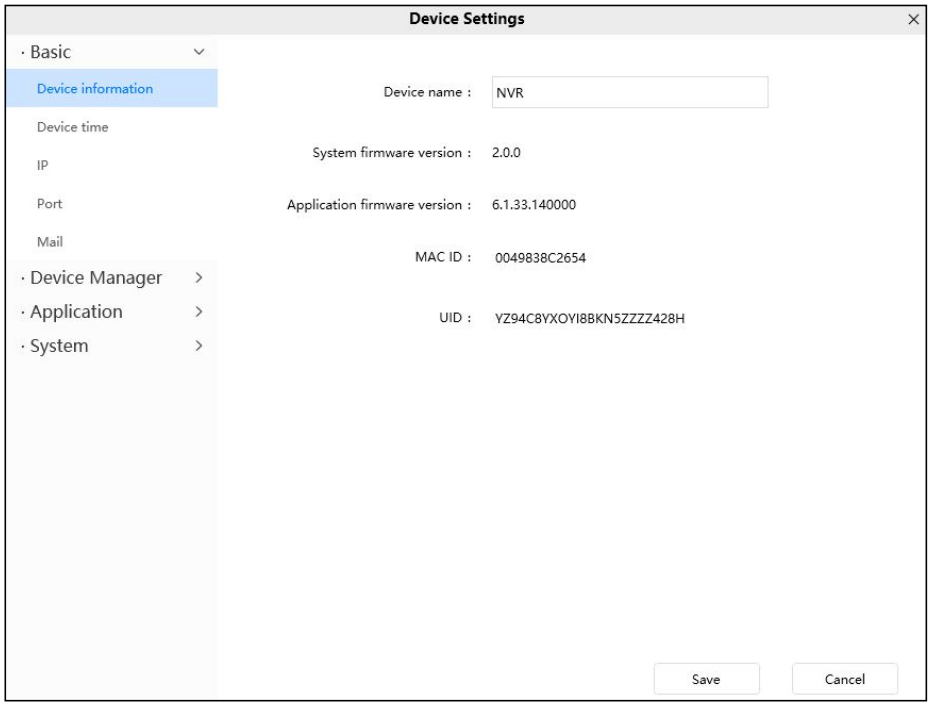
4.5 Setup

Select the icon on the right side of the NVR list to do the following. Click **Setup** button, goes to **Device Settings** control panel to make advanced NVR settings.

4.5.1 Basic

Device Information

You can modify the device name. You can also see the basic information of the NVR.



Device name: The Device Name is a unique name that you can give to your device to help you identify it. You can define a name for your NVR here such as NVR1. Click Save to save your changes. The alias name cannot contain special characters.

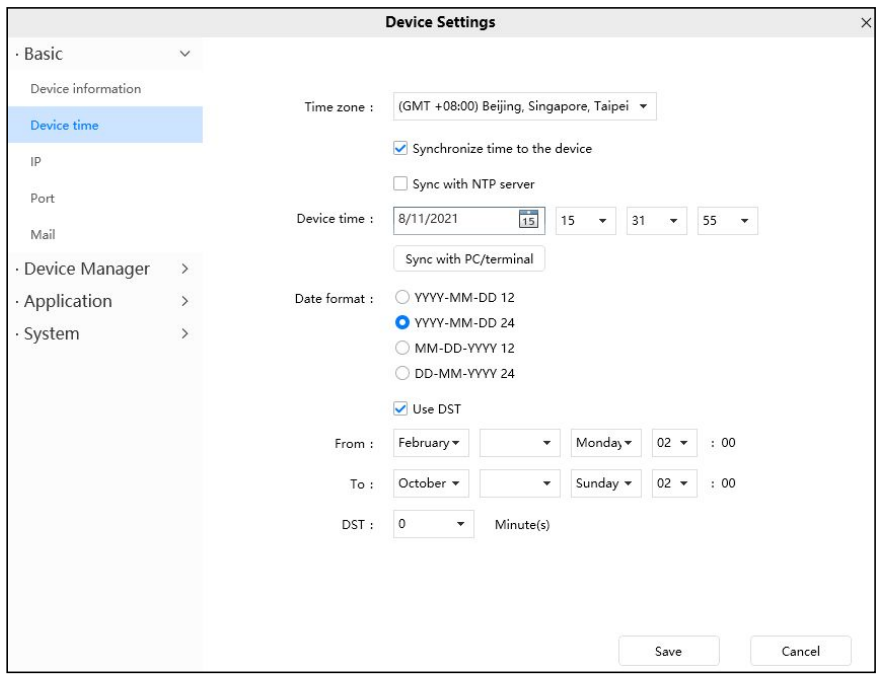
System firmware version: Display the system firmware version of your NVR.

Application firmware version: Display the application firmware version of your NVR.

MAC ID: Display the MAC address of your NVR. For example Device ID is 0049838BFD2D, the same MAC ID sticker is found at the bottom of the NVR.

Device time

This section allows you to configure the settings of the internal system clock for your camera. You can set the time zone, device time, date format.



Time zone: Select the time zone for your region from the drop down menu.

Synchronize time to the device: After checking the **Synchronize time to the device** checkbox, you can set the device time, or click the **Sync with PC/terminal** button to synchronize the PC/terminal time to your device.

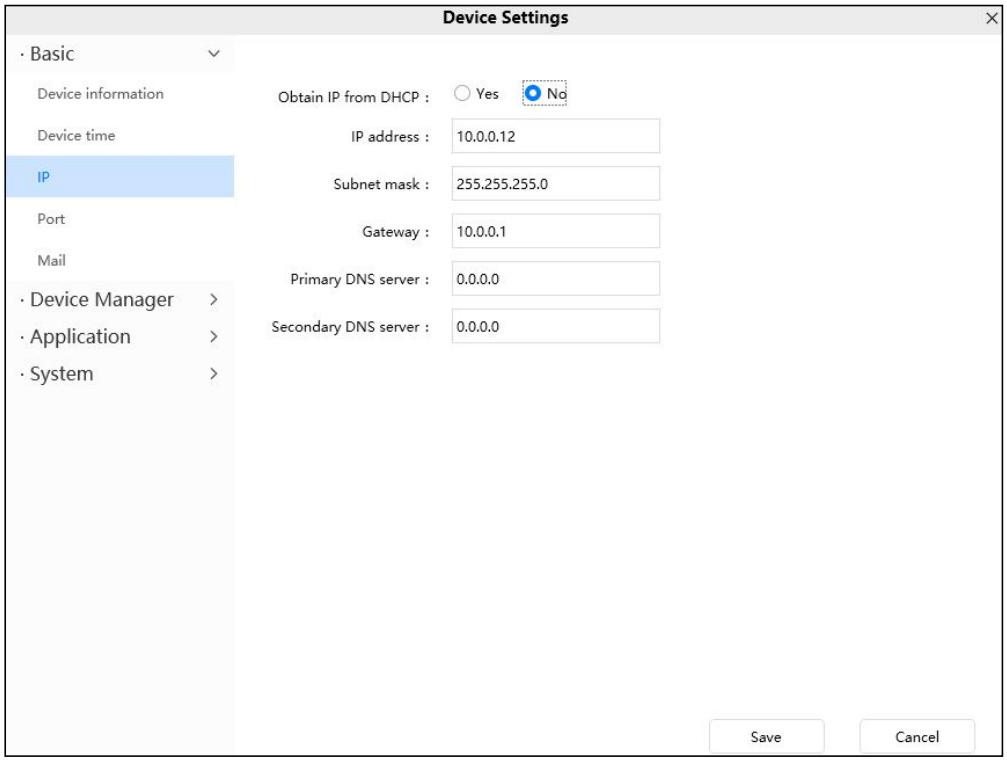
Sync with NTP server: Network Time Protocol will synchronize your device with an Internet time server. Choose the one that is closest to your device.

Use DST: Select the **use DST** (Daylight Saving Time, to set the clock ahead of the real-time), then set the start time and end time of the DST, select the daylight saving time from the drop-down menu at last.

Click **Save** button and submit your settings.

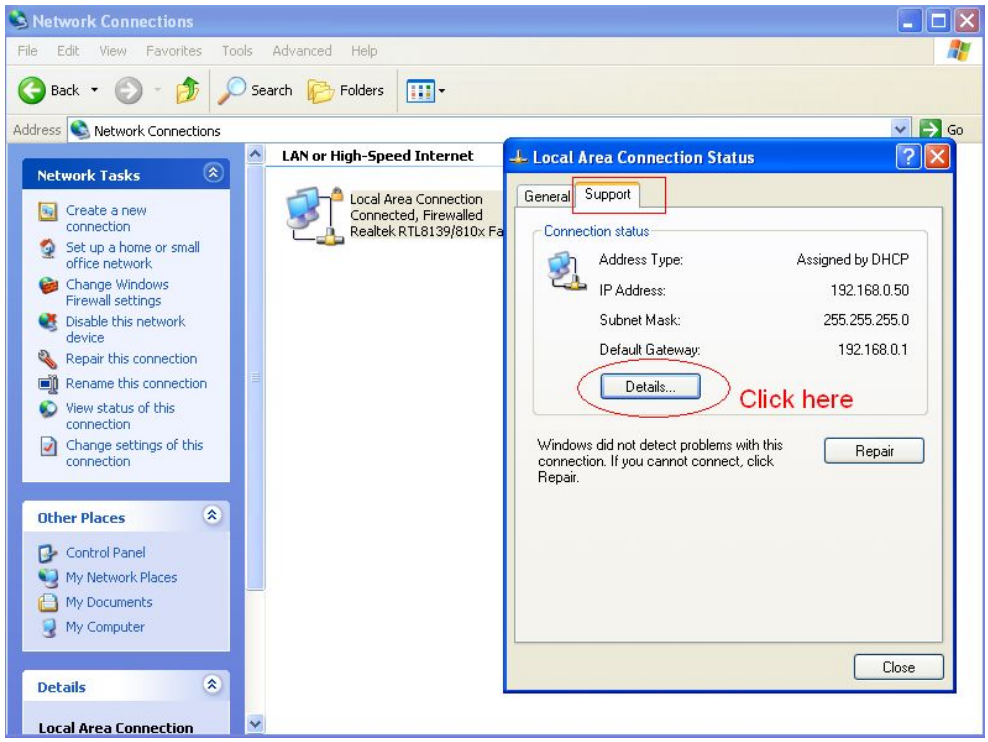
IP

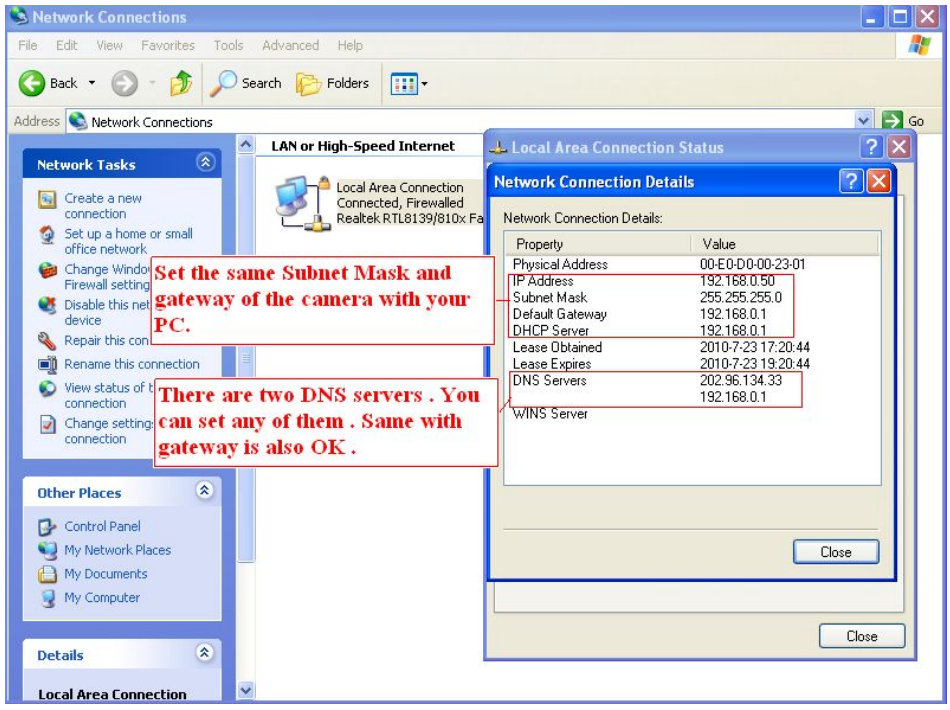
If you want to set a static IP for the device, please go to **IP** page. Keep the device in the same subnet of your router or computer.



It is recommended that you use the subnet mask, gateway and DNS server from your locally attached PC. If you don't know the subnet mask, gateway and DNS server, you can check your computer's local area connection as follows:

Control Panel--Network Connections--Local Area Connections --Choose Support--Details.



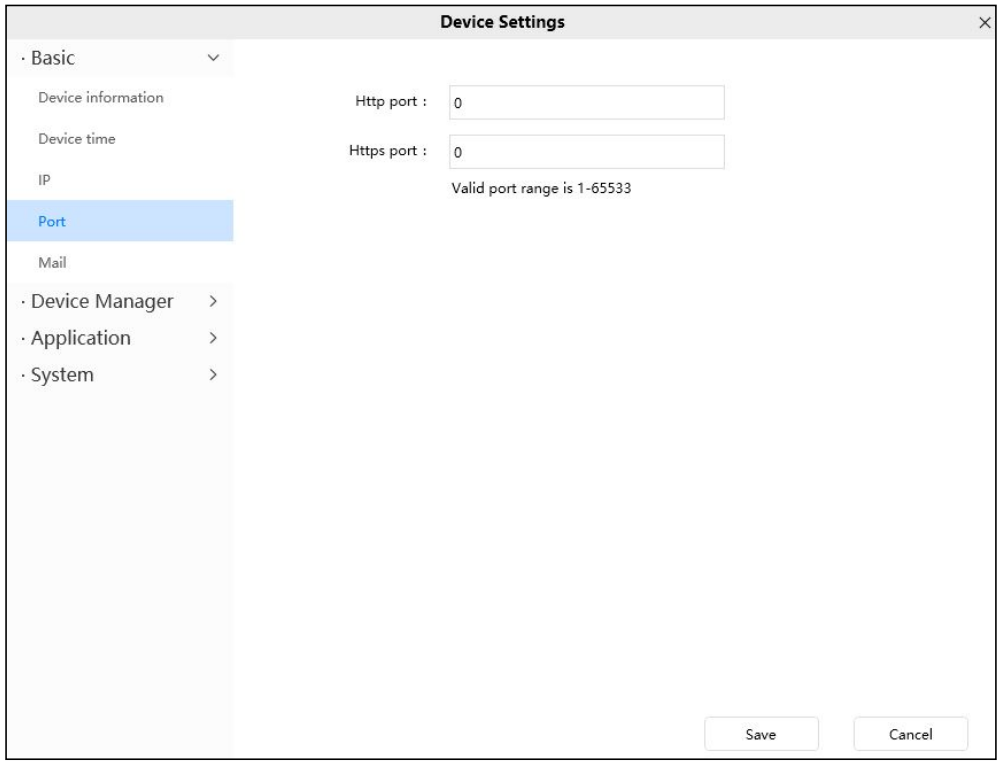


If you don't know the DNS server, you can use the same settings as the Default Gateway.

Port

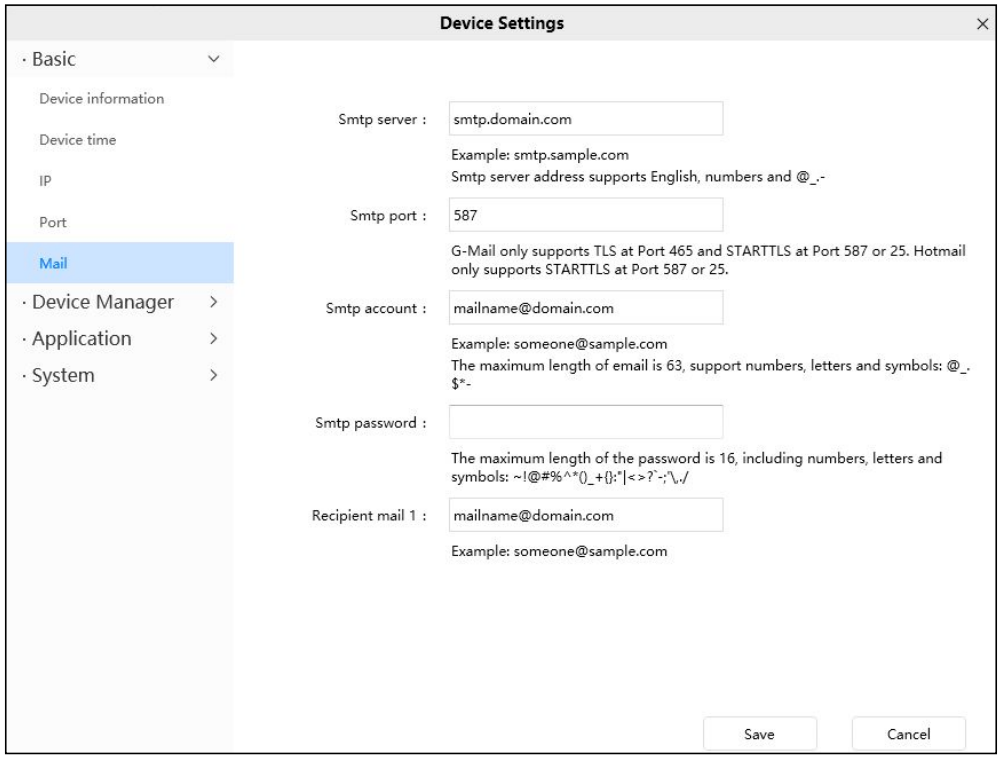
This device supports HTTP Port / HTTPS Port Port. HTTP Port is used to access the device remotely.

HTTP port: By default, the HTTP is set to 88. 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.



Mail

If you want the NVR to send emails when motion has been detected, here mail will need to be configured.



1----- SMTP server/ Port Enter SMTP server for sender. SMTP port is usually set as 25. Some SMTP servers have their own port, such as 587 or 465, and Transport Layer Security usually is None. If you use Gmail, Transport Layer Security must be set to TLS or STARTTLS and SMTP Port must be set to 465 or 25 or 587, which port you choose should be decided by which Transport Layer Security you select.

2----- SMTP account/ password ID account and password of the sender email address

3----- Recipient mail 1 Mailbox for receiver need not support SMTP, you can set 4 receivers.

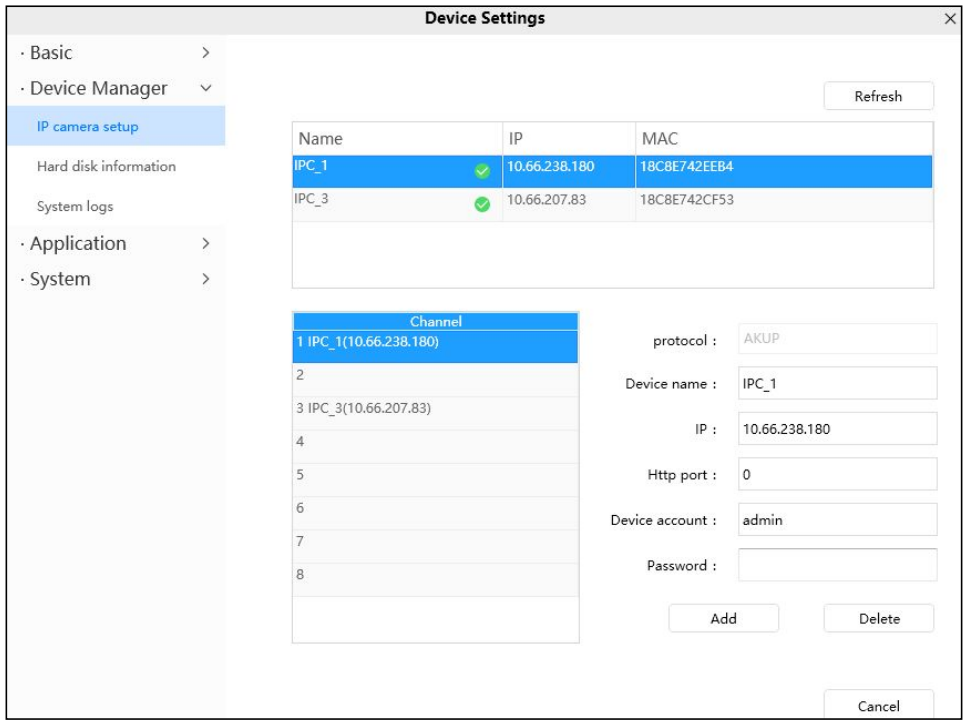
4----- Save Click Save to take effect.

4.5.2 Device Manager

IP camera setup

You can add the camera for the NVR device on this page.

Select the channel in the channel list box, enter the device information, click the add button, and the system will prompt for success.



Device account/Password：The Device account/Password is the user name and password you set when you first logged in to the NVR system using the monitor.

Note

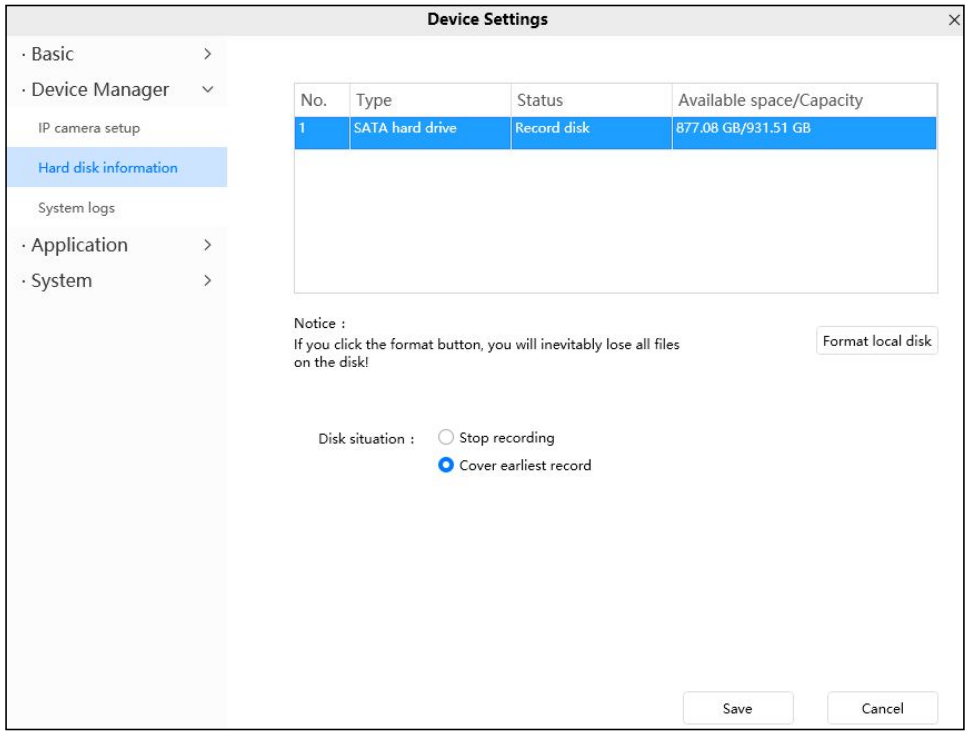
The NVR in the FN7108W-B4 kit can only add the IPC in the kit, and the IPC in the kit can only be used for the NVR in the kit. And NVR automatically matches IPC.

Hard disk information

You can view the hard disk information of NVR.

Click the **Format local disk** button to clear the hard disk information of NVR.

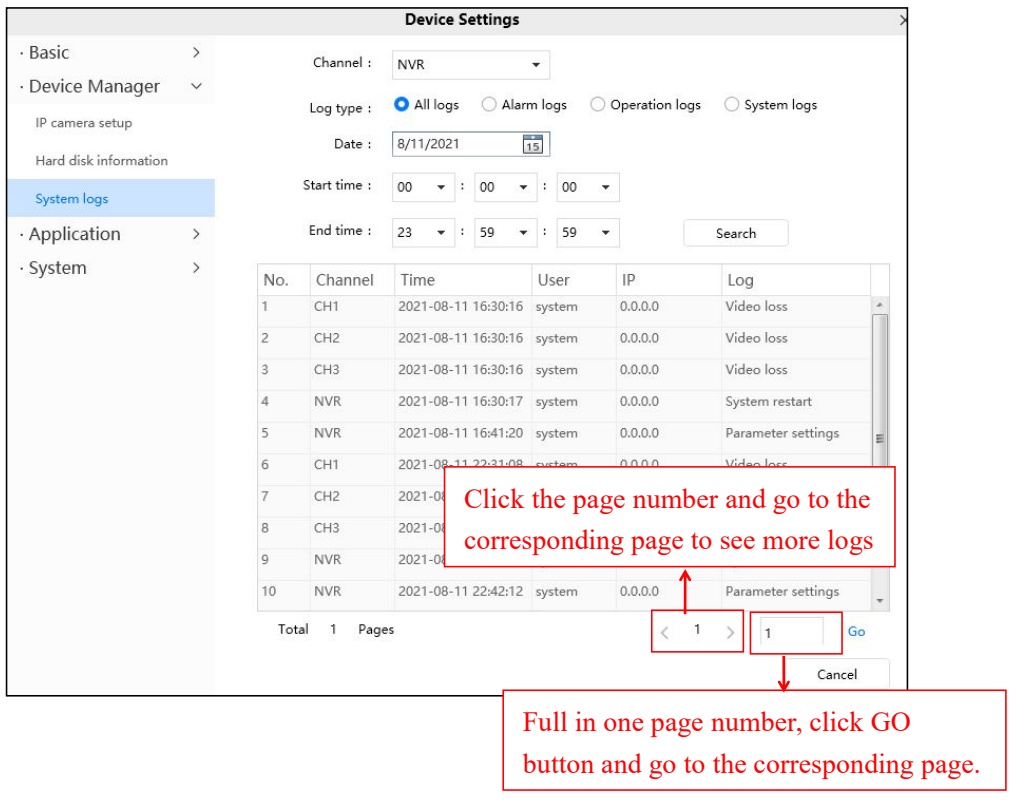
If your hard disk is full, you can check whether to Stop recording or Cover earliest record.



After the modification is completed, click **Save** button to take effect.

System logs

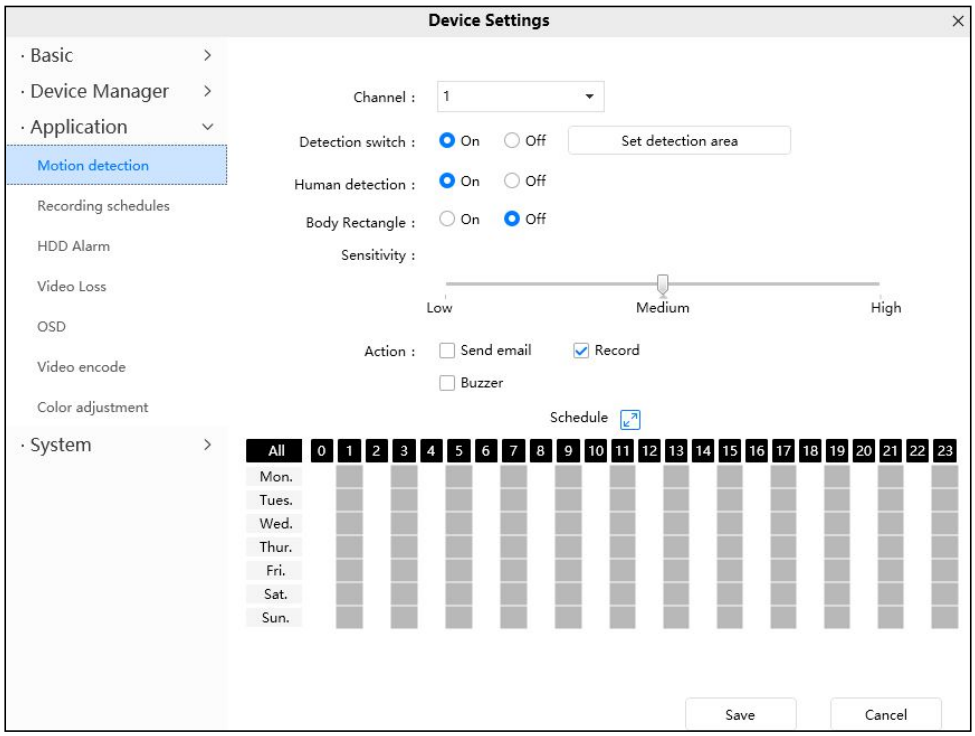
You can query the Alarm logs, Operation logs and System log of the NVR.



4.5.3 Application

Motion detection

The NVR supports **Motion Detection Alarm**, when the motion has been detected, it will send emails.



To enable motion detection, follow the steps below:

1 Channel---- Select the channel that needs motion detection.

2 Detection switch---- Whether to enable motion detection

3 Set detection area----You can set the alarm area.

4 Human detection---- Whether to turn on detection.

5 Body Rectangle

6 Sensitivity---- It supports three modes: Low, Middle and High. The higher the sensitivity, the camera will be more easily alarmed. Select one motion sensitivity.

7 Select the alarm Action

There are some alarm indicators:

- Send E-mail

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

Mail Settings first. Make sure you have set E-mail in “Device Setting -> Basic -> Mail” interface.

- Recording

  If you select this checkbox, when the motion has been detected, the NVR will recording and store in HDD.

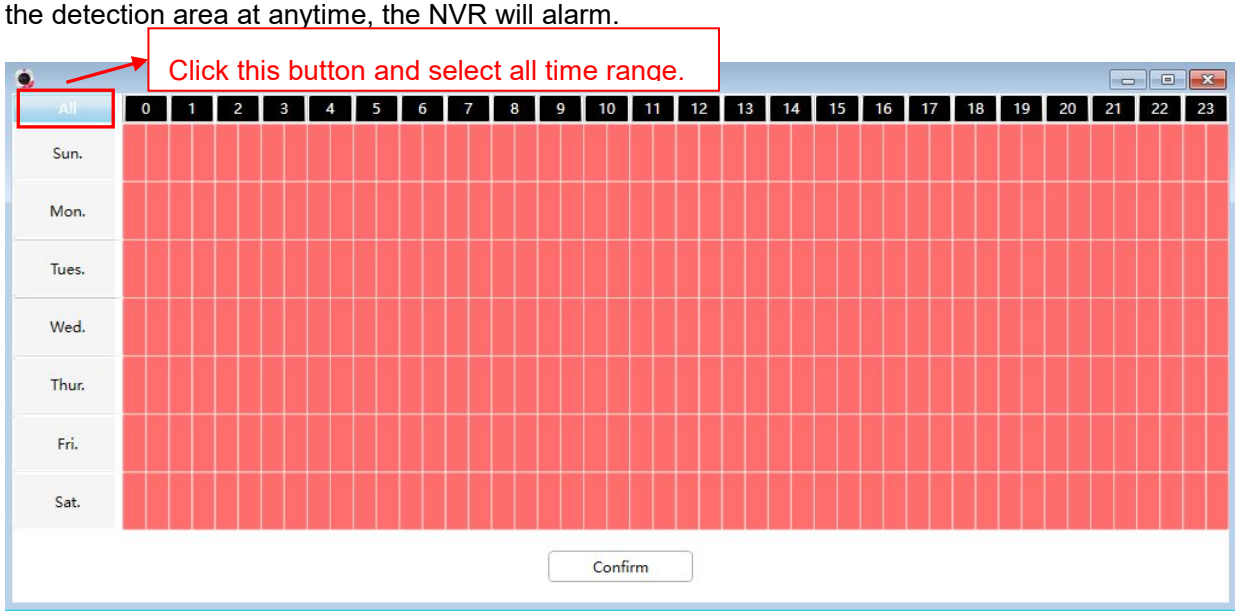
- Buzzer

  If you select this checkbox, when the motion has been detected, the NVR will alert the buzzer.

8 Alarm Schedule

- Alarm anytime when motion is detected.

  Click the black button up the MON, you will see all time range turn red. When something moving in the detection area at anytime, the NVR will alarm.



- Specify an alarm schedule

  Click the week day words, the corresponding column will be selected. For example, click TUE, the all column of TUE turns to red, that means during Tuesday whole day, when something moving in the detection area, the NVR will alarm.

- Press the left mouse and drag it on the time boxes, you can select the serial area.

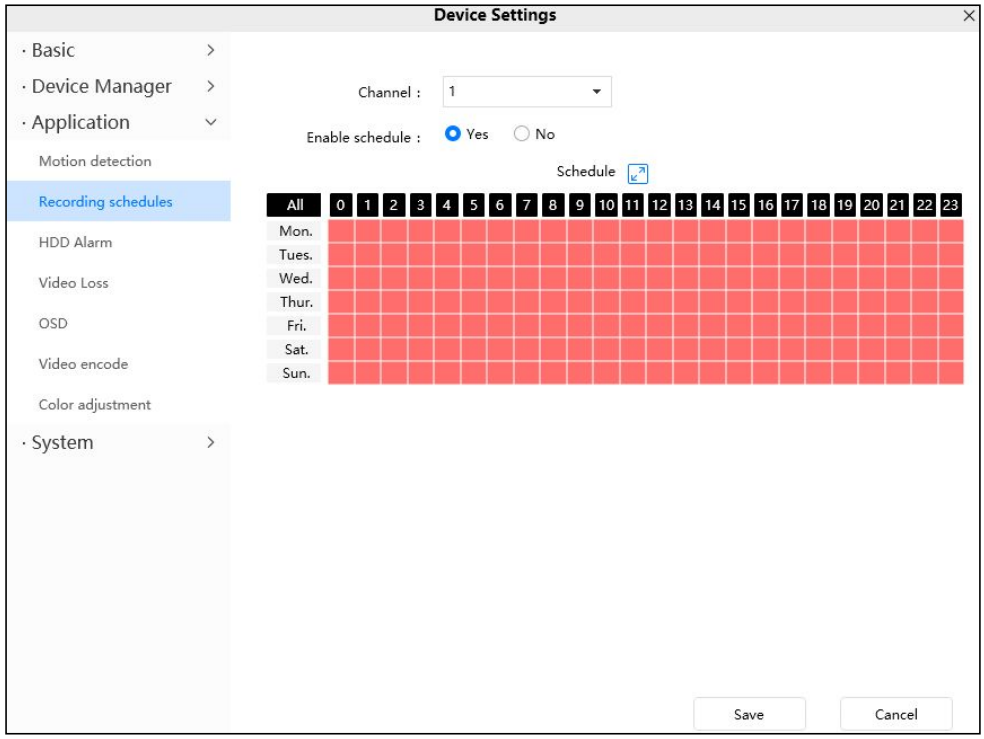
9 Click Save button to take effect. When the motion is detected during the detection time in the detection area, the NVR will alarm and adopt the corresponding alarm indicators.

Note

You must set the detection area and detection schedule, or else there is no alarm anywhere and anytime.

Recording schedules

On the page you can configure the schedule record.Schedule Recording only supports HDD.

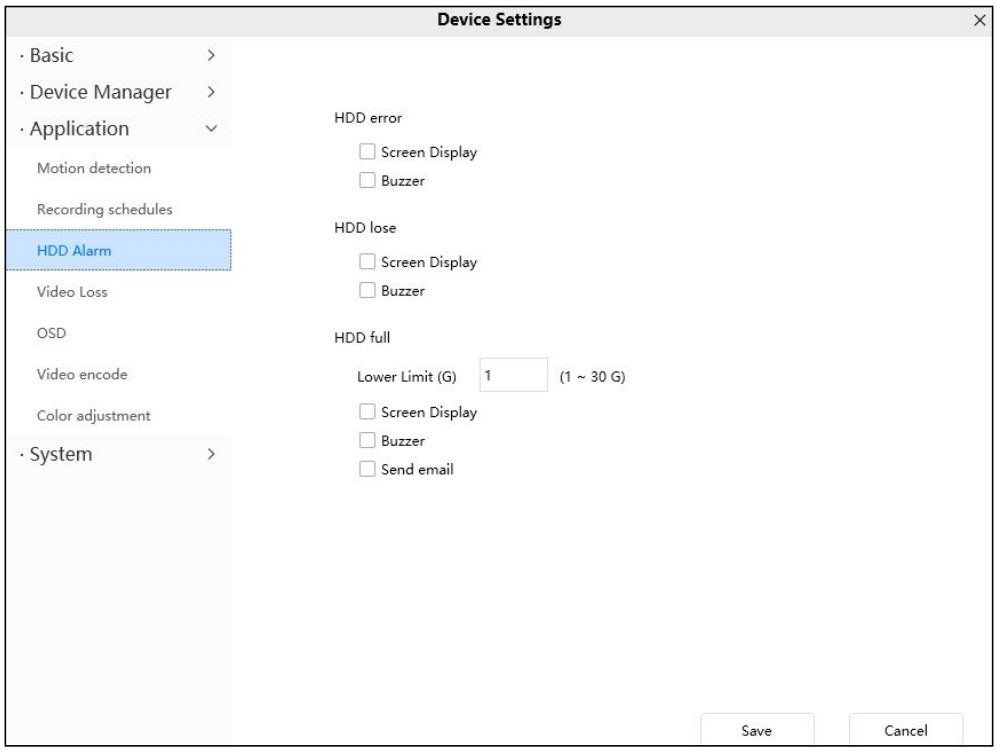


Select the recording channel. Check the **Enable schedule** checkbox, then you can set the schedule for recording.

Click **Save** button to take effect.

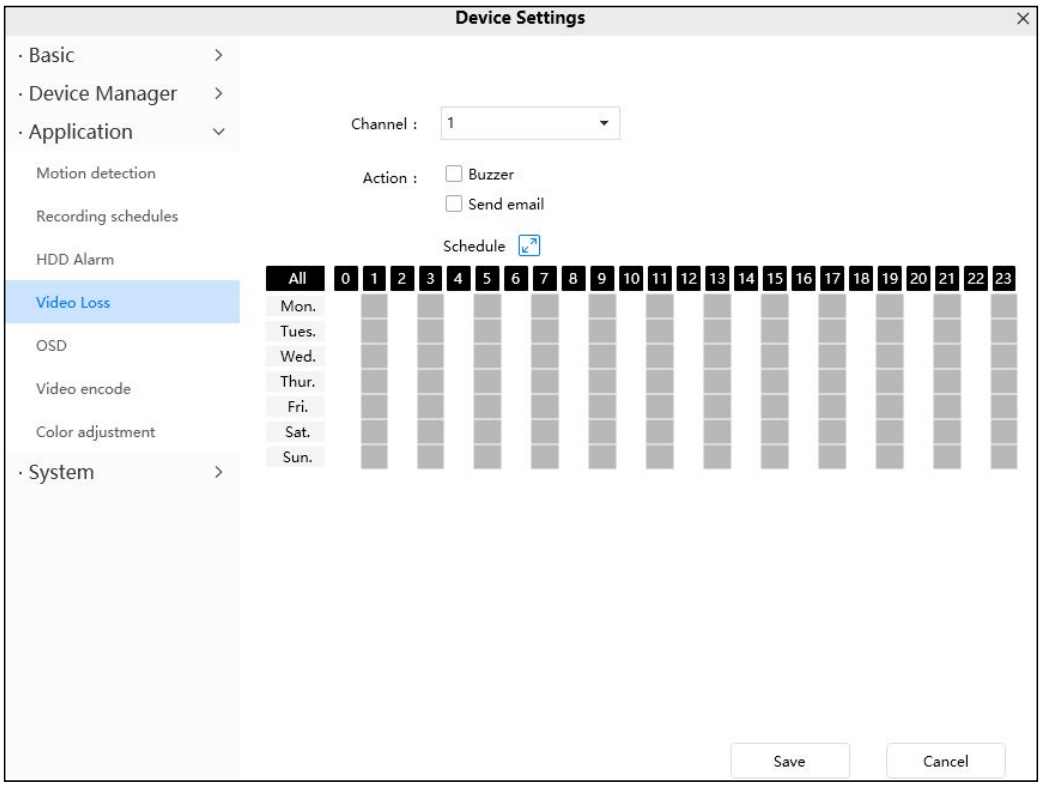
HDD Alarm

When the hard disk is error, lose or full, you can set the NVR alarm.



Video Loss

When the video is lost, you can set an alarm message.



To enable motion detection, follow the steps below:

1 Channel---- Select the channel.

2 Action

- Send E-mail

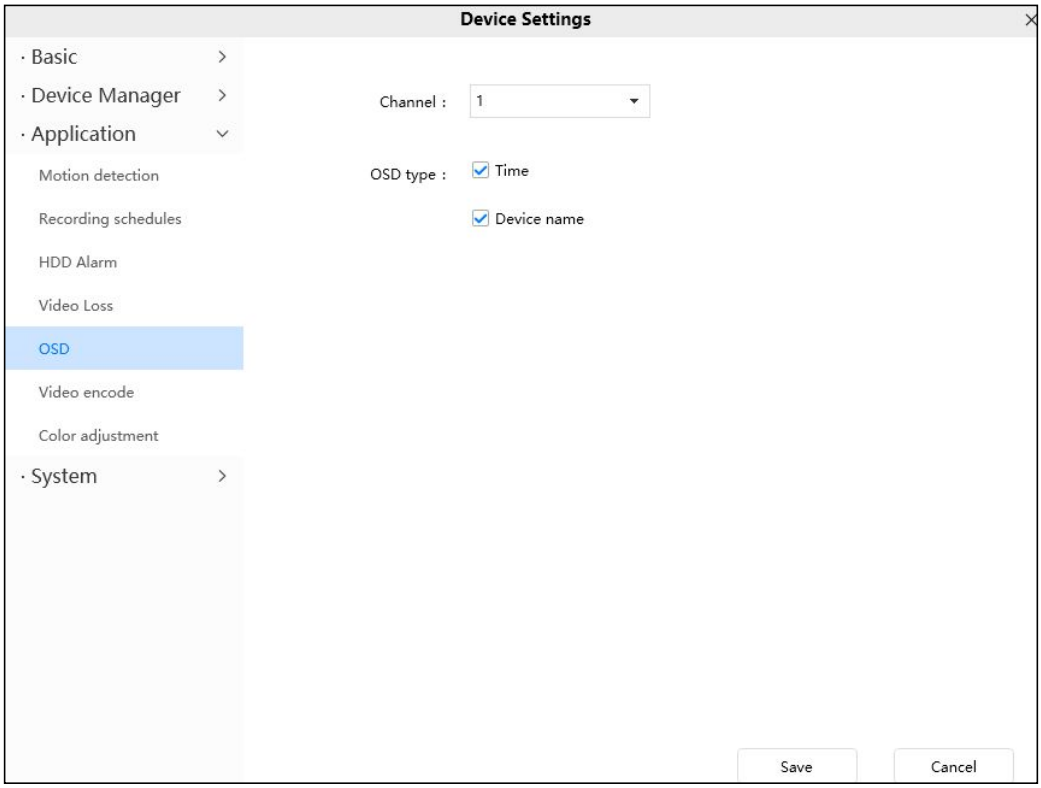
  If you want to receive alarm emails when video loss, you must select Send E-mail and set Mail Settings first. Make sure you have set E-mail in “Device Setting -> Basic -> Mail” interface.

- Buzzer

  If you select this checkbox, when the video has been loss, the NVR will alert the buzzer.

OSD

This page is used to add time and device name on the video.

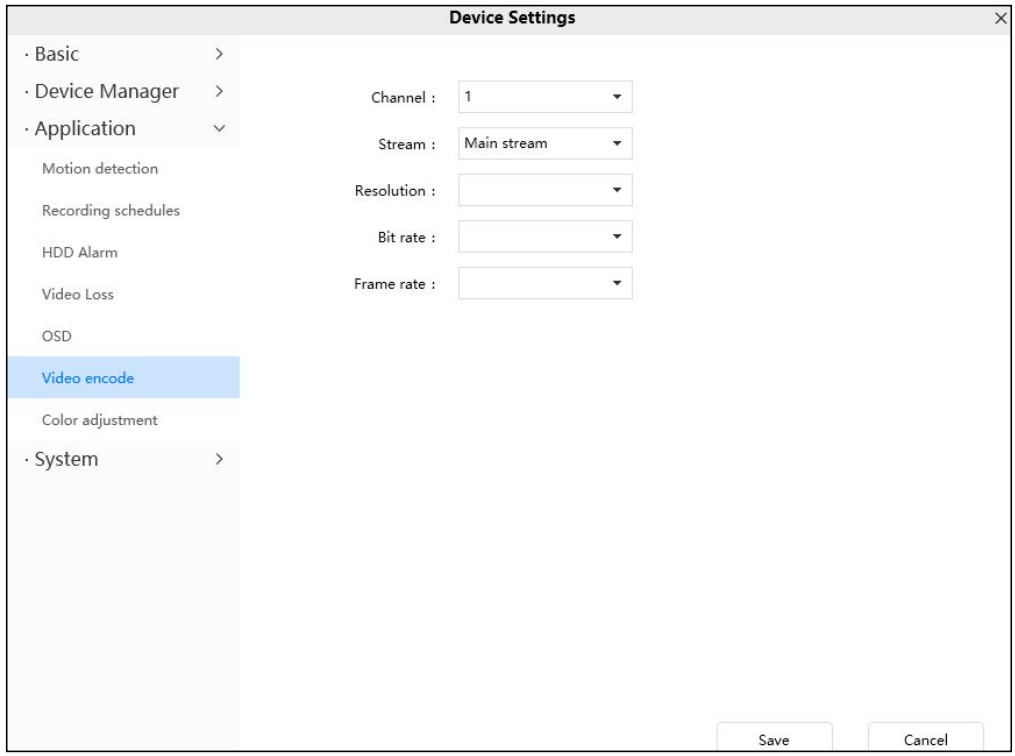


Video encode

This is main/sub stream video settings.

Note

FN7108W-B4 kit will automatically configure the main/sub stream information according to the network environment, so it is not editable here.



Channel: Select the channel.

Stream: There are two types to identify different streams you have set.

Resolution: The camera supports multiple types in the channel, For example: 2K,3M,1080P, 720P, VGA. The higher the resolution is, the clearer video will become. But the code flux will become larger too, and it will take up more bandwidth. (Different models support different specific types.)

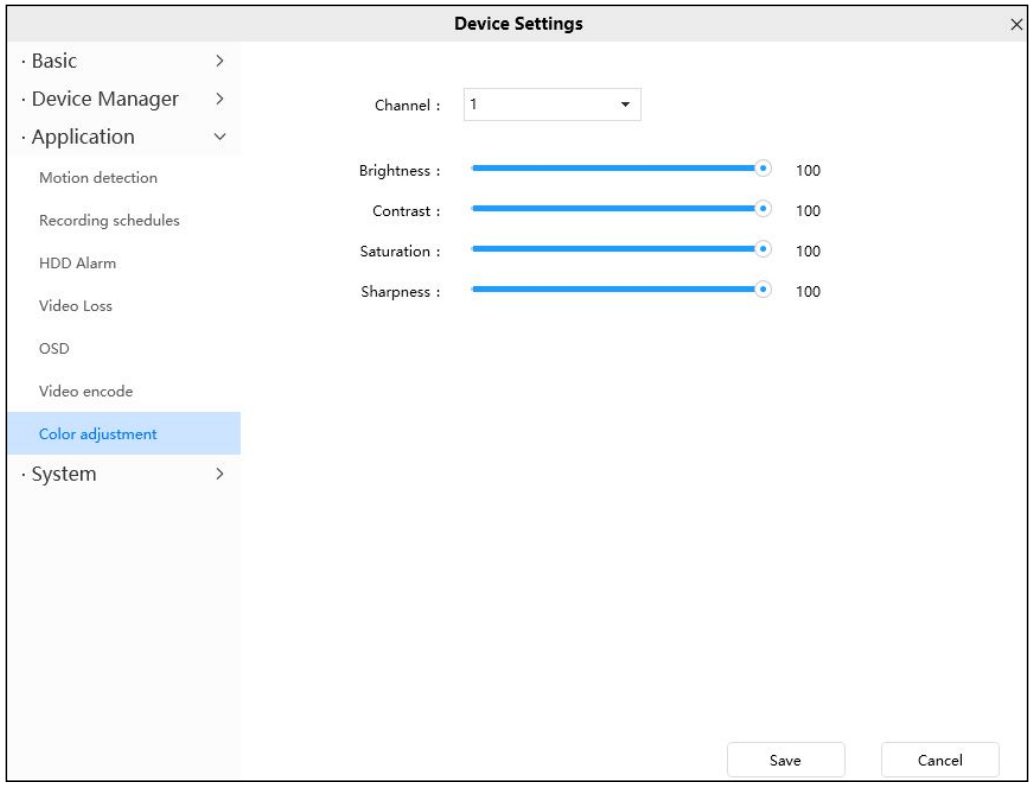
Bit Rate: Generally speaking, the larger the bit rate is, the clearer video will become. But the bit rate configuration should combine well with the network bandwidth. When the bandwidth is very narrow, and bit rate is large, that will lead to video can not play well.

Frame Rate: Note that a larger frame size takes up more bandwidth. When the video format is 50Hz, the maximum frame rate is 25 fps. When the video format is 60Hz, the maximum frame rate is 30 fps. You should lower frame rate when the bandwidth is limited. Normally, when the frame rate above 15, you can achieve fluently video.

Click **Save** button to take effect.

Color adjustment

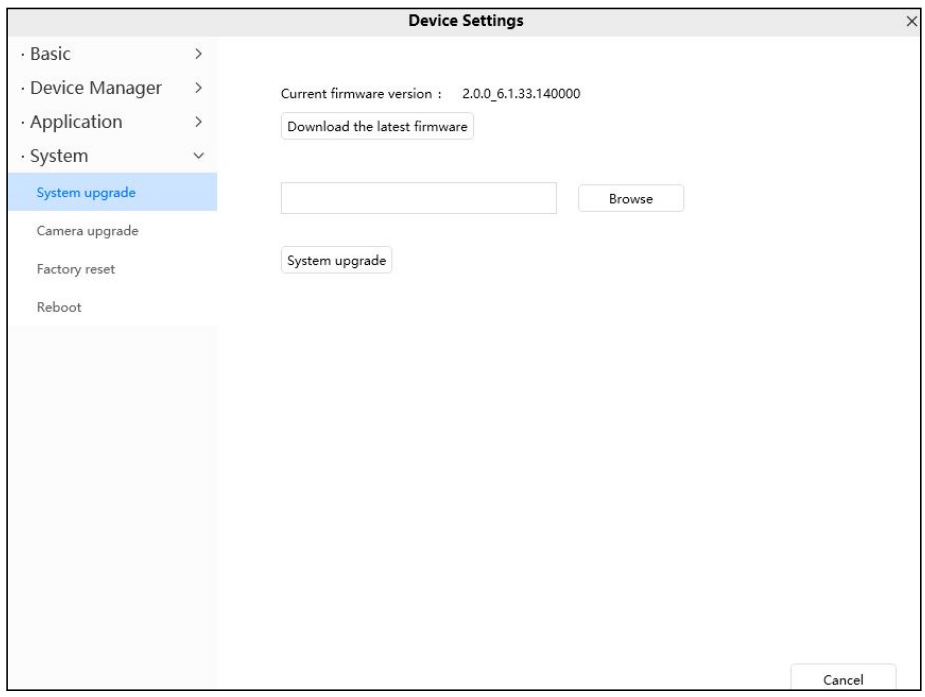
You can adjust the settings to your liking.



4.5.4 System

System upgrade

Click **Download the Latest Firmware**, you will see the following screen. And click **Save** to save the firmware on your computer locally.



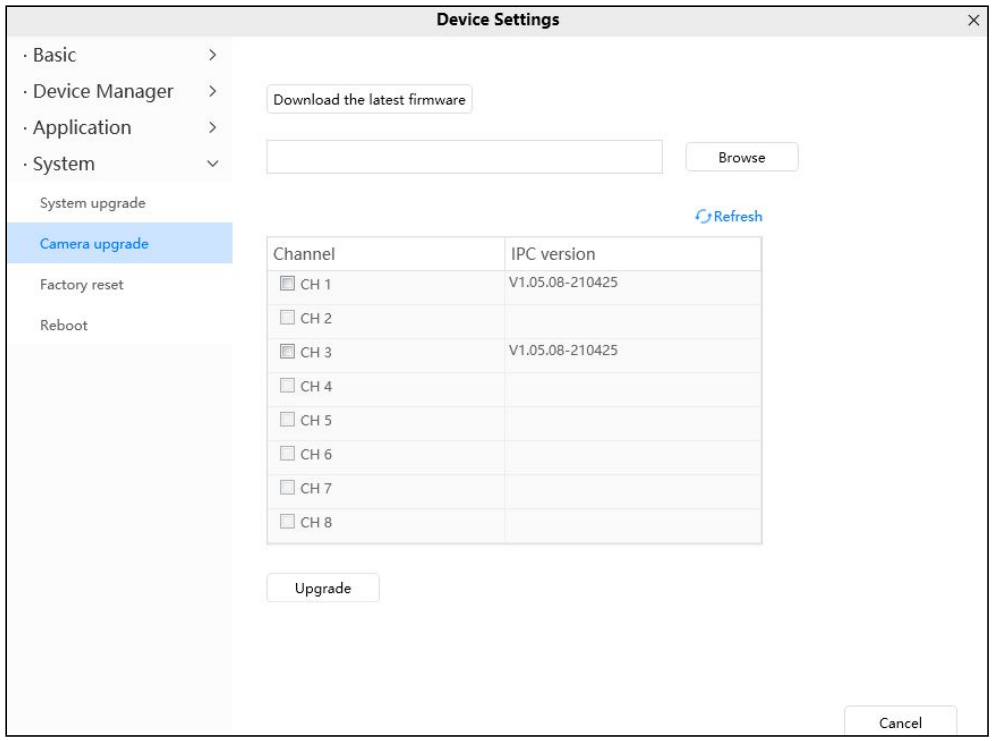
Your current firmware version will be displayed on your screen.

Click **Browse**, choose the correct bin file and then click **System upgrade**.

Don't shut down the power during upgrade. After upgrading, you can see the upgrade result.

Camera upgrade

Click **Download the Latest Firmware**, you will see the following screen. And click **Save** to save the firmware on your computer locally.



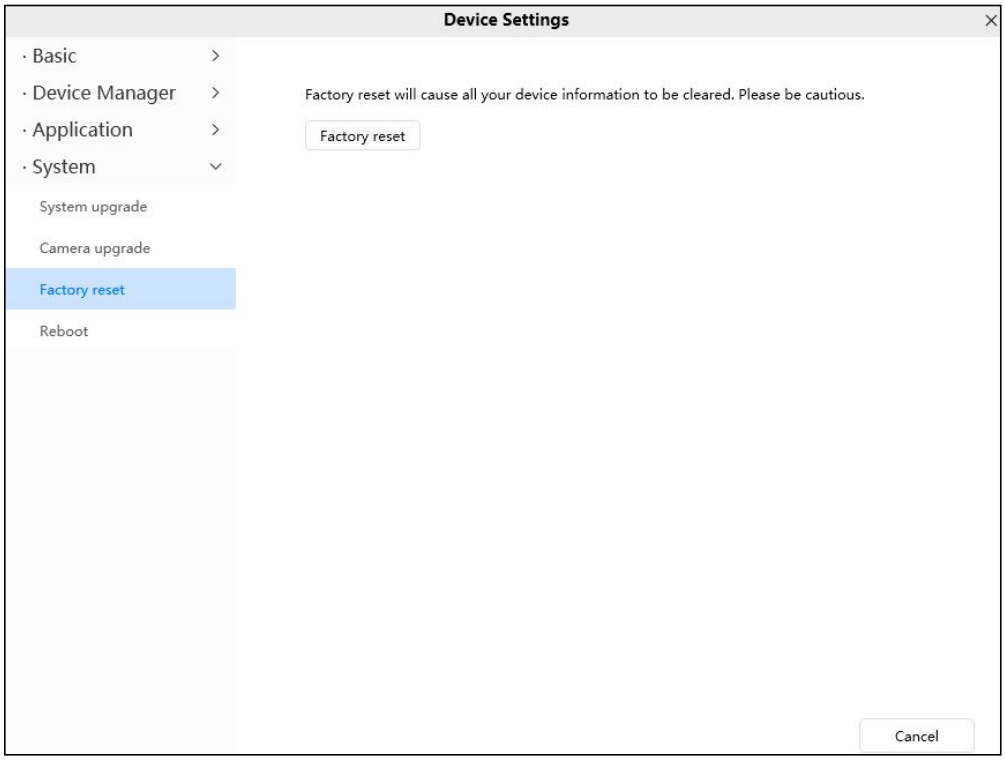
Your IPC current firmware version will be displayed on your screen.

Click **Browse**, choose the correct bin file and then click **upgrade**.

Don't shut down the power during upgrade. After upgrading, you can see the upgrade result.

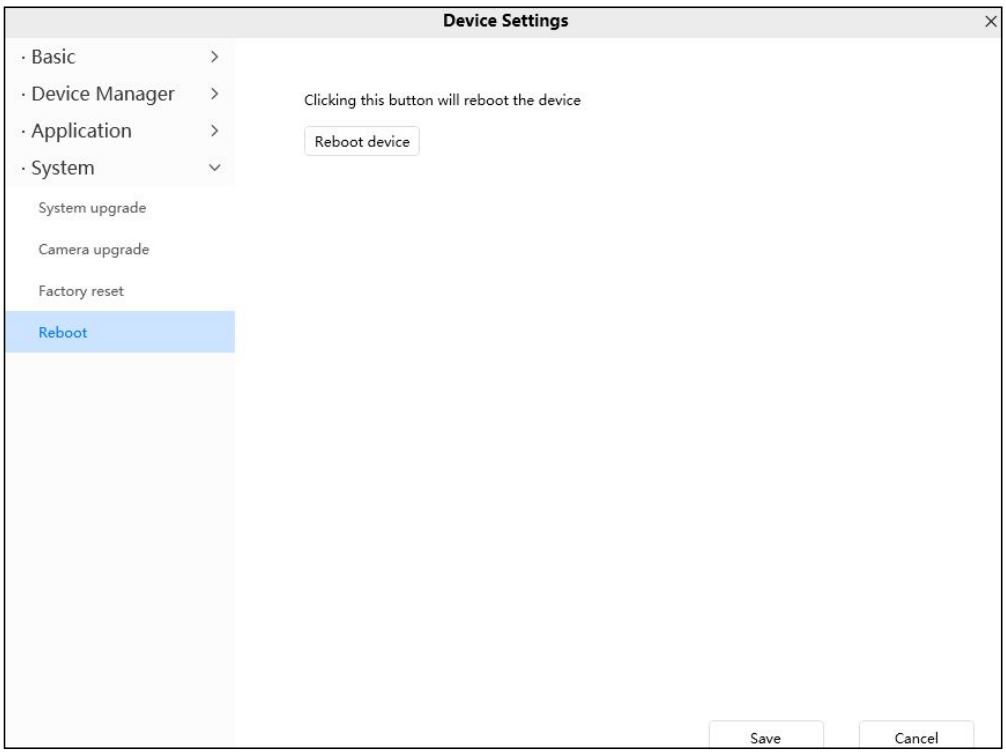
Factory reset

Click **Factory Reset** button and all parameters will return to factory settings if selected.



Reboot

Click **Reboot device** to reboot the NVR. This is similar to unplugging the power to the NVR.



5 Appendix

5.1 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 H.264/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.

5.2 Specifications

NVR		FN8108W(FN8108W-B4-1T)
Video Input	**IP Video Input**	8 Channels IP camera input
Video Output	**HDMI Output**	1×HDMI
	VGA Output	1×VGA
	Display Resolution	3840x2160, 2560x1440,1920x1080,1440x900,1280x1024,1280x800, 1280x720,1024x768
Recording	**Recording Resolution**	Up to 8MP per channel (8ch@8MP)
	Record Mode	Time Scheduled / Human Detect
	Compression Format	H.264+
Playback	**Synchronous Playback**	8 channels synchronous video playback
	Playback Mode	Pause / Stop / Slow / Fast/ Frame Play
Network	**Ethernet**	One 10/100Mbps RJ45 port
	Mesh	Mesh state management
	Wireless Standard	IEEE802.11b/g/n/ax
	Wireless Security	WPA, WPA2
	Network Protocol	IP, TCP, UDP, SMTP, DHCP
HDD	**Capacity**	Up to 8TB
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

Software	**Smart Phone**	iOS,Android,3G/4G/5G Smartphones
Language	**Language**	20 Languages
Physical and Environmental	**Power Supply**	DC 12V/2A
	Dimension(LxWxH)	234mm*234mm*52mm
	Net Weight (g)	660g
	Operating Temperature	0°C ~ 50°C (32°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		FI9911W (FN8108W-B4-1T)
Image Sensor	**Sensor Type**	High Definition Color CMOS Sensor
	Video Quality	3.0Megapixels (2304*1296)
	Backlight Compensation	√
Lens	**Lens Type**	f: 4mm;F: 2.0
	IR Range	65ft(20m)
	Infrared Mode	Automatic
	Diagonal View Angle	94°
	DORI(For reference only)	Detect (25px/m): 56.2m. Observe (63px/m): 22.3m. Recognise (125px/m): 11.2m. Identify (250px/m): 5.6m.
Network	**Mesh**	Each IPC as a WiFi relay
	Wireless Standard	IEEE802.11b/g/n/ax
	Data Rate	IEEE802.11b: 11Mbps(Max.); IEEE802.11g: 54Mbps(Max.);

		IEEE802.11n: 150Mbps(Max.) ;IEEE802.11ax: 286.8Mbps(Max.).
	Wireless Security	WPA, WPA2
	Network Protocol	IP, TCP, UDP, NTP, DHCP
System Requirements	**Operating System**	Microsoft Windows (Foscam VMS), MacOS (Foscam VMS), Android (Foscam app), iOS (Foscam app)
	Smart Phone	iOS,Android,3G/4G/5G Smartphones
Software Features	**Video Format**	H.264+
	Multi-Stream	Dual streams
	Human Detection	√
	Day/Night	√
	Zoom	20X digital zoom function (Foscam app and Foscam VMS)
Physical and Environmental	**Waterproof**	IP66
	Net Weight	370g
	Power	DC12V
	Power Consumption	<5W
	Dimension(LxWxH)	97(L)x67 (W)x64 (H)
	Certification	FCC, CE, IP66
	Operating Temperature	-10°C~ 55°C (14°F ~ 140°F)
	Operating Humidity	10% ~ 80% non-condensing
	Storage Temperature	-20°C ~ 60°C (-4°F ~ 140°F)
	Storage Humidity	0% ~ 90% non-condensing

NVR		FN9108W(FN9108W-B4-2T)
Video Input	**IP Video Input**	8 Channels IP camera input
Video Output	**HDMI Output**	1×HDMI
	VGA Output	1×VGA
	Display Resolution	3840x2160,2560x1440,1920x1080,1440x900,1280x1024,1280x800, 1280x720,1024x768
Recording	**Recording Resolution**	Up to 8MP per channel (8ch@8MP)
	Record Mode	Time Scheduled / Human Detect
	Compression Format	H.264+
Playback	**Synchronous Playback**	8 channels synchronous video playback
	Playback Mode	Pause / Stop / Slow / Fast/ Frame Play
Network	**Ethernet**	One 10/100Mbps RJ45 port
	Mesh	Mesh state management
	Wireless Standard	IEEE802.11b/g/n/ax
	Wireless Security	WPA, WPA2
	Network Protocol	IP, TCP, UDP, SMTP, DHCP
HDD	**Capacity**	Up to 8TB
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
Software	**Smart Phone**	iOS,Android,3G/4G/5G Smartphones
Language	**Language**	20 Languages
Physical and	**Power Supply**	DC 12V/2A

Environmental	**Dimension(LxWxH)**	234mm*234mm*52mm
	Net Weight (g)	1070g
	Operating Temperature	0°C ~ 50°C (32°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		FI9925W (FN9108W-B4-2T)
Image Sensor	**Sensor Type**	High Definition Color CMOS Sensor
	Video Quality	5.0Megapixels (2880x1620)
	Backlight Compensation	√
Lens	**Lens Type**	f: 4mm;F: 2.0
	IR Range	65ft(20m)
	Infrared Mode	Automatic
	Diagonal View Angle	Diagonal: 104.5°, Horizontal: 91.8°, Vertical: 51.2°
	DORI(For reference only)	Detect (25px/m): 63.2m. Observe (63px/m): 25.1m. Recognise (125px/m): 12.6m. Identify (250px/m): 6.3m.
Network	**Mesh**	Each IPC as a WiFi relay
	Wireless Standard	IEEE802.11b/g/n/ax
	Data Rate	IEEE802.11b: 11Mbps(Max.); IEEE802.11g: 54Mbps(Max.); IEEE802.11n: 150Mbps(Max.) ;IEEE802.11ax: 286.8Mbps(Max.).
	Wireless Security	WPA, WPA2

	Network Protocol	IP, TCP, UDP, NTP, DHCP
System Requirements	**Operating System**	Microsoft Windows (Foscam VMS), MacOS (Foscam VMS), Android (Foscam app), iOS (Foscam app)
	Smart Phone	iOS,Android,3G/4G/5G Smartphones
Software Features	**Video Format**	H.264+
	Multi-Stream	Dual streams
	Human Detection	√
	Day/Night	√
	Zoom	20X digital zoom function (Foscam app and Foscam VMS)
Physical and Environmental	**Waterproof**	IP66
	Net Weight	390g
	Power	DC12V
	Power Consumption	<5W
	Dimension(LxWxH)	177(L)x70 (W)x70 (H)
	Certification	FCC, CE, IP66 , WEEE, ROHS
	Operating Temperature	-10°C~ 50°C (14°F ~ 122°F)
	Operating Humidity	10% ~ 80% non-condensing
	Storage Temperature	-20°C ~ 60°C (-4°F ~ 140°F)
	Storage Humidity	0% ~ 90% non-condensing

NVR		**FN9108E (FN9108E-B4-2T)**
Video Input	**IP Video Input**	8 Channels QHD IP camera input
Video Output	**HDMI Output**	1×HDMI
	VGA Output	1×VGA
	Display Resolution	3840x2160, 2560x1440,1920x1080,1440x900,1280x1024, 1280x800,1280x720,1024x768

Recording	**Recording Resolution**	Up to 5MP per channel (8ch@5MP)
	Record Mode	Time Scheduled / Motion Detect
	Compression Format	H.264/H.264+
Playback	**Synchronous Playback**	8 channels synchronous video playback
	Playback Mode	Pause / Stop / Slow / Fast/ Frame Play
HDD	**Capacity**	Up to 16TB
Network	**POE Standard**	IEEE 802.3at/af
	Network Protocol	IP, TCP, UDP, SMTP, DHCP, RTSP
External Interface	**Network Interface**	1× 10/100 Mbps RJ45 port
	USB Interface	2× USB2.0 interface for mouse and external storage
	Button	1× Power on/off button,1× Reset button
Language	**Language**	20 Languages
Physical and Environmental	**Power Supply**	DC 48V/2A
	Dimension(LxWxH)	255mm*238mm*50mm
	Net Weight (g)	880g
	Operating Temperature	0°C ~ 50°C (32°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	**V5EP V2 (FN9108E-B4-2T)**	

Image Sensor	**Sensor Type**	High Definition Color CMOS Sensor
	Display Resolution	5.0Megapixels(3072*1728)
	Min. Illumination	0 Lux (With IR Illuminator)
Lens	**Lens Type**	f:4mm;F2.1
	Night Vision	20m
	Night mode	Manual and automatic modes,when the white light is on, the night vision image is colored
	Angle of view	Diagonal: 107.9°, Horizontal: 91.6°, Vertical: 49.6°
	DORI(For reference only)	Detect (25px/m): 65.3m. Observe (63px/m): 25.9m. Recognise (125px/m): 13.1m. Identify (250px/m): 6.5m.
Audio	**Input/Output**	Built-in mic and speaker
	Audio Compression	PCM/AAC
	Siren	Support maximum 100dB alarm siren
Connectivity	**IEEE 802.3at/af**	√
	Ethernet	RJ45
Software Features	**Video Format**	H.264/H.264+
	Multi-Stream	Dual streams
	Motion Detection	√
	Human Detection	√
	Vehicle Detection	√
	Day/Night	√

	WDR	√
	Zoom	20X digital zoom function
	Spotlight	√
System Requirements	**Operating System**	Microsoft Windows (Foscam VMS), MacOS (Foscam VMS), Android (Foscam app), iOS (Foscam app)
	Smart Phone	iOS, Android, 3G/4G/5G Smartphones
Physical and Environmental	**Waterproof**	IP66
	Net Weight	342g
	Power	Powered by PoE NVR
	Power Consumption	5 Watts (Max.)
	Dimension(LxWxH)	170(L)x66 (W)x66 (H)
	Certification	FCC, CE, RoHS, IP66
	Operating Temperature	-20°C ~ 50°C (-4°F ~ 122°F)
	Operating Humidity	10% ~ 80% non-condensing
	Storage Temperature	-20°C ~ 60°C (-4°F ~ 140°F)
	Storage Humidity	0% ~ 90% non-condensing
NVR		**FN9108E (FN9108E-T1-2T)**
Video Input	**IP Video Input**	8 Channels QHD IP camera input
Video Output	**HDMI Output**	1×HDMI
	VGA Output	1×VGA

	Display Resolution	3840x2160, 2560x1440,1920x1080,1440x900,1280x1024, 1280x800,1280x720,1024x768
Recording	**Recording Resolution**	Up to 5MP per channel (8ch@5MP)
	Record Mode	Time Scheduled / Motion Detect
	Compression Format	H.264/H.264+
Playback	**Synchronous Playback**	8 channels synchronous video playback
	Playback Mode	Pause / Stop / Slow / Fast/ Frame Play
HDD	**Capacity**	Up to 16TB
Network	**POE Standard**	IEEE 802.3at/af
	Network Protocol	IP, TCP, UDP, SMTP, DHCP, RTSP
External Interface	**Network Interface**	1× 10/100 Mbps RJ45 port
	USB Interface	2× USB2.0 interface for mouse and external storage
	Button	1× Power on/off button,1× Reset button
Language	**Language**	20 Languages
Physical and Environmental	**Power Supply**	DC 48V/2A
	Dimension(LxWxH)	255mm*238mm*50mm
	Net Weight (g)	880g
	Operating Temperature	0°C ~ 50°C (32°F ~ 122°F)
	Operating Humidity	20% ~ 85% non-condensing
	Storage	-20°C ~ 60°C (-4°F ~ 140°F)

	Temperature	
	Storage Humidity	0% ~ 90% non-condensing

Camera		**T5EP V2 (FN9108E-T4-2T)**
Image Sensor	**Sensor Type**	High Definition Color CMOS Sensor
	Display Resolution	5.0Megapixels(3072*1728)
	Min. Illumination	0 Lux (With IR Illuminator)
Lens	**Lens Type**	f:4mm;F2.1
	Night Vision	20m
	Night mode	Manual and automatic modes,when the white light is on, the night vision image is colored
	Angle of view	Diagonal: 107.9°, Horizontal: 91.6°, Vertical: 49.6°
	DORI(For reference only)	Detect (25px/m): 65.3m. Observe (63px/m): 25.9m. Recognise (125px/m): 13.1m. Identify (250px/m): 6.5m.
Audio	**Input/Output**	Built-in mic and speaker
	Audio Compression	PCM/AAC
	Siren	Support maximum 100dB alarm siren
Connectivity	**IEEE 802.3at/af**	√
	Ethernet	RJ45
Software Features	**Video Format**	H.264/H.264+
	Multi-Stream	Dual streams

	Motion Detection	√
	Human Detection	√
	Vehicle Detection	√
	Day/Night	√
	WDR	√
	Zoom	20X digital zoom function
	Spotlight	√
System Requirements	**Operating System**	Microsoft Windows (Foscam VMS), MacOS (Foscam VMS), Android (Foscam app), iOS (Foscam app)
	Smart Phone	iOS, Android, 3G/4G/5G Smartphones
Physical and Environmental	**Waterproof**	IP66
	Net Weight	380g
	Power	Powered by PoE NVR
	Power Consumption	5 Watts (Max.)
	Dimension	φ110*100 mm
	Certification	FCC, CE, RoHS, IP66
	Operating Temperature	-20°C ~ 50°C (-4°F ~ 122°F)
	Operating Humidity	10% ~ 80% non-condensing
	Storage Temperature	-20°C ~ 60°C (-4°F ~ 140°F)
	Storage Humidity	0% ~ 90% non-condensing

NVR		FNA108E (FNA108E-B4-2T)
Video Input	**IP Video Input**	8 Channels UHD IP camera input
Video Output	**HDMI Output**	1×HDMI
	VGA Output	1×VGA
	Display Resolution	3840x2160, 2560x1440,1920x1080,1440x900,1280x1024, 1280x800,1280x720,1024x768
Recording	**Recording Resolution**	Up to 8MP per channel (8ch@8MP)
	Record Mode	Time Scheduled / Motion Detect
	Compression Format	H.264/H.264+
Playback	**Synchronous Playback**	8 channels synchronous video playback
	Playback Mode	Pause / Stop / Slow / Fast/ Frame Play
HDD	**Capacity**	Up to 16TB
Network	**POE Standard**	IEEE 802.3at/af
	Network Protocol	IP, TCP, UDP, SMTP, DHCP, RTSP
External Interface	**Network Interface**	1× 10//100 Mbps RJ45 port
	USB Interface	2× USB2.0 interface for mouse and external storage
	Button	1× Power on/off button,1× Reset button
Language	**Language**	20 Languages
Physical and Environmental	**Power Supply**	DC 48V/2A
	Dimension(LxWxH)	255mm*238mm*50mm

	Net Weight (g)	880g
	Operating Temperature	0°C ~ 50°C (32°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		**V8EP (FNA108E-B4-2T)**
Image Sensor	**Sensor Type**	High Definition Color CMOS Sensor
	Display Resolution	8.0Megapixels(3840*2160)
	Min. Illumination	0 Lux (With IR Illuminator)
Lens	**Lens Type**	f:4.3mm; F1.6
	Night Vision	20m
	Night mode	Manual and automatic modes,when the white light is on, the night vision image is colored
	Angle of view	Diagonal: 108.5°, Horizontal: 90.1°, Vertical 46.2°
	DORI(For reference only)	Detect (25px/m): 81.1m. Observe (63px/m): 32.2m. Recognise (125px/m): 16.2m. Identify (250px/m): 8.1m.
Audio	**Input/Output**	Built-in mic and speaker
	Audio Compression	PCM/AAC
	Siren	Support maximum 100dB alarm siren

Connectivity	**IEEE 802.3at/af**	√
	Ethernet	RJ45
Software Features	**Video Format**	H.264/H.264+
	Multi-Stream	Dual streams
	Motion Detection	√
	Human Detection	√
	Vehicle Detection	√
	Day/Night	√
	HDR	√
	Zoom	20X digital zoom function
	Spotlight	√
System Requirements	**Operating System**	Microsoft Windows (Foscam VMS), MacOS (Foscam VMS), Android (Foscam app), iOS (Foscam app)
	Smart Phone	iOS, Android, 3G/4G/5G Smartphones
Physical and Environmental	**Waterproof**	IP66
	Net Weight	342g
	Power	Powered by PoE NVR
	Power Consumption	5 Watts (Max.)
	Dimension(LxWxH)	170(L)x66 (W)x66 (H)
	Certification	FCC, CE, RoHS, IP66
	Operating Temperature	-20°C ~ 50°C (-4°F ~ 122°F)

	Operating Humidity	10% ~ 80% non-condensing
	Storage Temperature	-20°C ~ 60°C (-4°F ~ 140°F)
	Storage Humidity	0% ~ 90% non-condensing

NVR		**FNA108E (FNA108E-T4-2T)**
Video Input	**IP Video Input**	8 Channels UHD IP camera input
Video Output	**HDMI Output**	1×HDMI
	VGA Output	1×VGA
	Display Resolution	3840x2160, 2560x1440,1920x1080,1440x900,1280x1024, 1280x800,1280x720,1024x768
Recording	**Recording Resolution**	Up to 8MP per channel (8ch@8MP)
	Record Mode	Time Scheduled / Motion Detect
	Compression Format	H.264/H.264+
Playback	**Synchronous Playback**	8 channels synchronous video playback
	Playback Mode	Pause / Stop / Slow / Fast/ Frame Play
HDD	**Capacity**	Up to 16TB
Network	**POE Standard**	IEEE 802.3at/af
	Network Protocol	IP, TCP, UDP, SMTP, DHCP, RTSP
External Interface	**Network Interface**	1× 10/100 Mbps RJ45 port
	USB Interface	2× USB2.0 interface for mouse and external storage

	Button	1× Power on/off button,1× Reset button
Language	**Language**	20 Languages
Physical and Environmental	**Power Supply**	DC 48V/2A
	Dimension(LxWxH)	255mm*238mm*50mm
	Net Weight (g)	880g
	Operating Temperature	0°C ~ 50°C (32°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		**T8EP (FNA108E-T4-2T)**
Image Sensor	**Sensor Type**	High Definition Color CMOS Sensor
	Display Resolution	8.0Megapixels(3840*2160)
	Min. Illumination	0 Lux (With IR Illuminator)
Lens	**Lens Type**	f:4.3mm; F1.6
	Night Vision	20m
	Night mode	Manual and automatic modes,when the white light is on, the night vision image is colored
	Angle of view	Diagonal: 108.5°, Horizontal: 90.1°, Vertical 46.2°
	DORI(For reference only)	Detect (25px/m): 81.1m. Observe (63px/m): 32.2m. Recognise (125px/m): 16.2m. Identify (250px/m): 8.1m.

Audio	**Input/Output**	Built-in mic and speaker
	Audio Compression	PCM/AAC
	Siren	Support maximum 100dB alarm siren
Connectivity	**IEEE 802.3at/af**	√
	Ethernet	RJ45
Software Features	**Video Format**	H.264/H.264+
	Multi-Stream	Dual streams
	Motion Detection	√
	Human Detection	√
	Vehicle Detection	√
	Day/Night	√
	HDR	√
	Zoom	20X digital zoom function
	Spotlight	√
System Requirements	**Operating System**	Microsoft Windows (Foscam VMS), MacOS (Foscam VMS), Android (Foscam app), iOS (Foscam app)
	Smart Phone	iOS, Android, 3G/4G/5G Smartphones
Physical and Environmental	**Waterproof**	IP66
	Net Weight	380g
	Power	Powered by PoE NVR
	Power Consumption	5 Watts (Max.)
	Dimension	φ110*100 mm

	Certification	FCC, CE, RoHS, IP66
	Operating Temperature	-20°C ~ 50°C (-4°F ~ 122°F)
	Operating Humidity	10% ~ 80% non-condensing
	Storage Temperature	-20°C ~ 60°C (-4°F ~ 140°F)
	Storage Humidity	0% ~ 90% non-condensing

ITEMS		**FN9108HE**
Video Input	**IP Video Input**	8 Channels QHD IP camera input
Video Output	**HDMI Output**	1×HDMI
	VGA Output	1×VGA
	Display Resolution	3840x2160, 2560x1440,1920x1080,1440x900,1280x1024, 1280x800,1280x720,1024x768
Recording	**Recording Resolution**	Up to 5MP per channel (8ch@5MP)
	Record Mode	Time Scheduled / Motion Detect
	Compression Format	H.264/H.264+
Playback	**Synchronous Playback**	8 channels synchronous video playback
	Playback Mode	Pause / Stop / Slow / Fast/ Frame Play
Network	**POE Standard**	IEEE 802.3at/af
	Network Protocol	IP, TCP, UDP, SMTP, DHCP, RTSP
HDD	**Capacity**	Up to 16TB
External Interface	**Network Interface**	1× 10/100 Mbps RJ45 port
	USB Interface	2× USB2.0 interface for mouse and external storage
	Button	1× Power on/off button,1× Reset button

System Requirements	**Operating System**	Microsoft Windows (Foscam VMS), MacOS (Foscam VMS), Android (Foscam app),iOS (Foscam app)
	Smart Phone	iOS,Android,3G/4G/5G Smartphones
Language	**Language**	20 Languages
Physical and Environmental	**Power Supply**	DC 48V/2A
	Dimension(LxWxH)	255mm*238mm*50mm
	Net Weight (g)	880g
	Operating Temperature	0°C ~ 50°C (32°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

ITEMS		**FN9108H**
Video Input	**IP Video Input**	8 Channels QHD IP camera input
Video Output	**HDMI Output**	1×HDMI
	VGA Output	1×VGA
	Display Resolution	3840x2160, 2560x1440,1920x1080,1440x900,1280x1024, 1280x800,1280x720,1024x768
Recording	**Recording Resolution**	Up to 5MP per channel (8ch@5MP)
	Record Mode	Time Scheduled / Motion Detect
	Compression Format	H.264/H.264+
Playback	**Synchronous Playback**	8 channels synchronous video playback
	Playback Mode	Pause / Stop / Slow / Fast/ Frame Play
Network	**Network Protocol**	IP, TCP, UDP, SMTP, DHCP, RTSP

HDD	**Capacity**	Up to 16TB
External Interface	**Network Interface**	1× 10/100 Mbps RJ45 port
	USB Interface	2× USB2.0 interface for mouse and external storage
	Button	1× Power on/off button,1× Reset button
System Requirements	**Operating System**	Microsoft Windows (Foscam VMS), MacOS (Foscam VMS), Android (Foscam app), iOS (Foscam app)
	Smart Phone	iOS, Android, 3G/4G/5G Smartphones
Language	**Language**	20 Languages
Physical and Environmental	**Power Supply**	DC 12V/2A
	Dimension(LxWxH)	255mm*238mm*50mm
	Net Weight (g)	780g
	Operating Temperature	0°C ~ 50°C (32°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

ITEMS		**FNA108HE**
Video Input	**IP Video Input**	8 Channels UHD IP camera input
Video Output	**HDMI Output**	1×HDMI
	VGA Output	1×VGA
	Display Resolution	3840x2160, 2560x1440,1920x1080,1440x900,1280x1024, 1280x800,1280x720,1024x768
Recording	**Recording Resolution**	Up to 8MP per channel (8ch@8MP)
	Record Mode	Time Scheduled / Motion Detect

	Compression Format	H.264/H.264+
Playback	**Synchronous Playback**	8 channels synchronous video playback
	Playback Mode	Pause / Stop / Slow / Fast/ Frame Play
Network	**POE Standard**	IEEE 802.3at/af
	Network Protocol	IP, TCP, UDP, SMTP, DHCP, RTSP
HDD	**Capacity**	Up to 16TB
External Interface	**Network Interface**	1× 10/100Mbps RJ45 port
	USB Interface	2× USB2.0 interface for mouse and external storage
	Button	1× Power on/off button,1× Reset button
System Requirements	**Operating System**	Microsoft Windows (Foscam VMS), MacOS (Foscam VMS), Android (Foscam app),iOS (Foscam app)
	Smart Phone	iOS,Android,3G/4G/5G Smartphones
Language	**Language**	20 Languages
Physical and Environmental	**Power Supply**	DC 48V/2A
	Dimension(LxWxH)	255mm*238mm*50mm
	Net Weight (g)	880g
	Operating Temperature	0°C ~ 50°C (32°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

ITEMS		**FNA108H**
Video Input	**IP Video Input**	8 Channels UHD IP camera input
Video Output	**HDMI Output**	1×HDMI
	VGA Output	1×VGA

	Display Resolution	3840x2160, 2560x1440,1920x1080,1440x900,1280x1024, 1280x800,1280x720,1024x768
Recording	**Recording Resolution**	Up to 8MP per channel (8ch@8MP)
	Record Mode	Time Scheduled / Motion Detect
	Compression Format	H.264/H.264+
Playback	**Synchronous Playback**	8 channels synchronous video playback
	Playback Mode	Pause / Stop / Slow / Fast/ Frame Play
Network	**Network Protocol**	IP, TCP, UDP, SMTP, DHCP, RTSP
HDD	**Capacity**	Up to 16TB
External Interface	**Network Interface**	1× 10/100/1000 Mbps RJ45 port
	USB Interface	2× USB2.0 interface for mouse and external storage
	Button	1× Power on/off button,1× Reset button
System Requirements	**Operating System**	Microsoft Windows (Foscam VMS), MacOS (Foscam VMS), Android (Foscam app), iOS (Foscam app)
	Smart Phone	iOS, Android, 3G/4G/5G Smartphones
Language	**Language**	20 Languages
Physical and Environmental	**Power Supply**	DC 12V/2A
	Dimension(LxWxH)	255mm*238mm*50mm
	Net Weight (g)	780g
	Operating Temperature	0°C ~ 50°C (32°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

ITEMS		FNA216HE
Video Input	**IP Video Input**	16 Channels UHD IP camera input
Video Output	**HDMI Output**	1×HDMI
	VGA Output	1×VGA
	Display Resolution	3840x2160,2560x1440,1920x1080,1440x900,1280x1024, 1280x800,1280x720,1024x768
Recording	**Recording Resolution**	Up to 8MP per channel (16ch@8MP)
	Record Mode	Time Scheduled / Motion Detect
	Compression Format	H.264/H.264+
Playback	**Synchronous Playback**	16 channels synchronous video playback
	Playback Mode	Pause / Stop / Slow / Fast/ Frame Play
Network	**Network Protocol**	IP,TCP,UDP,SMTP,DHCP,RTSP
	POE Standard	IEEE 802.3at/af
HDD	**Capacity**	Up to 16TB *2
External Interface	**Network Interface**	1× 10/100/1000 Mbps RJ45 port
	USB Interface	2× USB2.0 interface for mouse and external storage
	Button	1× Power on/off button,1× Reset button
System Requirements	**Operating System**	Microsoft Windows (Foscam VMS), MacOS (Foscam VMS), Android (Foscam app), iOS (Foscam app)
	Smart Phone	iOS,Android,3G/4G/5G Smartphones
Language	**Language**	20 Languages
Physical and Environmental	**Power Supply**	DC 52V/4A
	Dimension(LxWxH)	325mm*242mm*50mm
	Net Weight (g)	1319g
	Operating	0°C ~ 50°C (32°F ~ 122°F)

	Temperature	
	Operating Humidity	20% ~ 85% non-condensing
	Storage Temperature	-20°C ~ 60°C (-4°F ~ 140°F)
	Storage Humidity	0% ~ 90% non-condensing

ITEMS		**FNA216H**
Video Input	**IP Video Input**	16 Channels UHD IP camera input
Video Output	**HDMI Output**	1×HDMI
	VGA Output	1×VGA
	Display Resolution	3840x2160, 2560x1440,1920x1080,1440x900,1280x1024, 1280x800,1280x720,1024x768
Recording	**Recording Resolution**	Up to 8MP per channel (16ch@8MP)
	Record Mode	Time Scheduled / Motion Detect
	Compression Format	H.264/H.264+
Playback	**Synchronous Playback**	16 channels synchronous video playback
	Playback Mode	Pause / Stop / Slow / Fast/ Frame Play
Network	**Network Protocol**	IP,TCP,UDP,SMTP,DHCP,RTSP
HDD	**Capacity**	Up to 16TB *2
External Interface	**Network Interface**	1× 10/100/1000 Mbps RJ45 port
	USB Interface	2× USB 2.0 interface for mouse and external storage
	Button	1× Power on/off button,1× Reset button
System Requirements	**Operating System**	Microsoft Windows (Foscam VMS), MacOS (Foscam VMS), Android (Foscam app), iOS (Foscam app)
	Smart Phone	iOS,Android,3G/4G/5G Smartphones

Language	**Language**	20 Languages
Physical and Environmental	**Power Supply**	DC 12V/4A
	Dimension(LxWxH)	325mm*242mm*50mm
	Net Weight (g)	1105g
	Operating Temperature	0°C ~ 50°C (32°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

5.3 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.

5.4 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.
VMS	Video Management System	Foscam VMS is a new tool for PC. It does not require plug-ins and is compatible with Windows & Mac, It supports all Foscam HD cameras and up to 36 cameras at the same time.

5.5 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.

5.6 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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5.7 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.

5.8 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

Manufacturer: Shenzhen Foscam Intelligent Technology Co., Ltd

Addr: Room 901, Unit B, Building 7, Xingke 1st Street

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