NVR Quick Start Guide

Version 1.0.4
Revised November 24th, 2020

Contents

Welcome

Thank you for purchasing an Amcrest NVR!

Before installation and operation, please read the below safeguards and warnings carefully.

Many of the setup sections below have corresponding videos on YouTube To access the setup videos, please go to http://amcrest.com/videos

NOTE: This document is applicable to all Amcrest 2XXXX-HS, 4XXXX-HS, and 5XXXX-HS series NVRs.

This document provides a quick setup and overview of your Amcrest NVR and its features. **For access to a full user manual or further information regarding your device please visit:** http://amcrest.com/support

Important Safeguards and Warnings

- All installations and operations of the device should conform to your local electrical safety codes.
- We assume no liability or responsibility for any of the fires or electrical shocks caused by improper handling or installation.
- We are not liable for any problems caused by unauthorized modifications or attempted repair.
- Do not submerge the device in water or install in areas with high levels of moisture or humidity.
- Handle with care, avoid from dropping or placing the device in unsecure areas.
- The NVR does not have rack mount compatibility and should be used on flat surfaces.

Check Packaging

When you receive the NVR system in the packaging, unpack it, and check all sides of the NVR to see if there is any physical damage. The protective materials used for the packaging of the NVR will protect most accidental damage during transportation, but to ensure that your equipment is operating as expected, it is recommended to inspect the product before proceeding.

On the NVR, check that the label on the bottom is not damaged. The serial number and model number of the unit is needed to add the device to other Amcrest applications.

Please note that most Amcrest cameras come defaulted to H.264 encoding for maximum compatibility when accessing your device in a web browser, or other third-party applications. However, for optimal performance, the device's compression and bitrate can be updated to H.265 compression after the device has been initialized.

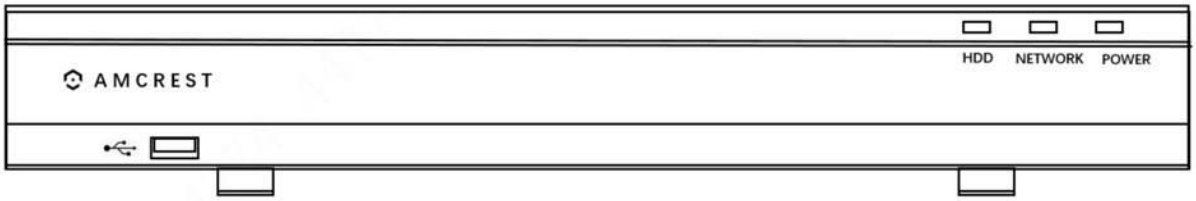
H.265 provides a more advanced technology than H.264 and allows the device to reduce file sizes which in turn helps to reduce required bandwidth without sacrificing frames per second (FPS) or resolution.

For more information on adjusting compression and bitrates, please refer to page 20, "*Adjusting Camera Settings for Maximum Resolution, FPS, and Bitrate*".

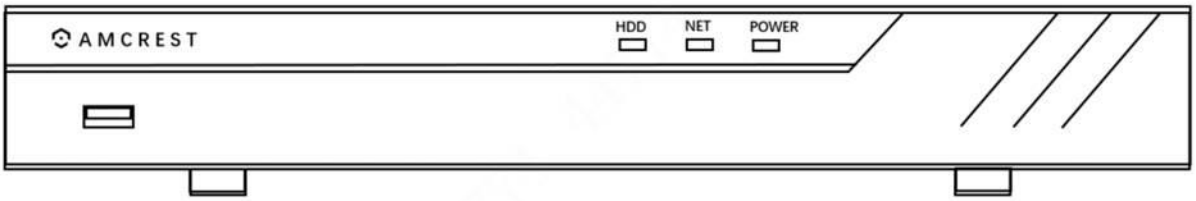
Front Panel

The front panel of the NVR may differ model to model. Below is a representation of the front panel for the NV2XXX, NV2XXX-HS, NV4XXX, and NV4XXX-HS series NVR.

NV2XXX, NV2XXX-HS Series NVR Front Panel



NV4XXX, NV4XXX-HS Series NVR

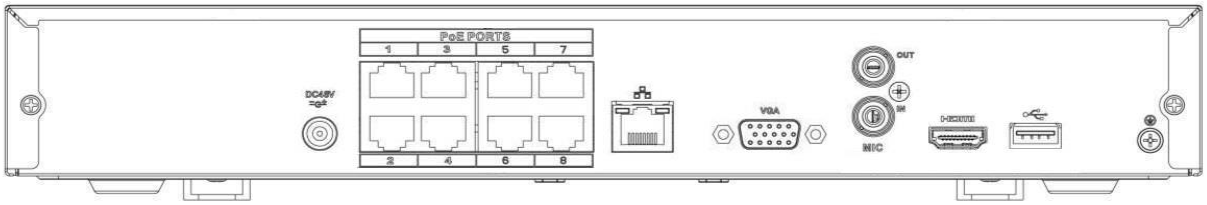


Icon	Name	Function
NET	Network Abnormality	When a network error occurs or there is no network connection, this light turns red.
PWR	Power indicator	When the NVR is on, this light remains on.
HDD	HDD abnormal indicator light	When an HDD error occurs, or the HDD capacity is below the specified threshold value, this light turns red.

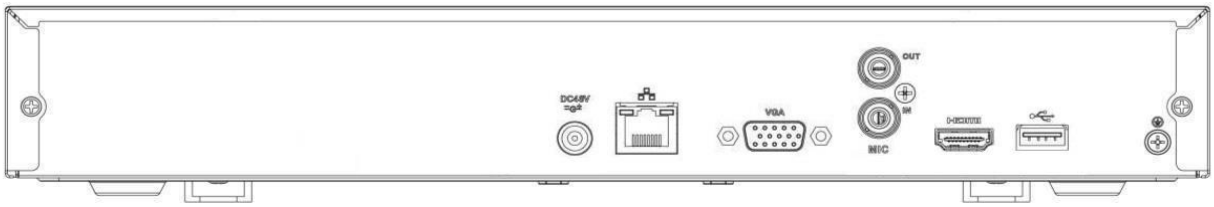
Rear Panel

The rear panel of the NVR may differ model to model. Below is a representation of the rear panel for the NV2XXX, NV2XXX-HS, NV4XXX, and NV4XXX-HS Series.

PoE Ports

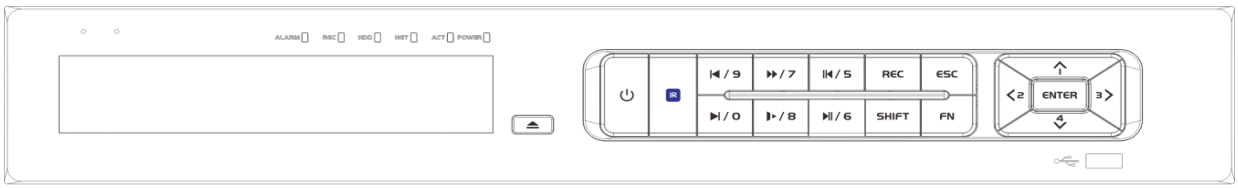


Non-PoE Ports



Applicable for Amcrest NV4232 and NV4232E-HS Series NVRs

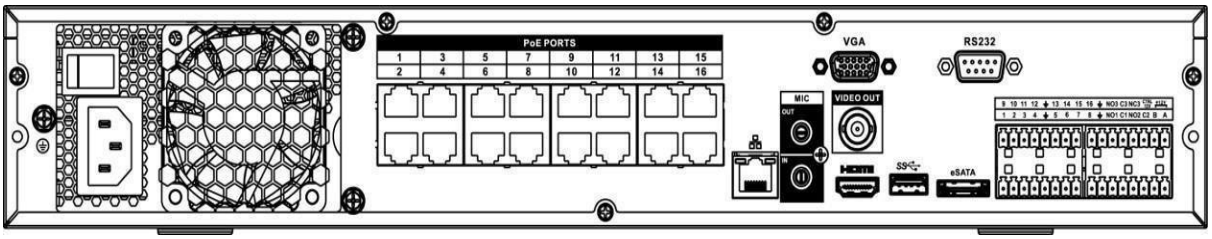
Front Panel



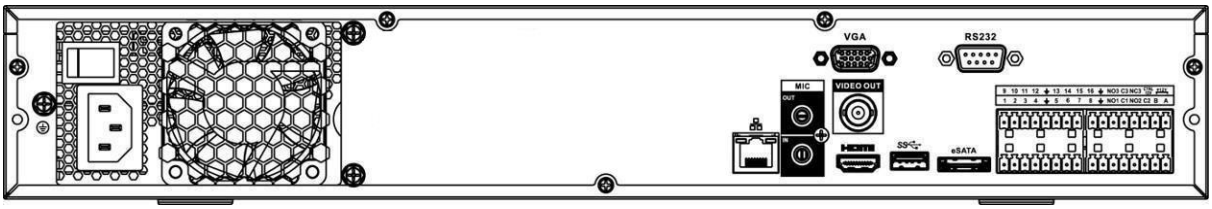
Name	Icon	Function
CD Drive		Use this button to open/close the built-in CD drive (if applicable)
Power button		Power button press this button for three seconds to boot up or shut down NVR.
Shift	Shift	In the textbox, click this button to switch between numeral, English (Small/Capitalized), donation etc.
Up/1 Down/4	▲、▼	Activate current control, modify setup, and then move up and down.
		Increase/decrease numeral.
		Assistant function such as PTZ menu.
Left/2 Right/3	◀ ▶	Shift current activated control
ESC	ESC	Go to previous menu or cancel current operation. When playback, click it to restore real-time monitor mode.

Rear Panel

PoE Ports



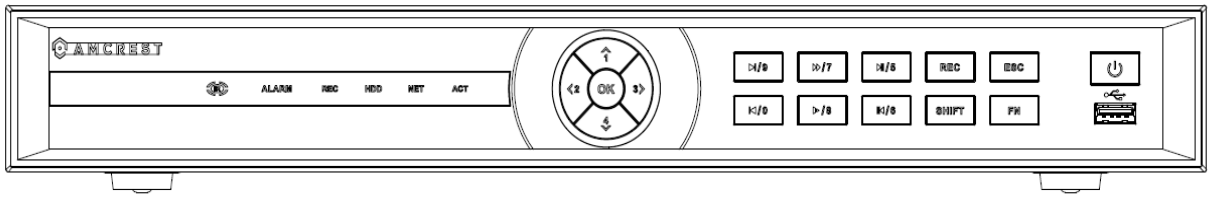
Non-PoE Ports



Port Name	Connection	Function
	USB 2.0 port	USB2.0 port. Connect a mouse, USB storage device, USB burner, etc.
	Network port	10M/100Mbps self-adaptive Ethernet port. Connects to the network.

HDMI	High Definition Media Interface	High definition audio and video signal output port. It transmits uncompressed high definition video and multiple-channel data to the HDMI port of the display device. HDMI version is 1.4.
VGA	VGA video output	VGA video output port. Outputs analog video signal. This connects to the monitor to view analog video.
⏚	GND	Ground end
DC 12V DC 48V	Power input	Power socket. ★ For NVXXX series, inputs DC 12V/2A. ★ For NV4432 series, inputs DC 48V/1.25A. ★ For NVR41H-8P series, inputs DC 48V/2A.
MIC IN	Audio input	Bidirectional talk input port. This is used to receive the analog audio signal from the devices such as a microphone.
MIC OUT	Audio output	Audio output port. This is used to output the analog audio signal to devices such as an amplifier. ★ Bidirectional talk output. ★ Audio output on 1-window video monitoring. ★ Audio output on 1-window video playback.
PoE PORT	PoE port	Built-in switch. Supports PoE. For PoE series products, you can use this port to provide power to the network cameras.

Applicable for Amcrest NV52XXX and NV52XXX-HS Series NVRs



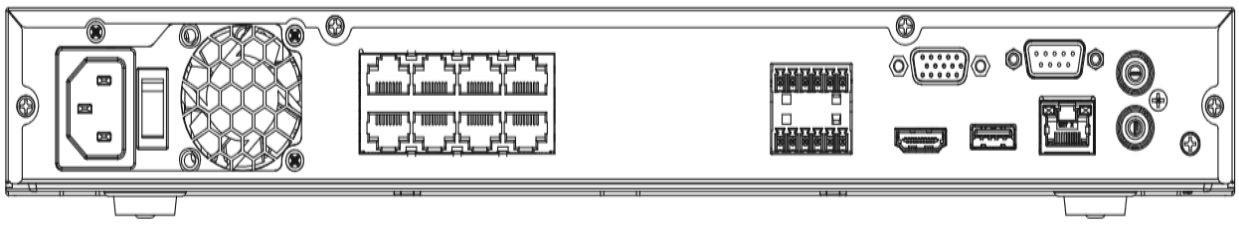
Button	Icon	Description
Power Button	⏻	Press and hold this button for five seconds to shut off or power on the NVR. Use the switch on the back of the NVR to initially power the device.
USB		Front panel USB 2.0 Port.
Up/1, Down/4	▲、▼	Activate current control, modify setup, move up and down in a menu Increase/decrease numeric functions. Tilt camera up and down using PTZ menu (if applicable).
Left/2, Right/3	◀、▶	Move left or right in a menu. When viewing playback, use these buttons to scan forwards or backwards.
Enter	OK	Confirm a current operation Go to default button Go to menu
Escape	ESC	Go to previous menu or cancel a current operation. When using playback, used to restore real-time monitor mode.

Record	REC	Manually stop/start a recording. Use the directional keys or numeric keys to select the recording channel.
Shift	SHIFT	In a textbox, click this button to switch between numeric characters or provide capitalization to a word, etc.
Play/Pause/5	▶ II	Click this button to pause or resume playback. In text mode, input number 5.
Reverse Playback/ Pause/6	II ◀	During playback or pause mode, click this button to reverse playback. In reverse playback, click this button to pause. In text mode, input number 6.
Fast Forward/7	▶▶	Various fast speeds and normal playback. In text mode, input number 7
Slow Motion/8	▌▶	Multiple slow play speeds or normal playback. In text mode, input number 8.
Next/9	▶ ▏	In playback mode, press to playback the next video. In menu setup, go downward in a dropdown list. In text mode, input number 9.
Previous/0	▏◀	In playback mode, press this button to playback the previous video. In text mode, input number 0.
Function	FN	One-window monitor mode, click this button to display assistant function: PTZ control and image color. Backspace function: in numeric control or text control, press and hold for 2 seconds to delete the previous character before the cursor. In motion detection setup, working with FN and direction keys to realize setup. In text mode, press this button to switch between numeric, capitalization, etc.

Rear Panel

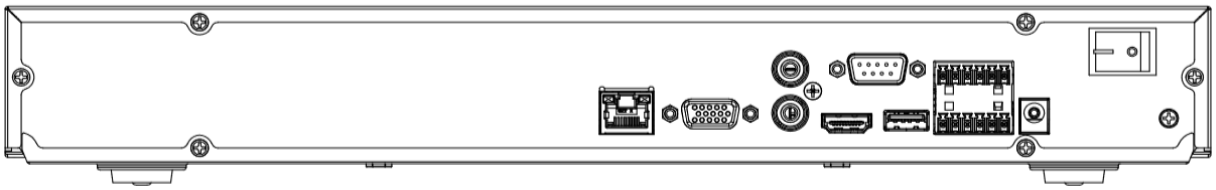
The rear panel of the NVR may differ model to model. Below is a representation of the rear panel for the NV52XX and NV52XX-HS series.

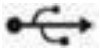
PoE Ports



NV52XX without PoE ports is shown below.

Non-PoE ports



Port Name	Connection	Function
	USB 2.0 port	USB 2.0 port. Connect a mouse, USB storage device, etc.
	Network port	10M/100Mbps self-adaptive Ethernet port.
HDMI	HDMI Output	High definition audio and video signal output port.
VGA	VGA video output port	VGA video output port. Outputs analog video signal. This connects to the monitor to view analog video.
	GND	Ground end
	Power Port	DC12V, DC48V Depending on model.
MIC IN	Audio input port	Bidirectional talk input port. This is used to receive the analog audio signal from the device such as a microphone.
MIC Out	Audio output port	Audio output port. This is used to output the analog audio signal to devices such as an external RCA speaker. Bidirectional talk output. Audio output on 1-window video monitoring. Audio output on 1-window video playback.
PoE Ports	PoE ports	Built-in switch on certain compatible devices. For PoE series products, you can use this port to provide power to a PoE camera.

Hardware Setup

Before setting up the NVR, you will need the following items. These items may not be included:

- A computer monitor or TV with either an HDMI or VGA input
- A power strip with room for 4 large power plugs
- A hard drive for storing video recordings.
- A USB flash drive formatted to FAT 32 for importing/exporting configure or image files.

It is recommended to connect all components *before* mounting any of the cameras. This is to ensure all components are working properly before they are physically installed. If any components are not functioning, please contact Amcrest Support: https://amcrest.com/contacts

There will be two parts to this section:

1. **Hard drive installation**
2. **Setting up the cable connections**

A hard drive must be installed to record or save *any* footage. If no hard drive is installed, you can only view the cameras from the NVR. If a microSD card is installed in the camera you can still view the recordings from the microSD card using the Amcrest View Pro application and

accessing the camera directly, however, no recordings will be retained to the NVR if a hard drive is not installed.

Hard drive installation

A hard drive can be installed if you want to record and save data to the NVR. Having a hard drive allows you to configure and use the recording functionality of the NVR to store and view events.

Most NVRs have connections for only one hard drive however some models have the option for multiple hard drives inside the case. **A hard drive used in these NVRs must be no larger than 8TB (Terabytes)**. To install your hard drive, the following is needed:

- A medium sized (regular) Phillips-head screwdriver - *not included*
- A hard drive - *not included*
- Four hard drive fastening screws - *included*

Note: **Before installing the hard drive, make sure the NVR is powered off with the power cable disconnected.**

		
1. Loosen the screws on the upper cover and side panel.	2. Attach four screws on the hard drive (HDD). Do not fully tighten, only tighten about 3 times.	3. place the HDD in accordance with the four holes on the bottom of the casing.
		
4. Turn the NVR upside down and place the screws in firmly.	5. Tighten the HDD screws firmly to the bottom of the NVR.	6. Connect the HDD cable and power cables to the motherboard.

	
7. Place the cover back onto the NVR in accordance with the clip and place the upper cover back onto the device.	8. Secure the screws on the rear and side panels.

For further assistance on how to install the hard drive, feel free to contact us at: https://amcrest.com/contacts

Setting Up the Cables

The following instructions will show you how to set up the cables for the NVR, cameras, as well as a monitor or TV screen.

To set up the cable connections, there are 5 major steps:

1. Connect a monitor or TV screen to your NVR. The NVR is compatible with any monitor or screen that uses a VGA or HDMI connection. For purposes of this guide, we will use a VGA connection. Take a VGA cable, and connect one end to the VGA port on your monitor/screen and the other end to the VGA port on the back panel of your NVR.

2. Connect an Ethernet cable to your router.

   Then, connect the other end of the cable to the Ethernet port on the back of the NVR.

3. Connect the cameras.
   For PoE NVRs/cameras: connect an Ethernet cable to the Ethernet port attached to the camera.

   Then, connect the other end of the Ethernet cable to a PoE port on the NVR.

   Note: PoE cameras can either be powered with a PoE connection or with a standard power adapter (sold separately). If the NVR does not come with PoE ports, connect the PoE camera to a PoE compatible router or switch that is on the same network as the NVR.

   For non-PoE NVRs/cameras: Connect the power adapter to the power port attached to the camera.

   Then, plug the adapter into a wall outlet or power strip.

4. Connect the NVR's power adapter into the power port on the back of the NVR.

   Note: If your NVR has a 3-prong power cord, connect the input of the cord into the power input of the NVR.

5. Finally, connect the other end of the power cable into a wall outlet or power strip to turn on the NVR. Some models may feature a power switch on the back which may need to be turned on to power the device.

NVR Initialization

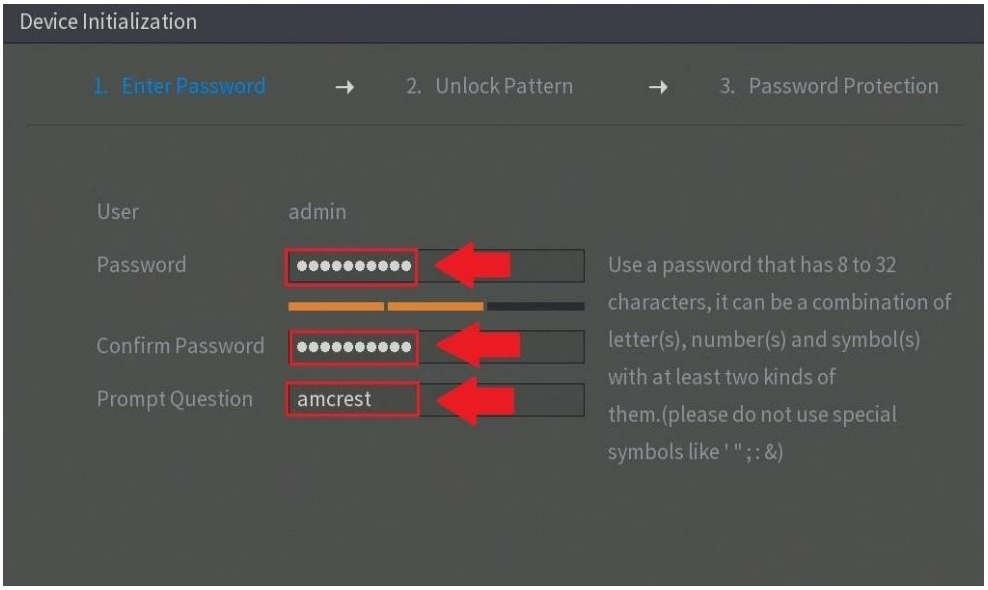
After applying power to the NVR, the system will turn on. Allow the NVR to finish loading. The **Device Initialization** screen will appear. Select your location, language, and video standard then click **Next** to continue.

Select your time zone as well as current date and time. Click **Next** to continue.

Enter Password

Create a new admin password for your NVR. The password for your device should be between 8 and 32 characters. A combination of letters, numbers, and symbols are recommended when setting up your password.

Note: Please do not use special symbols like ' " ; : &



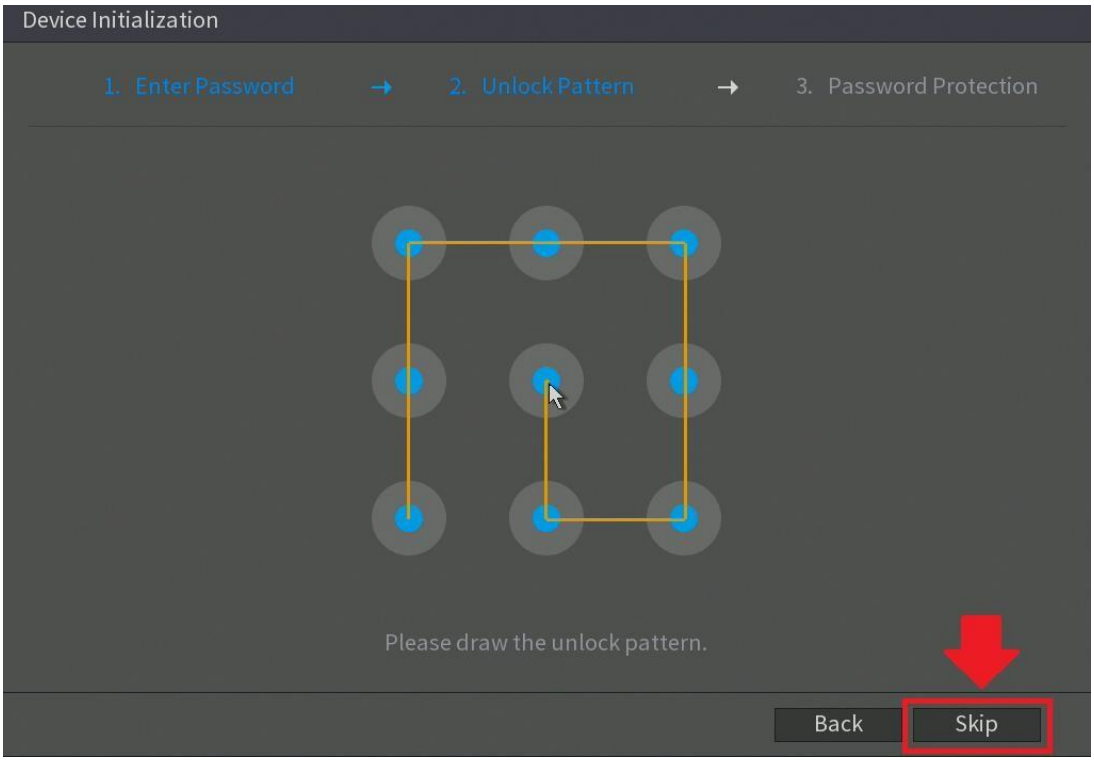
Once you have entered a new password for your device, confirm the password in the next field.

Lastly, you will be asked to enter a prompt question for your account. This is useful if you have forgotten your password and would like an easier way of recovering your password. Please use a prompt question that will help you remember the password for your device.

After you have completed this section, click **Next** to continue.

Unlock Pattern

This is an optional security measure for your device. To set an unlock pattern, use your mouse to draw a design that you will remember**.** Draw the pattern again to confirm. If you do not want to assign an unlock pattern, you can click '**Skip**' to skip this process.

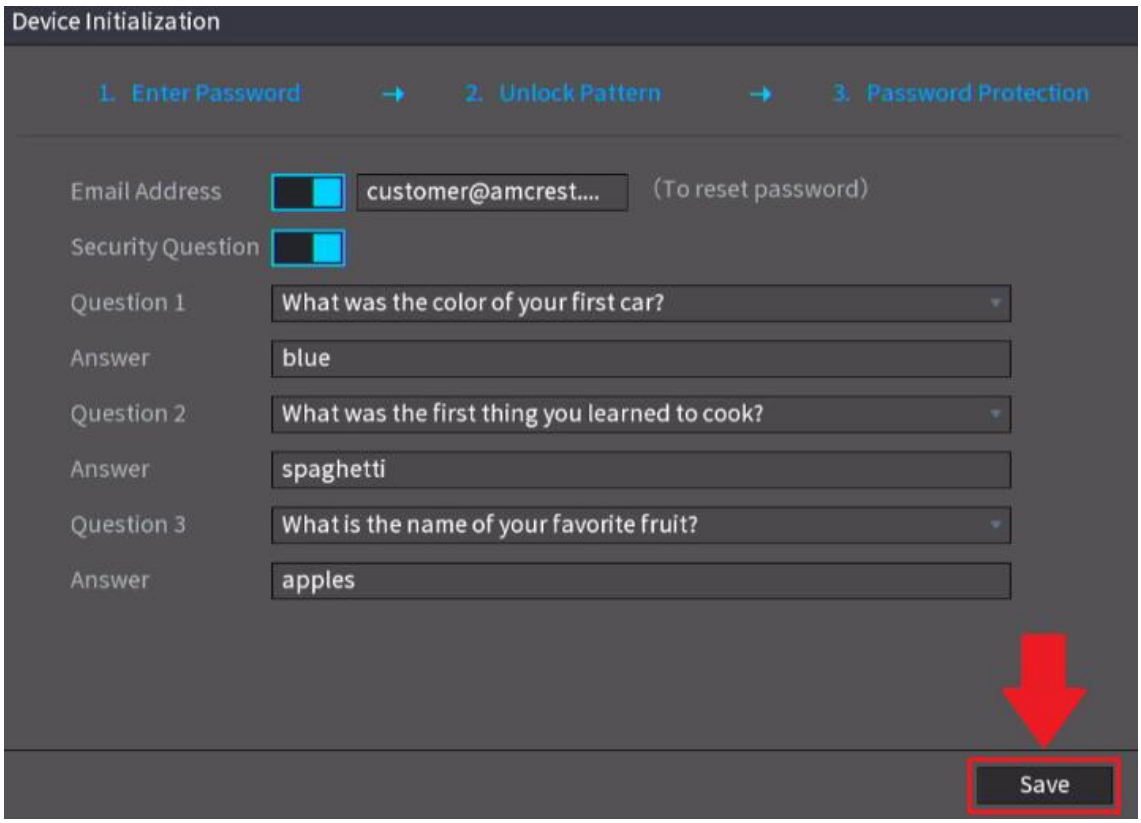


If you have assigned an unlock pattern, you will need to draw the pattern again to confirm your assigned unlock pattern.

Password Protection

Additional means of password protection and retrieval can be set up in this menu. If you would like to reset your password using your email, make sure the email address checkbox is enabled and enter a valid email address in the **Email Address** field. The email address will be retained in the system.

If you do not want to use an email address you can disable the email address option. As a secondary means of recovering your password, you can apply security questions to your NVR. To add a question, select a question from the drop-down menus for **Question 1, Question 2,** and **Question 3** and enter the answers to those questions in the **Answer** fields.



Once this section is complete, click on the **Save** button to save your information to the device.

Startup Wizard Walkthrough

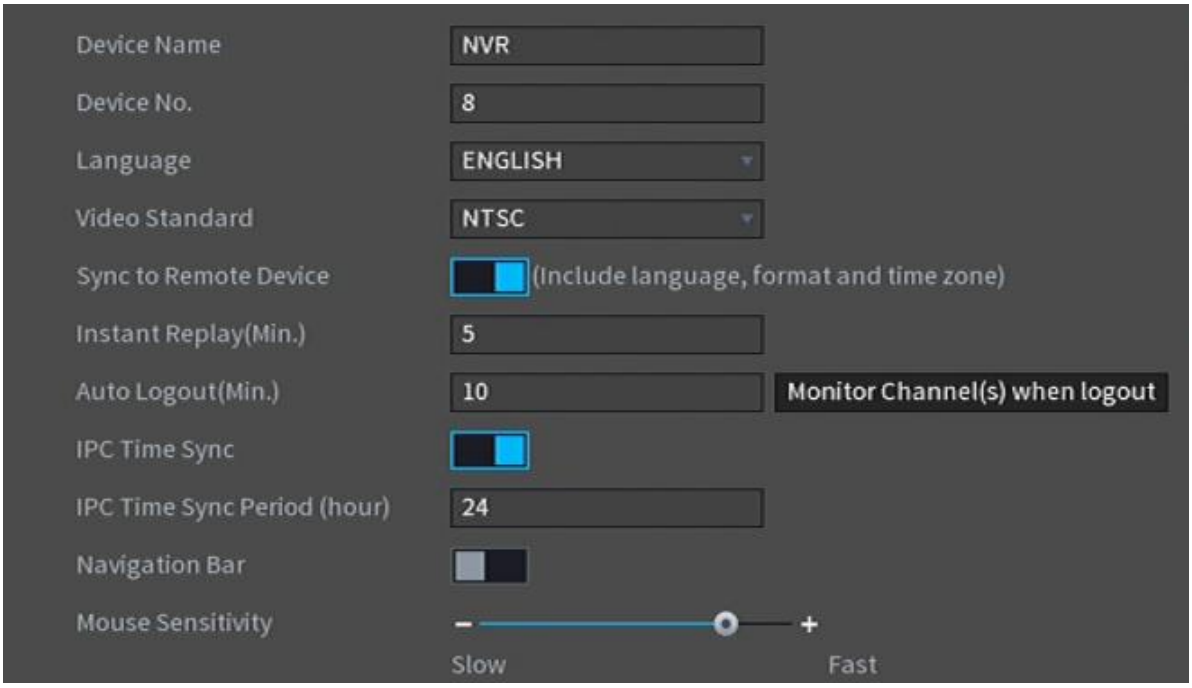
The first page of the Startup Wizard will appear which allows you to setup any General, Network, Remote Devices, and Record Control Settings for the NVR.

Before proceeding please note, most Amcrest products are H.265 compatible. H.265 provides a more advanced technology than H.264 and allows the device to reduce file sizes which in turn helps to reduce required bandwidth **without sacrificing frames per second (FPS) or resolution**. However, for maximum compatibility when accessing your device in a web browser, or other third-party applications, our H.265 compatible products will come **factory default to H.264.**
For optimal performance, the device's compression can be upgraded to H.265 during the camera registration process.

To begin the startup wizard, click **Next**.

General

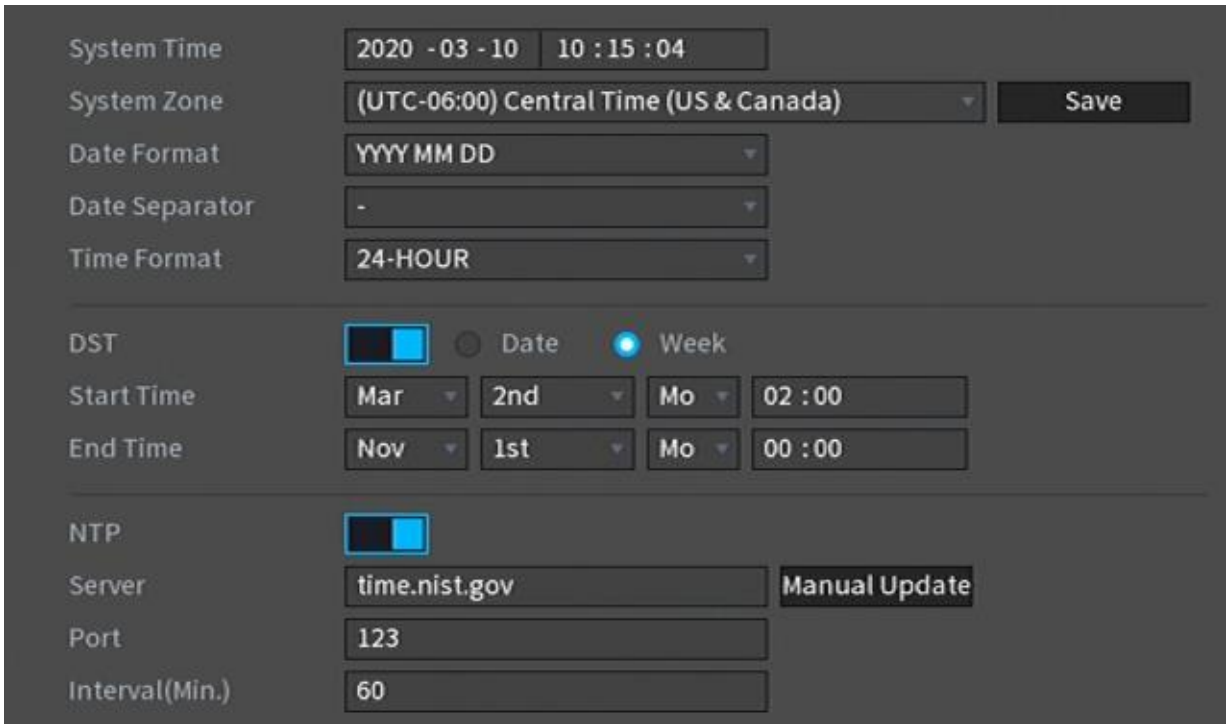
The first screen that appears in the startup wizard is the **GENERAL** menu. The General menu allows you to edit the name of the NVR, display number of devices, languages, etc.



Once you are satisfied with the settings on this screen click **Next** to continue.

Date & Time

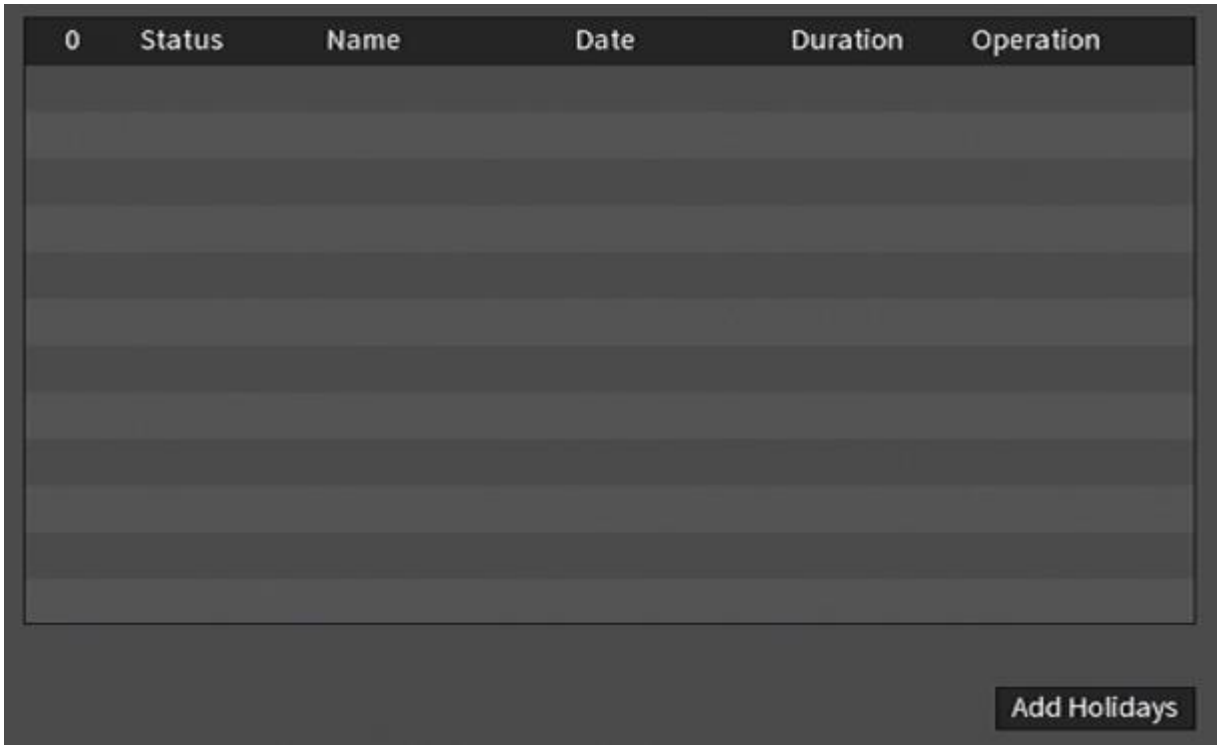
The **Date & Time** settings screen is used to set the date and time for your NVR. If you want to utilize daylight savings time, click on the **DST** enable toggle switch. This should be enabled by default. Click **Next** to continue.



Note: Make sure to toggle the **NTP** toggle switch to the off position if you do not want to sync your device to an NTP server.

Holiday

This screen allows the user to set and modify holiday settings which allows the NVR to record or send snapshots based on specific schedules set by the user. Please note, a holiday record / snapshot setup has a higher priority than an ordinary date record/snapshot setup plan. Below is a screenshot of the Holiday settings screen:



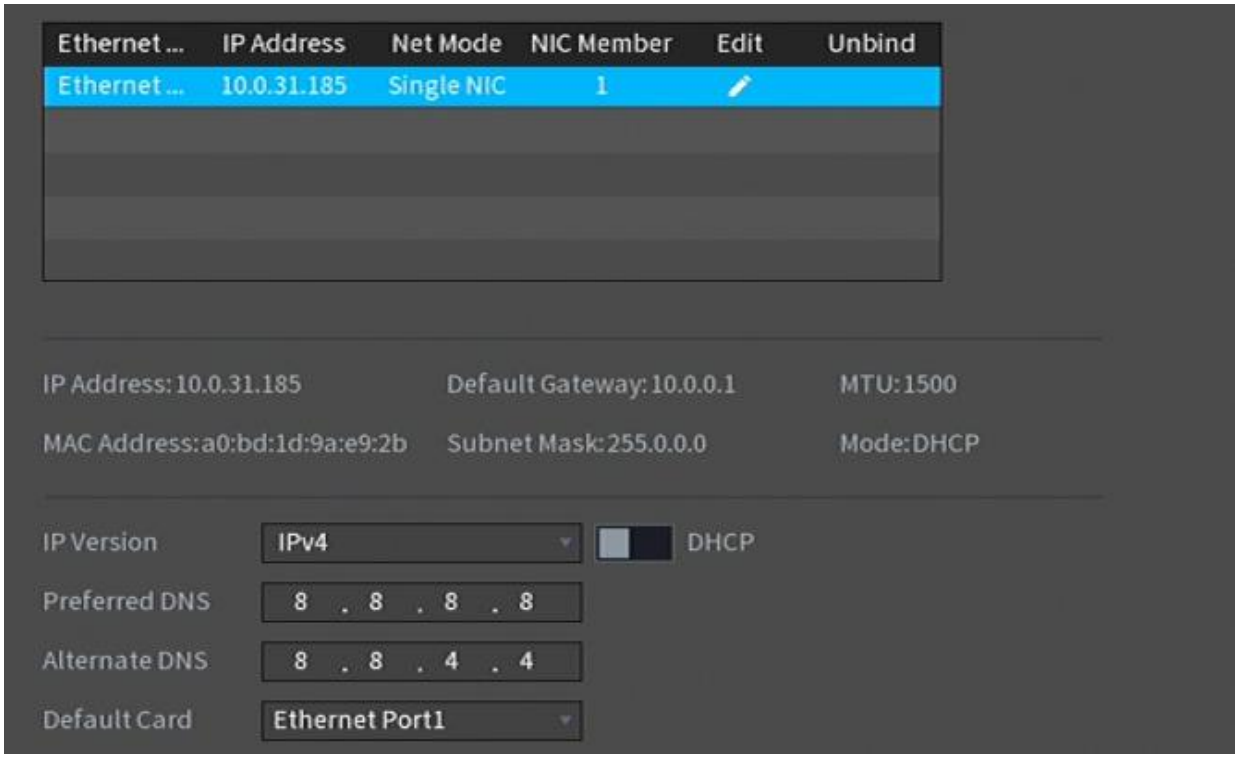
To add a holiday schedule to your NVR, click on the **Add Holidays** button. This will take you to an "Add Holidays" screen. Name the holiday you would like to add and select a mode, range, start time, and end time. If you would like to add more holidays, click on the **Add More** toggle switch, and repeat the process. Click **Add** to add the holiday(s). Click **Next** to continue.

Network

The next screen that appears will be the **Network,** or TCP/IP screen. *Unless you have a specific reason to change these settings, it is best to leave them as they are.* Please note, **the IP address for the NVR will be the address used to access your NVR's web user interface on a laptop or PC**.

Click the **Test** to test the overall health and status of your network connection once complete, click the **Back** button to return to the previous menu.

To continue with the startup wizard, click **Next.**



P2P

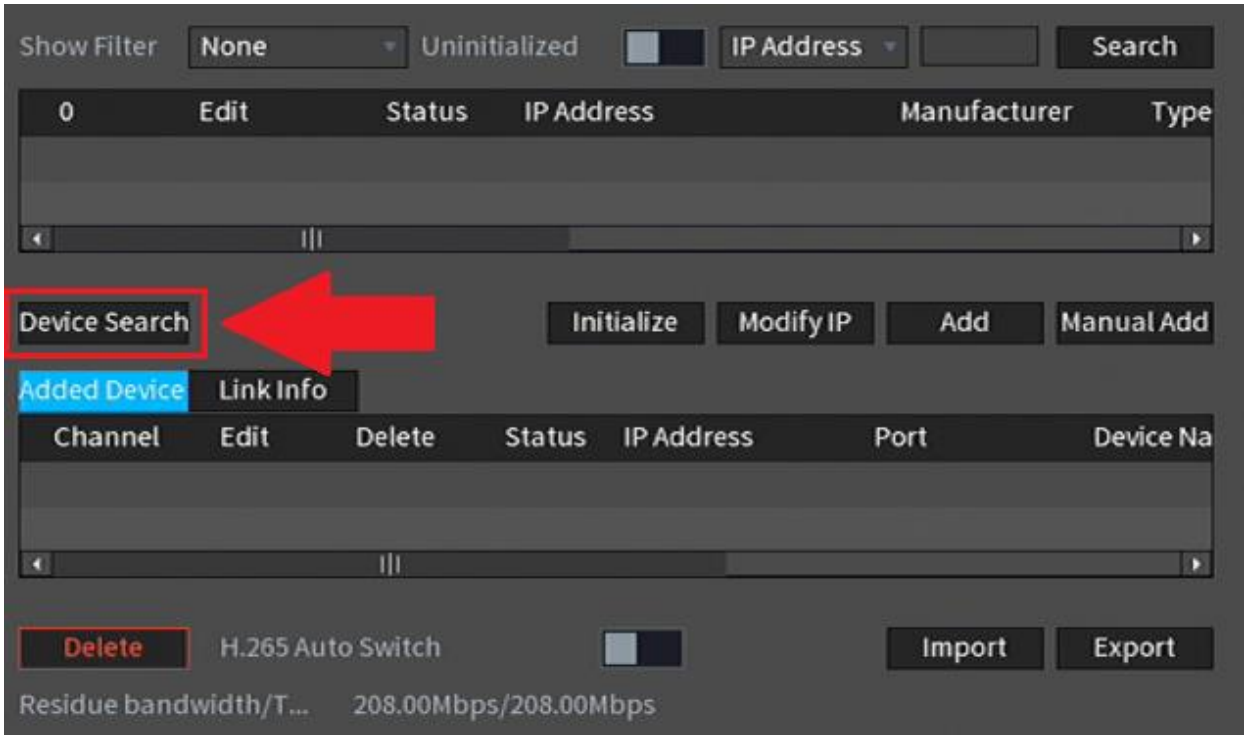
The next screen that appears is the P2P screen. This screen allows you to connect your NVR to your mobile device via the Amcrest View Pro app. The P2P status should read as “Online”. To download the app, use your mobile device’s camera and scan the **Cell Phone Client** QR code. When using the app, use the SN QR Code for quick access to the serial number for your NVR.

Click the **Next** to continue.

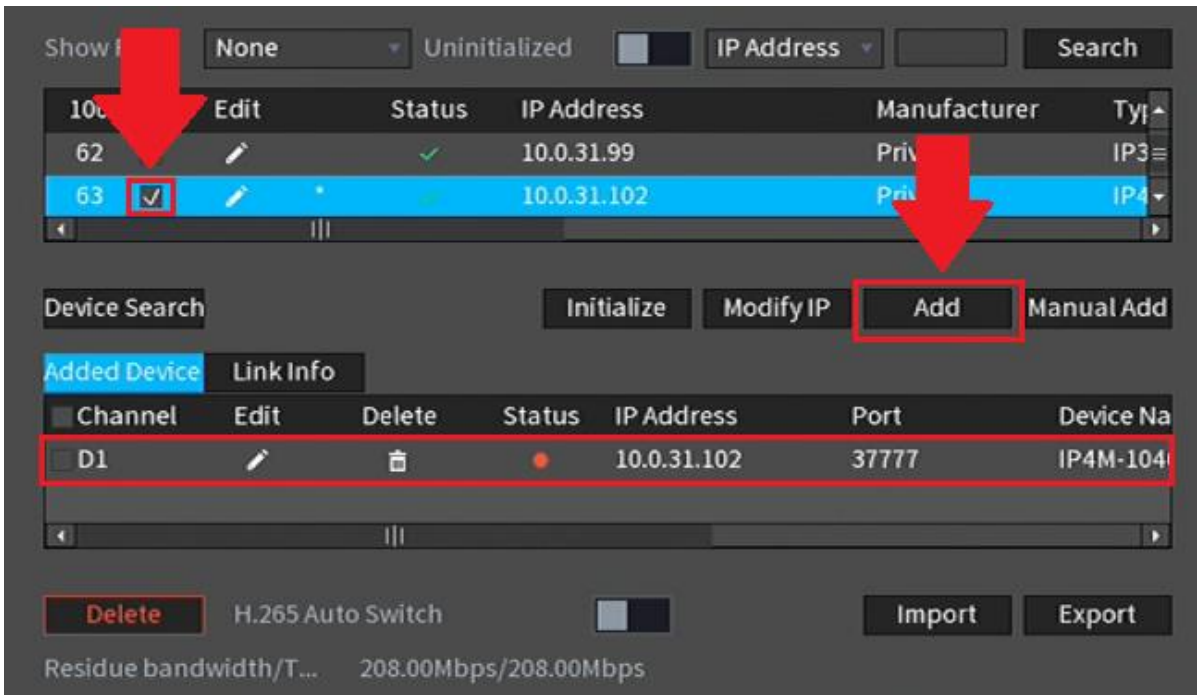
Camera Registration

The next screen that appears is the **Camera Registration** screen. This is where you can begin adding cameras to the NVR. If the cameras are not directly connected to the back of the NVR, please make sure they are active and on the same network as the NVR before proceeding.

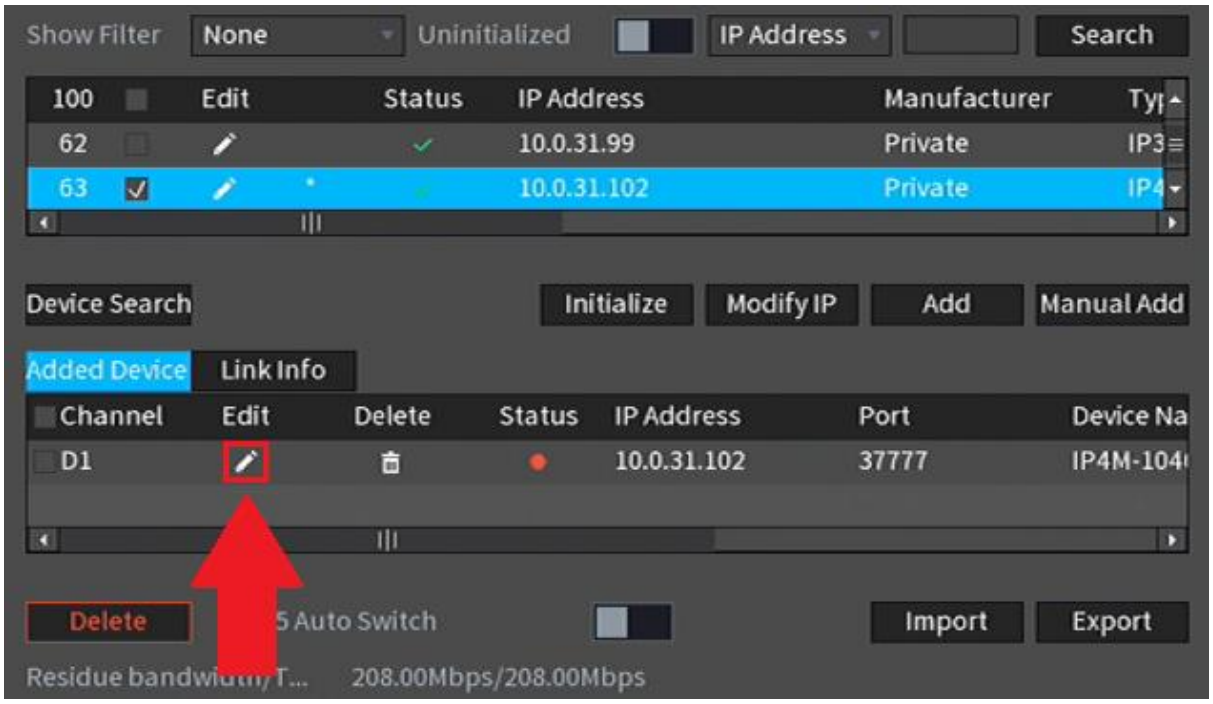
To begin adding a device, click on **Device Search** to allow the NVR to scan for connected devices on your network.



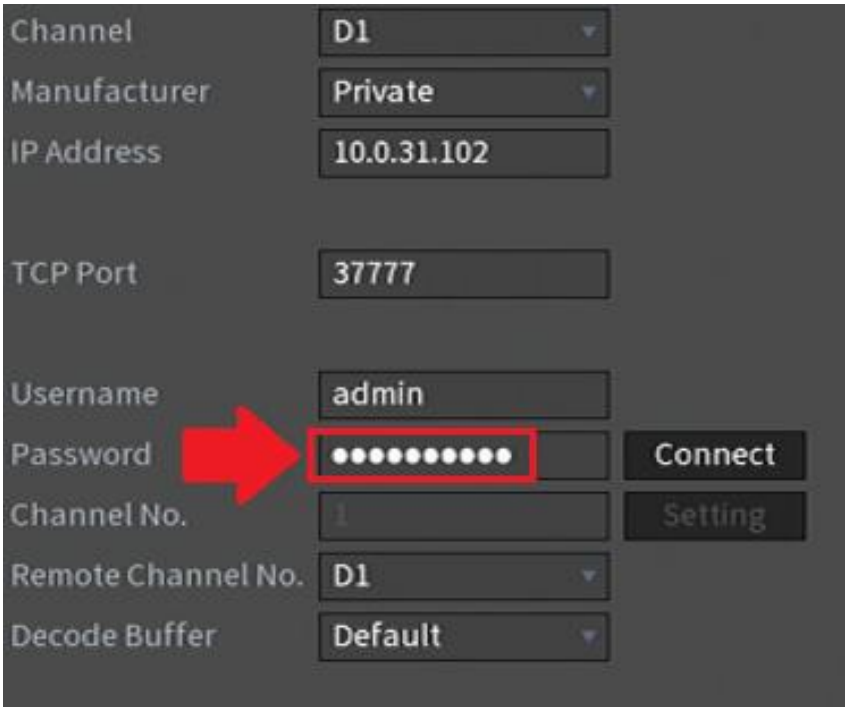
A list of applicable connected devices will show on the screen. Select your devices by clicking on the checkbox next to the device and click **Add** to add the device into the **Added Devices** menu.



If the status of your camera is red, it indicates the camera is not properly connected to the NVR. This could be because the password for the camera is not entered properly in the system.
To modify the password for your camera, click on the edit icon (pencil) located in the **Edit** column in the **Added Device** menu.

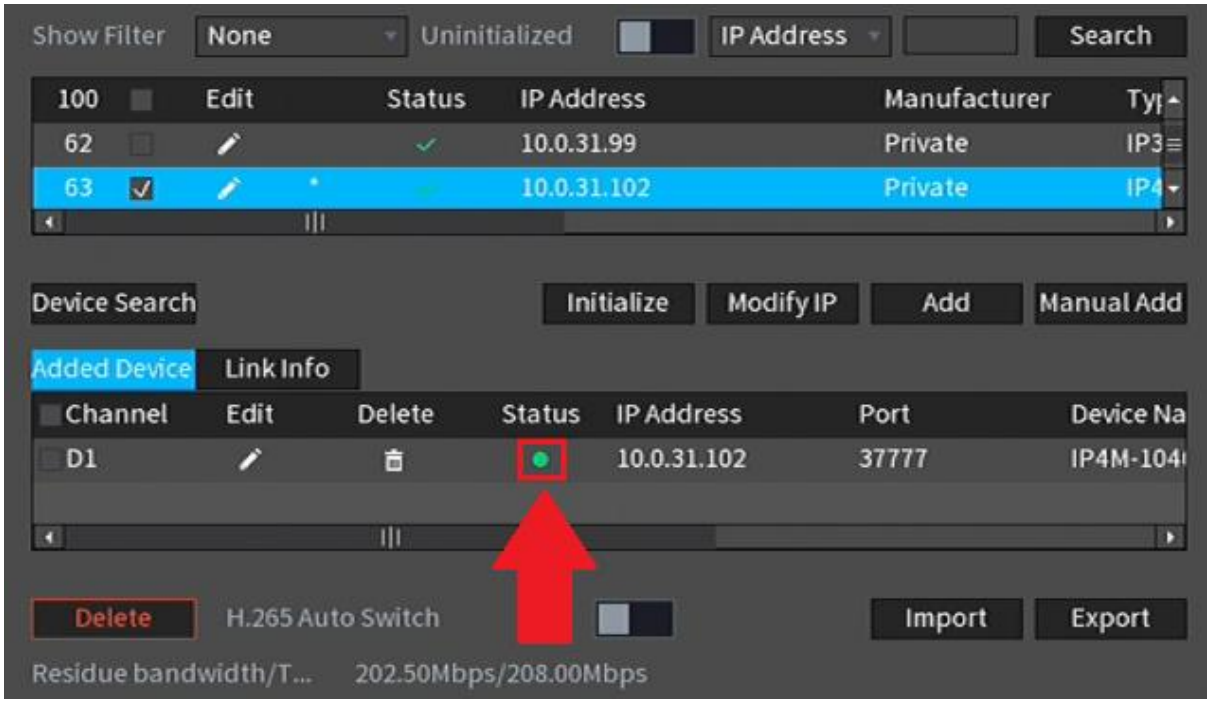


Select the **Password** field and use the onscreen keyboard to enter the password for your camera. Once the password has been entered, click **Connect** then click **Save** to continue.

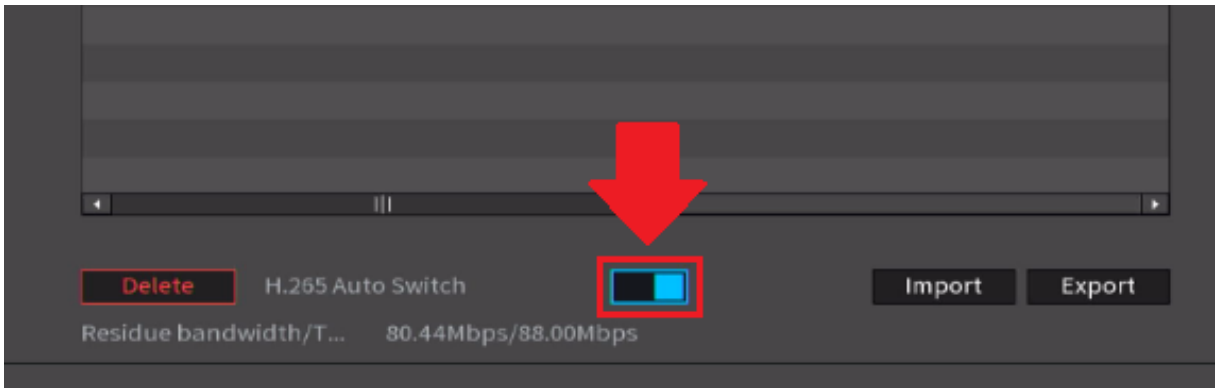


Note: If this is a new device and a password has not been added the password will be **admin.**

Once the password has been properly set the **Status** indicator will turn green indicating the camera has been properly added.



As previously stated, our H.265 compatible products will come **factory defaulted to H.264 compression**, but for increased performance, the camera's settings can be automatically switched to H.265 compression. Switching to H.265 compression reduces bandwidth **without sacrificing frames per second or resolution**. To activate H.265 compression, click on the **H.265 Auto Switch**.



For more information on H.265 compression, please visit: amcrest.com/support

Click on **Next** to proceed.

Schedule (Rec)

The next screen you will see is the **Rec** screen which allows you to set recording schedules for regular (24/7 continuous recordings), motion detection, alarm, motion & alarm, and POS recording types. For more information on setting a recording schedule, please see section, "*Setting Up Recording Schedules*".

Click **Next** to continue.

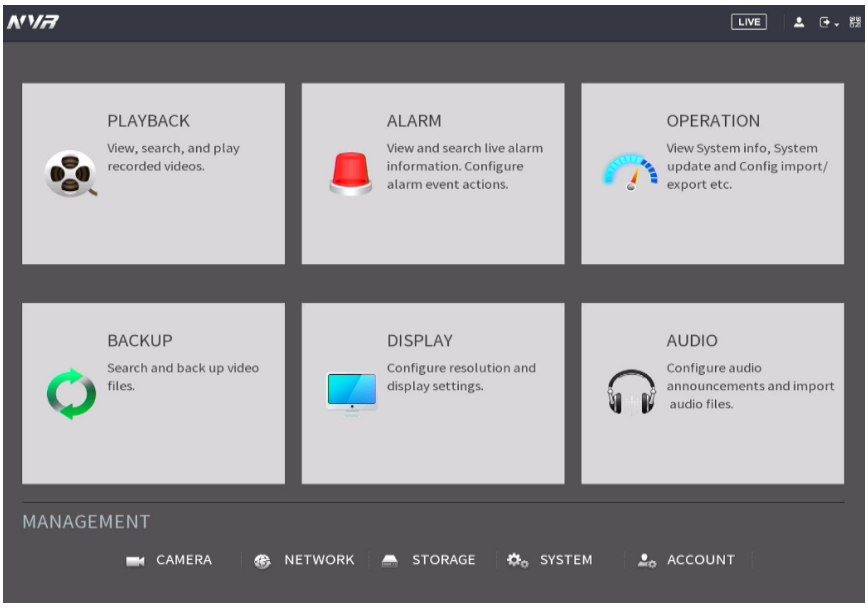
This will take you to the snapshot settings for scheduled recordings. This screen is used similarly to the Rec menu only it pertains only to snapshot events. Once you have scheduled your events, click on the **OK** button to continue.

Once the setup process is finished you should see a dialog box indicating the startup wizard is finished. Click **Save** to continue

The next screen you will see will be the video wall screen which will display all connected devices. Right click on the video wall and click on the '**Main Menu**' from the selections to access the main menu.

Main Menu Overview

The screenshot below is the main menu screen for the Amcrest NVR console interface:



Below are short descriptions for each of the menu items on the main menu:

PLAYBACK: View, search, and play recorded videos.
ALARM: View and search live alarm information. Configure alarm event actions.

OPERATION: View system information, system updates. Import/export configuration files, etc.
BACKUP: Search and backup files using a USB flash drive.
DISPLAY: Configure resolution and display settings.
AUDIO: Configure audio announcements and import audio files.

Management

CAMERA: Add, search, review or edit settings for each camera, including video settings (e.g. quality, bit rate, color, etc.).
NETWORK: Review and edit TCP/IP, connection, DDNS, Email settings, etc (e.g. P2P, UPnP, Multicast, etc.)
STORAGE: Set motion detection schedules, as well as access the hard drive management interface, FTP, etc.
SYSTEM: Review and edit general system settings such as, video standards, date & time, as well as adjust firewall settings.
ACCOUNT: Add or remove shared user settings, groups, as well as ONVIF users. Reset security questions and update reset password email.

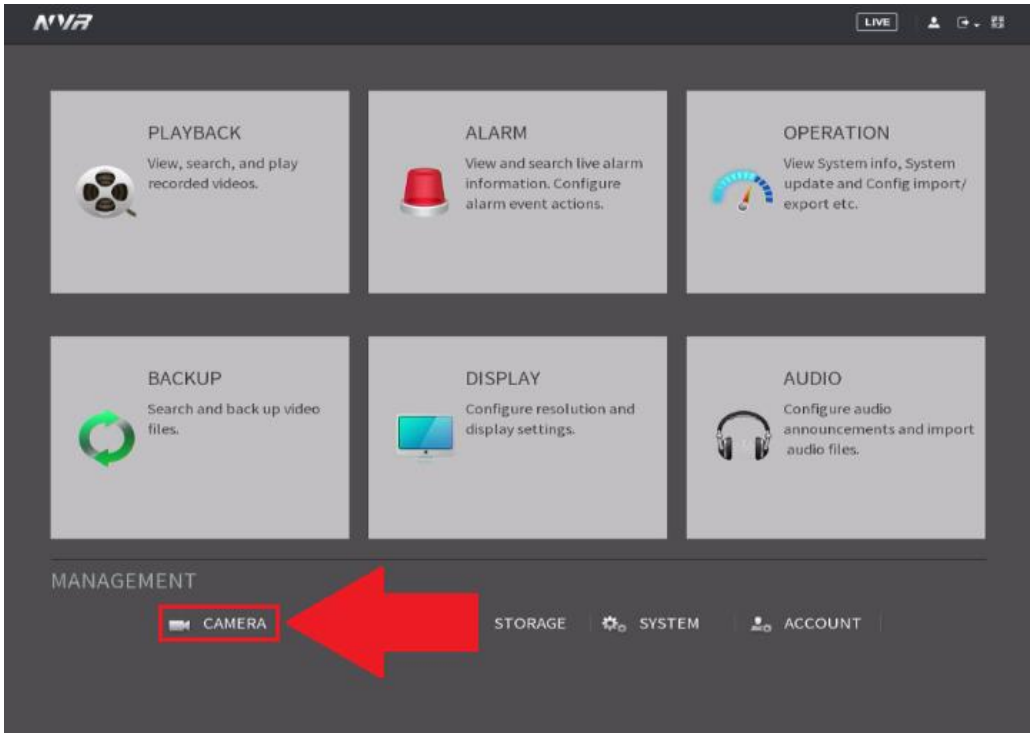
Adjusting Camera Settings for Maximum Resolution, FPS, and Bitrate

Most Amcrest products are H.265 compatible. H.265 provides a more advanced technology than H.264 and allows the camera to reduce file sizes which in turn helps to reduce required bandwidth **without sacrificing frames per second (FPS) or resolution**. However, for maximum compatibility when accessing your device in a web browser, or other third-party applications, our H.265 compatible products will come **factory default to H.264.** For optimal performance, the device's settings can be upgraded to H.265 compression if needed.

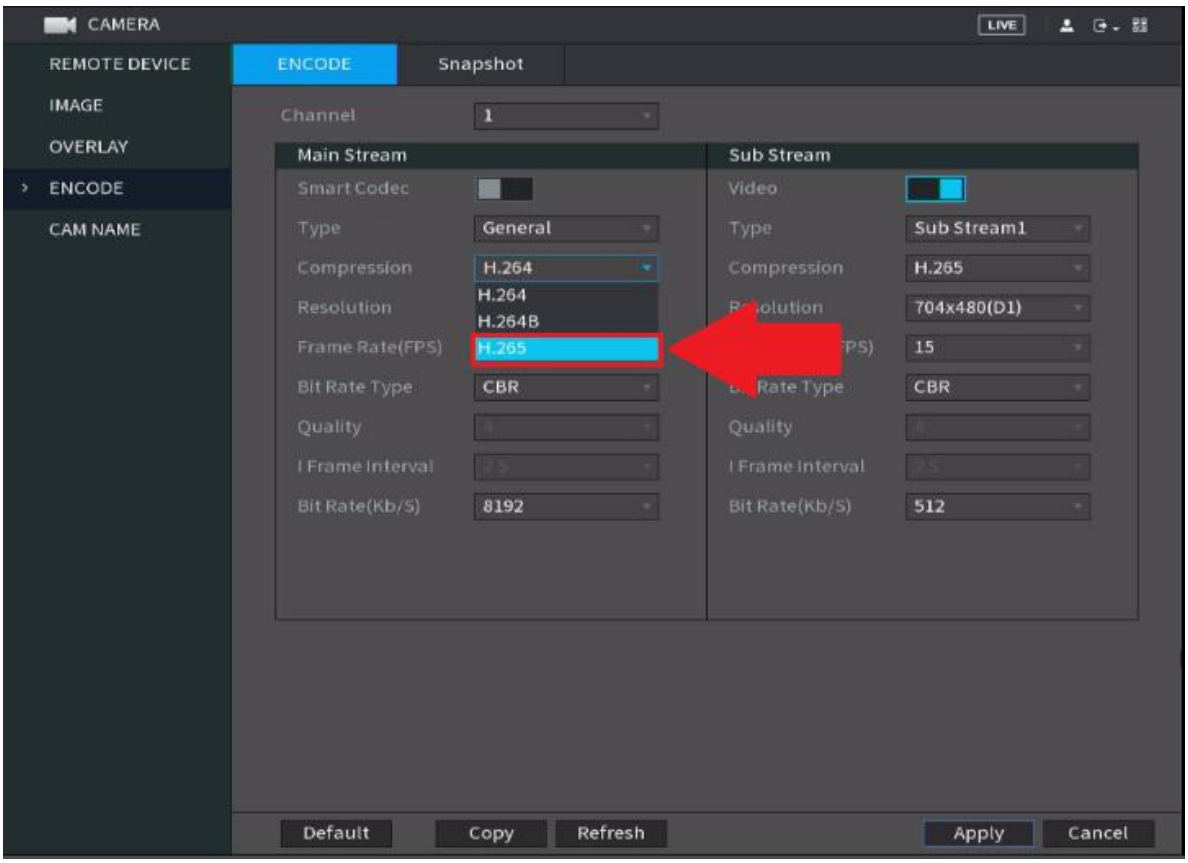
Please note, for higher performance as well when using H.265 compression it is recommended to adjust bitrate. The bitrate is the number of bits that are processed per unit time by the system and helps the system to create a tradeoff between bandwidth and image quality.

How to Adjust to H.265 Compression

If the auto switch for H.265 compression was not selected in the camera registration process, the setting can be adjusted manually. On the **Main Menu**, under **Management**, click on **Camera**.



In the **Camera** menu, select **Encode** and click on the **Compression** drop down menu and select **H.265**.



Click **Apply** to save your settings.

Adjusting Bitrate
Since H.265 compression uses roughly 30% less resources than H.264, the camera will typically come defaulted to a preset bitrate when switching to H.265. For instance, when switching to H.265 on a 4K camera, the bitrate may be defaulted to 8192 Kb/S, however, adjusting the bitrate to a lower value may help to increase the overall efficiency of the camera while viewing playback or watching live view.

To adjust the bitrate, access the **Encode** menu and click on the **Bit Rate (Kb/S)** dropdown menu. A list of preset bitrates will be displayed as well as a **Customized** selection which will allow you to set a customized bitrate if needed.

Please note, when using a 4K camera, it is recommended to keep the bitrate around **1792 Kb/S**, however, different values may be applicable depending on your specific network requirements. Please refer to the table below regarding recommended resolution and bitrates and custom thresholds.

Resolution	Recommended Bitrate	Custom Bitrate Threshold
2MP (1080P)	Default Settings	Default Settings
3MP	Default Settings	Default Settings
4MP	Default Settings	Default Settings
5MP	1536 Kb/S	1792 Kb/S
8MP (4K)	1792 - 2048 Kb/S	1825 Kb/S

Note: Adjusting the bitrate to anything lower than the recommended bitrates above may result in degradation to recordings or to live view. For best results, if you are adjusting multiple cameras, it is highly recommended to adjust each camera **individually**. This may be a trial and error process since most network environments are unique and may vary, however, the bitrate should range between 1792-2048 Kb/S if using a 4K camera. An optimal customized bitrate should be around 1825 Kb/S. Click **Apply** to save the new bitrate settings.

Motion Detection, and Recording Setup

This section will cover how to set up a recording schedule for your NVR. This is applicable to regular (24/7 recordings), motion detection, alarms, etc. This section will also cover how to set up a recording schedule, email alerts with snapshots, etc.

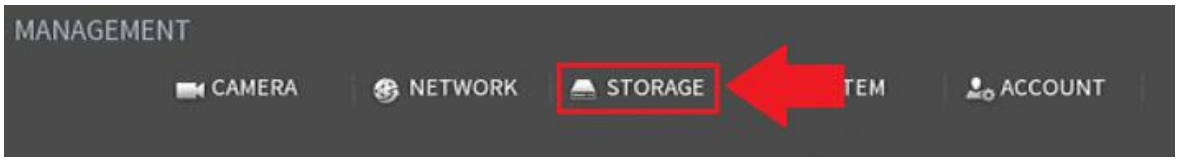
Note: **The NVR can only be set up to save recordings if a hard drive has already been installed**. **However, email alerts with snapshots can still work without a hard drive installed.**

The following setup processes will be shown using the NVR's built-in interface. However, these same steps can also be done through the web interface on a computer. For more information on how to access your device from a web browser, please refer to section, *"Computer Access Setup".* Despite the difference in appearance, the settings pages have similar organizational structures.

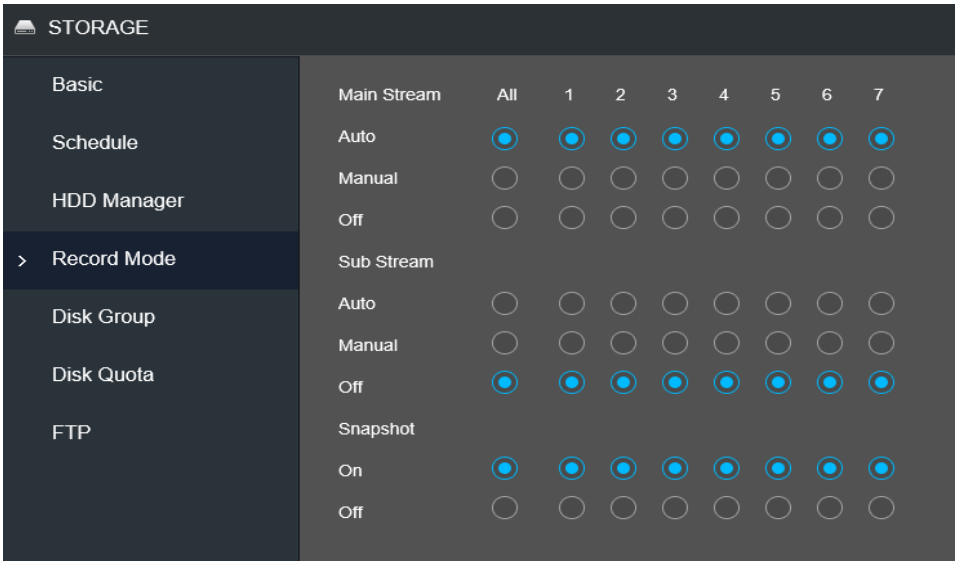
Enabling Recording Options

This menu should be verified to ensure that all recording protocols are enabled. This menu details, per channel, which streams are enabled or disabled in the NVR. To access this menu, please refer to the information provided below.

1. On the main menu, click on **Storage**.



2. Click on **Record Mode**. The **Record Mode** menu displays all active channels and streams being used for recording. If using snapshots, ensure the **Snapshot** radio button is enabled on each stream. To apply the settings to all channels, click on the **All** radio button.

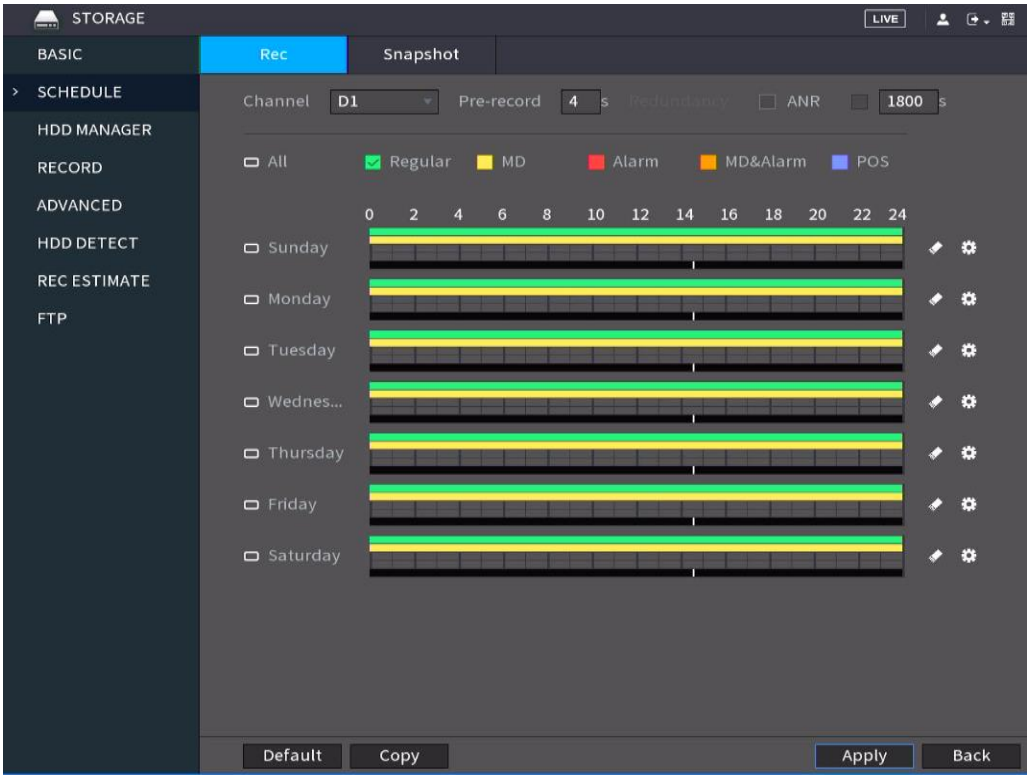


3. Click on **Apply** to save the settings to your device.

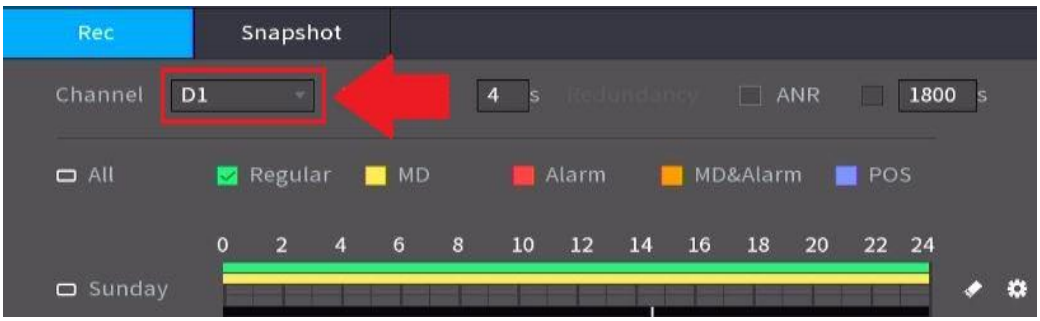
Setting Up Recording Schedules

1. From the Main Menu, click on **STORAGE** in the **MANAGEMENT** section:

Make sure you are on the **SCHEDULE** > **REC** page. This is where you can configure your video recording schedules. To configure a snapshot schedule, click on the **Snapshot** tab. All video events will be saved and accessible via the playback menu, if a hard drive is installed, whereas snapshot events can be emailed. For more information on how to setup Email snapshots, please refer to section, *"Setting Up Email Alerts".* By default, **Regular** (24/7), **MD** (Motion Detection) recording types will be activated for all days as indicated by the different colored bars available in this menu.

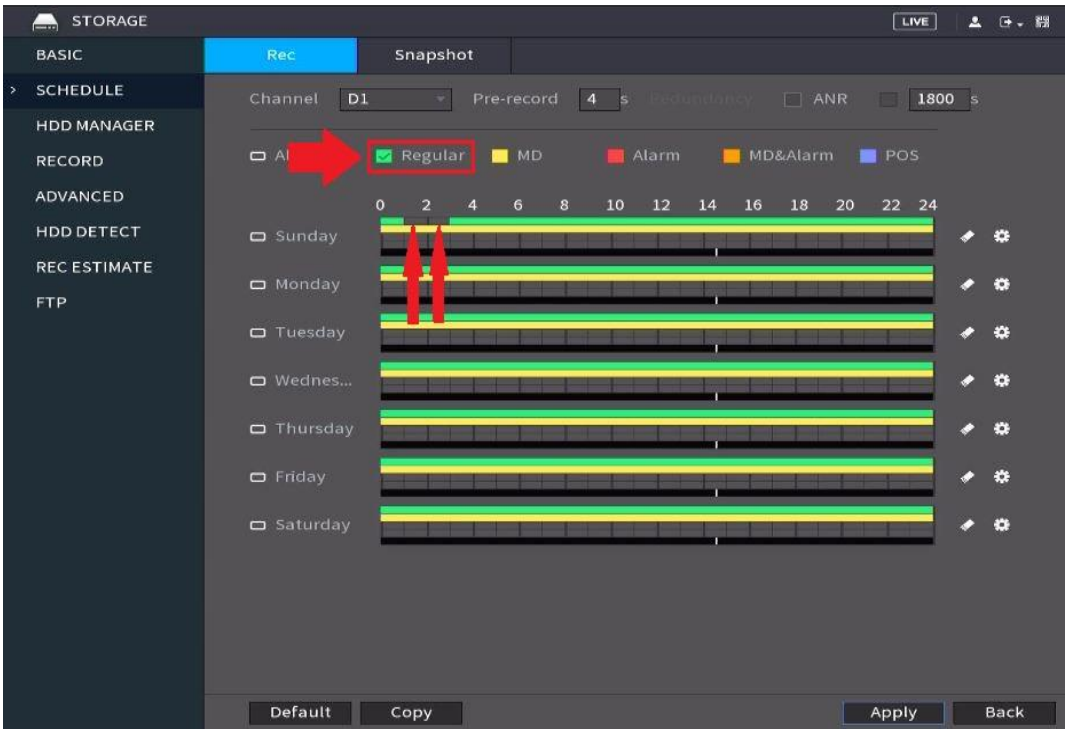


To choose a channel (or camera) for which to configure, click the number next to **Channel**, then select either a single channel or **All** if you would like the schedule to apply to all channels currently connected to your NVR:



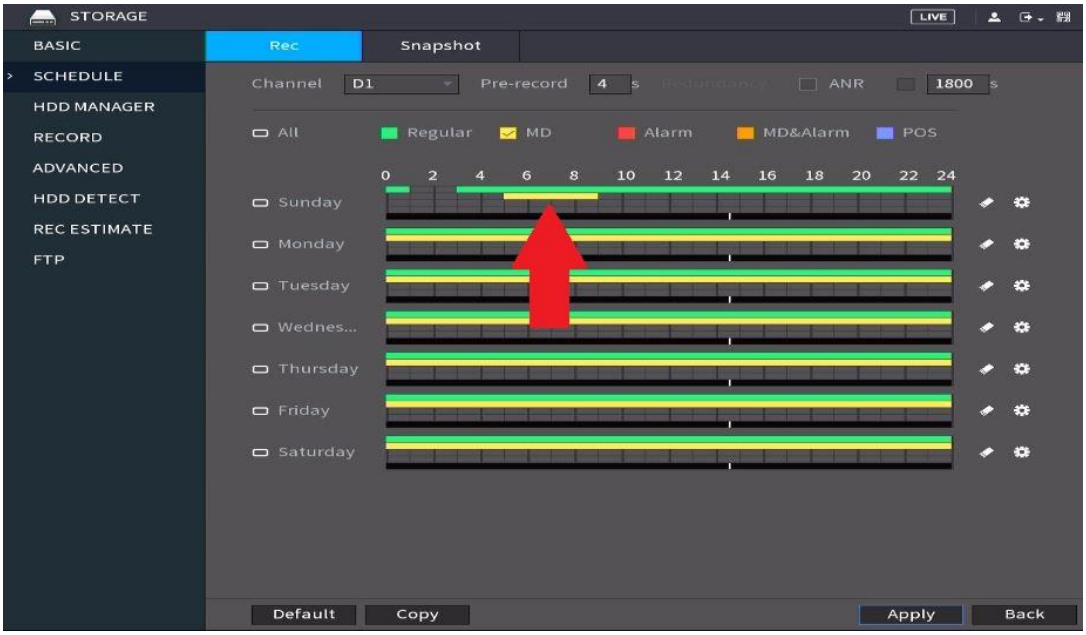
By default, the NVR will have the schedule for each recording type to record 24/7. Also note, that the NVR uses military time from 00:00 to 24:00 hours instead of 12 a.m. to 12 a.m.

To edit a recording schedule, select a recording option from the colored boxes. Each recording option is color coded: Green: Regular (24/7 recording), Yellow: MD (Motion Detection), Red: (Alarm), Orange: MD&Alarm (a combination of motion detection and alarm recordings), and POS. Select which recording type you would like to modify and then use your mouse to adjust the time via the time bar for your specific recording type.



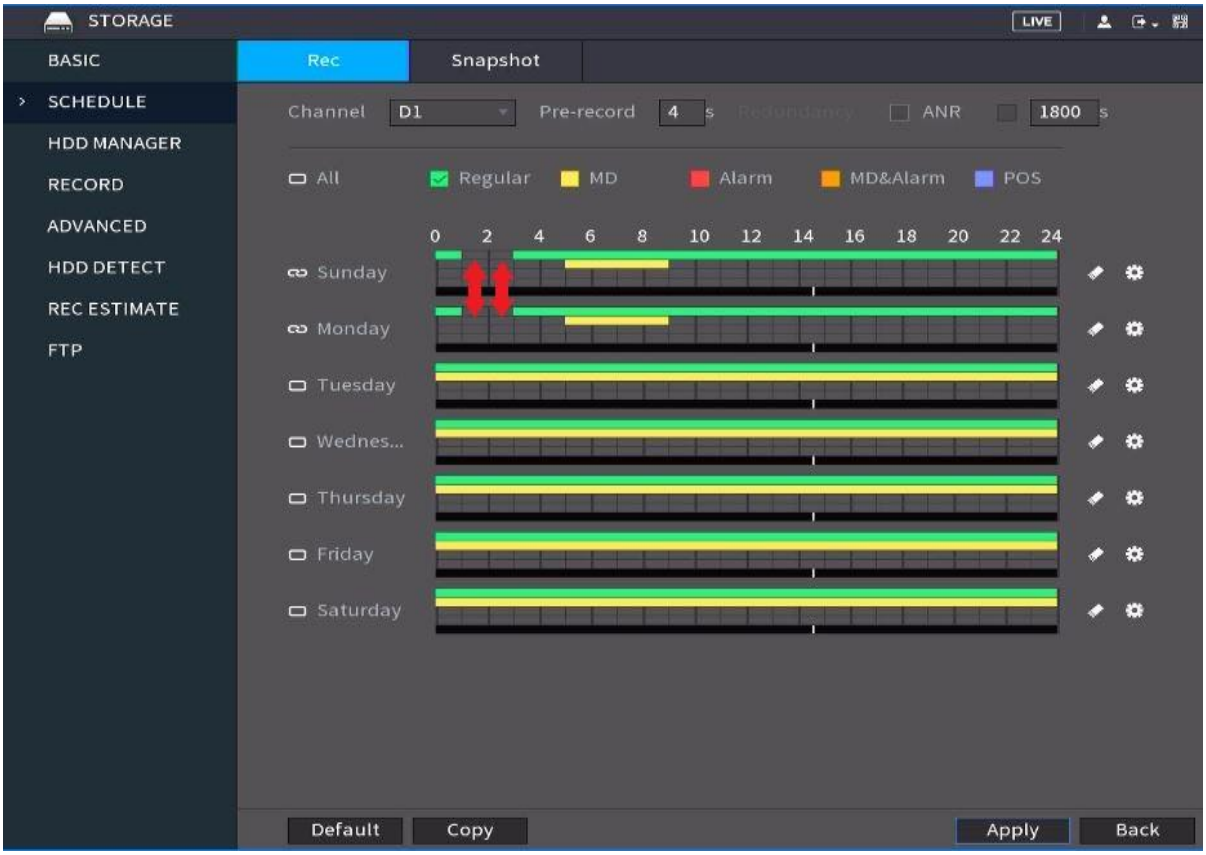
Click the eraser icon to the right of any day if you would like to clear the entire row of blocks.

To add or remove motion detection blocks to the grid, mark the yellow checkbox next to **MD**, then click individual cells or click-and-drag for multiple blocks:

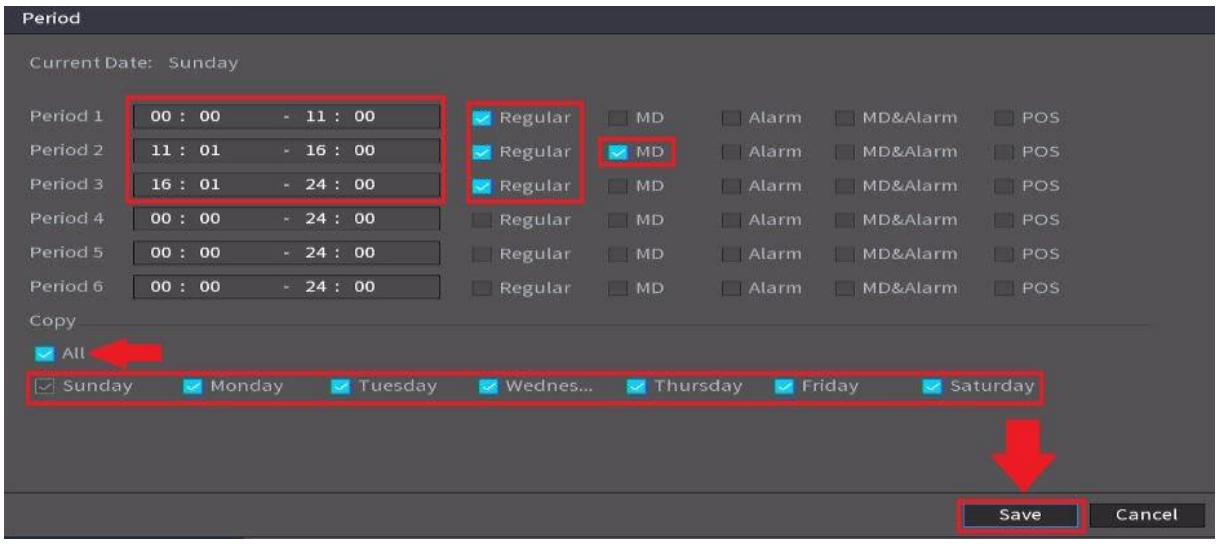


To the left of each day, there are small boxes which can be marked to ‘link’ days together. This is useful if you want to save time by instantly making changes to multiple days simultaneously.

In the below example, Sunday and Monday are linked, so any blocks that are added or removed for Sunday will automatically and immediately reflect the same for Monday and vice versa:



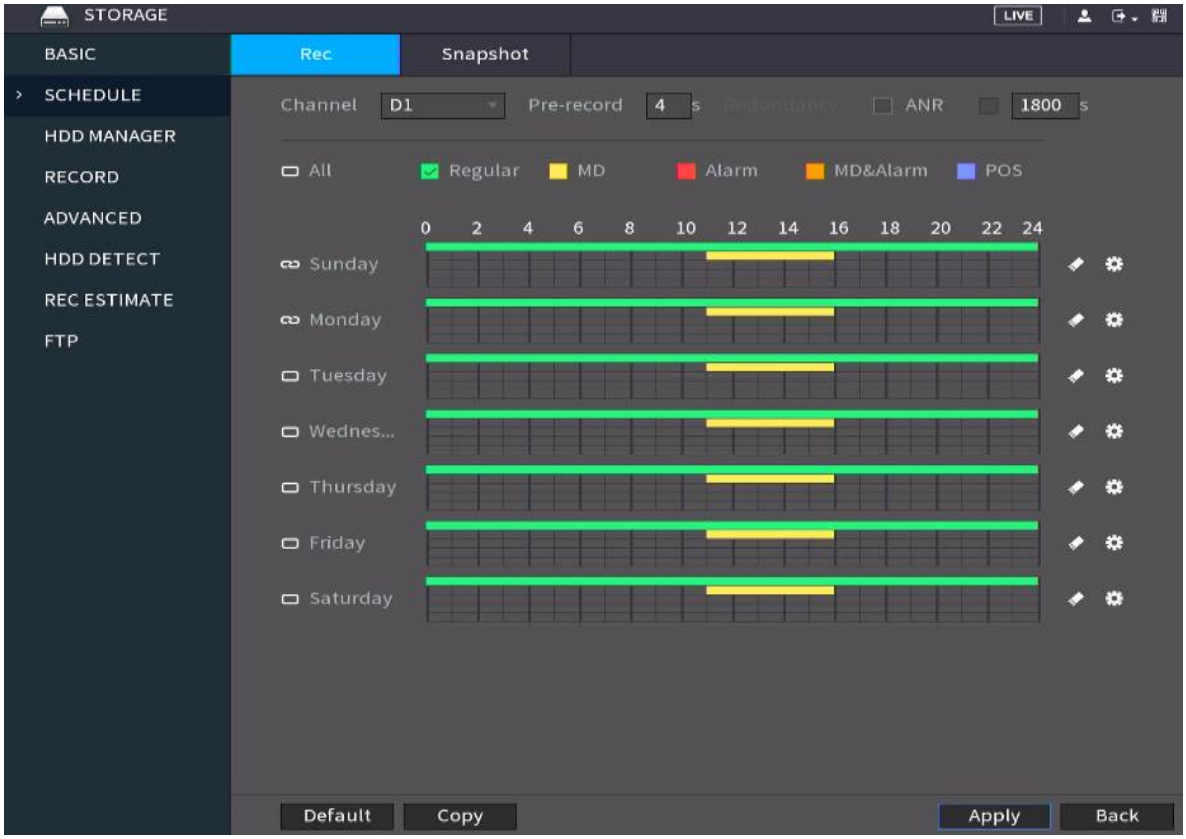
Another way to configure recording schedules is by manually setting time periods. Click the “gear" icon to the far right of any day to open the **Period** page:



Here, the periods (Periods 1 - 6) will be in displayed in chronological order. You can set either **Regular**, **MD, Alarm, MD&Alarm or POS**, checkboxes. You can also copy the period settings

over to other days by checking them individually or checking **All**. Make sure to click **Save** when finished.

Now that you have finished configuring the recording schedules, you may need to copy these settings over to other channels (or cameras). By default, D1 (Channel 1) will be selected unless you immediately selected **All** in the channel window previously. Please note, you can copy these settings directly over to another channel by clicking **Copy.**



In the **Copy** window, you can select individual channels for any cameras you have added to the NVR or select **All**:

Click **Save** when finished.

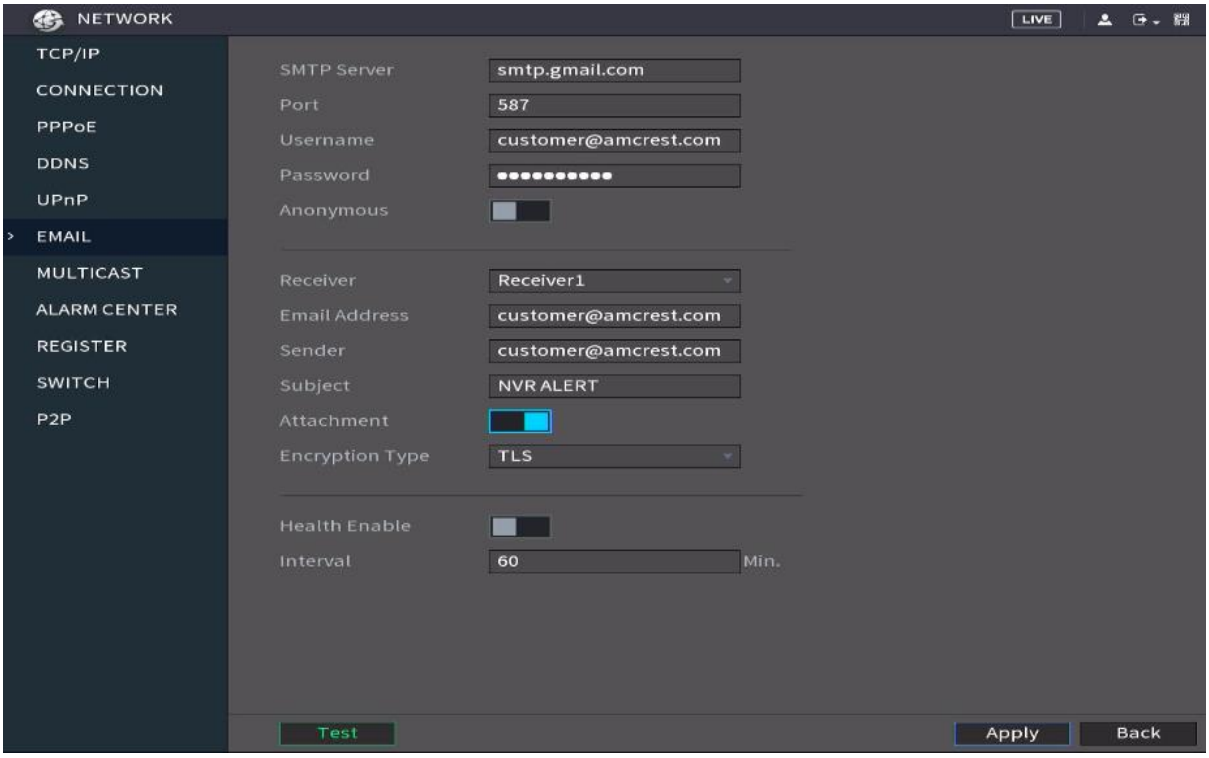
When finished on this screen, click **Apply** to save your changes.

Setting Up Email Alerts

Setting up Email alerts will allow you to receive snapshots of motion events via your email. Each event type must have the "**Send Email**" option enabled to allow the feature to send snapshots to your email. To setup email alerts, please refer to the information provided below.

1. On the Main Menu, click on **Network** located in the **Management** section.

2. Enter the SMTP information for your email. In this example we will be using Gmail, however other email services can also be used. If using Gmail, type in "**smtp.gmail.com**"
3. Enter a port number. This is based on the type of encryption used by your email service. In this example we will be using port **465**, which uses an **SSL** encryption type. If using **TLS**, the port number will be **587**.
4. Enter the email address you will be using in the **Username** field.
5. Enter the password for the email address in the **Password** field.
6. In the **Receiver** field, enter your email address. Enter that same email address in the **Sender** field.
7. Update the subject line for your alerts in the **Subject** field. The default subject line will be NVR Alert however this can be changed to anything you would like to use.
8. Make sure the **Attachment** toggle switch is enabled to enable snapshots to be sent.



9. Click **Apply** and **Test** to verify connectivity. Once the test has been successfully sent, click **Save** to continue.

10. Check your email to see if you received the email test.
Now, whenever your camera detects motion, you will get email alerts sent to the email that was set up in the system.

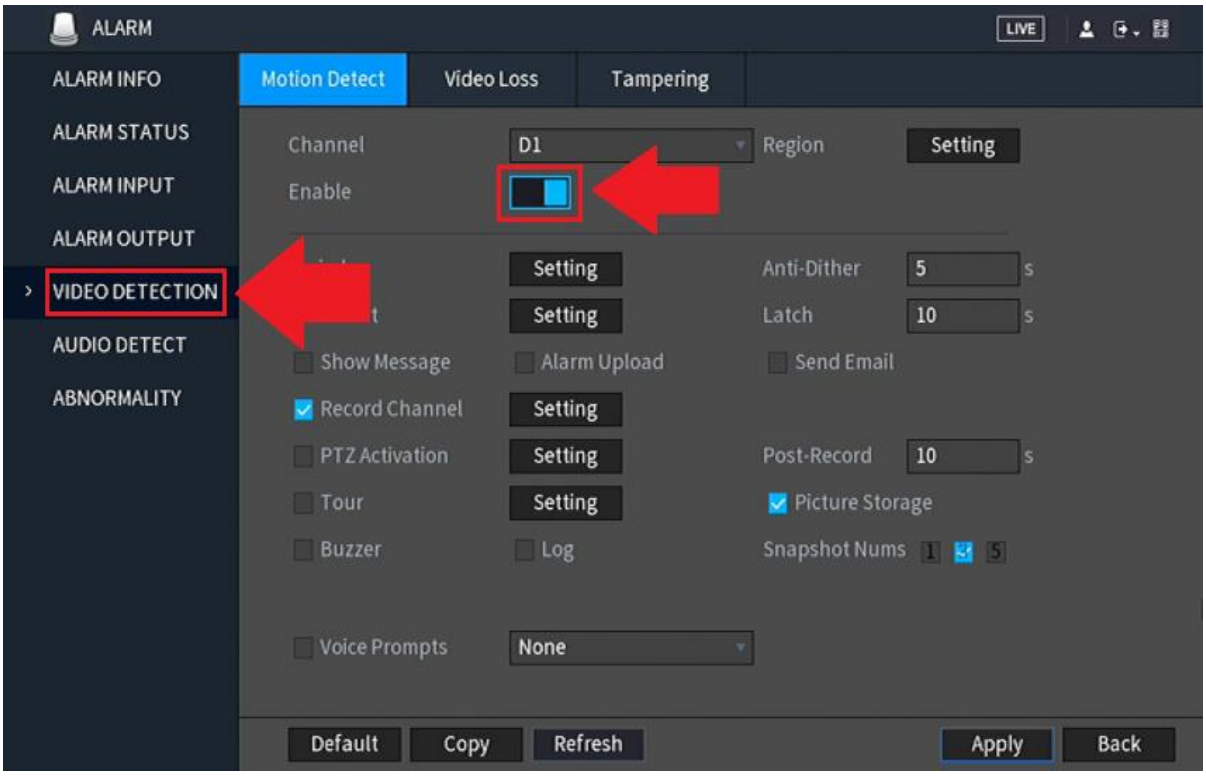
This will include an email with a snapshot of what was seen when the event was triggered.

Setting Up Motion Alerts

This will allow video and snapshots of motion detection events to be recorded and retained in the system. For more information on configuring motion detection, please refer to the information below.

1. On the Main menu, click on **Alarm.**

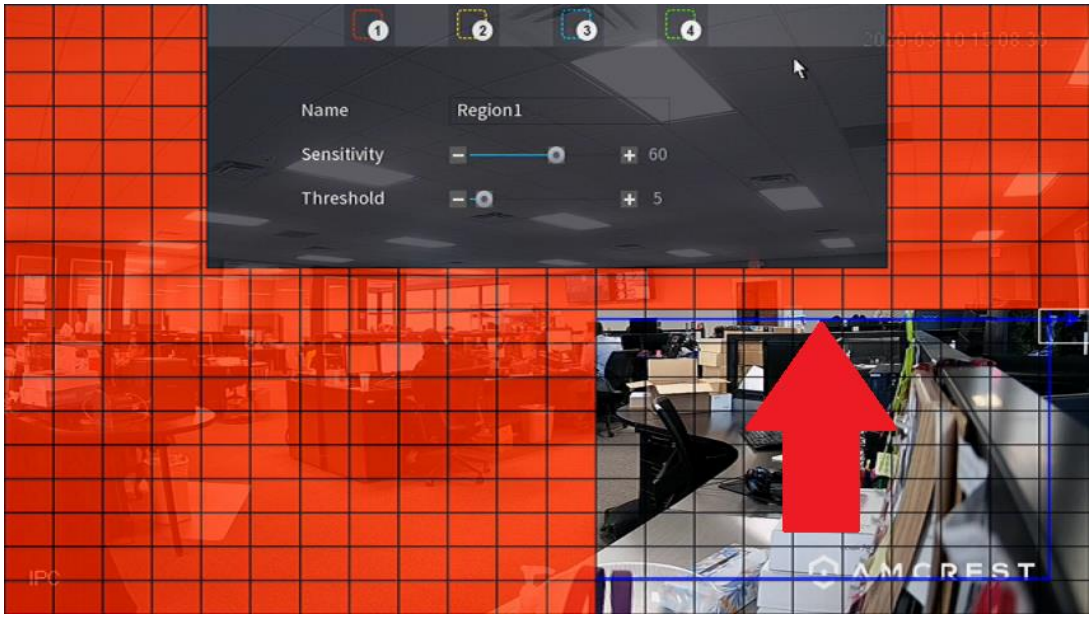
2. Select **Video Detection** to access the **Motion Detect** menu. This is the main configuration page for your motion detection settings. Select which channel you are configuring from the Channel drop down menu.



3. Ensure the toggle switch for motion detection is enabled and adjust any motion detection settings or motion schedules accordingly. Click **Apply**.

Adjusting Region Settings

You can set up “regions“ for motion detection using the region grid on your NVR. By default, the entire area of view for your cameras will be highlighted with red blocks indicating that all areas of the live view screen will have active motion detection. However, to prevent false events from occurring, you can use your mouse to block out certain areas.



If you hover your mouse pointer over the top-center edge of this window, another small window will appear with options to configure **sensitivity** and **threshold** settings as well as to choose from up to **four regions**.

Sensitivity - is the measure of how many pixels on the screen need to change before being considered motion. **0** is the lowest value and **100** is the highest.

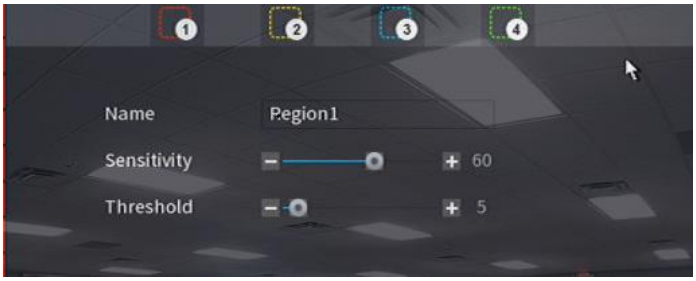
In plain English: Sensitivity is the difference between a squirrel running up a tree, versus a big dog running up to and barking at that tree. A squirrel would trigger motion detection at a *higher* sensitivity because it takes *less change or movement to qualify as motion*. But the dog would trigger motion detection at a *lower* sensitivity because it takes *more change or movement to qualify as motion*.

Threshold - is the degree of movement that needs to occur before the motion is defined as a motion event and is triggered. **0** is the lowest value and **100** is the highest.

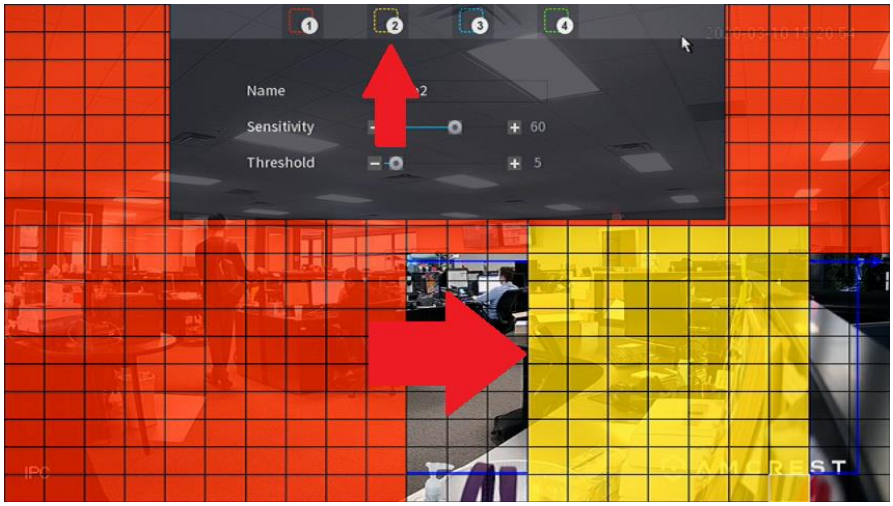
In plain English: Threshold is the difference between a car driving quickly by on a street and a car driving into the field of view, slowing down, and turning into a driveway. The car driving past *would not* trigger motion detection based on a certain threshold setting, but the parking car *would* trigger motion detection with that *same* threshold setting. The *higher* the threshold, the *more time* motion needs to occur before motion detection is triggered. The *lower* the threshold, the *less time* motion needs to occur before motion detection is triggered.

If sensitivity is set to 100 and threshold to 0, motion detection will be triggered by almost any change in the field of view, large or small. But if sensitivity is set to 0 and threshold to 100, motion detection will be extremely difficult to trigger.

The **four regions** are all different colors, so you can customize the field of view of any camera to your specific preferences.



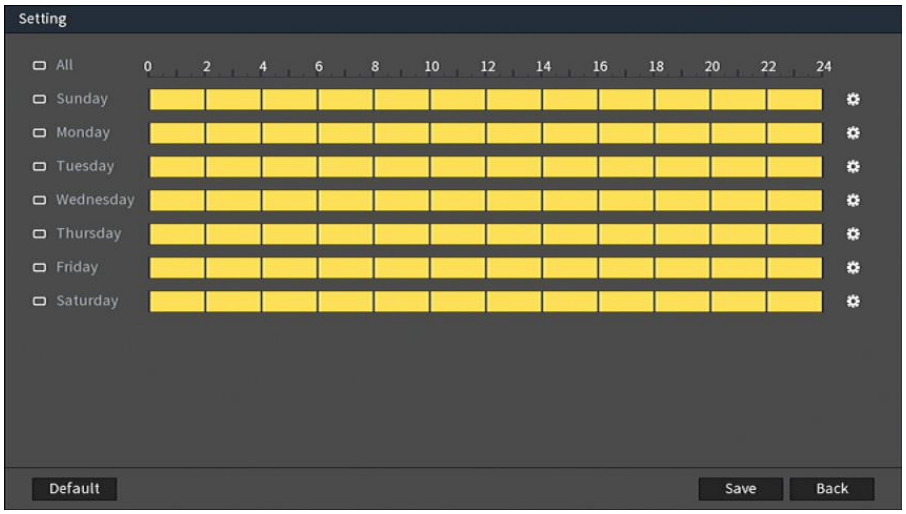
To choose another region, hover your mouse pointer near the top center of the region window, and a small window will appear. Keep your mouse pointer inside that small window and select either region 2, 3, or 4:



You will be able to click individual blocks or click-and-drag an area with the new selected color to highlight portions of the screen. Each new region (or color) has its own unique sensitivity and threshold settings. The different regions/colors can also overlap one another. To exit the regions setting screen, right click your mouse on the interface.

Adjusting Motion Detection Schedules

Motion detection schedules work the same as the schedules outlined in section: "*Setting Up Recording Schedules."* To adjust a motion detection schedule, click on **Period** and use your mouse to adjust the timeline. Click on the settings (gear) icon to set multiple periods. Click on **Save** to save your schedule.



3. Click on the **"Send Email"** checkbox. To enable the NVR to send an email once a motion is detected.
4. Click on **Apply** to save the settings to your system.

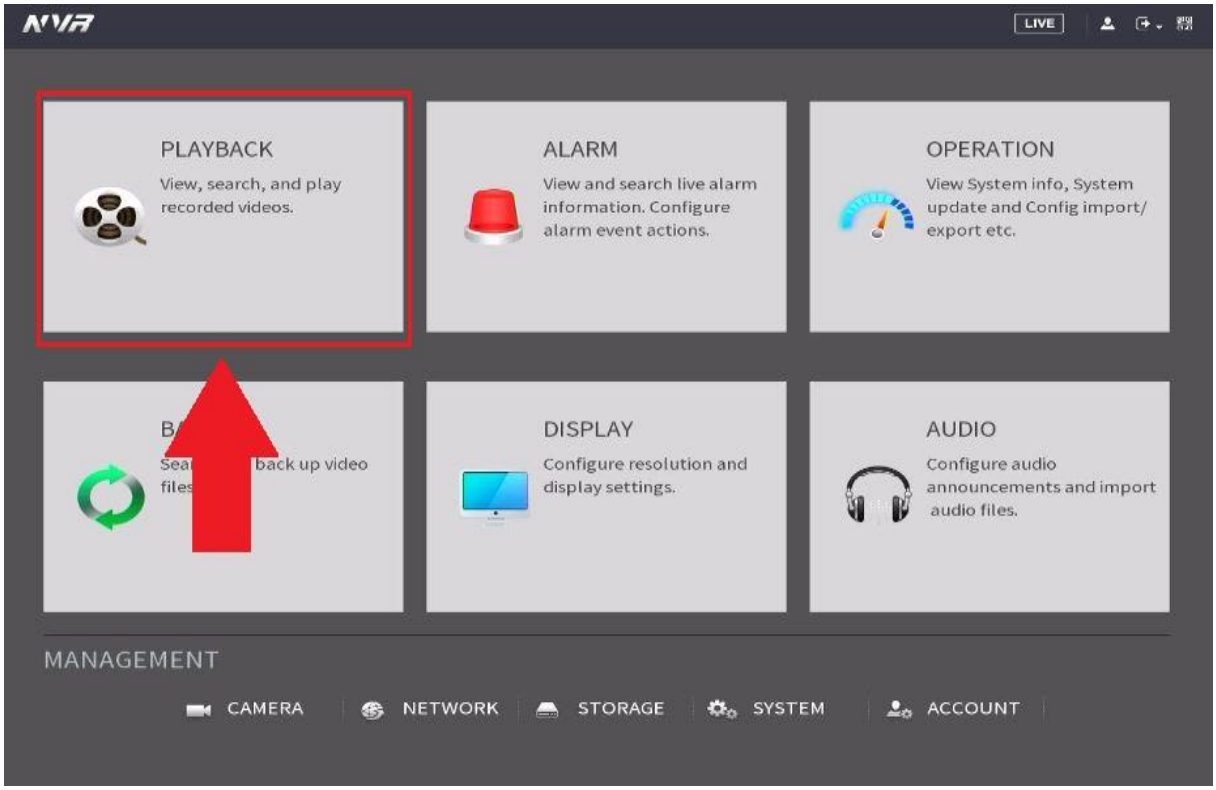
Once you have set up your settings for one channel, you can copy them to other channels in the system. If you did not select **All** after clicking **Channel** as previously described, click **Copy**, select channels to copy to, then click **Save**.

Click **Save** to save all the settings made on this page. Click **Apply** in the Motion Detect menu to finish saving your motion detection settings to your device.

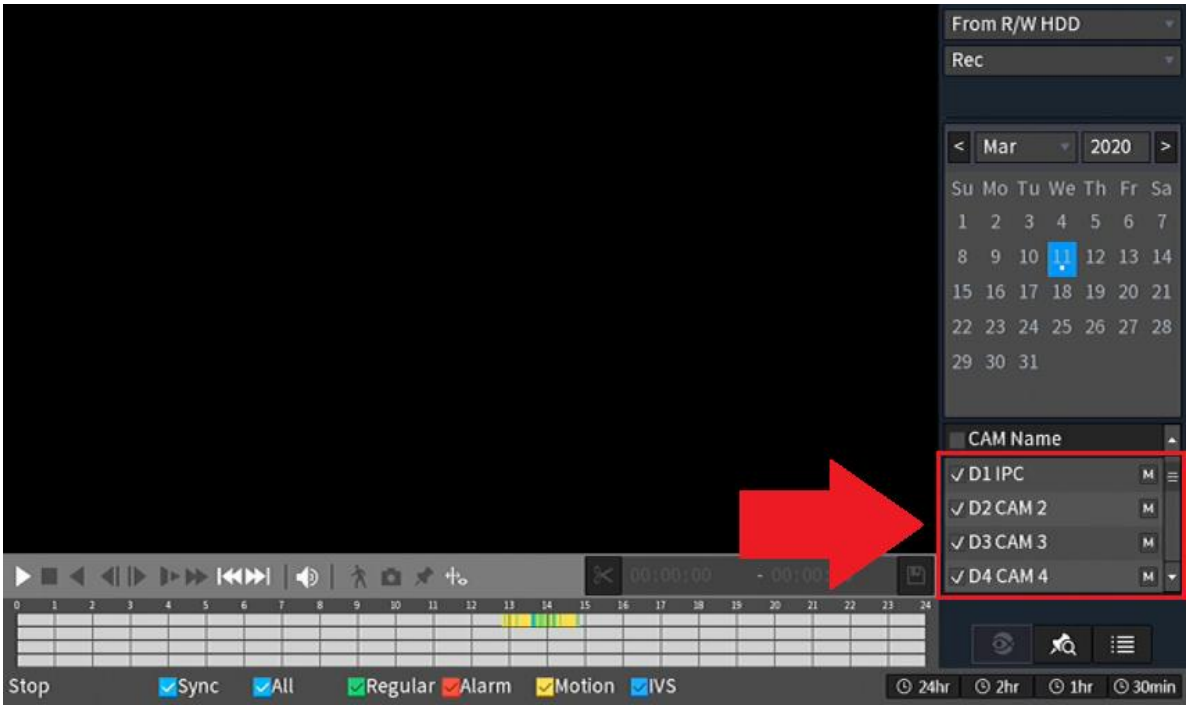
Accessing Playback

Motion and general recordings can be accessed in the **Playback** option on the main menu. **A hard drive must be installed to access and view recordings from this menu.** To access the playback interface, click on the **Playback** option located in the main menu.

Please note, each NVR has its own capabilities in relation to the number of cameras it can playback or support. Please refer to the specifications sheet for your specific device or for more details on playback please visit amcrest.com/support.



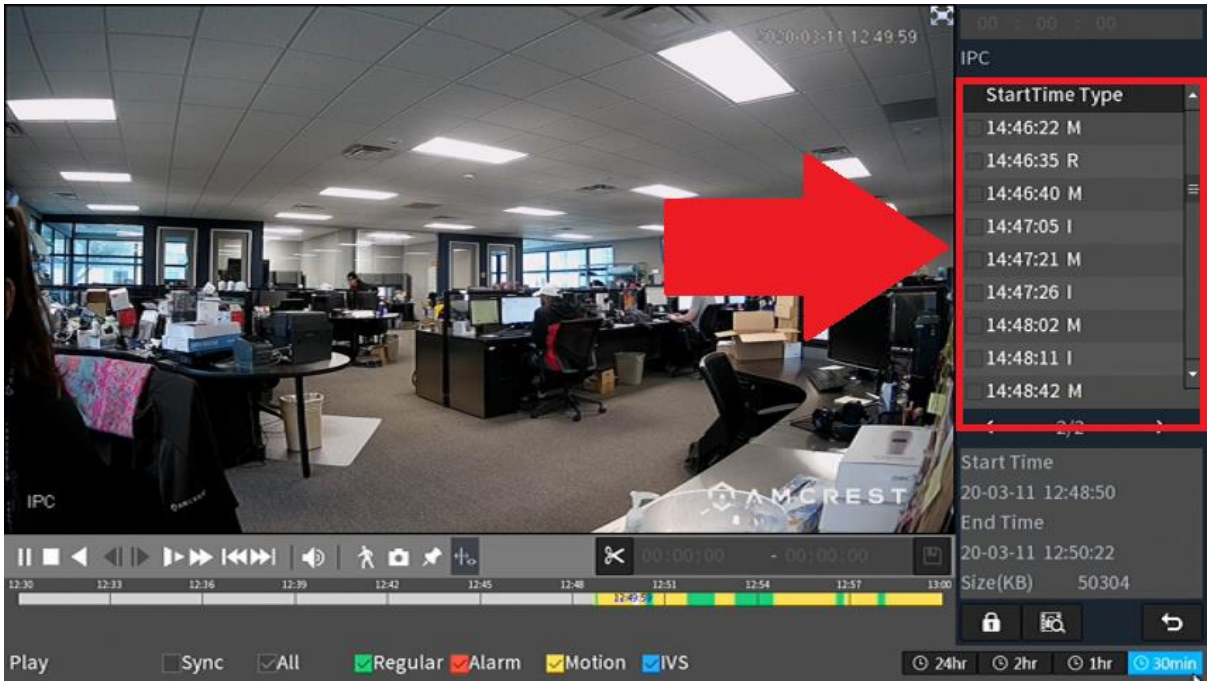
To view recordings from the search menu, select the camera you wish to view from the **Camera Name** section by clicking on a checkbox next to the device.



A timeline of the recordings will appear in the interface.

Click the **Play** button ( ) to play all recordings available on the timeline.

Additionally, all days with recordings available will be highlighted in the calendar portion of the interface with a dot.
To select specific days/months or years, use the navigation arrows provided in the calendar. A file list of recordings can also be shown by clicking on the **File List** icon ( ) located in the interface. Once clicked, a list of recordings will be shown based on the time the events were recorded.



Note: In the File List menu, "**R**" stands for regular/continuous recordings, "**M**" stands for Motion.

To play a recording from the File List menu, double click on the file you want to view. The recording will automatically begin to play in the interface.

How To Upgrade System Firmware

Keeping the firmware on your NVR up to date is an important part of overall system health. For security purposes, it is highly recommended to upgrade the firmware on your device every time a new firmware is available. To locate the most up to date firmware for your NVR please visit https://amcrest.com/firmware-subscribe

Upgrading the firmware for your NVR can be done locally, using a USB flash drive, or via a web browser using the web user interface. For more information on how to access the web user interface please see section, *"Computer Access Setup".*

Upgrading the Firmware Locally

1. Insert a USB flash drive into your computer and go to https://amcrest.com/firmware-subscribe
2. Locate the most up to date firmware for your device and download it to your computer. Save the file to your USB flash drive.
3. Insert the USB flash drive into a USB port on your NVR.
4. On the NVR, go to **Operation** and click on **System Maintain,** then click on the **Upgrade** tab.
5. Click on **System Upgrade**.
6. Locate the firmware file that is on the USB flash drive and then click **Save**.
7. Allow the system to upgrade. The device may reset after the firmware update is complete.

Computer Access Setup

There are 2 ways to access your NVR from a computer, locally or remotely.
Local Access: Logging into your NVR's web interface from a computer or laptop connected to the same network as your NVR (home, office, etc.).
Remote Access: Logging into your NVR's web interface from a computer or laptop connected to a network outside of your home or business network (coffee shop, work computer, etc.)

Local access is preferred by those who do not want to make their NVR accessible from outside their network. *However, there are several options available for remote access that use standardized and secure network protocols including SSL, TLS, DDNS, etc.* Most other users require remote network access by way of their smartphones, tablets, laptops, or computers, wherever they are.

The following section will cover both means of access (local and remote). Keep in mind that any user can have *both* local *and* remote access simultaneously if they so choose.

Before accessing your NVR through a web browser, the following two steps must be completed:

1. *You must access the NVR's web interface with its **IP address**.*
2. *You must install the Amcrest web **browser plugin**.*
3. *You must use a compatible web browser such as Internet Explorer (recommended), Firefox (49.0.2) or Safari 11. Google Chrome users can also use the Chrome app to access their NVRs if needed. To download the Chrome app, visit* https://chrome.google.com/webstore/detail/amcrest-web-view/oddndbjhpcpopbebhonolceinkbnheih?utm_source=chrome-app-launcher-info-dialog

An **IP address** is just an identifier given to any devices that connect to a network. People use names, but internet-connected devices use a set of numbers called an IP address to talk to each

other. Once you have the IP address, your computer will be able to find and communicate with your NVR.

A **browser plugin** is just like a translator. Using your NVR by itself, without a is different than using it on your computer. By using the NVR on your computer through a web browser, you need to introduce a new piece of software that allows your computer to understand the language that the NVR speaks in a way that a computer can understand. That's what the browser plugin is for. Click "Allow" to allow the plugin to be used in the web browser.

Note: If you prefer not to use a web browser plugin to access your NVR you can use our free Amcrest Surveillance Pro software to access your device from a computer. To download the software please visit: https://amcrest.com/downloads

For a detailed user manual on the Amcrest Surveillance Pro software, please visit https://amcrest.com/surveillancepro

If using a web browser, there are 2 ways to access the NVR's web interface:

(1) **Amcrest IP Config**
(2) **Local interface**

Amcrest IP Config

Amcrest IP Config software can be installed for free onto your computer from Amcrest's official website. The IP Config software is available for both Windows and Mac operating systems. To get to the downloads page please visit: https://amcrest.com/downloads

After you have downloaded the Amcrest IP config software, please follow the information provided below:

1. Once you see the first page of the installer wizard, click **Next** to continue.
2. On the next page, check the box next to '**I agree'**, then click **Install**.

3. After the progress bar completes, if you see a Windows Security Alert popup, click **Allow access** (if applicable).

4. This brings you to the main screen of the Amcrest IP Config Software. Your NVR will automatically be found on your network and appear in the list (if properly connected with an Ethernet cable to your router). You will also see the IP address associated with your NVR.

   The 'e' icon to the right allows you to launch directly into your web browser from this screen.

   Note: The 'e' icon will automatically take your NVR's IP address and use your computer's 'default' web browser to access and log into your NVR. If your default browser is not Internet Explorer, you can write down the IP address from the Amcrest IP Config software, open Internet Explorer and type it into the search bar to access the login screen.

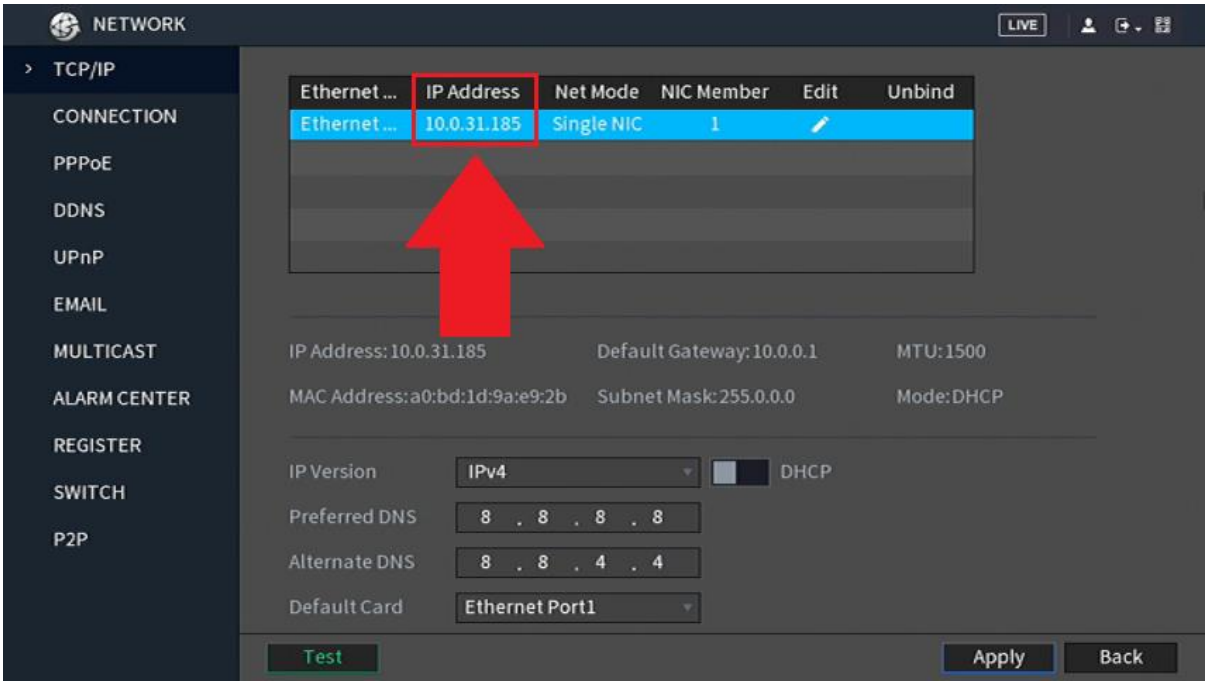
Local interface method

1. Log into your NVR. The live view interface will load.

2. Left-click on the main video wall screen to access the Main Menu, or right-click and choose it from the list.

3. Click the **Network** option located in the **Management** section of the interface.

4. In the **Network** settings page locate the **TCP/IP** option on the left panel list. Then, locate where it says **IP Address** on the main center page of the window.



5. Write it down. It will look something like '192.168.xx.xxx', or '10.0.XX.XXX' depending on your network, router, or service provider.

   Note: It does not matter what your IP address looks like, however, the IP address is needed to access the NVR from a web browser. If DHCP is enabled, it is highly recommended to disable it to allow the device to maintain a static IP address. This will help to increase the overall efficiency and security of your device.

Accessing the Web User Interface

To access the web user interface (web UI) for your NVR, open a web browser and type the IP address for your NVR into the browser and press Enter. This will pull up the Device Initialization screen. Set a location, language and video standard then click **Next** to continue.

Choose your Time Zone and System Time then click **Next** to continue.

Enter Password
Like accessing the NVR directly, if you are accessing the NVR for the first time you will need to enter a password for the device. Enter a password. Click **Next** to continue.

Next, it is recommended to secure your NVR with an Email address and security questions. The Email address entered can be used for password recovery purposes in case a password is forgotten or needs to be reset.

Enter a valid email address and then select and answer the security questions provided in the dropdown menu. Click **OK** when done.

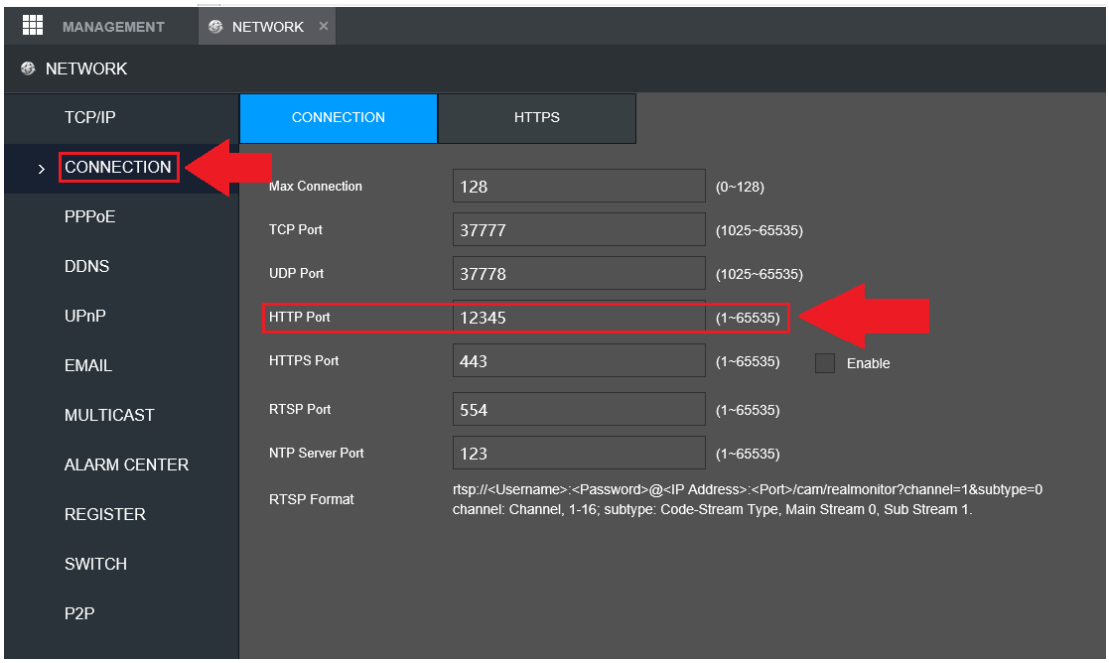
When the NVR has been setup successfully you will hear a beep from the NVR and a prompt in the browser letting you know that the initialization is complete. You will then be taken to the login screen. Enter the **username** and **password** for your NVR then click **Login**.

Note: Please allow all permissions to allow the plugins to function in your browser. Once the plugins are allowed the main menu screen will appear.

Accessing the Web User Interface Remotely

For the purposes of this guide, we will outline the most common method for setting up web access. Port forwarding using the HTTP protocol and using Dynamic Domain Name Server (DDNS) is the easiest way to setup stable remote access.
For this method, you should have direct access to your router as well as the ability to port forward the device using the router's built in interface.
Below is a step-by-step walk through that details how to setup the NVR for remote web access using DDNS.

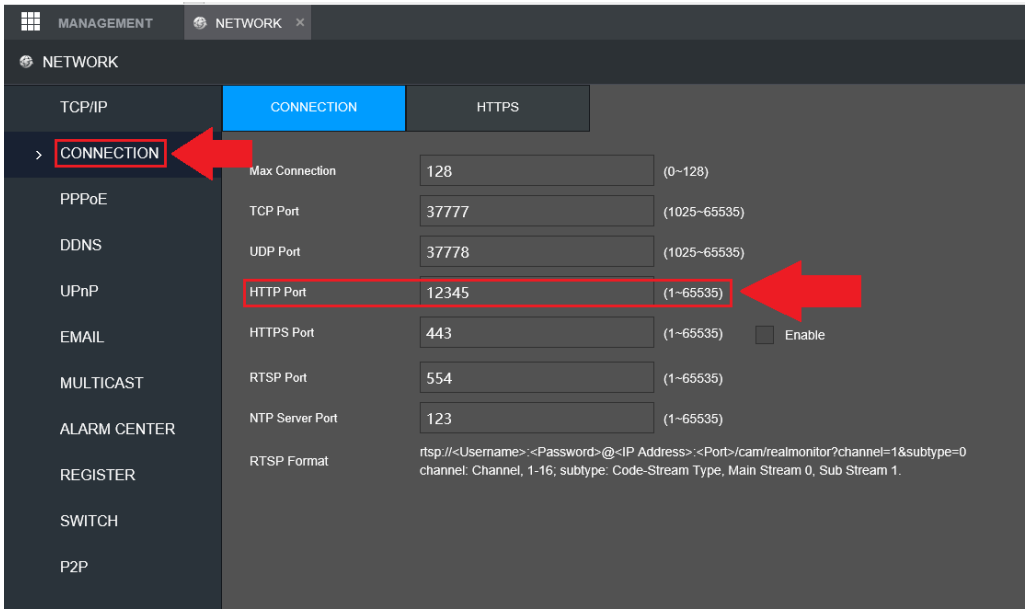
1. Log into the web UI and go to **Management>>Network>>Connection.** In the Connection tab, note the HTTP Port information for your NVR.



It is recommended to ensure the port number is at least 5 digits long to prevent any port conflicts. You can change the port to any 5-digit number that is less than 65535 (e.g. 12345) by clicking the number field and entering a new port number. Write it down, then click **Save**.

2. The system will need to reboot for this change to take effect. Click **OK**.

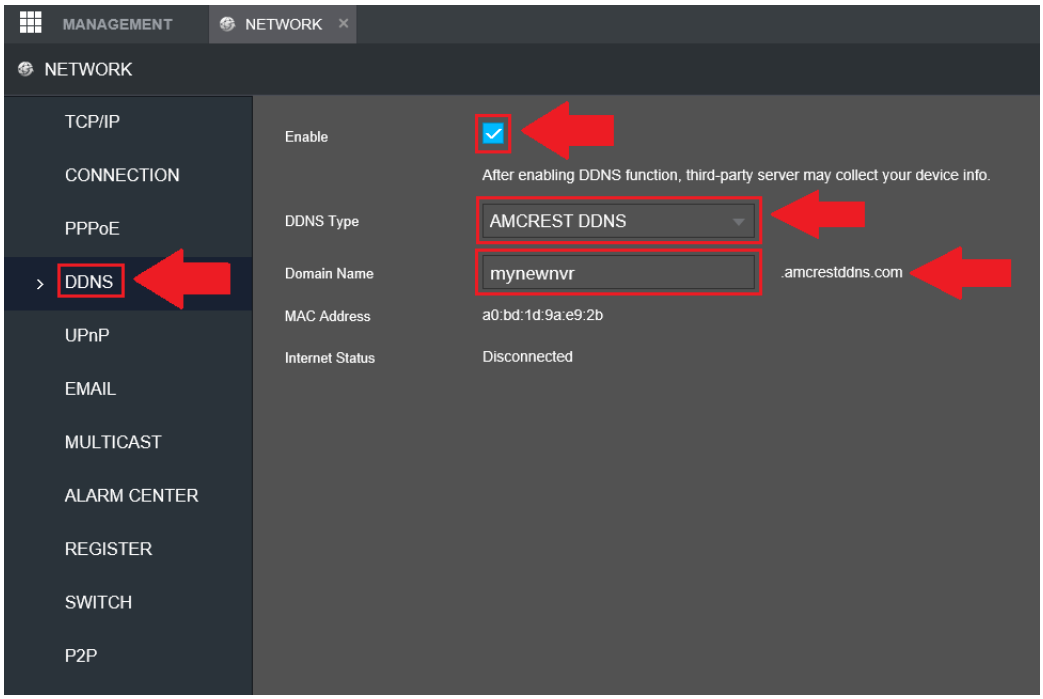
3. Once the NVR has come back online, log back into the web UI and navigate back to the Connection menu to verify the HTTP port has been updated properly.



4. Access your router's user interface and port forward the device using the HTTP port information displayed in the system. Every router's port forwarding protocols are unique. For more information on how to port forward your specific device, please visit portforward.com or refer to the user manual for your specific router.

Note: When port forwarding the NVR in your router, make sure to use the TCP, UDP and updated HTTP protocols displayed in the NVR. If DDNS is not an option, the device can be accessed remotely using the public IP address for your network and the HTTP port used that was port forwarded in your router. To locate your public IP address and verify the connectivity of your system, please visit: canyouseeme.org

5. Click on the **DDNS** menu located in the **Network** tab in the left panel. In the DDNS menu, click on the Enable checkbox to enable DDNS. Make sure the **AMCREST DDNS** type is selected and a domain name for the NVR (one you create) is entered in the Domain Name field. As an example, the Domain Name will be in the following format: mynewnvr.amcrestddns.com



Click **Save** once the DDNS information is entered.

Accessing the Device Remotely
After setting up the NVR in the previous steps provided, open a web browser and enter in the DDNS domain name address previously setup for your NVR.

For example, if the DDNS domain name is http://abc123456789.amcrestddns.com and your HTTP Port is 12345, the URL would be http://abc123456789.amcrestddns.com:12345

Remote access not working?

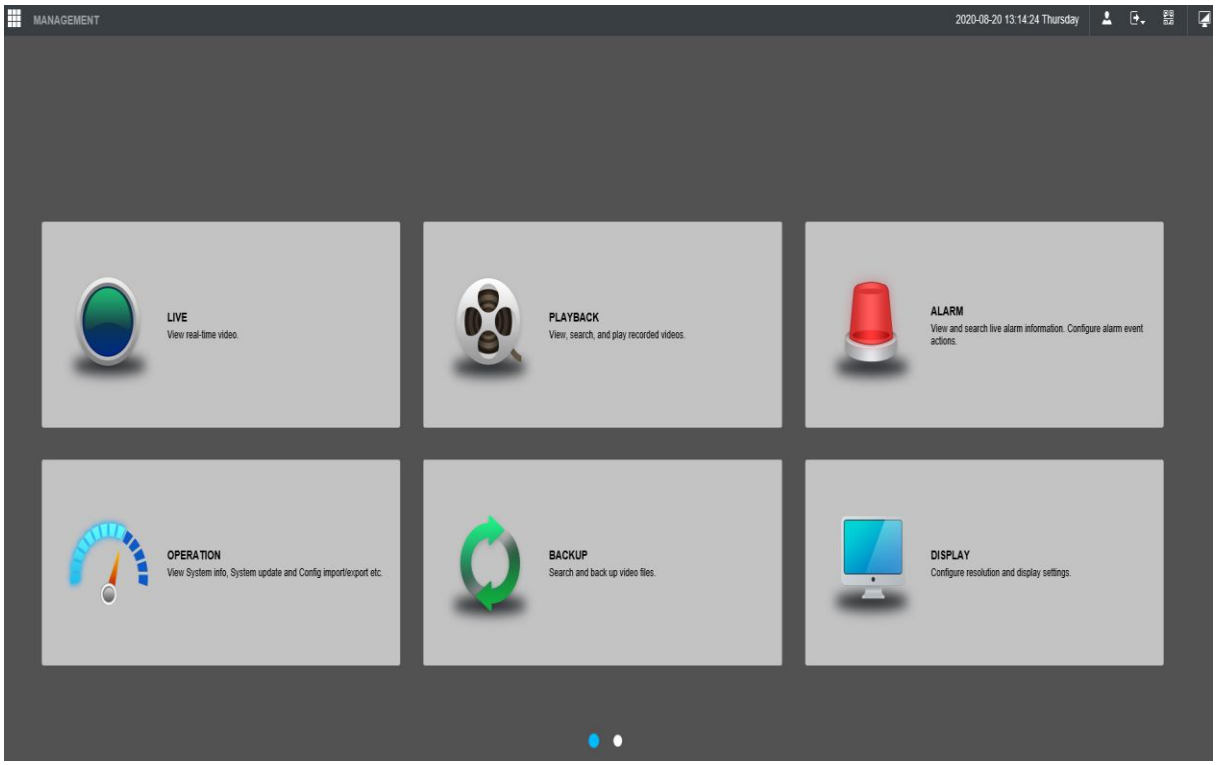
Please contact Amcrest Support via one of the following options:

Visit http://amcrest.com/contacts and use the email form

Call Amcrest Support using one of the following numbers
Toll Free: (888) 212-7538
International Callers (Outside of US): +1-713-893-8956
USA: 713-893-8956
Canada: 437888-0177
UK: 203-769-2757

Web Interface Walkthrough

The web interface will be the main hub for all of your NVR's features. This interface allows you to view manage and control every aspect of your device similarly to the built-in local user interface. This section provides a brief description of the items listed in this menu.



Management: This menu allows you to access camera settings and registration, network settings, storage options, system, and account management. For more information on these features or access to a full user manual, please visit https://amcrest.com/support

Live: This menu takes you to a live view interface. In this menu you can view real-time live video from all connected devices as well as access to Pan/Tilt/Zoom functions (if applicable), and other related live view settings for your device.
Playback: This menu allows you to view playback of motion detection and other recording type events. For more information on the features included in the playback menu, please refer to section, *"Accessing Playback".*
Alarm: This tab allows you to view and search live alarm information, configure alarm events and controls such as, Motion Detection, Audio Detection, Abnormality, or other related alarm features. For more information on the features listed in this menu, please refer to the full user manual which can be found at https://amcrest.com/support
Operation: This tab allows you to access system logs, current firmware/version information, import/export system config files, upgrade firmware, and other related system operation features. For more information on the items listed in this menu please refer to the full user manual which can be found at https://amcrest.com/support
Back Up: This tab allows you to back up information from your system onto an inserted USB flash drive. An external USB flash drive is needed to store information such as configuration files or other data related to your system.
Display: This tab allows you to configure resolution and display settings for your system. This includes tours and video output settings for your device.
Audio: This tab allows you to configure audio announcements and import audio files into your system. These audio announcements can be used as voice prompts within the system.
Note: For more detailed information on the items listed in the web user interface please refer to the full user manual for your device which can be found at https://amcrest.com/support

Upgrading the Firmware Using a Web User Interface.

1. Log into your NVR via a web browser and click on **Operation**.
2. In the **Operation** menu, click on **System Maintain** then click on the **Upgrade** tab.
3. Click on **Download the latest Firmware** button to access the firmware downloads page.
4. Choose your model device and download the firmware file.
5. In the **Upgrade** menu, click **Browse** to access the firmware file and load it into the system.
6. Click on **System Upgrade** and allow the system to upgrade. The system may reset after the firmware file has finished downloading. The system is now up to date.

Amcrest View Pro App Setup

The Amcrest View Pro app allows instant access to all live camera streams from any location. This is the primary application most users prefer when using Amcrest systems. The app supports a multitude of features and includes both a plug-and-play setup as well as a manual network setup.

The Amcrest View Pro app can be downloaded in both the App Store and Play Store.

Before the NVR can be accessed through the app using the easy plug-and-play method (P2P Setup), **P2P must be enabled on the NVR**.

Enabling P2P on the NVR

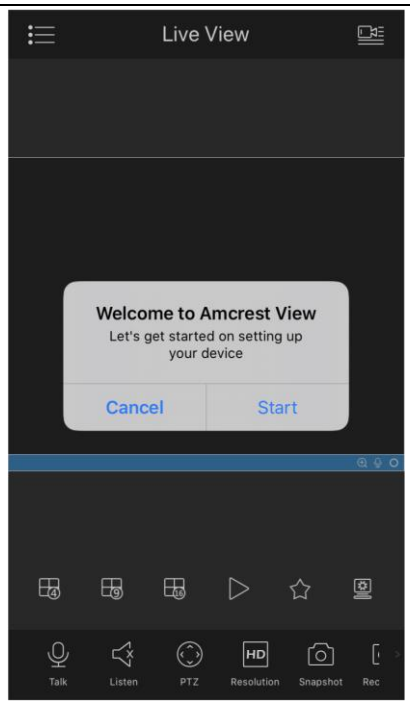
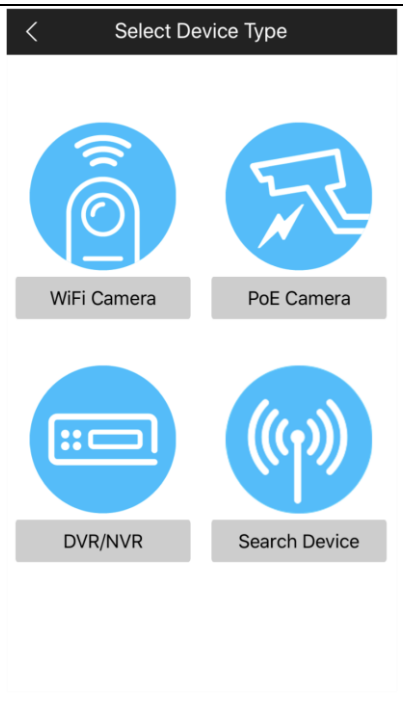
P2P should be enabled on your device by default, however, to check if P2P is enabled, please follow the information provided below.

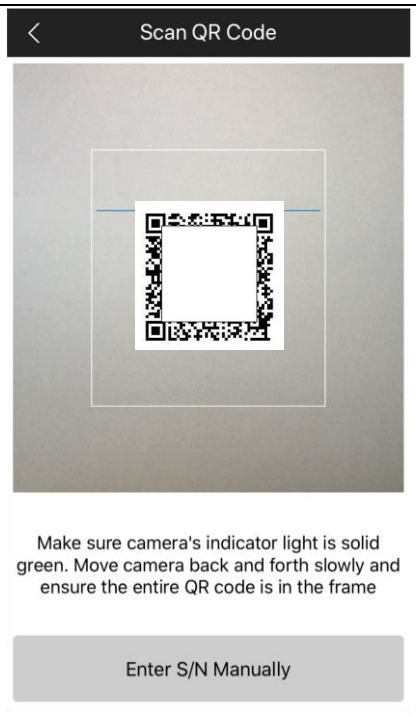
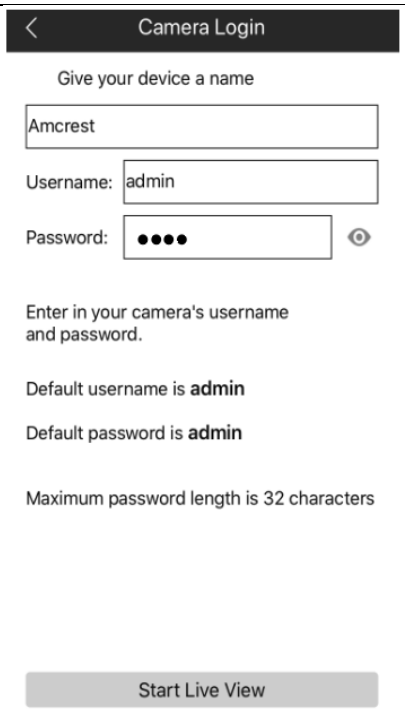
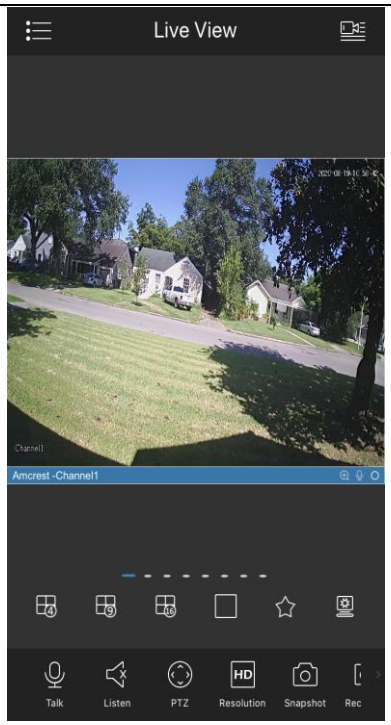
Log into your NVR and access the Main Menu.
In the **Management** section, click on **Network** then click on **P2P**. Ensure the Enable toggle switch is enabled and the P2P status says "Online". This indicates the P2P option is enabled.

Amcrest View Pro Setup

The following steps will continue the app setup process for an Android phone and, though the iPhone version of the app has slightly different steps, most of this process is identical and easy. Download and install the Amcrest View Pro app for the App Store or Google Play Store.

Open the app on your mobile device and allow the app to load.

		
3. Tap **"Start".**	4. Tap **"DVR/NVR"**	5. Tap **"P2P Connection"** **Note:** IP/Domain/DDNS can be used to establish a DDNS connection. For more information on how to setup a DDNS connection please visit https://amcrest.com/support

		
6. Scan the QR code. The QR code can be found on the serial tag along with the scannable barcode.	7. Create a name for the device and enter a username and password. The default username and password will be admin. Tap **"Start Live View"**.	8. Update the default password for the device and tap **"Start Live View"** to access the device in the app.

Note: To locate the serial number, you must either have physical access to the NVR or computer access to the web interface to access the P2P menu. The SN QR code will be the serial number for your device. For more information regarding the Amcrest View Pro app, please visit: https://amcrest.com/support

FCC Statement

1. This device complies with Part 15 of the FCC Rules. Operation is subject to the following two conditions: (1) this device may not cause harmful interference, and (2) this device must accept any interference received, including interference that may cause undesired operation.
2. The user's manual or instruction manual for an intentional or unintentional radiator shall caution the user that changes, or modifications not expressly approved by the party responsible for compliance could void the user's authority to operate the equipment. In cases where the manual is provided only in a form other than paper, such as on a computer disk or over the Internet, the information required by this section may be included in the manual in that alternative form, provided the user can reasonably be expected to have the capability to access information in that form.
3. (b) For a Class B digital device or peripheral, the instructions furnished the user shall include the following or similar statement, placed in a prominent location in the text of the manual: NOTE: This equipment has been tested and found to comply with the limits for a Class B digital device, pursuant to Part 15 of the FCC Rules. These limits are designed to provide reasonable protection against harmful interference in a residential installation. This equipment generates, uses and can radiate radio frequency energy and, if not installed and used in accordance with the instructions, may cause harmful interference to radio communications. However, there is no guarantee that interference will not occur in a particular installation. If this equipment does cause harmful interference to radio or television reception, which can be determined by turning the equipment off and on, the user is encouraged to try to correct the interference by one or more of the following measures:

-- Reorient or relocate the receiving antenna.

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

4. RF exposure warning

This equipment must be installed and operated in accordance with provided instructions and the antenna(s) used for this transmitter must be installed to provide a separation distance of at least 20 cm from all persons and must not be co-located or operating in conjunction with any other antenna or transmitter. End-users and installers must be provided with antenna installation instructions and transmitter operating conditions for satisfying RF exposure compliance.

IC Warning Statement

This device complies with Industry Canada's license-exempt RSSs. Operation is subject to the following two conditions:

(1) This device may not cause interference; and
(2) This device must accept any interference, including interference that may cause undesired operation of the device.

Le présent appareil est conforme aux CNR d'Industrie Canada applicables aux appareils radio exempts de licence. L'exploitation est autorisée aux deux conditions suivantes : (1) l'appareil ne doit pas produire de brouillage, et (2) l'utilisateur de l'appareil doit accepter tout brouillage radioélectrique subi, même si le brouillage est susceptible d'en compromettre le fonctionnement.

This equipment complies with IC RSS-102 radiation exposure limits set forth for an uncontrolled environment. This equipment should be installed and operated with a minimum distance of 20cm between the radiator and any part of your body.

Pour se conformer aux exigences de conformité CNR 102 RF exposition, une distance de séparation d'au moins 20 cm doit être maintenue entre l'antenne de cet appareil ettoutes les personnes.

References & Contact Information

To view setup videos for many of the steps outlined in this guide, go to http://amcrest.com/videos
For more supplemental information, a full user manual, or to view articles related to your device visit http://amcrest.com/support
For contact information please visit us at https://amcrest.com/contacts or reach out to us directly at 1-888-212-7538
This quick start guide is for reference only. Slight differences may be found in the user interface.
All the designs and software here are subject to change without prior written notice.
All trademarks and registered trademarks mentioned are the properties of their respective owners.