A2 Network Video Recorder

User Manual

Version 1.0.0.

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Welcome

Thank you for purchasing an Amcrest NVR!

This user manual is designed to be a reference tool for the installation and use of your NVR. The information provided in this manual may be subject to change without notice. At Amcrest, we want to ensure the safety of our customers, their loved ones, homes, and businesses each product receives a full 1-year warranty and lifetime support provided directly from Amcrest. Thank you again for being a valued Amcrest customer.

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.

Overview

Amcrest NVRs use a Linux based operating system to maintain reliable operation. The AI features listed on the NVR include, “Face Detection, IVS, People Counting, Heat Map, and SMD (Smart Motion Detection). The features available for use in the NVR will be dependent on the type of camera used on the system as the **AI features are controlled by the camera only.** This device allows the user to implement the AI features from an Amcrest AI camera into the NVR and store the recorded events.

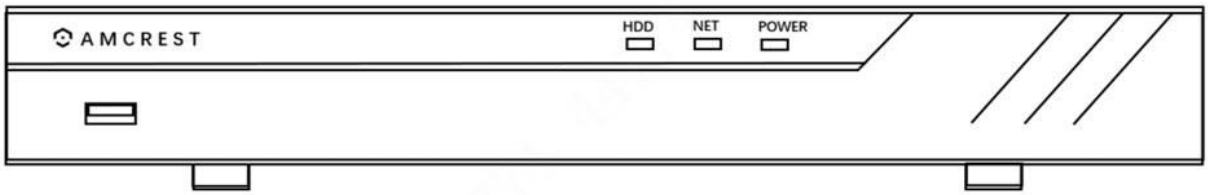
Check Hardware

When you receive the NVR system in the packaging, unpack it, and check all sides of the device to see if there is any physical damage. The protective materials used for the packaging can 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 further.

On the NVR, check that the label on the NVR is not damaged. The serial number of the unit may be needed if requesting support and is provides a QR code for a quick means of adding the device to the Amcrest View Pro app on your mobile device.

Front Panel

Applicable for A2 Series NVRs

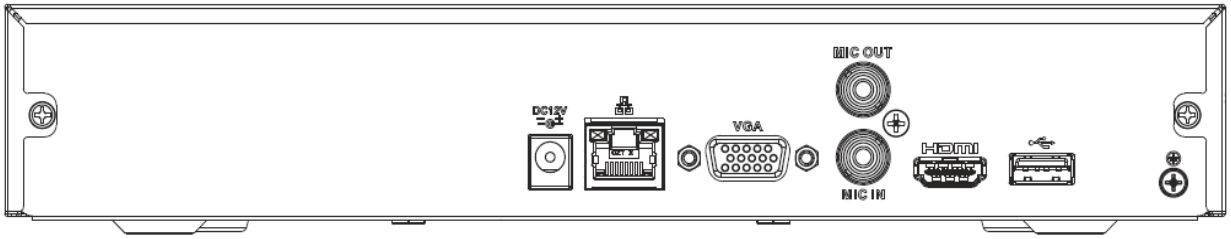


Icon	Name	Function
NET	Network Abnormality	When a network error occurs or there is no network connection, this light turns red.
PWR	Power indicator	When the NVR is on, this light remains on.
HDD	HDD abnormal indicator light	When an HDD error occurs, or the HDD capacity is below the specified threshold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

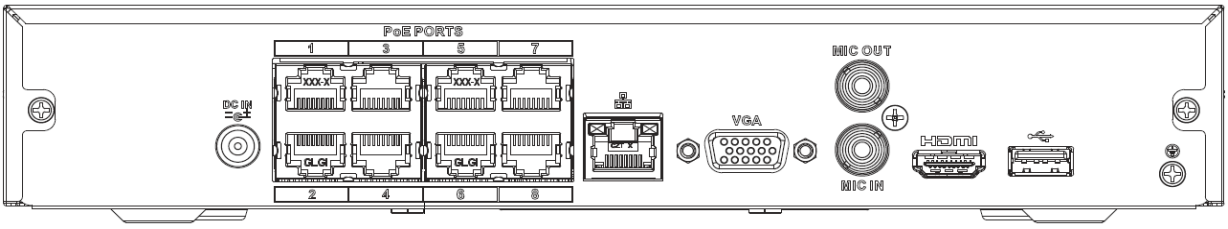
Rear Panel

The rear panel of the NVR may differ model to model.

Non-PoE ports



PoE Ports.



	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.

Connection & Setup

The following instructions will show you how to set up the cables for the NVR, cameras (PoE and Wi-Fi), as well as a monitor or TV screen.

To set up the cable connections, there are 5 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 to power.

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 have 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.

Hard Drive Installation

Hard drives are typically sold separately, when installing a hard drive to the device, please make sure to use a hard drive with 7200rpm or higher. Please follow the instructions below to install a hard disk drive (HDD).

All the figures listed below are for reference only. Slight differences may be found on the front or rear panel.

The NVR has connections for only 1 hard drive inside the case and the hard drive must be no bigger than 10TB (Terabytes).

To install your hard drive, the following is needed:

A medium sized (regular) Phillips-head screwdriver - *not included*
A hard drive - *not included (unless you purchased a 'kit' that **does** have one included)*
Four hard drive fastening screws - *included*

Note: Before installing the hard drive, make sure the NVR is powered off and completely disconnected from power.

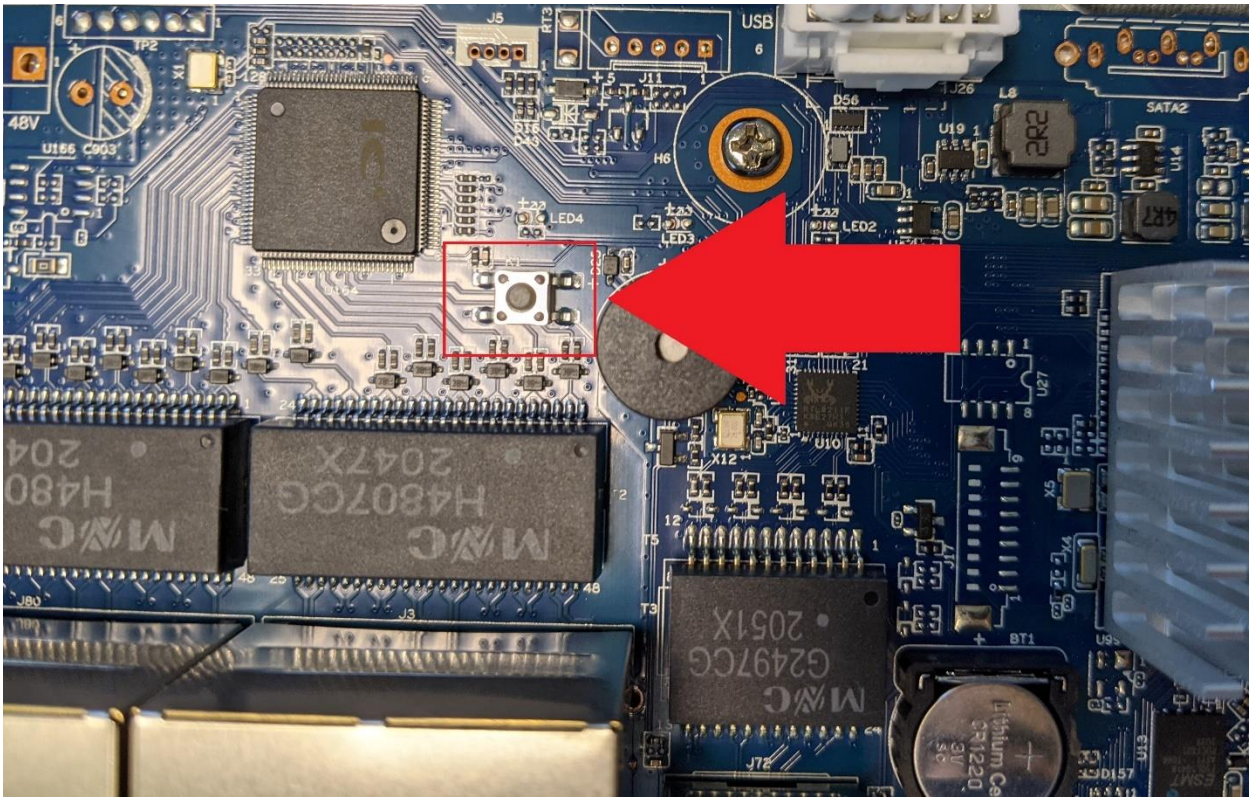
		
1. Loosen the screws on the upper cover and side panel.	2. Attach four screws in the HDD (Turn three times.)	3. Place the HDD in accordance with the four holes on the bottom.
		
4. Turn the device over secure the screws.	5. Connect the HDD data cable and power cable to the HDD.	6. Attach the cover onto the NVR and secure it using the screws.

Once the hard drive is installed, turn on the NVR. If the hard drive for your NVR was not setup properly you may hear a beeping noise. This indicates the NVR does not have the proper connection with your hard drive.

Factory Reset Procedures

A factory reset will revert the device back to its original factory settings. To begin the process, you will need to remove the NVR cover. Use a Phillips head screwdriver to remove the screws on the back/sides of the NVR. Once the screws have been removed, lift the lid to expose the NVR's motherboard. Please make sure the NVR is powered on as well to complete the process.

On the motherboard you will notice a small black button. This is the factory reset switch for your NVR:



To factory reset the NVR, press, and hold the factory reset switch for 4 – 5 seconds and unplug the power adapter. Once power is removed from the unit, press, and hold the factory reset switch for an additional 4 - 5 seconds and power plug the adapter back into the unit. Continue pressing the factory reset button until you hear a beep and release. The device will be reset to its original factory settings.

Device Installation

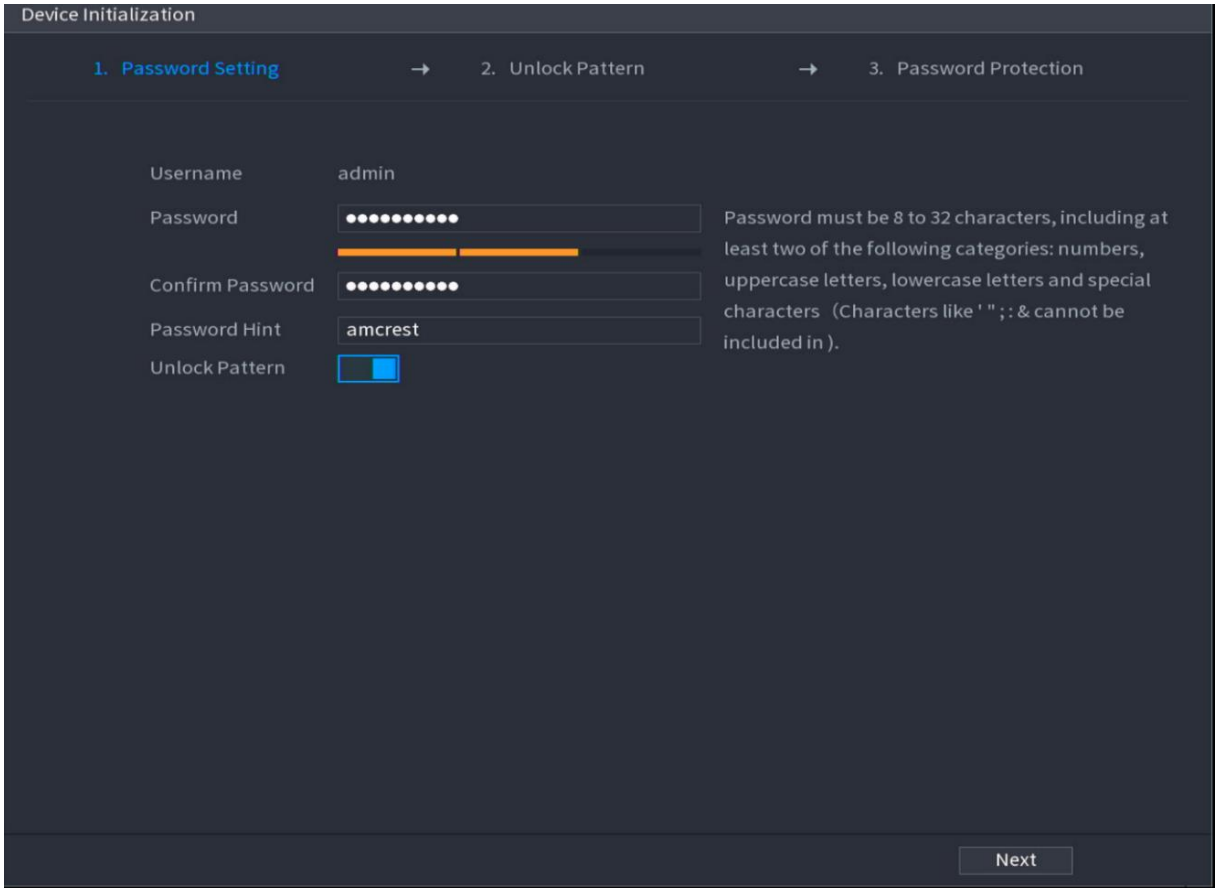
After applying power to the NVR, the system will turn on. Allow the NVR to finish loading. The **Device Initialization** screen will appear. Select your location, language, and video standard then click **Next** to continue.

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.

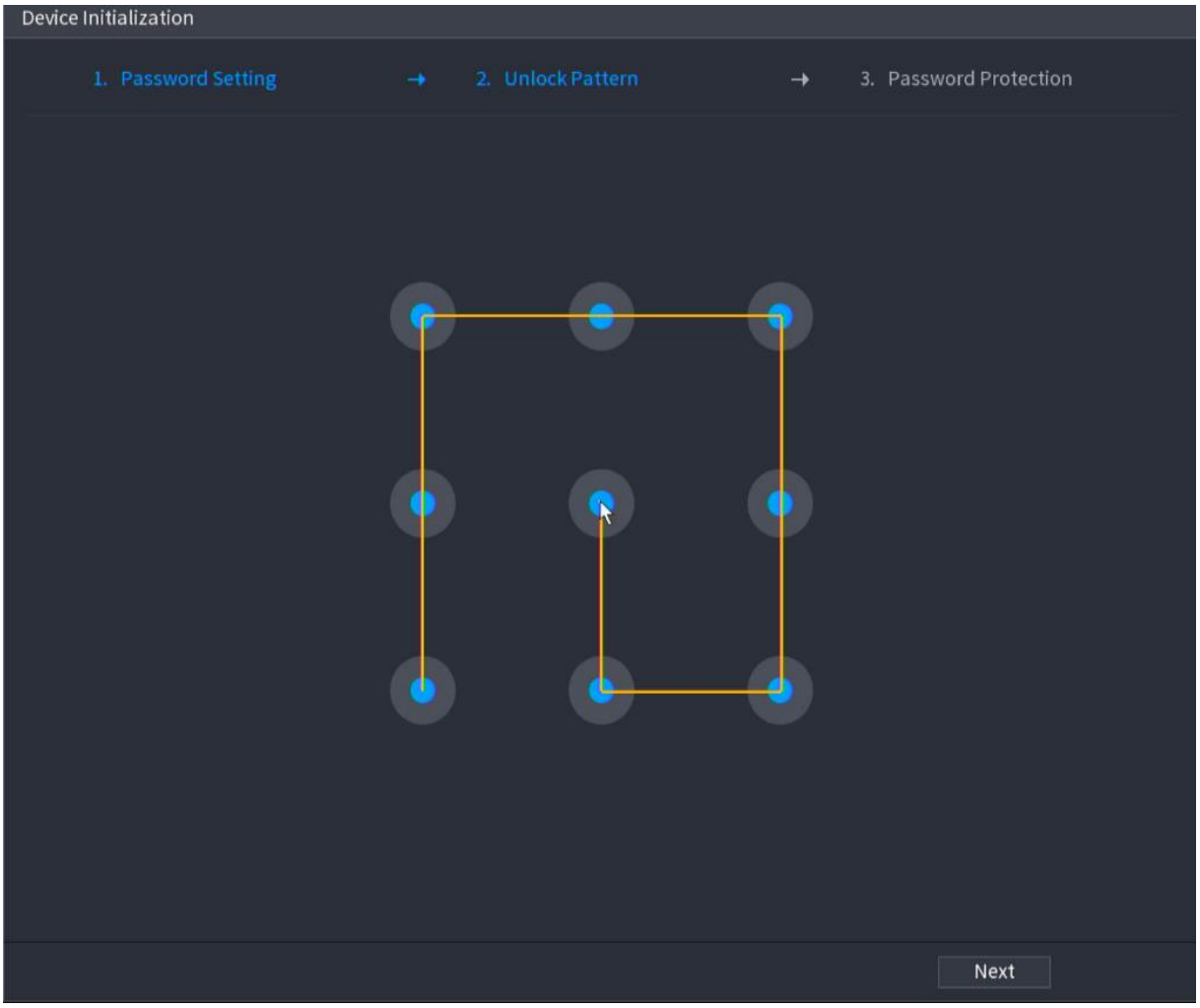
Note: Please do not use special symbols like ‘ ‘ ; : &



Once you have entered a new password for your device, confirm the password in the next field. A hint for the password is optional but is recommended in case you forget the password. You can also disable or enable the unlock pattern toggle switch as this feature is optional. Click **Next**.

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.

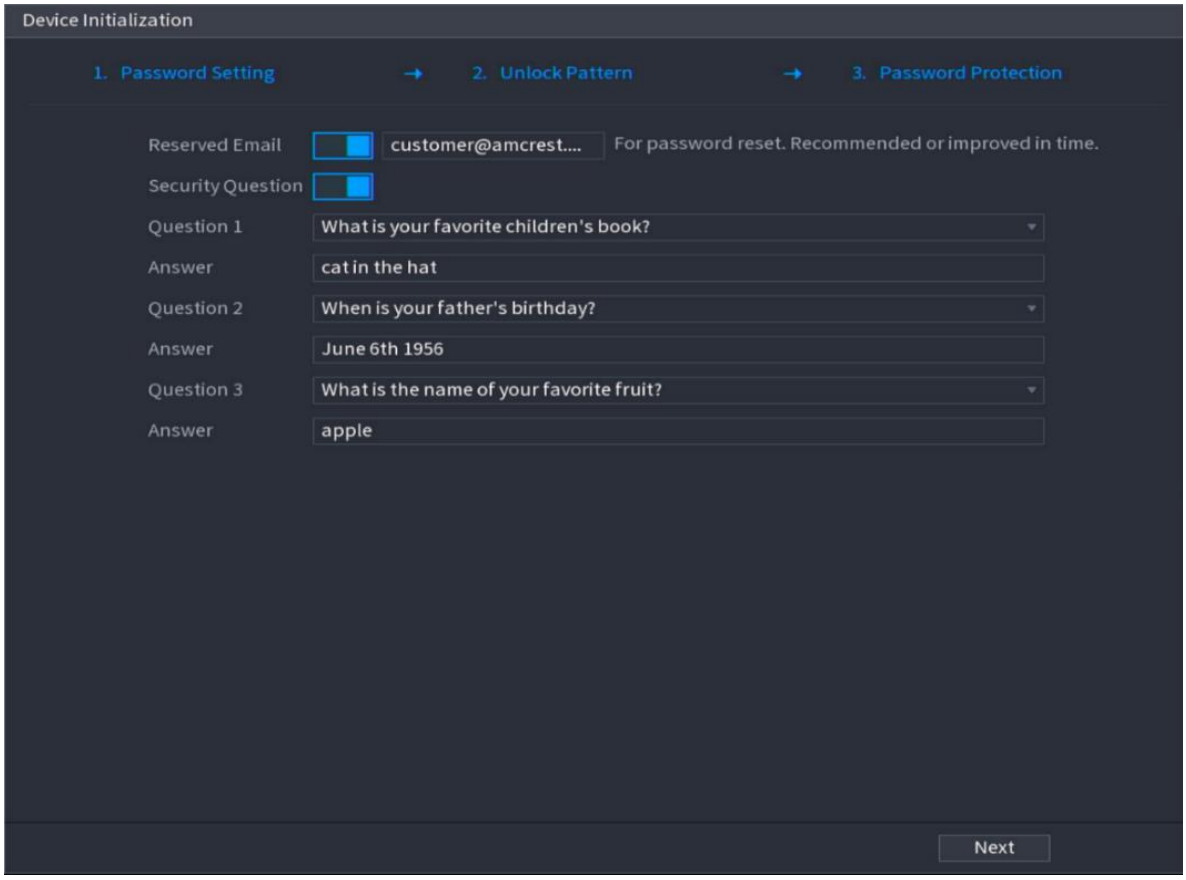


If you have assigned an unlock pattern, you will need to draw the pattern again to confirm your assigned unlock pattern.

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 **Next** 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 network, P2P, camera, and hard drive (HDD) settings.

Network

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**. It is highly recommended to make sure the IP is set as static. To set the NVR to a static IP address, click on "**Modify**" and disable the DHCP toggle switch. Click **Save**. This will set the network mode to **Static**.

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. Click **Next**.

P2P

The next screen that appears is the P2P screen. This screen allows you to connect your NVR to your mobile device using the Amcrest View Pro App. Ensure the P2P toggle switch is enabled and the P2P status reads

"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 **Next**.

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 **Search Device** 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 registered 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. Once the camera(s) have been successfully added, Click **Next.**

HDD Manager

The next screen will be the hard drive manager screen. This screen allows the user to verify the hard drive is being read by the device as well as provides an option to format. Please note, it is highly recommended to format the hard drive before proceeding.

To format the hard drive, select the hard drive you would like to format from the list and click **Format**.

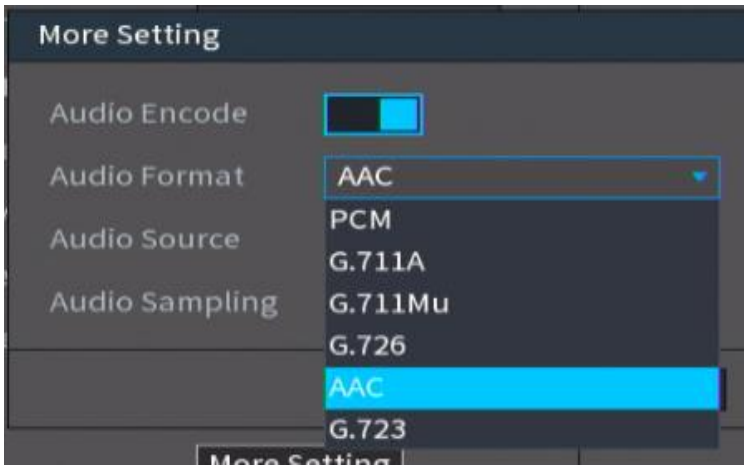
Toggle the **Clear HDD Database** toggle switch on and click **Save**. Enter the password for the NVR and click **Save**. Once the hard drive has been successfully formatted click **Save**.

Audio Ports

Device Connection

Connect an RCA microphone to the "Audio In" port on the back of the device. If using an audio out device, such as an RCA speaker, plug the speaker into the "Audio Out" port on the back of the device.

Most audio codecs will use ACC as a default audio codec. To adjust audio settings, log into your NVR and access the Encode menu for the specific device and click on "**More Setting**" (Camera > Encode > More Setting). Verify the codec and settings are correct and click **Save** to Save the audio settings.



Mouse Operation

Please refer to the following sheet for mouse operation instructions.

Left click		When you have selected one menu item, left mouse click to view the menu content.
		Modify a checkbox or motion detection status.
		Click a combo box to show the dropdown list
		In an input box, you can select different input methods. Left click the corresponding button on the panel to input a numeral/English character. (small/capitalized). Here ← stands for backspace. __ stands for space. In English input mode: _ stands for inputting a space icon and ← stands for deleting the previous character.  In numeral input mode: _ stands for clear and ← stands for deleting the previous numeral.
Double left		Implement special control operations such as double click one item in the file list to playback the video.
Mouse click		In multiple-window mode, double left click one channel to view in full-screen. Double left click the current video again to go back to previous multiple-window mode.
Right click		In real-time monitor mode, this pops up a shortcut menu.
		Exit the current menu without saving any modifications.
		In a numeral input box: Increase or decrease the numeral value.

Scroll middle button	Switch the items in the check box.
	Page up or page down
Move mouse	Select current control or move control
Drag mouse	Select the motion detection zone
	Select the privacy mask zone

Video Wall

Please note the displayed window amount may vary depending on how many channels your NVR can support. The following figure is for reference only.

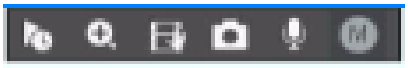


Please note, the video wall menu will also provide a separate portion that will display the current bit rate of each channel. The bitrate for each device is measured in Kb/S.

1		Recording status	**3**		Direct PoE Connection
2		Motion detection	**4**		Camera lock

Preview Control Interface

Move the mouse to the top center of the video of the current channel, and the system pops up the preview control interface. If your mouse stays in this area for more than 6 seconds and preforms no operation, the control bar automatically hides.



Instant Playback

Click this button to instantly playback any previous motion detection events that were captured by the camera. Please note, a hard drive must be installed in the device to playback any recorded events or snapshots.

Digital Zoom

This option allows you to digitally zoom in on a specific area on the live view interface. To use digital zoom, click the digital zoom button and click an area on the live view screen. Drag the mouse to select a zone and release. The live view will zoom in on the set area. To exit digital zoom, right click on the live view screen to return to its original view.

Manual Record

This option allows you to manually record video. Please note, the NVR can only record videos of a single channel at a time, if multiple channels are enabled, no footage will be retained. To manually record video, insert a USB flash drive into a USB port on the NVR and click on the manual record button. Click on the manual record button again to stop recording. The recording will be Saved to the USB flash drive.

Manual Snapshot

Like the manual record button, this option allows you to manually snapshots. To manually take a snapshot, insert a USB flash drive into a USB port on the NVR and click on the manual snapshot button. The snapshot will be Saved to the USB flash drive.

Audio talk

This option allows for bidirectional talk. Please note, an external microphone and speaker will need to be applied to the audio in and audio out ports on the back of the NVR for this to function. To activate, click on the audio talk button and use an external RCA microphone and speaker to talk. To disable this function, click on the audio talk button again.

Switch Stream

This option allows the device to switch between main stream and sub stream feeds. Please note, switching to a sub stream feed will provide less quality than a main stream feed.

Adding Additional Devices

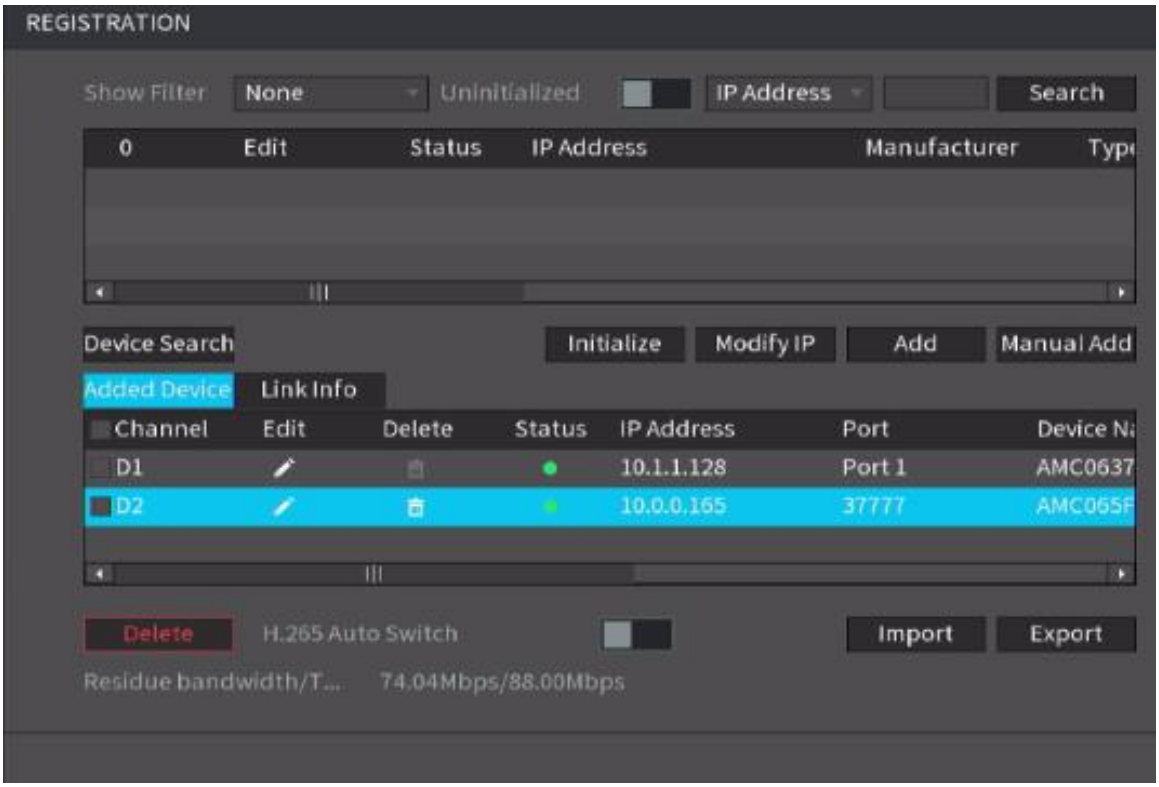
To add multiple devices from the video wall interface. Hover the mouse over the channel you would like to select and click the (+) icon.



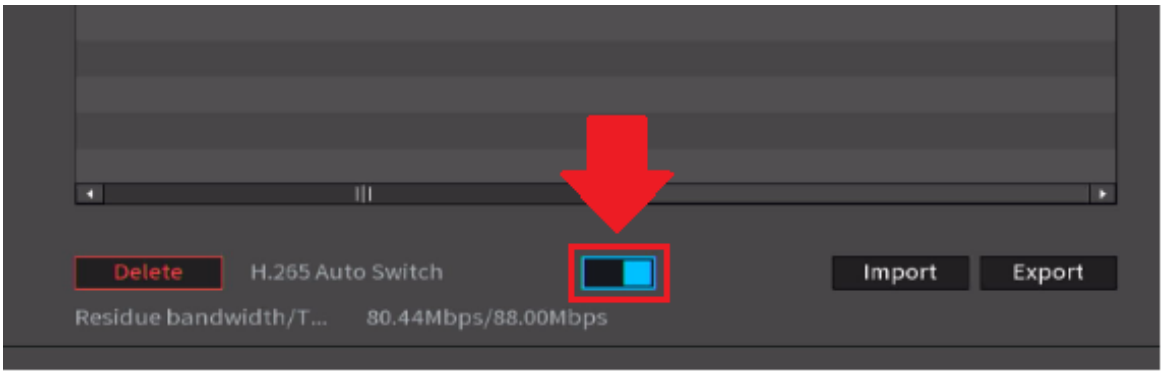
This will take you to a camera registration screen. Click on **Device Search** or **Manual Add** to begin adding the device. If using Device Search, please make sure the camera is on the same network as the NVR before searching. Once the camera has been detected, click on the device to highlight it, and click **Add**.

Please note, if the device is not registering to the device, the username or password may need to be updated for the camera. This can be resolved by right clicking on the screen and choosing **Camera Registration**.

In the registration screen, click on the **Edit** icon (pencil) and ensure the username and password are correct and click **Connect**. Once this is verified click **Save**. The status indicator for the camera should turn green, indicating the camera has been added successfully.



Note: For maximum compatibility when accessing your camera in a web browser or third-party applications, our H.265 compatible products will be **factory defaulted to H.264** but for increased performance, the camera's settings can be upgraded to H.265 compression. H.265 provides a more advanced technology than H.264 and allows the device to reduce file size which ultimately helps to reduce required bandwidth without sacrificing frames per second or resolution. To activate H.265 compression, click on the **H.265 Auto Switch** to switch the camera to H.265 compression.

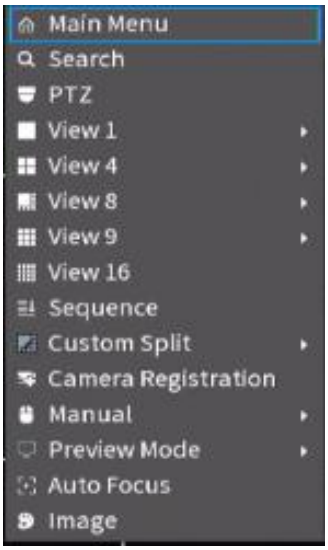


For more information on H.265 compression, please visit: amcrest.com/support

To exit the registration menu, right click on the video wall to display the connected devices. The process can be repeated to add additional cameras if needed. To add the device manually, click **Manual Add** and enter the information for your camera into the interface. Click **Save** to activate the camera.

Shortcut Menu

To access the shortcut menu for the device, right click on the video wall screen to access the shortcut options menu.



Main Menu: Click this option to exit the video wall and access the main menu options the NVR.
Search: Click this option to access the playback interface.
PTZ: Click this option to access the pan/tilt/zoom interface. Please note, this option is only applicable if a PTZ device is connected to the NVR. PTZ allows you to control the PTZ direction, speed, zoom, focus, iris, preset, tour, scan, pattern, aux function, light and wiper, rotation, etc.

Full Screen: Click the full screen option to display a selected feed in full screen.

Speed: Controls the PTZ movement speed. Its values can range from 1, being the slowest, and 8 being the fastest.
Zoom: Use the "+" and "-"icons to zoom in or zoom out on the interface.
Focus: Use the "+" and "-"icons to focus the image.
Iris: Use the "+" and "-" icons to control the iris behavior of the camera.
PTZ Trace: Provides the ability to store a sequence of camera movements as a preset.



In the middle of the eight direction arrows, there is a 3D intelligent positioning key. Please make sure your protocol supports this function and you need to use the mouse to control it. Click this key and the system goes back to the single screen mode. Drag the mouse in the screen to adjust the section size. The dragged zone supports 4X to 16X speeds. The smaller zone you dragged, the higher the speed.

Name	Function key	Function	Function key	Function
Zoom	-	Out	+	In
Focus	-	Near	+	Far
Iris	-	Close	+	Open

Click the “>” icon to open the menu. You can set preset, tour, pattern, scan, etc.



Refer to the following sheet for detailed information.

Please note the above interface may vary due to different protocols. The button is grey and cannot be selected if the current function is null.

Right click or click the ESC button on the front panel to go back

Icon	Function	Icon	Function
	Preset		Auto Pan
	Tour		Flip
	Pattern		Reset
	Auto Scan		PTZ Settings

Call PTZ Function

Preset

Input the Preset value and then click to call a preset. Click again to stop the call.

Call Tour

Input the Tour value and then click to call a tour. Click again to the stop call.

Call Pattern

Input the Pattern value and then click to call a pattern. Click again to stop the call.

Call Scan

Input the Scan value and then click to call a scan. Click again to stop the call.

Auto Pan

Click to enable the camera to enable any auto pan presets set in the device. Click again to disable this preset.

Flip

Click to enable the camera to flip its image.

Reset

Click to return to exit the current PTZ operation.

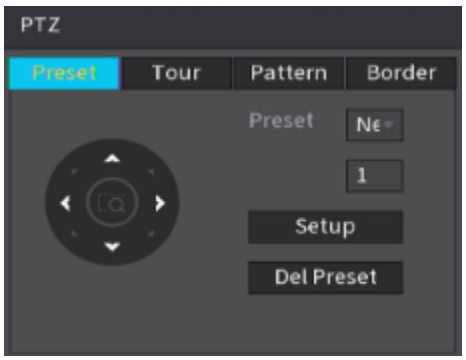
PTZ Function Setup

Click to go to the following interface to set preset, tour, pattern, and scan.

Preset Setup

Click the Preset button and use the eight direction arrows to adjust camera to the proper position.

Click the box next to Preset and then input the preset number. Click the Set button to Save the current preset.

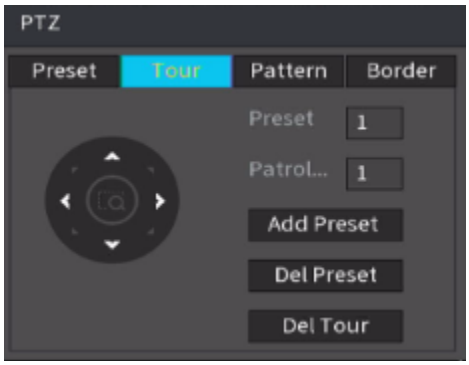


Tour Setup

Click the **Tour** tab. Input tour value and preset No. Click the Add preset button to add the current preset to the tour.

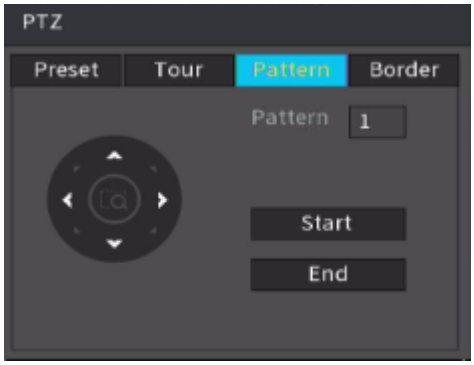
Tips

Repeat the above steps to add more presets to the tour. Click the Del preset button to remove it from the tour. Please note some protocols do not support the delete preset function.



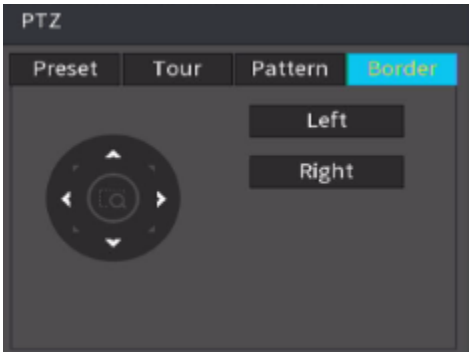
Pattern Setup

Click the **Pattern** button and input pattern number.
Click the **Begin** button to start the direction operation. Or you can go back to the screen below to operate zoom/focus/iris/direction operation.
Click the **End** button.



Scan Setup

Click the **Scan** button.
Use the direction buttons to set the camera's left limit and then click the **Left** button. Use the direction buttons to set the camera's right limit and then click the **Right** button. Now the scan setup process is complete.



View 1: View a single device in the video wall.
View 4: View 4 simultaneous devices in the video wall. The same concept will apply to any other View (Window Split) options in this menu.
Sequence: Allows the user to display in which sequence the cameras will be displayed in the video wall.
Custom Split: Allows the user to customize how the splits will be arranged on the video wall.

Camera Registration: This option allows the user to register additional devices to the NVR.
Manual: Allows the user to access record and alarm output options.
Preview Mode: Allows the user to switch between a general mode and AI mode (applicable only to AI connected cameras.
Auto Focus: Click this option to auto focus the selected device.

Web Operation

This device features the latest in JavaScript technology which allows you to access your device via a wide variety of web browsers including, Google Chrome, Firefox, Safari and other mainstream web browser via your PC or Mac computer. However, as a primary means of accessing the web user interface for your Amcrest device in a web browser, **we highly recommend using Internet Explorer** to access your device's web user interface as most modern browsers may provide certain limitations when accessing your device via a web browser.

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.

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.

The following must be considered before accessing the web user interface:
*You must access the NVR's web interface with its **IP address**.*
*You must install the Amcrest web **browser plugin** If using Internet Explorer (Recommended)*
The NVR can be accessed using Chrome and other browsers, however, some features, may be compromised.

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

If using a web browser, there are 2 ways to access the NVR's IP address:
(1) **Amcrest IP Config**
(2) **Built-in interface**

Amcrest IP Config Tool Method

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.

Built-in 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.

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.

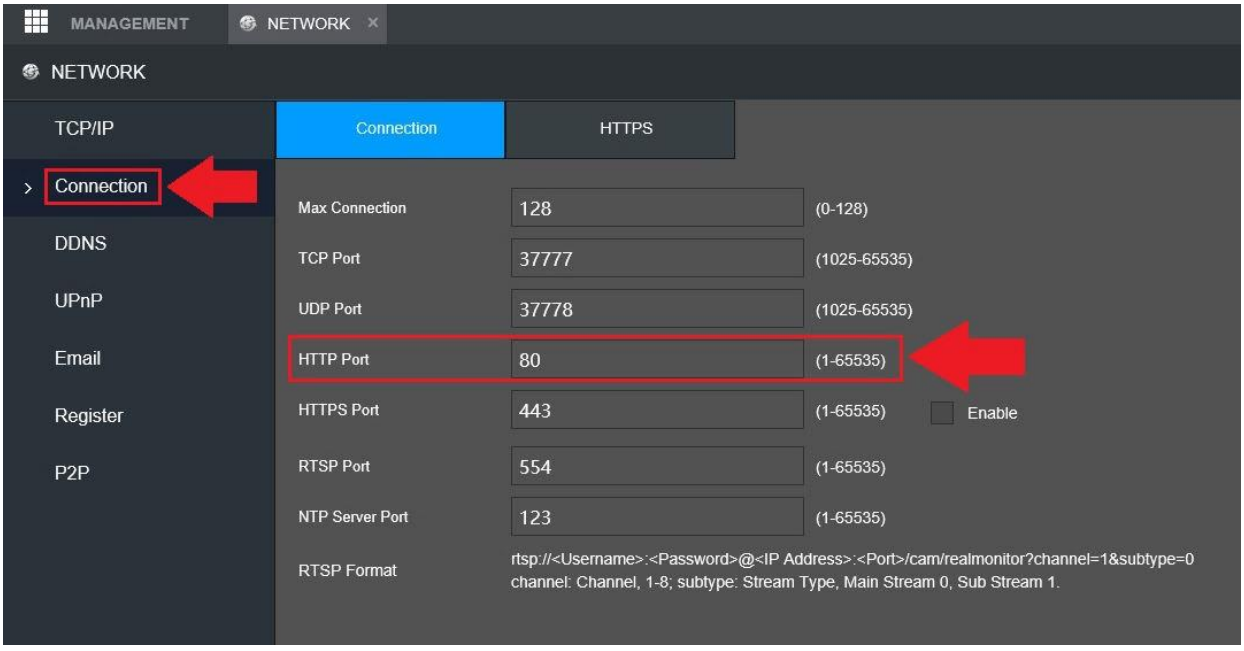
Accessing the Web User Interface Remotely

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.

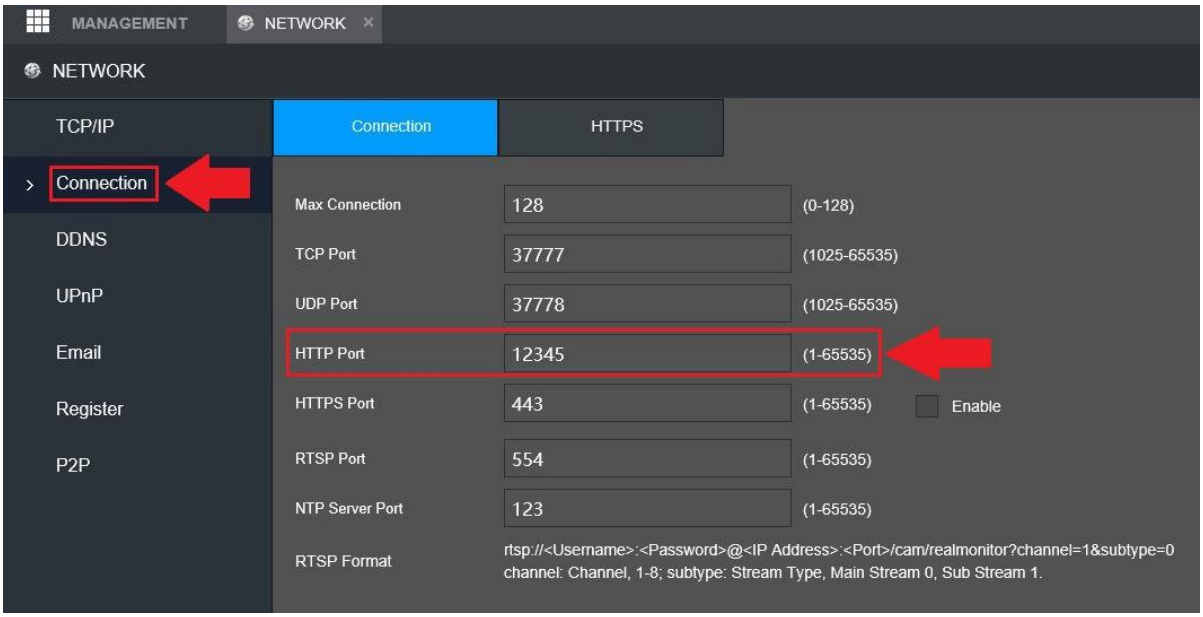
Below is a step-by-step walk through which details how to setup the NVR for remote web access using DDNS.

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 **OK**.

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

Please contact Amcrest Support via one of the following options:

Visit http://amcrest.com/contact 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

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 **Save** 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.

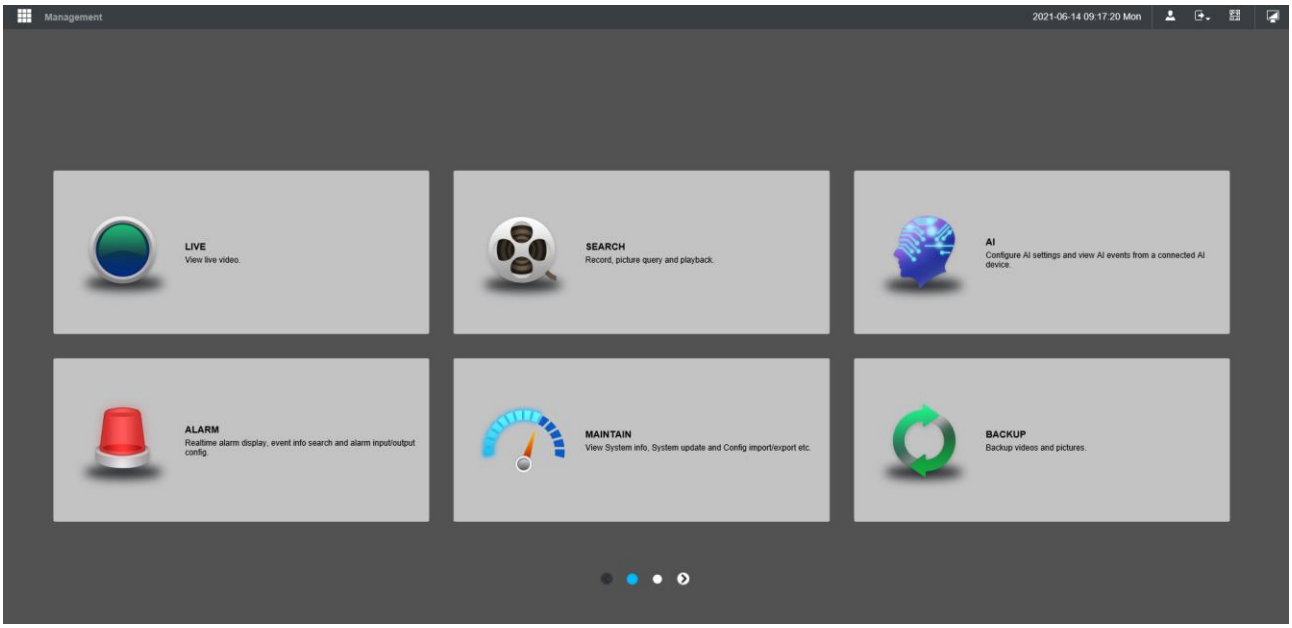
To adjust the bitrate, access the **Encode** menu and click on the **Bit Rate (Kb/S)** dropdown menu. A list of preset bitrates will be displayed as well as a **Customized** selection which will allow you to set a customized bitrate if needed.

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 **Save** to save the new bitrate settings.

Main Menu



Below are short descriptions for each of the menu items on the main menu:
LIVE: Access the live view screen and display a video wall for each connected device.
SEARCH: Search and playback recorded video that is stored on the hard drive.
AI: Configure AI settings and view AI events from a connected AI device. Please note, if you are using an AI camera the AI features will not be available as the features in this menu are controlled by the camera.
ALARM: View and configure live alarm information and notifications sent by the device.
MAINTAIN: View system information, update, and configuration import/export settings, etc.
BACKUP: Search and backup video data via an external USB or flash drive.

DISPLAY: Configure resolution and display output settings.
AUDIO: Schedule, manage, and import audio announcements and files.

Management

CAMERA: Review or edit settings for each camera, including video settings (e.g. quality, bit rate, color, etc.).
NETWORK: Review or edit network settings for the NVR (e.g. email, DDNS, UPnP, etc.)
STORAGE: Review or edit storage parameters and settings. (e.g. motion detection, alarm, etc.). Set HDD detection as well as setup FTP settings.
SYSTEM: Review or edit system parameters or configuration, including system maintenance, factory resets and firmware upgrades.
SECURITY: Review and configure trusted and blocked sites using the onboard IP filter (Firewall).
ACCOUNT: Review admin accounts and add new users to device. (e.g. ONVIF users).

Camera

This option allows the user to access and modify image and encode settings as well as modify the name of a device and add new devices into the system.

Remote Device

This menu allows you to view the device status, firmware version, as well as update firmware for a device. Please make sure the cameras are on the same network as the NVR during setup. To begin adding a device, click the **Device Search** button, to view a list of connected cameras. Select a device or devices from the list and click **Add** to begin registering them into the system.

If you would like to add a device, manually click on **Manual Add** and enter the requested device credentials into the system. Please make sure the device is on the same network segment as the NVR before manually adding it into the system.

Once the camera has been added, click on the **Edit** (pencil icon) in the Added Device list and verify the password for the camera is correct. When the correct password has been entered, click **Save** then in the **Added Device** menu, click Refresh. The status light for the device should turn from red to green indicating it has been properly registered to the NVR.

The web user interface, (web UI) for the camera can be accessed directly from the remote device menu. Click on the  icon located in the Webpage column and enter the login credentials for the camera. Click **Login**. It is highly recommended to set the camera with a static IP to avoid the IP address from changing in the camera. This may result in the camera becoming unavailable in the NVR. For more information on how to set a static IP please visit amcrest.com/staticIP

Update

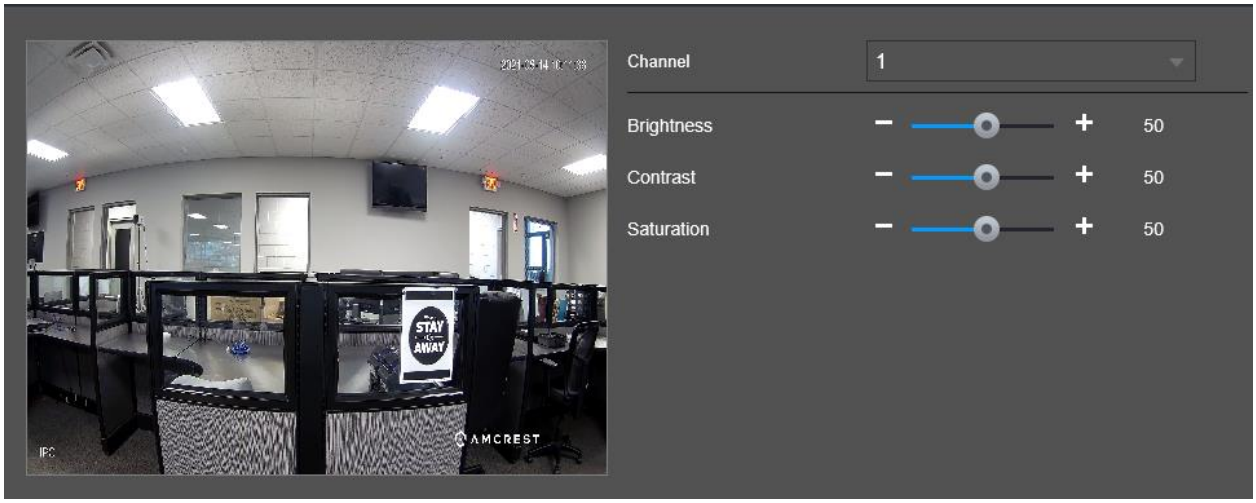
The **Update** tab allows the user to update firmware for a connected device. To access the latest firmware for your camera, please visit amcrest.com/firmware
For more information on how to upgrade the firmware for your camera using this tab, please refer to the information provided below.

1. Download the firmware for your camera.
2. Click **Browse** then locate and import the firmware into the interface.
3. Select the device from the Camera Update interface and click **Online Update**. Please note, if the camera is actively recording, recording will need to be disabled or the update may fail. If the camera is recording, click **Save** to disable the recording and begin upgrading the firmware.
4. Once updated, a prompt should be displayed indicating the update is successful.

Note: The recommended method for updating the camera on a camera is through the camera's actual web user interface.

Image

The **Image** tab allows the user to adjust image settings such as, brightness, contrast, saturation, etc. The Below is a screenshot of this menu:



Below is a description of the
Channel: In the **Channel** list, select the channel that you want to configure.
Cable Type: In the **Cable Type** list, select the cable type that the camera uses.
Brightness: Adjusts the image brightness. The bigger the value is, the brighter the image will become. You can adjust this value when the image is dark or bright. However, the image is likely to become dim if the value is too big. The value ranges from 0 to 100. The default value is 50. The recommended range is between 40 and 60.
Contrast: Adjusts the image contrast. The bigger the value is, the more obvious the contrast between the light area and dark area will become. You can adjust this value when the contrast is not obvious. However,

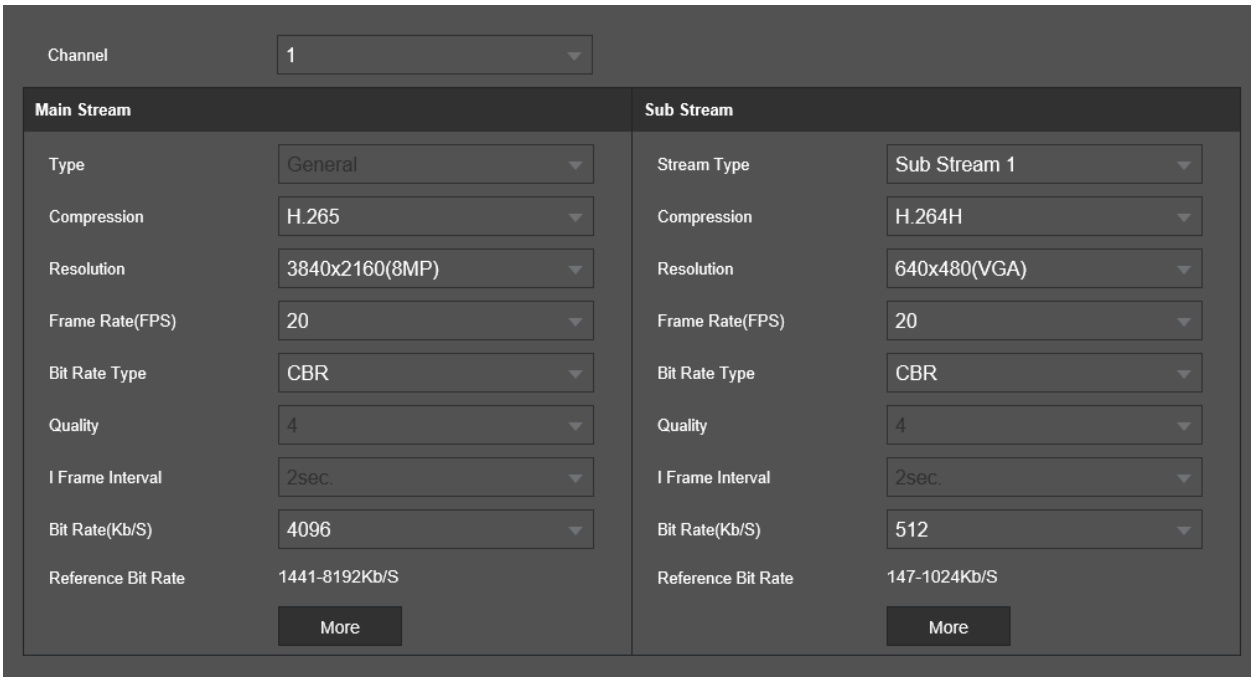
if the value is too big, the dark area is likely to become darker and the light area over exposed. If the value is too small, the image is likely to become dim. The value ranges from 0 to 100. The default value is 50. The recommended range is between 40 and 60.
Saturation: Adjusts the color shades. The bigger the value, the lighter the color will become. This value does not influence the general image lightness. The value ranges from 0 to 100. The default value is 50. The recommended range is between 40 and 60.

To refresh the interface, click **Refresh**. To Save the image settings, click **Save**.

Encode

This tab is used to set the audio/video encoding settings for each channel. The interface will display each stream (Main Stream and Sub Stream) depending on the capabilities of the connected device.

See below for a screenshot of the tab:



Below is an explanation of the fields on the Encode settings screen:

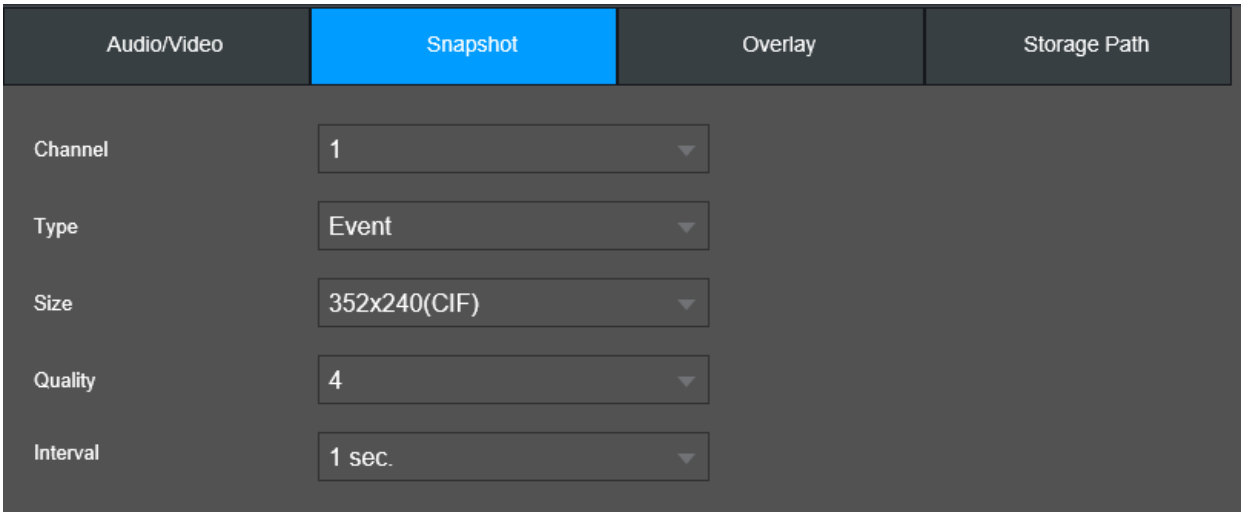
Channel: This dropdown box allows the user to select a channel from the dropdown list to modify.
Type: This dropdown box allows the user to select one of 3 channel types: general, motion, and alarm. Various encode parameters can be for different record types.
Compression: This dropdown box allows the user to select a compression protocol. The system supports H.264, H.264B, H.264H, and H.265 compression protocols.
Resolution: This dropdown box allows the user to set the resolution. The system supports various resolutions, and they can be selected from this dropdown list.
Frame Rate (FPS): This dropdown box allows the user to select a frame rate. Frame rate settings range from 1f/s to 25f/s in NTSC mode and 1f/s to 30f/s in PAL mode.

Bit Rate Type: This dropdown box allows the user to select a bit rate type. The system supports two-bit rate types: CBR and VBR. In VBR mode, video quality can be set.
Quality: This dropdown menu allows the user to set a quality level for a connected device. The quality can be adjusted based on the capabilities of a connected device.
I Frame Interval: The interval of time between every two I frames.
Bit Rate (Kb/S): Represents how much data is packed into every data packet per second.
More: This checkbox allows the user to enable or disable audio encode and codec settings. Please note, if using an external microphone (connected to the Audio In on the back of the NVR) select Local as an audio source.

Click the **Copy to** button to copy the settings to other channels. Press the **Refresh** button to refresh the interface. To confirm settings, click the **Save** button.

Snapshot

This tab allows the user to set scheduled or event snapshot settings.



Below is a list of snapshot settings that can be modified on this screen:

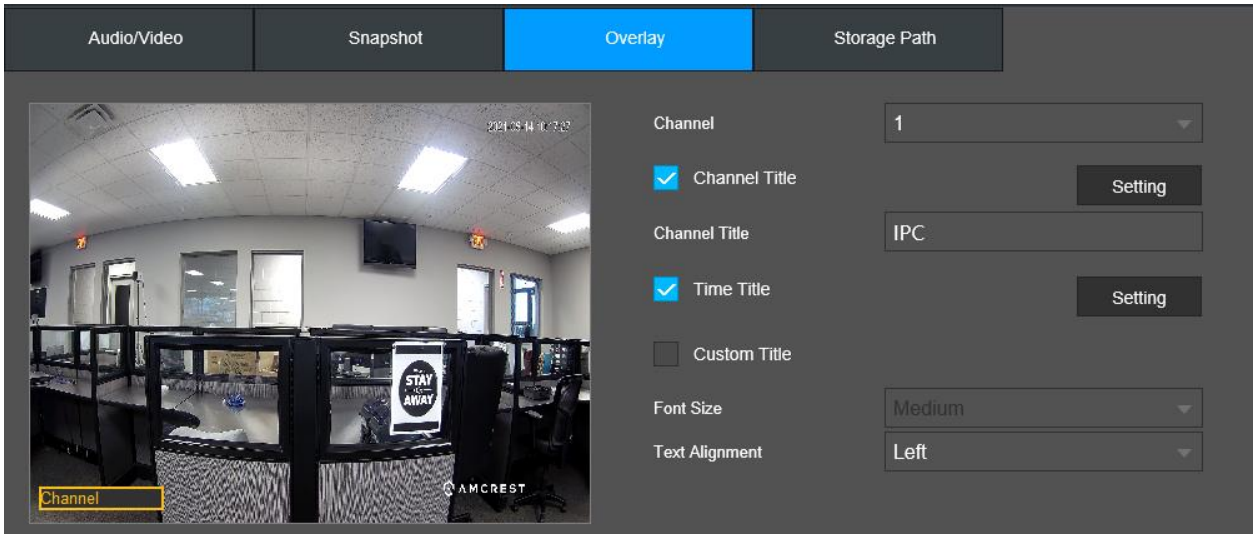
Channel: This dropdown box allows the user to select a channel from the dropdown list to modify.
Type: There are 2 snapshot modes, Scheduled and Event. Scheduled types will allow the feature to retain snapshots continuously, event mode will allow a snapshot to be retained when an event occurs.
Size: This dropdown box allows the user to select an image size. This may be unavailable (grayed out) on certain models.
Quality: This dropdown box allows the user to select image quality. Quality is adjusted on a scale between 1, being the lowest quality and 6 being the highest quality.
Interval: This dropdown allows the user to select the snapshot interval. The value ranges from 1 to 7 seconds. The maximum setting for a customized interval is 3600s/picture.

To revert to default settings, click the **Default** button. Click the **Copy to** button to copy the settings to other channels. Press the **Refresh** button to refresh the interface. To confirm settings, click the **Save** button.

Overlay

The overlay tab allows the user to change overlay settings for each channel. There are a time display, channel display, and a custom title display which allows the user to set a custom title. A total of 5 custom titles can be added per channel.

Below is a screenshot of the **Overlay** tab:



Below is an explanation of fields that can be modified on the overlay settings screen:

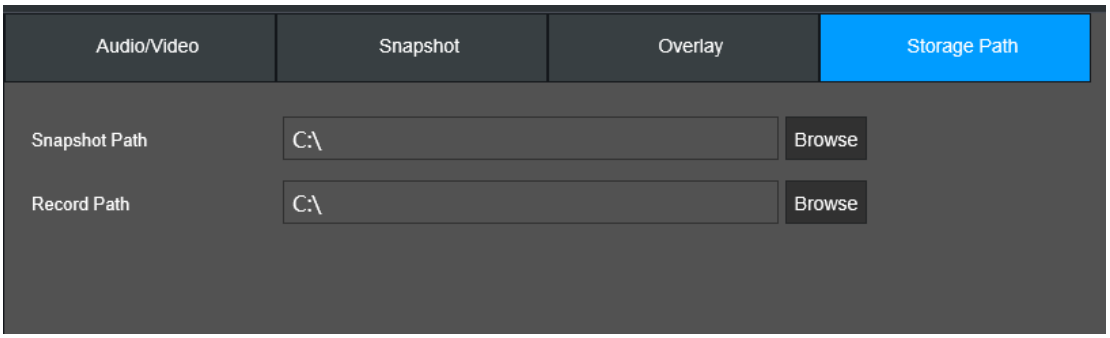
Channel: This dropdown box allows the user to select a channel from the dropdown list to modify.
Channel Title: This button allows the user to select whether the system displays channel number on playback video. Clicking the set button allows the user to drag the title to the corresponding position on the screen.
Time Title: This button allows the user to select whether the system displays time on playback video. Clicking the set button and allows the user to drag the timestamp to the desired position on the screen.
Custom Title: This button allows the user to enter a custom title to the interface. A total of 5 custom titles can be added to the interface.

Click the **Copy to** button to copy the settings to other channels. Press the **Refresh** button to refresh the interface. To confirm settings, click the **Save** button.

Storage Path

The storage path tab allows the user to designate a path for snapshots and videos to be downloaded. This feature may not be available on all browsers.

Below is a screenshot of this menu:



Below is a description of the fields in this menu:

Snapshot Path – The designated storage path for all downloaded snapshots.
Record Path – The designated storage path for all downloaded recordings.

To set a storage path, click on the Browse button and select a storage path or folder in which snapshots or recordings will be downloaded.

To revert to default settings, click the **Default** button. To confirm settings, click the **Save** button.

Camera Name

This screen is used to modify the channel names for a connected device. Each field supports a maximum of 31 characters. To rename a camera, choose which channel you would like to modify and enter a name. Once the name has been updated, click Save.

To revert to default settings, click the **Default** button near the bottom left-hand corner. Press the Refresh button to refresh the interface. To confirm settings, click the **Save** button near the bottom right-hand corner. Click the **Back** button to exit the interface.

Network

This menu controls all network related functions for the NVR and governs how the NVR interacts with a connected network.

TCP/IP

TCP/IP stands for Transmission Control Protocol/Internet Protocol and it is the language/protocol that allows communication between internet connected devices, whether on a local network, or a on the

Internet at large. This screen allows for TCP/IP settings to be modified for the NVR to establish connection to the network.
Below is an explanation of the fields on the TCP/IP settings screen:

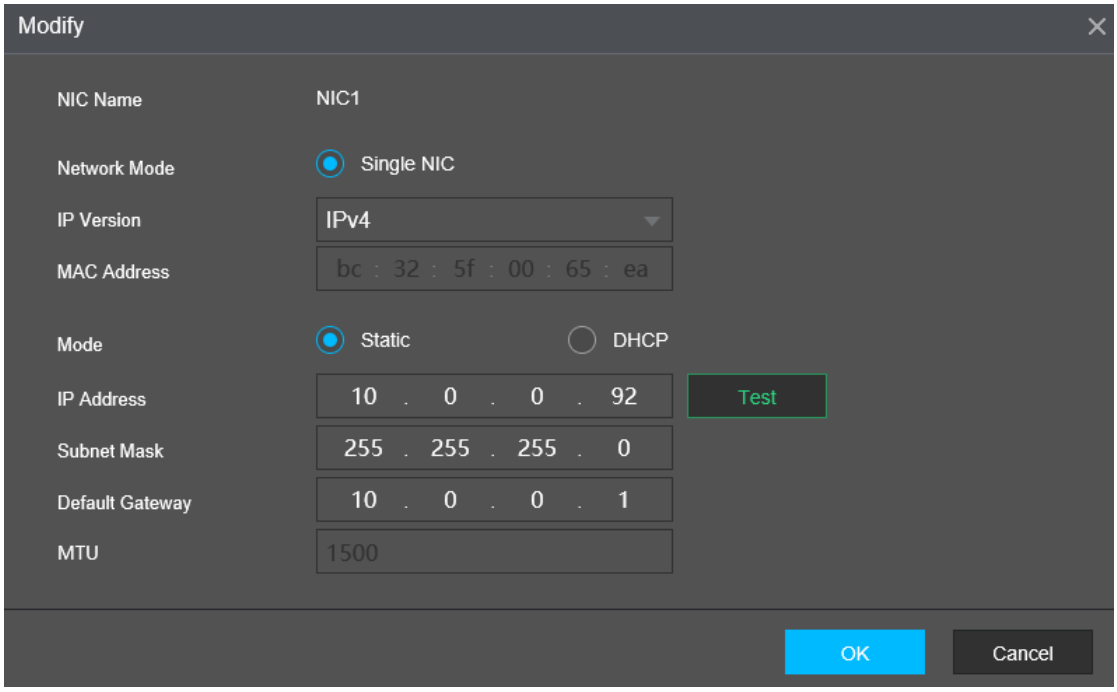
NIC Name: The name of the NIC card in the device.
IP Address: This field allows the user to enter a custom IP address.
Network Mode: The current NIC mode detected by the system. The system only supports a single NIC.
NIC Member: The NIC number that is being detected by the system.
Modify: Click the pencil icon to edit TCP/IP information.

NIC Name: The current name of the NIC card.
Network Mode: The current NIC mode detected by the system.
IP Version: The current IP version of the NIC card, IPv4 or IPv6.

MAC Address: This field shows the NVR's MAC address, which is unique to this NVR. This number is read-only and is used to access a local area network (LAN).
Mode: Set the NIC card to a static or DHCP mode. DHCP stands for Dynamic Host Configuration Protocol, and this enables the NVR to automatically obtain an IP address from another network NVR such as a server or more commonly, a router. When the DHCP function is enabled, the user cannot modify the IP address, Subnet Mask, or Gateway, as these values are obtained from the DHCP function. To view the current IP address, DHCP needs to be disabled.

IP Address: This field allows the user to enter a custom IP address.

Subnet Mask: This field allows the user to enter a custom subnet mask. The default subnet mask is 255.255.255.0. This number is used to determine which subnetwork the IP address belongs to.
Default Gateway: This field allows the user to enter the default gateway for the network. The default gateway should be on the same IP subnet as the NVR's IP. That is to say, the specified length of the subnet prefix should have the same string. For example, if the IP address is 192.168.0.25, the default gateway should start with 192.168.0.X. The default gateway is usually the IP address of the router.
MTU: MTU stands for Maximum Transmission Unit. This field allows the user to set the MTU value of the network adapter. The value ranges from 1280-7200 bytes. The default value is 1500 bytes. Please note MTU modification may result in network adapter reboot and the network turning off. MTU modification can affect the current network service. The system may pop up a dialog box to confirm setup when the MTU value is changed. Click the SAVE button to confirm current value and reboot or can click the Cancel button to terminate the current modification. Before the modification, you can check the MTU of the gateway; the MTU of the NVR should be the same or lower than the MTU of the gateway. This way, packets can be reduced, and the network transmission efficiency be enhanced. The following MTU values are for reference only.
1500: Ethernet information packet maximum value and it is also the default value. It is the typical setup when there is no PPPoE or VPN. It is the default setup of some routers, switches, and network adapters.

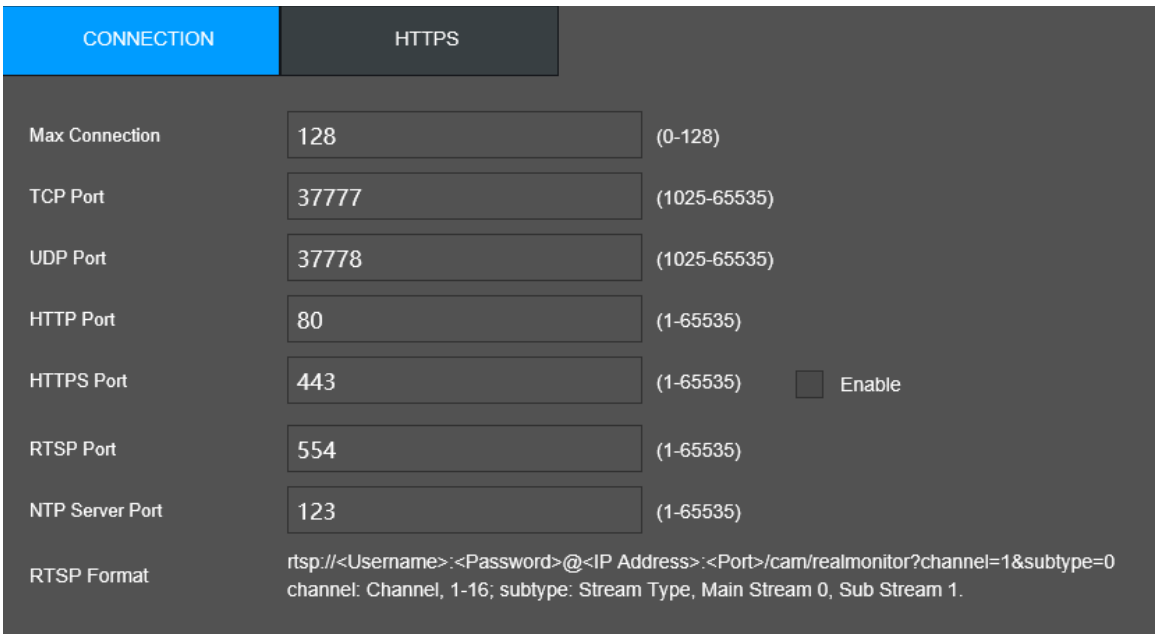


Click **Test** to test the TCP/IP connection. Click **OK** to modify the NIC settings. Click **Cancel** to exit the interface. To refresh the interface, click the **Refresh** button. Click **Save** to save the settings.

Connection

This screen allows users to configure port connections. It is important that the system is rebooted if any changes are made to the settings on this screen. Also, ensure that port values do not conflict.

Below is a screenshot of the connection screen:



Below is an explanation of the fields on the **Connection** screen:

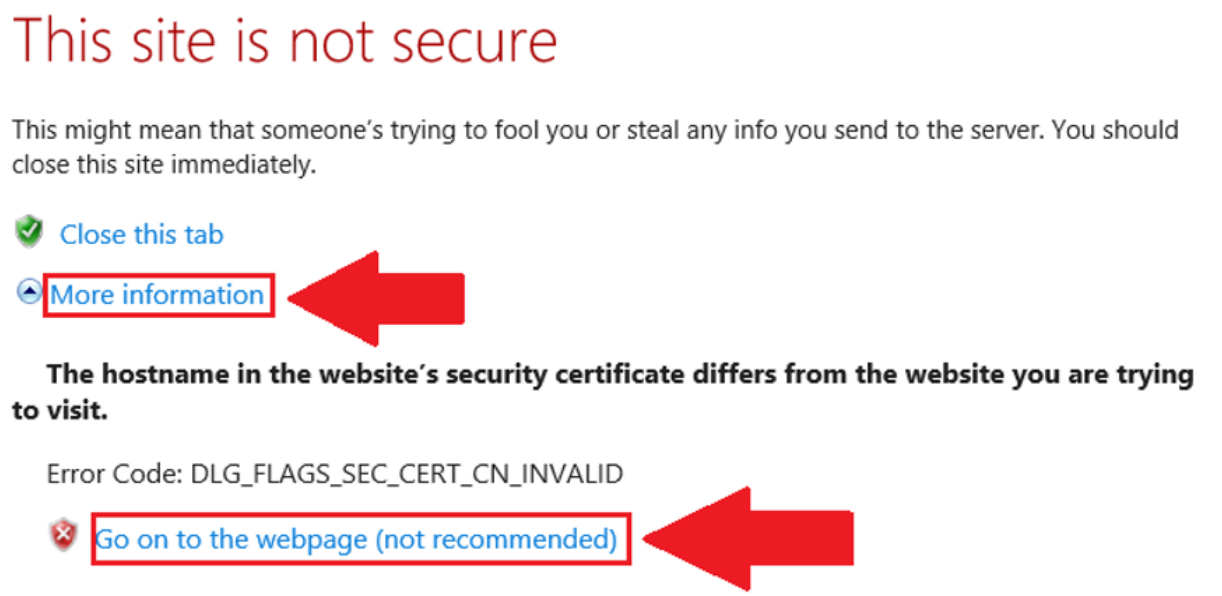
Maximum Connection: This field represents the maximum number of users that can be connected to the NVR at the same time. The maximum number of users the NVR can support at one time is 128.
TCP Port: This field designates the Transmission Control Protocol (TCP) port number. The default value is 37777.
UDP Port: This field designates the User Datagram Protocol (UDP) port number. The default value is 37778.
HTTP Port: This field designates the Hypertext Transfer Protocol (HTTP) port number. The default value is 80.
HTTPS Port: This field designates the Hypertext Transfer Protocol Secure (HTTPS) port number. The default value is 443. Click this checkbox to begin creating an HTTP certificate.
RTSP Port: This field designates the Real Time Streaming Protocol (RTSP) port number. The default value is 554.

Press the **Refresh** button to refresh the interface. To confirm settings, click the **Save** button.

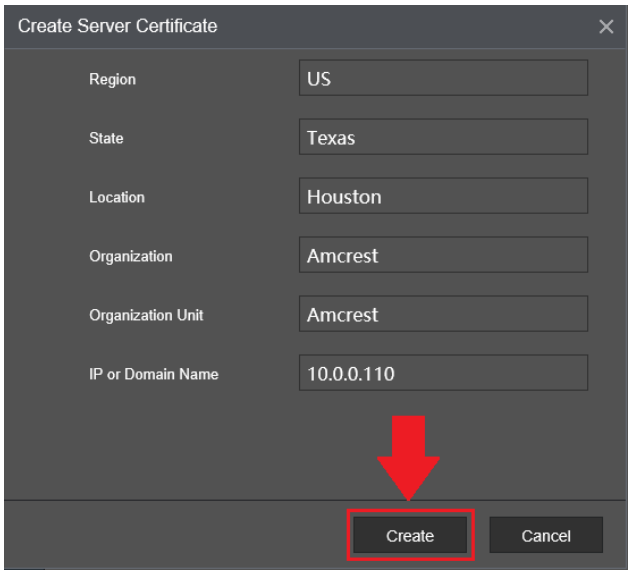
HTTPS

The HTTPS tab allows the user to create an HTTPS certificate for the device. Hypertext transfer protocol secure (HTTPS) is the secure version of HTTP, which is the primary protocol used to send data between a web browser and a website. HTTPS is encrypted to increase security of data transfer.

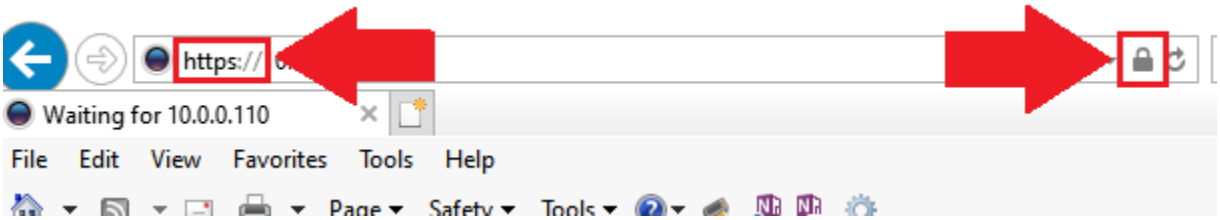
To create an HTTPS cert, click on the HTTPS checkbox located in the **Connection** menu and click **Save**. The browser will reload. Once the browser reloads, click on **More Information,** and then click on Go on to the webpage (not recommended) to access the login screen.



The HTTPS cert will need to be created, log into the device and access the HTTPS menu. Click on the **Create Server Certificate** button. Enter the necessary credentials for your HTTPS certificate and click Create.



The browser will reset again and will automatically load the login interface. You will notice the IP address has changed to HTTP and the security report will show a lock symbol indicating the cert has been created properly.

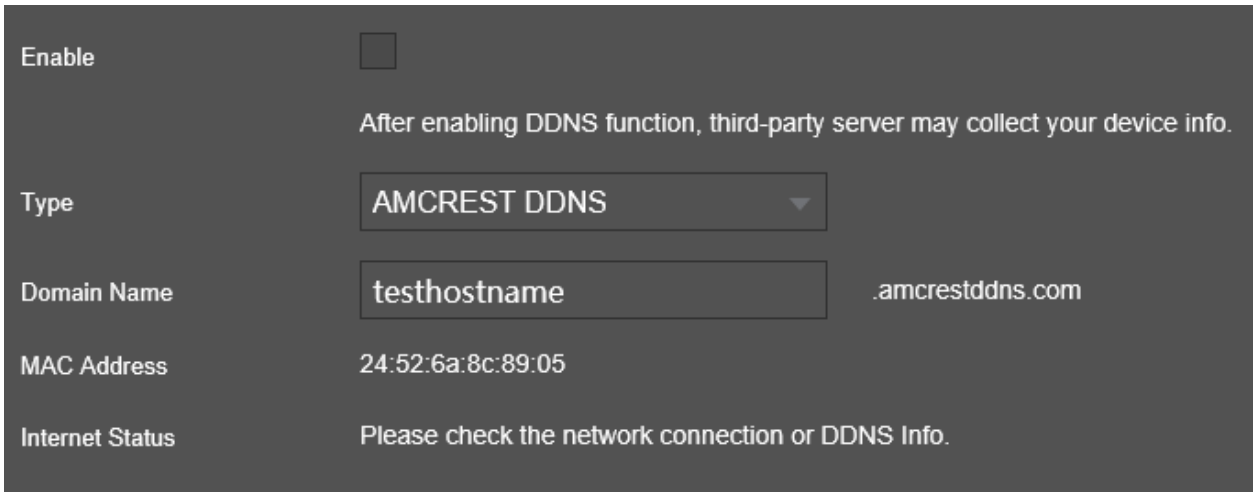


DDNS

DDNS stands for Dynamic Domain Name Server. This technology is used to automatically update name servers in real time to help the NVR maintain a persistent address despite changes in location or configuration. What this means is that even when the NVR is restarted, moved, or reconfigured, it can keep the same IP address, thus allowing remote users uninterrupted access to the NVR, rather than having to request a new IP address to use for remote access anytime a change is made.

To use this feature, users will need to setup an account with a DDNS service. The NVR supports a variety of DDNS services such as AmcrestDDNS, NO-IP DDNS, CN99 DDNS, Dyndns DDNS, and private DDNS services. Based on which service is selected, different options may show on this screen. For purposes of this guide, AmcrestDDNS will be used. To use AmcrestDDNS, go to http://www.AmcrestDDNS.com and register for an account. If the account is inactive for a year, AmcrestDDNS may take back the domain name, but an email will be sent beforehand as a warning.

Below is a screenshot of the DDNS settings screen, configured to AmcrestDDNS:



Below is an explanation of the fields that can be configured on DDNS settings screen:

Enable: This option allows the user to enable DDNS on the NVR.
DDNS Type: This dropdown box allows the user to select which DDNS service is being used on the NVR.
Domain Name: This field allows the user to enter the domain name from the AmcrestDDNS service.
MAC address: This field shows the NVR's MAC address, which is unique to this device. This number is read-only and is used to access a local area network (LAN).
Internet Status: The current DDNS connection status.

For more information on how to setup DDNS service for your device, please visit amcrest.com/support

Press the **Refresh** button to refresh the interface. To confirm settings, click the **Save** button.

UPNP

UPnP stands for Universal Plug and Play, and it is a protocol used to easily connect devices to the internet. In the case of this NVR, it allows the NVR to connect to the router in an easy manner to quickly allow for remote connection.

Below is an explanation of the fields in the UPnP settings screen:

Port Mapping: This checkbox enables the UPnP function.
Status: This field shows the UPnP status and has two options:
Offline: This means that UPnP is offline.
Successful: This means that UPnP is working.
LAN IP: This field allows the user to enter the IP address of the router that the NVR is trying to connect.
WAN IP: This field is where the NVR Wide Area Network (WAN) IP is populated. This IP address is what is used to remotely access the NVR through web access.

Port Mapping Table: This table is used to show how the ports for each protocol listed below have been remapped by the UPnP protocol.
The first column shows the order of the services.
The second column shows the name of the services. To edit this, double click on the service line item.
The third column shows the name of the protocol used by that service. To edit this, double click on the service line item.
The fourth column shows the Internal Port used by that service. To edit this, double click on the service line item.
The fifth column shows the External Port used by that service. To edit this, double click on the service line item.

Press the **Refresh** button to refresh the interface. To confirm settings, click the **Save** button.

Email

This screen allows for the configuring of email settings to permit the NVR to send emails when the connected cameras or alarms are triggered.

Below is an explanation of the fields on the Email settings screen:
SMTP Server: SMTP stands for Simple Mail Transfer Protocol. This field allows the user to enter the SMTP server used by the email service.
Port: This field allows the user to enter the port that corresponds to the selected SMTP server.
Username: This field allows the user to enter the username used to login to the selected SMTP server.
Password: This field allows the user to enter the password associated with the SMTP username.
Sender: This field allows the user to enter the sender email address. This email address will be the one that sends out all emails pertaining to the alerts and alarm emails sent by the NVR.
Encrypt Type: This dropdown box allows the user to select an encryption type. There are two types of email encryption that are available.
SSL: Secure Socket Layer
TLS: Transport Layer Security
Subject: This field allows the user to define the subject line of the email that is sent to the receivers.
Attachment: This checkbox allows the user to enable the attachment of screenshots with emails.
Receiver: This field allows the user to enter the receiver email address. These email addresses are the ones that will receive any emails pertaining to alert and alarm emails sent by the NVR. Up to 3 email addresses can be entered in this field.
Health Enable: This checkbox allows the user to enable the function that causes the system to send out a test email to ensure if the connection is SAVE or not.
Interval: This field allows the user to define, in minutes, how often emails can be sent by the system. This helps to curb heavy load on the email server when multiple events are occurring.

For more information on how to setup Email Alerts, please visit amcrest.com/support

Click on the **Test** button to test the connection. Click the **Refresh** button to refresh the interface. To confirm settings, click the **Save** button.

Multicast

Multicast is a feature that enables the NVR to broadcast its live view to multiple computers on the same network. Below is an explanation of the fields in the Multicast settings screen:

Enable: This checkbox allows the user to enable the Multicast feature for the NVR.
IP Address: This field allows the user to enter the multicast IP address.
Port: This field allows the user to enter the port number for the multicast IP address.
For more information on how to configure multicast, see the information below.

Multicast IP Address Range (IPV4): 224.0.0.0 through 239.255.255.255

Well-known IPv6 multicast addresses	
Address	**Description**
ff02::1	All nodes on the local network segment
ff02::2	All routers on the local network segment
ff02::5	OSPFv3 All SPF routers
ff02::6	OSPFv3 All DR routers
ff02::8	IS-IS for IPv6 routers
ff02::9	RIP routers
ff02::a	EIGRP routers
ff02::d	PIM routers
ff02::16	MLDv2 reports (defined in RFC 3810)
ff02::1:2	All DHCP servers and relay agents on the local network segment (defined in RFC 3315)
ff02::1:3	All LLMNR hosts on the local network segment (defined in RFC 4795)
ff05::1:3	All DHCP servers on the local network site (defined in RFC 3315)
ff0x::c	Simple Service Discovery Protocol
ff0x::fb	Multicast DNS
ff0x::101	Network Time Protocol
ff0x::108	Network Information Service
ff0x::181	Precision Time Protocol (PTP) version 2 messages (Sync, Announce, etc.) except peer delay measurement
ff02::6b	Precision Time Protocol (PTP) version 2 peer delay measurement messages
ff0x::114	Used for experiments

To confirm settings, click the **Save** button near the bottom right-hand corner. To refresh the interface, click the Refresh button.

Register

The **Register** menu allows the user to register to a proxy to the system which allows the user to access the NVR via a specified proxy. Please note, this section only supports, IPv4 server IP addresses.

Enable: This option is used to enable the register function.

No: The number applied to the proxy in the system.
Server IP Address: Enter the IP address of the server being used.
Port: The port number used when setting up the proxy address.
ID: The ID number that is applicable to the proxy address.

Click the **Refresh** button to refresh the interface. To confirm settings, click the **Save** button.

Switch

The Switch menu is used to automatically allocate the IP address according to the specified IP segment. The network camera can automatically register to the NVR. It is for you to set IP address, subnet mask, gateway etc. of the switch.

Note: This function is for PoE products only. Do not connect a physical switch to the PoE ports of the NVR as it may cause damage to the unit. The Switch function of the NVR is enabled by default. The IP segment is 10.1.1.1. Usually, we recommend using just the default setup method.

IP Address: The default IP segment of the device.
Subnet Mask: The current default subnet mask of the device.
Default Gateway: The current default gateway of the device.

Click the **Refresh** button to refresh the interface. To confirm settings, click the **Save** button.

P2P

The P2P screen allows users to access a QR code to connect their smartphone or tablet to the NVR. The device uses an app called Amcrest View Pro, and it is available on both iOS and Android.

Enable: This checkbox allows the user to enable the P2P feature for the NVR.
Status: This field shows the status of the P2P connection. Once connected using the app, this field should display the word Online.
Cell Phone Client: This is the unique QR code is used as a quick reference point for downloading the Amcrest View Pro app onto your mobile device.
Device SN: This is the unique QR Code associated with your NVR's serial number. Use this as a quick reference point when setting up your NVR on the Amcrest View Pro app.

Click the **Refresh** button to refresh the interface. To confirm settings, click the **Save** button.

Amcrest View Pro Setup

The Amcrest View Pro app allows instant access to all live camera streams from any location. The app supports a multitude of features and includes both a plug-and-play setup as well as a manual network setup. **Please note, AI features provided by the NVR can only be modified using the local or web UI and cannot be adjusted using the Amcrest View Pro app.**

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

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

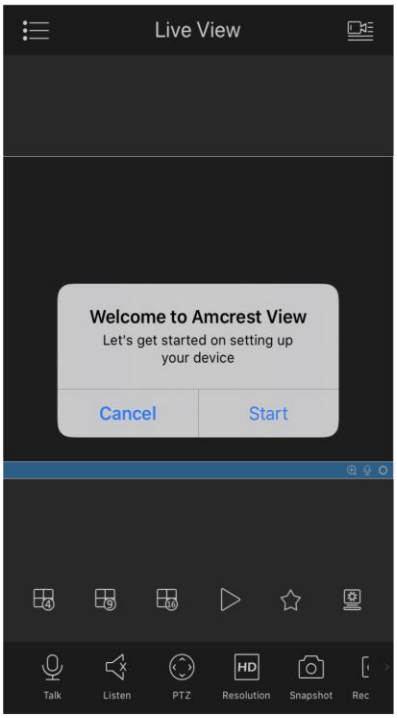
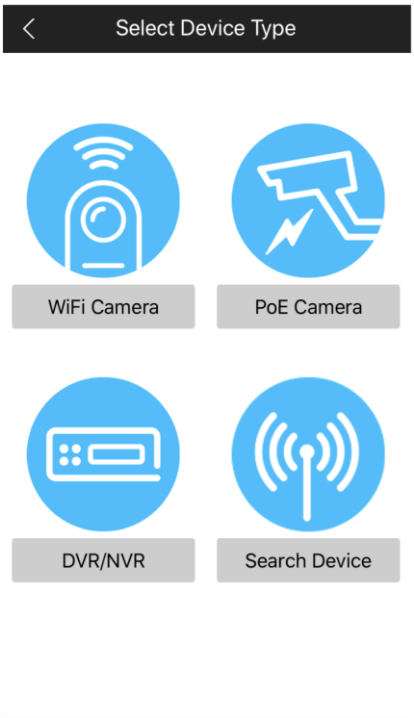
Log into your NVR and access the Main Menu.
In the **Management** section, click on **Network** then click on **P2P**. Ensure the Enable toggle switch is enabled and the P2P status says "Online". This indicates the P2P option is enabled.

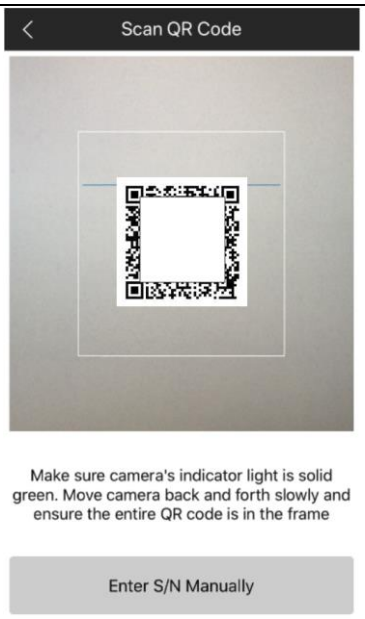
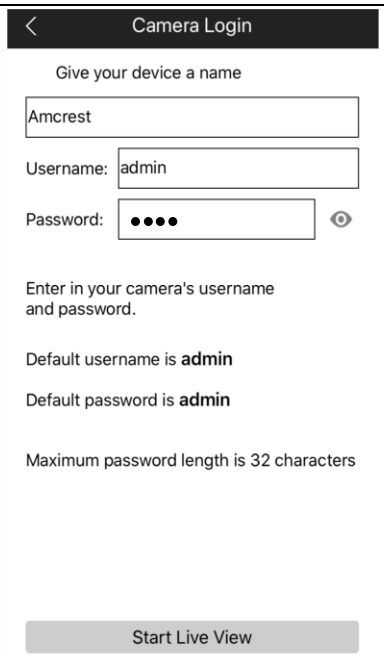
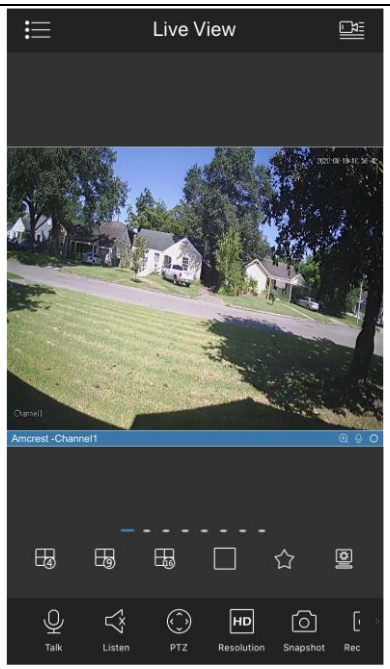
The following steps will continue the app setup process for an Android phone and, though the iPhone version of the app has slightly different steps, most of this process is identical and easy.

Download and install the Amcrest View Pro app for the App Store or Google Play Store.

ANDROID APP ON Google play Download on the App Store

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

	
1. Tap **"Start".**	2. Tap **"NVR/NVR".**

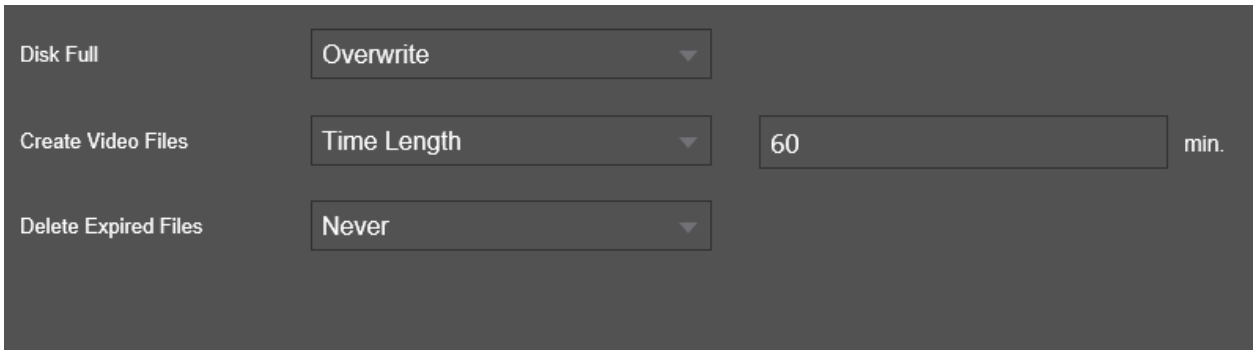
	
3. Tap **"P2P Connection".** **Note:** IP/Domain/DDNS can be used to establish a DDNS connection. For more information on how to setup a DDNS connection, visit amcrest.com/support	4. Scan the QR code. The QR code can be found on the serial tag along with a scannable barcode.
	
5. Create a name for the device and enter a username and password. The default username and password will be admin. Tap **"Start Live View".**	6. Update the default password for the device and tap **"Start Live View"** to view the device.

Storage

This menu allows the user to update, modify, and manage device storage settings within the NVR. For more details on this menu please refer to the sections below.

Basic

This menu allows the user to set hard drive (HDD) overwrite permissions for the system. Below is a screen shot of this menu.



Below is a description of the features listed in this menu:

Disk Full – Allows the user to set a overwrite mode for their recordings. This option can be set to overwrite, which automatically overwrites old recordings once the hard drive is full, or to stop recording, which means the recordings will stop once the hard drive is full.
Create Video Files – Specifies the recording duration of the overwrite. The values range from 1 to 120 minutes. Default value is 60 minutes.
Delete Expired Files – Allows the user to automatically delete or customize a delete schedule. The customized field will be denoted in how many days you would like to retain information on the HDD.

Note: This feature may not be available in all models and may be applicable to only certain model NVRs.

Click the **Refresh** button to refresh the interface. To confirm settings, click the **Save** button.

Schedule

This menu allows the user to set recording schedules for their device. For more information on this feature, refer to the sections provided below.

Record

This screen is used to specify the recording schedule for both recorded video and snapshots.



Below is an explanation of the fields on the **Record** settings screen:

Channel: This dropdown menu allows the user to pick which channel the schedule will apply.
Prerecord: This field allows the user to capture extra video that occurs before an event. Up to 30 seconds of video prior to a recording event can be captured to provide context to a recording.
Record Types: There are 5 types of recordings:

General: General recording means that the NVR captures all footage for the specified time period. Regular recording is represented by green.

Motion: Motion Detection recording means that the NVR captures only footage when the motion detection alarm is activated. MD recording is represented by yellow.

Alarm: Alarm recording means that the NVR captures only footage when an alarm is activated. Alarm recording is represented by the color red.

M&A: This type of recording is a combination of motion detection and alarm footage, and records when either a motion detection alarm or general alarm is activated. MD & Alarm recording is represented by the color white.

IVS: This type of recording means that the NVR will capture only footage when an AI rule is triggered such as IVS and face detection.

To set a recording schedule for your device, click on the **setting** button option located on the right of the day you wish to set the schedule. The system allows for the configuration of up to 6 different time periods.

Click the text next to each period to edit the time you wish to set for that specific period. Next, choose which record type you would like to set for each period. You will also need to select the days you wish to apply these settings. To select all days, select all options to apply the settings to all days of the week. Click **Save** to save this schedule to the system.

To revert to default settings, click the **Default** button. To copy settings to another channel, click **Copy to**. To confirm settings, click the **Save** button.

Snapshot

This **Snapshot** tab allows the user to schedule snapshot schedules. The process is similar to the record schedule for video. Below is an explanation of the fields on the **Snapshot** settings screen:

Channel: This dropdown box allows the user to pick which channel they would like to change video recording settings for
All: Link all days of the week to a selected recording type schedule.
Record Types: There are 5 types of recordings:

General: General recording means that the NVR captures all snapshots for the specified time period. Regular recording is represented by green.
Motion: Motion Detection recording means that the NVR captures only footage when the motion detection alarm is activated. MD recording is represented by yellow.
Alarm: Alarm recording means that the NVR captures only footage when an alarm is activated. Alarm recording is represented by the color red.
M&A: This type of recording is a combination of motion detection and alarm footage, and records when either a motion detection alarm or general alarm is activated. MD & Alarm recording is represented by the color white.
IVS: This type of recording means that the NVR will capture only footage when an IVS rule is triggered. IVS events will be represented as a blue color.

To set a recording schedule for your device, click on the **Settings** button option located on the right of the day you wish to set the schedule. The system allows for the configuration of up to 6 different time periods.

Click the text next to each period to edit the time you wish to set for that specific period. Next, choose which record type you would like to set for each period. You will also need to select the days you wish to apply these settings. To select all days, select all options to apply the settings to all days of the week. Click **Save** to Save this schedule to the system.

To revert to default settings, click the **Default** button. To copy settings to another channel, click **Copy to**. To confirm settings, click the **Save** button.

HDD Manager

This screen is used to help the user monitor the NVR's hard drives. Using this screen, the user can see the current HDD type, status, and capacity. The user can also use this screen to format hard drives and change hard drive properties.

Below is an explanation of the fields on the **HDD Manager** settings screen:

No.: Displays how many HDDs the system is supported.
Device Name: This column shows the names of the connected hard disk drives (HDD).
Physical Position: The location in which the HDD is connected on the device.
Properties: This column shows the type of access the NVR has to the hard drive. To change a hard drive's type, click the downward arrow next to the HDD's type and select the desired type. There are 3 possible settings:
Read-Only: This allows the NVR to read the data, but not modify it in anyway.
Write-Only: This allows the NVR to write data to the HDD, but not read any data from it.
Read/Write: This allows the NVR to both read and write data on the HDD.
Health Status: This column shows the status of the connected hard drive. There are 3 statuses:
Normal: This means the hard drive is operating normally.
Error: This means the NVR is experiencing an error when attempting to access the hard drive.
Disconnected: This means that the HDD has disconnected from the NVR.
Free Space/Total Space: This field shows the free space on the hard drive compared to its total capacity.
Format: This option allows the user to format a connected HDD. This will erase all information from the HDD. To format the HDD, click the **Format** button, then click **Save** to complete the format.

Click the **Refresh** button to refresh the interface. To confirm settings, click the **Save** button.

Record Mode

This screen allows the user to specify which channels can record and take snapshots. The settings on this screen supersede all others when it comes to allowing channels the ability to record information.

Below is an explanation of all the fields on the Record Mode settings page:

Main Stream: The main stream is the stream through which the channels transmit data by default. There are 3 settings that can be used for the mainstream.
Auto: Channels will record as they have been scheduled, and not in any other capacity.
Manual: Channels will support all recording type. This includes scheduled recording.
Off: Channels will not record in any capacity. This includes scheduled and manual recording.
Sub Stream: These options allow the user to enable or disable sub stream recording types. There are 3 settings that can be used for sub stream 1.
Auto: Channels will record as they have been scheduled, and not in any other capacity.
Manual: Channels will support all recording type. This includes scheduled recording.
Off: Channels will not record in any capacity. This includes scheduled and manual recording.

Snapshot: This set of options can either enable or disable the snapshot functionality for specific channels.
Enable: Enable snapshots to be recorded or sent from the system.
Disable: Disable snapshots from being recorded or sent from the system.

To refresh the interface, click the **Refresh** button. Click on the **Save** button to set the settings.

FTP

FTP stands for File Transfer Protocol. This protocol allows for remote uploading of files to a server. This feature requires the use of an FTP tool on a computer to enable the use of FTP features on the NVR.

Once an FTP tool has been acquired, installed, and configured to allow read, write, append, and delete access, then the NVR can be configured to use FTP.

Below is an explanation of the fields on the FTP settings screen:

Enable: This checkbox allows the user to enable the FTP feature for the NVR.
FTP: Enables FTP.
Server Address: This field allows the user to enter the FTP server IP address and port.
Port: The port number of the FTP server. The default port number is 21.
Username: This field allows the user to enter the FTP username.
Password: This field allows the user to enter the FTP server password. The checkbox next to this field enables anonymous access to the FTP.
Anonymous: This checkbox allows the event to be retained as an anonymously titled event.
Storage Path: This field allows the user to designate which folder the NVR will upload files to.
File Size: This field allows the user to dictate how large upload files can be.
Channel: This field allows the user to pick a channel to set FTP settings for.
Day: This field allows the user to pick a day of the week to set FTP settings for.
Period 1: This field allows the user to specify a time period and what types of files to upload (Alarm, Motion, Regular).
Period 2: This field allows the user to specify a time period and what types of files to upload (Alarm, Motion, Regular).
Picture Upload Interval: This field allows the user to define, in seconds, how often images can be uploaded to the FTP server.
Channel: This settings button allows the user to select a channel in which the FTP will apply.

For more information how to setup FTP settings, please visit amcrest.com/support

To reset the interface back to default, click the Default button. To test the current settings, click **Test.** To refresh the interface, click the **Refresh** button. To confirm settings, click the **Save** button.

System

This menu allows the user to access and modify general system functions.

General

This screen displays general settings for the NVR. Below is an explanation of the fields on the **General** settings screen:

Device Name: This field allows the user to customize the name of the NVR.
Device No: This field allows the user to customize the device's number.
Language: The default language will be English.
Video Standard: The default video standard will be NTSC.
Sync to Remote Device: This option allows device settings, including language, format, and time zone, to sync to a remotely connected device.
Logout Time: This field allows the user to define in minutes how long a camera can stay idle before it is logged out.
Navigation Bar: This option allows the user to enable the navigation bar that shows on the main screen.

To refresh the interface, click the **Refresh** button. To confirm settings, click the **Save** button.

Date and Time

This screen displays date and time settings for the NVR. Below is an explanation of the fields on the Date & Time settings screen:

System Time: This field allows the user to set the system time and time zone. Click Save to Save the system time as it is shown in the display.
System Zone: This dropdown box allows the user to specify a time zone for the NVR to use.
Date Format: This dropdown box allows the user to specify a date and time format for the NVR to use. There are 3 options.
YYYY MM DD: Year, Month, Day.
MM DD YYYY: Month, Day, Year.
DD MM YYYY: Day, Month, Year.
Date Separator: This dropdown box allows the user to specify a date separator. There are 3 options:
– Dash
/ Forward Slash
_ Underscore
Time Format: This dropdown box allows the user to specify a time format for the NVR to use. There are two options.
24 Hour
12 Hour
DST: This option allows the user to activate DST for the system.
DST Type: This field allows the user to pick whether DST starts on a specific day of the week, or on a specified.
Start Time: This field allows the user to enter a start date and time for DST to begin.
End Time: This field allows the user to enter an end date and time for DST to end on.
NTP: NTP stands for Network Time Protocol. This checkbox allows the user to enable the use of an NST server to synchronize the date and time settings on the NVR.

Server: This field allows the user to set the NTP server IP address. Clicking the Manual Update button pulls a time update from the server.
Port: This field allows the user to set the NTP server port number.
Interval (Min.): This field allows the user to set the NTP synchronization interval. This number determines how often the NVR queries the NTP server to get accurate date and time information. This value can be between 0 and 60 minutes.

To refresh the interface, click the **Refresh** button. To confirm settings, click the **Save** button.

Holiday

This screen displays the holiday settings for the NVR. Holiday settings are used to allow the device to recognized holidays in the system which are set by the user.

Below is an explanation of the fields on the Holiday settings screen:

No.: This number indicates how many holidays are in the system. Each line item has a number to signify its place in the list.
Status: This dropdown box indicates the status of the holiday. There are two options:
Open: The holiday is active, and the NVR will stop recording for that holiday period.
Stop: The holiday is inactive, and the NVR will continue normal operation for that holiday period.
Name: This column is where the name of the holiday is displayed.
Date: This column shows the date that the holiday occurs on.
Duration: This column shows the range in which the holiday occurs.
Operation: This column allows the user to edit or delete the holiday.
Edit ( ): This column has a button that allows for the editing of the holiday.
Delete ( ): This column has a button that allows for the deletion of the holiday.
Add Holidays: This button allows the user to add a holiday.

Note: Holidays take precedence over the scheduled setup. Holidays do not roll over based on their inherent date. Meaning, if a holiday is set for October 30th, then the system will treat every October 30th as a holiday.

Firewall

The Firewall menu allows the user to set IP filters which allow certain IP addresses to become whitelisted or blacklisted in the system.

Below is a description of the fields in the security settings screen:

Type: This dropdown menu allows the user to select which type of firewall will be included. There are 3 types of firewall settings.
Network Access: Prevents a set IP address from network access.
Ping Prohibited: Prevents the device from pinging a set IP address.
Anti-Half Connection: Prevents the device from partial connection to a set IP address.
Enable: This option allows the user to enable the firewall feature.

Mode: Allows the user to choose which sites will be trusted (whitelisted) or blocked (blacklisted.
Host IP/Mac: The host IP/Mac address of the applied IP address.
Port: The port number of the whitelisted or blacklisted IP address.
Edit: Allows the user to edit an IP or port number of a whitelisted or blacklisted IP address.
Delete: Delete an added whitelisted or blacklisted IP address
Add: Click this button to add a trusted or blocked site into the system.

To refresh the interface, click the **Refresh** button. To confirm settings, click the **SAVE** button.

Account

This menu is used to manage user accounts, user account passwords, and user groups. Below are a few considerations to keep in mind when editing this information:

The NVR comes with 2 usernames by default:

Username: admin **Password:** admin
Username: default **Password:** default

It is highly recommended to change the passwords for the admin and default accounts.
Each Username and user group name can only contain letters, numbers, underline marks, dashes, or dots. No empty spaces are allowed.
The maximum number of users is 64, and the maximum number of users that can be in one group is 20.
There are two levels for user management: administrator and user. Administrator has more rights than a normal user and can modify key NVR settings. Each user can belong to only one group, and user rights cannot exceed group rights.

User

This screen is used to configure User Account settings. Below is an explanation of the fields on the User screen:

Number: This number indicates how many users are in the system. Each line item has a number to signify its place in the list.
Username: This column indicates an account's username.
Group Name: This column shows which group the username belongs to.
Edit: This column has a button that allows for the account's properties to be edited.
Delete: This column has a button that allows for the account's properties to be deleted.
Status: The status of the user in the system.
MAC address: The MAC address in which the user's credentials are associated.
Memo: This column provides a brief description of the account's status in the NVR.
Add User: This button allows the user to add another user account.

Note: It is recommended to give the general user fewer rights than an administrative one. When a new user is created, a MAC address can be entered for the user. This can limit the user's ability to logon from another device. If left blank, the user can logon from any MAC address.

Group

This screen is used to configure **Group** account settings. Below is an explanation of the fields on the **Group** settings screen:

No.: This number indicates how many groups are in the system. Each line item has a number to signify its place in the list.
Group Name: This column indicates an account's username.
Remarks: This column indicates any notes about the user group.
Modify: This column has a button that allows for the account's properties to be edited.
Delete: This column has a button that allows for the account's properties to be deleted.
Add: This button allows the user to add another user group.

ONVIF User

This screen is used to configure or modify ONVIF users that are associated with your NVR. Below is a description of the fields listed in this menu:

No.: This number indicates how many users are in the system. Each line item has a number to signify its place in the list.
Username – The user account that is being modified.
Group Name – The group name of the account that is being modified.
Modify – Used to modify the settings associated with this menu.
Delete – Used to delete the user from this menu.
Add – Used to add a new user into the system.

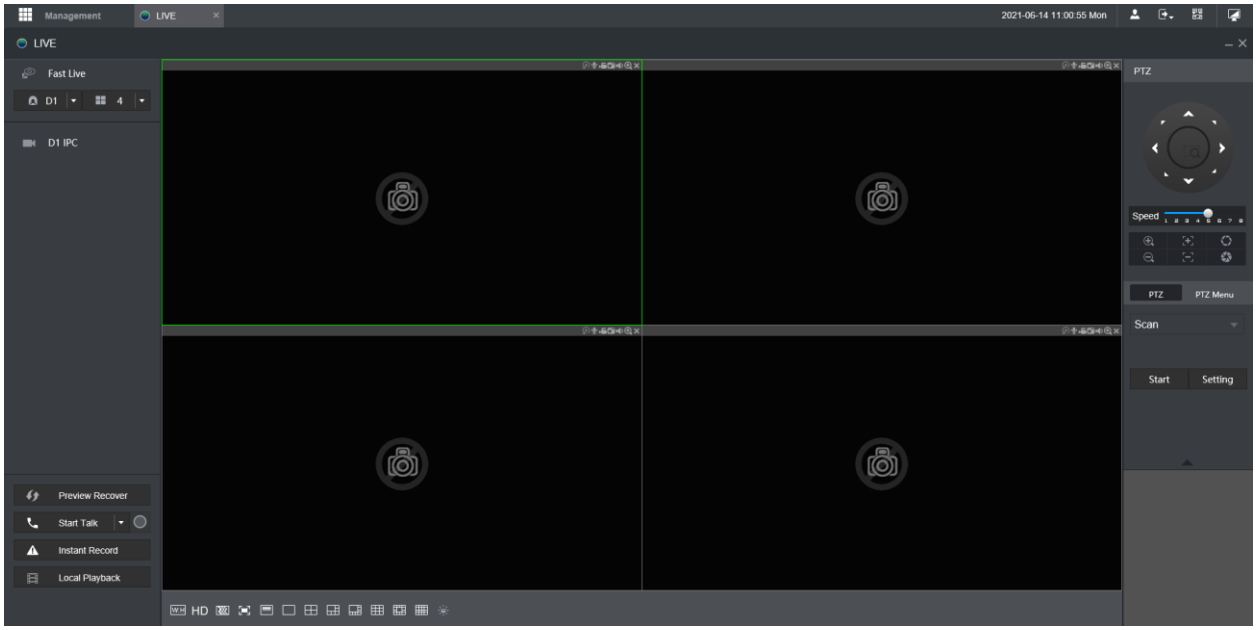
Password Reset

This menu is used to add an email address in which the **Forgot Password** instructions can be emailed. Please ensure a valid email address is entered in this field.

To confirm settings, click the **Save** button. Click the **Refresh** button to refresh the interface.

Live

The live view interface provides a real-time viewing of a connected device.



Below is a description of the options in this menu:

Fast Live: Automatically display window splits of connected devices. Select which devices you would like to automatically populate from the channel list dropdown menu and select the window split amount from the split dropdown menu. Click Fast Live to display the selected channels.

Channel List: The amount of HDCVI channels currently available on the system.

Start Talk: Enables two-way audio if an external and microphone and speaker are connected. Requires a plugin to function if using a web browser (Internet Explorer).

Instant Record: Instantly starts recording video (a hard drive must be installed).

Local Playback: Pulls a downloaded video that is locally stored.

W:H: Adjust the aspect ratio output of the selected device.

HD: Switch between high- and low-quality video output.

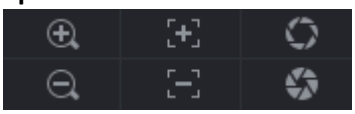
Fluency Output: Switch between fluent, general, and real time video fluency.

V-Sync: Use this option to sync if feed is out of sync with an output monitor.

Window Splits: Select how many channels will be displayed in the interface.

PTZ: Used to pan/tilt/zoom a connected PTZ camera.

Speed: Use this slider to control the speed of the pan/tilt.


: Used for zoom, focus, and iris control.

PTZ Setup: Set PTZ presets for a PTZ controlled camera. The system can handle 1~255 presets.

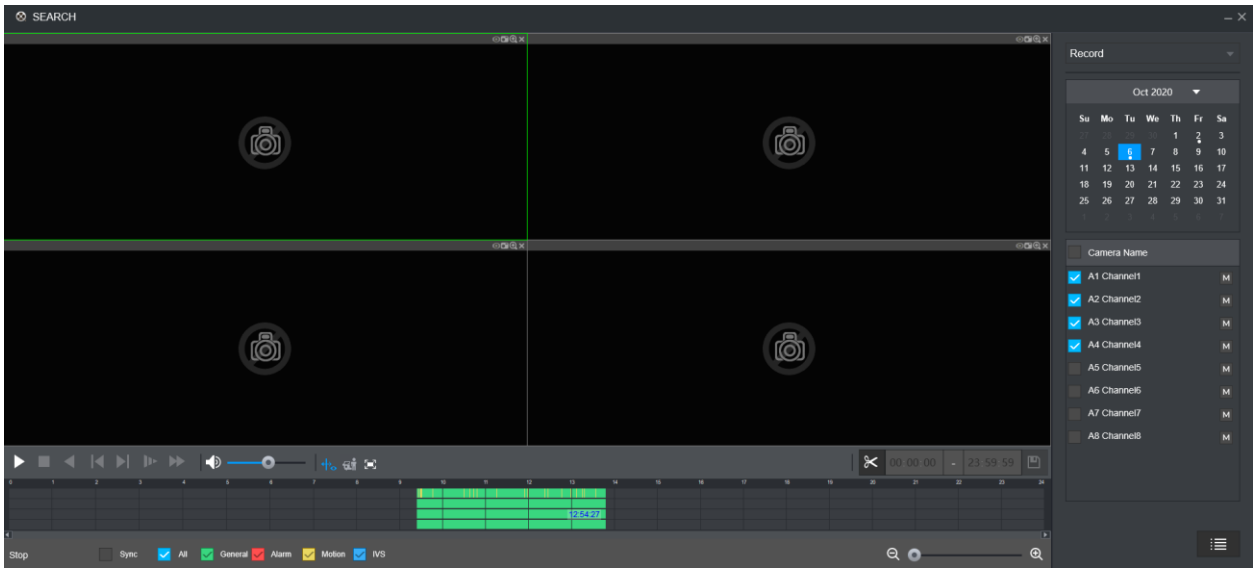
PTZ Menu: Used to access the OSD menu for a connected camera. To access the OSD menu, click Save in the PTZ Menu and use the directional arrows to scroll up and down the menu.

For more information on how to setup a PTZ preset, if applicable, please visit: amcrest.com/support

 - Enable smart tracking (if appliable device supports it), audio in (microphone), manually record video, manually take a snapshot, enable audio output, utilize digital zoom, exit interface.

Search

The **Search** menu allows the user to view recorded data retained in the system. This includes recording types such as regular, motion detection, (MD), Alarm, and IVS. The system will need a hard drive installed to view recorded events.



Please refer to the following sheet for more information.

Calendar – The calendar provides dates in which events have been retained in the system. If there are any events for a specific date the data will be represented with a dot. Users can use the left and right arrow keys to switch between months.

Camera Name – This section provides names of connected cameras on the device. If data is applied to any of these channels, a timeline of the events will be displayed in the time bar interface. Please note, the user can switch between mainstream and sub stream recording by clicking on the "M" (mainstream) and "S" sub stream icons.

Mark File List: This option is used to access the mark file list interface which allows the user to view all marked information on a current channel. For more information on this feature, please refer to section, *"Mark File List"*.

File List: This option is used to view a categorized list of all events found in the system. These are labeled by recording types such as, regular, motion events (MD), alarm, and IVS. Use the back icon () to exit the file list.

Recording Types: This banner allows the user to choose which recording types to view. Click the All option to view all recording types in the interface.

Recording Clipping/Saving – This option is used to clip and download/backup recordings onto a flash drive (if using locally) or on a computer (web UI). To use this feature, enter a start and end time for the

event and click the scissors icon to clip it from the time bar. Once the file is clipped, click on the Save button to download or backup the recording.

Time Bar – The time bar provides a linear representation of all events. The events are viewed based on the times they occurred and are color coded based on specific recording types; green (regular types), red (alarm types), yellow (motion detection types), and blue (IVS types).

Playback options – Please refer to the table below:

Icon	Feature
▶/ II	**Play/Pause:** Play and pause the recording.
■	**Stop:** Stops the recording
◀	**Backward Play:** Rewinds the recording. Click the ▶/ II icon to resume play mode.
◀I	**Previous Frame:** Returns the recording to the previous frame in playback mode.
I▶	**Next Frame:** Moves the recording to the next frame while in playback mode.
▶	**Slow Play:** Plays the recording in slow motion modes.
▶▶	**Fast Forward:** Fast forwards the recording while in playback mode.
⏮	**Previous Day:** Moves the interface previous day recordings
⏭	**Next Day:** Moves the interface to the next day recordings.
🔊	**Volume:** Adjust the volume of the recording up or down using the volume slider.
📌	**Mark Button:** Adds a mark into the time bar while in playback mode.
	IVS Overlay Button: Enable/Disable IVS overlays while in playback mode.
	Human/Vehicle Filter: Filter between human and vehicle events.
	Full Screen: Click this button to view the event in full screen mode.
✂	**Clip:** Used to clip an event by entering a start and end time for the clip.
💾	**Save:** Used to Save and download a created clip.
Time Bar	Provides a timeline of all recording types for a selected channel. Different recording will be displayed in different colors on the timeline. Use the recording type checkboxes to filter which recording types will be displayed in the playback timeline.
Zoom	While in playback mode, select an area of the recording to digitally zoom in and out.
	File List: Access and view recordings from a selected date & time.
	Mark a recording manually in the file list.
	Search and unlock a marked recording.
	Go Back: Exit the file list menu.

File List Playback

The **File List** provides a list of active recordings based on the date selected in the calendar. To use the file list, choose a day with active recordings from the calendar and select the channel(s) you would like to view. Click on the **File List** icon.

A list of recordings and their record types will be displayed in the file list. Find the recording you would like to view; you can double click the event to play it back or click the play button.

Downloading a Recording

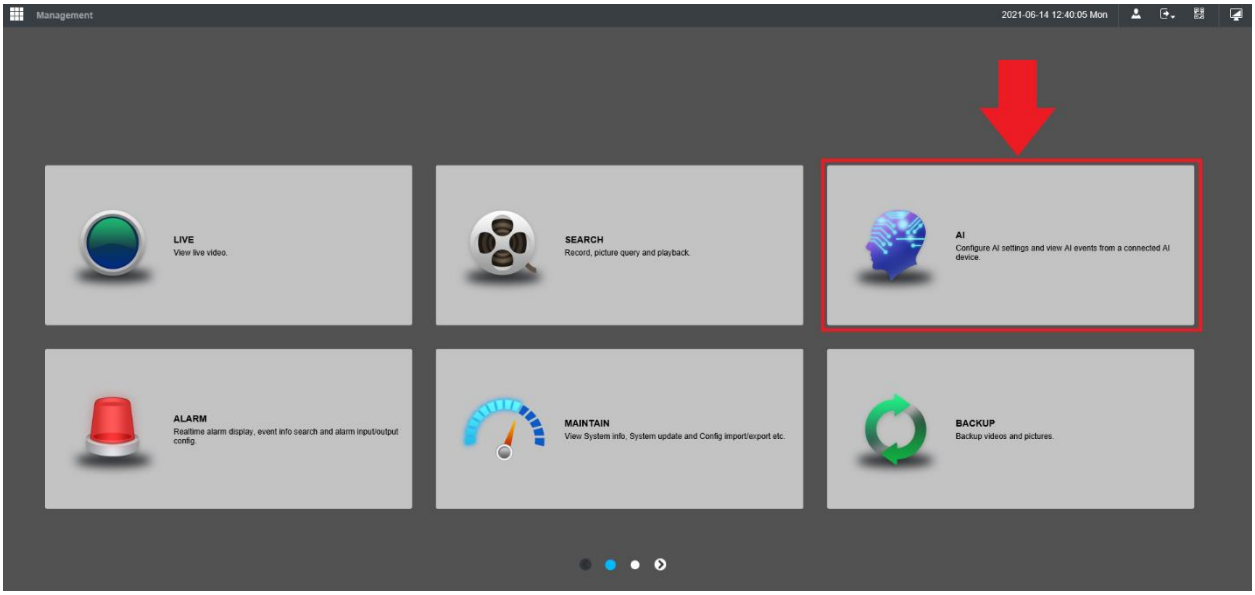
To download a recording, select the recording from the file list that you would like to download, note the start and end times, and click the **Clip** icon. Enter the start and end time of the event into the interface and click the **Save** icon.

Select a path for the recording and the file format in which the recording will be downloaded. The default file format will be MP4 however .dav can be selected as well. Click Save. The recording will begin to download to the specified path on your computer.

AI

The AI features listed on the NVR include, “Face Detection, IVS, People Counting, Heat Map, and SMD (Smart Motion Detection). The features available for use in the NVR will be dependent on the type of camera used during setup as the **AI features are controlled by the camera only.** The NVR allows the user to implement the AI features from an Amcrest AI camera into the NVR and store the recorded events.

The AI events from the AI camera are stored locally and can be accessed in the **Search** menu or by using the **AI Search** option located in the AI menu. Please note, features such as heat map will only be available to view using the AI search menu as it is displayed graphically. To begin setting up AI events, click on the **AI** option shown on the main menu.



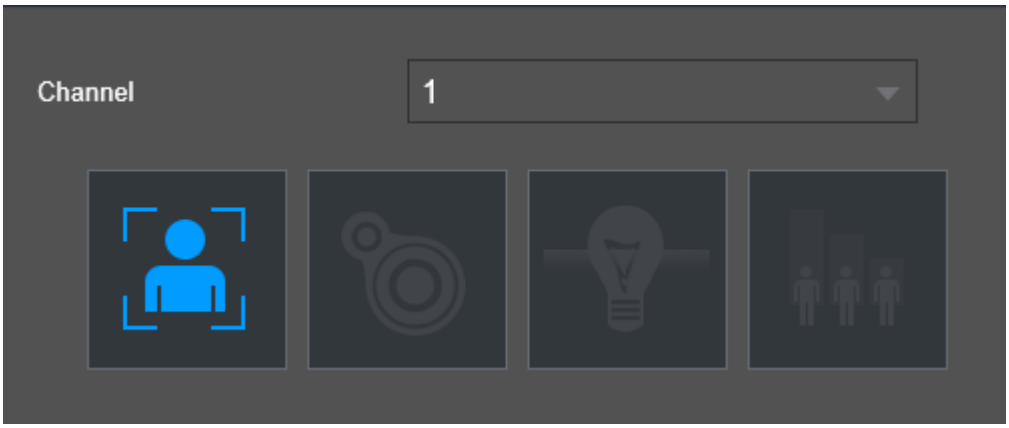
Smart Plan

A smart plan acts as the “master switch” for all AI features. The smart plan menu is in the **Parameters** section of the AI menu. The smart plans available in this interface will vary camera model to camera model as the AI events are controlled on the camera side, **not the NVR**. Please note, a smart plan must be enabled for an AI feature to be activated.

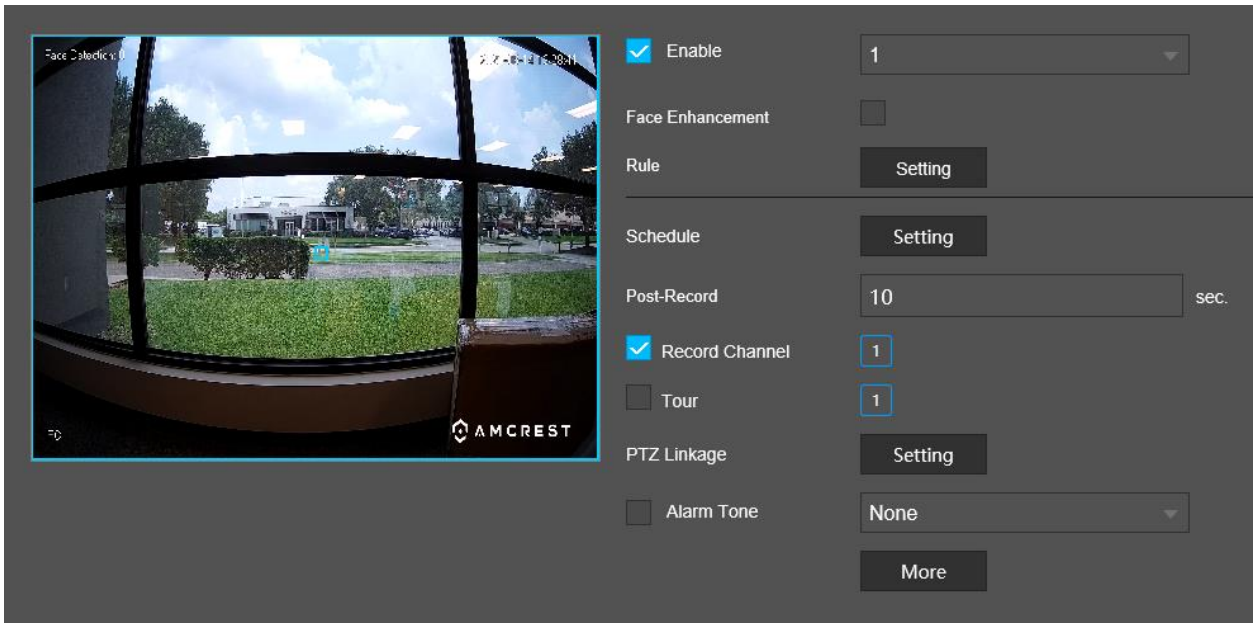
Face Detection

Face detection is used to allow your device to detect face events. **Please note, this feature may differ depending on which model camera is being used on the NVR**. Not all AI cameras support this feature. For more information on setting up face detection, please refer to the information provided below.

1: Access the **Smart Plan** menu and select the channel you would like to configure from the **Channel** drop down menu. Click on the **Face Detection** icon and then click **Save**. If using a non-AI camera, a smart plan may not be available for the specific channel.



2. Click on the **Face Detection** option located in the **Parameters** section and select which channel to configure from the **Channel** drop down menu and enable the face detection toggle switch. Click **Save**.



3. It is best to leave the **Rule** settings as default, however, they can be adjusted by clicking on the **Setting** button. Use your mouse to adjust the minimum (Min) and maximum (Max) size of the face detection area.

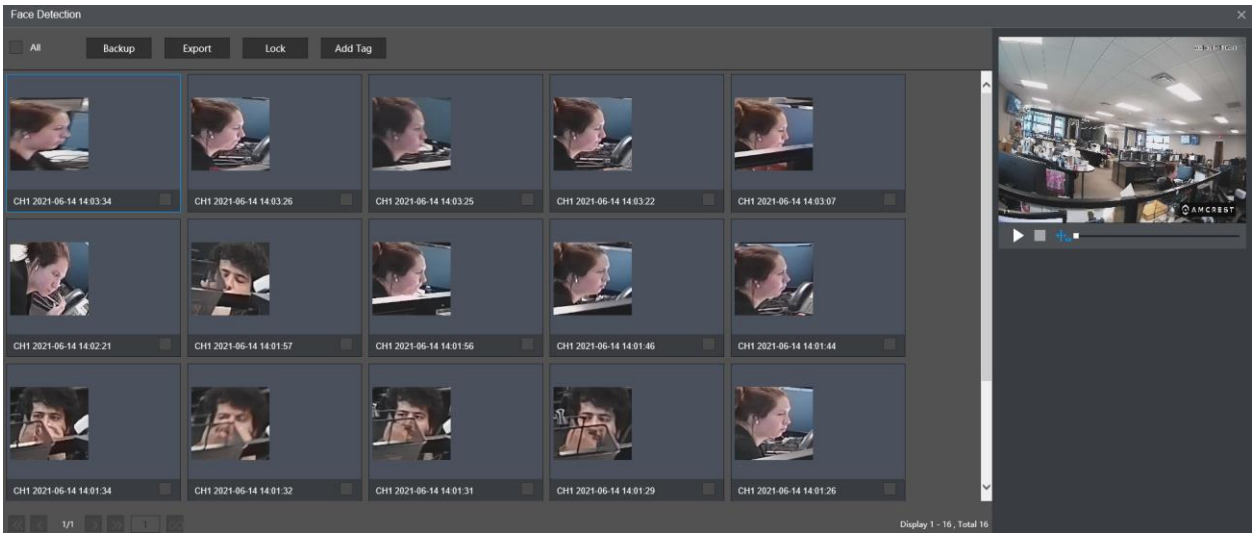
4. When triggered, the face detection event will be retained in the face detection smart search menu or snapshots of the event can be emailed to you. To have a snapshot of the event emailed to you, ensure email alerts are setup properly in the NVR and click on the More option located in the face detection menu. Click Send Email then click **Save**.

5. Click **Save**.

Viewing Face Detection Data

All face detection data retained by the system can be accessed via the **Face Detection** option located in the **AI Search** menu. Enter a start and end date and time for the event you would like to view in the Smart Search interface and click **Search**.

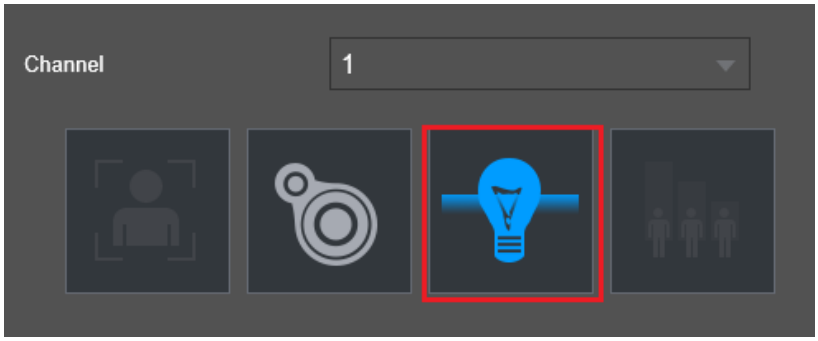
A display of all face detection data will be displayed along with facial attributes. Click on the event you would like to view, and a clip of the event will be displayed in the built-in player. Click on the play icon to view the event.



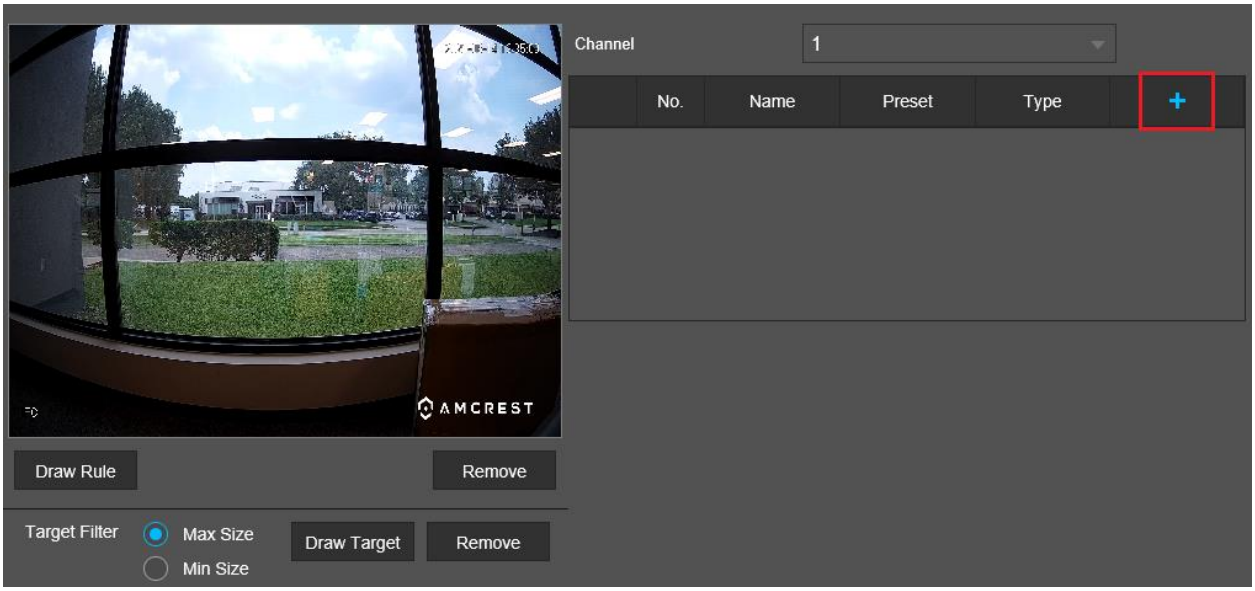
Setting Up IVS Rules

IVS stands for intelligent video system analytics and is the basis of most AI rules associated with your camera. Please note, the amount of IVS features available in the NVR will be dependent on the amount of IVS features that are included with your camera. The IVS menu allows you to customize and set IVS rules which allow the camera to produce general behavior analytics and reporting to the NVR. An IVS smart plan must be enabled to set up IVS rules. For more information on how to setup IVS please refer to the information provided below.

1. Ensure the **IVS** option is enabled in the **Smart Plan** menu. Click **Save**. Please note, if your camera supports heat map, it can also be enabled in this menu.

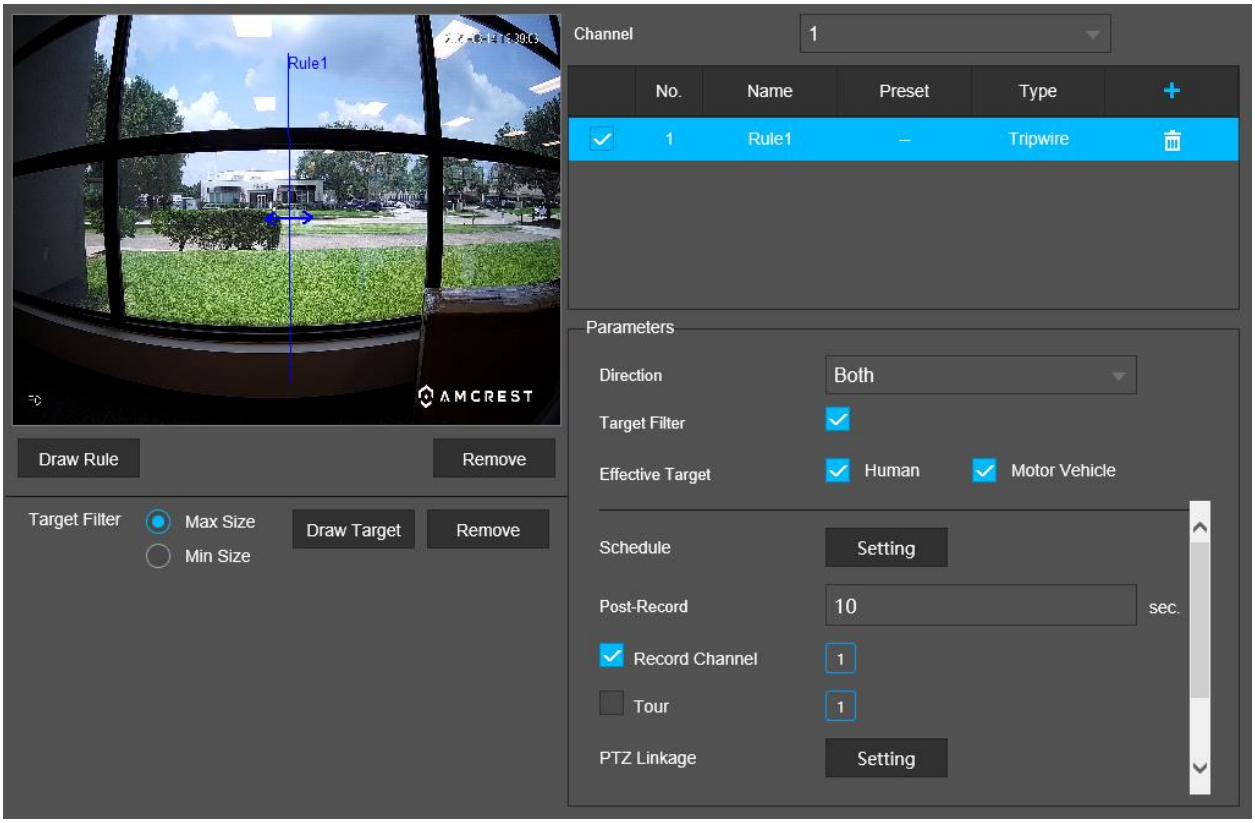


2. Click on the **IVS** option located in the **Parameters** menu and verify the correct channel is being used then click the add icon (“+”).



3. Click the **Type** dropdown menu to select an IVS rule. Please note, the number of IVS features available will be dependent on the number of IVS features the camera supports. If you would like to add a name for the rule, enter a name in the **Name** box. The **Direction** drop down menu allows you to choose a direction in which the rule will be triggered. Object filters can be enabled for accuracy. Click **Save**.

Enable the checkbox next to the IVS rule and use your mouse to draw the perimeter line or area on the interface.



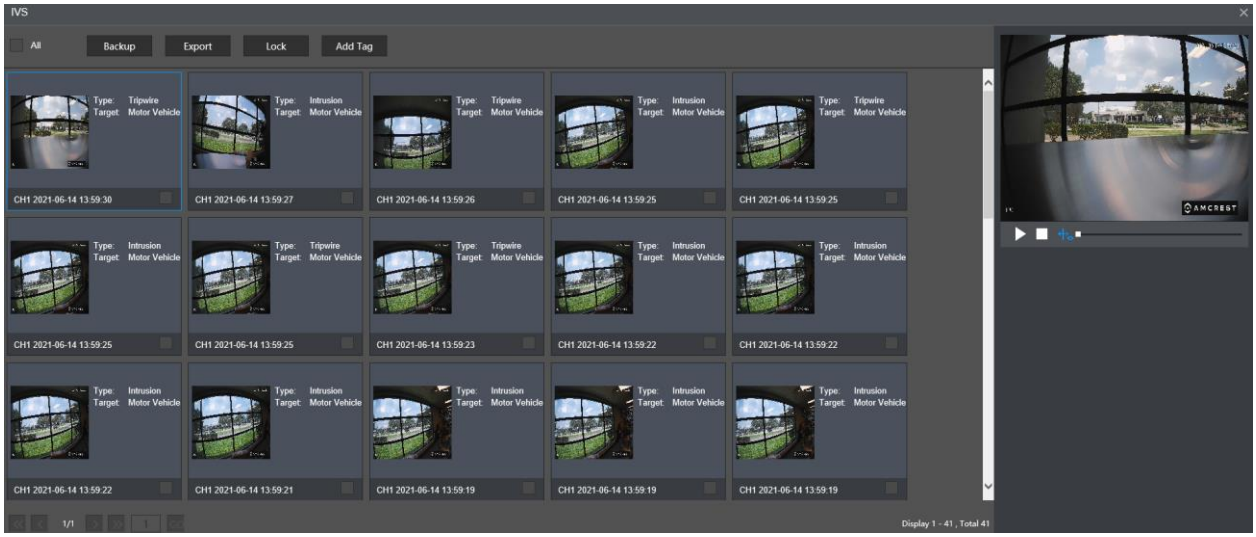
The Target Filter option is used to set a minimum or maximum detection area. It is recommended to leave this as default; however, it can be modified. Use the Clear (trash can) icon to remove a drawn area or line. The effective target options allow object filtering options which allow you the ability to determine if a human or vehicle has entered the area. If a person is chosen, the rule will only be triggered if a human figure is detected. If Vehicle is chosen, the rule will only be triggered if a vehicle is detected by the system. Both object filtering options can be used simultaneously if needed.

5. If you would like to add multiple rules to the device, click on the **"+"** icon and repeat the IVS setup process for the rule. Click **Save** once all IVS rules are set.

Viewing IVS Data

Any IVS data retained on the system can be viewed using the IVS AI Search interface or using the playback menu if an IVS schedule is set in the system.

1. To view IVS data using AI search, click on the **IVS** option located in the AI Search menu. Enter a start and end time of the event and click **Search**. A layout of all IVS events will be displayed. To view the event, select the event from the interface and click the play icon.



People Counting

People Counting is typically used to provide a statistic based on the number of people who enter and exit a certain area. Please note, this feature may differ depending on which model camera is being used on the NVR. Not all AI cameras support this feature. For more information on using people counting please refer to the information provided below.

1. Enable the **People Counting** icon in the **Smart Plan** menu. Click **Save**.



2. Click on the **People Counting** option located in the **Parameters** menu and ensure the **Enable** checkbox is enabled. For more information on the people counting option for your specific camera, please visit amcrest.com/support

Viewing People Counting Data

People counting data shows the number of people reported by the system entering or exiting the area within a specified amount of time. This information is displayed graphically using a bar or line chart. For more information on viewing people counting data, please refer to the information provided below.

1. Click on the **People Counting** option located in the **AI Search** menu. Select a report type from the dropdown menu and enter the start and end time of the report in the **Start Time** and **End Time** fields. Click **Search**.



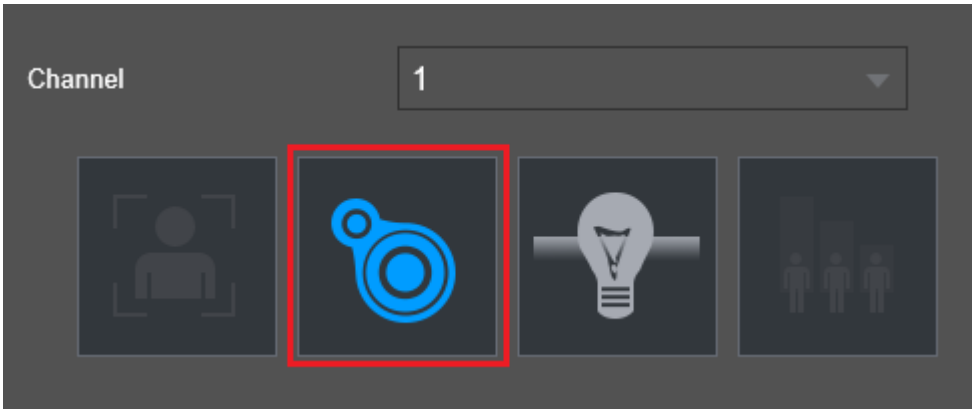
Note: An image or excel sheet of this data can be exported and backed up to a computer if needed. To export the data, click **Export** and set a file path, then download.

Heat Map

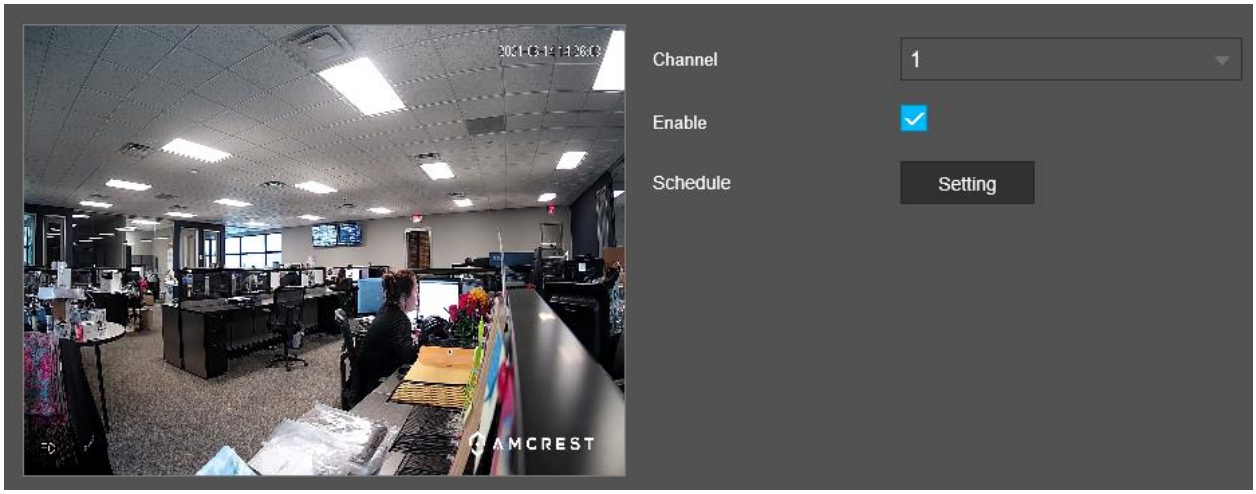
Heat Map is a tool used to determine the overall crowd flow (density) over a certain amount of time in a specific area. Heat map provides a color-coded layout of the density with red being the highest level to blue which is the lowest level. Please note, this feature may differ depending on which model camera is being used on the NVR. Not all AI cameras support this feature.

For more information on how to use heat map, please refer to the information provided below.

1. Ensure the **Heat Map** icon is enabled in the **Smart Plan** menu. Click **Save**.

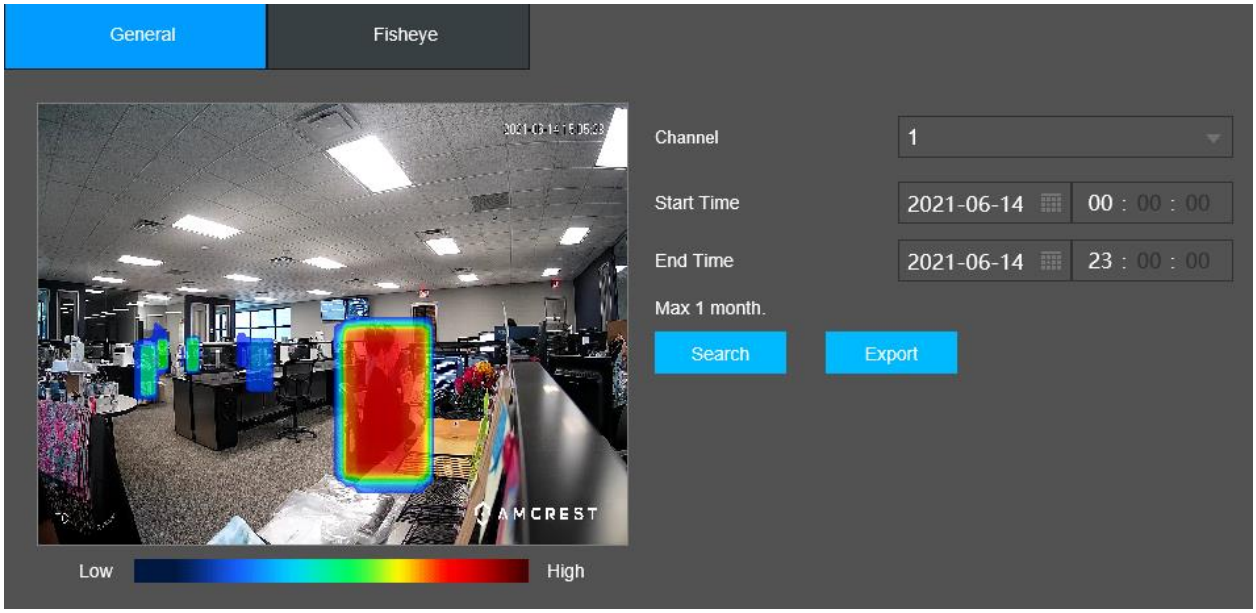


2. Enable the Heat Map checkbox to turn on the feature. Click **Save.**



Note: A schedule can be set for this feature by clicking on the **Setting** button in the **Schedule** field. This will allow the feature only to function during specific times set by the user.

3. To view Heat Map data, click on the **AI Search** option and click on **Heat Map**. There are 2 tabs, one for general and fisheye event types. Select an event tab and enter a start and end time into the interface and click **Search**. The heat map period cannot exceed one month of reporting. All heat map data will appear in the interface.

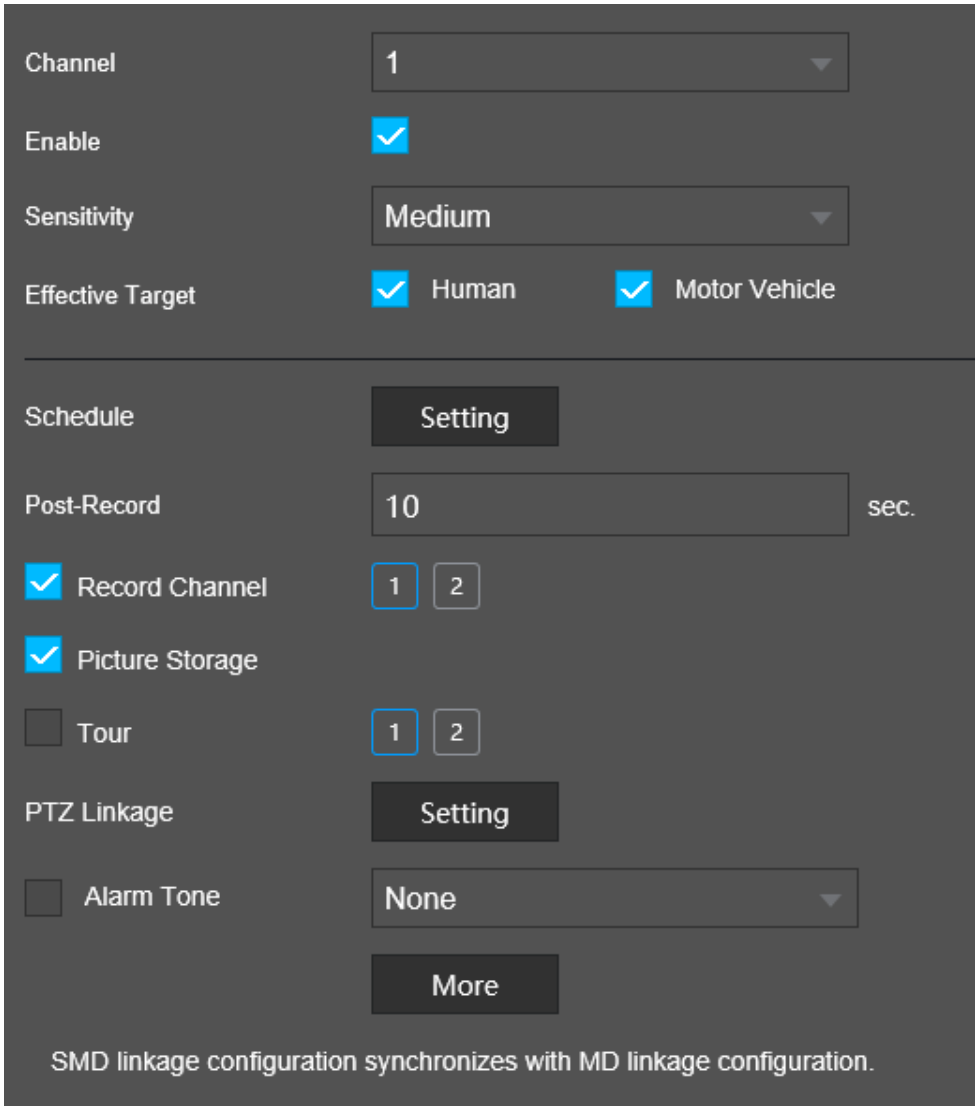


Note: An image or excel sheet of this data can be exported and backed up to a computer if needed. To export the data, click **Export** and set a file path, then download.

Smart Motion Detection

Smart Motion Detection (SMD) uses an advanced algorithm to differentiate between human and motor vehicle shapes within a scene and send alarms only when a person or vehicle is detected. Please note, this feature may differ depending on which model camera is being used on the NVR. **Not all AI cameras support this feature.**

1. Ensure the Smart Motion Detection checkbox is enabled in the **Parameters** menu. Click **Save**.



2. Use the Effective target options to select if the camera will detect human or motor vehicles. By default, both will be enabled. Click **Save**.

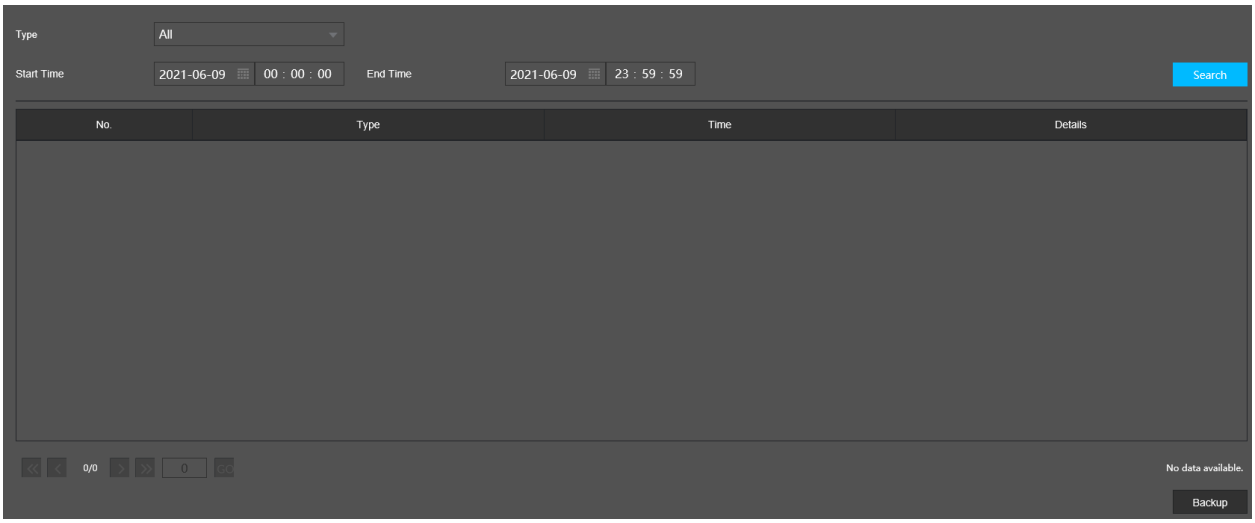
3. To view SMD data, click on AI Search and access the SMD menu. Select a channel and type from the respective dropdown menus and enter a date and time of the event. Click Search. A list of SMD events retained in the system will be displayed. Click the **Pla**y button next to the event to play to recording.

Alarm

The **Alarm** menu allows the user to view live alarm information as well as configure alarm event actions such as motion detection.

Alarm Info

This feature allows the user to search for specific types of alarm information related to the system. These specific types of alarms include, Motion Detection, Video Loss, Tampering, Abnormalities, Local Alarms, Intel, etc. You can also select **All** to view all log and alarm information.



To use this feature, access the alarm info interface and select the type of alarm you are search for from the dropdown menu. Enter in the start and end times in the **Start Time** and **End Time** fields and click **Search.** The alarm you are viewing will be accessible via the alarm info list. In this list you can view information such as, the log time, event type and playback. To playback the event, click on the playback icon.

If you require to back up any alarm events, the alarm info interface has a backup option. When selected, all selected files will be Saved to an external USB storage NVR. To backup events from this menu, click on **Backup** and follow the on-screen instructions. Also, for a more detailed description of the selected event, click on the **Details** options located next to the backup button.

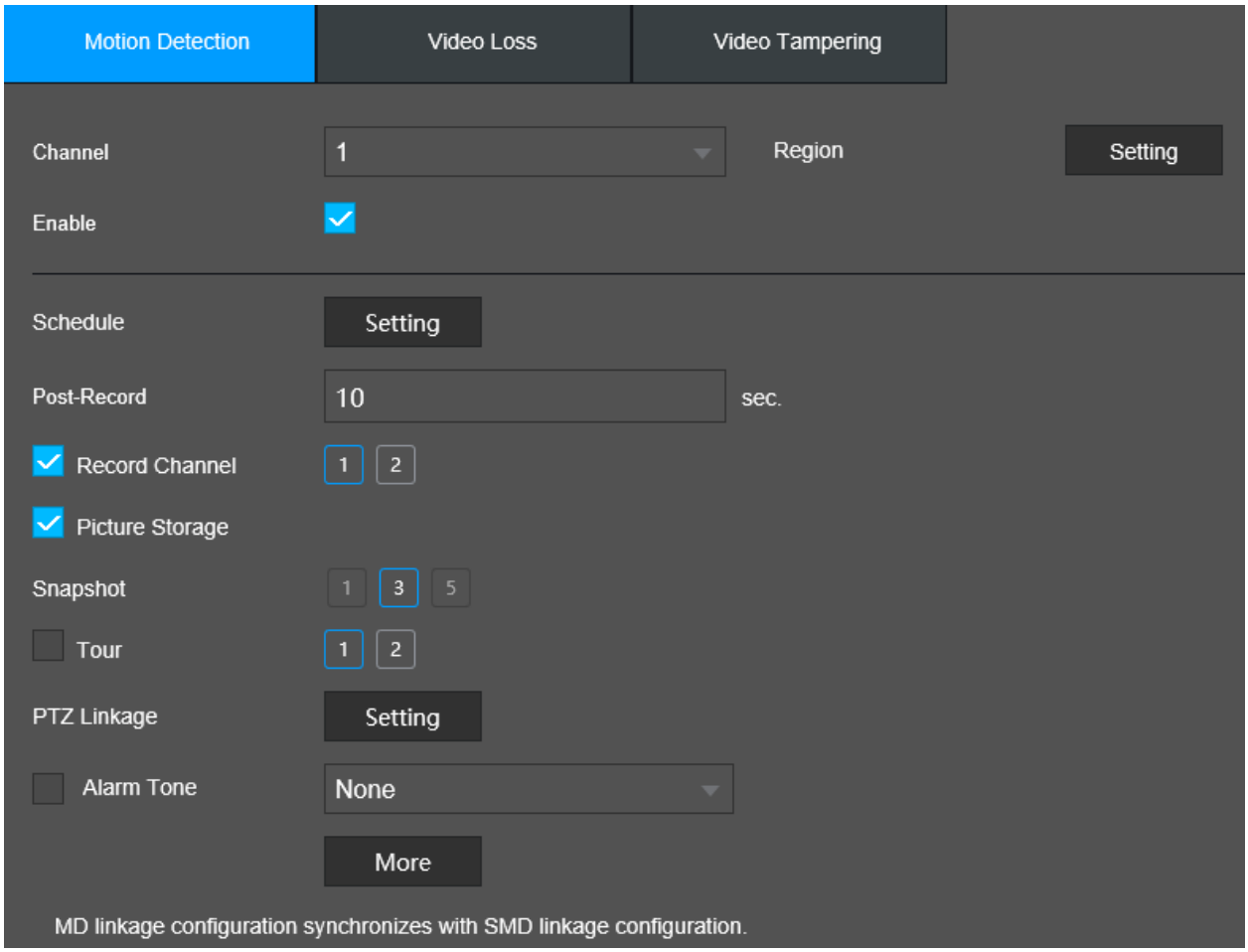
Video Detection

The detect tab allows users to set Motion Detection, Video Masking, and Video Loss events for their system.

Motion Detection

The motion detection settings screen is where motion detection can be setup for each individual channel. Based on the active motion detection region, the NVR can generate a motion detection alarm

when a moving signal is detected in a specified area. Below is a screenshot of the motion detection settings screen:



Below is a description of the fields on the **Motion Detection** settings page:

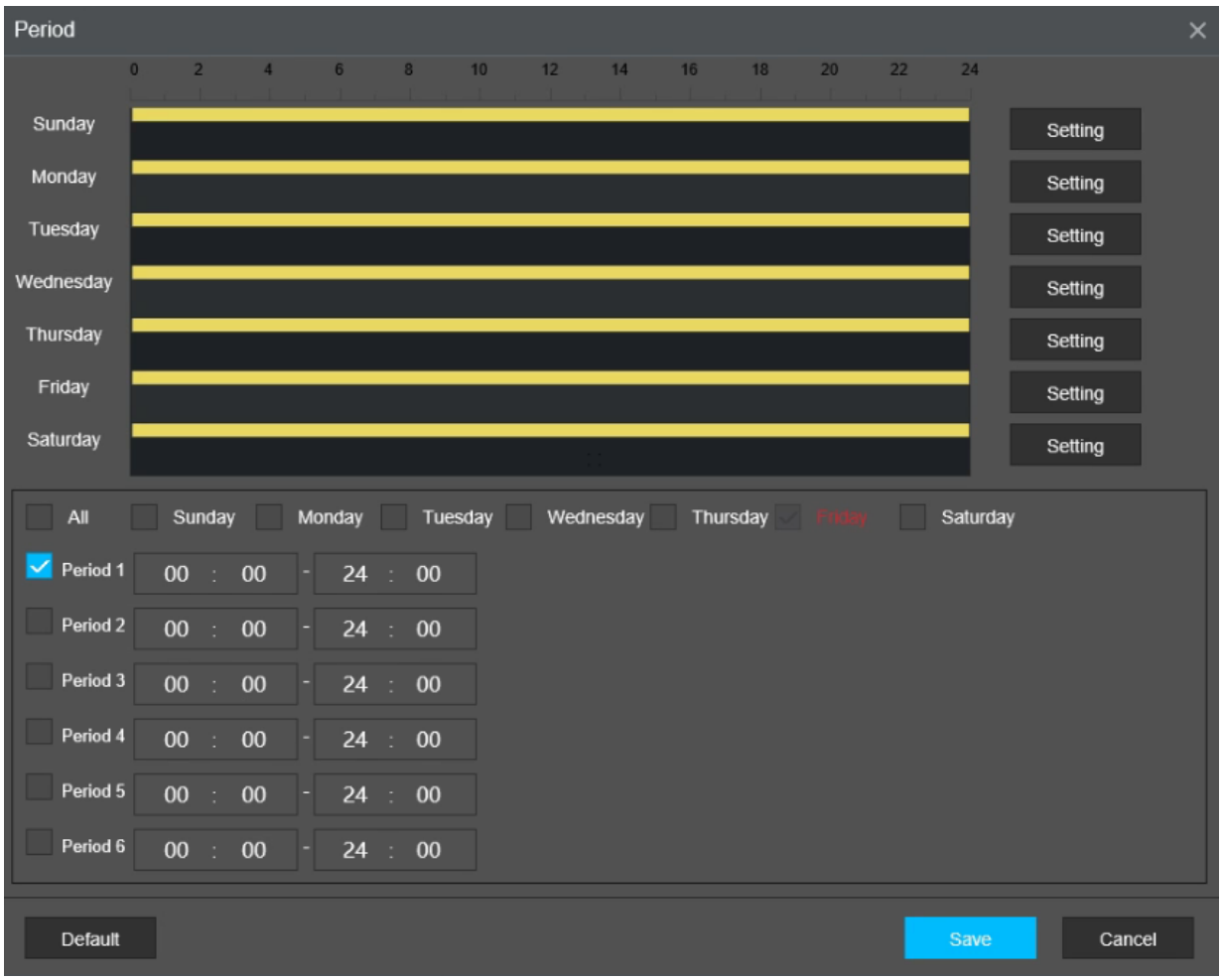
Channel: The channel dropdown menu is used to select which channel you would like to use to set your motion detection.
Region: The setup button takes the user to the motion detection region setup screen for that specific channel. On the next page is a screenshot of the motion detection region screen.

When the setup button is clicked, the current channel's interface comes into a full screen view. The user can then set up to 4 regions, each with their own region name, sensitivity (1-100), and threshold (1-100). Each region has a specific color, and the region selector tool is displayed when the mouse is moved to the top of the screen.

Sensitivity is the amount of change required to increase the motion detected by a percentage. The lower the sensitivity, the more movement is required to trigger an alarm.
Threshold is the level that the motion detection needs to reach to trigger an alarm.
The lower the threshold, the more likely that motion will trigger an alarm.

To designate a zone, click and drag the mouse over the area desired. When a colored box is displayed over the live feed, that area is now enabled for motion detection. Clicking the FN button will switch the mode between armed and disarmed, so that clicking and dragging the mouse can either designate a motion detection zone or remove any motion detection zone markers.
After the motion detection zone is set, click the enter button to exit the motion detection screen. Remember to click the Save button on the motion detection settings screen, otherwise the motion detection zones will not go into effect. Clicking the escape button to leave the motion detection zone and will not Save the zone setup.

Enable: This checkbox allows the user to enable the motion detection function for a specific channel. To select a channel, click on the drop-down menu provided on the right.
Schedule: This setup button takes the user to the motion detection period settings screen. Below is a screenshot of the motion detection period settings screen.



Click and drag on the yellow bars to specify time zones for motion detection. To edit multiple days at once, either click the checkboxes next to the names, or click the checkbox next to All to edit all the days at once. Once the checkbox is clicked, press Save to Save and apply your detection settings. Click Cancel to undo any changes and return to the motion detection settings screen. Click **Default** to use the default settings.

The system allows for the configuration of up to 6 different time periods. Click the checkbox to the left of the time period to enable that time period. Click the text next to each period to edit the time period. To copy time periods, click the checkboxes next to the days of the week that you would like to copy the settings to. Once finished on this screen, click Save to return to the time period settings screen.

Record Channel: This checkbox allows the user to enable the system to record video for that channel when a motion detection alarm is triggered. Delay is also associated with this tab; it is the This field specifies in seconds how long the delay between alarm activation and recording should be.

Picture Storage: When an alarm occurs, the NVR triggers a snapshot for the selected channel.

Tour: Allows the user to enable the camera to activate a PTZ tour when a motion detection alarm is triggered.

PTZ Linkage: Allows the user to active PTZ functionality to an applicable PTZ device.

Alarm Tone: Check this box to enable an imported voice prompt to be used if an event occurs. To use this feature, select a file from the dropdown box in the **File Name** section.

More: Allows the user to access other motion detection options:

Anti-Dither: This field allows the user to set the anti-dither time. The values in this field can range from 5 to 600 seconds. This time value controls how long the alarm signal lasts. Based on motion detection, a buzzer can go off, a tour can begin, PTZ can be activated, a snapshot can be taken, or a channel can begin recording.

Show Message: This checkbox allows the user to enable the system to show an on-screen message when a motion detection alarm is triggered.

Buzzer: Check this box to enable a buzzer to be sound on your device if an event occurs.

Log: Check this box to enable a log of the abnormality to be retained into the system.

Send Email: This checkbox allows the user to enable the system to send an email when a motion detection alarm is triggered.

To reset to default settings, click the **Default** button. To copy the motion detection settings, click on the **Copy to** button. To refresh the page, click the **Refresh** button. To Save the settings click the **Save** button.

Video Loss

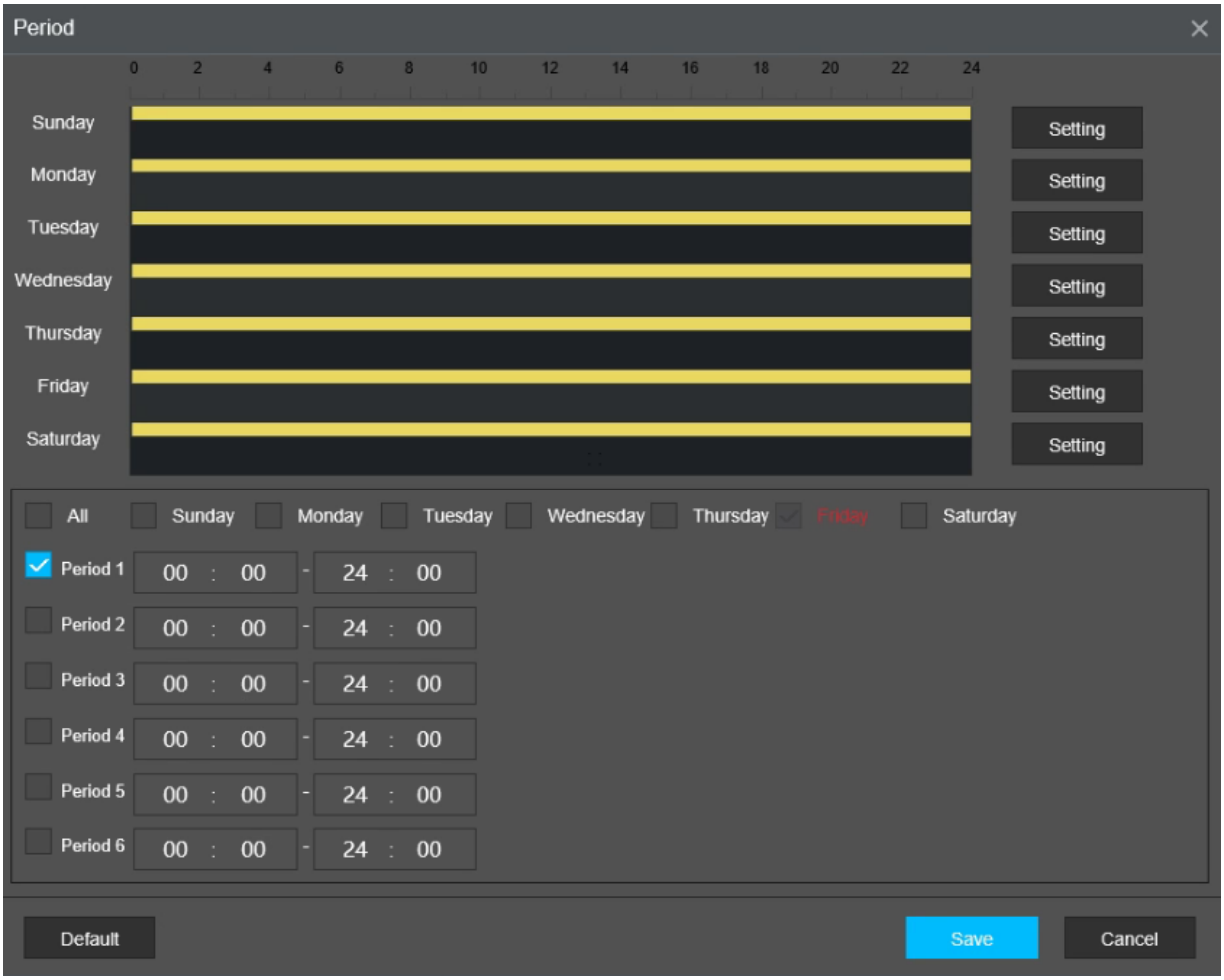
The video loss settings screen is where the NVR can be setup to notify the user any time there is video loss on any of the channels.

Below is a description of the fields on the **Video Loss** settings page:

Channel: The channel dropdown menu is used to select which channel you would like to use to set your motion detection.

Enable: This checkbox allows the user to enable the detection function for a specific channel. To select a channel, click on the drop-down menu provided on the right.

Schedule: This setup button takes the user to the detection period settings screen. Below is a screenshot of the motion detection period settings screen.



Click and drag on the yellow bars to specify time zones for detection. To edit multiple days at once, either click the checkboxes next to the names, or click the checkbox next to All to edit all the days at once. Once the checkbox is clicked, press Save to Save and apply your detection settings. Click Cancel to undo any changes and return to the motion detection settings screen. Click **Default** to use the default settings.

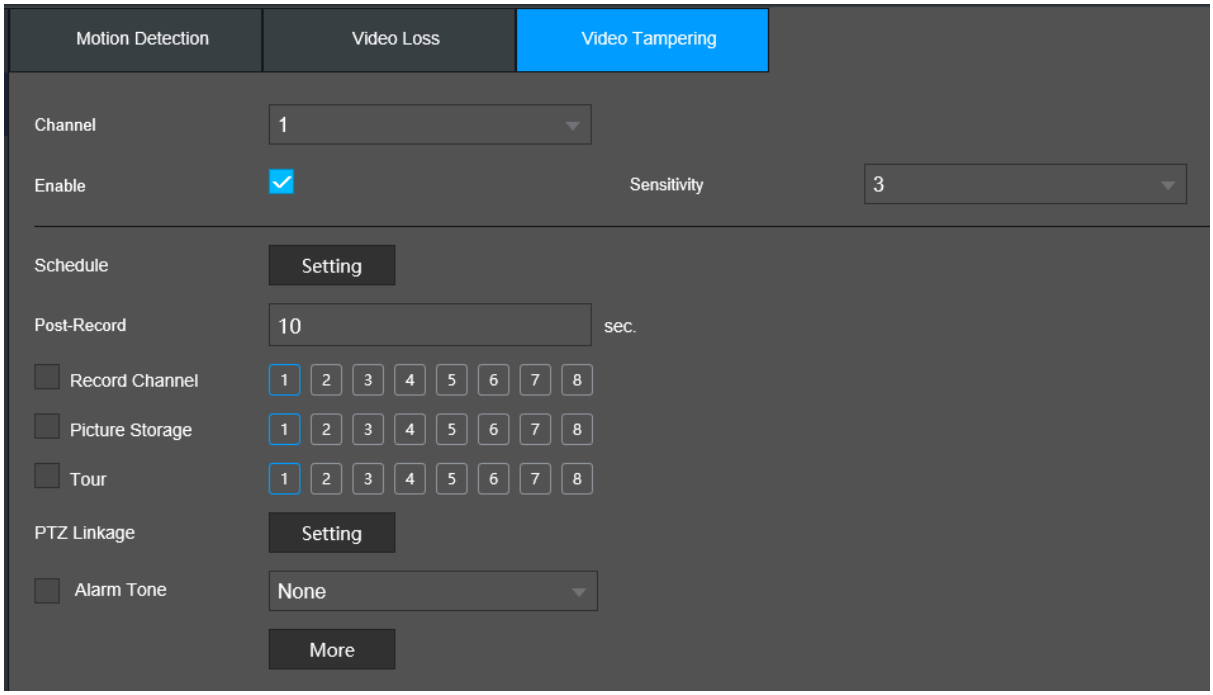
The system allows for the configuration of up to 6 different time periods. Click the checkbox to the left of the time period to enable that time period. Click the text next to each period to edit the time period. To copy time periods, click the checkboxes next to the days of the week that you would like to copy the settings to. Once finished on this screen, click Save to return to the time period settings screen.
Post Record: Allows the user to delay recording for a specified time after the event ends.
Record Channel: This checkbox allows the user to enable the system to record video for that channel when a motion detection alarm is triggered. Delay is also associated with this tab; it is the This field specifies in seconds how long the delay between alarm activation and recording should be.
Tour: Allows the user to enable the camera to activate a PTZ tour when a motion detection alarm is triggered.
PTZ Linkage: Allows the user to active PTZ functionality to an applicable PTZ device.

Alarm Tone: Check this box to enable an imported voice prompt to be used if an event occurs. To use this feature, select a file from the dropdown box in the **File Name** section.
More: Allows the user to access other motion detection options:
Show Message: This checkbox allows the user to enable the system to show an on-screen message when a motion detection alarm is triggered.
Buzzer: Check this box to enable a buzzer to be sound on your device if an event occurs.
Log: Check this box to enable a log of the abnormality to be retained into the system.
Send Email: This checkbox allows the user to enable the system to send an email when a motion detection alarm is triggered.

To reset to default settings, click the **Default** button. To copy the motion detection settings, click on the **Copy to** button. To refresh the page, click the **Refresh** button. To Save the settings click the **Save** button.

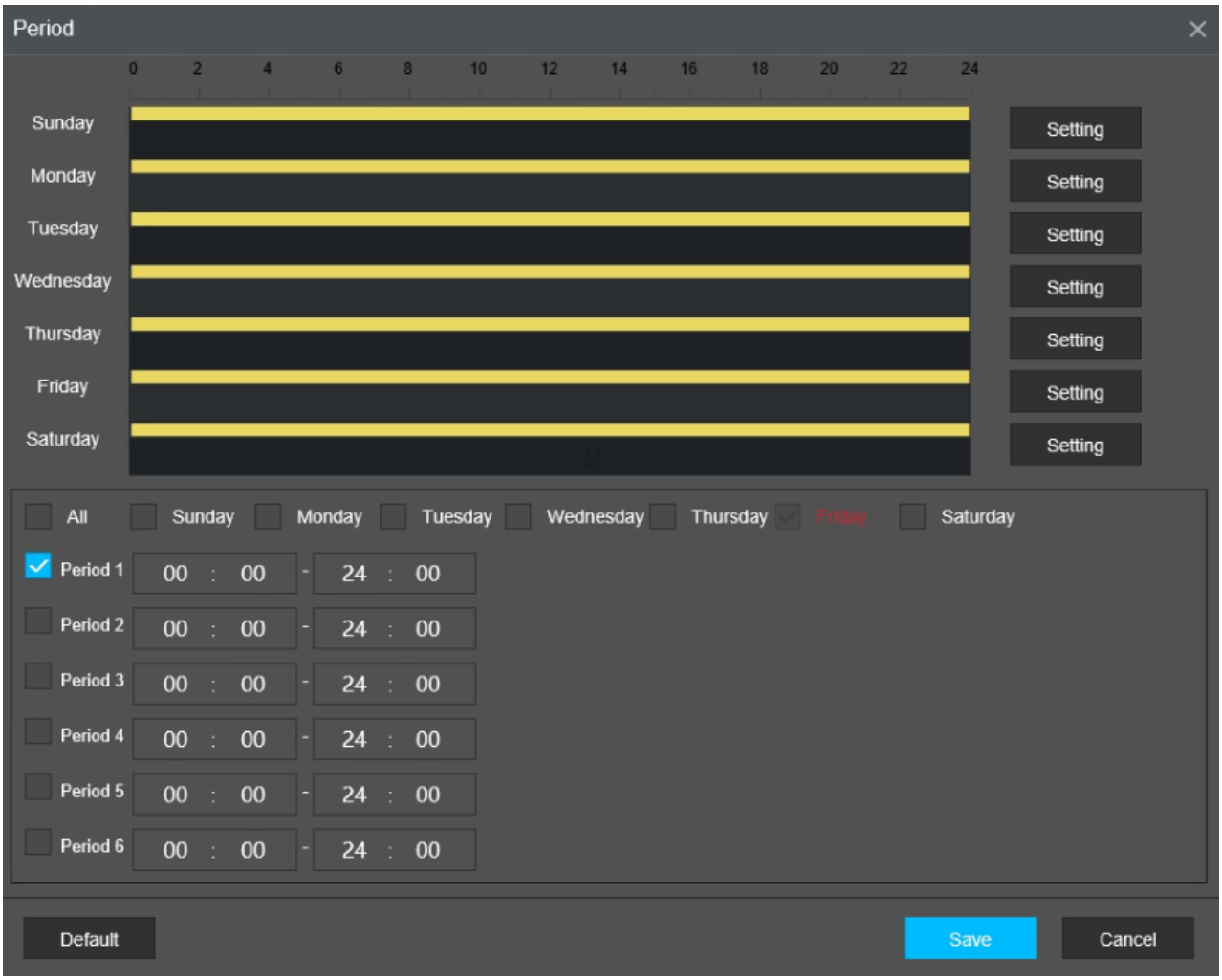
Video Tampering

The tampering settings screen is where the NVR can be setup to notify the user any time a camera is tampered with or if the output video is only displaying in one color.



Below is a description of the fields on the **Video Tampering** settings page:

Channel: The channel dropdown menu is used to select which channel you would like to use to set your motion detection.
Enable: This checkbox allows the user to enable the detection function for a specific channel. To select a channel, click on the drop-down menu provided on the right.
Schedule: This setup button takes the user to the detection period settings screen. Below is a screenshot of the motion detection period settings screen.



Click and drag on the yellow bars to specify time zones for detection. To edit multiple days at once, either click the checkboxes next to the names, or click the checkbox next to All to edit all the days at once. Once the checkbox is clicked, press Save to Save and apply your detection settings. Click Cancel to undo any changes and return to the motion detection settings screen. Click **Default** to use the default settings.

The system allows for the configuration of up to 6 different time periods. Click the checkbox to the left of the time period to enable that time period. Click the text next to each period to edit the time period. To copy time periods, click the checkboxes next to the days of the week that you would like to copy the settings to. Once finished on this screen, click Save to return to the time period settings screen.

Post Record: Allows the user to delay recording for a specified time after the event ends.

Record Channel: This checkbox allows the user to enable the system to record video for that channel when a motion detection alarm is triggered. Delay is also associated with this tab; it is the This field specifies in seconds how long the delay between alarm activation and recording should be.

Picture Storage: When an alarm occurs, the NVR triggers a snapshot for the selected channel.

Tour: Allows the user to enable the camera to activate a PTZ tour when a motion detection alarm is triggered.

PTZ Linkage: Allows the user to active PTZ functionality to an applicable PTZ device.

Alarm Tone: Check this box to enable an imported voice prompt to be used if an event occurs. To use this feature, select a file from the dropdown box in the **File Name** section.
More: Allows the user to access other motion detection options:
Show Message: This checkbox allows the user to enable the system to show an on-screen message when a motion detection alarm is triggered.

Buzzer: Check this box to enable a buzzer to be sound on your device if an event occurs.

Log: Check this box to enable a log of the abnormality to be retained into the system.

Send Email: This checkbox allows the user to enable the system to send an email when a motion detection alarm is triggered.

To reset to default settings, click the **Default** button. To copy the motion detection settings, click on the **Copy to** button. To refresh the page, click the **Refresh** button. To Save the settings click the **Save** button.

Audio Detection

Audio detection uses an "Audio In" interface (external or internal microphone) to trigger an alarm if audio is detected. Please note, this option will only be applicable to cameras with built-in microphones or audio capabilities. The feature is provided through the camera, not the NVR.

Below is a description of the features in this menu:

Channel: The channel dropdown menu is used to select which channel you would like to use to set your motion detection.
Audio Exception Interprets if an audio input is abnormal, such as clipping audio, etc.
Intensity Change: Interprets if the intensity value surpasses the set threshold; it can record, send a snapshot, and an alarm according to the result.
Sensitivity: Adjust and control the sensitivity of the audio from the camera.
Threshold: Adjust the threshold in which the audio will be detected by the camera.
Schedule This setup button takes the user to the motion detection period settings screen. Below is a screenshot of the motion detection period settings screen.
Post Record: Allows the user to delay recording for a specified time after the event ends.
Record Channel: This checkbox allows the user to enable the system to record video for that channel when a motion detection alarm is triggered. Delay is also associated with this tab; it is the This field specifies in seconds how long the delay between alarm activation and recording should be.
Picture Storage: When an alarm occurs, the NVR triggers a snapshot for the selected channel.
Tour: Allows the user to enable the camera to activate a PTZ tour when a motion detection alarm is triggered.
PTZ Linkage: Allows the user to active PTZ functionality to an applicable PTZ device.
Alarm Tone: Check this box to enable an imported voice prompt to be used if an event occurs. To use this feature, select a file from the dropdown box in the **File Name** section.
More: Allows the user to access other motion detection options:
Show Message: This checkbox allows the user to enable the system to show an on-screen message when a motion detection alarm is triggered.

Buzzer: Check this box to enable a buzzer to be sound on your device if an event occurs.

Log: Check this box to enable a log of the abnormality to be retained into the system.

Send Email: This checkbox allows the user to enable the system to send an email when a motion detection alarm is triggered.

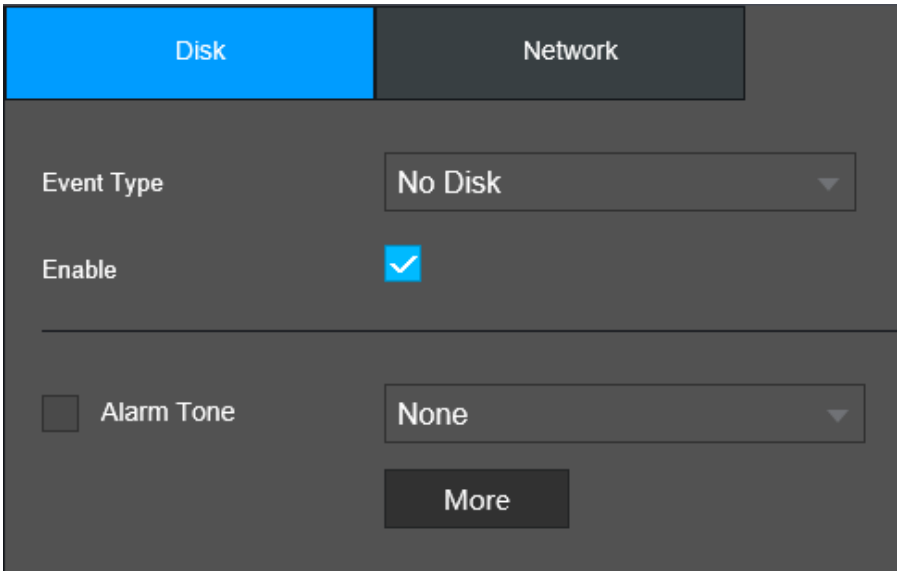
To reset to default settings, click the **Default** button. To refresh the page, click the **Refresh** button. To save the settings click the **Save** button.

Abnormality

This screen is used to specify system action in the case of either hard drive abnormality, or network abnormality.

Disk

This screen allows the user to specify actions that occur when there is an abnormality with the NVR's hard disk drive (HDD). Below is a screenshot of the HDD abnormality settings screen:



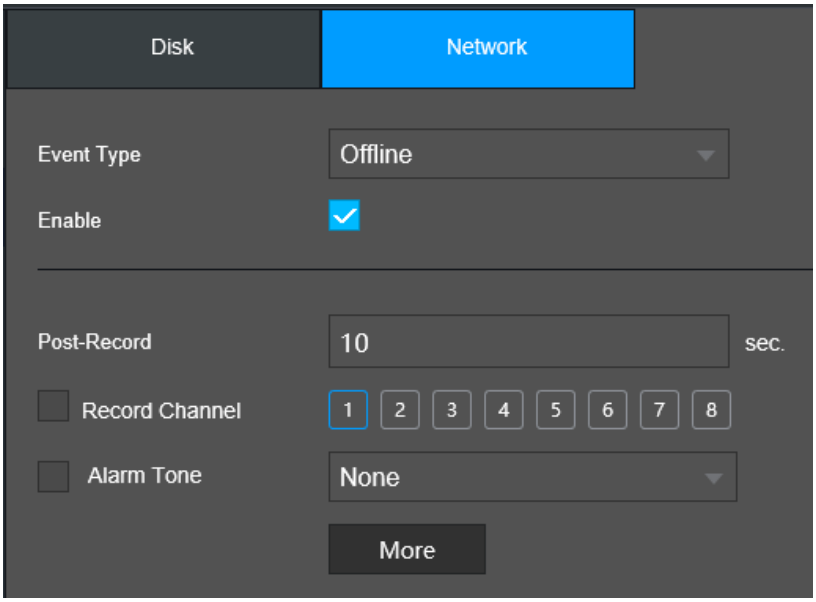
Below is an explanation of the fields on the **HDD** abnormality settings screen:
Event Type: This field allows the user to specify which HDD abnormality event type they would like to configure settings for.
No Disk: No hard drive is detected.
HDD Error: The hard drive has an error.
Low Space: The hard drive is about to or has run out of space.
Enable: This option allows the user to enable the features below for the specified event type.
Alarm Tone: Check this box to enable an imported voice prompt to be used if an event occurs. To use this feature, select a file from the dropdown box in the **File Name** section.
More: Allows the user to access other detection options.
Show Message: This checkbox allows the user to enable the system to show an on-screen message when an HDD abnormality occurs.
Buzzer: Check this box to enable a buzzer to be sound on your device if an event occurs.
Log: Check this box to enable a log of the abnormality to be retained into the system.

Send Email: This checkbox allows the user to enable the system to send an email when a motion detection alarm is triggered.

To refresh the page, click the **Refresh** button. To Save the settings click the **Save** button.

Network

This screen allows the user to specify actions that occur when there is an abnormality with the NVR's network connection. Below is a screenshot of the network abnormality settings screen:



Below is an explanation of the fields on the Network abnormality settings screen:

Event Type: This field allows the user to specify which Network abnormality event type they would like to configure settings for.
Offline: The network connection has been disconnected.
IP Conflict: There is a device on the network with the same IP address.
MAC Conflict: There is a device on the network with the same MAC address.
Enable: This option allows the user to enable the features below for the specified event type.
Record Channel: This checkbox allows the user to enable the system to record video for that channel when a motion detection alarm is triggered. Delay is also associated with this tab; it is the This field specifies in seconds how long the delay between alarm activation and recording should be.
Alarm Tone: Check this box to enable an imported voice prompt to be used if an event occurs. To use this feature, select a file from the dropdown box in the **File Name** section.
Show Message: This checkbox allows the user to enable the system to show an on-screen message when an abnormality occurs.
Buzzer: Check this box to enable a buzzer to be sound on your device if an event occurs.
Log: Check this box to enable a log of the abnormality to be retained into the system.
More: Allows the user to access other detection options.

Show Message: This checkbox allows the user to enable the system to show an on-screen message when an HDD abnormality occurs.

Buzzer: Check this box to enable a buzzer to be sound on your device if an event occurs.

Log: Check this box to enable a log of the abnormality to be retained into the system.

Send Email: This checkbox allows the user to enable the system to send an email when a motion detection alarm is triggered.

To refresh the page, click the **Refresh** button. To Save the settings click the **Save** button.

Maintain

The **Maintain** menu allows the user to view system information, update, import and export configuration settings, etc.

Log

This menu allows the user to view log information retained in the system. The system will automatically retain logs of events which occur during normal operation.

Below is a description of the features in this menu:

Type: Use this dropdown menu to select a log type.
Start Time: The start time in which logged events will be displayed
End Time: The end time in which a logged event will be displayed.
Search: Run a query of logs based on the start and end time.
Go To: Go to a specific log in the query.
Details: Provides details of a selected log such as, the login group, IP address, user, time, etc.
Clear: Clears the query.
Backup: Used to download data from the query to a designated file path.

To view system logs, enter a start and end time for the log you wish to pull and select a log type from the dropdown menu. Click **Search**. To download a copy of the log to your computer, click on **Backup**, select a path for the text document.

System Info

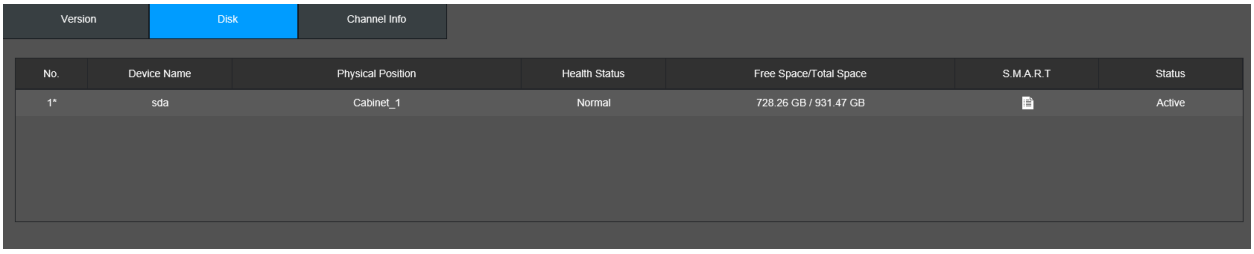
This menu allows the user to view information about their system such as the current system and firmware version, hard drive details, BPS, and hard drive health detection.

Version

The version tab provides details about the NVR such as the model, system version, and other basic information related to the system.

Disk

The HDD tab provides information about a connected hard drive in the system.



Below is a description of the fields listed in this menu:

Number: The number represented in the system for the hard drive.
Device Name: The name assigned by the system for the connected hard drive.
Physical Position: Displays the location of the connected hard drive on the system.
Type: The read and write type assigned to the hard drive.
Free Space/Total Space: The total space used on the hard drive.
S.M.A.R.T: S.M.A.R.T. stands for, "Self-Monitoring, Analysis, and reporting technology. The S.M.A.R.T. report provides a detailed description of the results taken from the initial HDD detect process. This report is designed to provide insight into the health of your HDD and its interaction with your system.
Status: The status of the hard drive.

BPS

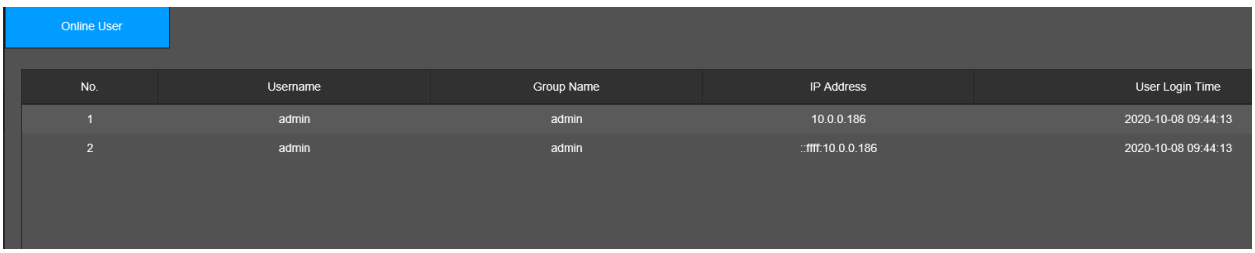
The BPS tab allows the user to view current video bit rate (kb/s) and resolution provided for each connected channel. The menu will show the current channel and resolution of that specific channel.

Network

The Network menu provides an overview of all online users currently logged into the system.

Online Users

The Online Users tab allows the user to manage online users connected to your NVR.
Below is a screenshot of this menu.



Below is a description of the fields listed in this menu:

No: The number assigned to the user in the system.
Username: The username of the connected user.
Group Name: The group name associated with the connected user.
IP address: The IP address used by the connected user to access the system.
User Login Time: The date & time which the user logged into the system.
Refresh: This button is used to refresh the interface.

Manager

The system maintain menu allows the user to set auto maintenance settings, import/export settings, reset the device back to its default settings, and upgrade firmware.

Maintenance

This screen is used to configure **Maintenance** settings for the system. Below is an explanation of the fields in the **Maintenance** screen:

Auto Reboot: This dropdown field allows the user to set a day of the week and time in which the device will automatically reboot the system to keep the system healthy. The interface will be set to Never by default unless changed by the user.

Click the **Refresh** button to refresh the interface. To confirm settings, click the **Save** button.

Import/Export

This screen is used to manage importing and exporting of system configurations. This feature can be used to import and export NVR settings.

Export: Used to export device configuration files to the device.
Browse: Click this button to select the device configuration file from
Import: Click this button after the config file has been imported into the interface to import the settings.

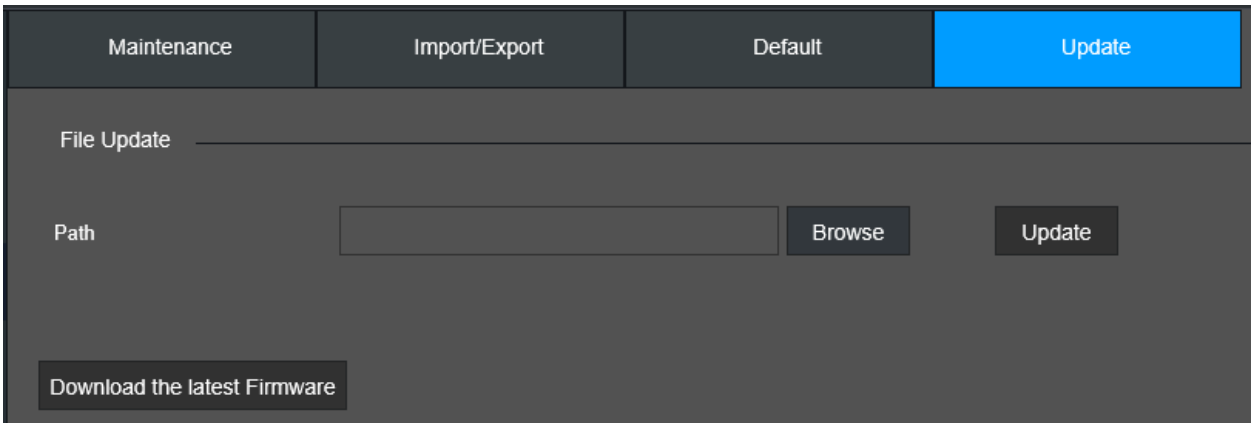
Default

This screen is used to revert the NVR back to its original default or factory default settings. To reset specific parameters, excluding network, user management, etc. use the **Default** button. To perform a factory reset, click on the **Factory Default** button. A prompt will be displayed, click the **SAVE** button to begin the factory reset. The device will reboot and restored back to its original factory settings.

Update

This screen is used to update the NVRs firmware. To conduct a system update, it is required to put an update file onto a USB storage device and plug it into the NVR. For more information on how to download a firmware file, please visit https://amcrest.com/firmware

Below is a screenshot of the upgrade screen:



To begin upgrading the firmware, click on **Download the latest Firmware** and locate the firmware file for your specific device. Download the firmware to a USB flash drive or to the computer if using a web user interface. Click on **Browse** to locate and import the firmware (.bin) file into the interface. Click **System Upgrade** and allow the device to complete the upgrade process.

Note: The device will reset after the firmware upgrade is complete.

BackUp

This menu allows the user to backup file information from the device to an external USB storage device.

Here is a brief explanation on how to use the backup feature listed in this menu:

In the **Path** field, choose a file path in which the files will be backed up, click the **Browse** option to select a file path. Choose a channel in which the file is located and choose a record type if necessary. Enter a start and end time of the event and the file format from the **Type** dropdown menu. Click **Search** to import all recorded data.

Note: A view the event before it is downloaded, click on the Play icon.

Select the event from the interface and click **Backup**. The chosen files will be backed up to the file path previously chosen.

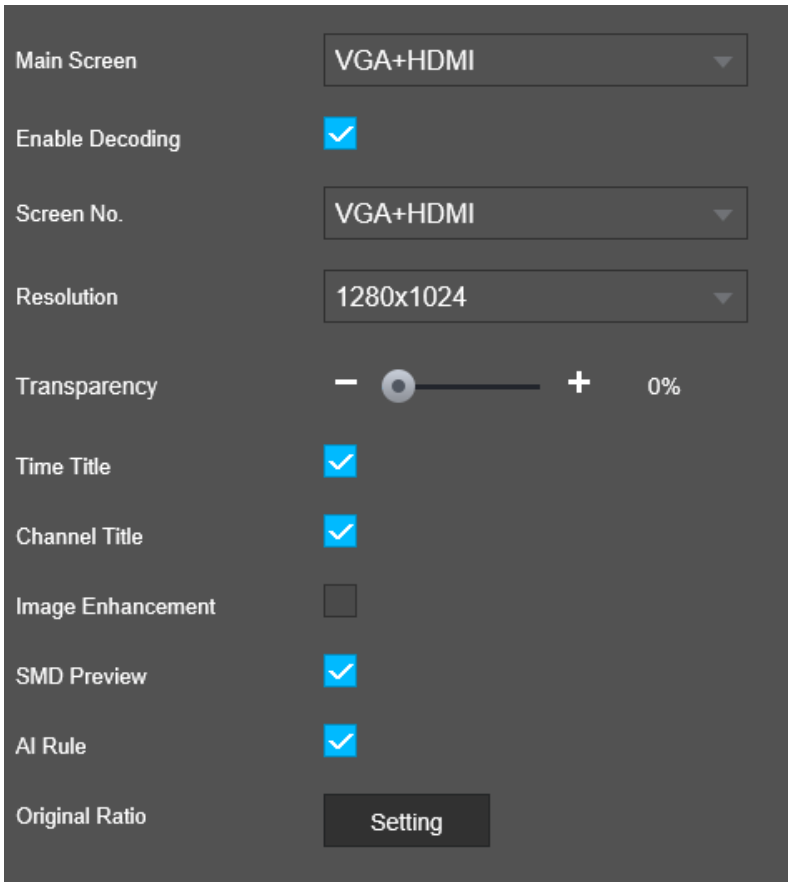
Note: Click on the Watermark option to verify the watermark information assigned to the downloaded file.

Display

This menu allows the user to configure resolution and display setting outputs as well as setup a display tour if multiple displays are being used.

Display

This menu provides you with quick access to your display and output information associated with your NVR. You can configure the display effects such as, resolution, time delays, channel titles, etc.



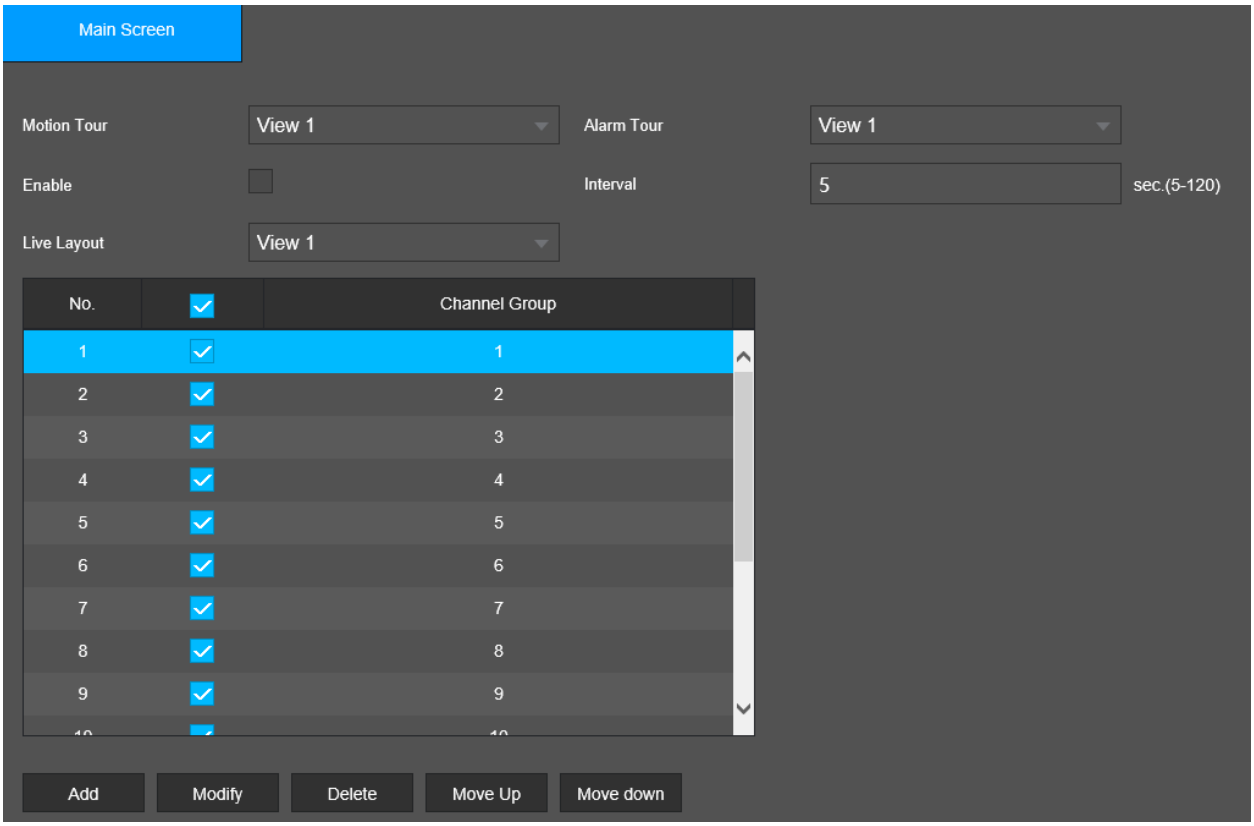
For more information on the settings provided in this menu, refer to the table provided below.

Parameter	Description
Main Screen	The main display outputs. The device should be VGA+HDMI by default.
Enable Decoding	This checkbox enables decoding from the NVR to the display.
Screen No.	This dropdown menu should be default to VGA+HDMI.
Resolution	This drop-down menu provides output different output resolutions of the NVR.
Transparency	Use this slider to choose a transparency rate for the output of your device.
Time Title	This checkbox enables the time overlay on the display.
Channel Title	This checkbox enables the channel overlay on the display.
Image Enhancement	This checkbox provides automatic image enhancement from the NVR.
SMD Preview	This check box enables smart motion detection previews on the display.
AI Rule	Enable and disable AI overlays in the in the output display.
Original Ratio	This checkbox sets the display into its original aspect ratio.

Click **Refresh** to refresh the interface. Click **Save** to Save display settings.

Tour Setting

This screen is used to activate tour functionality for the live preview.



Below is an explanation of the fields on the Tour screen:

Enable: This checkbox allows the user to enable the tour functionality.
Interval: Enter the amount of time that you want each channel group displays on the screen. The value ranges from 5 seconds to 120 seconds, and the default value is 5 seconds.
Motion Tour Select the View 1 or View 8 for **Motion** tour.
Alarm Tour: Select the View 1 or View 8 for Alarm tours (system alarm events).
Live Layout: In the **Live Layout** list, select **View 1**, **View 4**, **View 8**, or other modes that are supported by the NVR.
Add: This button allows the user to add a channel to the tour.
Modify: This button allows the user to modify a channel group sequence.
Delete: This button allows the user to remove a channel from the tour.
Move Up: This button allows the user to move a camera up in the tour queue.
Move Down: This button allows the user to move a camera down in the tour queue.

Click the **Default** option to set the tour settings back to default. Click the **Refresh** option to refresh the interface. Click the **Save** option to Save the tour settings.

Audio

This function tile allows you to manage audio functions such as, audio file management and configuring audio playing schedules which can be associated with specific alarm events.

File Management

The file manager tab allows the user to configure audio files to a set schedule.

To begin configuring audio files click on **Select audio file** to import the audio files into the system via a flash drive or a computer if using the web user interface. Click **Add** and select the audio files you wish to import. Click on **Save** to import the file.

Click **Add to Remote** to apply the audio file to a remotely connected device.

Click **Refresh** to refresh the interface. Click **SAVE** to Save the audio file to the system.

Audio Play

The schedule tab allows you to schedule downloaded audio to specific alarms in the device. For more information on the features listed in this menu, refer to the table provided below.

Parameter	Description
Period	In the **Period** box, enter the time. Select the check box to enable the settings. You can configure up to six periods.
File Name	In the **File Name** list, select the audio file that you want to play for this configured period.
Interval	In the **Interval** box, enter the time in minutes for how often you want to repeat the playing.
Repeat	Configure how many times you want to repeat the playing in the defined period.
Output	Includes two options: MIC and Audio. It is MIC by default. The MIC function shares the same port with talkback function and the latter has the priority.

FAQs/Troubleshooting

1. The NVR does not boot up properly.

Below are a few possible reasons why this may be occurring:

- The power input is not correct voltage.
- The power cable connection is not secured correctly.
- The power button is damaged or malfunctioning.
- The firmware was upgraded incorrectly.
- There is an HDD malfunction, or something is wrong with the HDD cable.
- There is damage to the NVR's main motherboard.

2. NVR often shuts down and stops running.
Below are a few possible reasons why this may be occurring:

- The input voltage is too low or is not stable.
- There is an HDD malfunction, or something is wrong with the HDD cable.
- The power button is damaged or malfunctioning.
- Video output signal is not stable.
- The insides of the NVR have accumulated too much dust.
- The temperature is either too hot or too cold.
- The hardware is malfunctioning.

3. The system does not detect a hard drive.
Below are a few possible reasons why this may be occurring:

The hard drive is brSaveen.
- The hard drive cable is damaged.
- The hard drive cable connection is loose.
- The NVR's main motherboard SATA port is brSaveen.

4. There is no video output on any of the channels.
Below are a few possible reasons why this may be occurring:

- The NVR firmware is incompatible with the attached cameras. Upgrade to the latest firmware.
- The image brightness is set to 0. Change the brightness using the image settings or restore the NVR to factory default settings.
- There is no video input signal, or the signal is too weak.
- A privacy mask or screenSaver may be enabled.
- There might be a malfunction with the NVR hardware.

5. Real-time video color is distorted.
Below are a few possible reasons why this may be occurring:

- When using a BNC output, NTSC and PAL may be setup incorrectly. The real-time video may become black and white.
- The NVR is not compatible with the monitor.
- The video transmission cable is too long, or signal degradation is too great.
- The NVR's color or brightness settings are not correctly configured.

6. Local Recordings are not searchable.
Below are a few possible reasons why this may be occurring:

- The hard drive cable is damaged.
- The hard drive is brSaveen.
- The NVR's firmware is incompatible with the recorded video.

- The recorded files have been overwritten.
- The recording function has been disabled.

7. Local playback video is distorted.
Below are a few possible reasons why this may be occurring:

- The video quality setting is too low.
- The NVR software has a read error. Restart the NVR to solve this problem.
- The hard drive cable is damaged.
- The hard drive is malfunctioning.
- The NVR's hardware is malfunctioning.

8. There is no audio during real-time monitoring.
Below are a few possible reasons why this may be occurring:

- The microphone being used is not sufficiently powered.
- The speakers being used are not sufficiently powered.
- The audio cable is damaged.
- The NVR hardware is malfunctioning.

9. There is no audio during recorded video playback.
Below are a few possible reasons why this may be occurring:

- Audio may not be enabled for that channel.

The corresponding channel may not have any audio input.

10. The timestamp is not displaying the correct time.
Below are a few possible reasons why this may be occurring:

- The time and date settings may not be configured correctly.
- The battery inside the NVR may be loose, or the battery is running low.

11. PTZ control is not working.
Below are a few possible reasons why this may be occurring:

There may be an error with the PTZ front panel buttons.
- The PTZ decoding settings aren't configured correctly.
- The PTZ connection may be loose or may not be installed correctly.
- An incorrect cable may be used to connect the PTZ enabled NVR to the NVR.
- The PTZ decoder and the NVR protocol are not compatible.
- The PTZ decoder and NVR address are not compatible.
- Multiple PTZ decoders are causing reverberation or impedance matching, causing PTZ signal interference. Use a 120 Ohm resister between the PTZ cables to reduce interference.
- The PTZ cable is too long or signal degradation is too great.

12. Motion detection does not work.

Below are a few possible reasons why this may be occurring:

- The motion detection time period may be incorrectly configured.
- Motion detection zone setup is not correctly configured.
- Motion detection sensitivity is too low.

13. Web Access is not working.

Below are a few possible reasons why this may be occurring:

- Windows version is pre -Windows 2000 service pack 4. Use a more recent version of Windows.
- ActiveX controls have been disabled.
- The PC is not using DirectX 8.1 or higher. Upgrade to a more recent version of DirectX.
- The NVR is having network connection errors.
- Web access may be setup incorrectly.
- The username or password may be incorrect.
- The client end computer is not compatible with the NVR's firmware.

14. Web Access live view is only displaying a static picture. Both live playback and recorded playback are not working.

Below are a few possible reasons why this may be occurring:

- The network speed is not sufficient to transfer video data via web access.
- The client PC may have limited resources.
- Multicast mode may be causing this issue.
- A privacy mask or screenSaver may be enabled.
- The logged in user may not have sufficient rights to monitor real-time playback.
- The NVR's local video output quality is not sufficient.

15. Network connection is not stable.

Below are a few possible reasons why this may be occurring:

- The network is not stable.
- There may be an IP address conflict.
  There may be a MAC address conflict.
- The PC or NVR network card may be defective.

16. Keyboard is not working with the NVR.

Below are a few possible reasons why this may be occurring:

- The NVR serial port is not setup correctly.
- The keyboard may be drawing too much power.
- The keyboard cable too long.
- The keyboard is not compatible with the NVR's firmware.

17. The alarm signal cannot be disarmed.

Below are a few possible reasons why this may be occurring:

- An alarm may be setup incorrectly.
- An alarm output may have been manually opened.
- The NVR may have an input NVR error, or the connection is not correctly configured.
- There may be an error in the NVR's firmware.

18. **Alarms are not working.**

Below are a few possible reasons why this may be occurring:

- The alarm is not setup correctly.
- The alarm cable is not connected correctly.
- The alarm input signal is not correctly configured.
- There are two loops connected to one alarm NVR.

19. **The camera is not recording enough video.**

Below are a few possible reasons why this may be occurring:

- The hard drive's capacity is not enough.
- The hard drive is damaged.

20. **Downloaded files cannot be played back.**

Below are a few possible reasons why this may be occurring:

- The media player software on the PC may not be able to read the file format.
- The PC may not have DirectX 8.1 or higher.
- The PC may not have Windows XP or higher.

To contact Amcrest support, please do one of the following:

- Visit http://amcrest.com/contact 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: 437-888-0177
  UK: 203-769-2757

FCC Statement

1. This NVR complies with Part 15 of the FCC Rules. Operation is subject to the following two conditions: (1) this NVR may not cause harmful interference, and (2) this NVR 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 NVR 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 NVR, 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 NVR complies with Industry Canada's license-exempt RSSs. Operation is subject to the following two conditions:

(1) This NVR may not cause interference; and

(2) This NVR must accept any interference, including interference that may cause undesired operation of the NVR. *Le présent appareil est conforme aux CNR d'Industrie Canada applicables aux appareils radio* exempts *de l icence. L'exploitation est autorisée aux deux conditions suivantes : (1) apparel 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.

Appendix A: Toxic or Hazardous Materials or Elements

Toxic or Hazardous Materials or Elements						
Component Name	Pb	Hg	Cd	Cr Vl	PBB	PBDE
Sheet Metal	o	o	o	o	o	o
Plastic Parts	o	o	o	o	o	o
Circuit Board	o	o	o	o	o	o
Fasteners	o	o	o	o	o	o
Cables/Adapters	o	o	o	o	o	o
Packing Materials	o	o	o	o	o	o
Accessories	o	o	o	o	o	o

Note

O: Indicates that the concentration of the hazardous substance in all homogeneous materials in the parts is below the relevant threshold of the SJ/T11363-2006 standard.

X: Indicates that the concentration of the hazardous substance of at least one of all homogeneous materials in the parts is above the relevant threshold of the SJ/T11363-2006 standard. During the environmental-friendly use period (EFUP) period, the toxic or hazardous substance or elements contained in products will not leak or mutate so that the use of these (substances or elements) will not result in any severe environmental pollution, any bodily injury or damage to any assets. The consumer is not authorized to process such kind of substances or elements, please return to the corresponding local authorities to process according to your local government statutes.

Note:

To view setup videos for many of the steps outlined in this guide, go to http://amcrest.com/videos

Slight differences may be found in the user interface based on specific model numbers.

All the designs and software here are subject to change without prior written notice.

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