NVR AI Feature User Guide

Contents

Welcome

Thank you for purchasing an Amcrest AI NVR!

This guide is designed to provide a brief overview of how to setup and use the AI features on your Amcrest AI NVR. AI NVRs are compatible with both Amcrest AI cameras as well as other Amcrest IP cameras. The NVR provides two options, AI by camera and AI by device

To access a full user manual for your AI NVR and other support information, go to http://amcrest.com/support
To contact Amcrest support directly, go to http://amcrest.com/contacts

Accessing the NVR

When accessing the web UI for your AI NVR **we highly recommend using Internet Explorer** or Safari, however, other mainstream web browsers such as Google Chrome, or FireFox can be used when accessing your device.

To access the web UI using a web browser, please refer to the information provided below.

Locate the IP address for your device using the Amcrest IP Config Tool. The Amcrest IP Config Tool can be downloaded at the following web page: amcrest.com/downloads
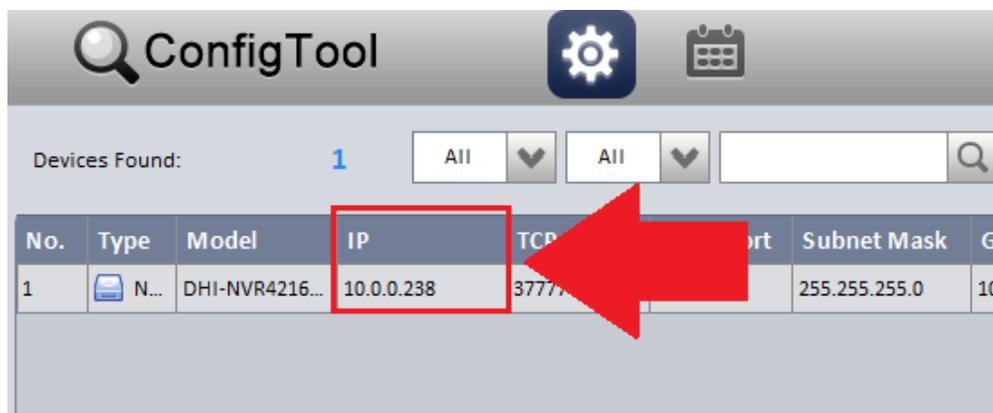
Enter the IP address for your device into a web browser and press enter to load the web user interface.
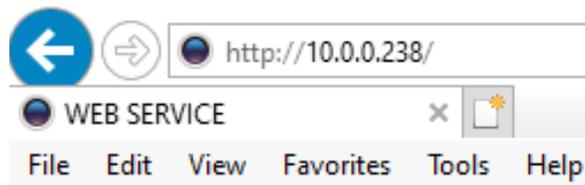
Device Initialization

If this is your first time logging into your device, the interface will prompt you to begin device initialization. Verify the region, language, and video standard are correct. Press **Next** to continue.

Verify the time zone and the system time are correct, press **Next** to continue.


Enter a username and password for the NVR. These will be the log in credentials that will be used to log into your NVR. Press **Next** to continue.

Enter a valid email address. This will be the email used for password recovery. Use the drop down to select a security question and place an answer to the question in the Answer field. Click **OK** after all information has been entered.

Enter the login credentials for your device. If this is the first time accessing the device, the username and password will both be **admin.** Click on **Login**.
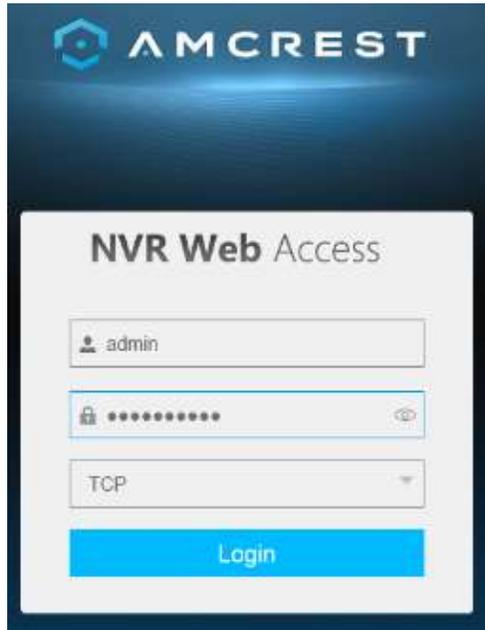
Once logged in you will be taken to the main menu interface.
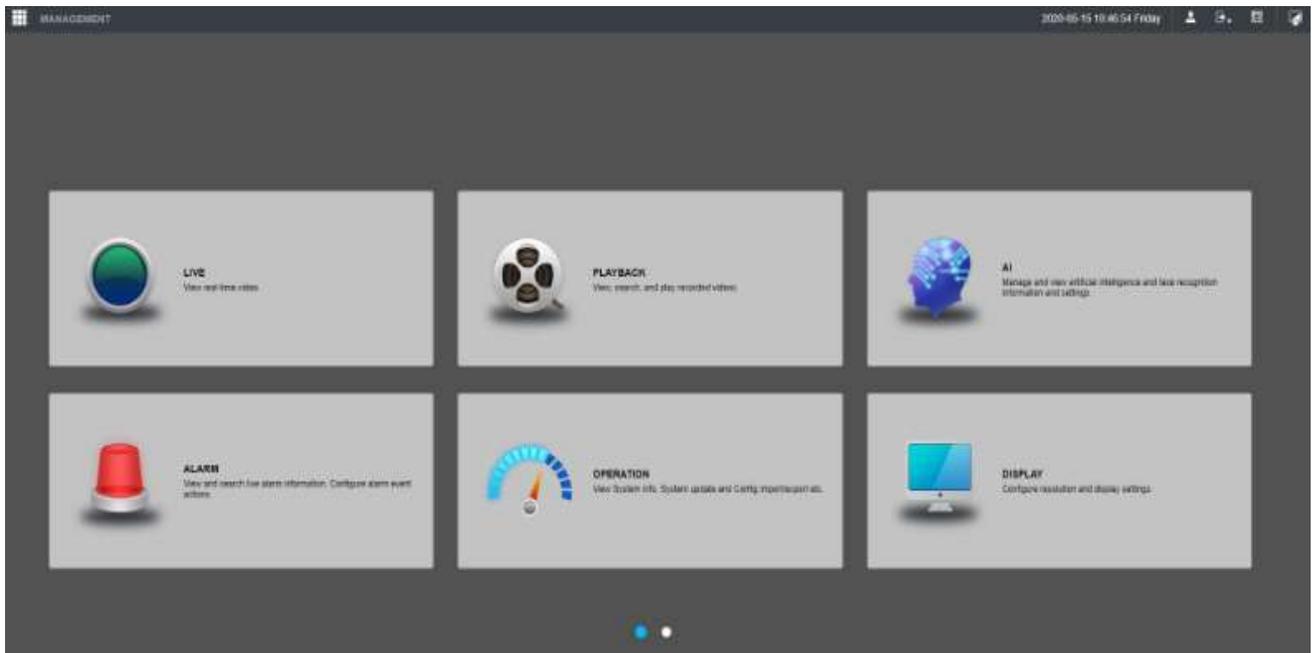
Accessing AI Features

The features listed in the AI menu include **Face Detection, Face Recognition, IVS, People Counting and Heat Map**. The NVR allows you to access stored AI events via a **Smart Search** option located in the AI menu, or via the playback menu depending on which feature is being used in the system. Certain AI features such as, face

recognition, heat map or other related features may only be available to view via the AI Smart Search menu. **Some features may only be available if the camera you are using supports those specific AI functions.** To begin setting up AI events, click on the **AI** option available in the main menu.
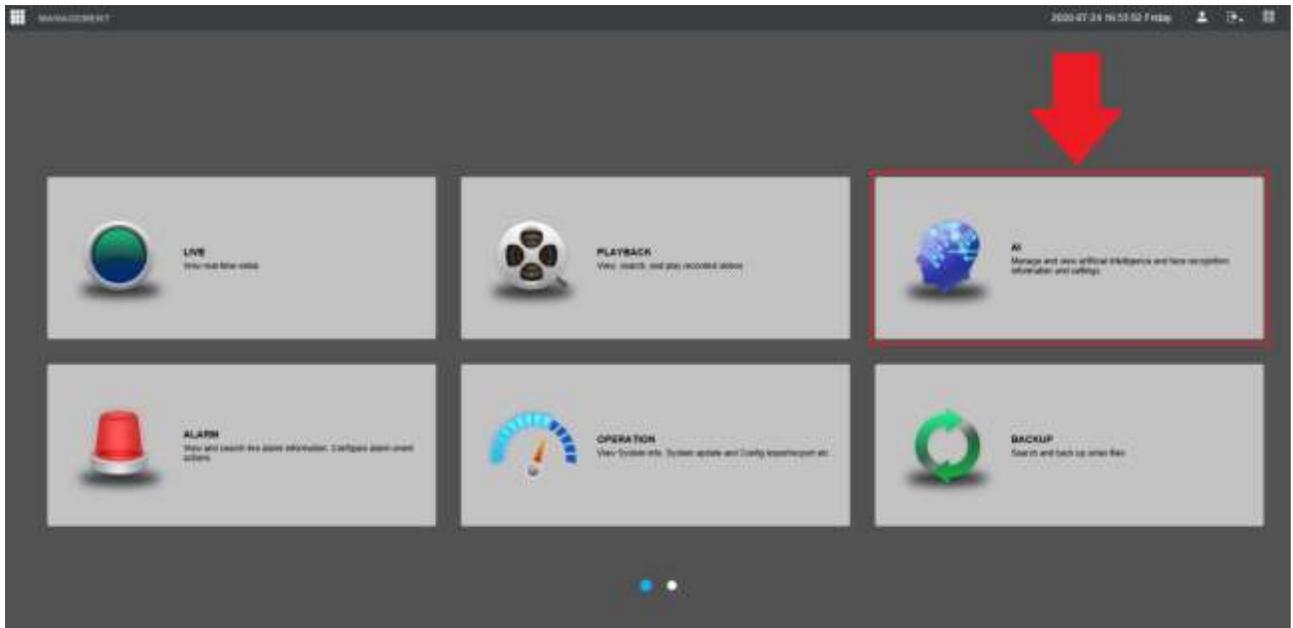
Smart Plan

A smart plan acts as the "master switch" for all AI features available in the NVR. These features include Face Detection, Heat Map, IVS, and People Counting. A Smart Plan must be saved first to use any AI features in your device. Both IVS and Heat Map settings can be activated simultaneously, however, People Counting and Face Detection act separately in the system.

Below is a screenshot of the Smart Plan menu:
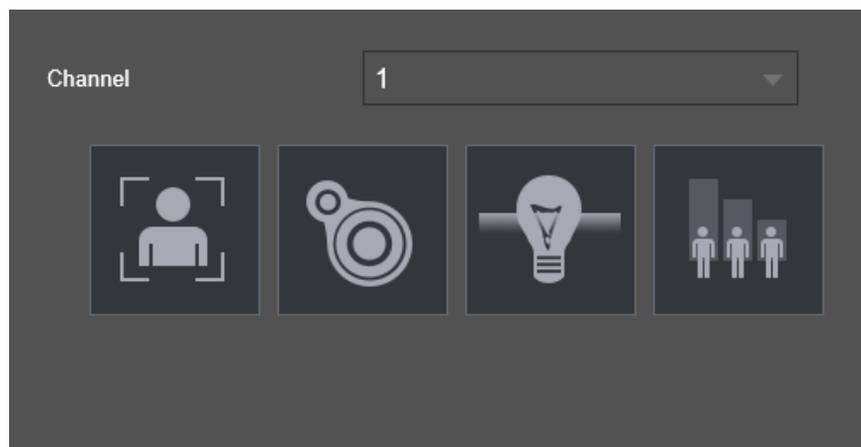
Below is a description of the features listed in the Smart Plan menu:
Channel: This option is used to select which channel the Smart Plan will apply.

Face Detection: Face Detection is used in conjunction with an AI NVR, however, can be used independently as well to detect faces.

Heat Map: Heat Map provides a general reporting of crowd density statistics based on color levels detected by the camera.

IVS: IVS stands for intelligent video system analytics and is the basis for all the AI rules associated with your device.

People Counting: People Counting allows the camera to automatically monitor how many people enter and exit a certain area. This is useful for constant and consistent monitoring of a flow rate in a certain area.

To refresh the menu to its original format, click the **Refresh** button. To save a smart plan to your camera, click the **Save** button.

Face Detection

Face Detection is typically used in conjunction with an AI NVR, however, can be used independently to detect faces. Please note, face detection cannot be used simultaneously with IVS, Heat Map, or People Counting rules. Make sure the Face Detection option is enabled in the Smart Plan menu before configuring any face detection settings.
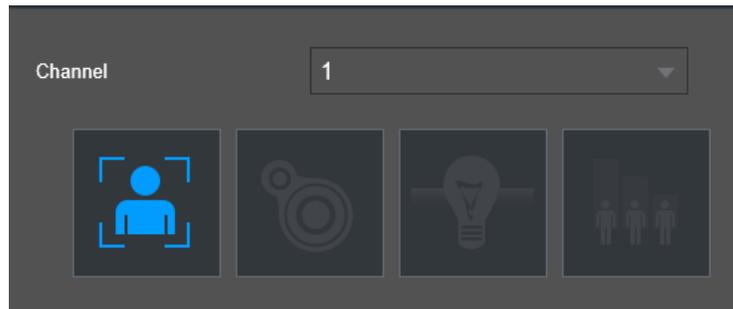
Below is a screenshot of the Face Detection menu:
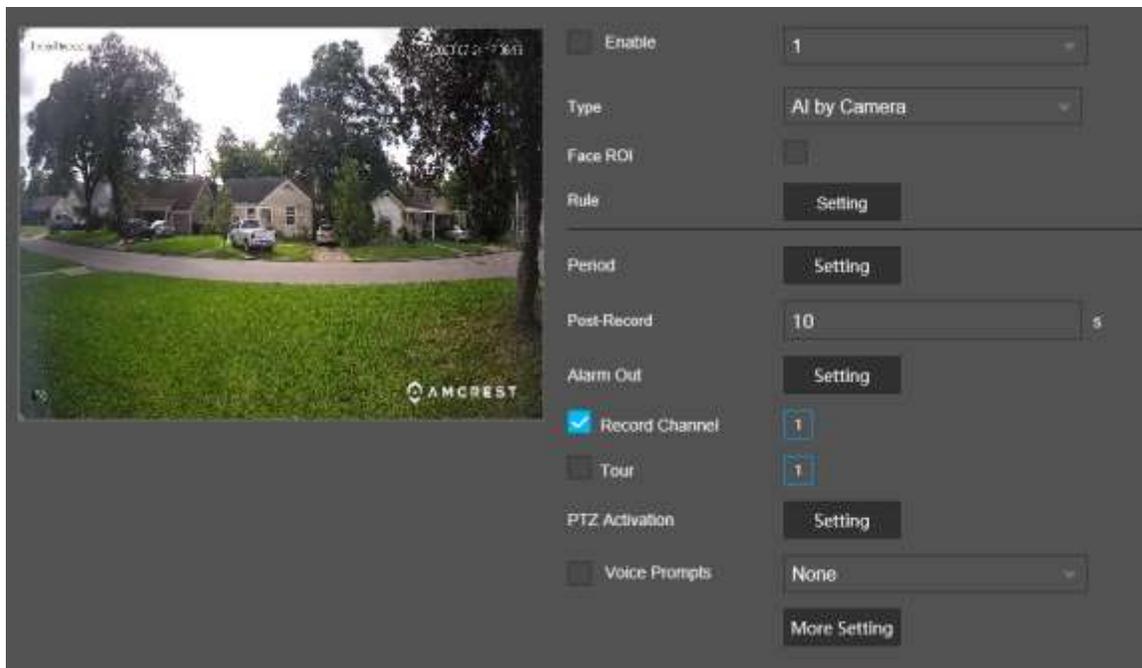
Below is a description of the features in this menu:

Enable: This checkbox is used to enable face detection. Use the channel dropdown to select a channel. Please note, the channel selected must reflect the same channel enabled in the smart plan menu.

Type: The type menu allows the user to choose if the AI feature will be controlled by the camera or controlled by the NVR. Please note, AI by Camera will allow the feature to be controlled by the camera, AI by Device will allow the feature to be controlled by the NVR's built in face detection capabilities.

Face ROI: This option is only available if face detection is available on the AI camera. Face ROI (region of interest) allows the camera to focus on providing the highest quality image for a selected region only. The remaining part of the image, outside the region of interest, is recorded at lower quality or not recorded at all. If the camera records are scene with regions of higher and lower importance, the compression can be focused on the regions of interest only.

Rule: Allows the user to adjust face detection area on the live view monitoring screen.

Period: Allows the user to set a schedule in which face detection will be triggered.

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

Alarm Out: Allows the user to set general settings for an external alarm.

> **General Alarm:** Used to enable alarm out features.
>
> **Alarm Out:** Used to enable one or both alarm out channels.
>
> **Latch:** The Delay (in seconds) before the system begins detecting for the same alarm/event.

Record Control: The channel currently enabled.

Tour: Used to setup a tour for multiple channels. Please note, this is only applicable for PTZ controlled devices.

PTZ Activation: Allows the user to activate pan, tilt, and zoom options. Please note, this is only applicable to PTZ controlled devices.

Voice Prompts: Plays an audio file set by the user once an alert is triggered.

More Settings: Access additional settings such as, buzzer, alarm upload, log, send email.

> **Buzzer:** Enable a buzzer to alert each time an alert is triggered.
>
> **Alarm Upload**: Allows an alarm signal to be uploaded to the network and retain in the alarm info menu.
>
> **Log:** Allows an alarm signal to be uploaded to the network and retain in the log menu.
>
> **Send Email:** This checkbox allows the user to enable the camera to send an email when an event is triggered. For more information on how to setup email alerts, please visit amcrest.com/support

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.

Using Face Detection

Face detection is used to allow your device to detect face events. This feature can be used either by the NVR or by the camera (if supported). For more information on how to setup face detection, please refer to the information provided below.

1. In the **Parameters** section, access the **Smart Plan** menu and click on the **Face Detection** option. Please note, the Face Detection option cannot be used simultaneously with other AI smart plans. Click **Save**.
Note: If using a non-AI camera, a smart plan may not be available for the specific channel.
2. Click on the **Face Detection** menu located in the **Parameters** section. Click **Enable** to enable face detection.
3. Choose which face detection type you will be using from the **Type** drop down menu. Choose whether the event will occur using the camera's built in face detection feature (**AI by Camera**) or using the NVR's built-in face detection features (**AI by Device**). Please note, if using a camera that does not have face detection capabilities, choose AI by Device to allow the NVR to use its built-in face detection capabilities.

Note: If using AI by Device Face ROI will not be available.

4. Click **Rule** to adjust any face detection exclusion areas. Please note, the entire area of the live view screen will be enabled by default.

Note: It is best to leave the **Rule** settings as default, however, they can be adjusted by clicking on the **Setting** button in the **Rule** field. Use your mouse to adjust the minimum and maximum size of the face detection exclusion area. The face detection exclusion area will be the center square found in the interface.

5. Click **Period** to set a face detection schedule, set your periods (if any) and click **Save** to continue.

6. Ensure the proper **Record Channel** is enabled. This will be the channel used to record face detection.

7. Click **More Setting** to set any additional event settings. For more details on these features please refer to the full user manual for your device or visit amcrest.com/support

When a face detection event is triggered, the data number of faces detected will be in the face detection overlay found on the live view interface. The face detection event will also be retained in the face detection smart search menu or snapshots of the event can be emailed to you. For more information on how to setup email notifications, please refer to the full user manual or visit amcrest.com/support

Viewing Face Detection Event

All face detection data retained by the system can be accessed via the **Face Detection** option located in the **Smart 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 **Smart Search**.
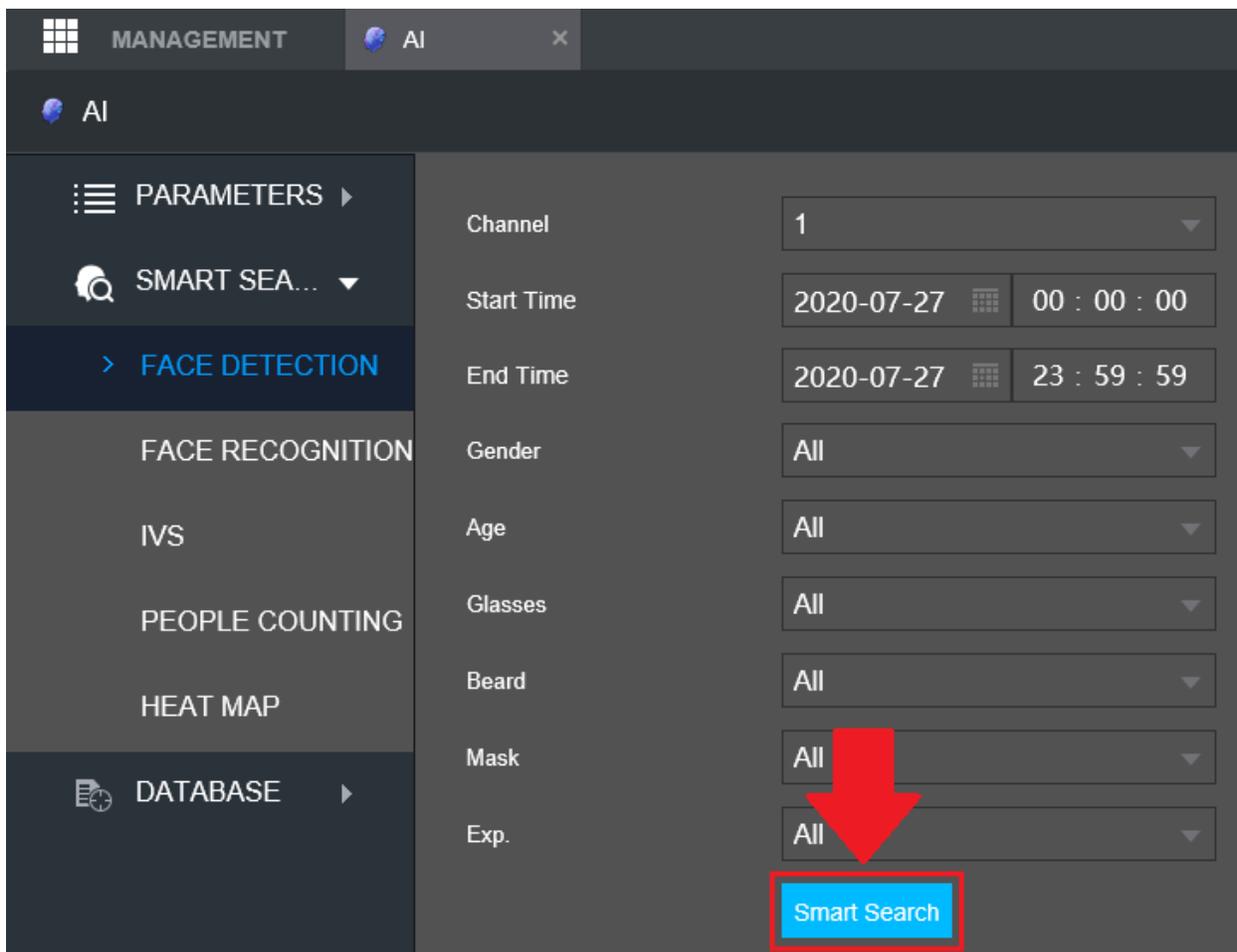
A display of all face detection data will be displayed along with facial attributes. Click on the event you would like to view, and a clip of the event will be displayed in the built-in player. Click on the play icon to view the event.
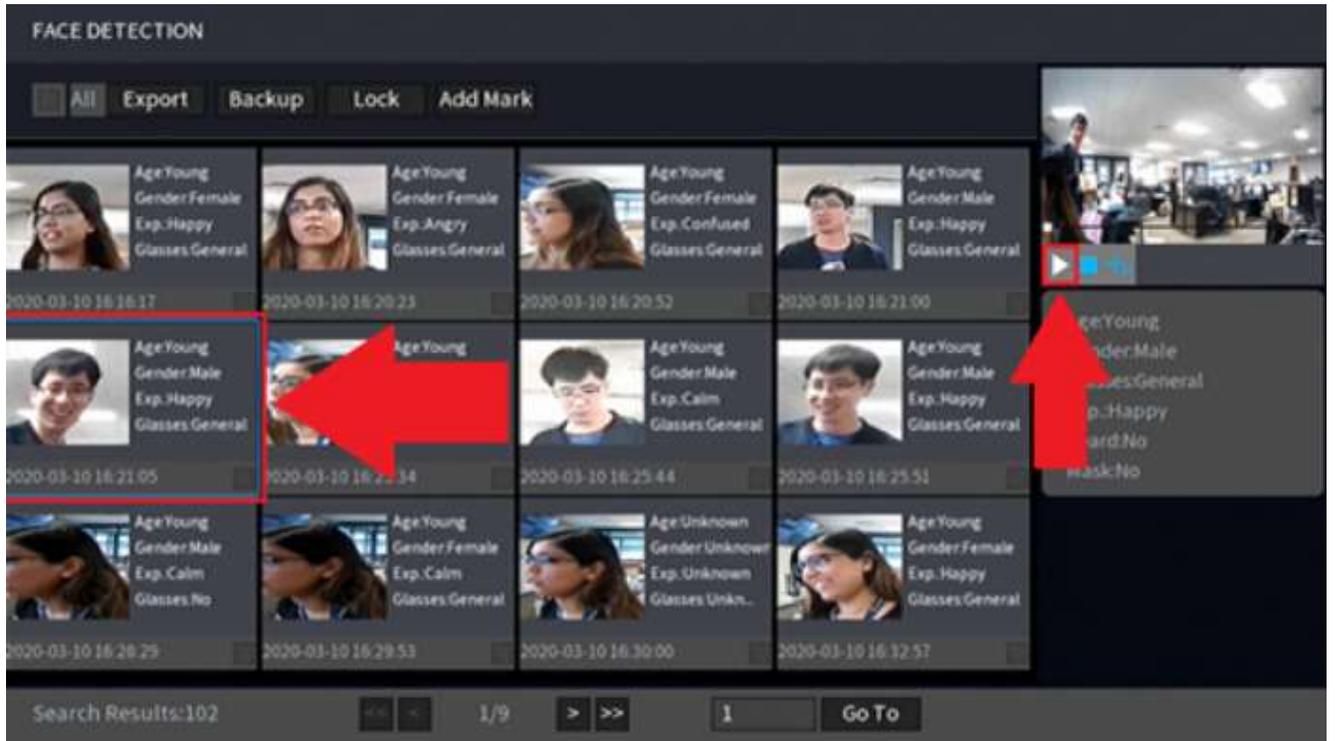
Face Recognition

Face recognition is used in conjunction with face detection to locate and determine facial similarities detected by the system. Images are registered in a face library, by the user, and accessed via a face recognition smart search tool that is built into the NVR.

Note: A USB flash drive with applicable facial images (in jpeg format) should be inserted into a USB port on the NVR if you are importing images locally. Make sure the Face Detection option is enabled in the Smart Plan menu before configuring any face detection settings.
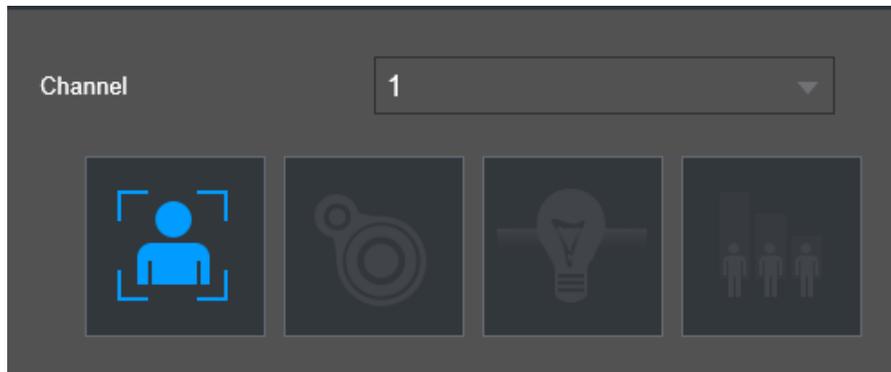
Below is a screenshot of the face recognition menu:
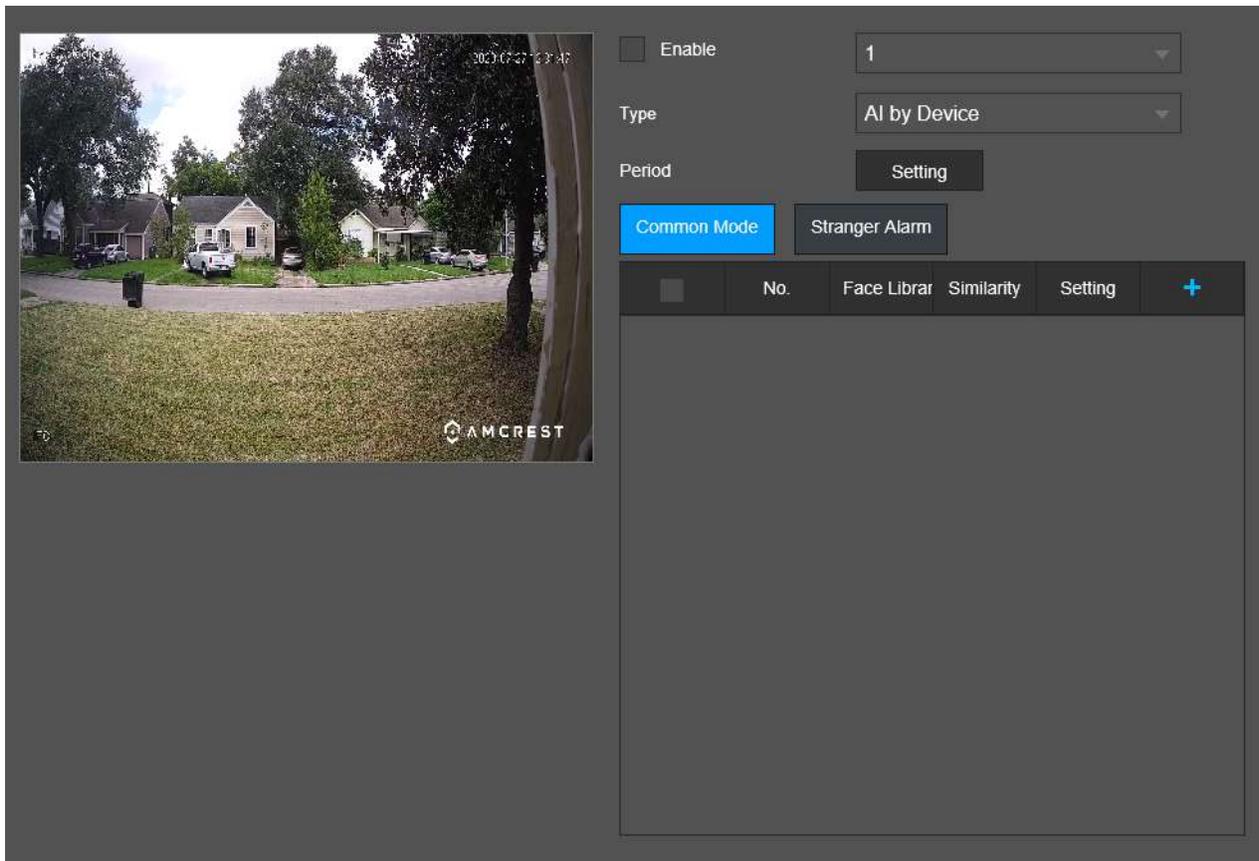
For more information on how to setup face recognition please refer to the information provided below:

There are 2 methods of face recognition, common mode, and stranger mode. Common mode allows the device to use the images registered in the face library as a reference to recognize faces. Stranger mode will alert the system once an unrecognized face is detected.

Note: Common mode can only be setup locally on the NVR or by using Internet Explorer on a PC. If using Face Recognition on other browsers, such as Google Chrome or Firefox, please use Stranger Mode.

How to Use Common mode

1. In the **Parameters** section, access the **Smart Plan** menu and click on the **Face Detection** option. Please note, the Face Detection option cannot be used simultaneously with other AI smart plans. Click **Save**.
Note: If using a non-AI camera, a smart plan may not be available for the specific channel.
2. Click on the **Face Recognition** option located in the **Parameters** section. Click **Enable** to enable face recognition.
3. Choose which channel will be applied to the feature from the channel dropdown menu.
4. Click on **Setting** to set a detection schedule for this feature.
5. Click on **Save**.
6. Click on the **Database** option located in the AI menu and click on **Face Library.**
7. Click on **Add** to begin registering images to a face library. **A face library must be registered for this feature to function properly.** Enter a name for your face library and click **Save.** The library will now be saved to the NVR.
8. Click on **Details** to begin adding images into the face library.

If you have a single image to add click **Register ID**, if you have multiple images to add click on **Batch register**.

9. Click on the Add (+) icon to import an image (.jpg format) from your computer and enter all necessary information (Name, Gender, Birthday, etc) and click **Save**.

Note: To add additional images into the face library, click on **Add More** and continue the process.
10. Once the IDs have been added to the face library, allow the system to model the image.

11. Navigate back to the **Face Recognition** menu in the **Parameters** section. Ensure **Common Mode** is highlighted and click the add (+) icon. Select the face library and click **Save** to import the library into the interface.
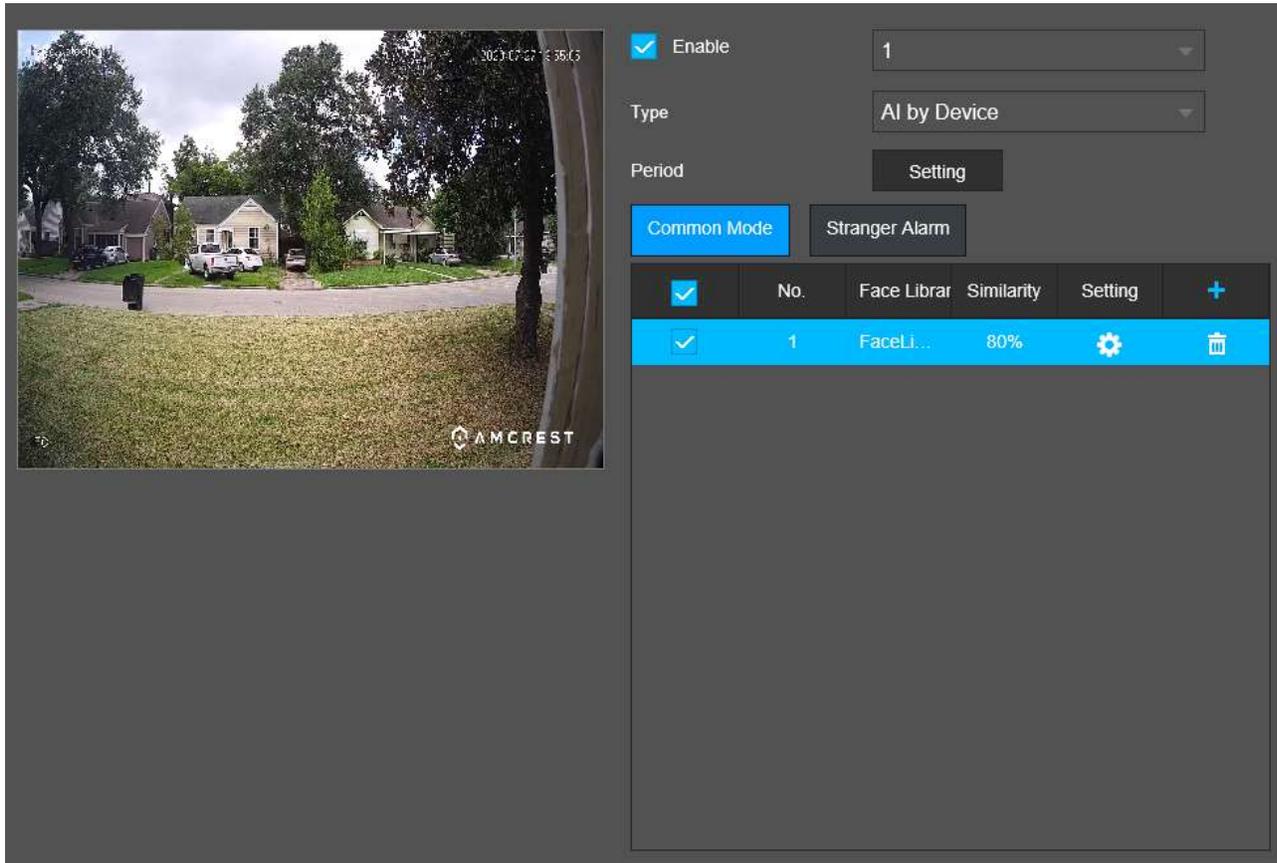
The interface will recognize faces with up to 80% similarity by default. Click on the similarity field to change the percentage between 0 and 100%. Click on the **Setting** button to add additional features such as Post Record, Alarm Out, Voice Prompts, etc. Click **Save**. Use the trash can icon to remove the library from the interface.

12. Click **Save** to save the face recognition settings.

How To Use Stranger Mode

1. In the **Parameters** section, access the **Smart Plan** menu and click on the **Face Detection** option. Please note, the Face Detection option cannot be used simultaneously with other AI smart plans. Click **Save**.
Note: If using a non-AI camera, a smart plan may not be available for the specific channel.
2. Click on the **Face Recognition** option located in the **Parameters** section. Click **Enable** to enable face recognition.
3. Click on **Stranger Mode** and click **Enable**.
4. Enable any features such as Post Record, Alarm Out, Voice Prompts, etc. Click on **More Setting** to enable additional settings such as, Alarm Upload, Send Email, etc.
5. Click **Save**.
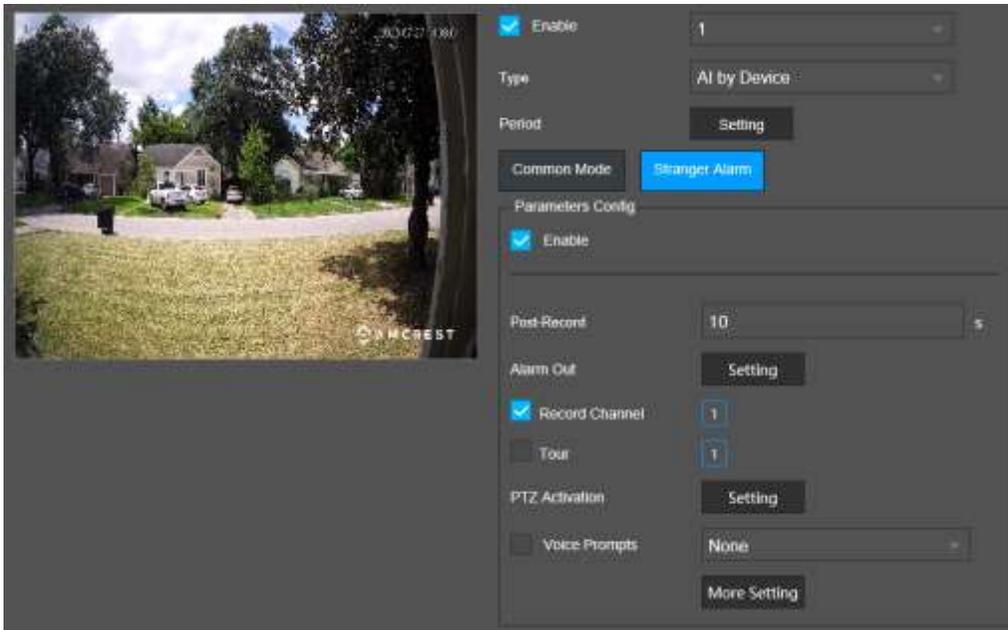
Viewing Face Recognition Events

All face recognition data retained by the system can be accessed via the **Face Recognition** option located in the **Smart Search** menu. A search by attributes or a search by image can be performed. Searching by attributes will load all face recognition data found in the system whereas searching by an image will filter and display only the faces chosen by the user.

To search by attributes, enter a start and end time of the event in the interface and then click **Smart Search**. The interface will display all face recognition data. To view the event, click on the event you would like to view then click the play button in the interface.
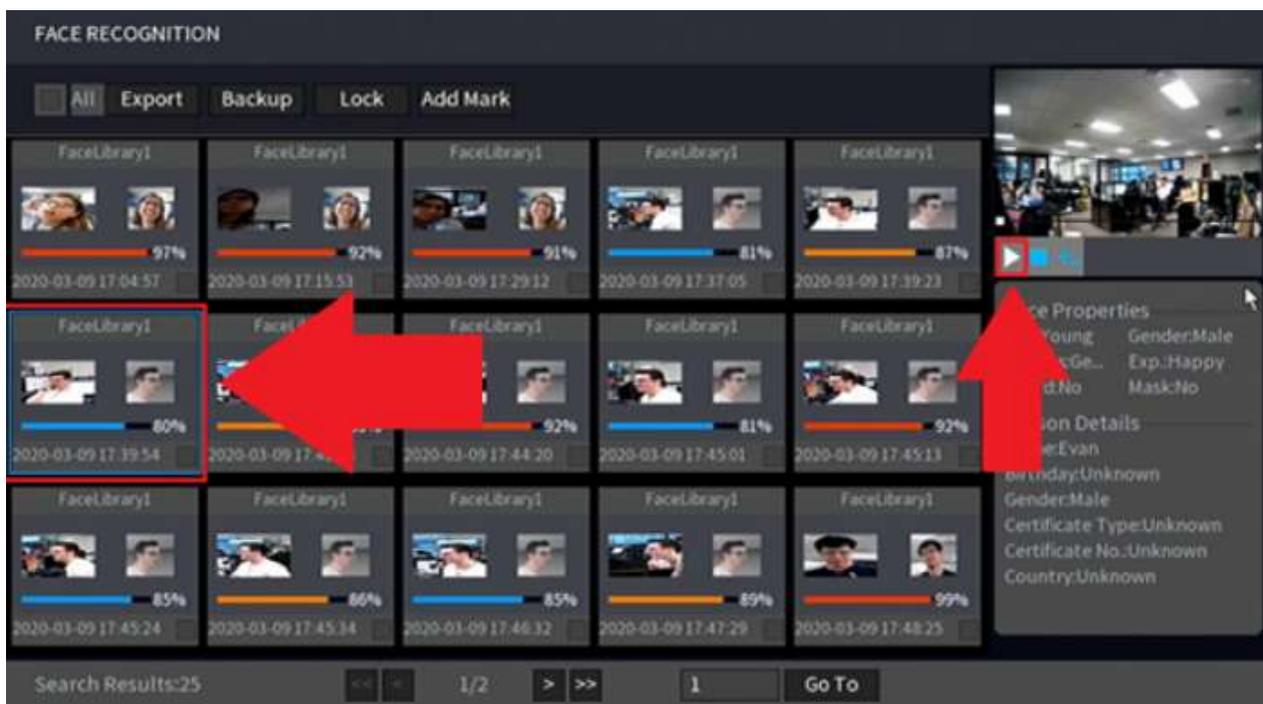
To view specific face recognition data by image, click on the **Search by Image** tab located in the **Face Recognition** interface.

If searchable images are already uploaded into a face library click on **Face Library** and select an image from the interface, then click **Save** to begin a search. If you would like to add images locally click **Local Upload** and follow the on-screen prompts to upload images. Once an image has been loaded, enter a start and end time of the event, and click **Smart Search.**

The system will display all face recognition data based on the image selected.

IVS

IVS stands for intelligent video system analytics and is the basis for all the AI rules associated with your device. The IVS menu allows the user to customize and set IVS rules which allows the device to produce general behavior analytics and reporting directly from the web user interface.

Please note, both IVS and Heat Map can be enabled at the same time. Ensure that the IVS option is enabled in the smart plan menu before enabling IVS features. Please make sure to completely disable any face detection, face recognition, people counting or other AI features when using IVS rules.

IVS rules on the NVR are controlled either by camera or by the NVR. The NVR currently has 2 built-in IVS features available (Tripwire and Intrusion) whereas some Amcrest AI cameras may have additional IVS features.

Below is a screenshot of the IVS menu:
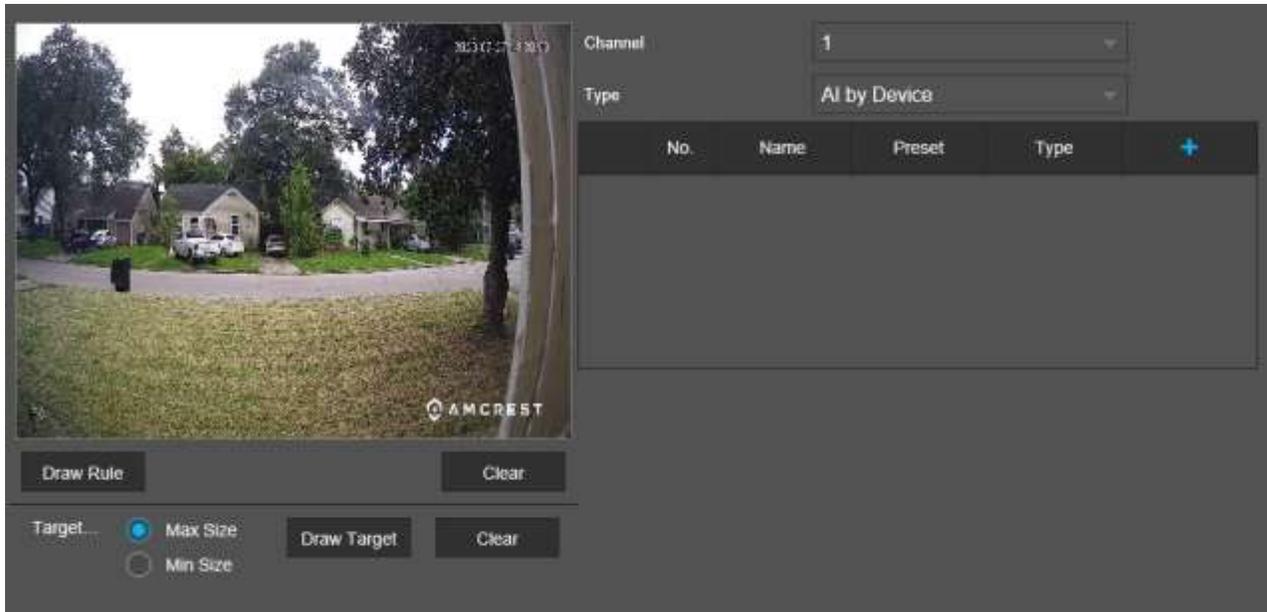
Below is a description of the features in this menu:

Channel: Use this dropdown menu to select which channel will apply to the AI feature.

Type: Used to select whether the AI feature will apply

No: Provides the order in which the IVS rules will be displayed in the menu.

Name: Allows the user to customize a name for their rule. Double click the name in the Rule column to modify.

Type: Allows the user to choose specific IVS features available in the device.

Add Icon (+): The "Add" icon is used to add additional IVS rules to the live view screen.

Trashcan Icon: The trashcan icon is used to delete a set IVS rule from the device.

Setting an IVS Rule (NVR)

All IVS rules can only be set and/or modified using the web user interface. They cannot be set using the Amcrest View Pro app or any other platforms associated with your device. For more information on setting IVS rules, please refer to the information below.

1. Ensure a Smart Plan has been activated in the Smart Plan menu for IVS.

2. Access the IVS menu and select which channel the rule will apply.

3. Click on the **Type** dropdown menu and select if the IVS rules will be applied from the camera (AI by Camera) or by the NVR (AI by Device). Please note, AI by Camera can only be used if the camera supports IVS. If the camera does not support IVS, please use AI by Device to use the NVR's built in IVS features.

Note: For more information on the features included with your AI camera (AI by Camera) please refer to the full user's manual, AI user's guide, or visit amacrest.com/support

The examples in this guide will only provide IVS features that are built into the AI NVR.

4. Click on the **Add** (+) icon to begin customizing an IVS rule.

5. Use the dropdown menu in the **Type** column to select which IVS rule you want to use/customize.

Tripwire

Tripwire allows the camera to trigger an event if an object, such as a human or vehicle, crosses the set tripwire line.

Below is a screenshot of the Tripwire menu:
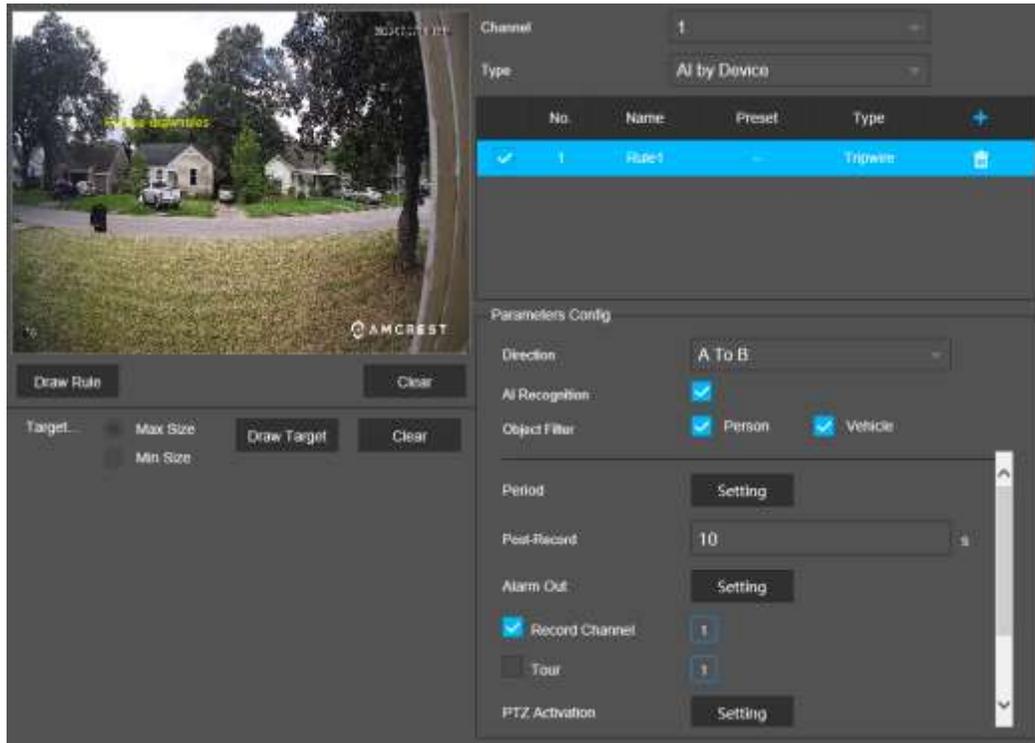
Direction: This dropdown menu allows the user to set which direction the object will be going for the tripwire to be triggered. It can be set left, right, or in both directions (A<->B).

AI Recognition: This option enables object filtering options that allow the ability to determine if a human or vehicle has entered the area.

Object filter: The object filter checkboxes allow the camera to be triggered only when a specific object, such as a human or motor vehicle, is detected. Both effective object checkboxes can be activated at the same time.

>   **Human:** This checkbox allows the camera to be triggered only when a human figure is detected.
>   **Vehicle:** This checkbox allows the camera to be triggered only when a vehicle has been detected.

Period: Allows the user to set an IVS recording schedule for the applied rule.

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

Alarm Out: Allows the user to set general settings for an external alarm.

>   **General Alarm:** Used to enable alarm out features.
>   **Alarm Out:** Used to enable one or both alarm out channels.
>   **Latch:** The Delay (in seconds) before the system begins detecting for the same alarm/event.

Record Control: The channel currently enabled.

Tour: Used to setup a tour for multiple channels. Please note, this is only applicable for PTZ controlled devices.

PTZ Activation: Allows the user to activate pan, tilt, and zoom options. Please note, this is only applicable to PTZ controlled devices.

Voice Prompts: Plays an audio file set by the user once an alert is triggered.

More Settings: Access additional settings such as, buzzer, alarm upload, log, send email.

>   **Buzzer:** Enable a buzzer to alert each time an alert is triggered.
>   **Alarm Upload**: Allows an alarm signal to be uploaded to the network and retain in the alarm info menu.
>   **Log:** Allows an alarm signal to be uploaded to the network and retain in the log menu.

Send Email: This checkbox allows the user to enable the camera to send an email when an event is triggered.

Draw Rule: This option allows the user to use their mouse to customize (draw) a rule/area on the screen. This will be the area or line in which an IVS rule will be triggered.

**Clear:** This option is used to clear the drawn rule set on the live monitor screen.

Draw Target: Allows the user to set a target area on the live monitor screen. **An IVS event will not occur outside the target box.**

Clear: Clears the modified target area to draw the target area on the live monitoring screen.

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.

Setting a Tripwire

1. Select Tripwire from the **Rule Type** menu. Set a name for the rule by double clicking the mouse over the **Name** of the rule.

2. Choose a direction in which the tripwire will apply. The rule can apply from A -> B, B -> A, or A <-> B.

3. Select the AI Recognition check box to select object filters. This will reduce the number of false alerts by filtering people, vehicles, or both.

4. Click on the **Setting** option in the Period field to set an IVS schedule. An IVS schedule will allow the rule to be activated during specific dates and time.

5. Ensure the correct channel is activated in the **Record Channel** field. Click on **More Settings** to set any additional features. For more details on these features please refer to the full user manual for your device or visit amcrest.com/support

6. Click on **Draw Rule** and use your mouse to draw a tripwire line in the interface. Right click on the interface and then left click to set the rule.

7. Click **Save** to save and apply the rule to the system.
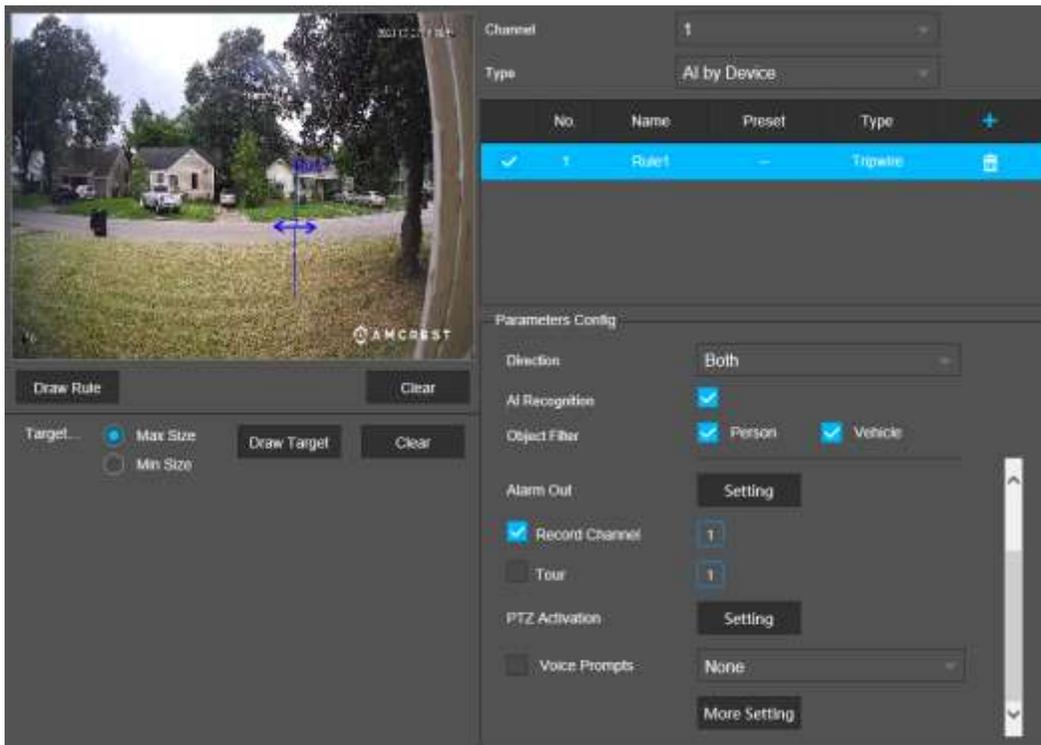
Intrusion

Intrusion allows the camera to trigger an event if an object, such as a human or vehicle, appears or crosses a set intrusion area set by the user. Below is a screenshot of the Intrusion menu:
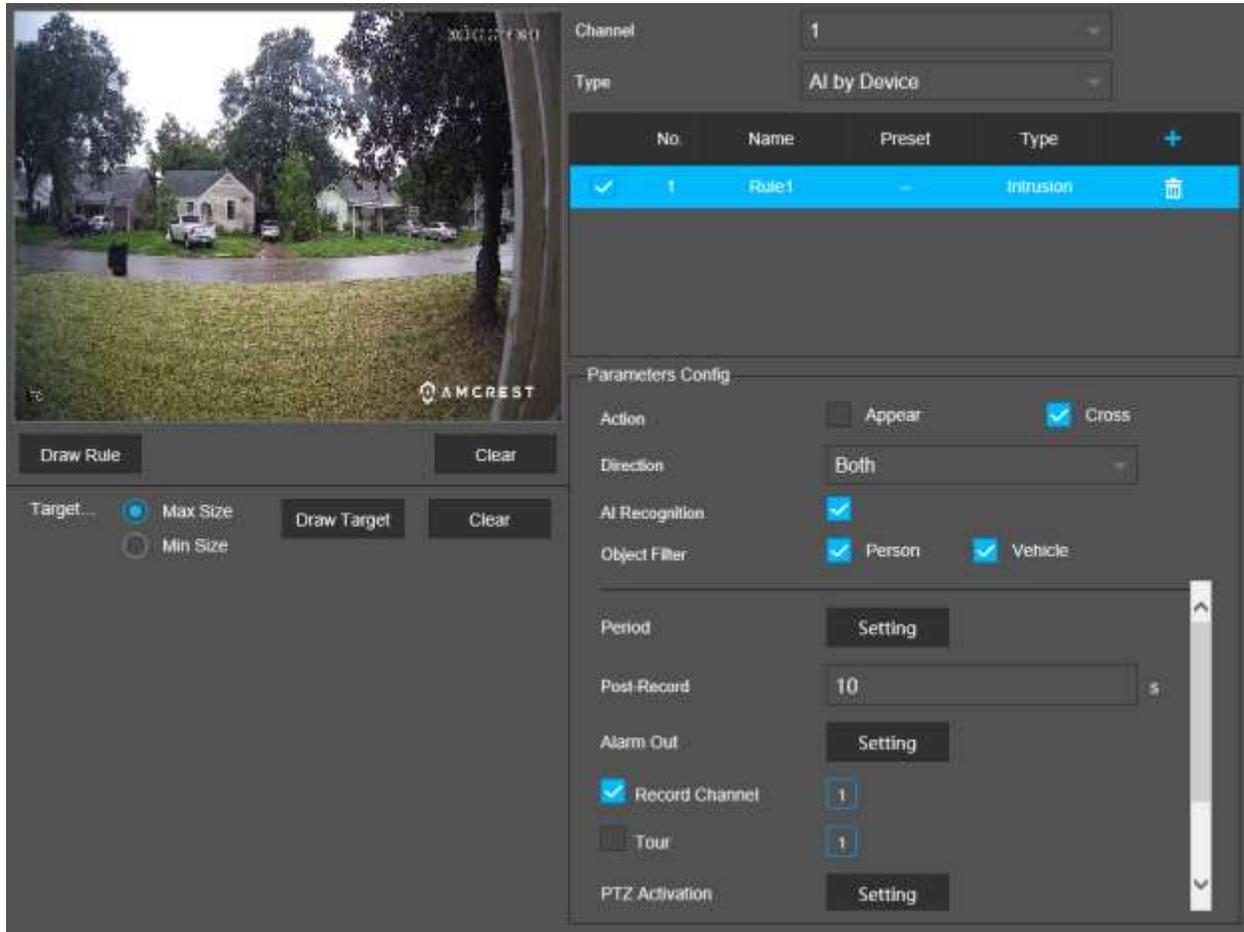
Below is a description of the features in this menu:

No.: Provides the order in which the IVS rules will be displayed in the menu.

Name: Allows the user to customize a name for their rule. Double click the name in the Rule column to modify.

Type: Allows the user to choose specific IVS features available in the device.

Add Icon (+): The "Add" icon is used to add additional IVS rules to the live view screen.

Trashcan Icon: The trashcan icon is used to delete a set IVS rule from the device.

Action: These checkboxes allow the user to choose a parameter filter that will activate a trigger if an object were to cross or appear in the set intrusion area.

> **Appears**: The rule will trigger when a target appears inside the area.
>
> **Cross**: The rule will trigger when a target enters or exits the area.

Direction: This dropdown menu allows the user to choose whether the rule will be triggered if an object enters, exits, or enters & exits a set line or area.

AI Recognition: This option enables object filtering options that allow the ability to determine if a human or vehicle has entered the area.

Object filter: The object filter checkboxes allow the camera to be triggered only when a specific object, such as a human or motor vehicle, is detected. Both effective object checkboxes can be activated at the same time.

> **Human:** This checkbox allows the camera to be triggered only when a human figure is detected.
> **Vehicle:** This checkbox allows the camera to be triggered only when a vehicle has been detected.

Period: Allows the user to set an IVS recording schedule for the applied rule.

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

Alarm Out: Allows the user to set general settings for an external alarm.

> **General Alarm:** Used to enable alarm out features.
> **Alarm Out:** Used to enable one or both alarm out channels.
> **Latch:** The Delay (in seconds) before the system begins detecting for the same alarm/event.

Record Control: The channel currently enabled.

Tour: Used to setup a tour for multiple channels. Please note, this is only applicable for PTZ controlled devices.

PTZ Activation: Allows the user to activate pan, tilt, and zoom options. Please note, this is only applicable to PTZ controlled devices.

Voice Prompts: Plays an audio file set by the user once an alert is triggered.

More Settings: Access additional settings such as, buzzer, alarm upload, log, send email.

> **Buzzer:** Enable a buzzer to alert each time an alert is triggered.
> **Alarm Upload**: Allows an alarm signal to be uploaded to the network and retain in the alarm info menu.
> **Log:** Allows an alarm signal to be uploaded to the network and retain in the log menu.
> **Send Email:** This checkbox allows the user to enable the camera to send an email when an event is triggered.

Draw Rule: This option allows the user to use their mouse to customize (draw) a rule/area on the screen. This will be the area in which an IVS rule will be triggered.

Clear: This option is used to clear the drawn rule set on the live monitor screen.

Draw Target: Allows the user to set a target area on the live monitor screen. **An IVS event will not occur outside the target box.**

Clear: Clears the modified target area to draw the target area on the live monitoring screen.

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.

Setting an Intrusion Area

1. Click on the (+) icon then double click in the **Type** menu and select Intrusion from the dropdown menu.

2. In the **Action** menu, choose whether the rule will be triggered if an object appears or crosses the set region. Both options can be enabled at the same time if needed.

3. In the **Direction** dropdown menu, choose how the rule will be triggered if the object enters only, exits only, or enters & exits a set region.

4. Select the **AI Recognition** check box to select object filters. This will reduce the number of false alerts by filtering people, vehicles, or both.

5. Click on the **Setting** option in the **Period** field to set an IVS schedule. An IVS schedule will allow the rule to be activated during specific dates and time.

6. Ensure the correct channel is activated in the **Record Channel** field. Click on **More Settings** to set any additional features. For more details on these features please refer to the full user manual for your device or visit amcrest.com/support

7. Click **Save** to save and apply the rule to the system.
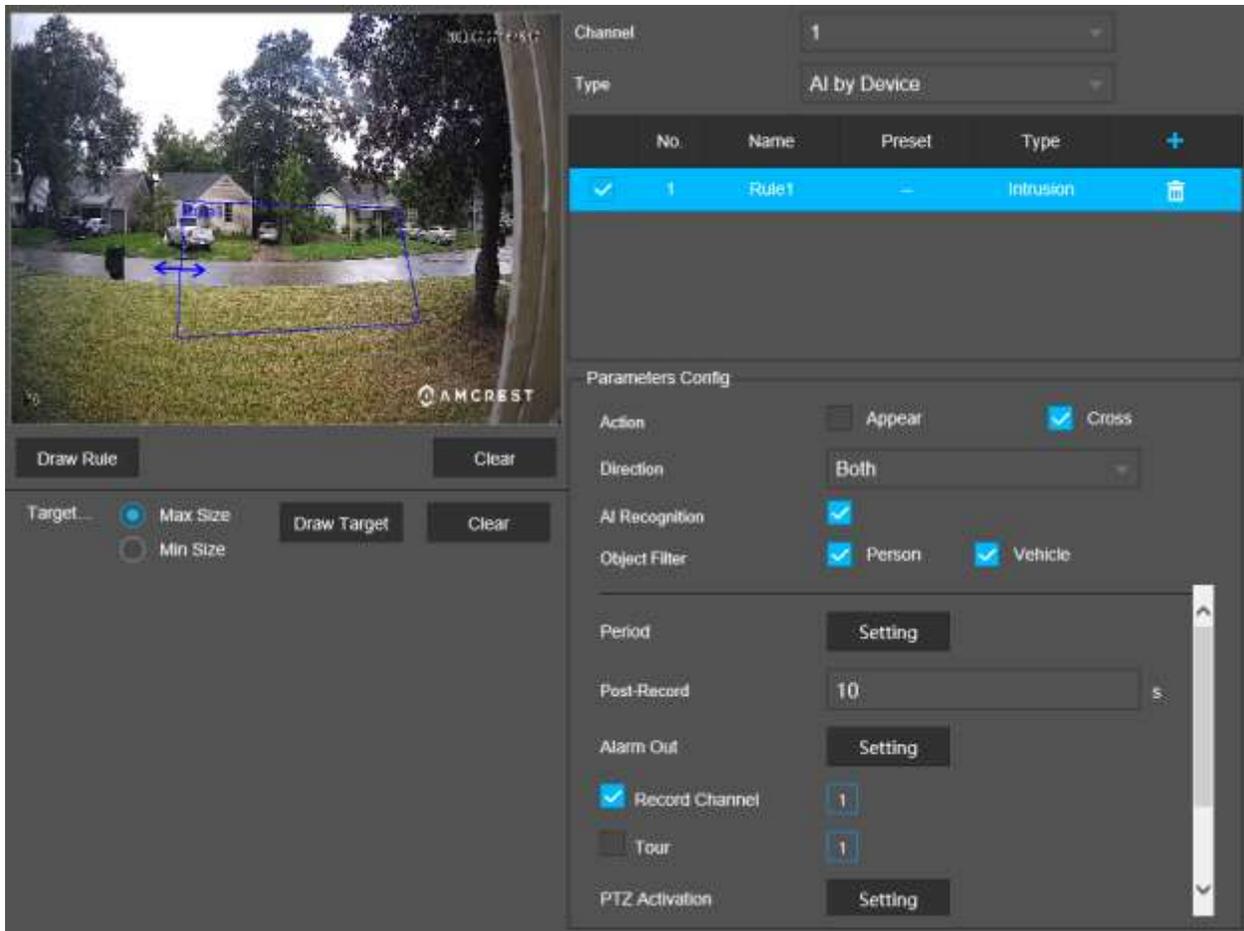
This rule requires you to draw at least a four point area on the interface. To draw an area, click the mouse on the interface and create a line. Click the mouse to set the initial line. Once the line is set, move the mouse to create another line and repeat the process. Right click on the interface to set the area on the screen then left click on the interface to set the detection area.

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

Viewing IVS Events

Any IVS data retained on the system can be viewed using the IVS Smart Search interface or via the playback menu if an IVS schedule is set in the system. If viewing IVS events in the playback menu, all IVS events will be represented as blue in the file list.
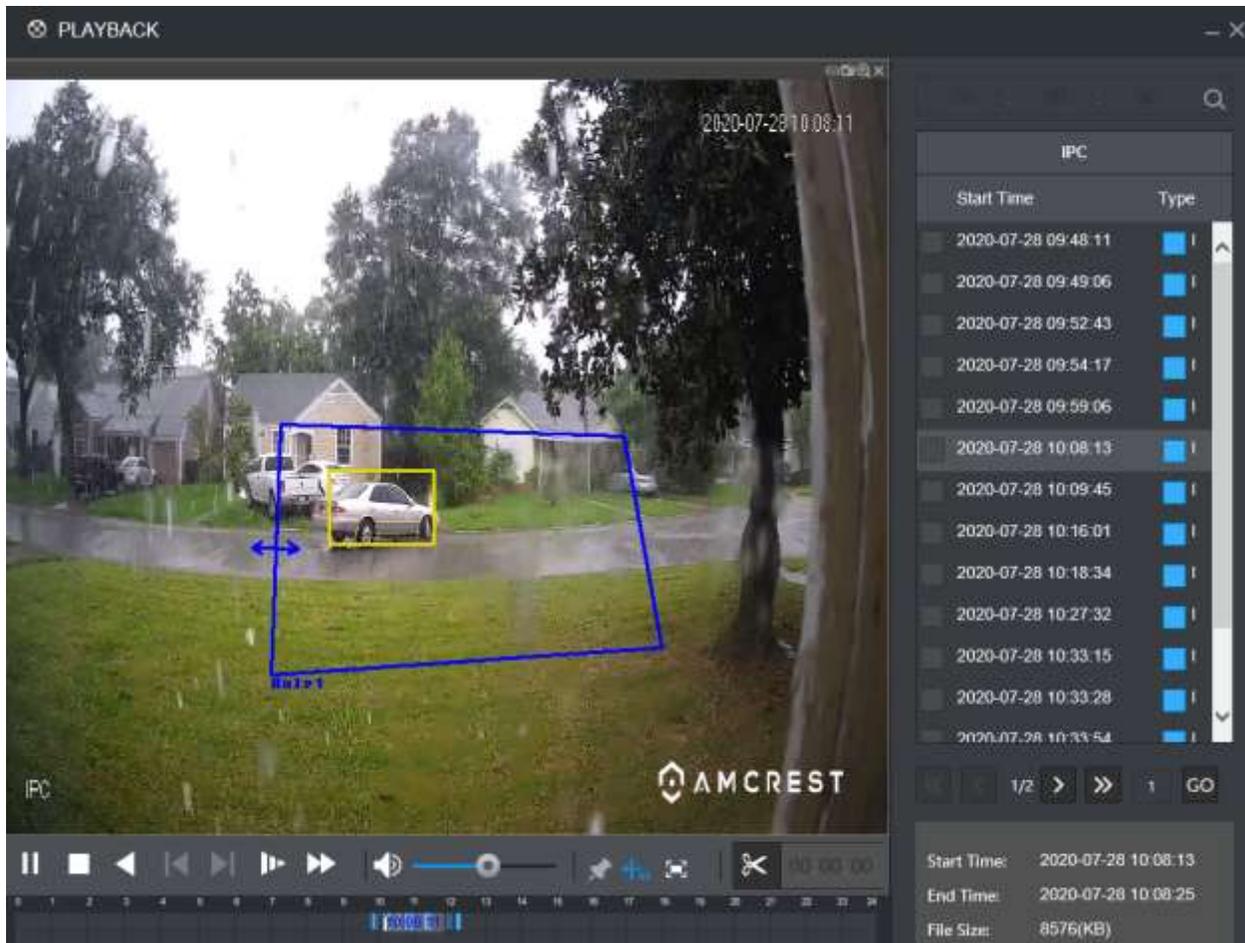
To view IVS data using the IVS smart search interface, click on the **IVS** option located in the Smart Search menu. Enter a start and end time of the event and click **Smart Search**. A layout of all IVS events will be displayed. To view the event, select the event from the interface and click the play button. The event can also be stored using a USB flash drive.
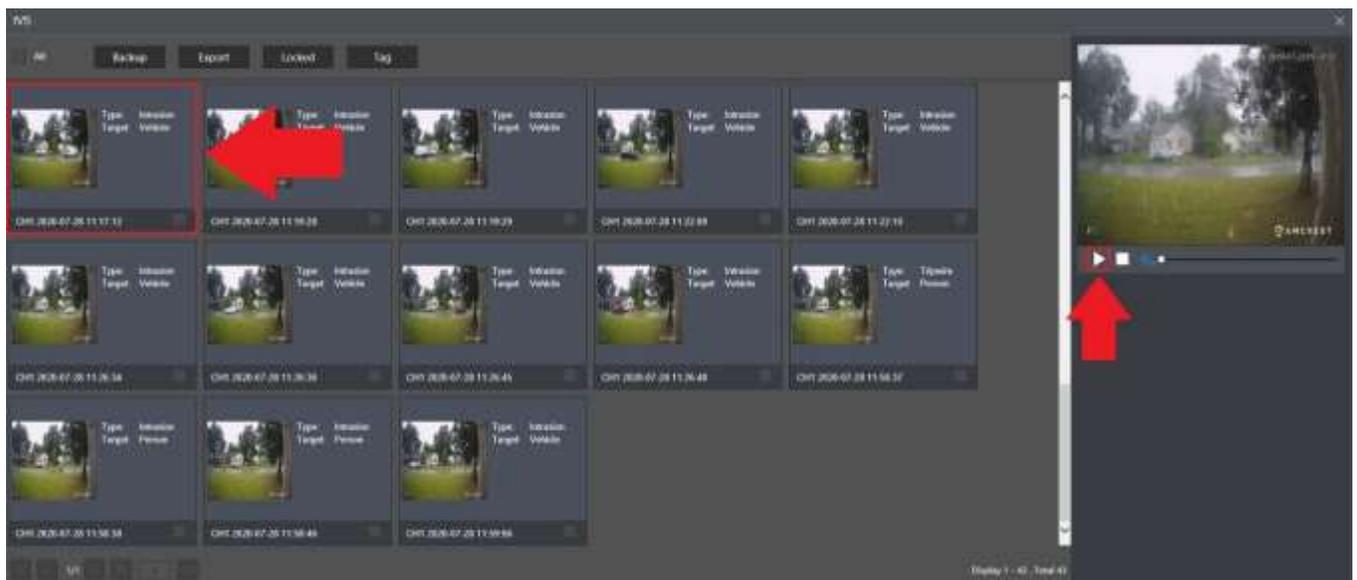
People Counting

People Counting is used to provide a statistic based on the number of people who enter and exit a certain area. **Please note, this feature will not be available if a camera is connected which does not support this feature.** This feature cannot be used in conjunction with IVS or any other AI features associated with your device. For more information on using people counting please refer to the information provided below.

Note: Position the camera in a way the camera can detect all people in the detection area.
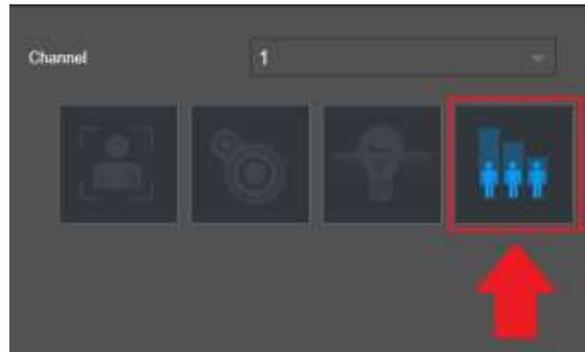
Note: Position the camera in a way the camera can detect all people in the detection area.

Below is a screenshot of the **People Counting** menu:
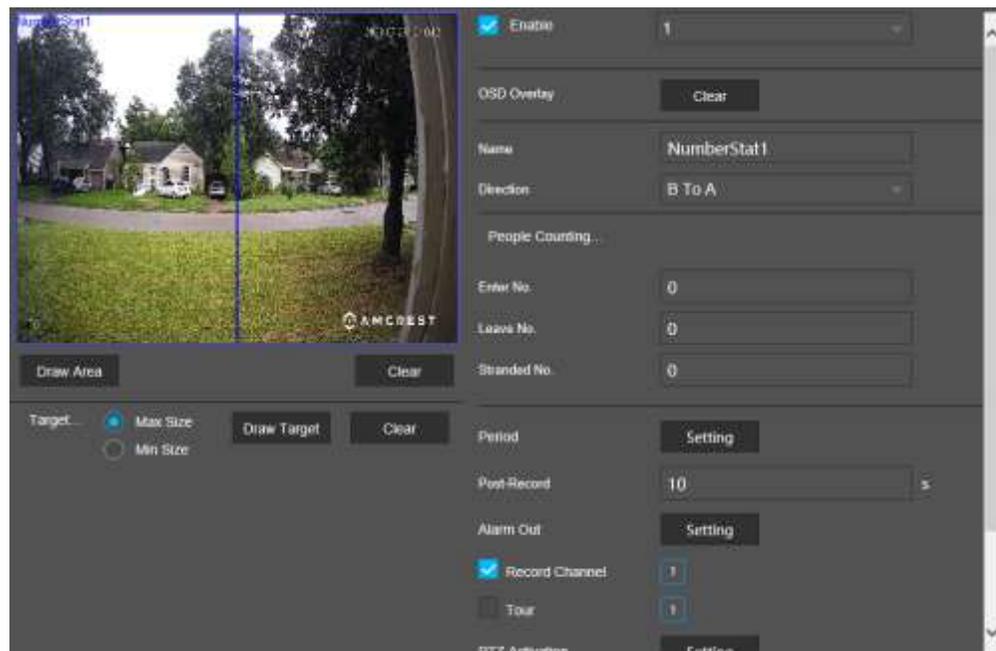
Below is a description of the features listed in the People Counting menu:
Enable: This checkbox is used to enable **People Counting**. Use the channel dropdown menu to select the proper channel for this feature.
OSD Overlay: Use the clear option to reset and clear the enter/exit data in the interface.
Name: The name used on the detection line. The name will be default to "NumberStat1", however, it can be modified.

Direction: The direction in which the rule will apply. The detection line can go from left to right (A to B) or right to left (B to A).

Enter No.: The amount of people it takes to trigger a person entering the set area to be counted. For efficiency, it is highly recommended to leave this as default (0).

Leave No.: The amount of people it takes to trigger a person exiting the set area to be counted. For efficiency, it is highly recommended to leave this as default (0).

Stranded No.: The amount of people it takes to generate an alarm who loiter in the set area. For efficiency, it is highly recommended to leave this as default (0).

Period: Allows the user to set a schedule in which the people counting feature will be used.

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

Alarm Out: Allows the user to set general settings for an external alarm.

> **General Alarm:** Used to enable alarm out features.
>
> **Alarm Out:** Used to enable one or both alarm out channels.
>
> **Latch:** The Delay (in seconds) before the system begins detecting for the same alarm/event.

Record Control: The channel currently enabled.

Tour: Used to setup a tour for multiple channels. Please note, this is only applicable for PTZ controlled devices.

PTZ Activation: Allows the user to activate pan, tilt, and zoom options. Please note, this is only applicable to PTZ controlled devices.

Voice Prompts: Plays an audio file set by the user once an alert is triggered.

More Settings: Access additional settings such as, buzzer, alarm upload, log, send email.

> **Buzzer:** Enable a buzzer to alert each time an alert is triggered.
>
> **Alarm Upload**: Allows an alarm signal to be uploaded to the network and retain in the alarm info menu.
>
> **Log:** Allows an alarm signal to be uploaded to the network and retain in the log menu.
>
> **Send Email:** This checkbox allows the user to enable the camera to send an email when an event is triggered.

Draw Rule: This option allows the user to use their mouse to customize (draw) a rule/area on the screen. This will be the area in which a People Counting rule will apply. Please note, this will be full screen by default.

Clear: This option is used to clear the drawn rule set on the live monitor screen.

Draw Target: Allows the user to set a target area on the live monitor screen. **An IVS event will not occur outside the target box.**

Clear: Clears the modified target area to draw the target area on the live monitoring screen.

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.

Using People Counting

People Counting is a great tool to use to keep track and provide insight into the number of people entering or exiting a certain area. For more information on how to use People Counting refer to the information below:

1. Open the **Smart Plan** menu and activate the People Counting Smart Plan. Click **Save**.
Note: People Counting cannot be used in conjunction with any other AI features in the system.
2. Open the **People Counting** option in the **Parameters** menu. The NumberStat1 (detection line) and area will be enabled by default. Ensure the correct channel is selected before proceeding.
3. Enter a name for the "NumberStat1" (if applicable). The default name will be "NumberStat1".
4. Choose a direction in which the system will count. The detection line can run from left to right (A to B) or right to left (B to A).

4. Use the items listed in the **People Counting Alarm** section to modify how many people it will take for the alarm to trigger if a person enters or exits an area. It is highly recommended to leave these field as default (0) for best results.

5. Click on the **Setting** button in the Period field to set a detection schedule. This is optional but is useful If the camera is only to record people counting data at specific times of day.

6. Ensure the correct channel is activated in the **Record Channel** field. Click on **More Settings** to set any additional features. For more details on these features please refer to the full user manual for your device or visit amcrest.com/support

7. Click **Save** to save the detection area.

The "NumberStat1" line represents the detection line. The detection line is the threshold in which a person enters or exits will be detected by the camera. The detection line name can be modified in the Name field located in the People Counting menu. The "Enters" and "Exits" overlay represents the number of people the camera has detected that have entered or exited the detection area.

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.
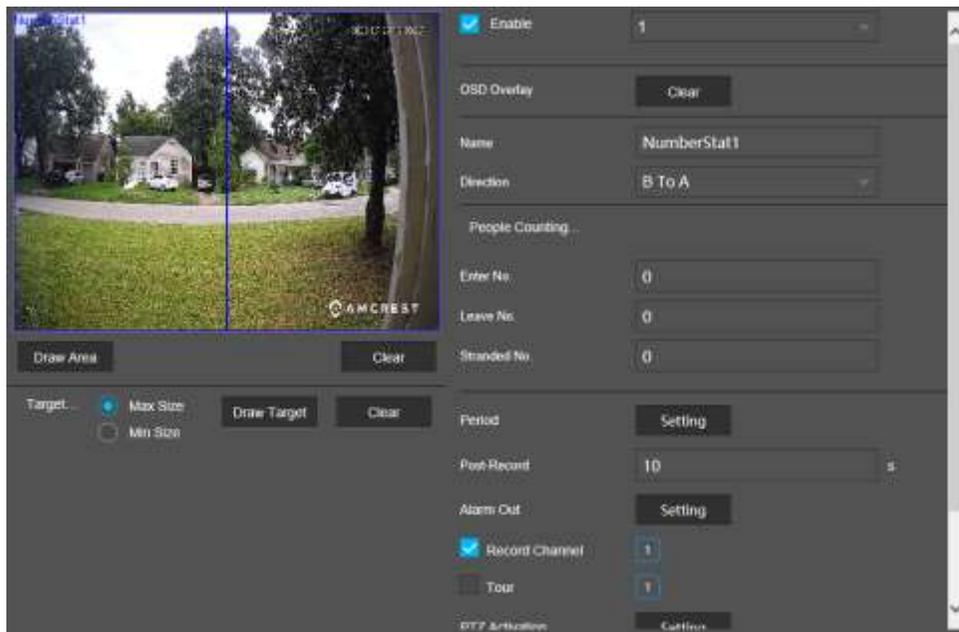

Note: To disable this overlay, click on the AI overlay enable or disable icon ( ) located in the bottom portion of the live view screen.
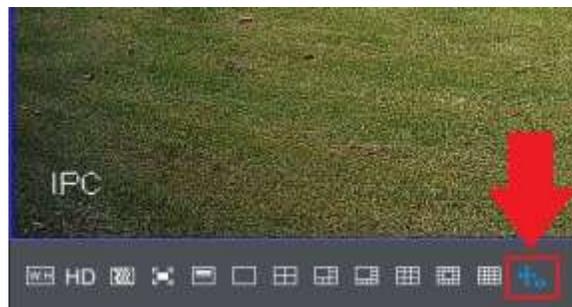
Report

A people counting report can be generated that will graphically display the amount of people detected by the system. The data reported can be displayed as a histogram or a polygon graph.

Below is a screenshot of the Report menu:
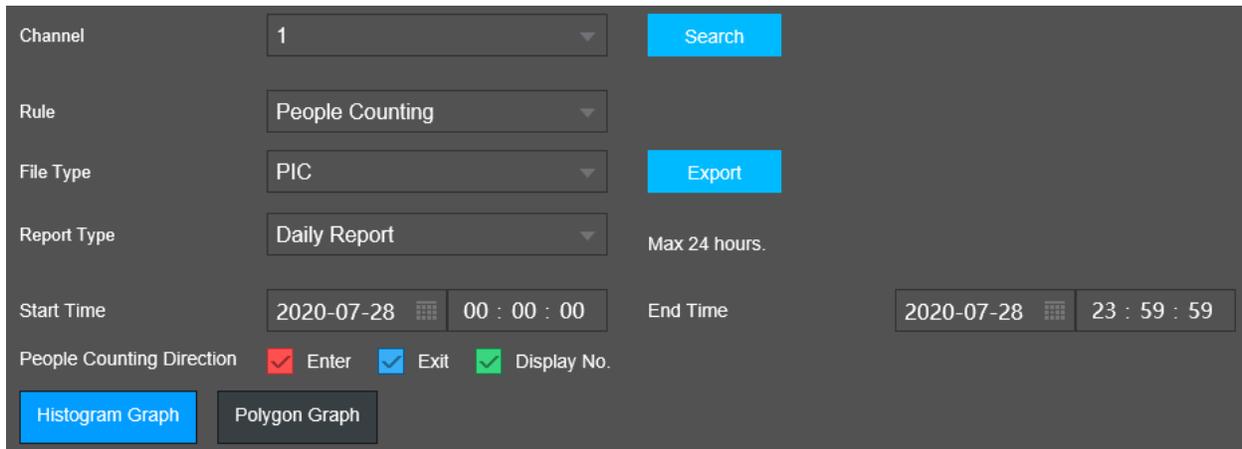
Below is a description of the options in the Report menu:

Channel: The current channel being searched.
Rule: The current rule being searched. This will be default to People Counting.
File Type: The type of file in which the graph will be represented. The graph can be represented as an image (PIC) or an excel file (CSV).
Report Type: This dropdown menu allows the user to choose which type of report will be generated (Daily, Monthly, Yearly). Daily report types cannot exceed 24 hours.
Start Time: The date and time the report will start. Use the calendar and time boxes to enter a start time range.
End Time: The date and time will end. Use the calendar and time boxes to enter an end time range.
People Counting Direction: These checkboxes can be used as filters for the report to show only certain criteria such as how many "Enter", "Exit", or "Display No." Display No." All 3 options are enabled by default.
Report Type: The type of report that will be generated (Bar chart or Line chart).
Search: Used to search and generate the report.
Export: Allows the user to export an image or CSV file of the people counting report to a computer.

Reading a Bar Chart

A bar chart can be generated which will display the number of people who enter or exit a certain area based on a daily, monthly, or yearly report.

Below is an example of a generated bar chart:

The date and time range will be displayed on the top of the chart as well as a color-coded display and legend of the enters and exit statistics will be displayed as well. The left side of the chart will display the range of people that were reported. The blue bar represents the amount of exits in the chart and the red bar represents the amount of people who entered.

Reading a Line Chart
A line chart can be generated which will display the number of people who enter or exit a certain area based on a daily, monthly, or yearly report.

Below is an example of a generated line chart:
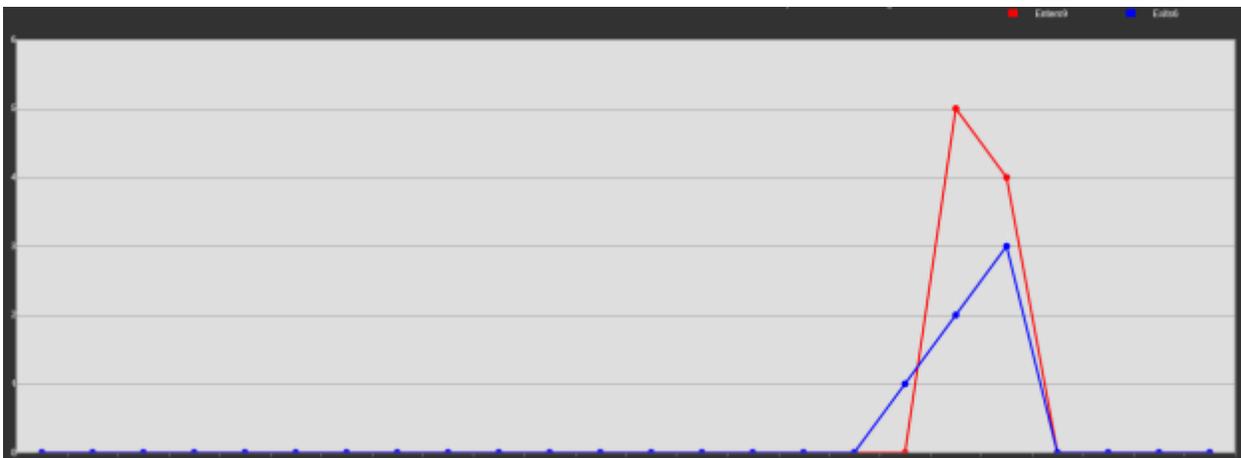
The date and time range will be displayed on the top of the chart as well as a color-coded display and legend of the enters and exit statistics will be displayed as well. The left side of the chart will display the range of people that were reported. The blue line represents the amount of exits in the chart and the red line represents the amount of people who entered.

Heat Map
The Heat Map function provides a general reporting of crowd density statistics based on a specific period of time based on color levels detected by the camera. Color levels are divided into, red, orange, yellow, green, and blue

which represent crowd density ranges; red being the densest area and blue representing areas with the lowest density.

Please note, both IVS and Heat Map can be enabled at the same time. Ensure that the Heat Map option is enabled in the smart plan menu before enabling the heat map feature.
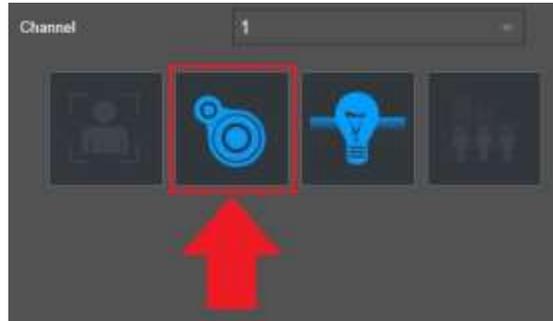
Below is a screenshot of the Heat Map menu:
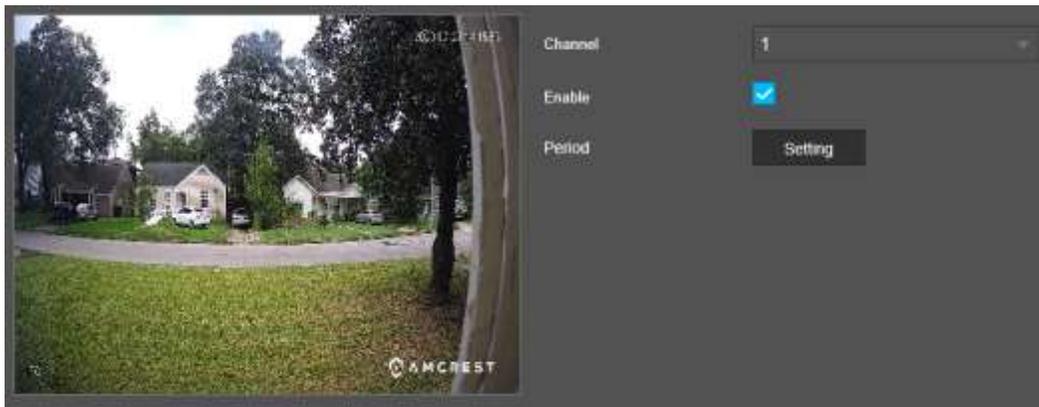
Below is a description of the features listed in this menu:

Channel: The channel being used for the heat map setting.
Enable: Enables the heat map function. This is enabled by default.
**Period:** Allows the user to set a schedule in which the feature will be used.

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.

Report

A Heat Map report can be generated that will graphically display the amount of crowd density detected by the camera. The maximum report range is less than 1 month.

Below is a screenshot of the heat map report menu:
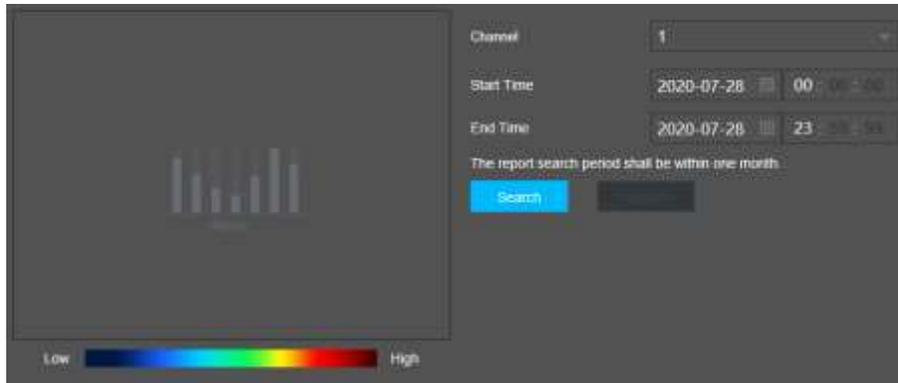
Below is a description of the items listed in this menu:

Start Time: The date and time the report will start. Use the calendar and time boxes to enter a start time range.
End Time: The date and time will end. Use the calendar and time boxes to enter an end time range.
**Search:** Used to search and generate the report.
Export: Allows the user to export an image of the people counting report to their computer.

Using Heat Map

The Heat Map function can be used in conjunction with IVS rules and features. To use heat map, the people counting smart plan must be disabled in the Smart Plan menu. For more information on how to use heat map, refer to the information provided below.

1. Open the **Smart Plan** menu and activate the Heat Map plan. Click **Save**.
   Note: Heat Map can be used in conjunction with IVS plans.
2. Open the **Heat Map** menu and verify the **Enable** checkbox is marked. This option enables the feature and should be enabled by default.
3. Click on the **Setting** button in the **Period** field to set a schedule. A schedule is needed to activate the heat map feature and must be saved to proceed. A default or modified schedule can be applied. Click **Save**.
4. Click on the **Report** tab select a start time date and time as well as an end time date and time (date & time ranges cannot exceed 1 month).
5. Click the **Search** button to search and view a heat map report. A generated Heat Map report will be displayed.
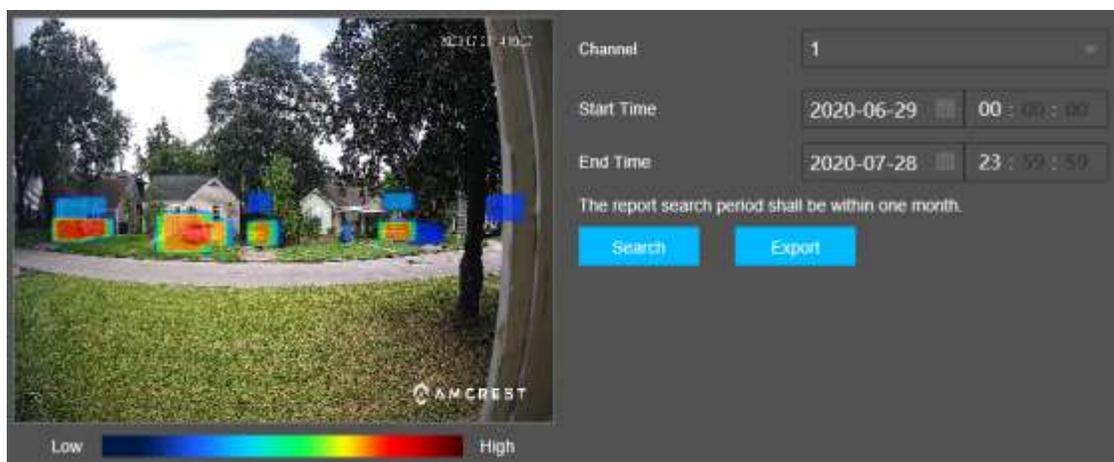
To reset to default settings, click the **Default** button in the heat map menu. To refresh the page, click the **Refresh** button. To save the settings, click the **Save** button.

FCC Statement

1.   This device complies with Part 15 of the FCC Rules. Operation is subject to the following two conditions: (1) this device may not cause harmful interference, and (2) this device must accept any interference received, including interference that may cause undesired operation.

2.   The user's manual or instruction manual for an intentional or unintentional radiator shall caution the user that changes, or modifications not expressly approved by the party responsible for compliance could void the user's authority to operate the equipment. In cases where the manual is provided only in a form other than paper, such as on a computer disk or over the Internet, the information required by this section may be included in the manual in that alternative form, provided the user can reasonably be expected to have the capability to access information in that form.

3.   (b) For a Class B digital device or peripheral, the instructions furnished the user shall include the following or similar statement, placed in a prominent location in the text of the manual: NOTE: This equipment has been tested and found to comply with the limits for a Class B digital device, pursuant to Part 15 of the FCC Rules. These limits are designed to provide reasonable protection against harmful interference in a residential installation. This equipment generates, uses and can radiate radio frequency energy and, if not installed and used in accordance with the instructions, may cause harmful interference to radio communications. However, there is no guarantee that interference will not occur in a particular installation. If this equipment does cause harmful interference to radio or

television reception, which can be determined by turning the equipment off and on, the user is encouraged to try to correct the interference by one or more of the following measures: -- Reorient or relocate the receiving antenna.   -- Increase the separation between the equipment and receiver.   -- Connect the equipment into an outlet on a circuit different from that to which the receiver is connected.   -- Consult the dealer or an experienced radio/TV technician for help.

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

End-users and installers must be provided with antenna installation instructions and transmitter operating conditions for satisfying RF exposure compliance.

Appendix A: Toxic or Hazardous Materials or Elements

Component Name	Toxic or Hazardous Materials or Elements					
	Pb	Hg	Cd	Cr VI	PBB	PBDE
Sheet Metal (Case)	O	O	O	O	O	O
Plastic Parts (Panel)	O	O	O	O	O	O
Circuit Board	O	O	O	O	O	O
Fastener	O	O	O	O	O	O
Wire and Cable/AC Adapter	O	O	O	O	O	O
Packing Material	O	O	O	O	O	O
Accessories	O	O	O	O	O	O

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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.

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**
- **This user manual is for reference only. Slight differences may be found in the user interface.**
- **All the designs and software here are subject to change without prior written notice.**
- **All trademarks and registered trademarks mentioned are the properties of their respective owners.**

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

Visit http://amcrest.com/contacts and use the email form
Call Amcrest Support using one of the following numbers:
Toll Free US: (888) 212-7538
International Callers (Outside of US): +1-713-893-8956
USA: 713-893-8956
Canada: 437-888-0177
UK: 203-769-2757

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