Using analytics such as motion can offer the advantage of providing notification of an event or provide an indication in recorded video which can be easily located later.

Motion Types

Motion Detection
Conventional motion detection analyzes the differences between adjacent video frames to detect if there is any change. The challenge with this type of detection is that if you don't have control over the environment it is difficult to prevent unintended alarms. Objects such as pets, insects, foliage, tree branches (especial their shadow), raindrops, headlights from passing cars, etc., can trigger hundreds of false alarms. As such locating an event can prove difficult.

Ultra Motion Detection
Ultra motion detection can detect moving objects, such as motor vehicles, non-motor vehicles, and pedestrians. It can even differentiate these objects from other moving objects and shadows.

VCA Detection
Smart detection events or VCA include such options as Cross Line, enter or exit area, Intrusion detection and many more. Not all cameras support all VCA features, refer to your model's documentation.
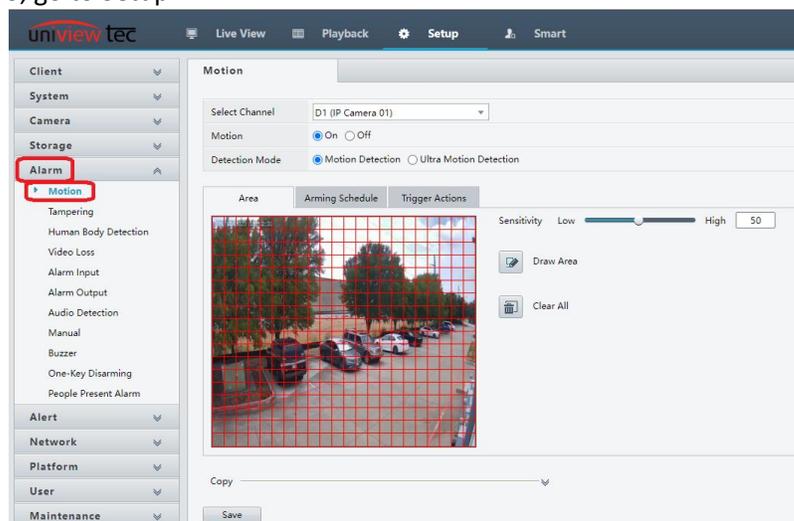
Motion/UMD Setup

Motion is enabled by default, but for the best results must be configured. Although detection is performed by the camera, normally setup changes are applied through the NVR. The principals of setup are very similar whether done through browser or locally at the NVR so this document will only cover browser setup. Open the recorder web login by typing the recorder's local IP address into, or navigating to cloud device via, web browser. Ensure that you have video from the desired camera on the live view screen before setting up motion, if you do, go to Setup.

In Setup, go to Motion under Alarm. Click on the drop down for Select Channel and select the desired camera.
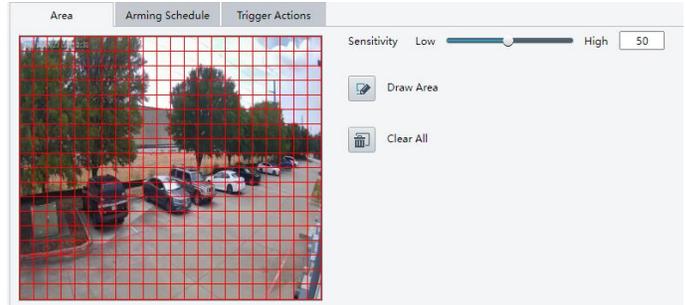
Click On to enable Motion Detection.

Select either Motion Detection or Ultra Motion Detection. If this option is not shown then either the camera does not support the feature or the cameras firmware might need to be updated.

Motion Detection

When using motion detection, it's very important to setup an accurate detection area to decrease unwanted detection.
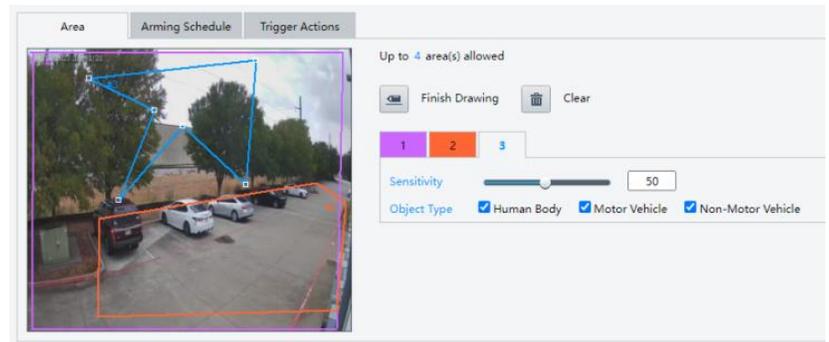
Wherever there is a red outline box the camera is looking for motion. If there is no box it will ignore that region. To edit where these detection boxes are, click on Draw Area. Next click on the boxes in the video image. Detection boxes will change to ignore the motion or vice versa. You can also click and drag to change multiple boxes at the same time. Clear All will remove all blocks.

When changing the detection area keep in mind trees and similar objects, and their shadows, will move with the wind and change position relative to the sun. Sensitivity should be adjusted to best suit the area it is monitoring. It is recommended to start at a level of about 75. After the NVR has recorded for a bit with the new settings, playback recently recorded video to see if it is triggering as anticipated and adjust as needed.

Ultra Motion Detection (UMD)
Since UMD is triggered by object shape, it's not as important to define an exact detection area. To set the detection area click on Draw Area. Then click, drag and release to create a line on the video image. Continue to move the mouse and another line will be created, click to set the endpoint for each additional line. Up to six lines can be drawn, with a final click being required on the start point to close the shape. Inside this shape is the detection area. Up to 4 detection areas can be created.

If you want to remove a detection area select it from the numbered tabs, and then click Clear. Each detection area can independently have Object Type and Sensitivity defined. The sensitivity is recommended to start at a level of about 75. After the NVR has recorded for a bit with the new settings, playback recently recorded video to see if it is triggering as anticipated and adjust as needed.

Arming Schedule
The schedule is used to limit when a detection will be acted upon. To edit the schedule click on the Armed or Unarmed to the right and then on schedule grid.

Trigger Actions

Here you set what actions the recorder should take when the current motion event occurs.

NVR Recording Setup

NVR recording settings will need to be setup to define what type of video will be recorded and when.

In the NVR go to *Storage* and then *Recording Schedule*. Select the appropriate camera from the *Select Camera* dropdown. Set the pre and post event recording times. Ensure *Recording Schedule* is set to On.

It is recommended to use either Normal, Event, or None schedule types. Normal, would be 24/7 recording. Event, is for all types of events including motion and smart features such as UMD or other VCA events. If using Event, the camera will not be recording 24/7, only detection events will trigger video recording. None disables recording at the selected times.

Note - If using UMD or any smart VCA features, do not use the Motion schedule type as it will only record conventional motion and will not record UMD or smart VCA motion.

To change the recording mode, click on the desired schedule type to the right of the schedule and then on the schedule to change it. Select individual boxes or click and drag to select multiple boxes at once.

To illustrate the difference in recording types, compare these two timelines from playback. The top one is normal recording, the blue line indicates normal recording, and the red lines indicate motion, UMD, or VCA events. On the bottom timeline you will still get the event recordings, but at other times no video will be saved.
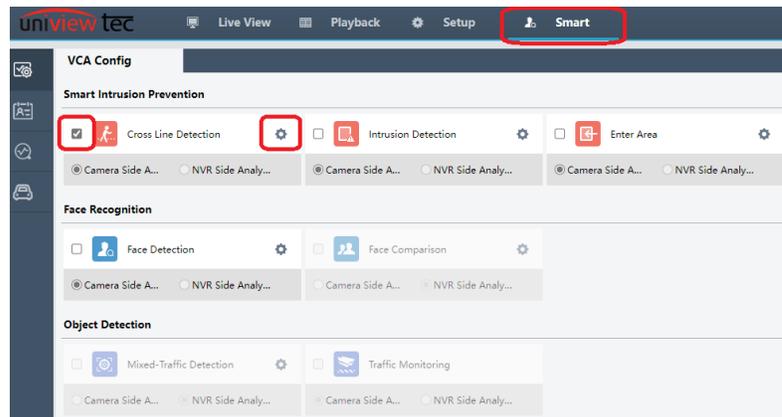
Playback from Normal recording.

Playback from Event recording.

VCA Detection

VCA detection setup options can be found in the Smart tab at the top of the NVR web page. Only options in color will be accessible for the selected camera. To enable a VCA rule click the checkbox next to its icon and name, to modify the parameters of detection click the gear icon to the right afterward.
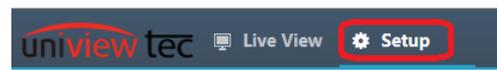

Many of the parameters for VCA detection are quite similar to motion detection. Refer to your model's documentation for more information.

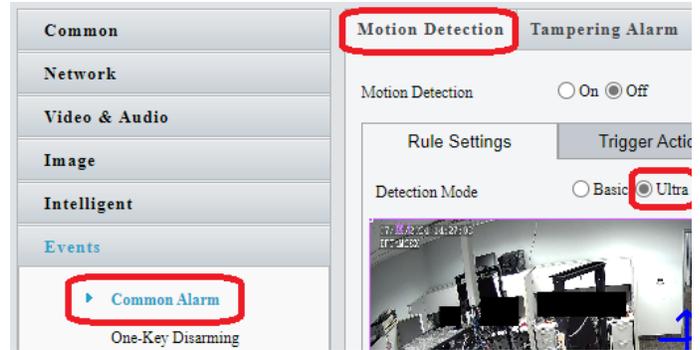## Setting Motion with uniview tec Cameras for a 3rd Party NVR

Navigate to the camera's web page by typing the IP address of the camera into a browser. The default login is Username: admin and Password: 123456.
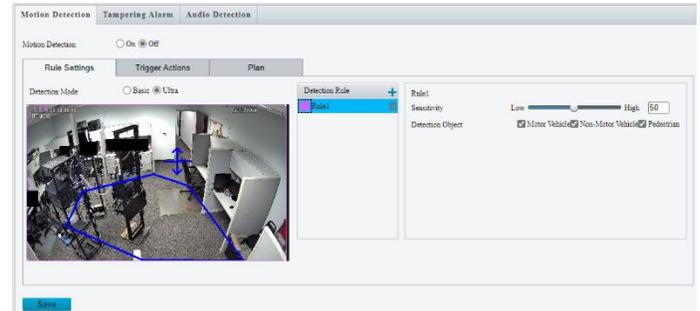

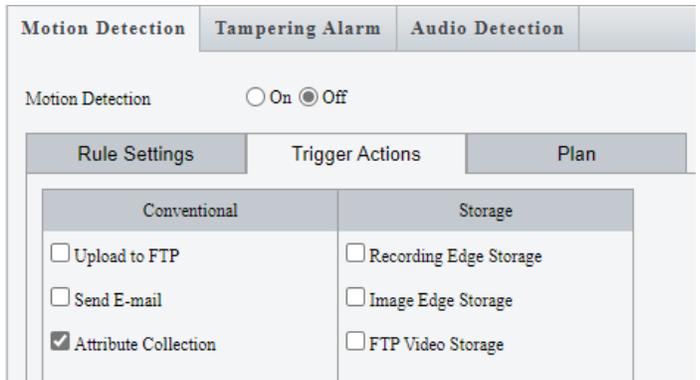Once logged into the camera go to "Setup" at the top of the screen.

From Setup, navigate to Events >> Common Alarm in the left menu. Next select the "Motion Detection" tab. In Motion Detection under Rule Settings, change the Detection Mode to Ultra.

Click on the "+" icon next to Detection Rule to create a new area. A pink box will appear in the camera image to the left, grab a corner of the box and drag it until it covers the image area that is desired. You can add up to 4 Detection Rule areas. Each area has a sensitivity slider and object detection parameter for additional precision of event detection.

Next Click on the "Trigger Actions" tab. Leave Attribute Collection checked. Upload to FTP must have server information setup in the Storage >> FTP section. Send E-mail must have Server and recipient information setup in Network >> E-mail.

Recording Edge Storage and Snapshot Edge Storage allow you to save this event to an SD card, purchased separately, if one is in the camera.

Finally click on the Plan tab. "Enable Plan" at the top of this menu must be selected. Time and days highlighted blue will be the active period for this motion detection. Selecting Armed or Unarmed at the top and clicking the schedule boxes individually or clicking and dragging with the mouse to select multiple boxes will change those time to the selected mode.