LILIN NVR with LILIN AI Camera LPR Detection Guide
Licence Plate Detection to a LILIN NVR

To add your AI camera to your LILIN NVR to detect and log AI LPR detections, follow the steps below.
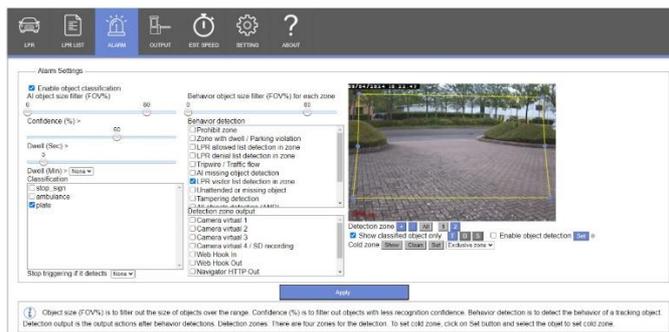
AI Camera

Log in to your AI camera and select the AI module icon. This will ask you to login to the camera's AI module. Enter the camera's administrator username and password.

Select 'Alarm' from the top bar.

This screen is where you will configure the desired AI behaviour and AI classifications that will trigger an event to an NVR.

In the example below the camera is set to log licence plates when a visitors car enters the designated zone.

In the example below the camera is set to log licence plates when an allowed car enters the designated zone.
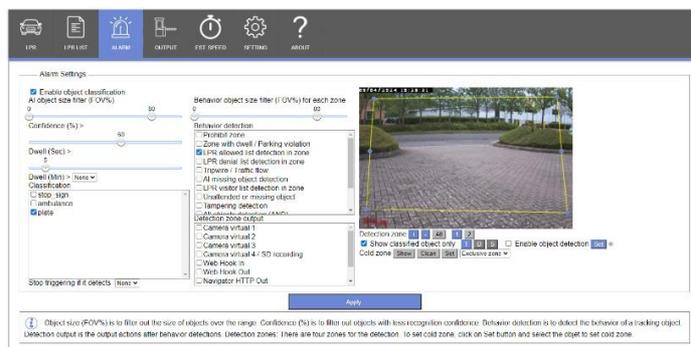
The difference between the 2 example above is the Behaviour detection selected. The top example has LPR Visitor ticked, and the bottom example has LPR Allowed List ticked.
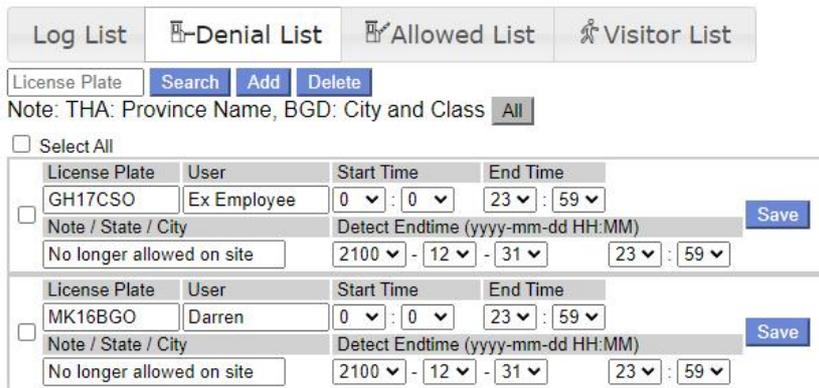
You can set up to 4 different AI zones with different behaviours.

Next select 'LPR List' from the top menu bar.

Under this menu you will see 4 lists. Log List, Denial List, Allowed list and Visitor list.

Log List - This shows a list of all plates detected by the camera with the time it was detected and the confidence level the plate was detected at.

Denial List, **Allowed List** – These are editable lists where you can enter specific plates to trigger certain desired outputs. I.E If the camera detects a plate on the allowed list, open a gate however if a plate is detected on the Denial list, send a push notification to a device (security managers phone) or trigger a security light etc.

Visitor List – Is not an editable list but can be assigned to an output of the camera. I.E Every time a plate is detected show a welcome message on a digital sign etc.

Next select the 'LPR' menu from the top bar.

Here is where you can specify the details of the number plates the camera is looking for. I.E only detect plates with more than 5 characters. This is where you edit the confidence level of the number plate being detected. The default value is 80.

Next select 'Settings' from the top bar.

Scroll down to LPR settings. Here are some additional options you can enable and disable to help fine tune the plate detection.
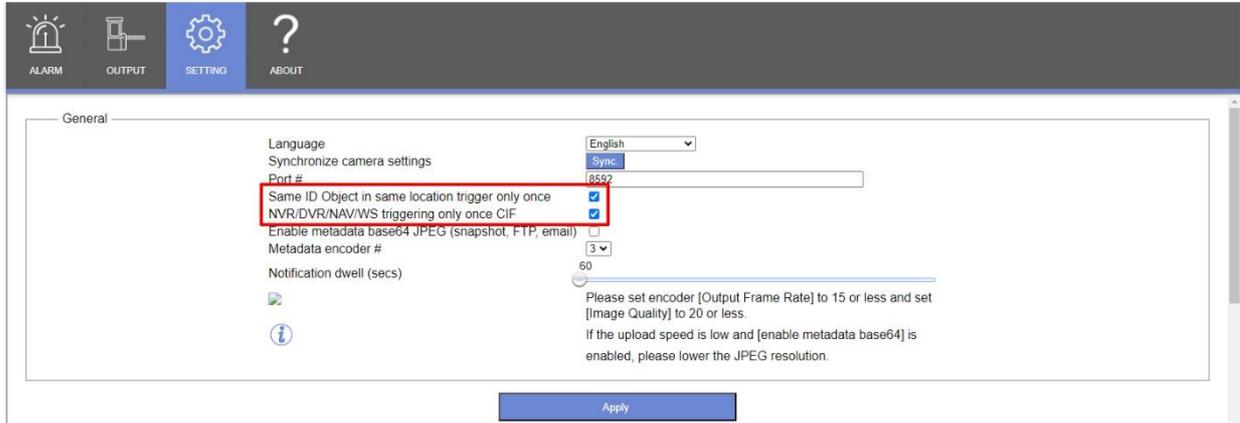
Within this menu, ensure you have the following ticked:

Same ID Object in same location trigger only once

NVR/DVR/NAV/WS triggering only once CIF

For a basic configuration, these should be the only options to change on this menu.

NVR

Next log in to the NVR (this guide assumes the camera has already been added to the NVR).

Once logged in to the NVR, select 'Meta Data' and select the channel your AI camera has been added to.

Once selected click the 'Camera Detection' button. This will talk to the camera and automatically match the detection classifications to what has been enabled on the camera.
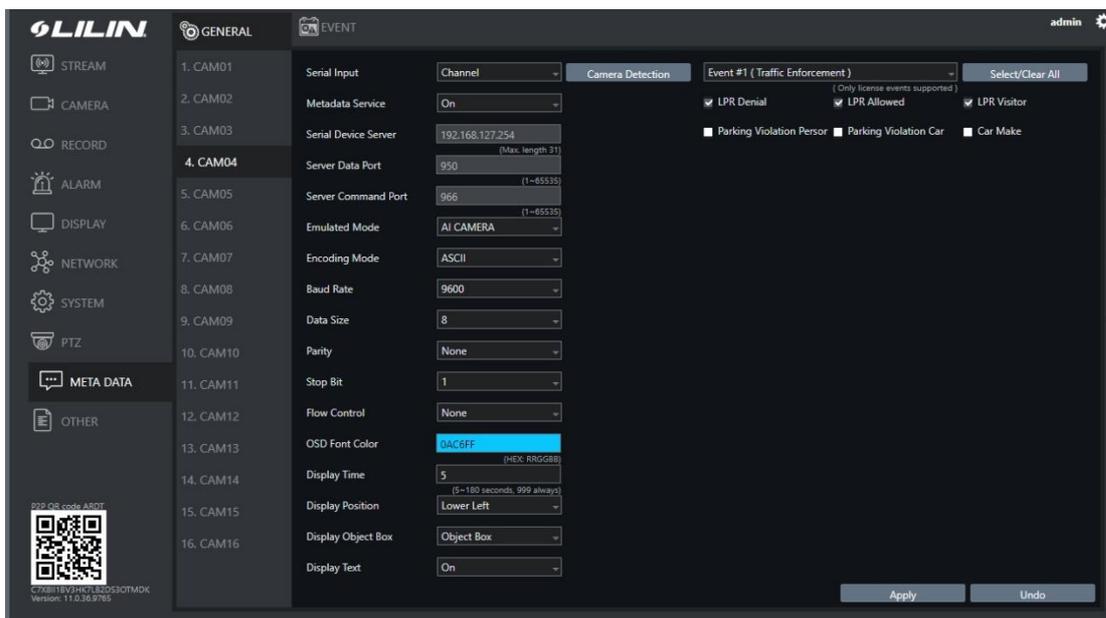
There are some options at the bottom of the page that will change how AI objects are displayed on the NVR.

You have the option Display Object Box:

Object Box, Detection Zone & Object Box / Detection Zone

Enabling **object box** means that an object box (coloured square) is displayed around the classified object once they enter the detection zone.

Enabling **Detection Zone** means the camera will display the detection zone set from within the camera over the video displayed on the NVR. (None of these options are shown when a video backup is taken.)
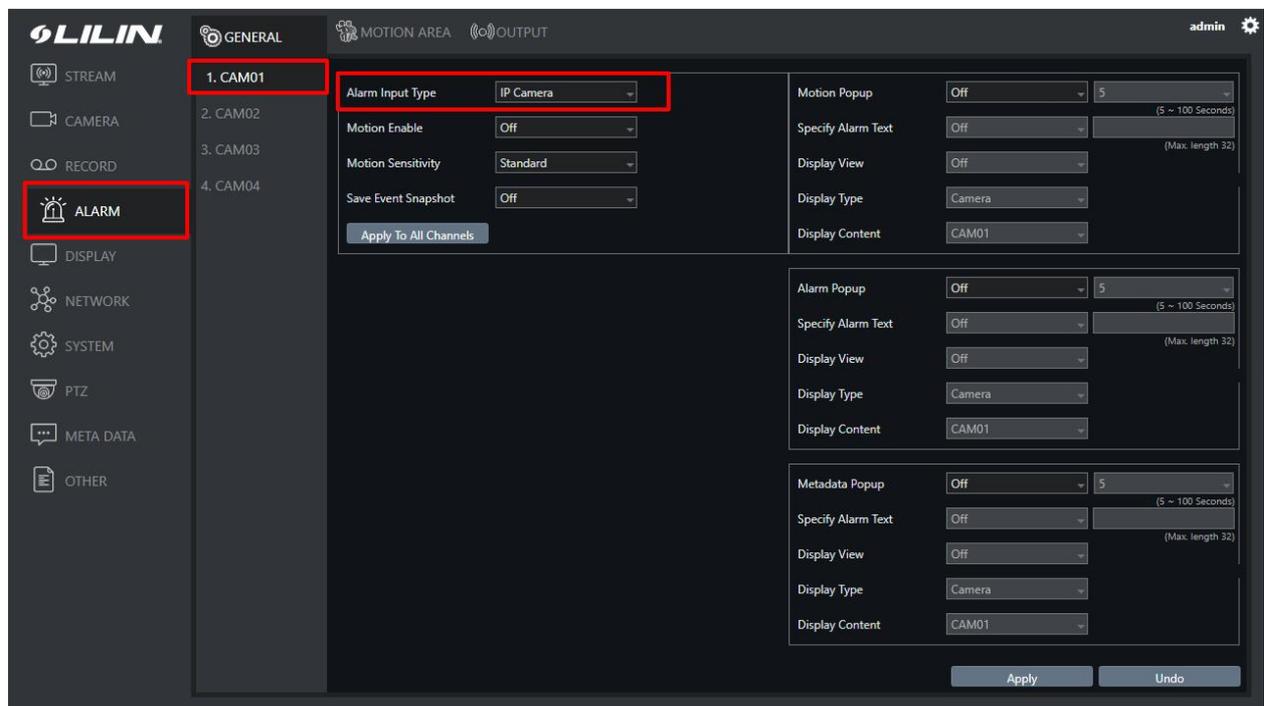
Enabling **Object Box / Detection Zone** simply means both are enabled and visible.

Click Apply.

(Please note that enabling Object Box or Detection Zone will cause the NVR to use more resources and may impact performance)

Next, select the 'Alarm' menu and select the channel your AI camera has been added to.

Next turn 'Alarm Input Type' to 'IP Camera' and click Apply.

Your camera is now logging AI events to the NVR.

Alert Outputs

This can include Email, Buzzer and Push Notifications alerts
(In this guide we will cover push notification configurations)

To enable push notifications for detected AI events, select 'Alarm' from the NVR menu.

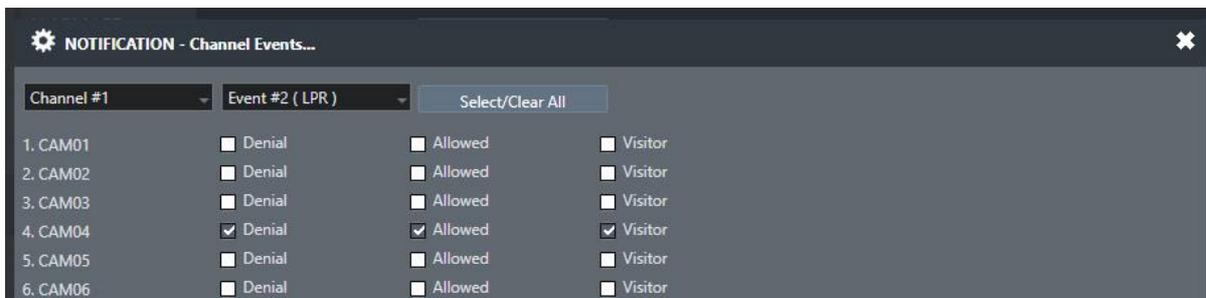Select the 'Output' tab from the top menu bar.

Next select 'Notification' from the sub menu bar.

Turn 'Enable' to On and click the 'Channel Events' button.
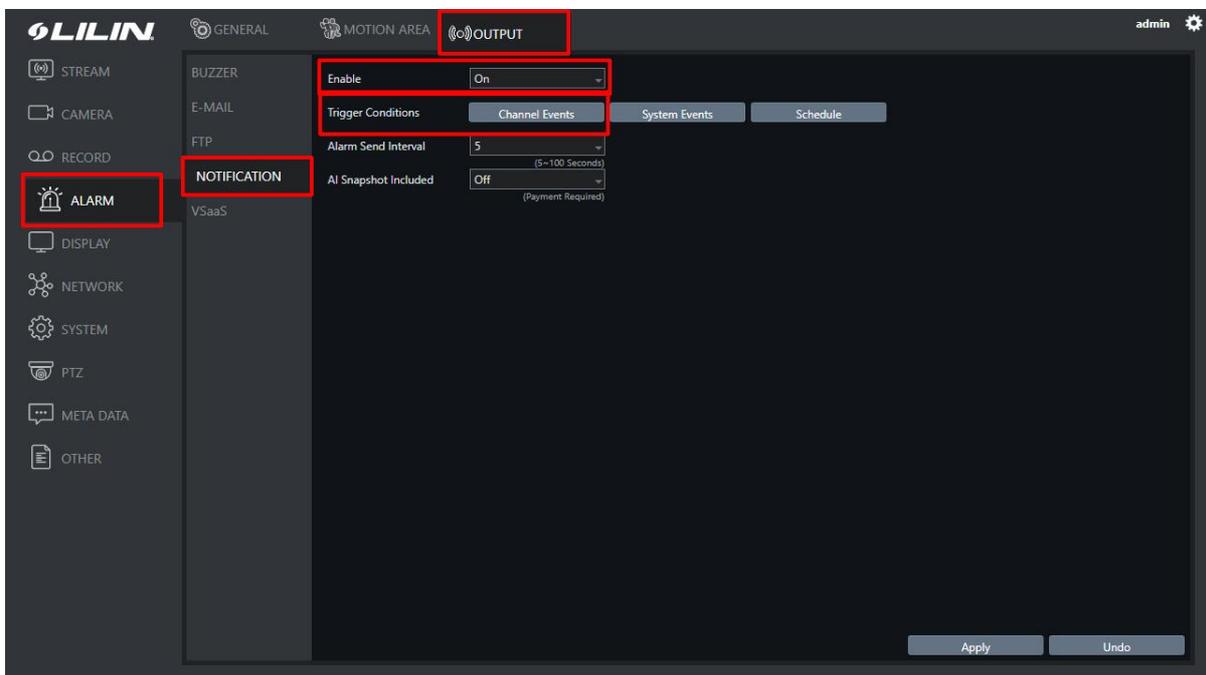
From the Events dropdown select 'Event 2 (LPR)' and tick which ever of the following are required, 'Denial, Allowed and Visitor.

(We select these because these are the classification set on the AI camera module)

Then click Apply.

If a mobile app already has the NVR configured within it and the app is set to receive 'Alarm Events' you will start to receive push notifications when an AI event is triggered.

Enabling push notifications will also enable the 'Events' option on the LILINPro app. This is a list of previous events on the NVR.

Below is an example of how an LPR detection looks in playback from an NVR6216E.

The NVR has both a camera and behaviour filter to help find any events quickly and easily.