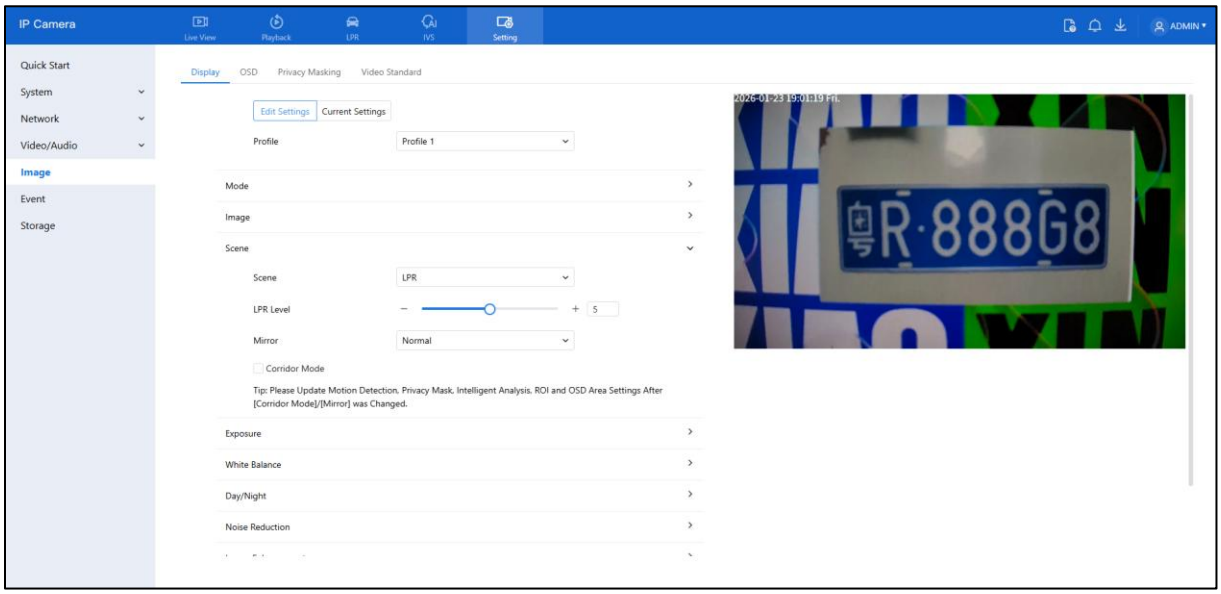
LPR Camera Configuration

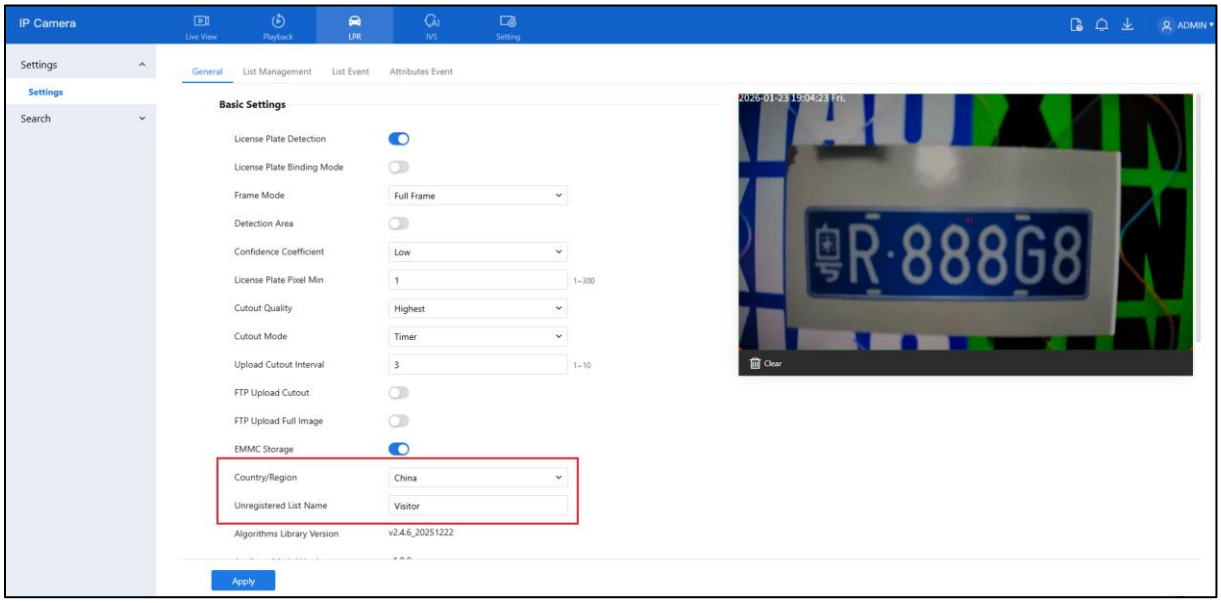
Prerequisite:

1. The IP camera should support the license plate recognition algorithm. Device models that include '**T**' have LPR. Examples are:
    - SN-IPR8045DQAN-**T**-Z
    - SN-IPR8047AKAN-S**T**-PZ

2. In the camera's web interface, set the LPR Mode by going to Settings > Image > Display > Edit Settings > Scene > LPR. This will make sure the image quality has the optimal settings for an LPR scene.



3. To set the Country/Region, go to the LPR > Settings > General.

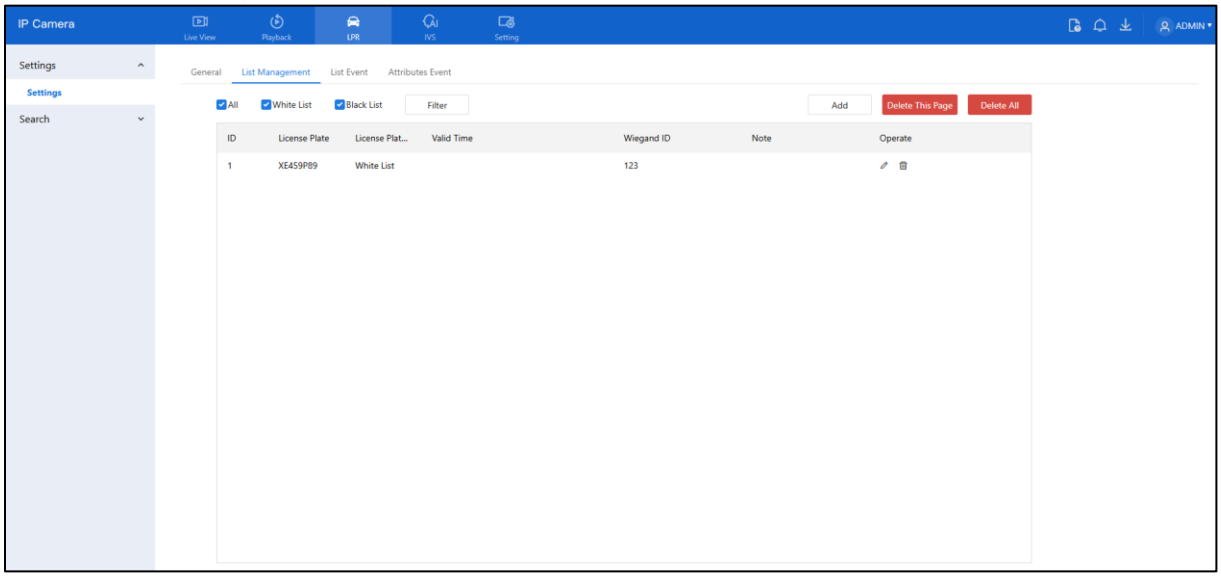


Note: The countries and regions supported by the current version of the LPR algorithm are as follows:

- Europe
- United States
- Thailand
- Nepal
- United Arab Emirates
- Taiwan
- Vietnam
- China
- Brazil
- General Mode (Australia, Chile, India, Indonesia, Malaysia, Oman, Philippines, Saudi Arabia, Singapore, South Africa)
  ****The 8045 series LPR camera only supports General Mode. (Australia, Chile, India, Indonesia, Malaysia, Oman, South Africa)*

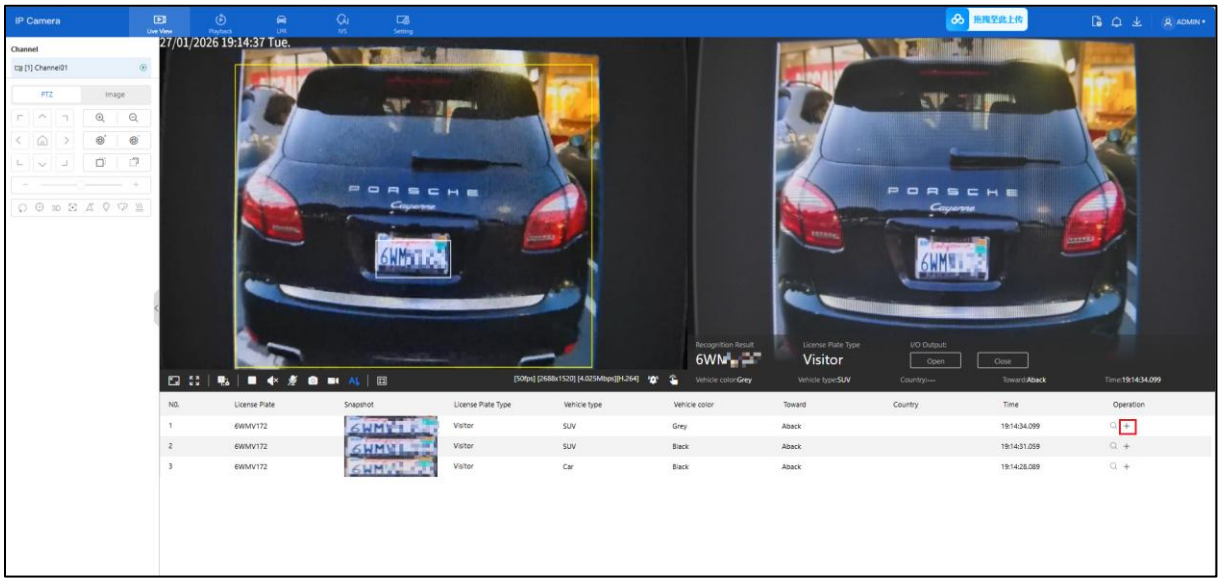
Testing the LPR algorithm using the camera's web interface

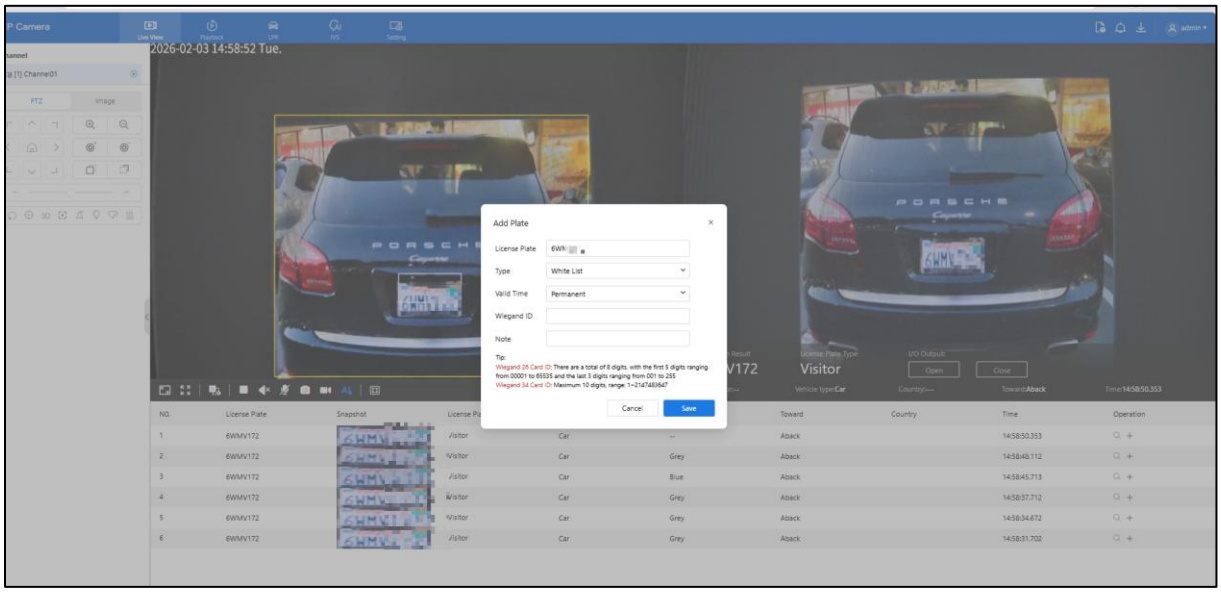
1. Setting the license plate library and strategy.
   a. Set from the LPR > Settings > List Management. It supports setting the *White List*, *Black List*, *Valid Time* and *Wiegand ID*.



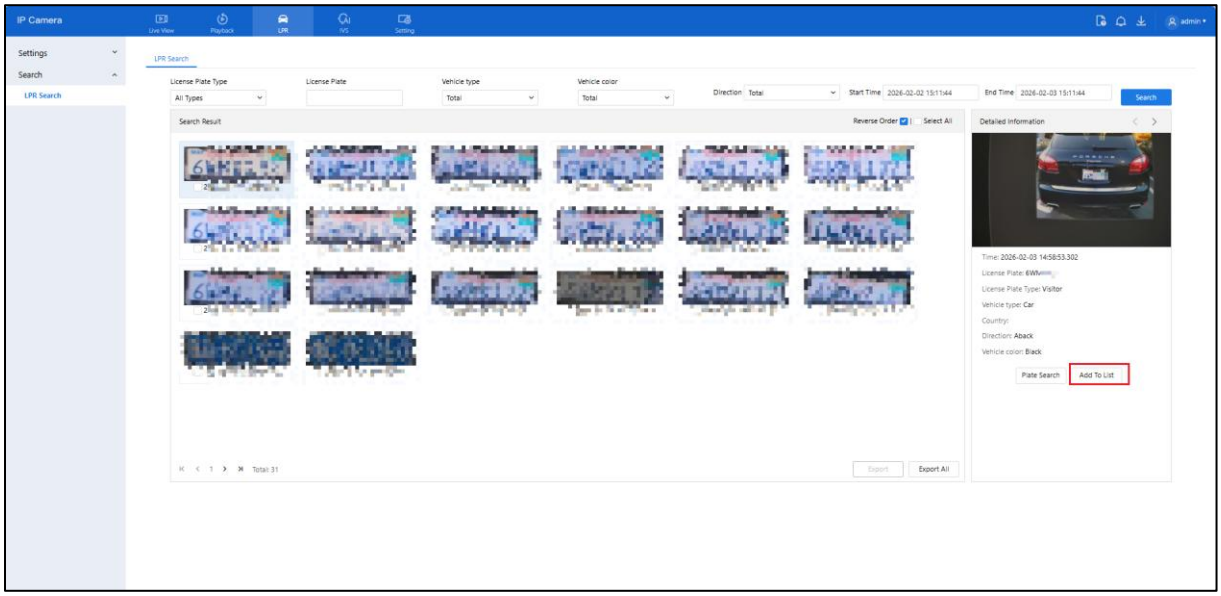
b. Add from the Live View or LPR > LPR Search menu. Click "**+**" on the Live View page or 'Add to List' on the LRP Search menu to add it to the library.

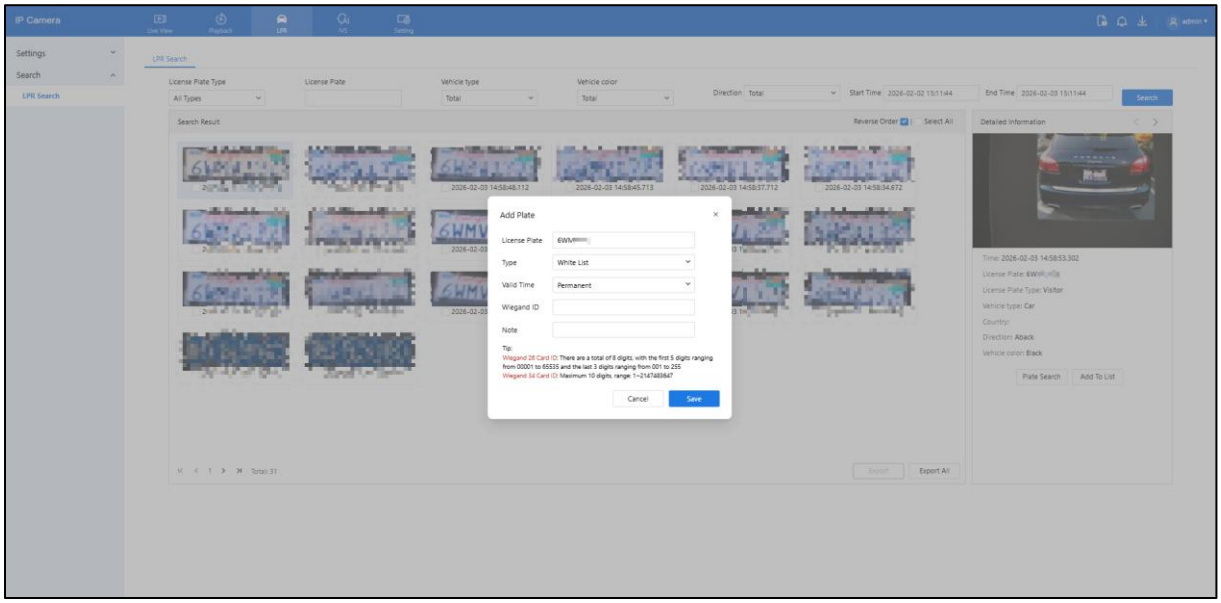
Add from the Live View page





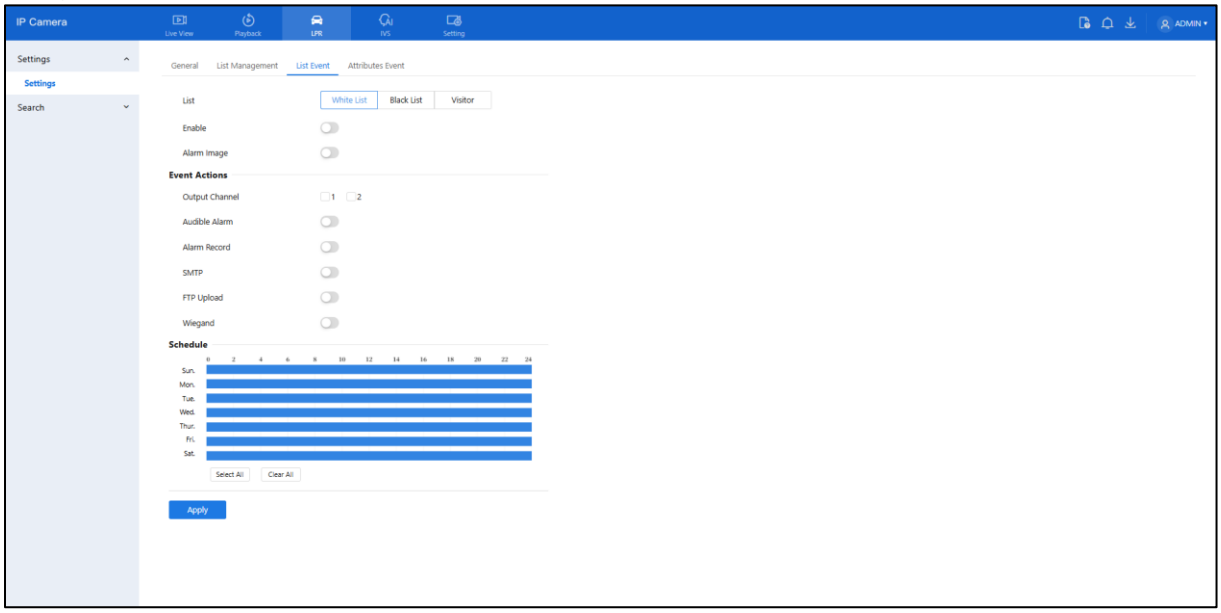
Add from the LPR Search menu



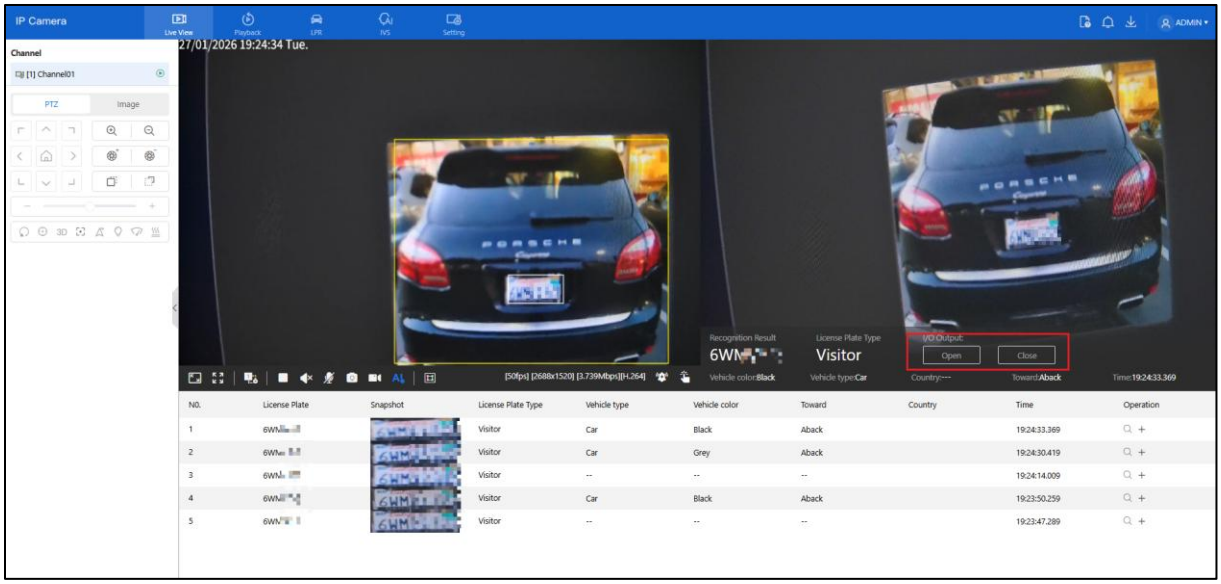


Note: 8047 Series supports 20000 plates for white list and black list.

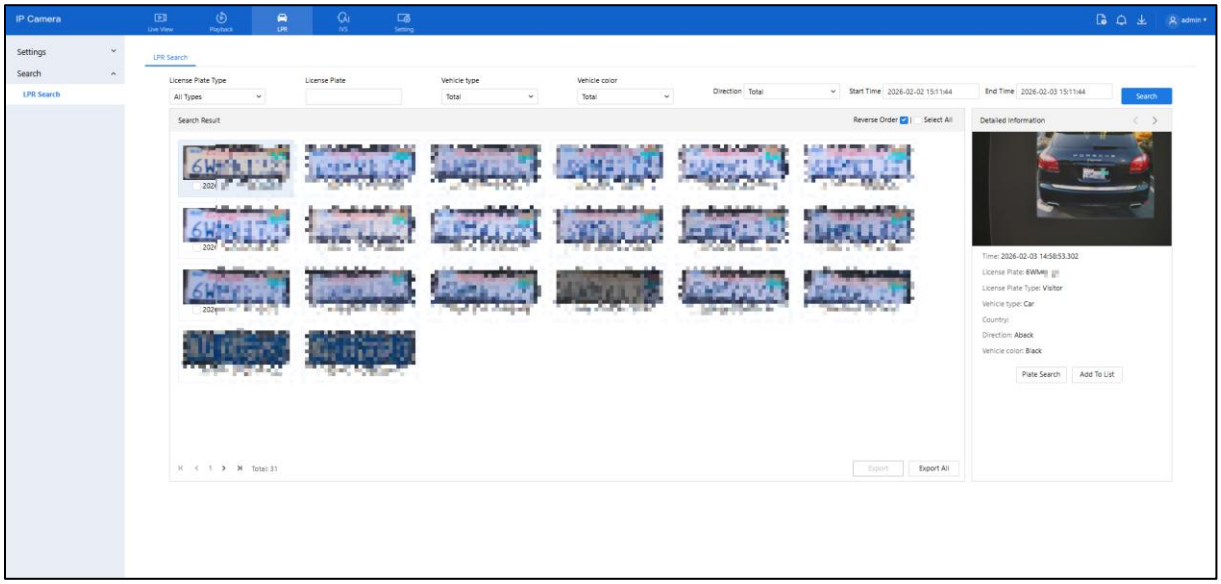
c. Set the strategy from the LPR > Settings > List Event. Unregistered license plate will be recognized as visitor.



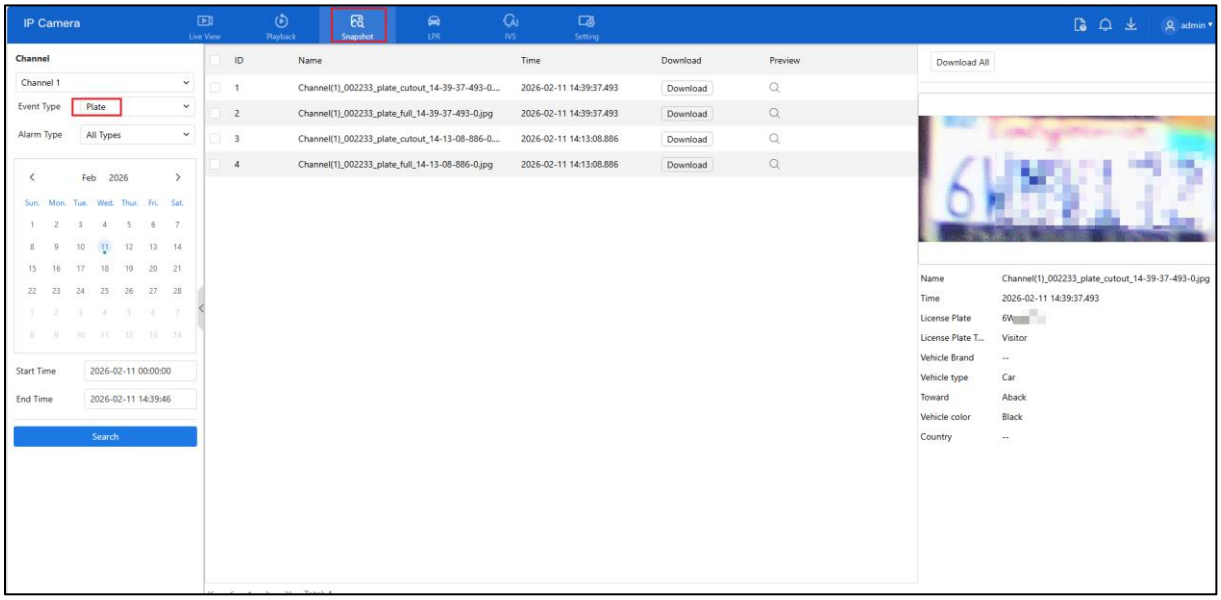
2. Go to **Live View** to check the real-time detection results. You can manually set the I/O output to open/close from this page, which allows you to manually open the barrier gate (when the IPC's I/O output interface is connected to the barrier gate).



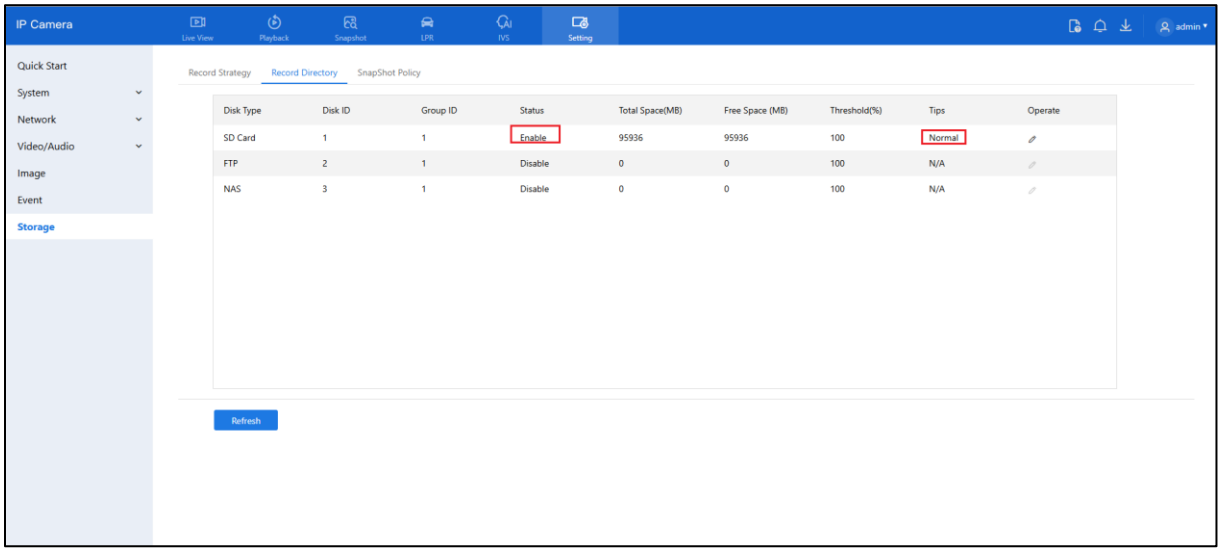
3. Go to the LPR > LPR Search to retrieve the happened events.



8045 LPR doesn't have LPR Search section. The plate captures are saved in the Snapshot section.



But the SD card is required for this to work properly. The SD card is enabled and in normal state.



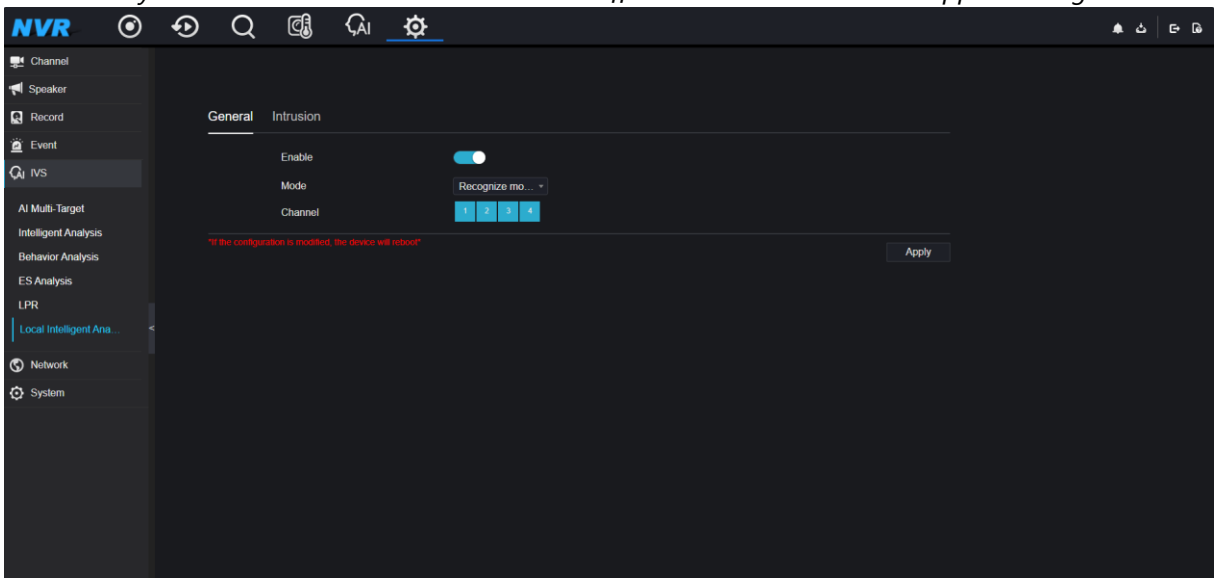
Testing the LPR using an NVR

Structure: IP Camera > NVR (managing the whole LPR system by the NVR)

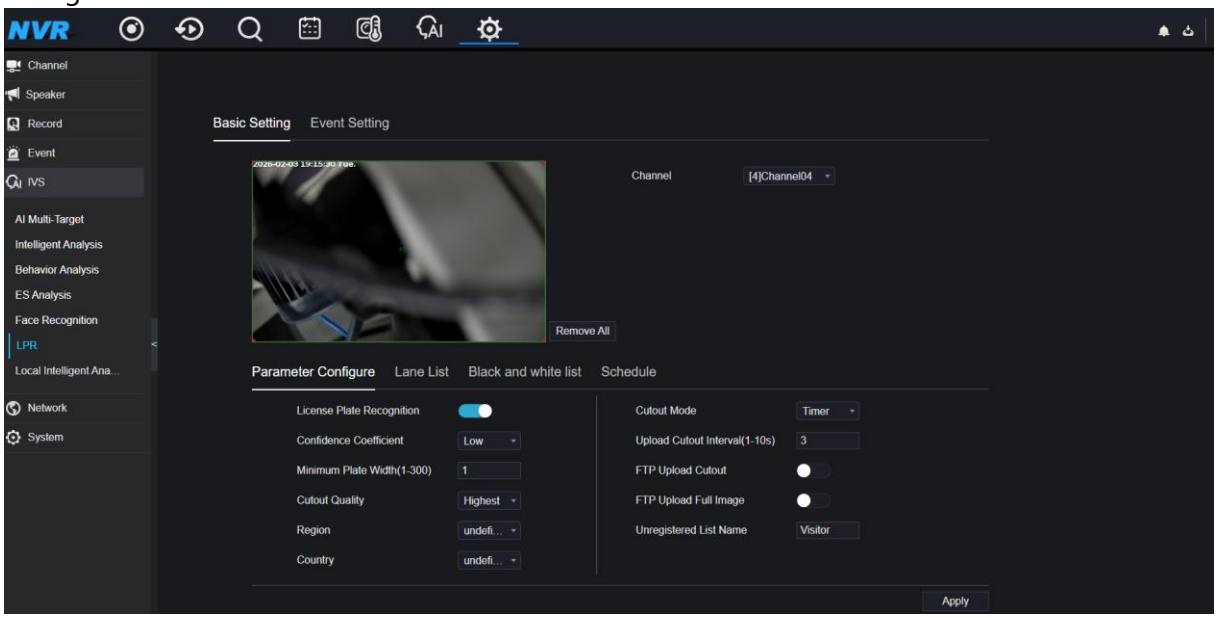
Please note that the alarm from the IP camera's List Event will not be transmitted to the NVR but only displayed on the IP camera's web interface. The NVR's function is to compare the license plate information already identified by the IP camera with the license plates in its own database and to store the comparison results for retrieving.

1. Add the LPR camera to the NVR.
2. Go to Setting > IVS > Local Intelligent Analysis. Set the NVR mode to Recognize mode and select the channel.

   Note: After changing the NVR to Recognize mode, the NVR will reboot by itself. Please wait for it to restart. Only 38 and 39 series NVRs with the '-J' suffix in the model number support Recognize mode.

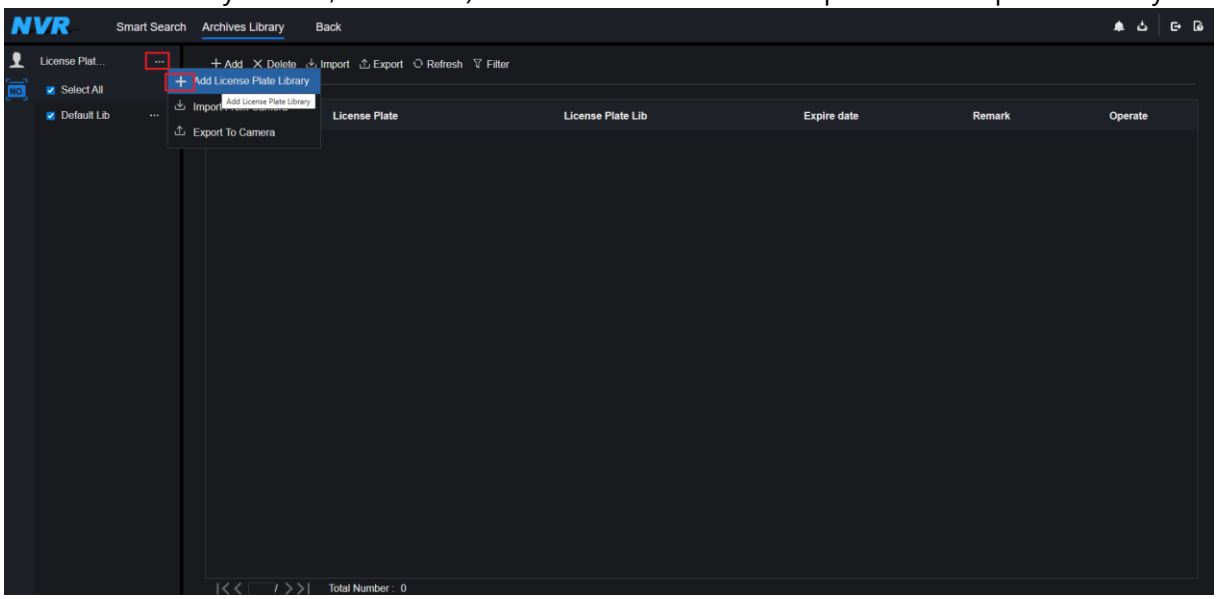


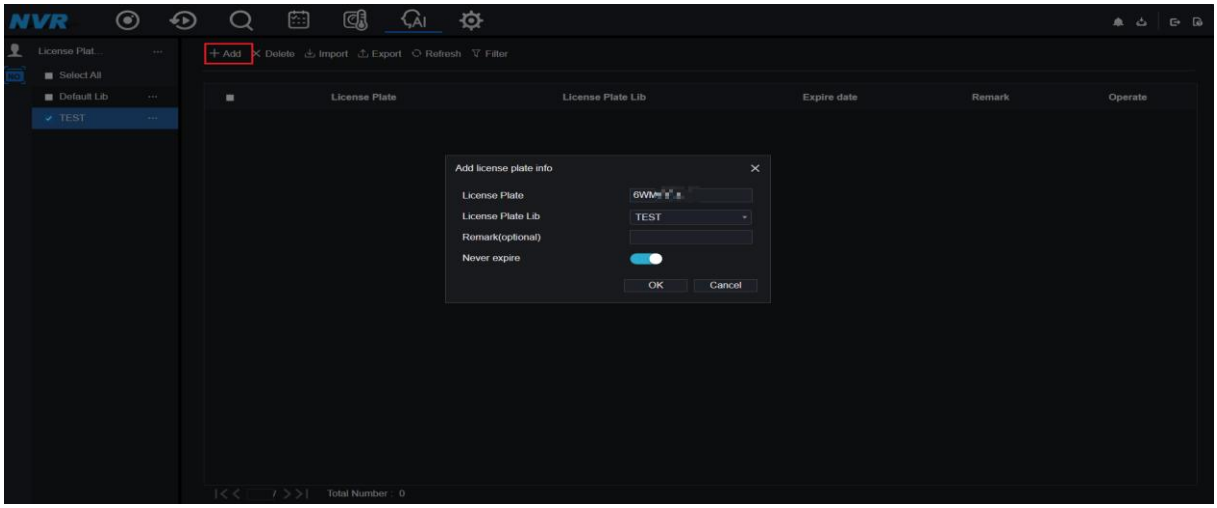
3. Go to Settings > IVS > LPR > Basic Setting to enable the License Plate Recognition on the specific channel. Some settings can be configured here instead of going to the camera side for LPR configuration.



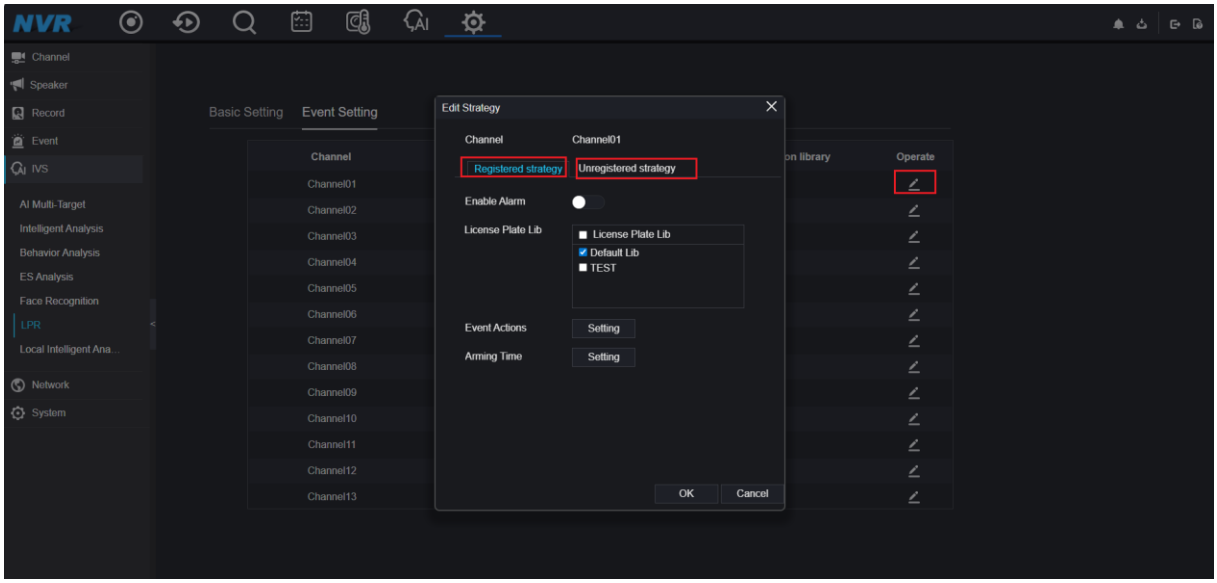
4. Set the license plate library.

   Set from AI Application > Archives Library >  icon. Click '**...**' to add your own library first. (There is a 'Default Lib' by default; it's usable). Click '+Add' to add license plates in the specific Library.

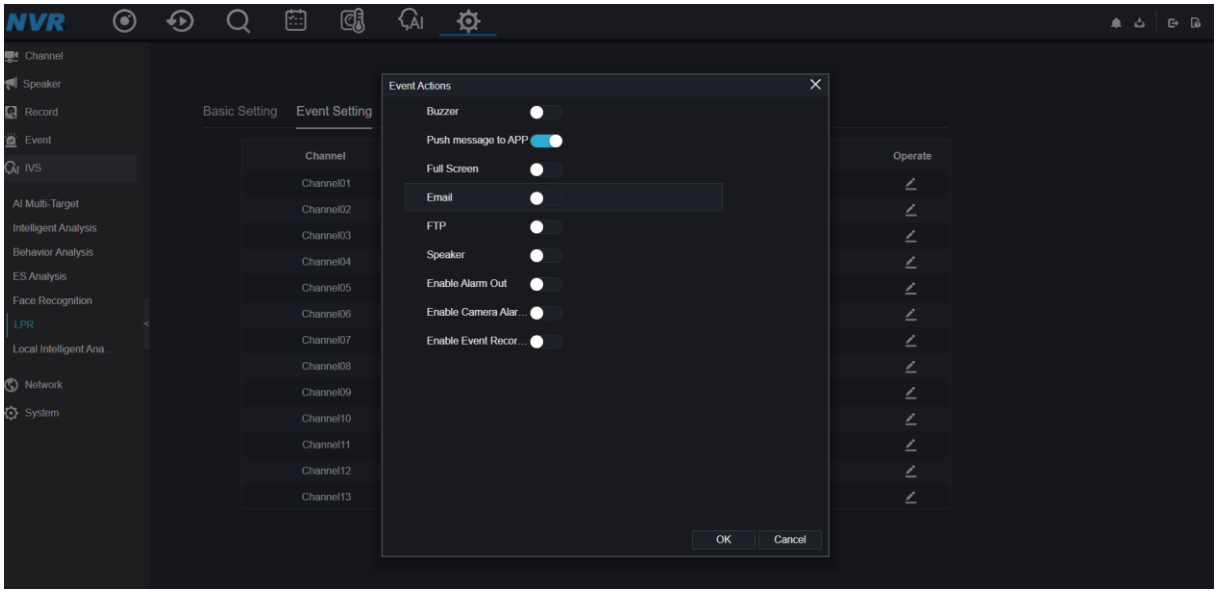




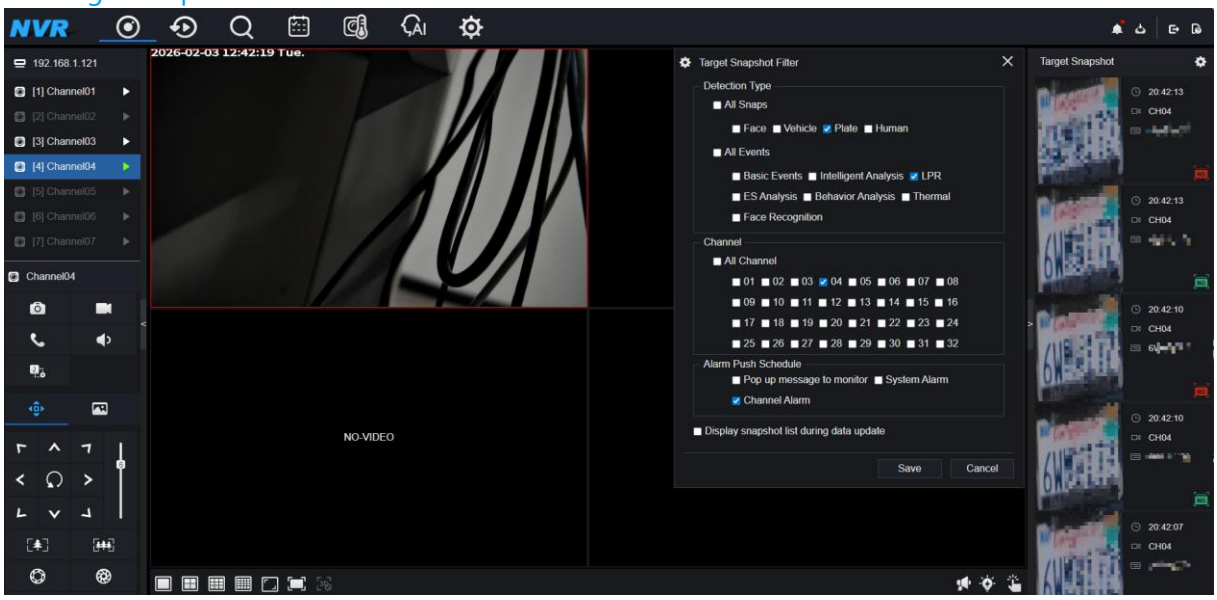
5. Go to Settings > IVS > LPR > Event Setting to configure the license plate detection strategy. Select the target channel and edit its settings. There are two kinds of strategy which are *Registered strategy* and *Unregistered strategy*.



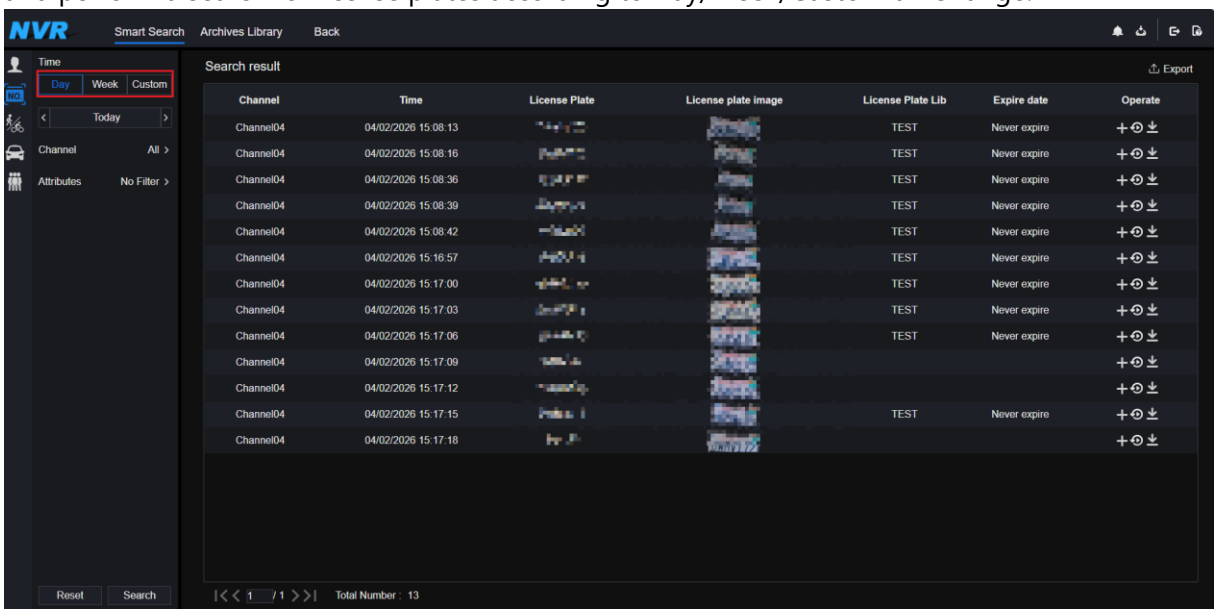
Under each strategy, there are a series of event actions that can be bound to the corresponding event.



6. To observe the real-time comparison result, go to Live View. The real-time result can be displayed on the Target Snapshot section.



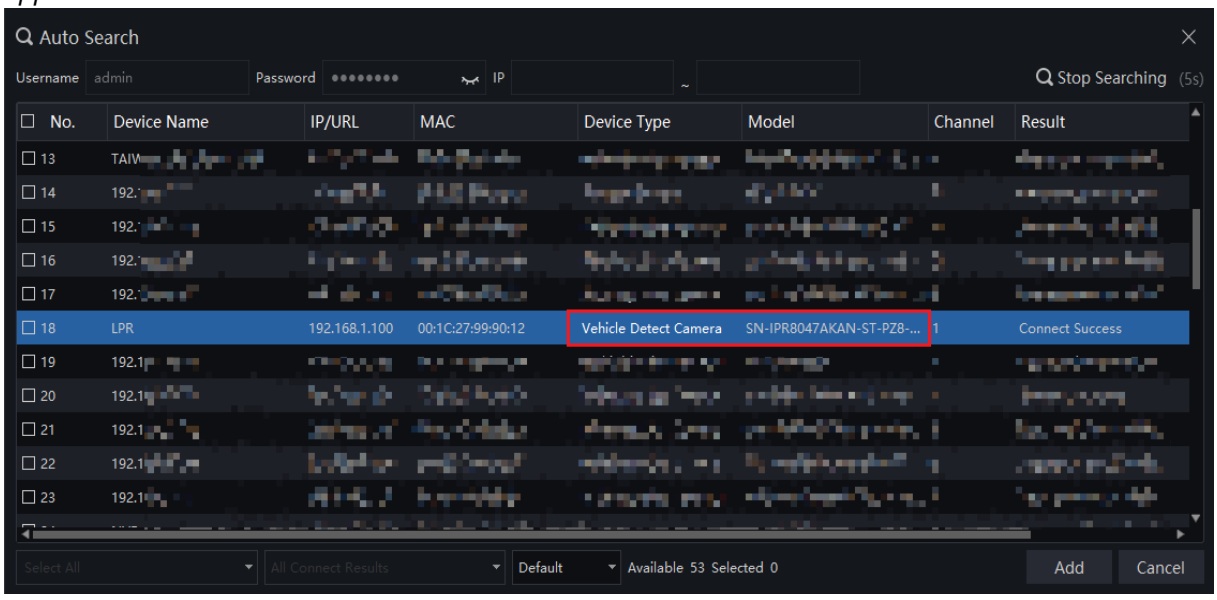
7. Go to Smart Search >  icon to search for the license plate you want. You can select the channel and perform a search for license plates according to Day/Week/Custom time range.



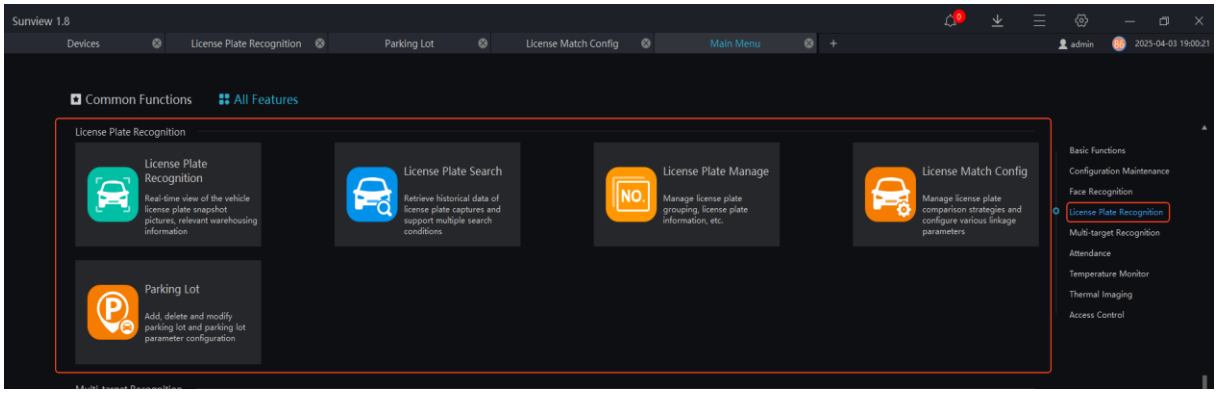
Testing the LPR using the CMS

Only the License Plate Recognition feature on the camera needs to be activated; no additional settings are required on the NVR.

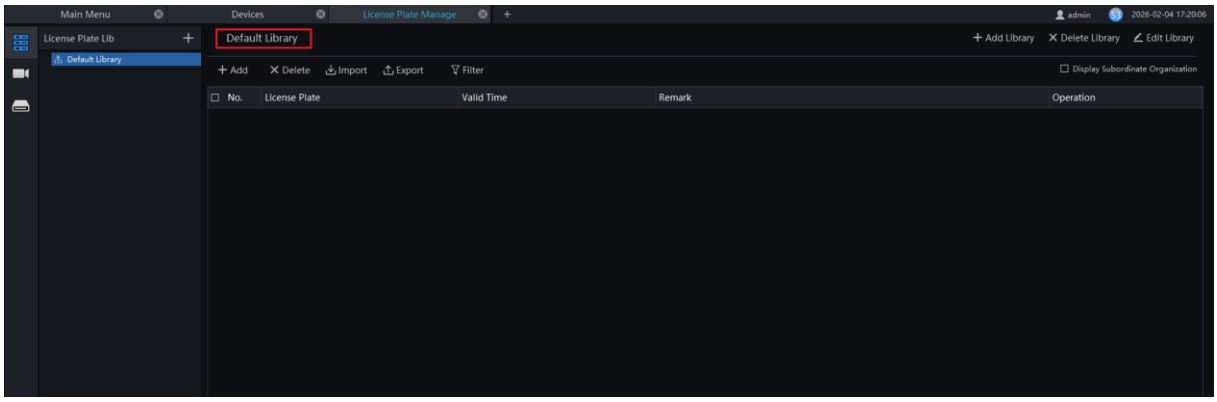
1. Add the LPR camera, or the NVR that has LPR cameras attached to it, to the CMS. Suggest using the Auto Search Function to add it. *Only NVRs within the 38 and 39 series with the '-J' suffix are applicable.*

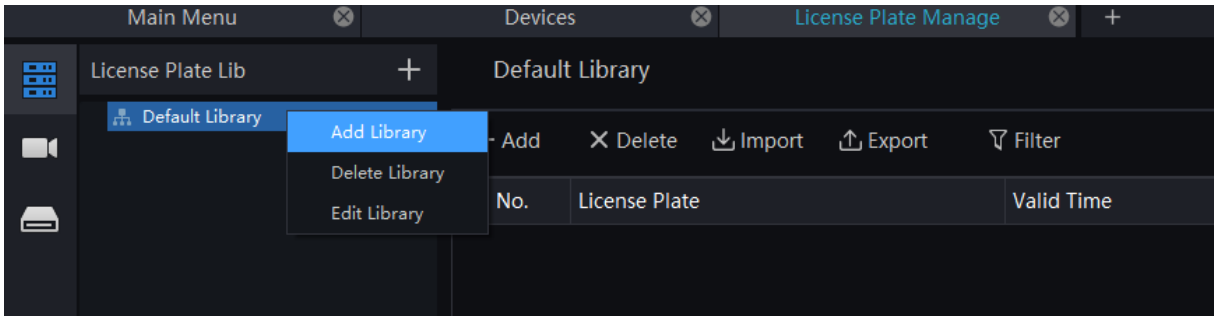


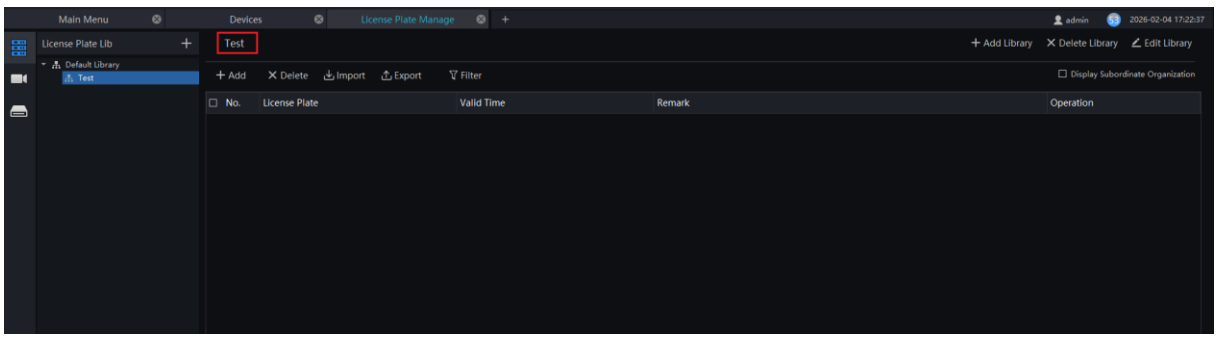
2. Go to the Main menu, choose the License Plate Recognition, then you'll see the related functions on the left side.



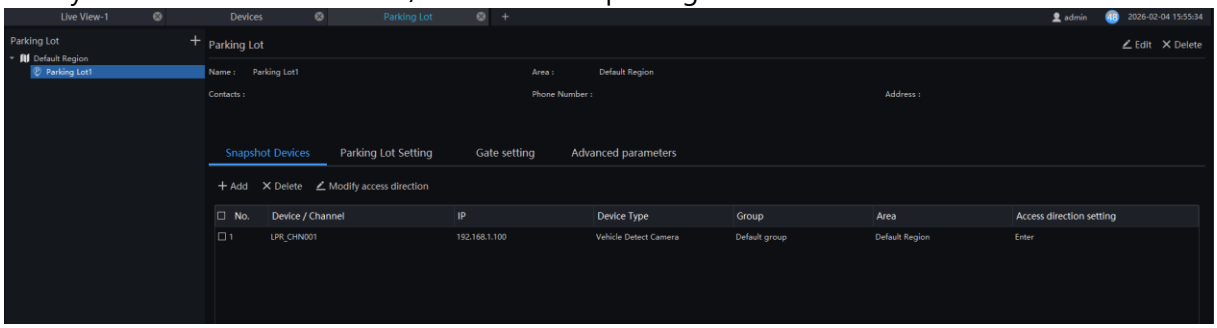
3. Register the plates in the CMS's License Plate Library first. There is a Default Library mode by default; license plates can be added directly in it, or a new sub-library can be created under this default mode.



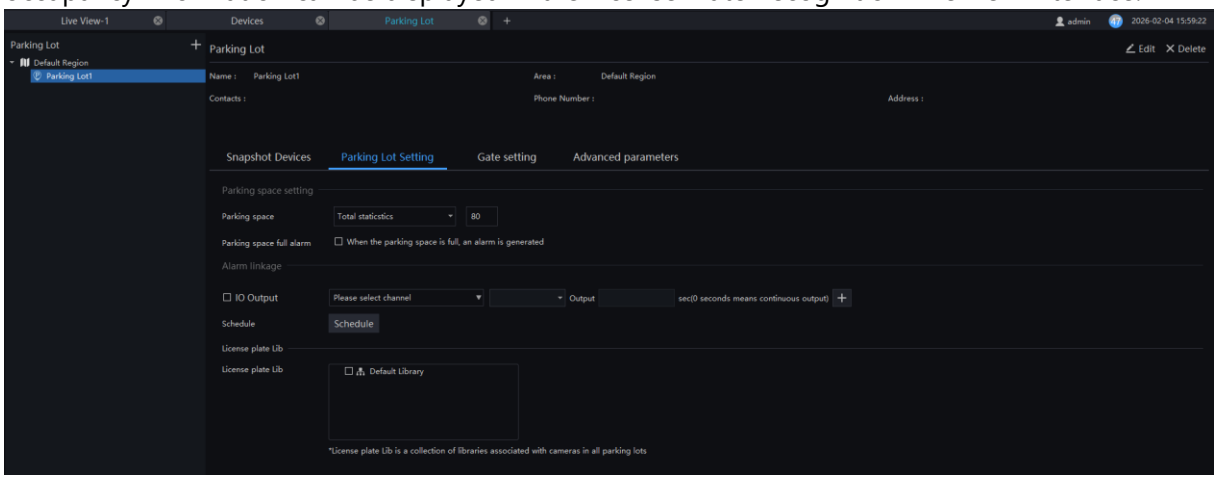




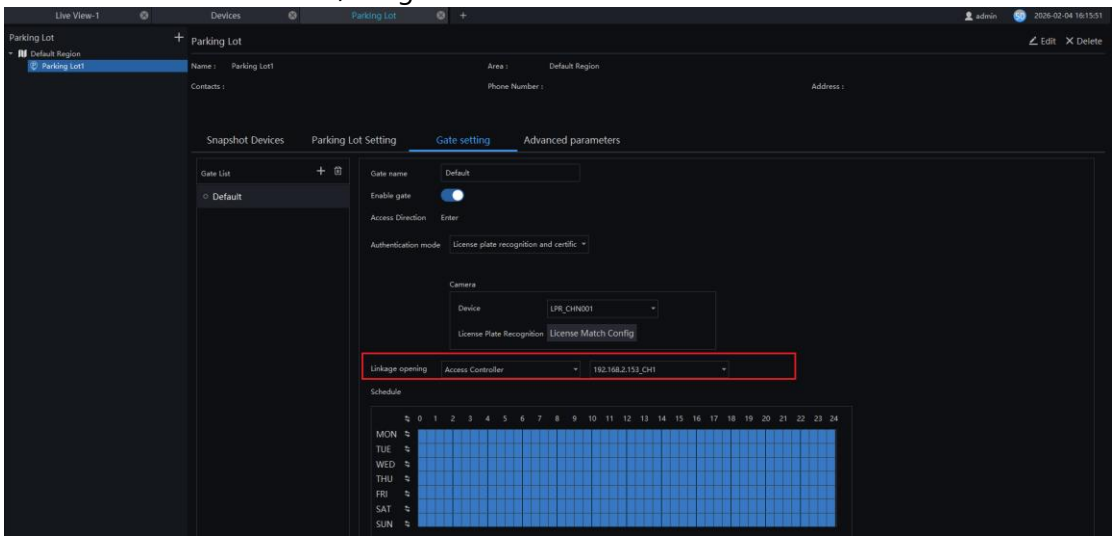
4. Go to the Parking Lot menu to set the parking lot information. (This step is not obligatory to configure; if your scenario only needs observing real-time comparison results on the CMS and retrieving the results, it can be skipped.) At the left side, if you have several parking lots, you can click '+' to add more.
   Here you can add the LPR device/channel to the parking lot and set the Device Direction.



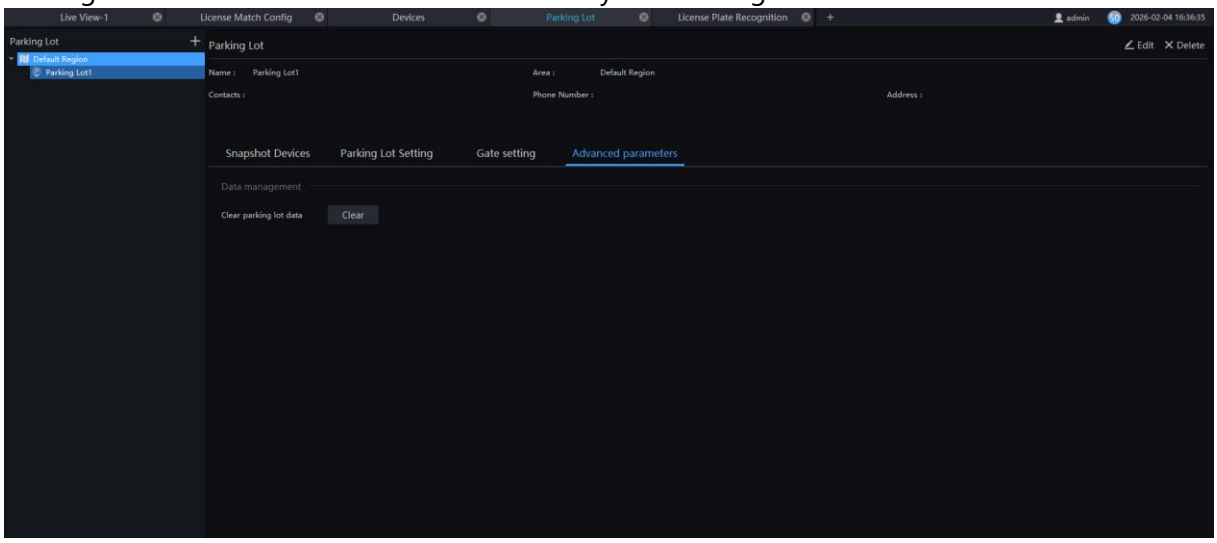
   Here you can set up parking spaces and link alarms to the "space full" condition. The space occupancy information can be displayed In the License Plate Recognition Live view interface.



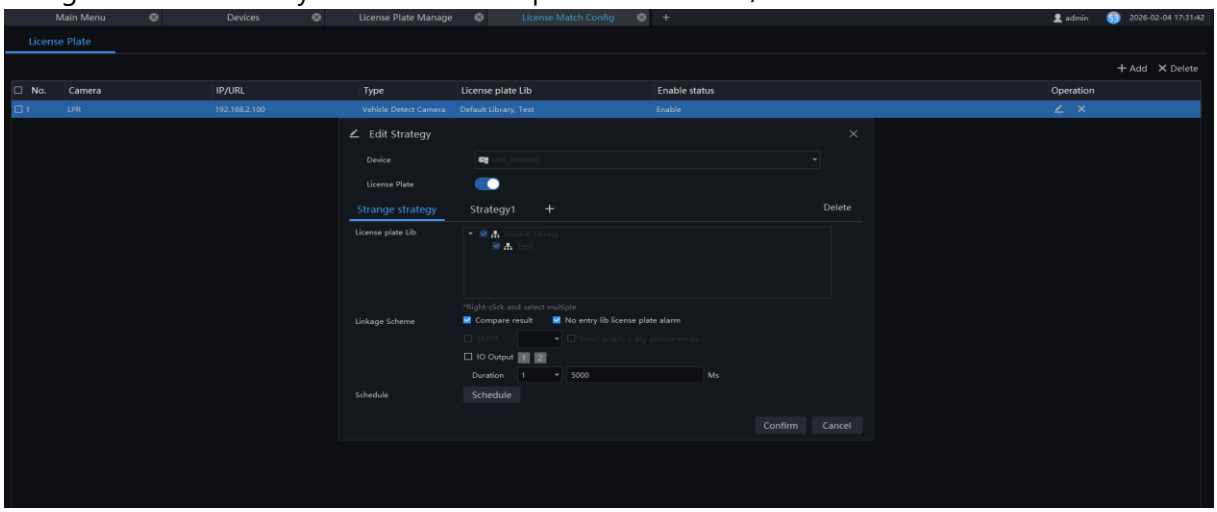
   If there is an access controller in the meantime, then once it detects a license plate, the access controller will send out an I/O signal.



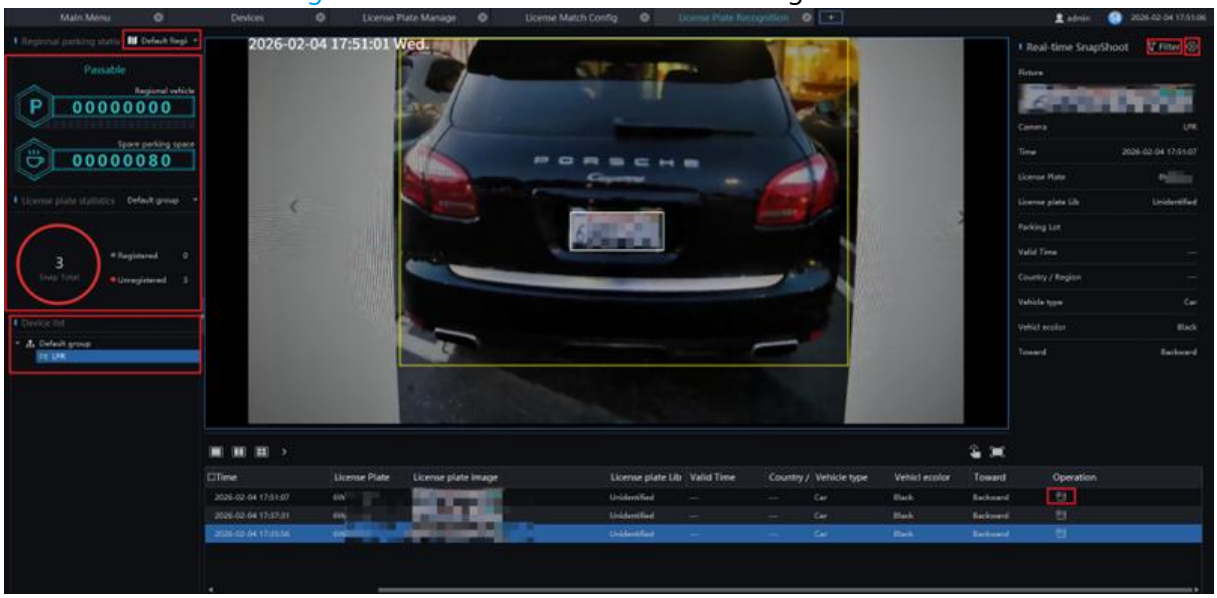
Here is to clearing the parking lot statistical data; the parking space occupancy will be cleared by clicking the “clear” button. It won’t clear the entry and exit log.



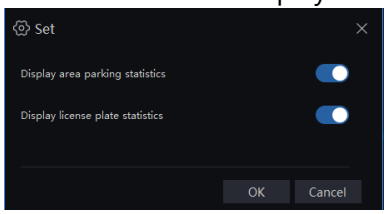
5. Go to License Match Config to manage the *License Plate Strategy*. You can also set an IO Output linkage event based on your need for the specific LPR device/channel.



6. Go to License Plate Recognition to check the License Plate Recognition live view.



- By clicking the  Settings button at the upper-right corner of the interface, you can choose whether to display the area parking statistics and license plate statistics.



- By clicking the  Menu icon at the upper-left corner of the page, you can select which parking lot you want to view.
- By clicking Filter, you can select to display comparison results of which device/channel. Select the device/channel to view its live stream.
- By clicking the button in the operation column, you can quickly add an unregistered license plate to the library.

7. Go to License Plate Search menu to search the license plates. You can define the time zone, device, and the license plate according to your need.