

Wisenet Road AI application USER GUIDE



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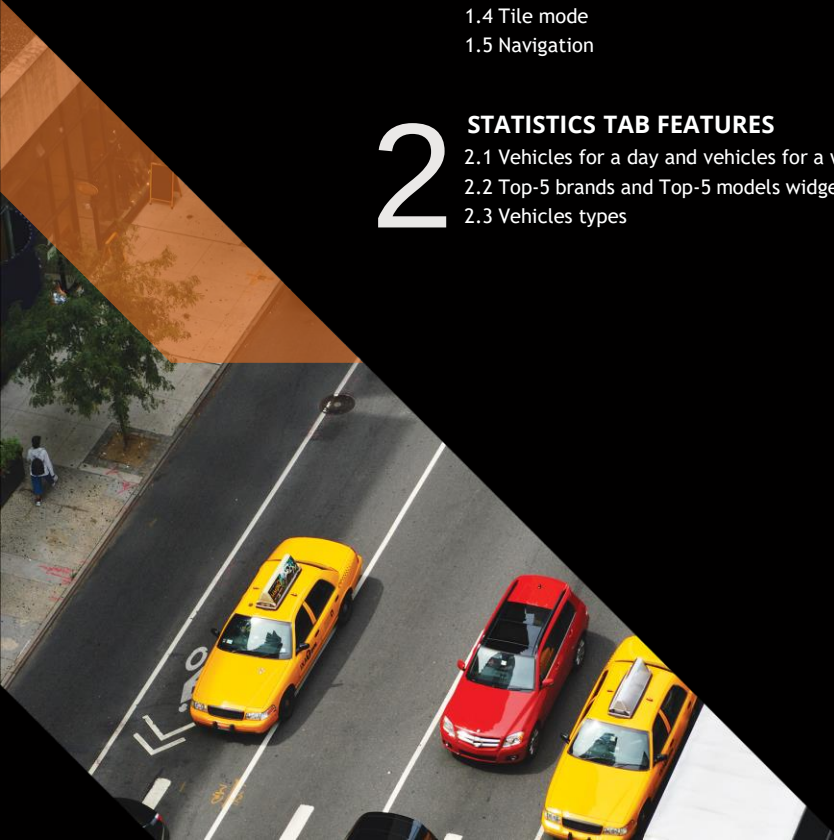
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TROUBLESHOOTING



INTRO

This document contains tips and recommendations on how to use Wisenet Road AI application running on Hanwha AI cameras.

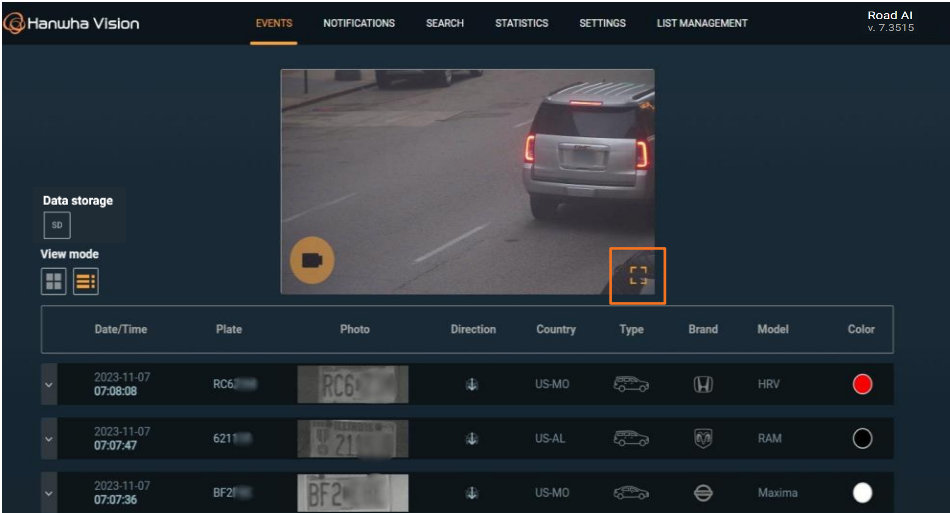
This document describes the following application sections:

- Live view of the recognitions in the **Events** tab.
- Work with the **Notifications**.
- Look for the stored events in the **Search** tab.
- Review historical data in the **Statistics** tab.
- Configure the application in the **Settings** tab.
- Manage the black and white lists in the **List Management** tab.

1

EVENTS TAB FEATURES

1.1 Full Screen Mode / Window Mode

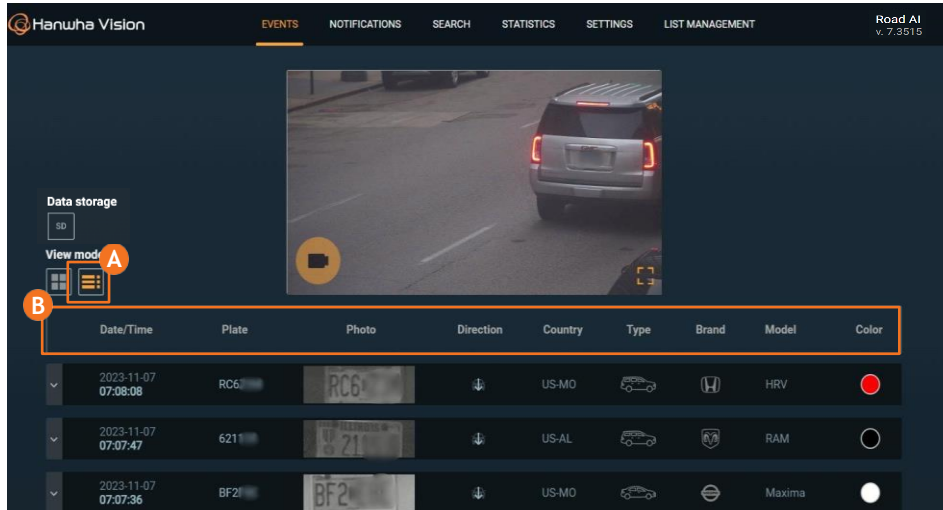


Full-screen mode allows using the entire screen area.

To view the live image from the camera in full screen mode, click the full screen mode icon.

To exit full screen mode, click anywhere on the screen.

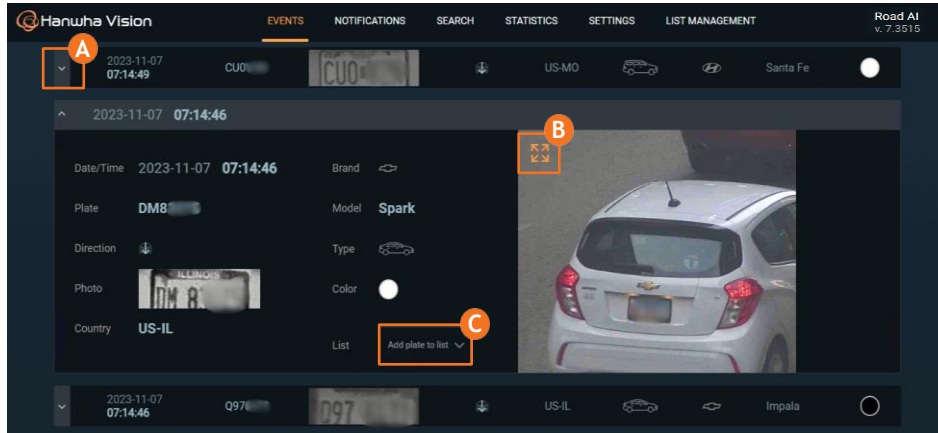
1.2 List Mode



To enable the list display of events, click the **A** corresponding button. Event parameters **B** such as Date/Time, Plate, Photo, Direction, Country, Type, Brand, Model and Color are displayed as a table. The events are displayed in a list from the newest to the oldest.

After hovering the cursor over the **Country**, **Type**, and **Brand** fields, a hint with the field value pops up.

1.3 Preview in the List Mode

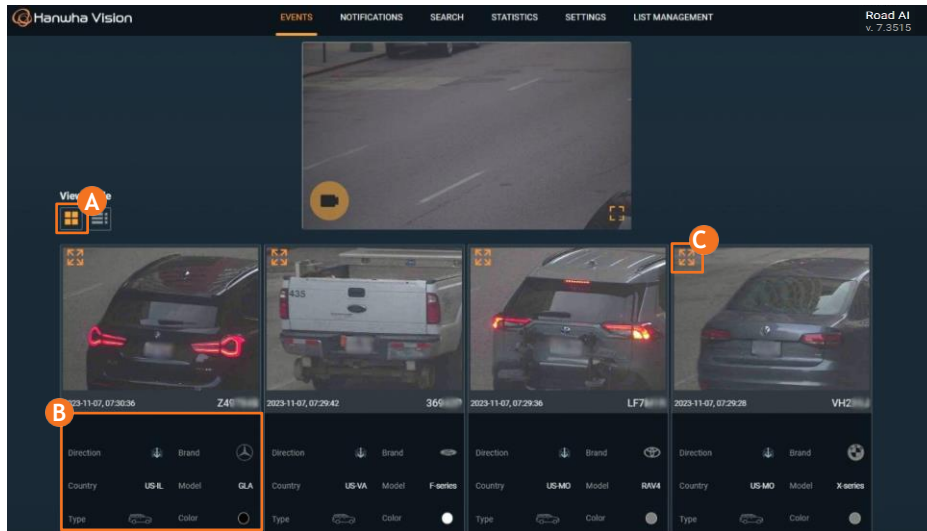


A To display full event data in the List mode, expand the selected event data.

This menu allows viewing images in full screen mode (click the **B** icon in the left upper corner of the preview), and **C** adding or removing the selected plate number to/from the white or black list.

The display of the new events will be paused until the list is collapsed. After collapsing, the list will be updated with the past events. If the list isn't collapsed manually, it will be collapsed and updated automatically in one minute.

1.4 Tile mode



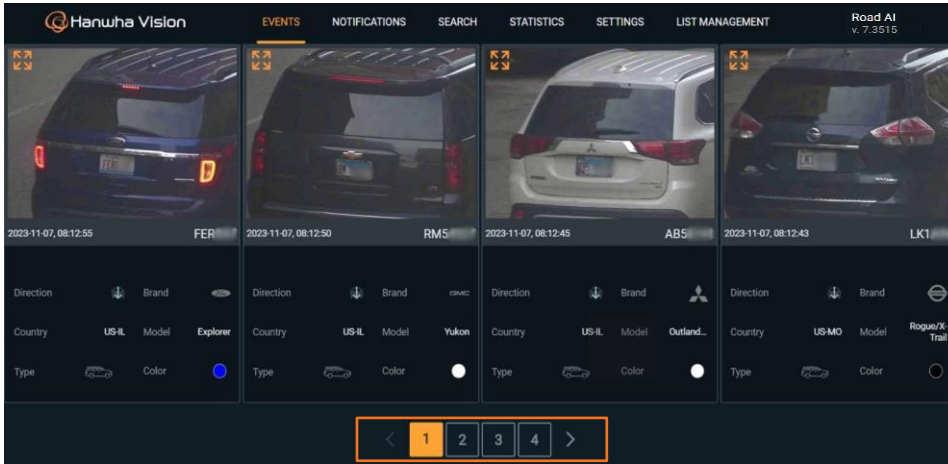
To activate the display of the events as tiles, click **A** button. In this mode events and their parameters (Date/Time, Plate, Direction, Photo, Country, Type, Brand, Model and Color) are displayed in tiles.

After hovering the cursor over the **B** Country, Type and Brand fields, a hint with the field value pops up.

This menu allows **viewing images in full screen mode** (click the **C** icon in the right bottom corner of the preview).

NOTE: *Adding/removing the selected plate number to/from the white or black list is only available in the list mode.*

1.5 Navigation



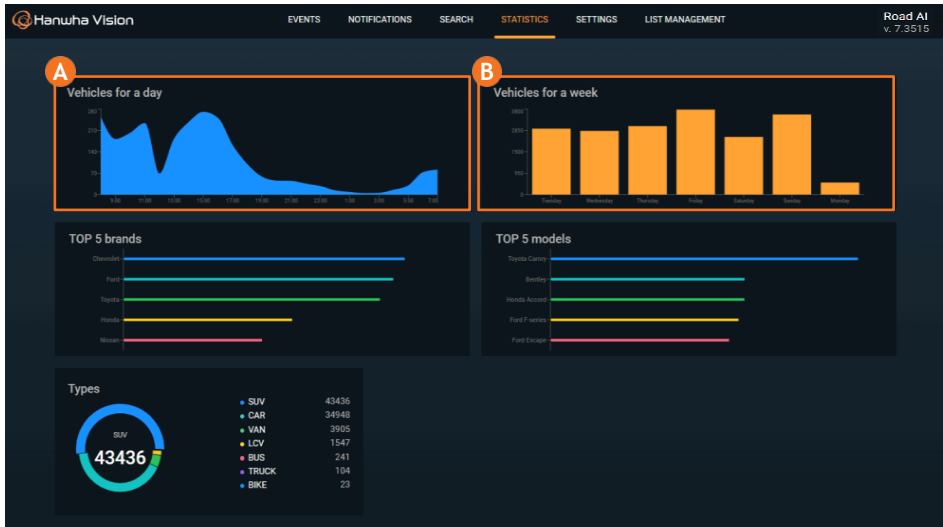
You can navigate through the events tab using left and right arrows or page buttons below the events list.

The events are displayed from the newest ones to the oldest ones.

2

STATISTICS TAB FEATURES

2.1 Vehicles for a day and vehicles for a week widgets



In the **Statistics** tab you can find dashboard with visualized statistics on different parameters.

A The **Vehicles** widget displays the statistics on the number of cars registered for the last 24 hours. Moving the cursor over a certain place on the widget, you can see the number of cars for the specified hour.

B The **Vehicles for a week** widget displays the statistics on the number of cars registered for the last week. Moving the cursor over a certain date on the widget, you can see the number of cars for the specified 24 hours.

Up to 100,000 latest vehicles are taken into account due to the limitation of the database size.

2.2 Top-5 brands, models and vehicle types widgets



A The **Top-5 brands widget** displays the car brands statistics.

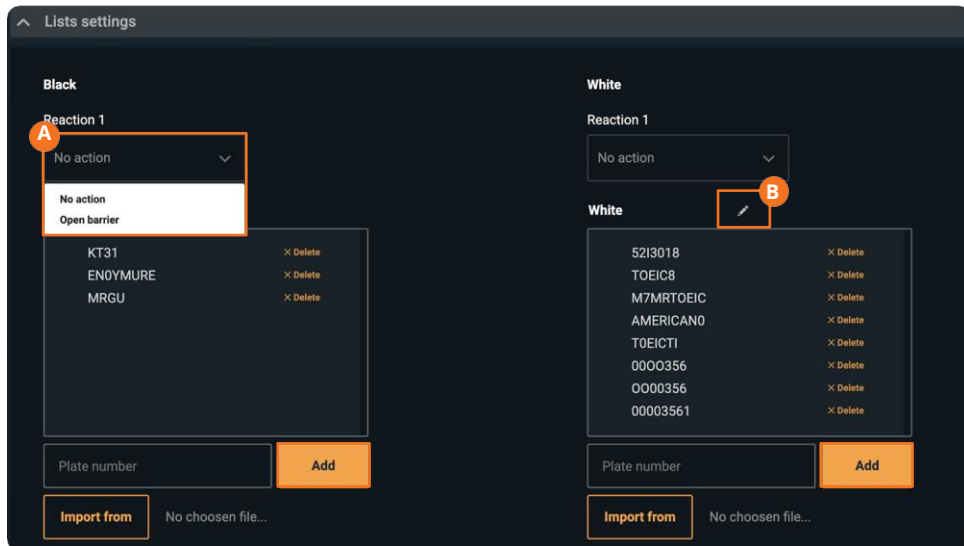
B The **Top-5 models widget** displays the car models statistics.

C The **Types widget** displays the vehicle types statistics.

Up to 100,000 latest vehicles are taken into account due to the limitation of the database size.

3 LIST MANAGEMENT TAB FEATURES

3.1 Black and white list management



In the **List settings** section you can set reactions to events from the white and black list.

A To select a reaction, open the drop-down list. Two options are available: **No action** and **Open barrier**.

Open barrier sets a trigger to open barrier, connected to the camera. (The barrier opening feature may be set up in the firmware UI (Event/Alarm I/O submenu)

You can edit the title of the Black / White list by clicking **B** **Edit** icon on the top of the list.

3 LIST MANAGEMENT TAB FEATURES

3.1 Black and white list management

The screenshot displays the 'Lists settings' interface with two tabs: 'Black' and 'White'. The 'Black' tab is active, showing a 'Reaction 1' dropdown set to 'No action'. Below it is a list of items: KT31, ENOYMURE, and MRGU, each with a 'Delete' button. At the bottom of the 'Black' tab, there is a 'Plate number' input field with an 'Add' button (callout C) and an 'Import from' button (callout D) next to a 'No chosen file...' label. The 'White' tab is also visible, showing a 'Reaction 1' dropdown set to 'No action'. Below it is a list of items: 52I3018, TOEIC8, M7MRTOEIC, AMERICAN0, TOEICTI, 0000356, 0000356, and 0000356, each with a 'Delete' button. At the bottom of the 'White' tab, there is a 'Plate number' input field with an 'Add' button (callout C) and an 'Import from' button (callout D) next to a 'No chosen file...' label. A callout B points to an 'Edit' button (pencil icon) in the 'White' tab.

C To add an item to the list, enter a number and then click the **Add** button. It should contain from 3 to 12 symbols.

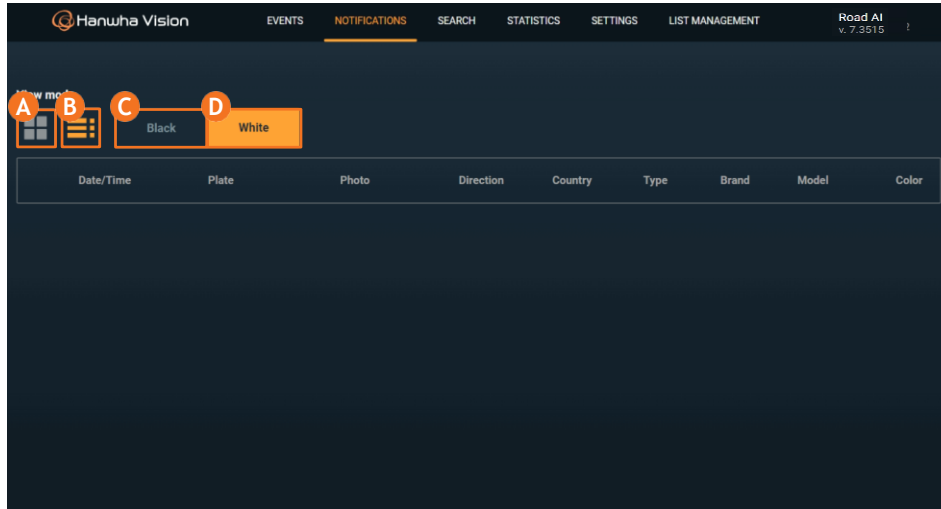
D Import the list in the .csv format. It should have items of 3-12 symbols long, divided only by €, ; or space.

You can also add plate numbers to the white or black list from the expanded List menu in the Events tab.

NOTE: You may add up to 4000 plate numbers per list. Make sure there are no duplicated plate numbers in the imported list.

4 NOTIFICATIONS TAB FEATURES

4.1 Notifications feature



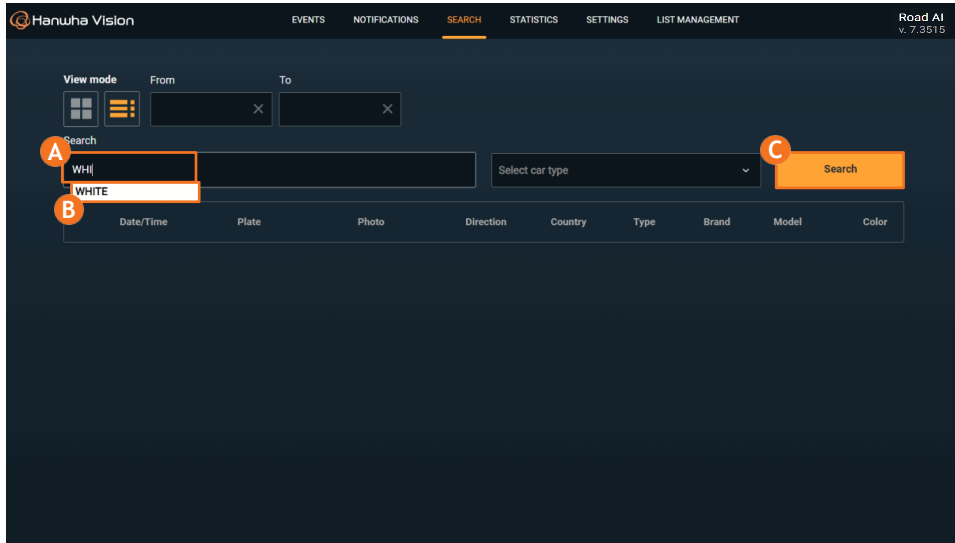
The **Notifications** tab allow you to see the registered license plate numbers that were added either to the white or black list.

You can choose the display mode: Tile mode **A**, List mode **B**, similar to the Events tab.

You can switch between Black and White lists is using corresponding buttons (**C**, **D**).

5 SEARCH TAB FEATURES

5.1 Search by plate and color



The **Search** tab allows searching by plate, country, make, model, color, date, vehicle type and a combination of these criteria.

A To search by **color**, start entering the first letters. **B** Then select the desired color from the list and click **C** Search button.

You can search by partial plate number or any characters present on the plate.

5.2 Search by country, make and model

View mode From To

Search

us

USA

Select car type

Search

Date/Time	Plate	Photo	Direction	Country	Type	Brand	Model	Color
2023-11-07 09:03:45	JD1		↓	US-MO			Equinox	●
2023-11-07 09:03:40	BD1		↓	US-MO			Optima	●
2023-11-07 09:03:25	GJ7		↓	US-MO			Town and Country	●

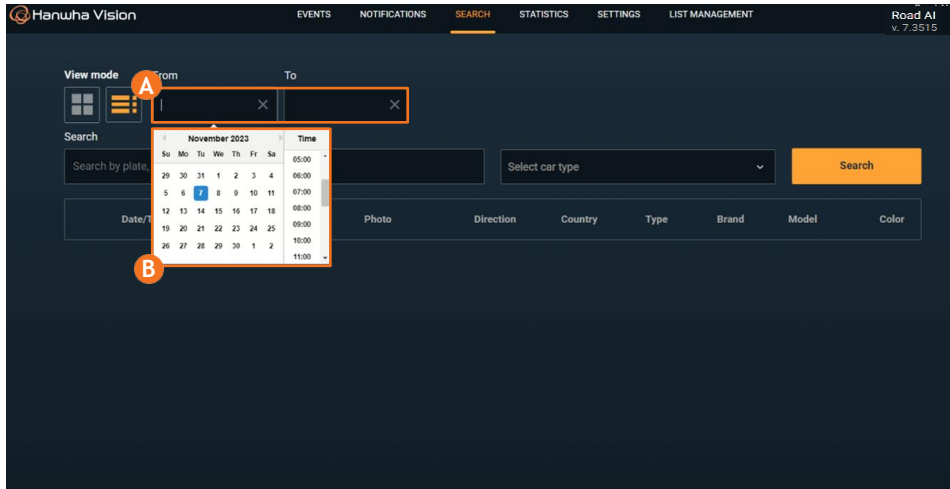
< 1 2 ... 445 446 447 448 >

Export CSV

- A** To search by Country, Brand or Model, start entering the first letters.
- B** After that select the desired country, brand or model from the list and click
- C** Search button.

Search results can be exported by clicking **Export CSV** button.

5.3 Search by date and date range



To search by date, **A** click From or To box and **B** select the start or end date of the search.

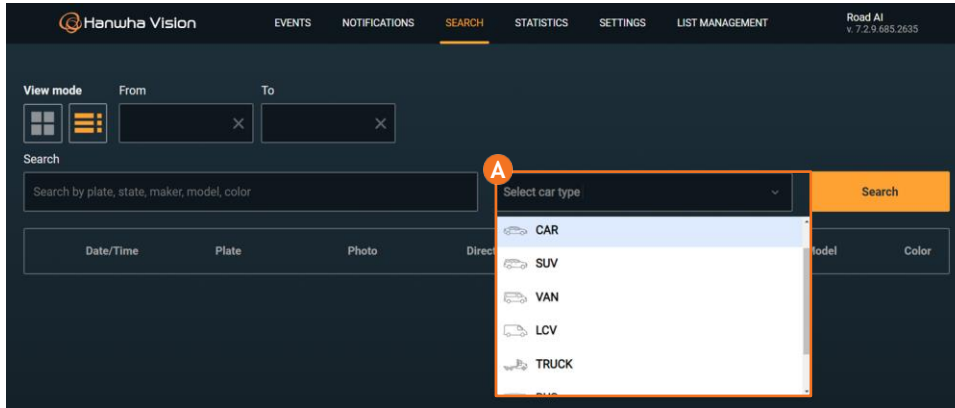
You can search the events within a date range. You can also combine search by date with search by license plate and other parameters.

The depth of the search results database is 100,000 events.

NOTE: In RAM mode, the event images are being stored in the camera memory for the optimized performance, so images for the latest 300~500 events would be available for the review.

We **strongly** recommend integrating with your VMS (Video Management System) to store a complete history of all event images.

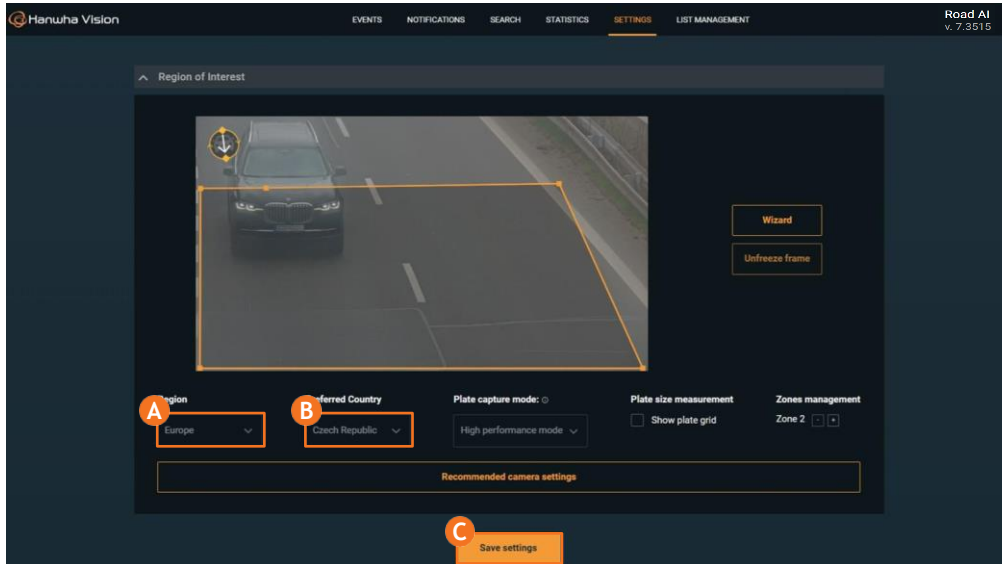
5.4 Search by car type



To search by car type, **A** click the tab to choose vehicle type. You can select multiple types to display results.

6 SETTINGS TAB FEATURES

6.1 Setting up Wisenet Road AI



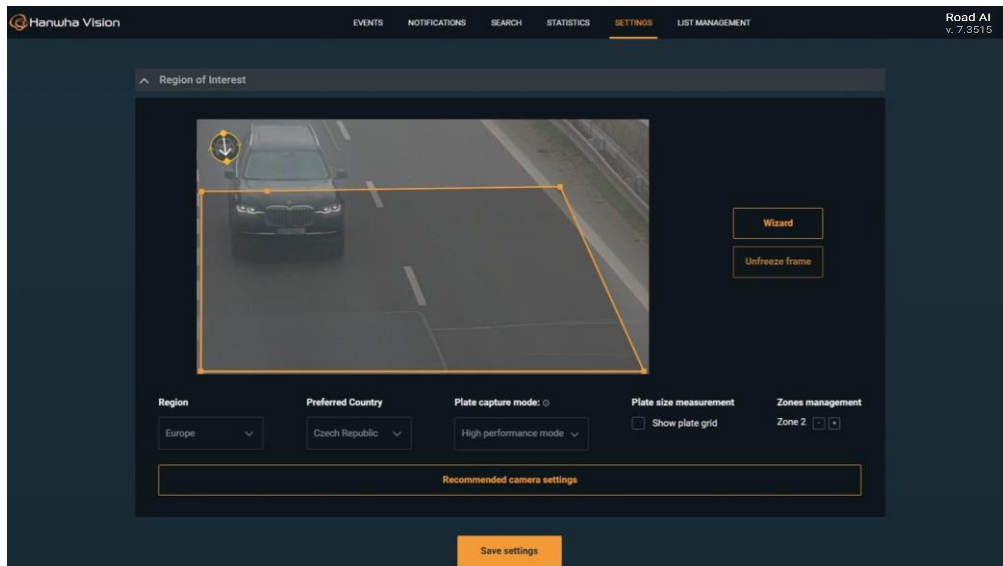
A First, choose the **Region**.

1) Choose the correct region that matches your country/region (Europe is set by default).

For Europe/US region specify **B** the **Preferred country/state** to improve the ANPR accuracy.

1) Save the settings. Click **C** **Save settings**. The application will restart for the selected region to take effect. After clicking Reload, wait for several seconds and reload the browser page.

6.1 Setting up Wisenet Road AI (continued)



Set up the **Region of Interest (ROI)**, a 5-point region that frames the recognition zone.

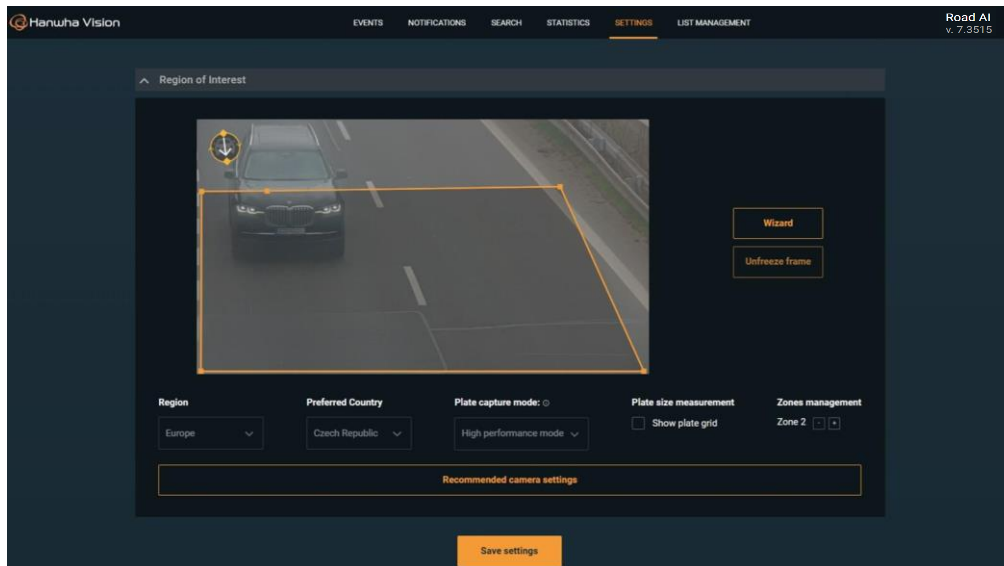
When setting the ROI, follow the principles below:

1) To ensure the vehicle is fully visible during detection and achieve the best MMCR results, leave ample space between the Region of Interest (ROI) and the side where the vehicle enters the camera's field of view.

2) To ensure no vehicles are missed, keep the Region of Interest (ROI) slightly wider than the vehicle's path. This helps guarantee the vehicle fully enters the ROI at some point.

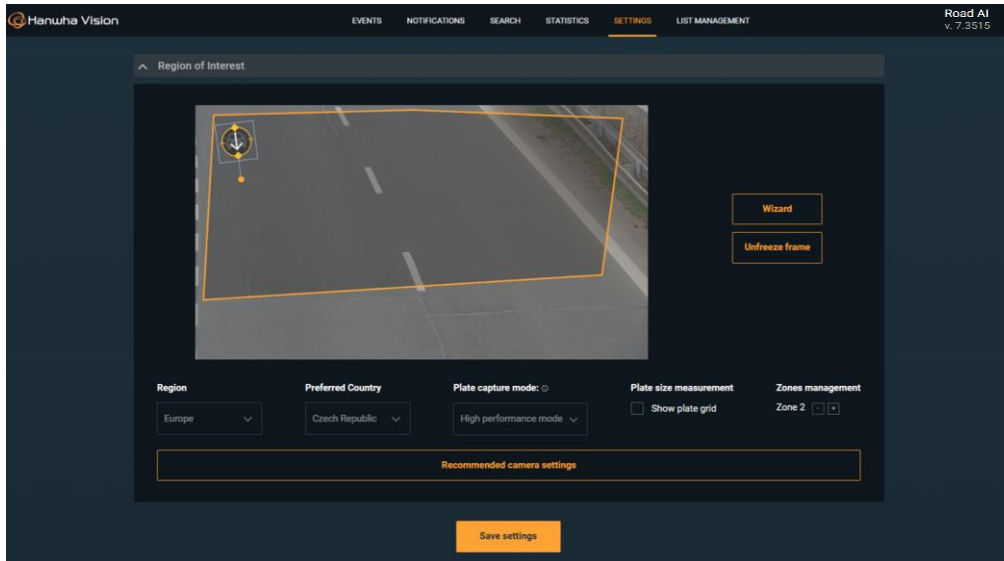
3) To maximize ANPR and MMR performance, set the ROI to cover the longest possible vehicle travel, factoring in point 1.

6.1 Setting up Wisenet Road AI (continued)



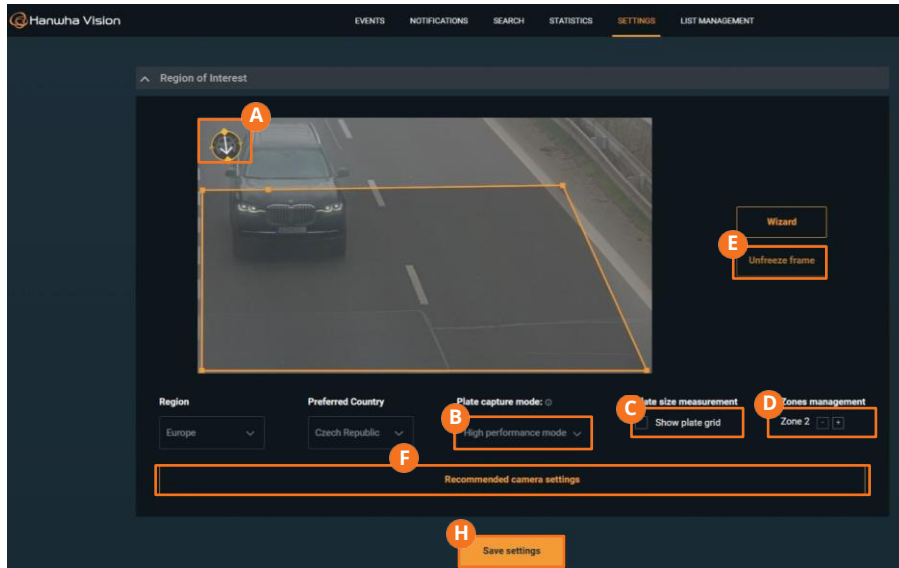
Example of correctly configured Region Of Interest (ROI).

6.1 Setting up Wisenet Road AI (continued)



Example of incorrectly configured Region of Interest (ROI).

6.1 Setting up Wisenet Road AI (continued)



A Set the **vehicle direction**: align the arrow in parallel to the vehicle direction vector, pointing the arrow towards the chosen standard vehicle direction.

B Select the Plate capture mode: **High Performance mode** with Full HD resolution. **Low speed mode** with 4K resolution. Currently in beta, with 4K mode try to keep the license plates wider than 110px to assure the best capture rate.

C Show/hide the Plate size measurement tool.

D Add License Plate Recognition Zone.

E Freeze frame button.

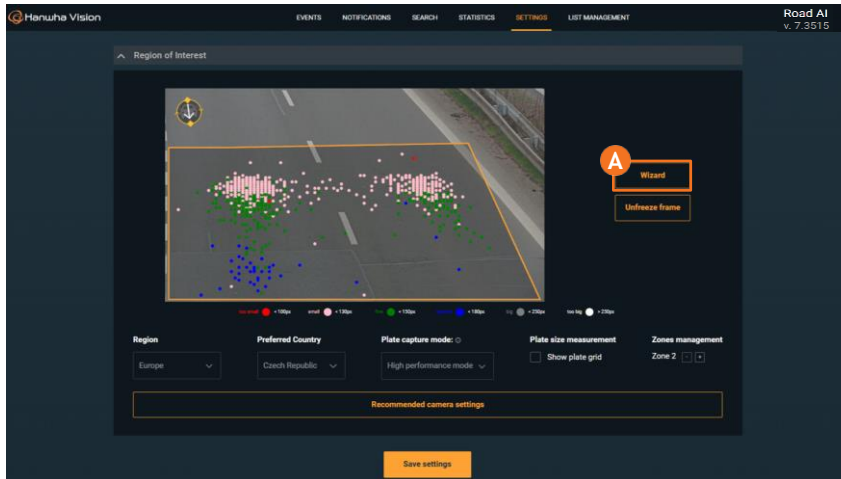
F Apply the **Recommended camera settings**.

H Click **Save settings**.

NOTE: The *Recommended camera settings* are a starting point for the camera setup. Please, adjust the settings up to your installation conditions.

Ensure number plates are clearly visible in both day and night conditions.

6.1 Setting up Wisenet Road AI (continued)



A Wizard tool displays statistics on location and sizes of the latest **1,000** recognized plates.

Use it to adjust the camera zoom and the recognition zone.

Try to keep plates in **green** and **blue** range.

At least **100** plates should be registered to display the data.

6.2 General Settings

General

A Events per page 

16

B Geo Latitude:

0

B Geo Longitude:

0

C Metadata format:

Bestshot ONVIF

D Metadata send mode:

On detect On update On lost

A In the Events settings, you can change the number of events displayed on a page (16 by default).

Changing this parameter will lead to changes in the **Events**, **Notifications** and **Search** tabs.

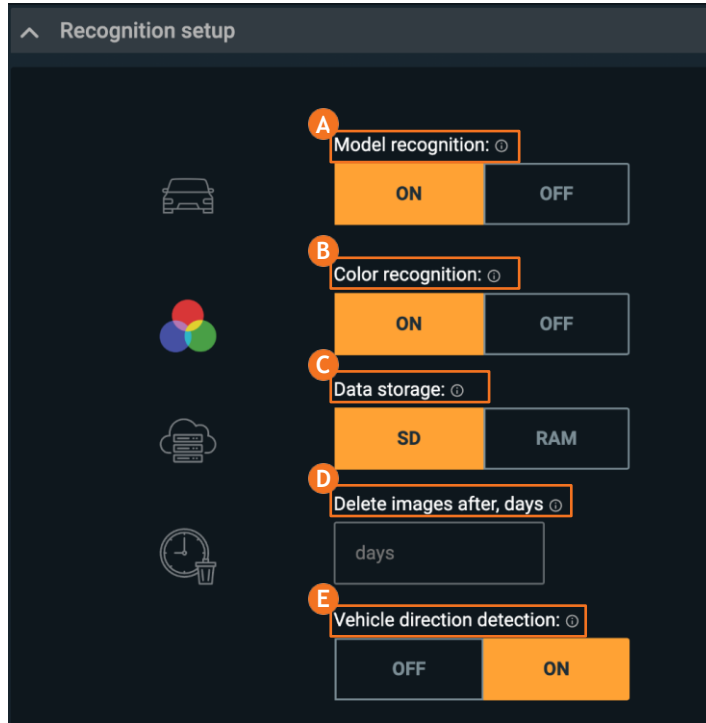
Event quantity per page should be between **8** to **100**.

B You can indicate the camera location coordinates.

C Road AI application always sends metadata when operating. Metadata in Bestshot or ONVIF format is supported.

D You can specify when the metadata is sent (see p.44).

6.3 Recognition Setup



A B You can enable/disable **model recognition** and **color recognition** features in the app.

C Road AI offers two image storage modes:
SD card: A traditional mode where new images overwrite older ones once the card is full.

RAM: Designed for high-traffic installations, this mode stores only the most recent 300-500 event images for review.

To ensure a complete historical record, we recommend integrating with a data management system to store all event images.

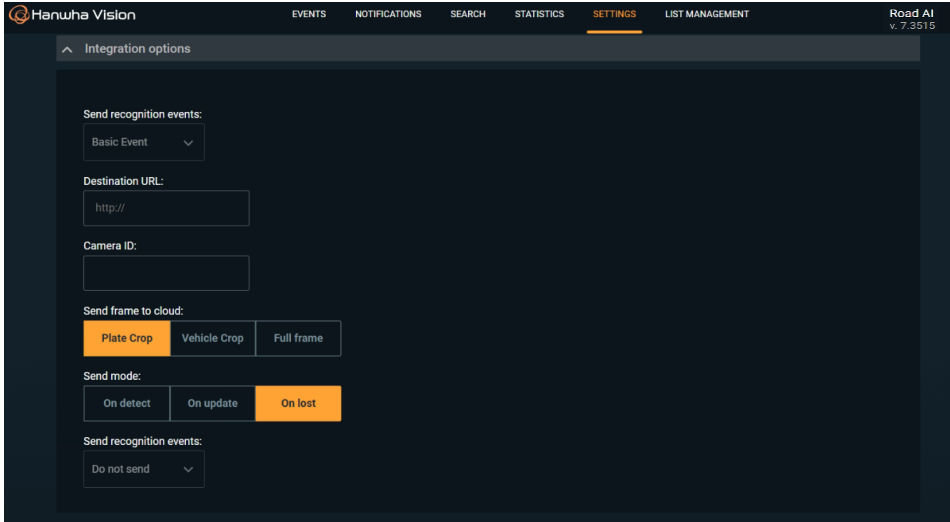
Switching from SD card to RAM mode will make previously stored SD card images inaccessible.

If you switch back to SD card mode, images written during a prior SD card session will become viewable again for events still in the database.

D You can limit on-camera events storage. The events and images will be deleted for those images older than the specified period (in days). To turn off the feature, indicate the 0 value.

E You can turn on/off the vehicle direction display.

6.4 Integration options



The screenshot shows the 'Integration options' section of the Hanuha Vision Road AI v. 7.3516 interface. The interface has a dark theme with a top navigation bar containing links for EVENTS, NOTIFICATIONS, SEARCH, STATISTICS, SETTINGS (highlighted), and LIST MANAGEMENT. The main content area is titled 'Integration options' and contains several configuration fields:

- Send recognition events:** A dropdown menu currently set to 'Basic Event'.
- Destination URL:** A text input field containing 'http://'.
- Camera ID:** An empty text input field.
- Send frame to cloud:** Three buttons: 'Plate Crop' (highlighted in orange), 'Vehicle Crop', and 'Full frame'.
- Send mode:** Three buttons: 'On detect', 'On update', and 'On lost' (highlighted in orange).
- Send recognition events:** A second dropdown menu currently set to 'Do not send'.

In the **Integration options** section, you can set up to two different integrations.

Available options are:
Basic Event (JSON over HTTP)

***NOTE:** Learn more about *On detect*, *On update* and *On lost* settings on p.44.*

6.4 Integration options (continued)

Integration options

Send recognition events:

UTMC 1

URL: Login: Password: Sensor ID:

Send frame to cloud:

Plate Crop Vehicle Crop Full frame

Send mode:

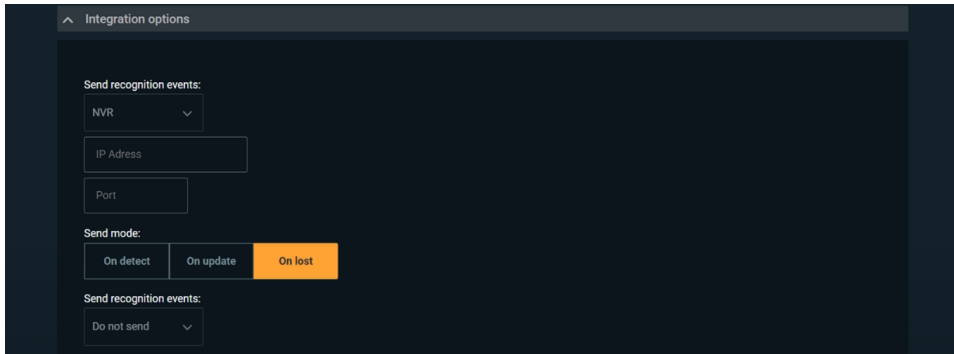
On detect On update On lost

Send recognition events:

Do not send

UTMC 1 and UTMC 2

6.4 Integration options (continued)

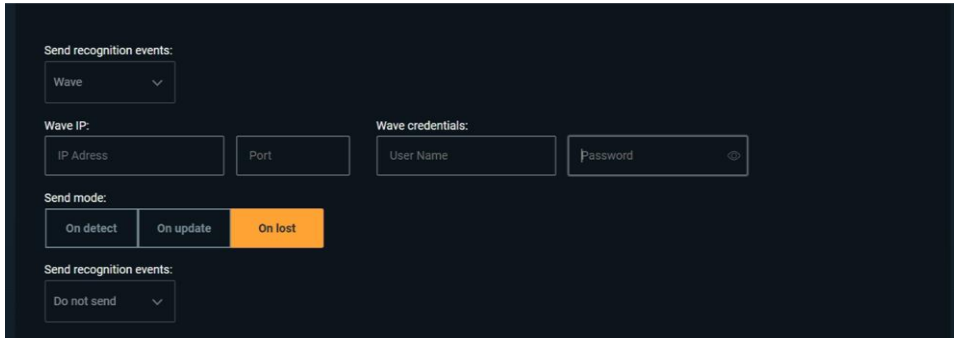


The screenshot shows the 'Integration options' configuration page for NVR integration. It features a dark theme with a sidebar on the left. The main content area has a title bar 'Integration options' with a back arrow. Below the title bar, there are three sections: 'Send recognition events:' with a dropdown menu set to 'NVR', 'IP Address' and 'Port' input fields; 'Send mode:' with three buttons: 'On detect', 'On update', and 'On lost' (the 'On lost' button is highlighted in orange); and 'Send recognition events:' with a dropdown menu set to 'Do not send'.

NVR

On the NVR side, you need to configure the events to be received properly.

Refer to the additional guidelines on page 29 on the supported options and commands.



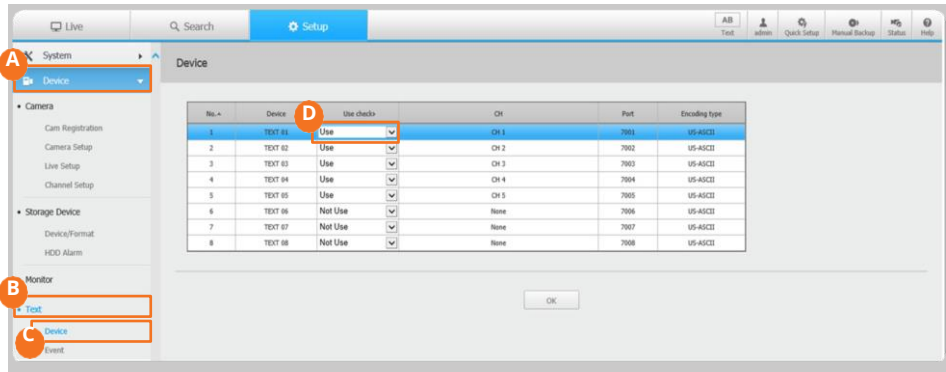
The screenshot shows the 'Integration options' configuration page for WAVE integration. It features a dark theme with a sidebar on the left. The main content area has a title bar 'Integration options' with a back arrow. Below the title bar, there are three sections: 'Send recognition events:' with a dropdown menu set to 'Wave', 'Wave IP:' with 'IP Address' and 'Port' input fields, 'Wave credentials:' with 'User Name' and 'Password' input fields (the 'Password' field has a toggle for visibility), 'Send mode:' with three buttons: 'On detect', 'On update', and 'On lost' (the 'On lost' button is highlighted in orange); and 'Send recognition events:' with a dropdown menu set to 'Do not send'.

WAVE

Configuring this will only provide generic events in your WAVE server. For full integration, including metadata, you'll need to use a WAVE version that supports complete metadata.

NOTE: To ensure the correct integration, fill in all the fields requested for selected option and save the changes.

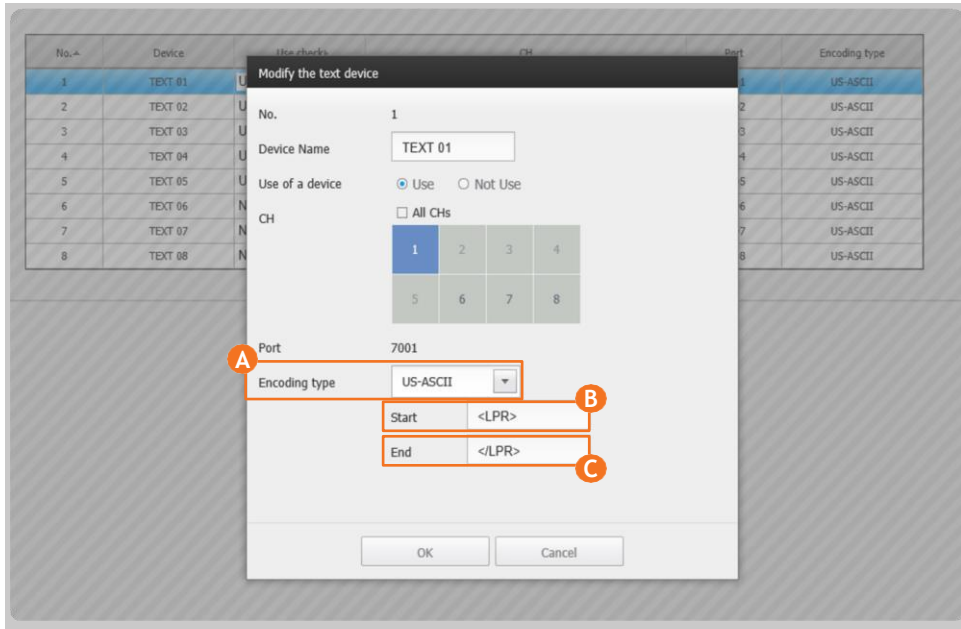
6.4 Integration options (continued)



Check the NVR settings to obtain corresponding Port number in **A** Device; **B**Text ; **C** Device setting (by default port 7001 for CH 1, 7002 for CH 2, etc.)

Set **D** Use per channels as appropriate.

6.4 Integration options (continued)



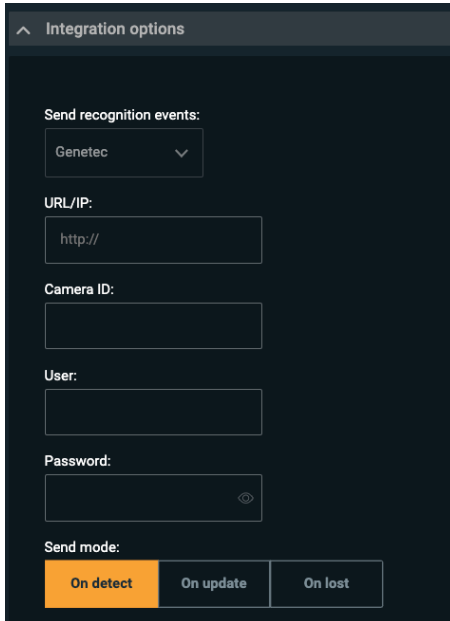
Click the channel row to open channel settings.

Set

- A** Encoding type : **US-ASCII**
- B** Start string : **<LPR>**
- C** End string : **</LPR>**

NOTE: *NVR may not show LPR events if there is no video stream bound to the same channel.*

6.4 Integration options (continued)



The screenshot shows a dark-themed 'Integration options' dialog box. At the top, there is a title bar with an upward arrow and the text 'Integration options'. Below this, the section 'Send recognition events:' contains a dropdown menu with 'Genetec' selected. The 'URL/IP:' field has 'http://' entered. The 'Camera ID:', 'User:', and 'Password:' fields are empty. The 'Send mode:' section at the bottom has three buttons: 'On detect' (highlighted in orange), 'On update', and 'On lost'.

Integration options

Send recognition events:

Genetec

URL/IP:

http://

Camera ID:

User:

Password:

Send mode:

On detect On update On lost

Genetec

Road AI supports integration with Genetec AutoVu plugin.

6.4 Integration options (continued)

Send recognition events:

SIRA ▾

URL: 192.168.1.3:7001 Username: admin Password: ***** Site ID: Site ID

Integrator name: Integrator name Lane name: Lane name Lane type: Entry Exit Camera name: Camera name

Send mode: On detect On update On lost

SIRA*

Send recognition events:

ADMCC ▾

Primary Server URL: 192.168.1.3:7001 Secondary Server URL: Secondary Server URL Client Id: admin Client Secret: *****

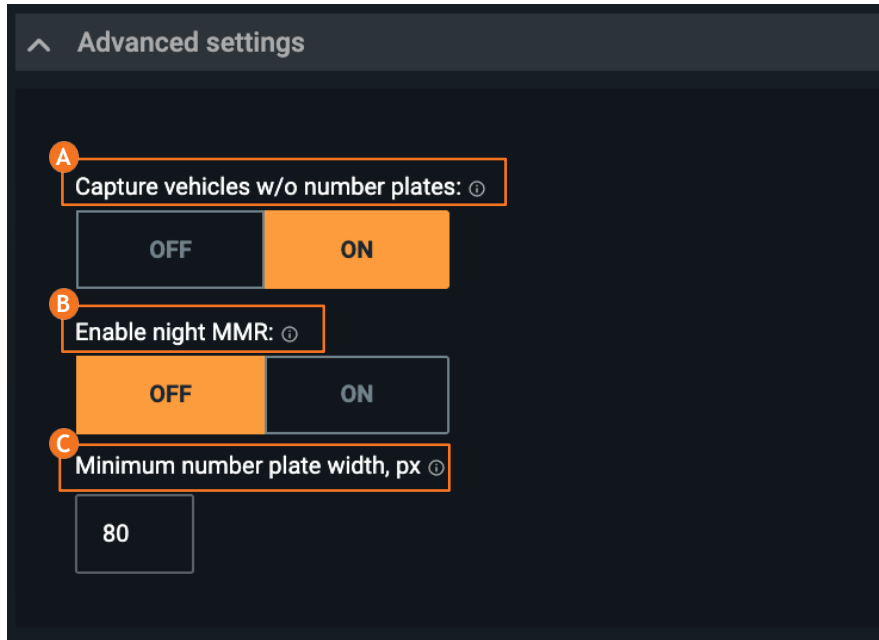
Delivery attempt timer, s: Delivery attempt timer, s ADMCC Name: Name Physical Id: Physical Id

Send mode: On detect On update On lost

ADMCC*

**NOTE: Available only in GCC region.*

6.5 Advanced settings



A You can turn on/off detection of the vehicles without license plates.

B You can turn on/off registering the MMCR results for the nighttime. Note that MMR is not supported for the nighttime, because the results may not be reliable.

C You can adjust the license plate filter indicating the minimum license plate size to be recognized.

6.6 SD card and Backup



A SD card status

B SD card formatting option

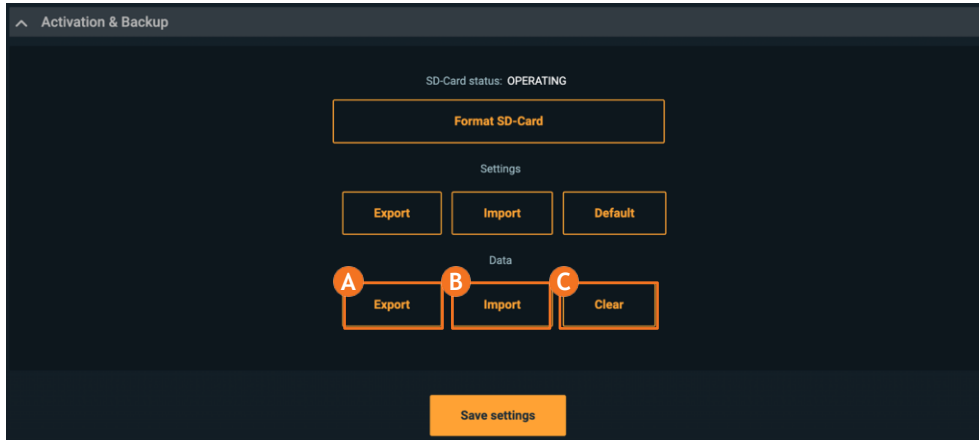
Please keep in mind this will result in losing images in SD storage mode. Perform this action **only if necessary**. Formatting SD-card may take **few minutes** and will force the app to restart automatically.

C **Export/Import*** buttons allow storing current configuration for later re-use.

D You can load default settings. Road AI restarts afterwards.

****NOTE:** When switching from the previous RoadAI generation (builds 3283 and earlier), we recommend to set up the application from scratch. If you still need to use the settings import, follow the instructions on p.45*

6.7 DB Export & Import



Select **A** to export the database (DB) on device.

It is highly recommended to export DB after all of settings have been saved.

Select **B** to import DB and specify the file for importing. Road AI restarts afterwards.

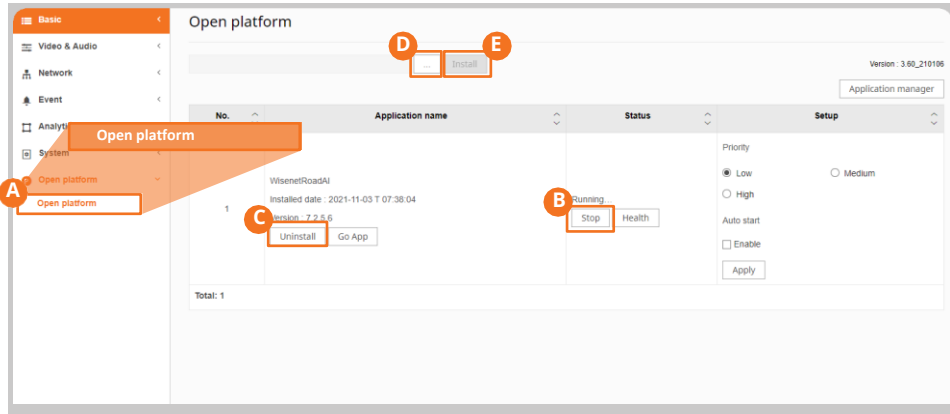
Select **C** to clear DB. Road AI restarts afterwards.

NOTE: Please be aware that database does not contain event images.

Please do not edit the database file manually, as it will become corrupted.

6.8 Updating the App

To update the App, go to the camera web viewer.



Before updating/uninstalling the application make sure to export Database and Settings (see p.35). You may import them to get all the data back into the application.

- A** Go to **Open platform** section in camera web viewer.
- B** Click **Stop** box to stop Wisenet Road AI App
It is very important process to stop App before updating App.
- C** Uninstall the App.
- D** Click “...” box to select App file to update.
- E** Click **Install** box to update the App.

TROUBLESHOOTING

● **How to install the application**

The Wisenet Road AI application comes pre-installed. If you need to manually install or update it, you can download the app from the Hanwha Vision website.

Before upgrading an existing application, we recommend stopping the current app. Always check for compatible firmware versions and upgrade your camera if needed. This application supports the following camera models: PNO-A9081RLP, PNV-A9081RLP, PNB-A9001LP, and PNO-A9311RLP.

Important: New firmware compatibility may take some time to be confirmed. Please do not upgrade your camera's firmware without verifying its compatibility with the Wisenet Road AI application.

● **Application restarts from time to time - is that normal?**

Both your camera and the application are equipped with "watchdog" mechanisms that prevent crashes and stalling by restarting the application. If you experience frequent restarts, please contact support.

To help maintain optimal performance and avoid issues, remember to:

- Disable built-in video analytics on your camera, as they consume resources and can impact the application's performance.
- Check the health of your microSD card.
- Verify that your camera's firmware version is compatible with the application.

● **Do I need a micro SD-card?**

Your camera ships with a pre-installed 32GB microSD card. While license plate events are stored internally, the microSD card is essential for saving images, application logs, and data sent via HTTP(s) integration. If you need to replace it, choose a compatible option: at least 32GB, Class 10, and U3 rated. The camera can also temporarily store a limited number of images in its RAM (see p.24).

TROUBLESHOOTING (CONTINUED)

● I do not see event images in the application

Please check the following:

- Micro SD-card is inserted in the camera
- Micro SD-card status is OPERATING in the Settings tab
- Micro SD-card is class 10 and above

Try to restart the camera to re-initialize the microSD-card if all the above is OK.

● How to obtain logs?

In some cases additional information needed to check the issues with the application. There are two types of logs: 1) in-camera, 2) in-application ones.

In-camera logs are accessible through camera configuration in System>Log section.

In-application logs could be downloaded via your browser by following the addresses below.

Keep in mind that micro SD-card is needed to store and download logs.

TROUBLESHOOTING (CONTINUED)

● How to obtain logs? (continued)

Accessing camera logs:

<http://<CameraIP>/home/setup/opensdk/html/WisenetRoadAI/logs/AppLog.log>

Turning on the app logs Ctrl+Alt+Shift+7

Turning off the app logs Ctrl+Alt+Shift+1

High-level log:

<http://<CameraIP>/home/setup/opensdk/html/WisenetRoadAI/logs/AppErrors.log>

Useful links to check application status:

<http://<CameraIP>/home/setup/opensdk/apps/WisenetRoadAI/AppConfig.json>

The application configuration is stored here

<http://<CameraIP>/stw-cgi/opensdk.cgi?submenu=metaframeschema&action=view>

Check the latest integration event

<http://<CameraIP>/home/setup/opensdk/html/WisenetRoadAI/logs/metadata.log>

Check the latest integration event

<http://<CameraIP>/home/setup/opensdk/html/WisenetRoadAI/logs/schema.log>

Check if integration with VMS (SSM, Milestone, Genetec) is enabled

<http://<CameraIP>/stw-cgi/debugcgi?submenu=data&action=view>

Check internal camera debug information

● How can I delete all Number Plates from the SD Card to have an empty database?

You can format the micro SD-card after removing it from a camera. That will remove stored images without removing the events from the database. Also, you can import an empty database in the Settings tab to clear it.

TROUBLESHOOTING (CONTINUED)

● **How many events can be stored?**

Currently Wisenet Road AI supports 100,000 events on SD card and 500 events in RAM mode. It's possible to increase the number of events by saving on the back-end side through the multiple available integrations.

● **How do I fix bad nighttime recognition?**

1. **Focus Adjustment:** The optimal focus can shift between day and night. The area that's sharply in focus during the day might not be at night. You might even consider creating separate focus configurations for day and night recognition.
2. **Automatic Gain Control (AGC):** If your camera's AGC is set to "Normal" or "High," it can introduce excessive noise into the image, significantly hindering recognition performance. Try adjusting AGC settings to reduce noise.
3. **Shutter Speed:** A slow shutter speed can lead to blurry images, especially with moving vehicles. Ensure your shutter speed is at least 1/700 (or faster) for clearer captures.
4. **IR Illumination:** Improperly configured infrared (IR) power is a frequent cause of issues. If vehicles are too far, the IR might not provide enough illumination. If they're too close, the license plates could be overexposed. Also, remember that plates closer to the frame edges might experience a stronger vignette effect. For longer distances or higher vehicle speeds, consider using an external IR illuminator.
5. **Black and White Mode:** Your camera might not be switching to black and white (B/W) mode at night. If there's enough ambient light, it might stay in color mode, which is poor for reading license plates and renders IR ineffective. Ensure the camera correctly switches to B/W mode for optimal night vision.
6. **At night, the application does not perform make, model, or color recognition.** This is normal. With the assistance of infrared (IR) light, it can only accurately read license plate numbers. While you might occasionally see make and model predictions, they may not be precise due to the challenging low-light conditions

TROUBLESHOOTING (CONTINUED)

● Do I need to activate the application after installation?

You do not need to activate the application in any way - you can install it on any of the supported camera models and use it right away.

Application does not recognize licence plates, vehicle models

● To ensure Wisenet Road AI functions correctly, follow these steps:

1. Install and Configure: Make sure the application is installed according to the official installation guides for a complete setup.
2. Start the Application: It's essential to actually launch the Wisenet Road AI app. If you just open the interface without starting the application, you'll only see a dark screen with the logo. We recommend enabling "Enable Auto Start" in the settings for automatic launch.
3. Verify Application Status: Confirm the application is running in the background.
4. Check Video/Image Requirements: If you're using video previews and not getting recognition, review the specified image requirements.
5. Browser Compatibility: Ensure your web browser is supported by the application.
- 6. Calibrate Plate Recognition: In the Settings tab, use the "Plate Size checker" and "Freeze Frame" tools to validate the plate size, tilt angle, and positioning. Adjust the plate size using your camera's zoom if necessary.

Image requirements

For optimal plate recognition, plates should adhere to the following guidelines:

- Clearly visible and readable by human
- Plate width should be in range of 80-350 pixels on a frame
- Plate tilt angle is less than 15°
- Plate vertical angle is less than 30°, and horizontal angle is less than 45°

Check the Installation Guide for details.

TROUBLESHOOTING (CONTINUED)

● **Recommended browsers**

We recommend using Chrome, Firefox, Safari. Check the details in the Installation Guide, section Camera Settings > Important note on web browsers

● **False recognitions: grass / asphalt / textures detected**

1. Define Region of Interest (ROI): In the Settings tab, configure the Region of Interest to exclude unnecessary background textures. This helps the system focus only on the area where license plates appear.
2. Adjust Camera Focus: Use your camera's manual focus settings to ensure a sharp image of license plates within their appearance zone.

● **False recognition: low picture quality**

Try improving picture quality through camera settings: sharpness, focus, exposure

● **False recognition: small objects detected**

Change Region of Interest in the Settings tab to avoid detecting small plates. Use zoom or in-app resolution to adjust.

● **Can't see video in browser**

1. Browser Compatibility (Local Network): If you're on the same network as the camera, make sure you're using a supported web browser to view the feed.
2. Remote Video Viewing: To view video from a remote network, you'll need to forward Port 6162 from the camera through your router

● **Recommended Settings do not apply**

Some of the camera settings are interconnected. Try to reset Video settings to default and use Recommended Settings button, or just follow the Installation Guide to set the camera manually.

TROUBLESHOOTING (CONTINUED)

● **Region selection, resolution selection does not apply**

When you change the region or resolution, these updates will first appear in the application's graphical user interface (GUI). To fully apply these changes, you'll need to restart the application from the Open Platform section within your camera settings

● **How can I integrate with Milestone/Genetec**

You can easily obtain vehicle recognition events from Wisenet Road AI by using Hanwha Vision AI plugins for your VMS. The Wisenet Road AI application requires no further setup.

● **What happens if I reset the camera**

If you reset your camera, you can prevent losing your application setup and data by keeping the Network & Open Platform parameters. If these parameters aren't kept, the application will be deleted. Any event images will still be on the SD card, but you'll have to remove the card from the camera to access them

● **We strongly recommend exporting application settings and the database in the Settings tab prior reset or application reinstallation/update.**

If you hard reset the camera through the physical reset button, you have to re-install the application.

● **Does Make, Model, Colour Recognition AI engine support front and back of vehicle?**

For the most accurate results, we recommend using the front of the vehicle, though both front and back are supported. Please note that our AI engine will be continuously improved and updated.

TROUBLESHOOTING (CONTINUED)

● What is On detect, On update, and On lost

Wisenet Road AI continuously refines vehicle recognition as it tracks a vehicle's path over time. This process involves multiple recognition cycles to improve the accuracy of license plate readings. There are three key milestones in how Wisenet Road AI tracks and refines vehicle recognition:

1. New: This is the first detected event when a vehicle enters the camera's view.
2. Update: This event is triggered when the system refines crucial information such as the country, license plate text, or vehicle direction after the initial detection.
3. Lost: This marks the last detected event for a specific vehicle as it leaves the camera's view.

Wisenet Road AI continuously refines recognition results throughout each cycle.

On detect: Sends only new recognition events.

On update: Sends both new and updated recognition events.

On lost: Sends only the latest registered event (either an update or a new event if no updates occurred).

For the fastest results, use "On detect." For the most refined results, "On lost" is your best option

TROUBLESHOOTING (CONTINUED)

● What happens if camera is reset?

Your camera comes with the Wisenet Road AI application pre-installed, but it might need an update. You can find the latest download on the Hanwha Vision website, specific to your product. To protect your data and ensure you have the current app version during a reset, we recommend:

- Enabling 'Keep Network & Open Platform parameters'.
- Exporting your application settings and database from the 'About' tab within the Wisenet Road AI app before any reset, reinstallation, or update.

● I am switching multiple cameras from the previous generation RoadAI and I don't want to set up applications manually.

To use the Settings import functionality when switching from the previous generation RoadAI, perform the following:

- 1) Export settings.json
- 2) In the file, find the line "LIBRARY_ACTIVATION_KEY": "ACTIVATION_KEY",
- 3) Substitute the ACTIVATION_KEY with the following key
69E0B6DCAE10198A99A4B8AD31881C34696C2441D735E4EF431497ADDBBE40D65E03B6E6B6CF8A0A6FC61069C0ADBC8C3
C5127DE1DD4E9D4
- 1) Import the settings.

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