CARMEN® GO

PLUG & PLAY
STREAM-TO-LPR SERVICE

USER MANUAL

WWW.ARH.HU

CARMEN® GO USER MANUAL

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ABOUT CARMEN® GO

CARMEN® GO is a camera independent, plug-and-play ANPR service which recognizes license plates from live or recorded video streams. Setup is easy: it only takes a few minutes to create your own ANPR solution without any ANPR system integration skills. CARMEN® GO works fully automatically, as it has a self-optimized operation for the best ANPR results. The streams are processed automatically, so there is no need for image preselection. Up to 8 parallel streams can be processed at the same time.

It has a user-friendly web interface where the basic input (camera or video stream) and output settings of CARMEN® GO can be done.

CARMEN® GO USER MANUAL

INSTALLING CARMEN® GO

1. HARDWARE INSTALLATION

1. Connect the USB NNC dongle to one of the USB 2.0 (or higher) ports of the computer.
2. The dongle will only be detected and recognized once the software package has been installed.

2. SOFTWARE INSTALLATION

1. Download link for the CARMEN® GO Installation Package is distributed via the ARH Technical Support System (ATSS). The link is sent out automatically once your order is processed. If you did not receive a download link, please contact your sales account manager.
2. Before installing CARMEN® GO, uninstall any previous versions of CARMEN®ANPR from your system (if applicable) and reboot the computer.

> **! Important**
>
> When you are installing a new version of CARMEN®GO and uninstall previous version, you may receive a warning window that older version is still exist on your computer and installing is not possible due to that reason. In this case, please contact with our support team on atsshelp@arh.hu for and ask a GX CLEAN UTILITY software!

3. Install "CARMENGoInstaller_x64_x.x.xx.msi"

   The installer contains the following mandatory elements:
   IT IS RECOMMENDED TO INSTALL ALL COMPONENTS!
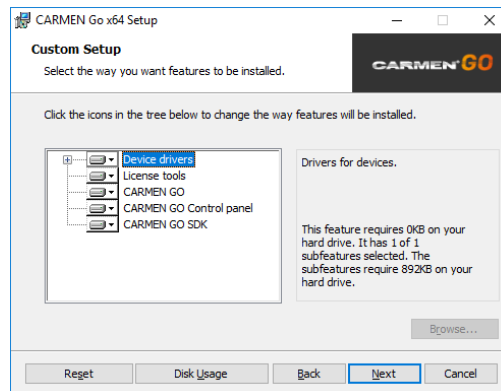
4. During installation the software will check the Hardware key, so it is recommended to connect it in advance.

5. Follow the installation steps and accept the END-USER LICENSE AGREEMENT by clicking on "I AGREE".

6. Restart your computer to complete installation.

7. CARMEN® GO and Control Panel are now installed on your computer and ready to use.

> **Note**
>
> Please install corresponding regional engine at the end of the process, as Carmen® GO comes with a general engine preinstalled without country recognition.

> **Note**
>
> If any error occurs during use, run "CARMENGoInstaller_x64_x.x.xx.msi" file and select "Repair" button to fix any issue.

3. LICENSE FILE INSTALLATION

Before you can start using CARMEN® GO, attached to the same message with the download link, you will find the license files that you need to upload to your hardware key to enable LPR. You can apply them with the License Manager utility. Please find the user guide here:

http://doc.arh.hu/carmen/license_manager_users_manual.pdf

START USING CARMEN® GO

- Connect the USB Hardware key to one of the USB ports (2.0 or higher). The key will only be detected and recognized once the software package has already been installed.


HARDWARE KEY / NNC DONGLE

- Simply go to the Start menu, locate and start the CARMEN® GO Control Panel application.

CONTROL PANEL

Control Panel is a tool for easy starting and monitoring the status of the CARMEN® GO service – accessible from the Start menu. Here you can also check license and NNC status.
If both the NNC key and CARMEN® GO license are ok, click on **"Start"** button to start CARMEN® GO service.
Once running, you can start using CARMEN® GO by clicking **"Open Web Interface"** button.
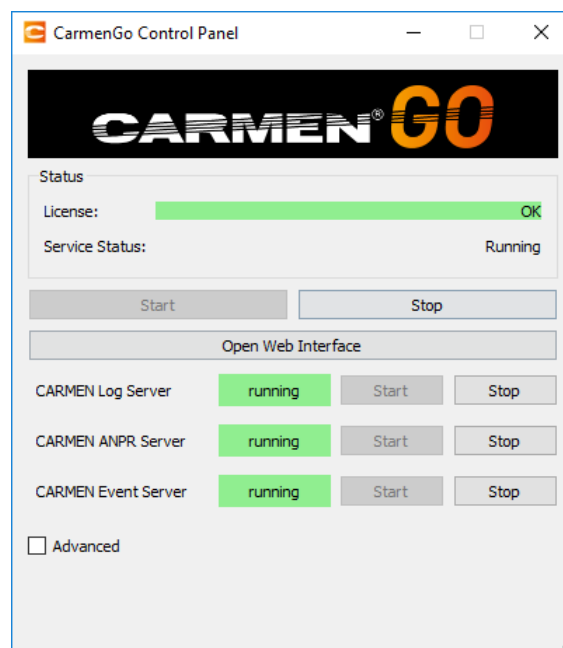
"Open Web Interface" will open CARMEN® GO Management page in your default internet browser. (**The interface page is optimized for Google Chrome browser**)

> 🗋 Note
>
> Alternatively: Open your internet browser (Chrome, Firefox, Opera, Safari) and type in the address bar: http://127.0.0.1/ or http://localhost/ to start using CARMEN® GO.

- If your Web server default port is reserved, you can change it in the Advanced menu.

> ❗Important
>
> The use of Internet Explorer is not recommended, the interface is not optimized for that browser!

> ❗Important
>
> Closing the browser and Control panel does not stop the service, it will still be running in the background. To shut down the service, click on the "Stop" button on the Control panel.

WEB INTERFACE – MAIN MENU

There are four main functions available on the opening page:

- Settings

- Monitoring

- Database

- Dashboard
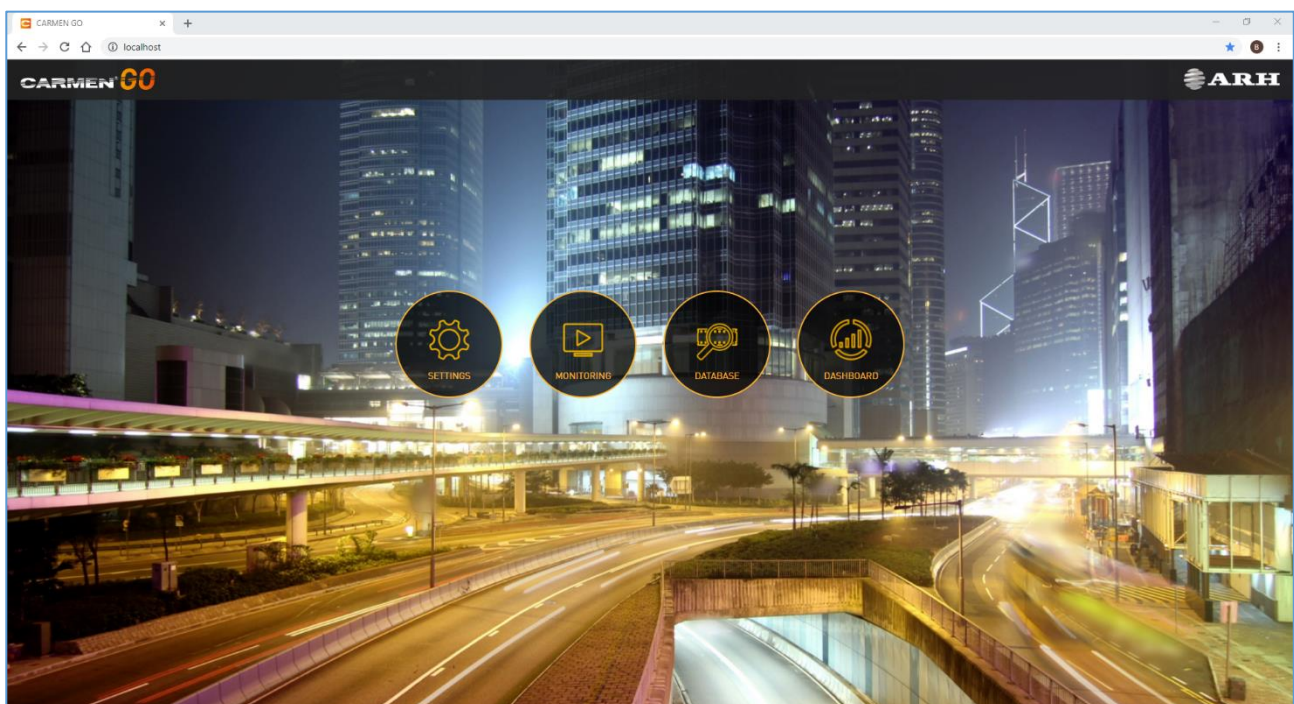
1 - MAIN MENU

1. SETTINGS

This menu allows you to edit input, output and ANPR settings.

- Up to 8 channels can be connected, this enables recognition of number plates from 8 individual cameras or pre-recorded video streams at the same time.
  System requirements depend on stream resolution and number of passing vehicles
- For input formats, recommended camera positions and image requirements, please check the input stream guide online document.
- After loading one of the stream options, live view on the left window becomes active.
  Set the Motion Detection zone by dragging the corner points of the trigger area. This area will be the ANPR detection zone or area of interest.

Start/Stop streams by clicking on the numbers
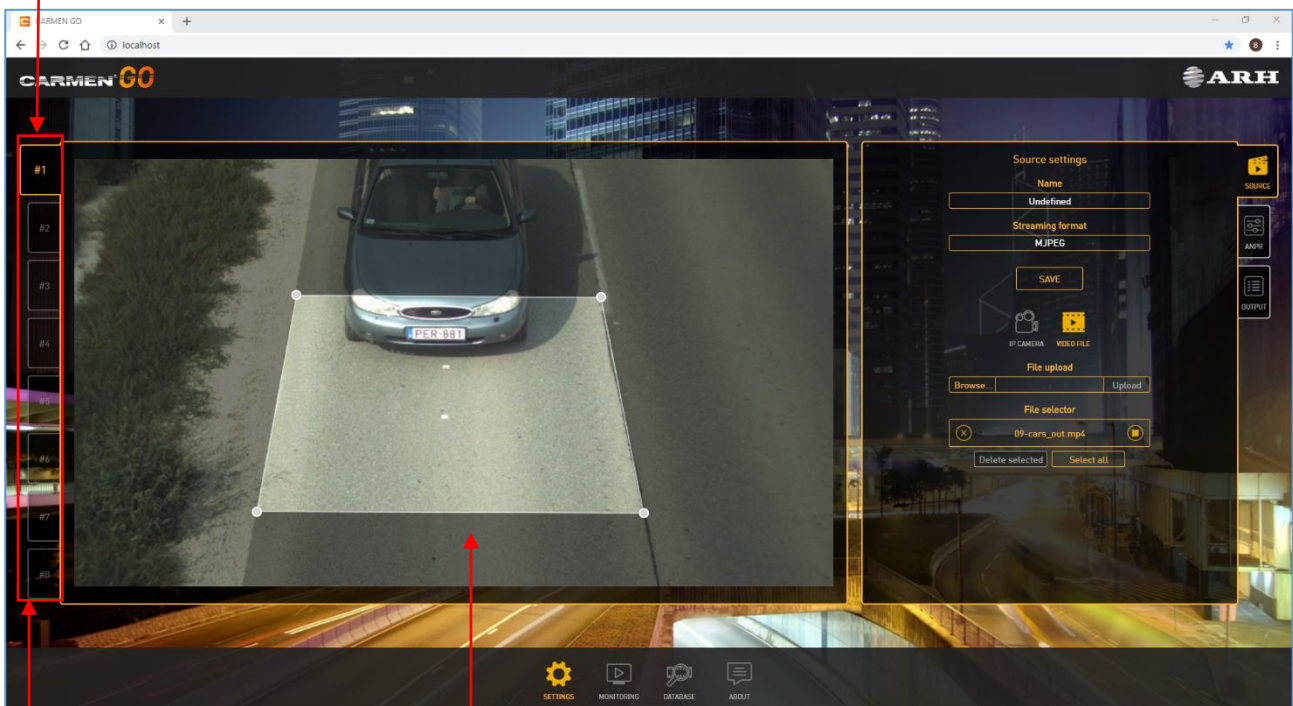
2 - SETTINGS MENU

Number
of streams

Motion Detection zone

1.1. SOURCE TAB

1.1.1. IP Camera

In order to get access to the IP camera settings, first press "Edit".
You can select **"ARH"** or **"Generic"** option from the **"Manufacturer"** list - depending on what camera brand you are using.

- In case of ARH products, add related data of camera.
- In case of any other brand, type in or copy and paste the complete URL address of the camera's stream into **"Stream URL".**

"Streaming format", refers to how the camera or selected video file is streamed into the web browser interface. **It is not related to the input stream format!**
You can choose between MJPEG or H264(beta) to stream the video into the browser.

You can assign a name to the camera (or video) stream in the **"Name"** field. After all changes done, click on **"Save"** button.
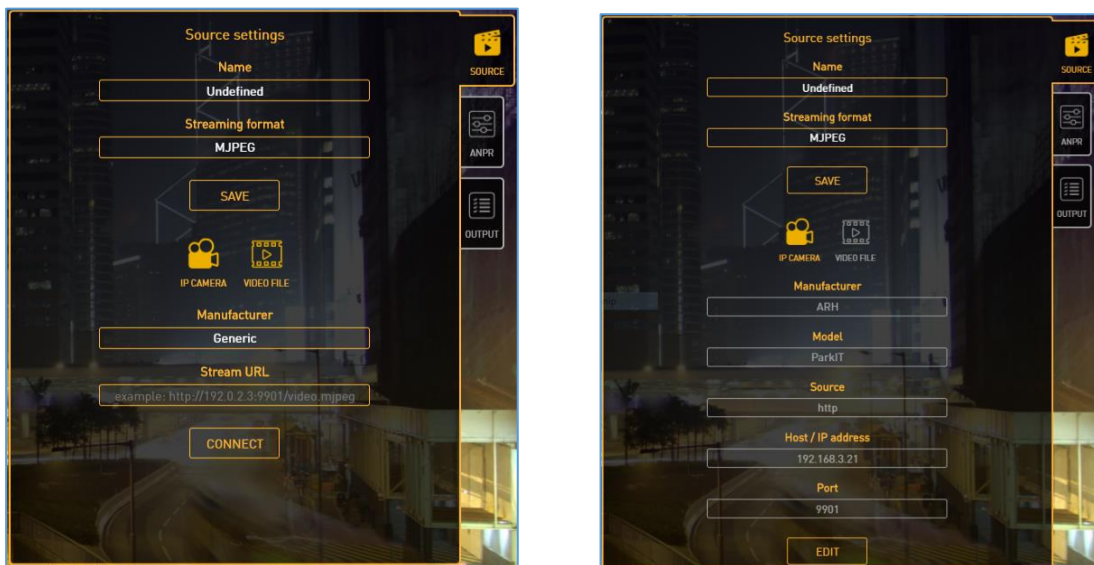
3 - IP CAMERA SETTINGS

> 📝 Note
>
> If the camera is password protected, enter the username and password into the URL address as below:
>
> ```
> http://username:password@192.168.x.xx:9901/video.mjpeg
> ```

1.1.2.   Video File

If you have a previously recorded video file about a monitoring event, you can browse and add it to the **"File upload**" field.

📝Note

File should be available from the computer where the web interface is accessed.

- To select the file, click on **"Browse"**, select video file and press **"Upload"**
- Wait till CARMEN® GO uploads it to the server.
- The uploaded video file list will be populated under **"File selector"**
- Last step is to click on **"Play"** in the list, and the video will start.

Supported video formats: MPEG-4, AVI, MOV, MJPEG, H.264, VP8, VP9 and many more. You can give a unique name to this stream as well.
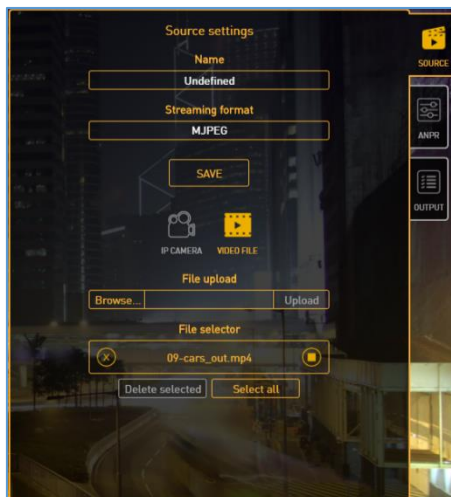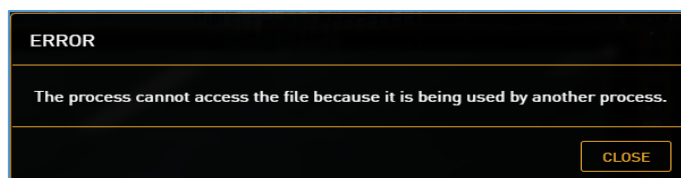
4 - VIDEO FILE SETTINGS

📝Note

You can upload more than one video file at the same time by selecting multiple files in the browser.

📝Note

When you are willing to delete the current video and click on either "Select all" or the "X" on the left side of the "File selector" and the video is playing, system will not allow it, because the file is being used at the time.

1.2.   ANPR TAB

1. Region / Country

By default, only a general engine is installed with no country recognition. For country and state recognition, install the regional engine purchased.
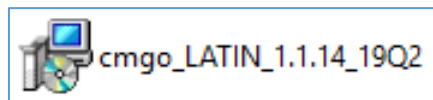
Select the desired region in ANPR settings.

> **Note**
>
> By selecting GENERAL engine, CARMEN® GO will recognize plate types of many countries, but not as accurate as specific engines.
>
> Output data: plate characters and country name.

Description of engine file:

cmgo_LATIN_1.1.14_19Q2

- **LATIN** - name of the region
- **1.1.** – this number indicates the main version of CARMEN® GO and engine is related to that
- **14.** – patch number
- **19Q2** – it is released in second quarter of 2019

> **Important**
>
> It is not granted that previous versions of CARMEN® GO will work properly with 1.1.xx engines!

> **Note**
>
> When you have installed engine and CARMEN® GO is running, please refresh webpage to load the engine to the web interface.

> **Note**
>
> You can uninstall engines from System settings (Add or remove programs).

After the regional engine installed, select the engine in **"region"** and country in **"country"**.

2. Method

This drop-down menu contains three trigger algorithms:

- **General video process:** general ANPR trigger setting
- **Stop and Go:** recommended to use for access control. Sensitivity can be set from low to high with the slider. Optimal setup is 50%.
- **Virtual loop (beta):** CARMEN® GO advanced motion detection algorithm specialized to detect the best position of the vehicle for ANPR.
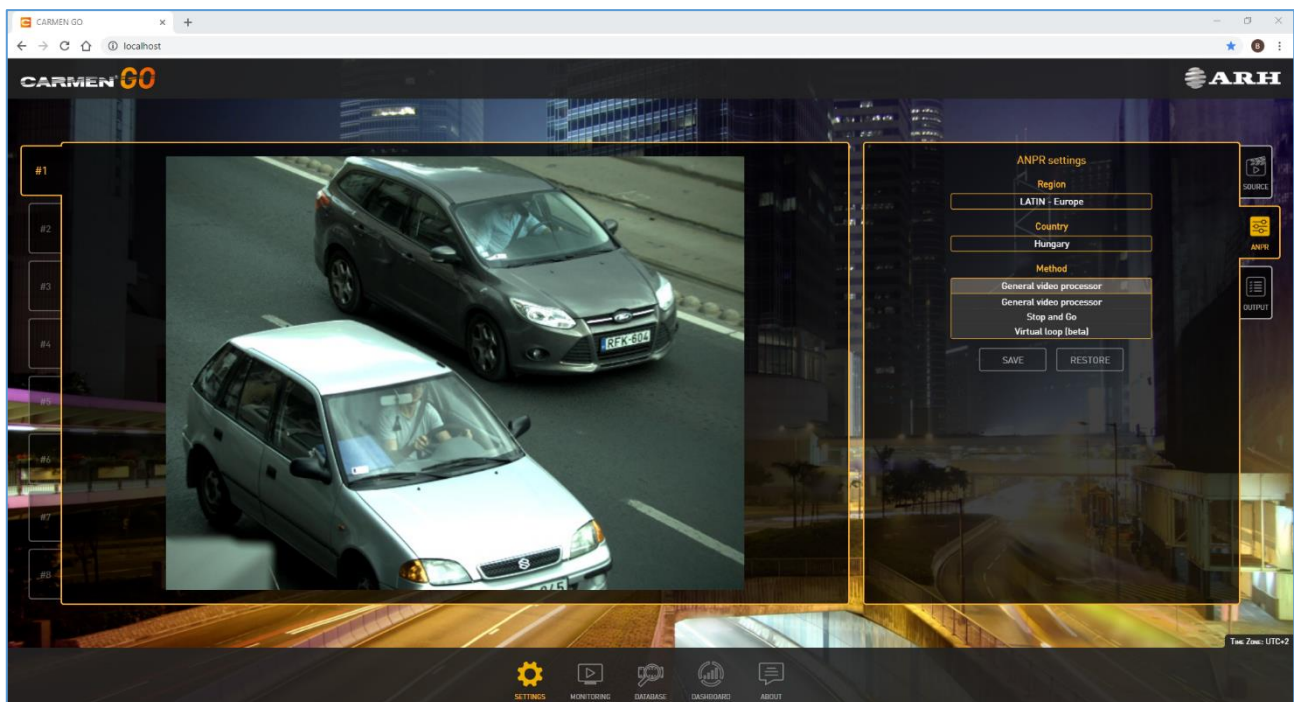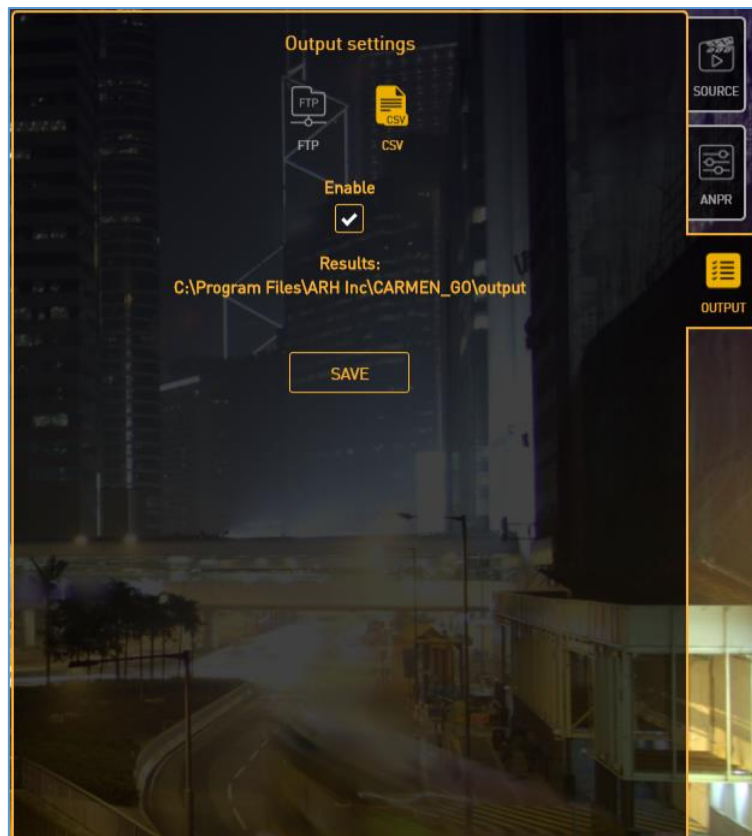

5 – ANPR METHOD

1.3.   OUTPUT TAB

There are 3 options to export ANPR results from CARMEN® GO:

- **FTP server** - remote
- **CSV file** – local

6 - FOLDER OF CSV FILE

On top of the 2 selectable, there are also other 2 "always on" outputs:
- **rest API** – remote
- **Data Stream** – remote

1.3.1.   FTP server:

You can export the output data directly to an FTP server (including images).
Type in all details (Host, Port, Username, Password and Path) in the required fields, check **"Enable"** and press the **"Save"** button.

1.3.2. CSV:

A comma-separated values (CSV) file is a simple file containing text that is separated by a comma, semicolon or other character (dependent on regional settings).

The results are independent from the streams: it means all streams are saved into one common CSV file, complete with stream ID for easy filtering of data.

CARMEN® GO automatically generates a folder on the computer where the CSV files will be saved. Event images are also saved in the same folder.

> **! Important**
>
> Checking **"Enable"** and pressing **"Save"** for the first time, will create the folder on your computer. All ANPR result within a day will be saved in a single daily file. Files will be arranged by date in the folder. In case you do not need a CSV file, just uncheck the "Enable" box and press **"Save".** It will not clear or delete the folder, but will discontinue creating CSV files until you enable it again.

1.3.3. Data stream

This "always on" output enables transferring events to a third-party software.
- SDK is available to install at initial installation
- With this SDK it is possible to connect to CARMEN® GO server - if Data stream option is active

- Online document available here:
  http://doc.arh.hu/carmen_go/carmen_go_data_stream_sdk_programmers_guide.pdf

1.3.4. Rest API

Through this new feature, it is possible to pull event data from the internal database through http with rest API commands. Results are available in JSON format.
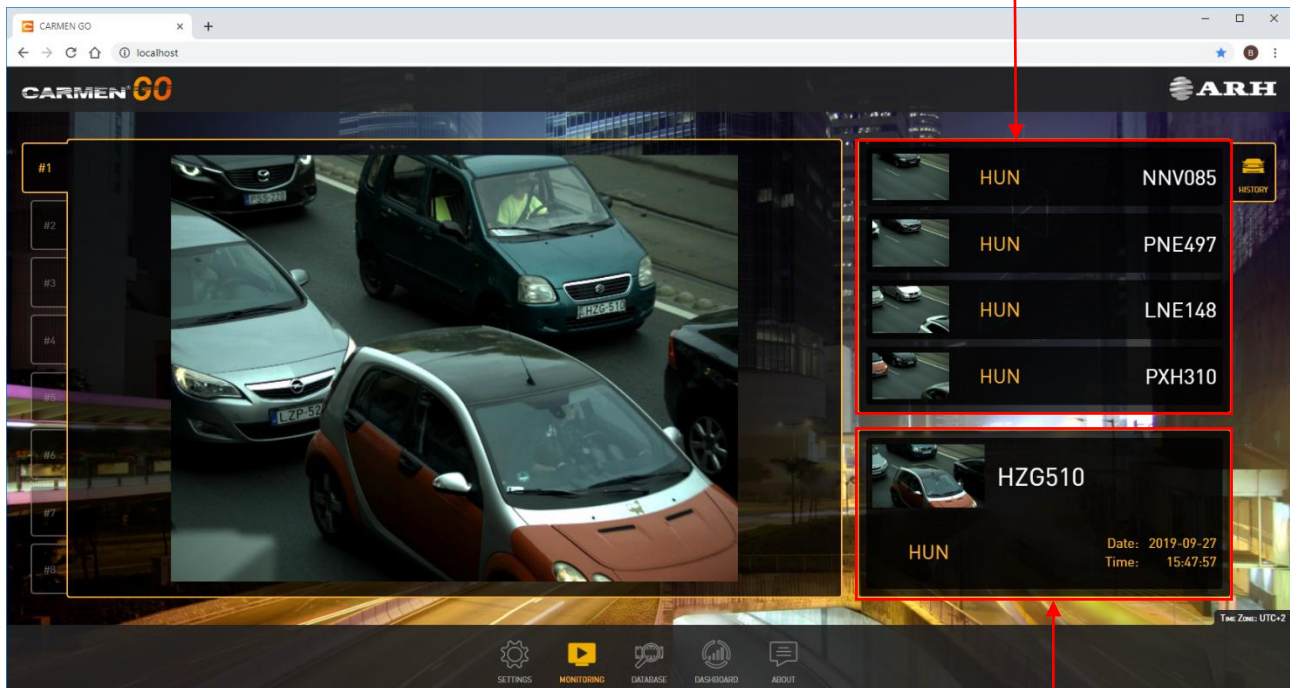For details, please see online document:
http://doc.arh.hu/carmen_go/carmen_go-database_rest_api_reference_manual.pdf

2. MONITORING

The Monitoring menu enables live view of the selected IP camera or Video file stream and the ANPR data captured.

The upper right "History" panel shows the previous 4 events detected (scrollable)
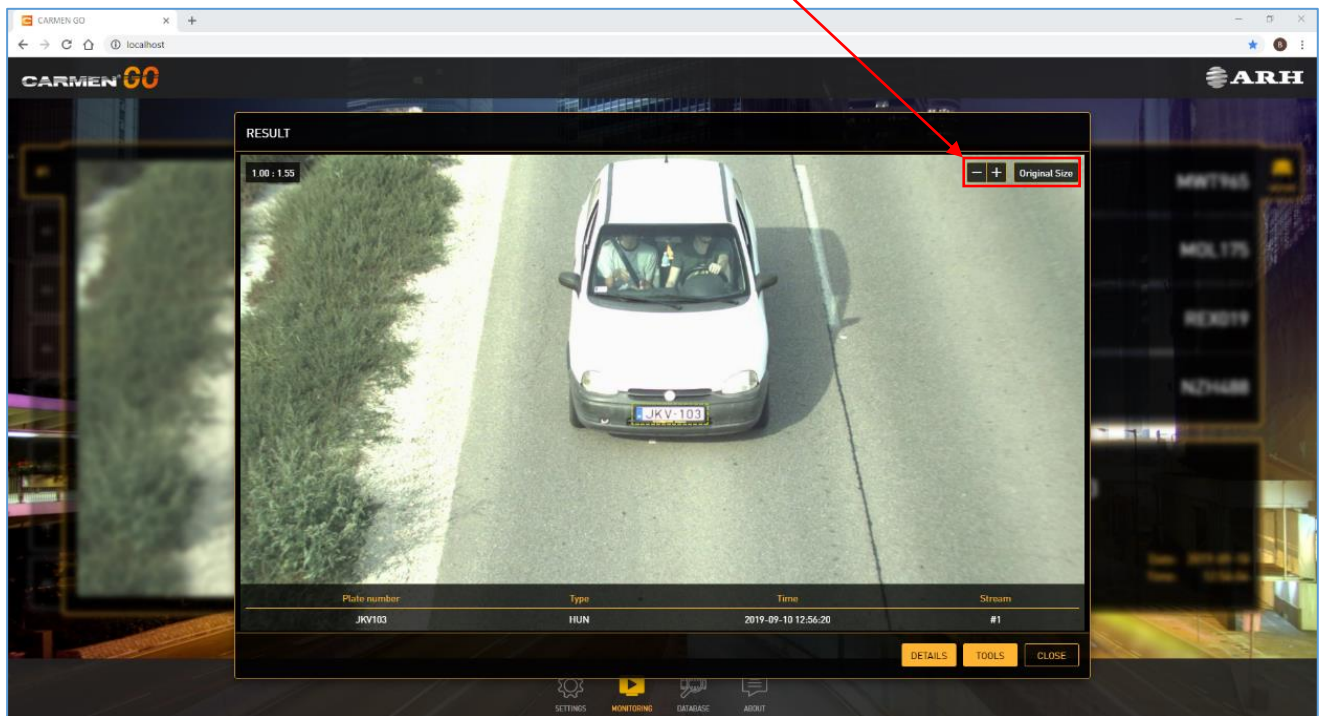

7 - MONITORING MENU

This area shows the last detected number plate with country, date and time

💡 Hint

Clicking on any event will open it in a popup window where zooming on the license plate is possible.

You can zoom in and out of the detected event image when you open it (also possible with the mouse scroller)

8 - MONITORING MENU

📄 Note

When refreshing the web page, results will disappear from the history but are not deleted from the internal database.

It is also possible to stop and play the stream. After stopping a video file, on the next start, it will jump to the beginning of the video.
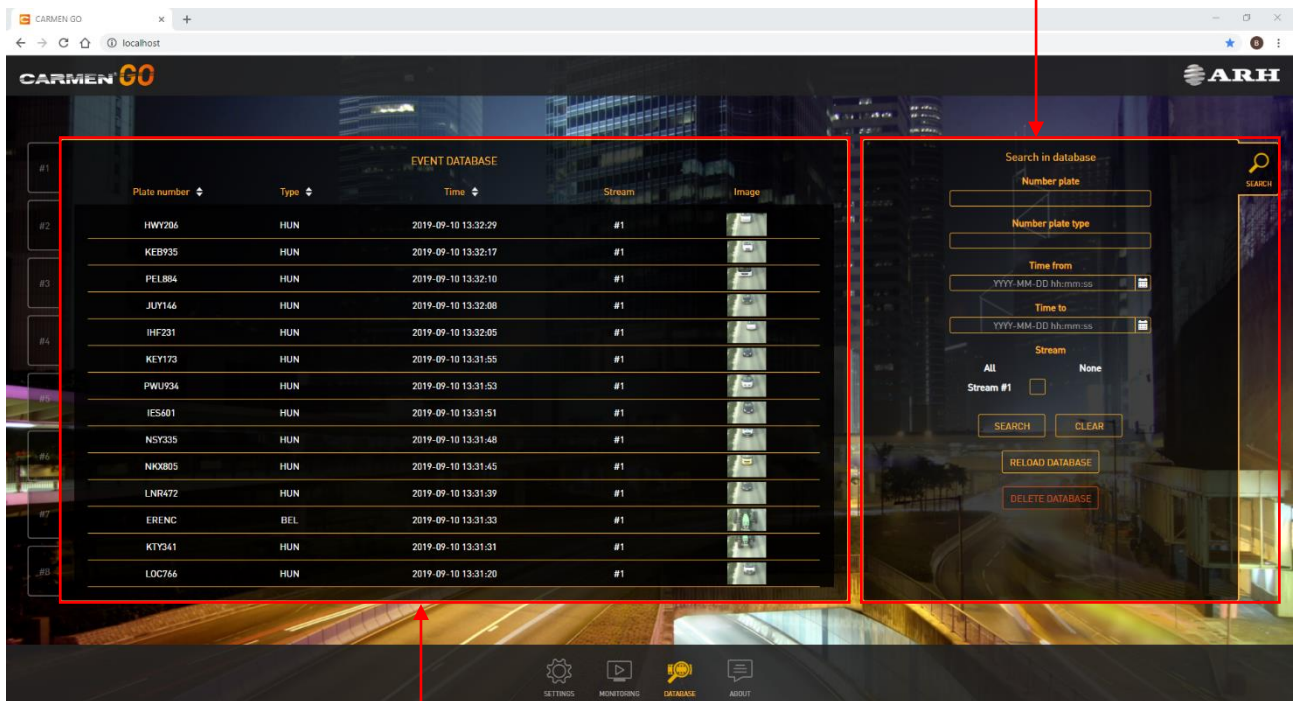

💡 Hint

You can close this window by clicking **"Close".**

3. DATABASE

The database menu shows all events from all streams with relevant details.

You can search within the database. You are also able to delete or reload the whole database.
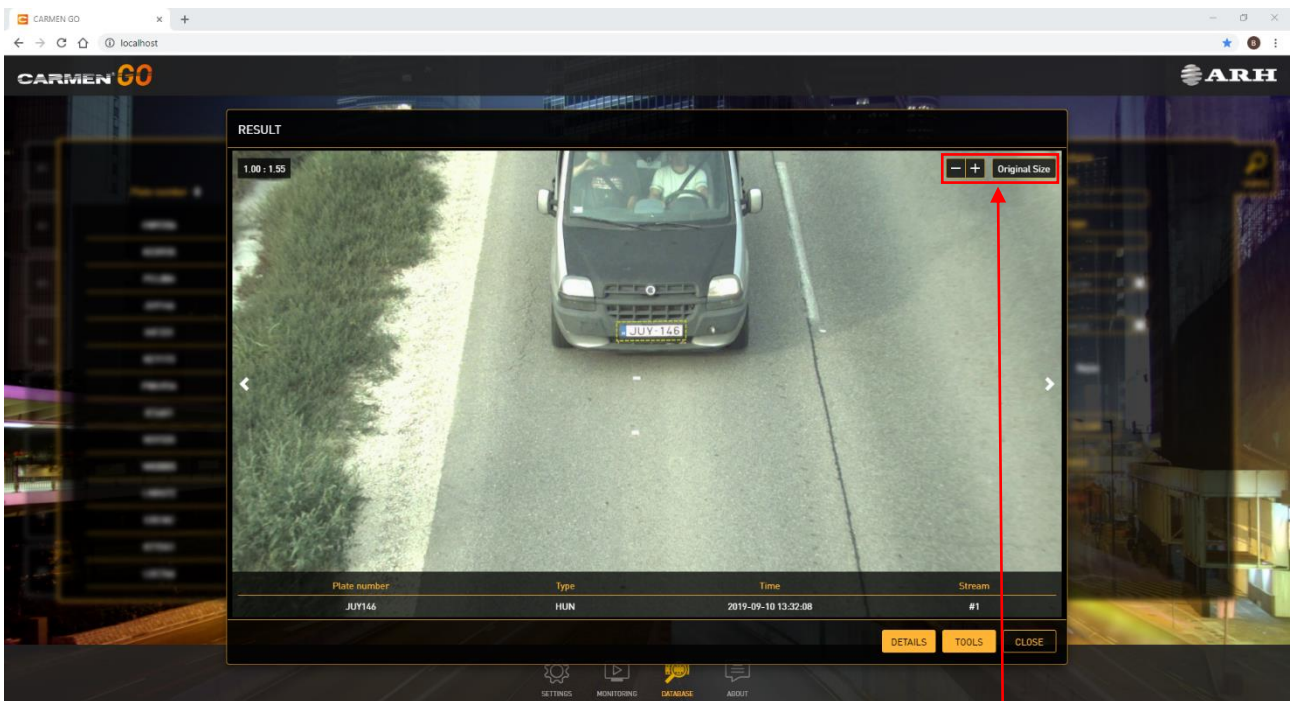

9 - DATABASE MENU

This area shows the detection history with all relevant data about each event captured (Number plate, Type, Time, Stream ID and Image)

📝 Note

Database is gathering and storing all event data – until the maximum capacity of storage is reached or the "Delete Database" button is clicked.
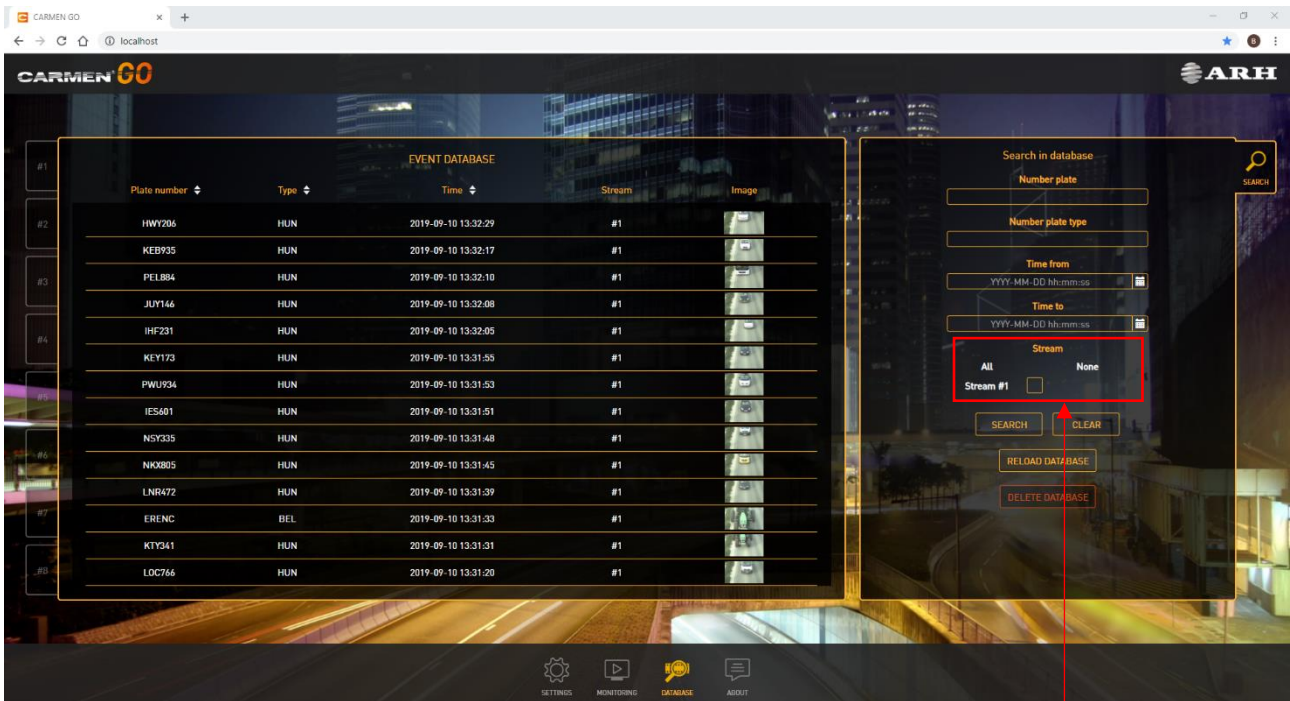
10 - DATABASE MENU

You can search separately among the streams or select only the relevant ones; it depends on the number of streams you have purchased

11 - DATABASE MENU

You can zoom in and out of the detected event image when you open it

4.   DASHBOARD

This menu represents information of detections. It has four categories:

- **Plate types:** all detected number plate
- **Detection count:** show all detected events
- **Average detection time:** average time of each detection
- **System load**: measure of the amount of work that system performs in a 24h period

11 - DASHBOARD MENU

The dashboard is collecting data while CARMEN® GO service is running. If you restart the service, it will continue gathering events.

> 📋 **Note**
>
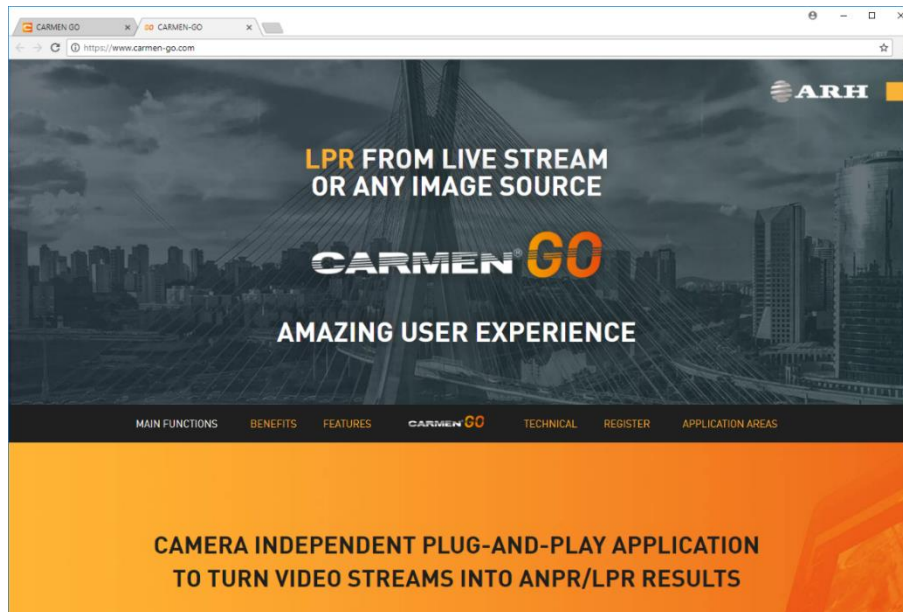> If you stop **ANPR Server** manually, Dashboard will be full empty at next start.

> 📋 **Note**
>
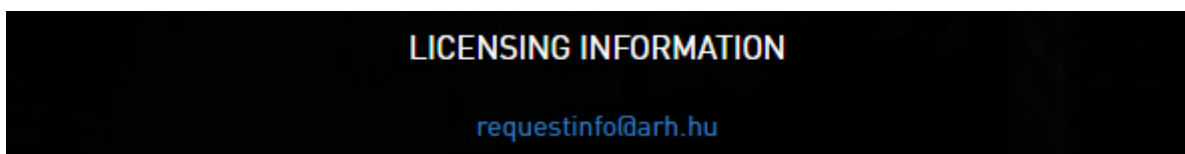> Deleting the database clears the Plate types tab history.

5. ABOUT

The software version number and a link to the official CARMEN® GO webpage are available here.
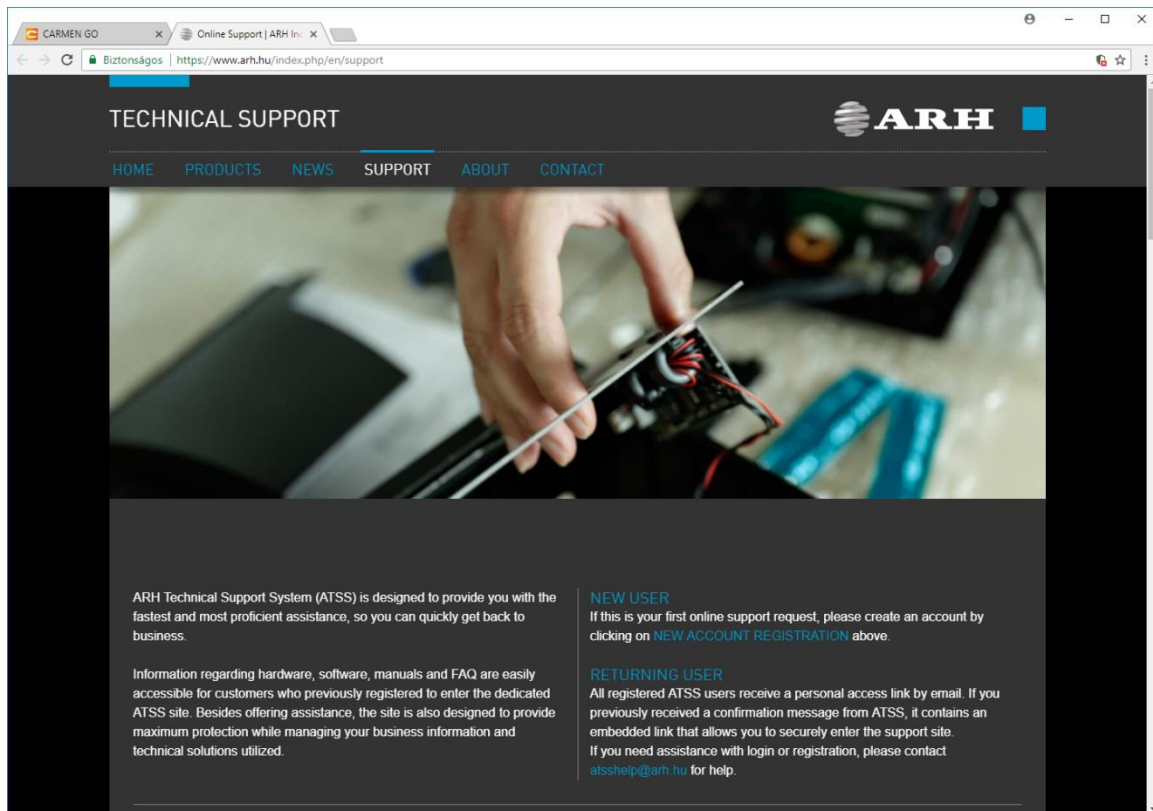
CARMEN® GO Microsite

12 - CARMEN® GO MICROSITE

"Licensing information": to request information about your licenses via e-mail.

13 - LICENSING INFORMATION

The "Technical assistance" link will direct to a web page, where technical assistance can be requested from our support team.

14 - TECHNICAL SUPPORT WEB PAGE

CARMEN® GO USER MANUAL

CONTACT INFORMATION

Headquarters:
ARH Inc.
Alkotás utca 41 HU-
1123 Budapest Hungary
Phone: +36 1 201 9650
Fax: +36 1 201 9651
Web: www.arh.hu

ARH America:
ARH America Corp.
28059 US Highway 19 North Suite 203
Clearwater, FL 33761
Phone: (727) 724-4219
Fax: (727) 724-4290
Web: www.adaptiverecognition.com

Service Address:
ARH Inc.
Ipari Park HRSZ1113/1 HU
 2074 Perbál Hungary
Phone: +36 1 2019650
E-mail: rmarequest@arh.hu

ARH Technical Support System (ATSS) is designed to provide you the fastest and most proficient assistance, so you can quickly get back to business.
For further technical information about our products, please visit our official website.

Information regarding hardware, software, manuals and FAQ are easily accessible for customers who previously registered to enter the dedicated ATSS site. Besides offering assistance, the site is also designed to provide maximum protection while managing your business information and technical solutions utilized.

New User
If this is your first online support request, please create an account by clicking on this link.

Returning User
All registered ATSS customers receive a personal access link via e-mail. If you previously received a confirmation message from ATSS, it contains the embedded link that allows you to securely enter the support site.

If you need assistance with login or registration, please contact atsshelp@arh.hu for help.