



Traffic Data Collection System Installation manual

Version v1.2



Contents

1. About the product.....	4
Recommended applications	4
Certifications and compliance Traffic sensor	4
Technical specification Traffic sensor	4
Technical specification Processing unit.....	4
2. Safety warnings and notes.....	5
Safe usage	5
Power supply	5
Safe installation	5
3. General system information.....	5
Wire colour coding	5
Terminating wiring	6
Processing unit wiring	6
Hardware reboot example with industrial router	6
Watchdog with SMS notification.....	7
4. Requirements for sensor installation into road surface	8
5. Recommended system installation sequence.....	9
6. Network connection and Web-UI	10
Introduction	10
Accessing the user interface	10
Navigation bar.....	13
Dashboard	14
Sensors.....	14
Cameras.....	16
System information	18
Results.....	19
Event log	19
Live feed	22
Charts	23
Settings.....	26
Device settings	26
Users	29
API keys	31
Profile	33

7. API.....	34
8. Ecology and utilization.....	34
9. Warranty	34
10. Service contacts.....	34

1. About the product

A universal traffic data collection system which includes electromagnetic sensors and processing unit supplied with software for local system configuration and data monitoring. All data is stored in SQL database for a comfortable and easy integration into ITS or Traffic Analytics Software solutions via HTML API. The sensor is suitable for installation on various roads and under different road surfaces. System can activate other device such as cameras, electronic road signs, etc.

Recommended applications

- Vehicle speed measurement
- Vehicle length measurement
- Average flow speed measurement
- Overspeed counting
- Vehicle counting
- Sector speed measurement
- Vehicle classification by length
- Traffic management
- Traffic density studies

Certifications and compliance Traffic sensor

RoHS; CE; FCC 47 CFR Part 15; EN 61000-6-3:2007/A1:2011; EN 55016-2-3:2017/A1:2019; EN 61000-6-1:2007; EN 61000-4-2:2009; EN 61000-6-1:2007; EN 61000-4-3:2006; EN 61000-4-3:2006/A1:2008; EN 61000-4-3:2006/A2:2010; EN IEC62368-1:2018+A11:2020; CSA/UL 62368-1:2019; AS/NZS 62368.1:2018;

Technical specification Traffic sensor

Relative error of speed (0 - 90 km/h)	< 2.5 %
Relative error of speed (91 - 110 km/h)	< 3 %
Relative error of speed (110 - 140 km/h)	< 4 %
Operating temperature	from -40° C to +80° C
Protection class	IP68
Voltage	5 V
Current	150 mA
Energy consumption	0.75 W
Thermal compensation	+
Arbitrary magnetic field compensation	+
Interface	RS485
Dimensions	400 x 25 x 25 mm
Standard sensor cable lengths	10m, 25m, 50m

Technical specification Processing unit

	HUB-S	HUB-L
Sensor connections	Up to 3	TBC
Included sensor licences	3	TBC
Onboard storage	Up to 110 mln. records	TBC
Power supply	5V 2A	TBC
Outputs	3	TBC
Protection class	IP20	TBC
Network connection	10/100	TBC
Temperature range	From 0°C to +50°C	TBC
Dimensions	(8din)	TBC
Weight		TBC

2. Safety warnings and notes

Check if there is an updated manual version online or with your distributor.

Safe usage

Warning! Carefully read instructions. Get familiar with equipment and learn how to safely use it. Save this manual for future reference.

Power supply

Use only high quality, power limited according IEC 62368-1, DC regulated power supply that provides DC of 5V.

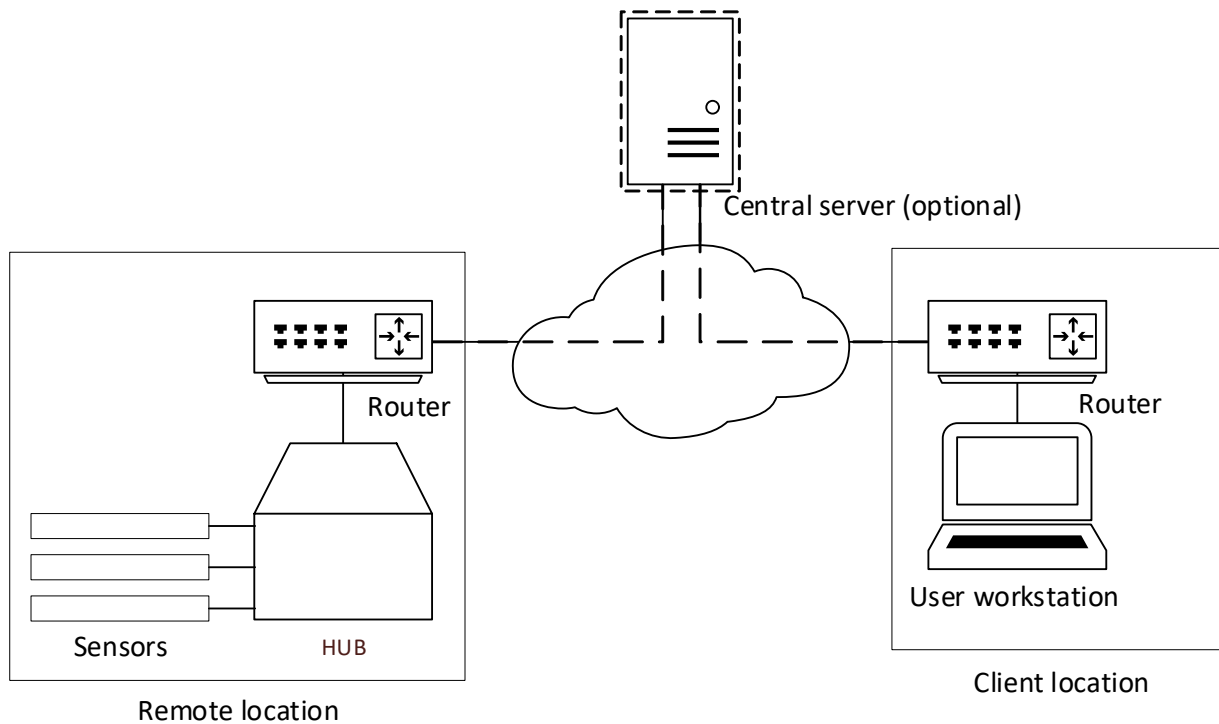
Safe installation

Before installing or uninstalling equipment, always disconnect power source. If during installation or operation cable and, or unit gets damaged, it is necessary, without touching it, to disable power supply. Never use damaged equipment.

Never work on active road/street – follow local guidelines and regulations for performing road works.

It is mandatory to comply with local legislation, when performing installation or service.

3. General system information



Wire colour coding

If needed, following safety guidelines, solder RS485 adapter to the Traffic Sensor cable following the legend below:

Ftdi RS485 adapter, Colour (signal)	Sensor, Colour (signal)
Black (GND)	White (GND)
Red (Power)	RED (+5V DC)
Yellow (Data-(B))	Black (A)
Orange (Data+(A))	Green (B)

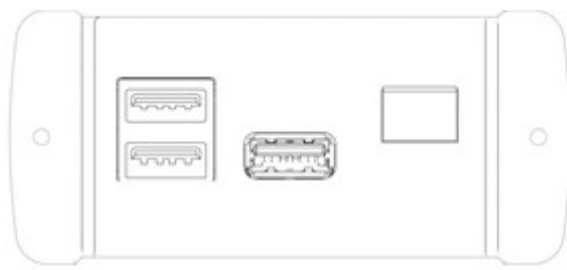
Connect Traffic Sensor to the Processing unit, run sensor software (please see section 5) and check that the soldered adapter is working properly (best way to imitate the car is to move the magnet over the sensor; pay attention to „Top“ and „Traffic flow“ marks, which are on the sensor).

Terminating wiring

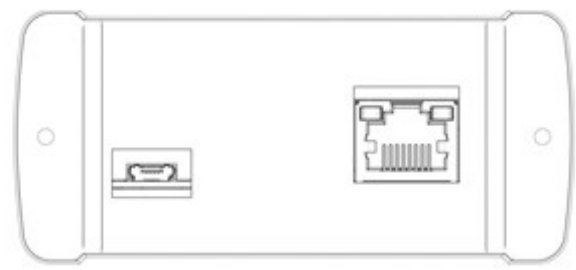
Depending on cable length between sensor and usb adapter you might need to use terminating resistors. Please refer to table below for reference values

Cable length	Terminating resistor
Less than 3m	Use of sensor not recommended
15-30	None
30-80	120R

Processing unit wiring



USB For sensors Signal output



Power Micro USB Ethernet

HUB-S features multiple ports for easy installation.

Power supply connector – used to connect 5VDC 15W limited power supply.

USB sockets – used to connect up to 3 sensors.

Input/Output connector – reserved for future use

RJ45 socket – used to connect to network (internet).

Hardware reboot example with industrial router

In case device is installed in remote location it is recommended to implement hard reboot solution. For example, such functionality can be achieved with some industrial routers (e.g. Teltonika RUT955).

Routing power in scenario when RUT955 router is used.

Services->Auto reboot->ADD

Parameters:
 Enable: ON
 Type: Wget
 Action if no echo is received: Send SMS
 Phone number: <your phone number>

Message text: <your text>

Interval: 5 mins

Timeout (sec): 10

Try count: 3

URL: https://192.168.243.101:1443 (ip of the HUB)

▼ PING/WGET REBOOT SETTINGS

Enable

☐ off
 ☒ on

No action on data limit

☐ off
 ☒ on

Type

Wget

Action if no echo is received

Send SMS

Phone number

+37061212345

+

Message text

Please check

Interval

5 mins

Timeout (sec)

10

Try count

2

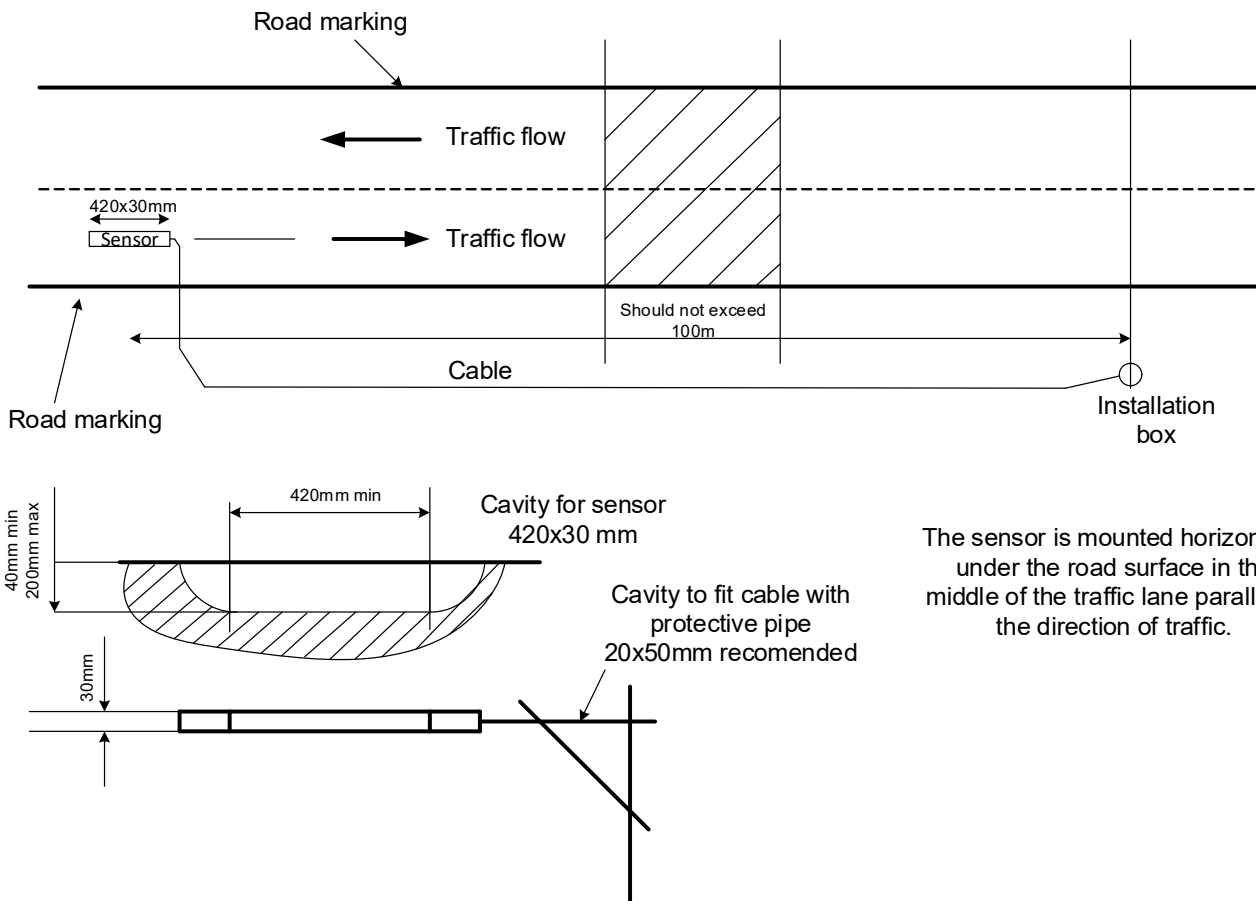
URL

https://192.168.243.101:1443

SAVE & APPLY

4. Requirements for sensor installation into road surface

- Traffic Sensor must be installed in a middle of the lane, parallel to the direction of traffic.
- Mounting distance from Traffic Sensor to road surface 40 – 200 mm.
- Mind „Top“ and „Traffic flow“ marks on the Traffic Sensor.
- Max. temperature of moulding material shall not exceed 110 °C.
- To protect the cable from heat and mechanical damage, corrugated pipe is required for installation under the road surface (D16 recommended). The sensor cable is suitable for direct burial under the ground on the roadside, but in order to increase the cable's resistance to mechanical impact, the corrugated pipe can be used for underground cable routing as well.
- Minimum distance between two parallel mounted Traffic Sensors 2,5 m.
- Refer to picture for sensor mounting cavity preparation.



The sensor is mounted horizontally under the road surface in the middle of the traffic lane parallel to the direction of traffic.

5. Recommended system installation sequence

- a. Install Processing unit.
Install Processing unit to it's intended location.

- b. Test Traffic sensor.

When Processing unit is installed to it's intended location, connect Traffic sensor to the processing unit (manual page 5) to make sure it works well before installing it under road surface

NOTE: best way to simulate a car, while sensor is not installed under the road surface, is to move magnet over the sensor (moving the magnet please mind "Flow direction", which you can set in a Dashboard when adding the sensor (manual page 13)).

- c. Prepare cavity for the Traffic sensor.

Prepare cavity for sensor and cable on the road surface according to the recommendations in this manual (manual page 8).

- d. Install Traffic sensor.

Install the Traffic sensor and cable into the road surface according to the recommendations in this manual (manual page 7). NOTE: Traffic sensor must be disconnected from Processing unit during the installation process.

- e. Test the system.

After all components are installed, please test the system. Take a ride with a car above the installed Traffic sensor and check the results.

6. Network connection and Web-UI

Introduction

Each processing unit (PU) comes with its own pre-installed web user interface (UI) that allows the user to access features, such as:

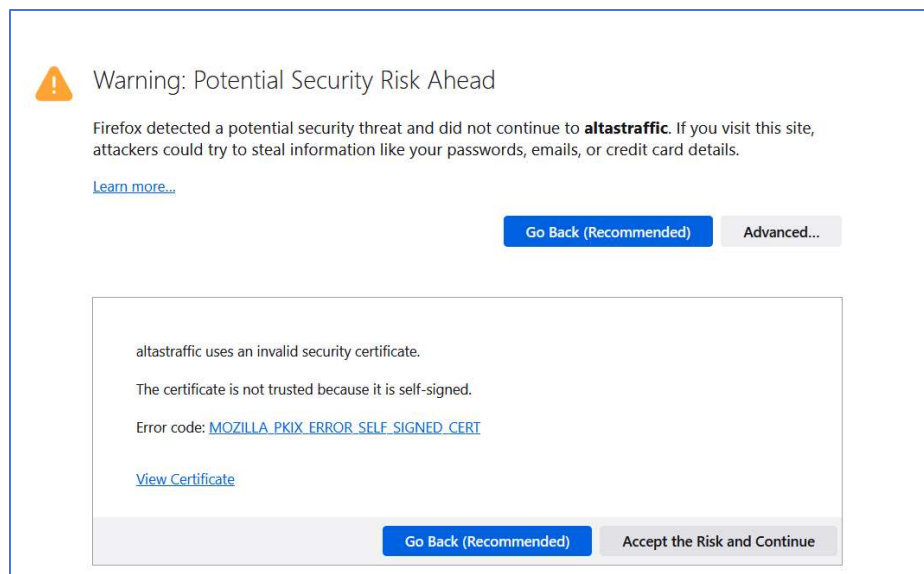
- **Sensor management:** Adding/removing sensors to/from the system, modifying their operational state, defining the sensor direction of the traffic flow, and specifying a speed limit value that can be used to calculate the overspeed value of each event.
- **Camera management:** Adding/removing camera connection information to/from the system, modifying the operational state of the streaming reading service, and assigning sensor devices that can trigger event image capturing.
- **User management:** Adding/removing user accounts that have access to the web UI.
- **API Key management:** Generating, issuing, and revoking API keys that provide authorized access to the system's API.
- **PU device management:** This feature enables users to manage and control various aspects of the device, including the ability to change settings such as time, network configuration, and auto-reboot options.
- **Data overview:** View the collected event data either row by row or grouped by hour/date/month, presented in either a table or a chart format.

The web UI supports current versions of web browsers like Mozilla Firefox, Google Chrome.

Accessing the user interface

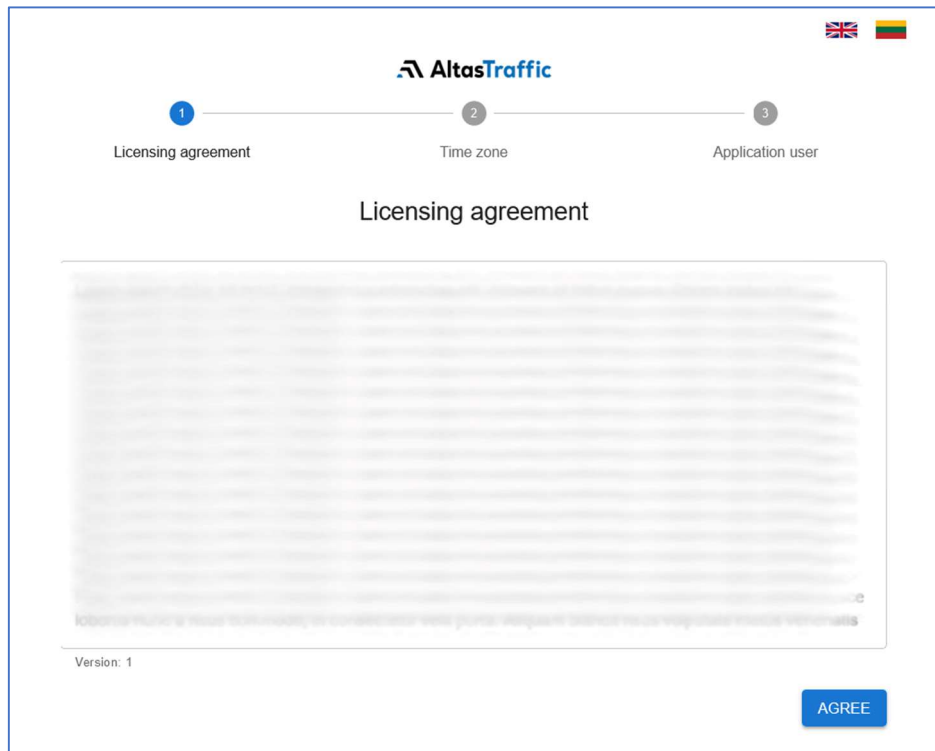
- 1) Using an Ethernet cable, connect the processing unit to the network. By default, the device's network adapter is configured to automatically receive an IP address from the network's DHCP server.
- 2) Using a web browser such as Google Chrome or Mozilla Firefox, navigate to the device's web interface by entering the assigned IP address with the following address: [https://\[ip_address\]:1443](https://[ip_address]:1443)

Note: Each processing unit comes with a set of self-signed SSL certificates. Therefore, when connecting via HTTPS, please be aware that the browser may display an error (Picture 1) indicating that the connection is not private. Please ignore this error message and, depending on the browser used, proceed by clicking a button such as "Accept the Risk and Continue".



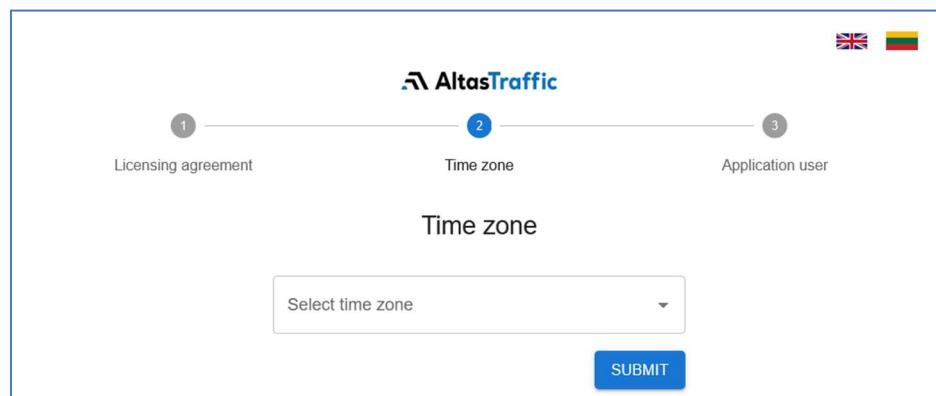
Picture 1

- 3) Proceed with the installation by carefully reading the licensing agreement and agreeing to its terms.



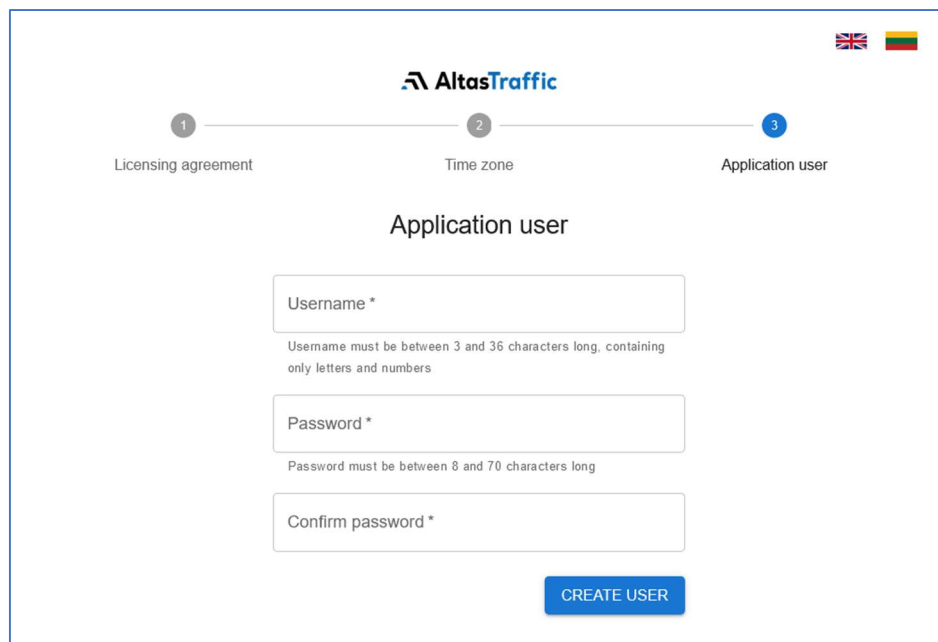
Picture 2

- 4) Select the appropriate time zone for the system.



Picture 3

5) Create a superuser for the system.



AltasTraffic

1 Licensing agreement 2 Time zone 3 Application user

Application user

Username *

Username must be between 3 and 36 characters long, containing only letters and numbers

Password *

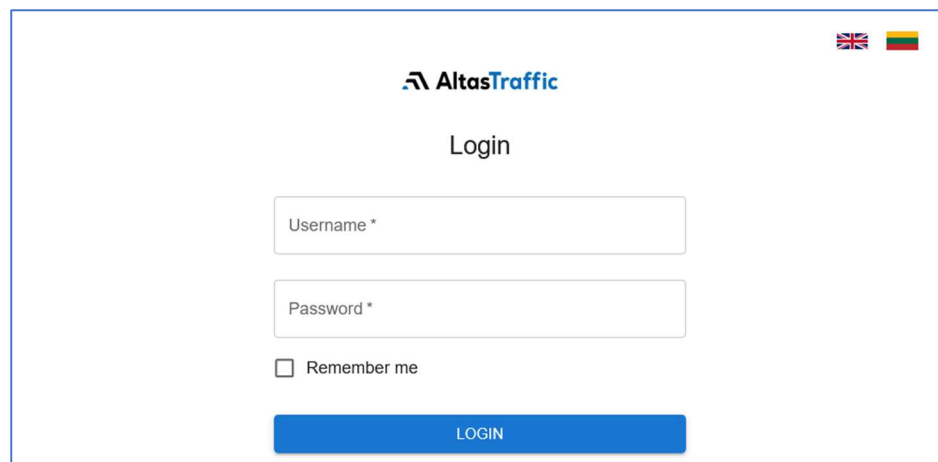
Password must be between 8 and 70 characters long

Confirm password *

CREATE USER

Picture 4

6) Login.



AltasTraffic

UK Hungary

Login

Username *

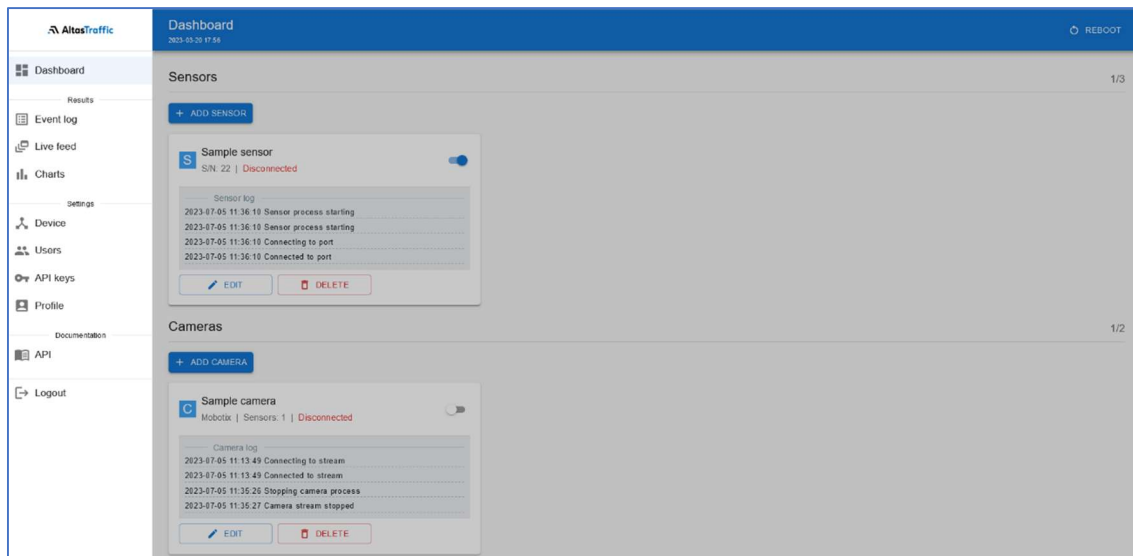
Password *

☐ Remember me

LOGIN

Picture 5

Navigation bar



Picture 6

Navigation Item	Description
Dashboard	The main landing page after logging in is divided into three separate sections: “Sensors” section - contains sensor widgets representing each of the sensors added to the system of the processing unit. “Cameras” section – contains camera widgets representing each camera stream reader service that has been added to the processing unit. “System information” section - contains data boxes that display the current system uptime and resource usage, including CPU, RAM, and Disk utilization.
Event Log	The page displays a data table showcasing the processed results that have been accumulated.
Live Feed	The page presents a dynamic data table that updates in real-time, displaying results once they are processed.
Charts	The page visually presents results and statistics in the form of line charts, facilitating easy analysis.
Device *	The page allows users to configure and customize various settings related to the device.
Users *	The page provides an interface for managing and administering user accounts, including creating, editing, and deleting user profiles, as well as assigning roles.
API keys *	The page allows users to generate, manage, and control access keys used for authentication when interacting with APIs.
Profile	The page enables users to view and modify their profile settings within the system.
API	The page serves as a detailed documentation resource, providing extensive information, instructions, and practical examples for utilizing and integrating with the system's APIs.
Logout	Button allows users to securely sign out of their account and terminate their active session within the system.

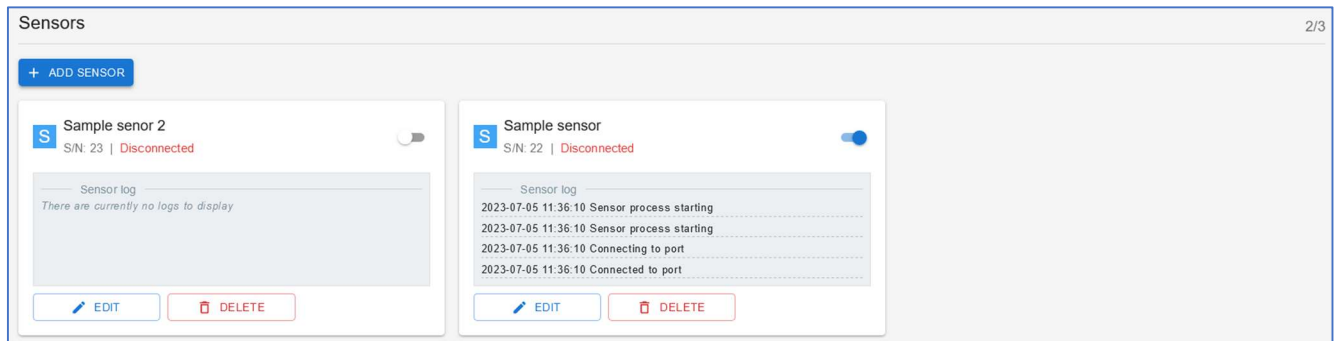
* - These pages are accessible exclusively to administrator accounts, ensuring that only authorized administrators can view and interact with their content. The "Dashboard" page is available to all user roles, but only administrators have the capability to add or remove sensor and camera widgets from the page.

Dashboard

The main landing page after logging in which is divided into three separate sections: “Sensors”, “Cameras” and “System information”.

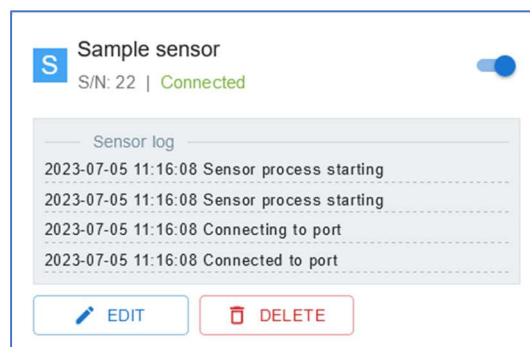
Sensors

Contains sensor widgets representing each of the sensors added to the system of the processing unit. Each processing unit has the capacity to support up to three sensor devices.



Picture 7

Sensor widget



Picture 8

Item number	Description
1	A custom, user-defined label for the sensor.
2	A row of information containing the device serial number and the current connection state.
3	The sensor reader’s operational state change button.
4	The sensor reader’s connectivity log.
5	“Edit” button which opens the sensor form.
6	“Delete” button which removes the sensor from the processing unit.

Add a sensor

- 1) Navigate to the **Dashboard** and click on the “+ Add Sensor” button in the **Sensors** section
- 2) Fill the sensor form (Picture 9) fields:

Add sensor

Label *

Sensor label must be between 1 and 64 characters long

Serial number *

Sensor model *

TRF-S

Flow direction *

N

Trigger pin

Speed limit

☒ Enabled

ADD SENSOR

Picture 9

Field name	Description
Label	A custom label for the sensor.
Serial number	Serial number of the sensor. This value is written on the sticker which is located on the sensor itself.
Sensor model	The model name of the sensor. Possible values: TRF-S, TRF-L.
Flow direction	The direction of the traffic flow relative to the position of the installed sensor. Possible values: N, S. 
Trigger pin	The output pin which will be triggered on the event of a vehicle passing.
Speed limit	An optional speed limit value which adds the possibility to filter results depending on the overspeed value.
Enabled	The operational state of the sensor reader process after the sensor will be added.

- 3) Click the “Add sensor” button in the sensor form window.
- 4) Once the sensor is added to the system, a new widget for this sensor should appear in the **Sensors** section. If the sensor device is connected to the processing unit's USB port, the widget's status message should change to "Connected" (assuming the operational state was set to "Enabled" when adding the sensor), once the background services start listening to the data stream from this device.

Note: It may take up to 30 seconds for the background services to start up a communication channel. During this time, it is possible that there will be multiple "Connected" and "Disconnected" messages in the log window.

Remove sensor

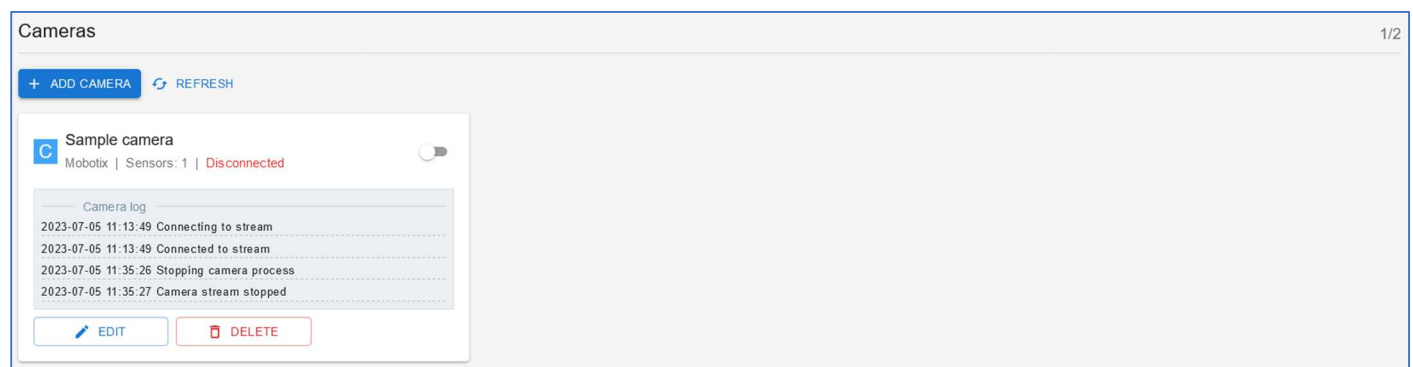
- 1) Navigate to the **Dashboard** page.
- 2) In the **Sensors** section, locate the widget of the sensor you want to delete and click the **"Delete"** button. This action will close the connection (if active) with the sensor, remove it from the system, and delete all the results associated with that device.

Disable / Enable sensor

- 1) Navigate to the **Dashboard** page.
- 2) In the **Sensors** section, locate the widget of the sensor for which you want to change the operational state of the reader service, and toggle the operational state change button.

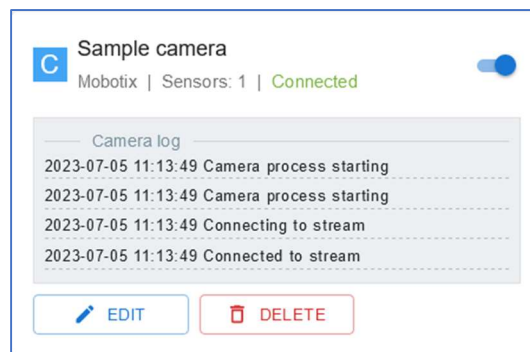
Cameras

Contains camera widgets representing each camera stream reader service that has been added to the processing unit.



Picture 10

Camera widget



Picture 11

Item number	Description
1	A custom, user-defined label for the camera.
2	A row of information containing the device type, number of linked sensors and the current connection state.
3	The camera stream reader's operational state change button.
4	The camera stream reader's connectivity log.
5	"Edit" button which opens the camera form.
6	"Delete" button which remove the camera stream from the processing unit.

Add a camera

- 1) Navigate to the **Dashboard** and click on the "+ Add Camera" button in the **Cameras** section.
- 2) Fill the sensor form (Picture 12) fields:

Add camera

Label *

Camera type *

Camera label must be between 1 and 64 characters long

Host *

Username *

Port *

Password *

Linked sensors

☐ Secure (HTTPS)

☒ Enabled

ADD CAMERA

Picture 12

Field name	Description
------------	-------------

Label	A custom label for the camera.
Camera type	The type of camera to add.
Host	Host value.
Port	Port value.
Username	Camera username.
Password	The password for the camera user.
Linked sensors	Sensors that are linked to this camera and will trigger to capture a event image.
Secure (HTTPS)	Indicates that the communication between the camera and the processing unit should be encrypted and protected using the HTTPS protocol.
Enabled	The operational state of the camera's stream reader process after the camera will be added.

- 3) Click the **"Add camera"** button in the camera form window.
- 4) Once the camera is added to the system, a new widget for this camera should appear in the **Cameras** section. If the provided information is correct and the device is online, the widget's status message should change to "Connected" (assuming the operational state was set to "Enabled" when adding the camera), once the background services start processing the live stream.

Remove camera

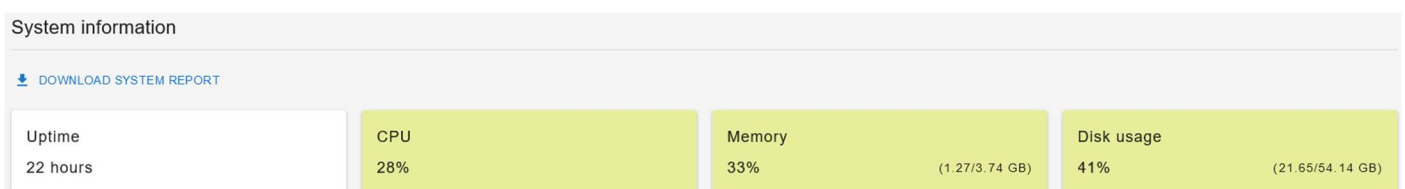
- 1) Navigate to the **Dashboard** page.
- 2) In the **Cameras** section, locate the widget of the camera you want to delete and click the **"Delete"** button. This action will close the connection (if active) with the camera, remove it from the system.

Disable / Enable camera

- 1) Navigate to the **Dashboard** page.
- 2) In the **Cameras** section, locate the widget of the camera for which you want to change the operational state of the stream reading service, and toggle the operational state change button.

System information

Contains data boxes that display the current system uptime and resource usage, including CPU, RAM, and Disk utilization.

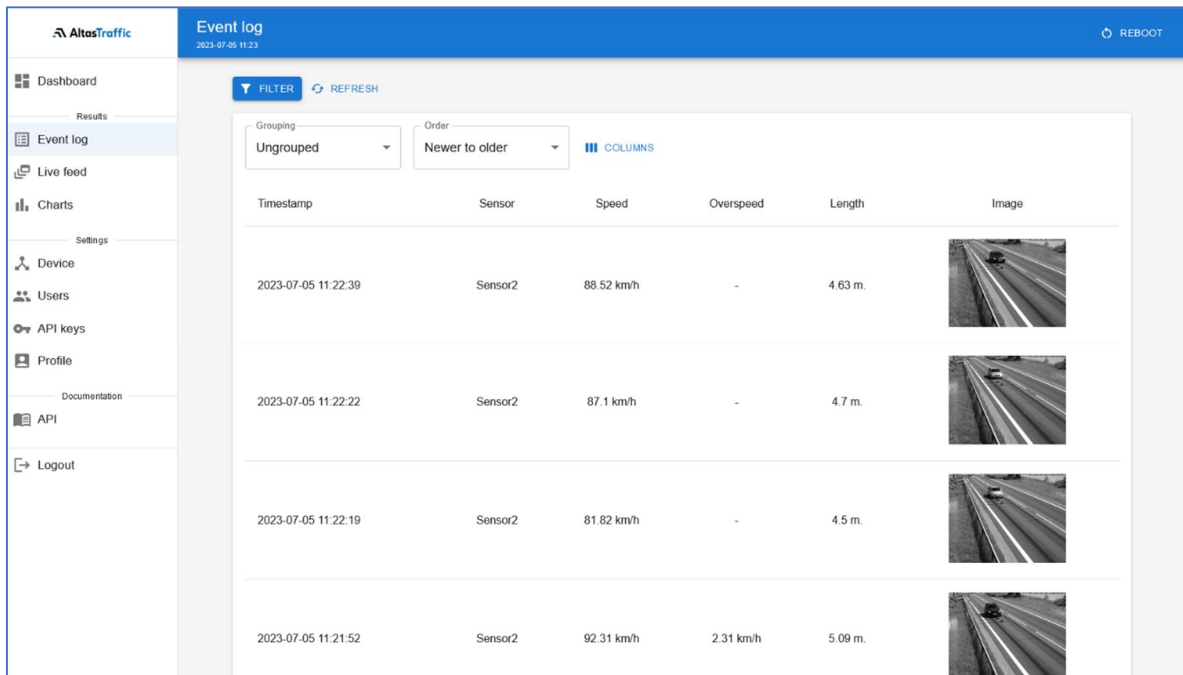


Picture 13

Results

Event log

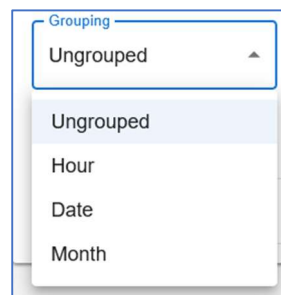
The page displays a data table showcasing the accumulated and processed results.



Timestamp	Sensor	Speed	Overspeed	Length	Image
2023-07-05 11:22:39	Sensor2	88.52 km/h	-	4.63 m.	
2023-07-05 11:22:22	Sensor2	87.1 km/h	-	4.7 m.	
2023-07-05 11:22:19	Sensor2	81.82 km/h	-	4.5 m.	
2023-07-05 11:21:52	Sensor2	92.31 km/h	2.31 km/h	5.09 m.	

Picture 14

Data grouping



Picture 15

It is possible to view raw results or select one of three grouping options:

- 1) Hour - allows data to be organized and grouped based on their respective hour of occurrence.
- 2) Date - allows data or items to be organized and grouped based on their respective hour of occurrence.
- 3) Month - allows data or items to be organized and grouped based on their respective months of occurrence.

Data filtering

Filter

Sensors

Timestamp from
Timestamp to

Min speed
Max speed

Min overspeed
Max overspeed

Length

Filter by
Vehicle category

Vehicle category

☐ Show only incorrect crossings

☐ Show only wrong direction events

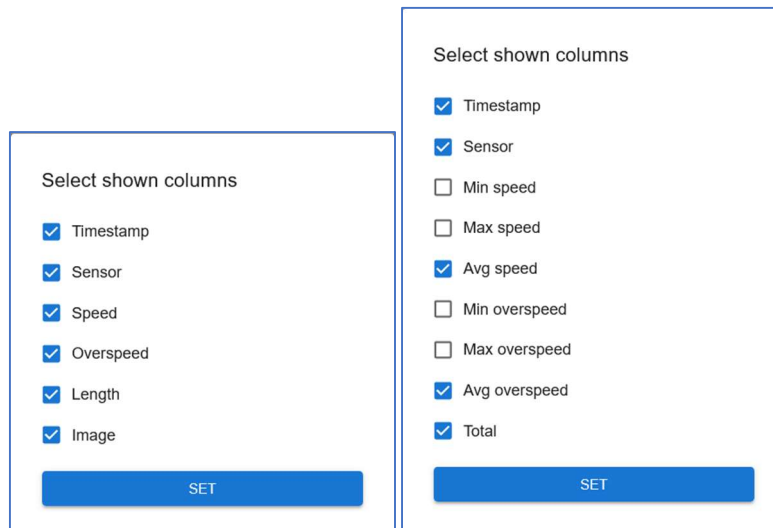
SET FILTER

Picture 16

To access the filter form, click on the "FILTER" button in the main result window. Once the window opens, fill in the relevant fields to apply the desired filters for the results and then press the "SET FILTER" button. To clear the filters later, click the "CLEAR FILTER" button in the main result window.

Field name	Description
Sensors	Filter the results based on the selected sensors.
Timestamp from/to	Filter the results by the selected time range.
Min/Max speed	Filter the results by the selected speed range.
Min/Max overspeed	Filter the results by the selected overspeed range
Filter By (Length)	Filter the results by vehicle length, either by selecting the appropriate "Vehicle category" (small: 0-6m, medium: 6-10m, or large: 10+m) or by providing the "Min/Max length" range.
Show only incorrect crossings	Filter the results to display only those that were marked as incorrect.
Show only wrong direction events	Filter the results to display only those that were detected going in the opposite direction than defined in the sensor settings.

Data columns



Select shown columns

- ☒ Timestamp
- ☒ Sensor
- ☒ Speed
- ☒ Overspeed
- ☒ Length
- ☒ Image

SET

Select shown columns

- ☒ Timestamp
- ☒ Sensor
- ☐ Min speed
- ☐ Max speed
- ☒ Avg speed
- ☐ Min overspeed
- ☐ Max overspeed
- ☒ Avg overspeed
- ☒ Total

SET

Picture 17

To choose the relevant information columns, click on the "COLUMNS" button in the main result window. When the window opens, click on the checkboxes next to the column names you wish to see, and then click "SET".

The columns of the raw result table are:

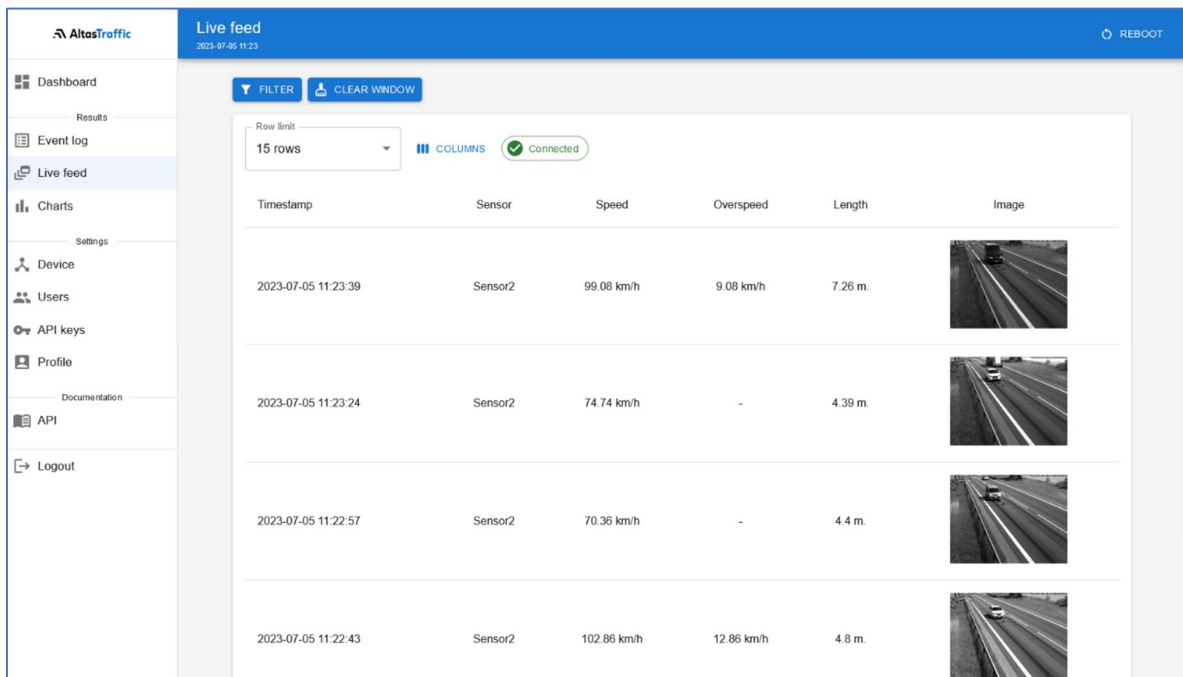
Column name	Description
Timestamp	The timestamp of the result.
Sensor	The sensor that processed the result.
Speed	The calculated vehicle speed value.
Overspeed	The calculated vehicle overspeed value, which is based on the "Speed limit" value provided in the sensor settings.
Length	The calculated vehicle length value.
Image	The image of the event.

The columns of the grouped result table are:

Column name	Description
Timestamp	The grouped time range.
Sensor	The sensor that processed the results.
Min speed	The minimum speed value in the grouped time range.
Max speed	The maximum speed value in the grouped time range.
Avg speed	The average speed value in the grouped time range.
Min overspeed	The minimum overspeed value in the grouped time range.
Max overspeed	The maximum overspeed value in the grouped time range.
Avg overspeed	The average overspeed value in the grouped time range.
Total	The total number of events in the grouped time range.

Live feed

The page presents a dynamic data table that updates in real-time, displaying results once they are processed.

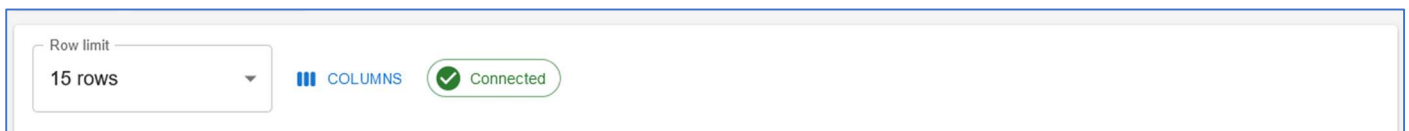


Timestamp	Sensor	Speed	Overspeed	Length	Image
2023-07-05 11:23:39	Sensor2	99.08 km/h	9.08 km/h	7.26 m.	
2023-07-05 11:23:24	Sensor2	74.74 km/h	-	4.39 m.	
2023-07-05 11:22:57	Sensor2	70.36 km/h	-	4.4 m.	
2023-07-05 11:22:43	Sensor2	102.86 km/h	12.86 km/h	4.8 m.	

Picture 18

Connection state

To receive data, the web UI needs to maintain an open connection with the backend server, otherwise, the table will remain empty. On the right side of the action panel, you will find a connection state indicator. It will display either "CONNECTED", signifying successful connection and data reception from the backend server, or "DISCONNECTED", which may indicate a potential issue.

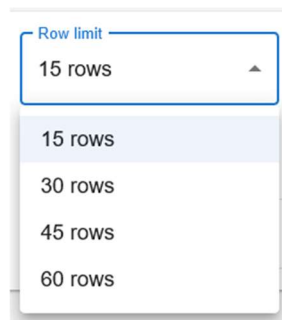


Picture 19

Note: If the web UI fails to connect to the backend server and only the "DISCONNECTED" state is shown, please make sure that there is no problem with the network connection and you are using a newest version of Mozilla Firefox or Google Chrome browser.

Data row limit

The live feed data table may show a limited number of rows. To change the default number of rows displayed, please select a more acceptable "Row limit" value.



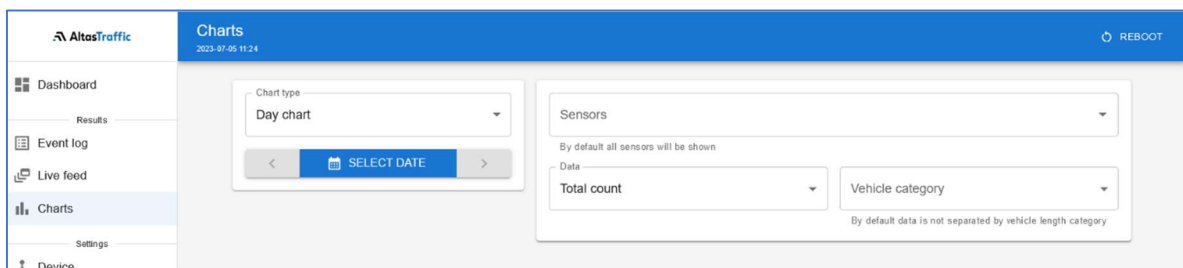
Picture 20

Filter and columns

The filter fields and columns are the same as in the [Event log](#) section on page 19.

Charts

The page visually presents results and statistics in the form of line charts, facilitating easy analysis.

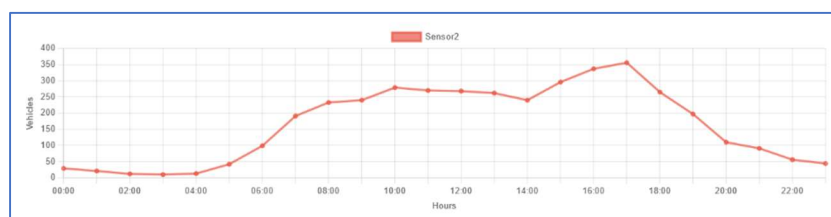


Picture 21

Chart types

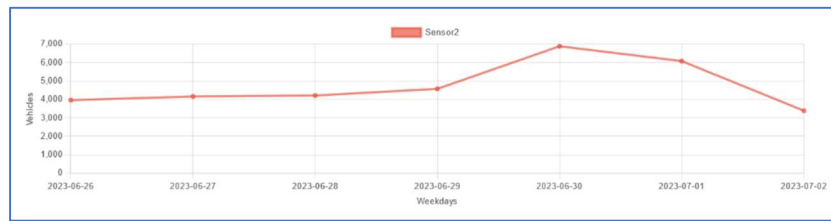
There are three types of charts:

- 1) Day chart – displays the data for the selected date in hourly intervals



Picture 22

2) Week chart – displays the data for the selected week in intervals based on weekdays



Picture 23

3) Month chart – displays the data for the selected month in daily intervals



Picture 24

Chart data panel

Sensors

By default all sensors will be shown

Data

Total count

Vehicle category

By default data is not separated by vehicle length category

Picture 25

Field name	Description
Sensors	Display data only for the selected sensors.
Data	Select which data should be displayed: Data Total count Total count Average speed Average overspeed Incorrect crossings count Wrong direction count

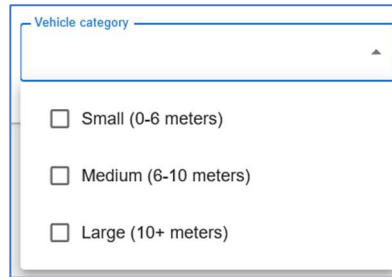
Picture 26

Total count – the number of processed results.

Average speed – the average speed value for each time step.
 Average overspeed – the average overspeed value for each time step.
 Incorrect crossings count – the number of invalid crossings for each time step.
 Wrong direction count – the number of wrong direction events for each time step.

Vehicle category

Display the data segregated by the selected vehicle length category.



The image shows a web interface for selecting a vehicle category. At the top, there is a dropdown menu labeled "Vehicle category" with a small upward-pointing arrow on the right. Below the dropdown, there is a list of three options, each preceded by an unchecked checkbox:

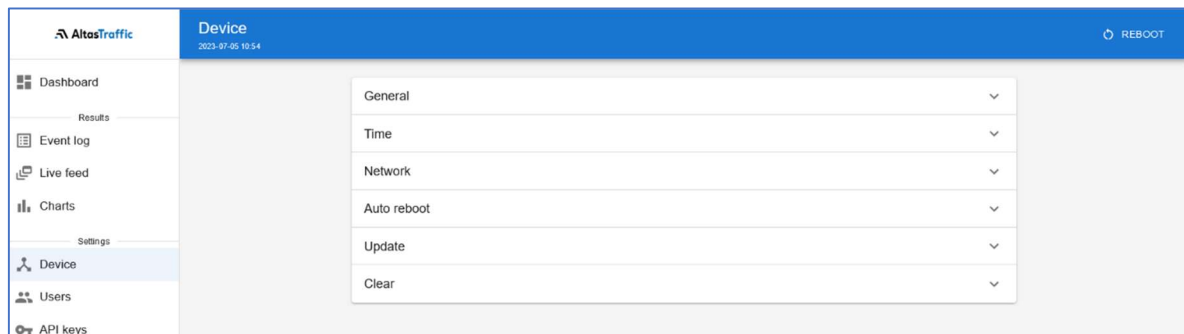
- ☐ Small (0-6 meters)
- ☐ Medium (6-10 meters)
- ☐ Large (10+ meters)

Picture 27

Settings

Device settings

The page allows users to configure and customize various settings related to the device.



Picture 28

General

General

Device name *

traffic-processing-unit

Device name must be between 1 and 64 characters long, containing only alphabetic characters (A-Z), numeric characters (0-9), the minus sign (-).

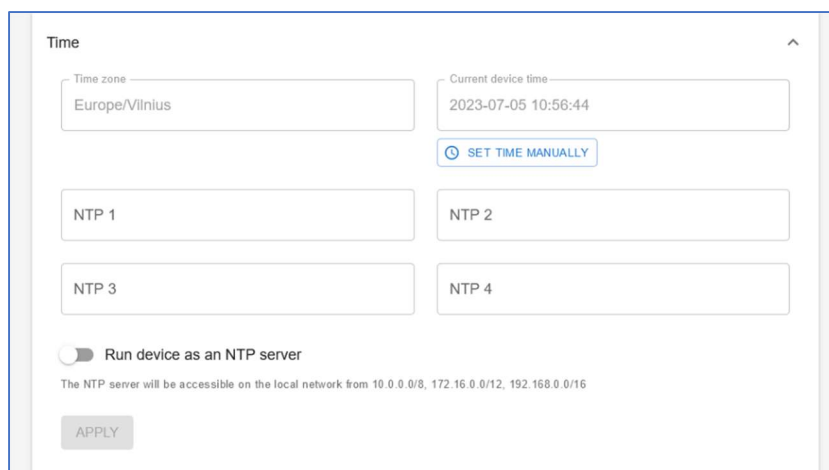
☒ Enable application API

APPLY

Picture 29

Field name	Description
Device name	The device name or hostname field is a unique and human-readable label assigned to the processing unit device.
Enable application API	User-configurable setting that allows users to choose whether to activate or deactivate the ability of external programs to interact with the API.

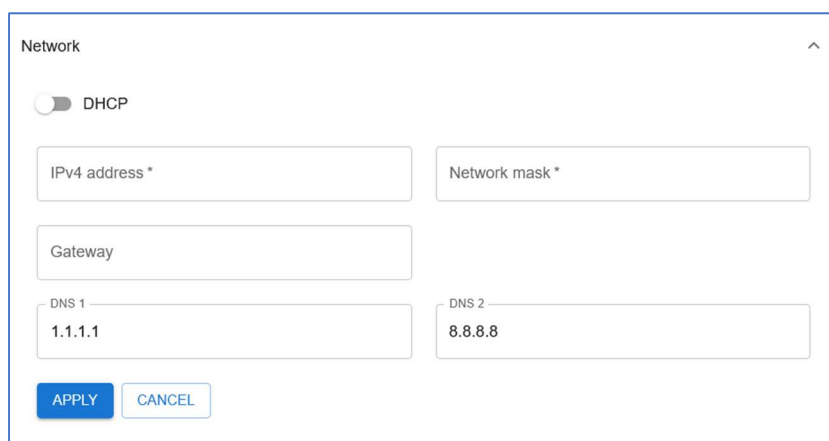
Time



Picture 30

Field name	Description
Time zone	The current time-zone that is set on the device. This field is not changeable. To modify the time zone, please follow these steps: go to "Device -> Clear" and click the "Clear all data from the device" button. After completing this action, you will be prompted to set the base settings of the device.
Current device time	The current device time. To change it, please click on the "Set time manually" button.
NTP 1-4	NTP servers that are used to synchronize the device time.
Run device as an NTP server	Enable or disable the NTP server on the device. When enabled, the device accepts NTP requests on port 123 from the internal network addresses: 10.0.0.0/8, 172.16.0.0/12, 192.168.0.0/16.

Network

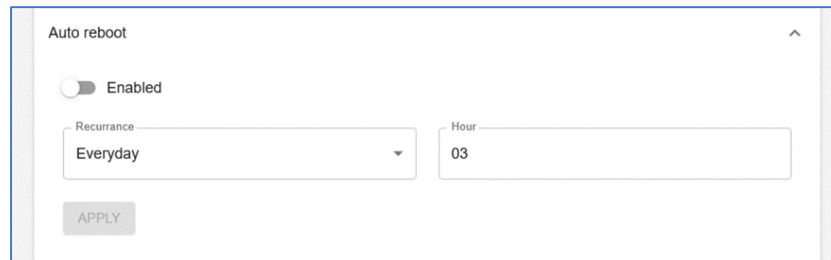


Picture 31

Field name	Description
DHCP	Enables/Disables the DHCP. By default the DHCP is enabled.
IPv4 address	The IP address of the processing unit device.
Network mask	The network mask of the processing unit device.

DNS 1	This field allows you to specify the primary DNS server that your device should use to resolve domain names.
DNS 2	This field is for specifying an optional secondary DNS server that your device can use as a backup if the primary DNS server (DNS 1) is unavailable or doesn't respond.

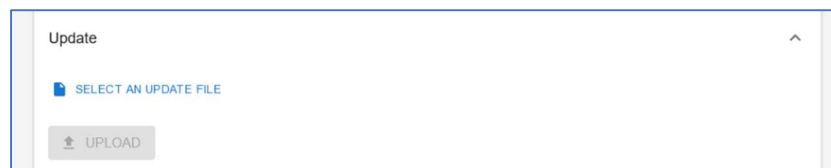
Auto reboot



Picture 32

Field name	Description
Enabled	Enables/Disables the auto reboot fun
Recurrence	The days on which the auto-reboot should be executed.
Hour	The hour at which the auto-reboot should be executed.

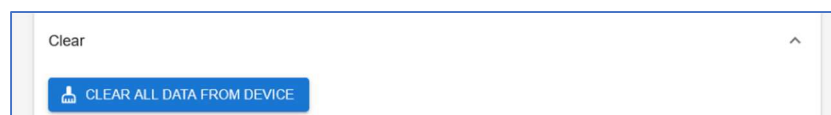
Update



Picture 33

The update page allows users to upload and install the latest software patches, bug fixes, and feature enhancements for their processing unit devices. To upload the update and start the installation, click on the “SELECT AN UPDATE FILE” button, select the relevant file and then press the “UPLOAD” button. The installation process should start shortly.

Clear

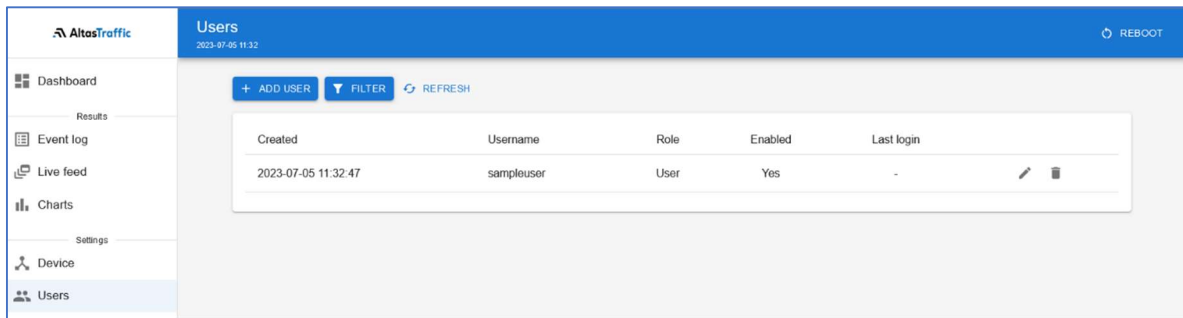


Picture 34

The "Clear" page enables users to clear data and images from their processing unit devices.

Users

The page provides an interface for managing and administering user accounts, including creating, editing, and deleting user profiles, as well as assigning roles.



Picture 35

Add a user

- 1) Navigate to the **Users** page and click on the “+ Add User” button.
- 2) Fill the user form (Picture 36) fields:

Add user

Password must be between 8 and 70 characters long

☐ Admin
 ☒ Enabled

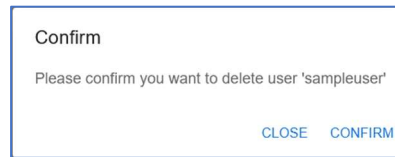
Picture 36

Field name	Description
Username	A unique name for the user.
Password	The password that the user will use to connect to the processing unit.
Confirm password	The repeated password value.
Admin	Assigns the user the administrator rights.
Enabled	Sets the user state

- 3) Click the “**Add user**” button in the user form window.

Remove a user

- 1) Navigate to the **Users** page.
- 2) In the user table, click on the  icon next to the username for which you want to remove.
- 3) Confirm the user removal (Picture 37).



Confirm

Please confirm you want to delete user 'sampleuser'

[CLOSE](#) [CONFIRM](#)

Picture 37

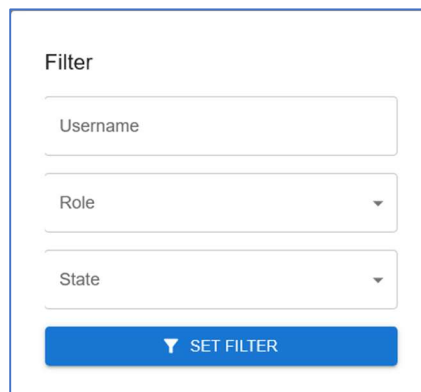
Disable/Enable user

- 1) Navigate to the **Users** page.
- 2) In the user table, click on  icon next to the username for which you want to enable/disable.
- 3) In the opened user form window, toggle the “Enabled” switch On/Off to enable or disable the user.
- 4) Click on the “UPDATE USER” button.

Change another user's password

- 1) Navigate to the **Users** page.
- 2) In the user table, click on  icon next to the username for which you want to change the password.
- 3) In the opened user form window, enter a new password in the “New password” field and then confirm it by entering it again in the “Confirm new password” field.
- 4) Click on the “UPDATE USER” button.

User filtering



Filter

Username

Role

State

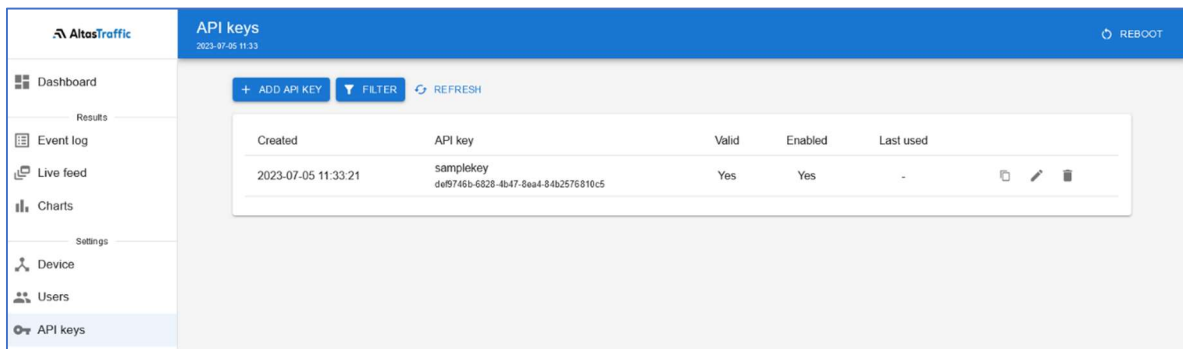
[SET FILTER](#)

Picture 38

To access the filter form, click on the "FILTER" button in the main user window. Once the window opens, fill in the relevant fields to apply the desired filters for the results and then press the “SET FILTER” button. To clear the filters later, click the “CLEAR FILTER” button in the main user window.

Field name	Description
Username	Search for user by username.
Role	Search for user by use role: Administrator or User.
State	Search for user by the user's current state.

API keys



Picture 39

The page allows users to generate, manage, and control access keys used for authentication when interacting with APIs.

Add an API key

- 1) Navigate to the **API keys** page and click on the “+ ADD API KEY” button.
- 2) Fill the user form (Picture 40) fields:

Add API key

API key
1c210384-58a1-4c0f-9865-b69709c6baad

Label

Valid from

Valid to

☒ Enabled

ADD API KEY

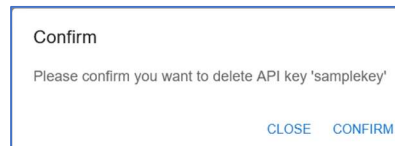
Picture 40

Field name	Description
API key	Generated API key value.
Label	A custom user-defined label for the API key.
Valid from	A timestamp indicating the start of the validity period for the API key.
Valid to	A timestamp indicating the end of the validity period for the API key.
Enabled	Sets the API key state

- 3) Click the “**ADD API KEY**” button in the user form window.

Remove an API key

- 1) Navigate to the **API keys** page.
- 2) In the API key table, click on the  icon next to the API key for which you want to remove.
- 3) Confirm the API key removal (Picture 41).

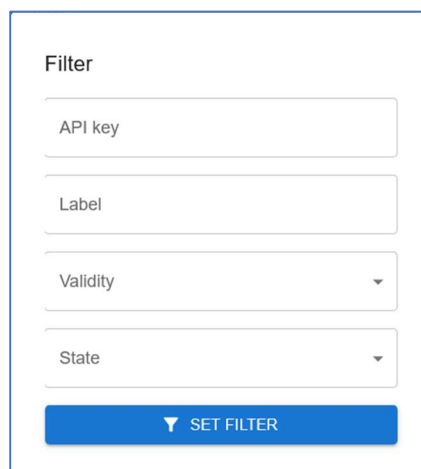


Picture 41

Disable/Enable API key

- 1) Navigate to the **API keys** page.
- 2) In the API key table, click on  icon next to the API key for which you want to enable/disable.
- 3) In the opened API key form window, toggle the "Enabled" switch On/Off to enable or disable the API key.
- 4) Click on the "UPDATE API KEY" button.

API key filtering



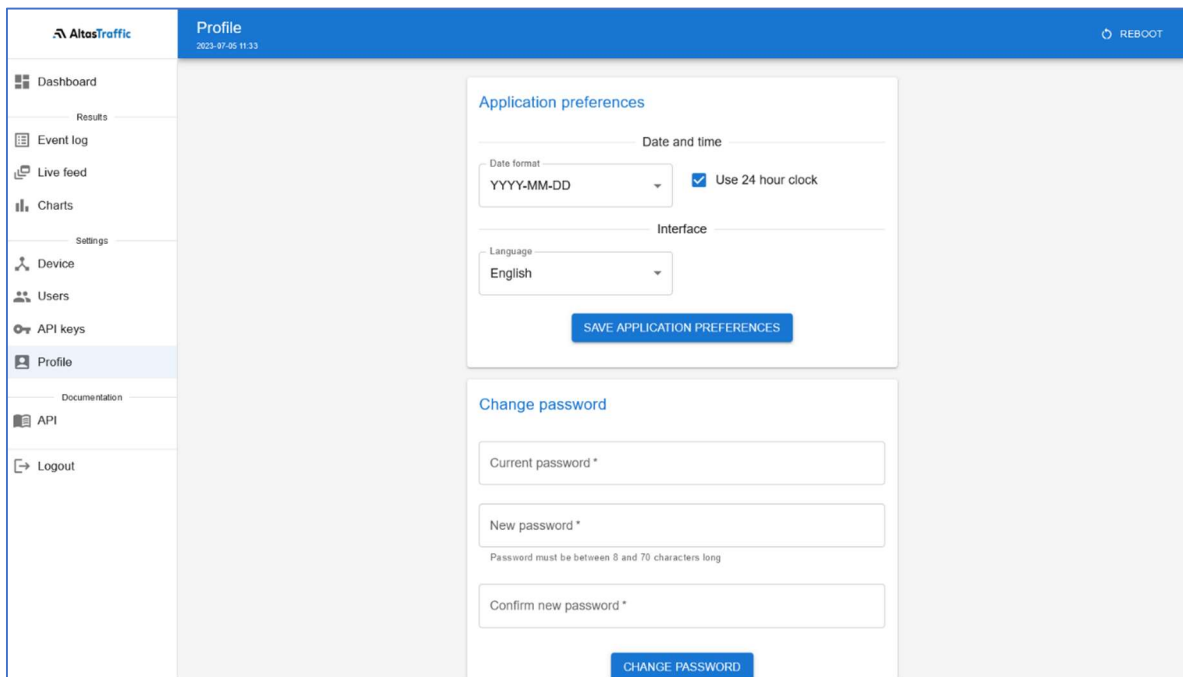
A filtering form titled "Filter". It contains four input fields: "API key", "Label", "Validity" (a dropdown menu), and "State" (a dropdown menu). Below these fields is a blue button with a downward arrow icon and the text "SET FILTER".

Picture 42

To access the filter form, click on the "FILTER" button in the main API key window. Once the window opens, fill in the relevant fields to apply the desired filters for the results and then press the "SET FILTER" button. To clear the filters later, click the "CLEAR FILTER" button in the main API key window.

Field name	Description
API key	Search by the API key value.
Label	Search by the key's label.
Validity	Search by the key's validity.
State	Search by the key's current state.

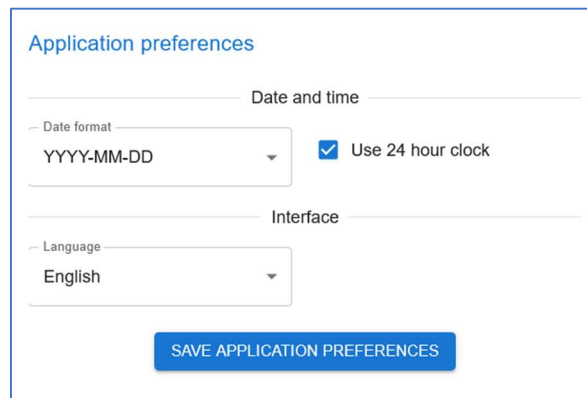
Profile



Picture 43

The page enables users to view and modify their profile settings within the system.

Application preferences



Picture 44

Field name	Description
Date format	The default date format for the application.
User 24 hour clock	The default time format for the application.
Language	The default language for the application.

To save the application preferences, please click on the “SAVE APPLICATION PREFERENCES” button.

Change password

Change password

Password must be between 8 and 70 characters long

CHANGE PASSWORD

Picture 45

To change the password for the connected user account:

- 1) Go to the **Profile** page.
- 2) Provide the current user password in the “Current password” field.
- 3) Enter the new user password in the “New password” field.
- 4) Confirm the new password by entering it again in the “Confirm new password” field.
- 5) Click on the “CHANGE PASSWORD” button.

7. API

Latest API can be found on <https://www.altastraffic.com/downloads>

8. Ecology and utilization

Sensor comes with 36 months of manufacturer’s warranty, after initial sale date. Under the warranty, equipment is repaired free of charge, with the exception that include, but are not limited to damage of mechanical nature, lighting, overvoltage, water ingress due to improper installation etc.



Do not dispose with general waste.

According to EU legislation (2012/19/EC Waste Electrical and Electronic Equipment Directive) old and no longer used electronic equipment should be collected and recycled in eco-friendly way or be reused.

9. Warranty

Sensor comes with 36 months and processing unit with 12 months of manufacturer’s warranty, after initial sale date. Under the warranty, equipment is repaired free of charge, with the exception that include, but are not limited to damage of mechanical nature, lighting, overvoltage, water ingress due to improper installation etc.

10. Service contacts

E-mail: info@altastraffic.com

Website: <https://www.altastraffic.com>