MotoMon®

# DYNAMIC GPS TRACKING SOLUTIONS

www.motomon.com

# How it works

## Product overview

The AutoGPS electronic logbook uses GPS (Global Positioning System) to easily and reliably monitor the movement of your vehicles, personnel or transported cargo.

The detailed electronic logbook is created from automatically processed tracking data. There are more than one hundred different tracking devices, reports and graphs which can be used in many different fields ranging from private use all the way up to corporate fleet management including integration with third party software and equipment.

The sophisticated alert system uses SMS, emails, and reporting to central monitoring stations to make sure that no critical event will be overlooked.

## How it works

Unit installed in the vehicle continuously establishes it's actual position by evaluating signals from GPS satellites. The received data is processed (position, altitude and exact time is extracted) and stored in devices memory buffer.

Local cellular GSM networks [satellite communication devices are also available] are used to transfer the collected data to AutoGPS's application servers. The same system that mobile phones utilize.

Like any ordinary mobile phone, our mobile tracker units include a SIM card which connects to most any GSM operator available.

It is the GPRS data service which is being used to transmit real-time telemetry data to the backend application servers.

Our encrypted server receives data from mobile units, performs the decoding / analysis and stores the results in a replicated data warehouses.

Users access information regarding their tracked vehicles or assets through a common Internet browser in the same way as any other website from any PC, tablet or smart phone.

AutoGPS's application servers which are connected to the public Internet can be accessed from anywhere in the world.

## Beyond regular tracking...

The AutoGPS's features go far beyond simple location and tracking services.

Today's customer requires much more thorough information than simply placing a single point on an ordinary 2D map.

It is commonly required to display the position or trip history utilizing 2D satellite imagery or 3D models. Of course we didn't overlook the Google Street View feature which allows users to "virtually look" around points of their interest.

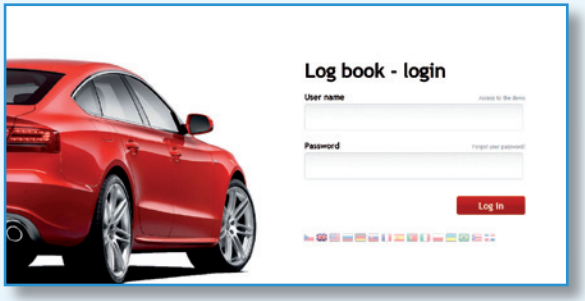
Our mobile unit's capabilities can be further expanded, for example by using a "trip type" switch, which lets you specify the current trip categorization, the driver identification, continuous fuel level monitoring or direct digital connection to vehicle CAN bus.

With the help of an easily attachable expansion module information about temperature, air pressure, humidity, lighting, sudden impacts, vibration and 3D spacial orientation can be collected and transmitted live to the application.

Even the most demanding customer will be pleasantly surprised by the quality of the live video feed transmitted from cameras mounted on the vehicle. This video is also available to smart phone users through our proprietary application (supports OS Android or iOS).

We can even continue tracking position of mobile assets when GPS satellite signal is lost through our GSM Localization feature [see page 10].

*Login screen*




## Application Examples

The AutoGPS system was designed with one idea in mind – to be as versatile as possible.

As a result of this effort, users can now choose one of fourteen languages and display data in any time zone in the world. It is also possible to monitor cargo, vehicles, heavy machinery, agricultural equipment or people. If it Moves, We can Track it!

It is becoming more and more common to track high value or pharmaceutical air/sea cargo transports requiring climate control telemetry to be documented and reported.

# What can it do?

## Logbook

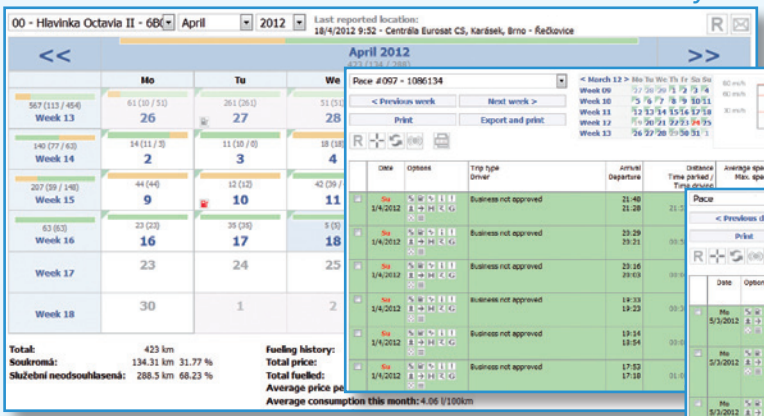
The logbook clearly displays all the important information of the vehicles trips and position history.

You can easily switch between daily, weekly and monthly views. Based on the selected view the summary statistics of the number of trips, mileage, idle time, and entered expenses are displayed appropriately.

Important operations such as entering information about fuel, travel expenses, the type and purpose of travel, are all accessible with one click.

Separate colors distinguish the different types of trips both in the logbook and in the speed graph. At first glance, you can see when and how quickly the vehicle was moving or if vehicles exceeded preset speed limits.

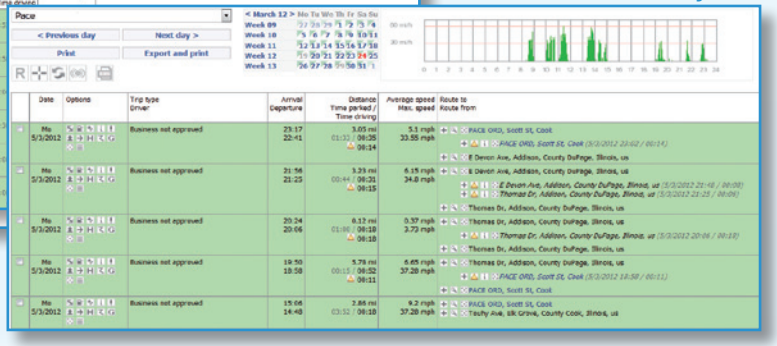
*Monthly View*




*Weekly View*

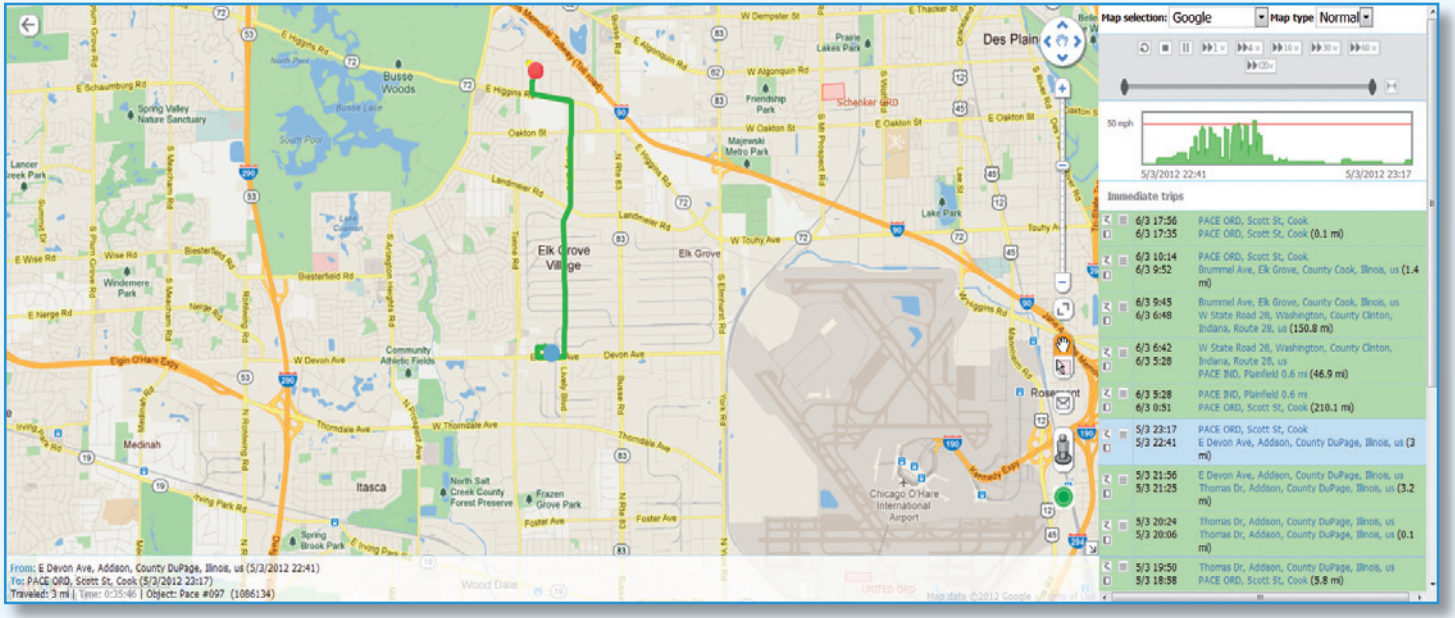



*Daily View*



## Trip display – map view

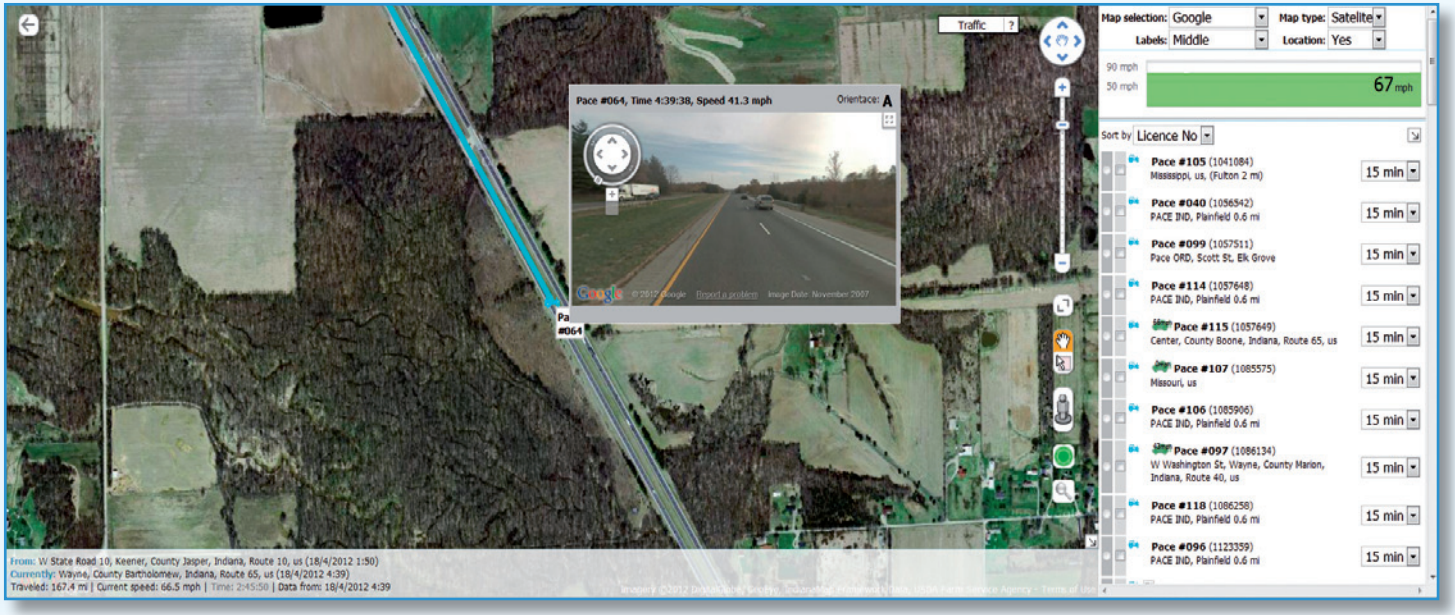
Displaying trips on the normal map is perhaps the most commonly used method to preview vehicle activity. You can display one or multiple trip routes simultaneously and switch between them. The selected trip can be re-played at an accelerated rate using the integrated player. Separate colors inform you of the different types of the whole trip or any of its segments.



# What can it do?

## Trip display – satellite view, street view

In addition to displaying on the normal map the system also offers visualization in satellite aerial imagery. The integrated satellite maps can be rotated and viewed from four different headings [North, South, East and West] or you can use the enhanced Google Street View to virtually walk through the city streets (where it is supported).



## Real-time tracking, live video transmission

Tracking mobile assets in real-time is undoubtedly our customers' most popular function.

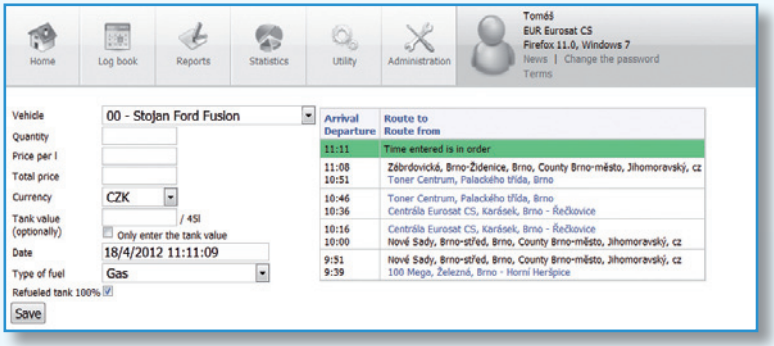
With only a few seconds delay customers are provided detailed information about the location and behavior of the asset being monitored. The current address, GPS location, speed, altitude, and traveled route displayed on the map. This view is enhanced with Google's Street View system automatically oriented in the direction of travel and transmission of "live" video from cameras mounted on board the vehicle. All of which can be displayed for multiple vehicles simultaneously.

# What can it do?

## Refueling , maintenance expenses and electronic credit card payment systems

Expenditures such as fuel and maintenance can be entered into the system manually by the user or setup to be automatically imported from data files of electronic payment systems.

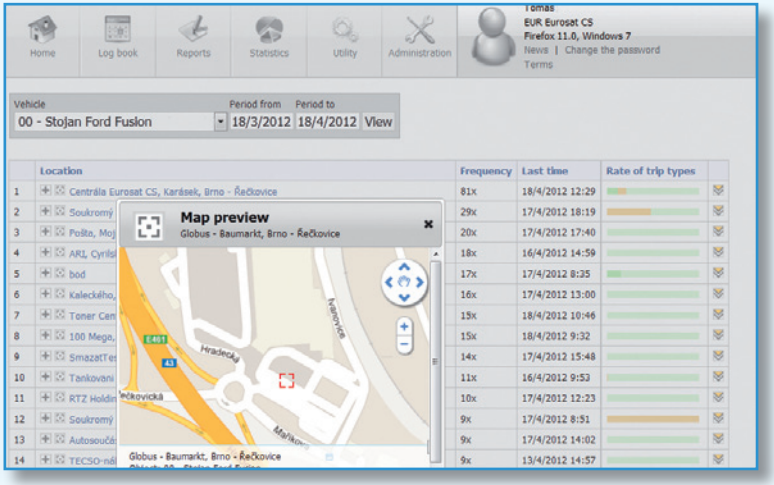
The program automatically converts the currency by the applied current rate, monitors cost and average consumption and draws attention to abnormal values.




## Frequent destinations

Another popular feature is the ability to display frequent destinations.

The standard default table shows the vehicle's frequently visited destination addresses times counts, combined with easily accessible preview on the map.

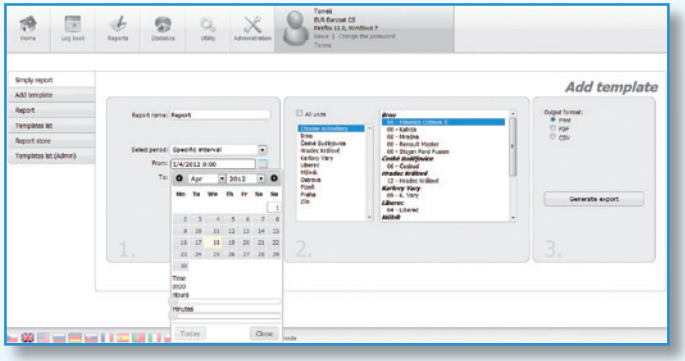


## Reports

Reports and data exports are indisputably one of the most important functions of every mobile asset / fleet management application. One could say that without comprehensive quality reporting capabilities the application functionality is diminished.

It's not only about the number of reports that the system can generate (we offer over 100 different reports and exports available), but more about how easily and intuitively you can use them.

Our report generator is based on a very intelligent template system, scheduling planners and data warehouses.




**For example, you can very simply:**

- store your most frequently used reports as a "favorite" for repeated quick use
- store your work in progress on report templates in data storage for later completion
- edit, clone, and copy templates already created
- share the template with other users within the group
- create periodically generated reports based on "rolling" time intervals
- save generated reports into the data warehouse storage for later processing and reviewing
- plan templates that start at a specific time and allow resulting report to be delivered by email
- use comprehensive functionality description attached to predefined reporting templates


The report data can be freely exported to multiple export formats: tables, graphs, PDF, MS Excel format, CSV, TXT, HELIOS, SAP, ...

# What can it do?

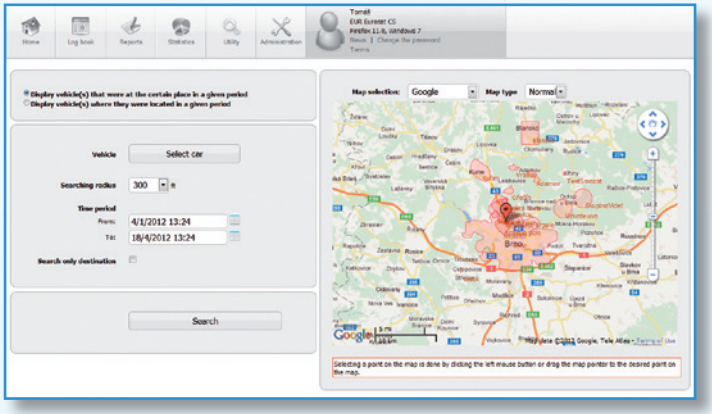
## Searching based on time or geographic location

The logbook system allows users to easily search historical data to generate a snapshot of where a vehicle was located at a specified time or geographic location.

## Vehicle Groups Detection (VGD)

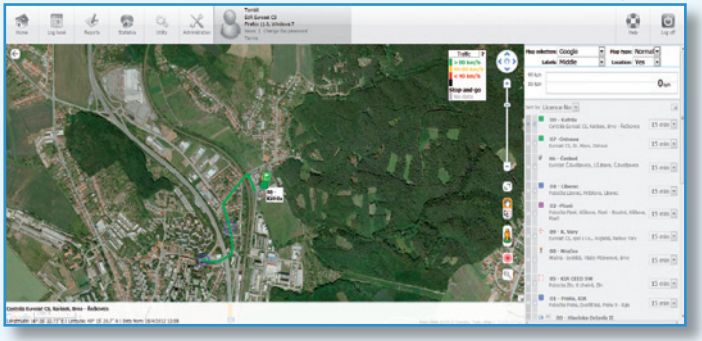
By filtering the historical data containing the detailed vehicles movement information users can render the listing of addresses where more than the specified numbers of vehicles were gathered within a given time interval.

*Vehicle Groups Detection (VGD)*




*Normal Map View*

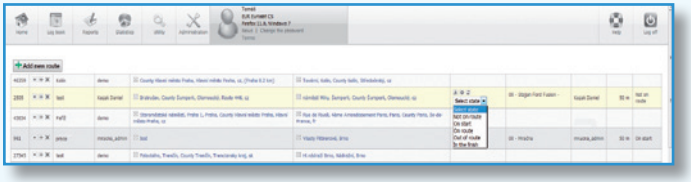
*Satellite Map View*



# What can it do?

## Route Planning – "RouteWatch™"

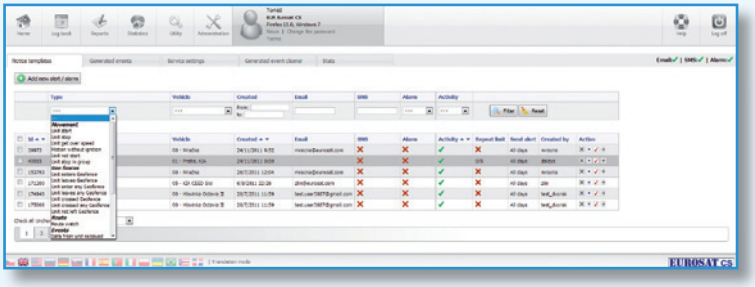
The user can create and save routes which the assigned vehicle(s) must follow. The activated "RouteWatch" system then ensures that the vehicle(s) assigned to the route do not deviate from the pre-defined path by more than the allowed preset tolerance.



## Reminders, tasks, alerts

System reminders, tasks and alerts inform users about various types of events occurring during the vehicle(s) daily operation. These events are stored in the data warehouse, sent via SMS, e-mail and with an audible signal alerting the Central Monitoring Station operators. Records of generated events can also be used as a source of data for different types of reports.

**Examples of some useful types of information:**



- times and dates of service inspections
- beginning and end of trips
- exceeding maximum speed limits
- detection of sudden fuel loss
- entry, exit or transit across geographic areas
- border crossing of different countries or states
- movement of vehicles outside permitted hours of operation
- driver authorization failure
- extensive unit communication outage
- emergency button alert
- main battery power loss
- harsh driving, acceleration, cornering or braking
- temperature, humidity, lighting or atmospheric pressure alerts

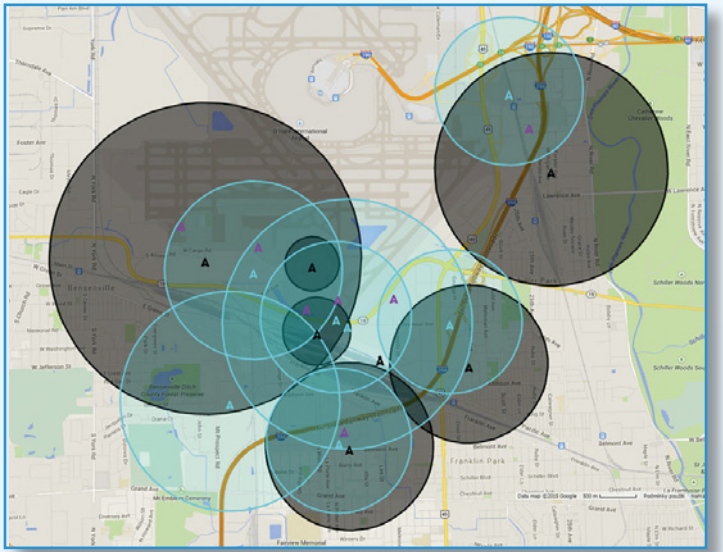
# What can it do?

## GSM / Cell Tower Localization

Often when tracking cargo in tractor trailers when the doors are closed the ability of the GPS tracking device to get the GPS signal is lost. If you shipment is going from New York to Chicago you will not know anything after it is loaded in New York until it emerges out of trailer in Chicago. Our GSM/Cell Tower Localization feature will allow you to track even when GPS signals are lost.

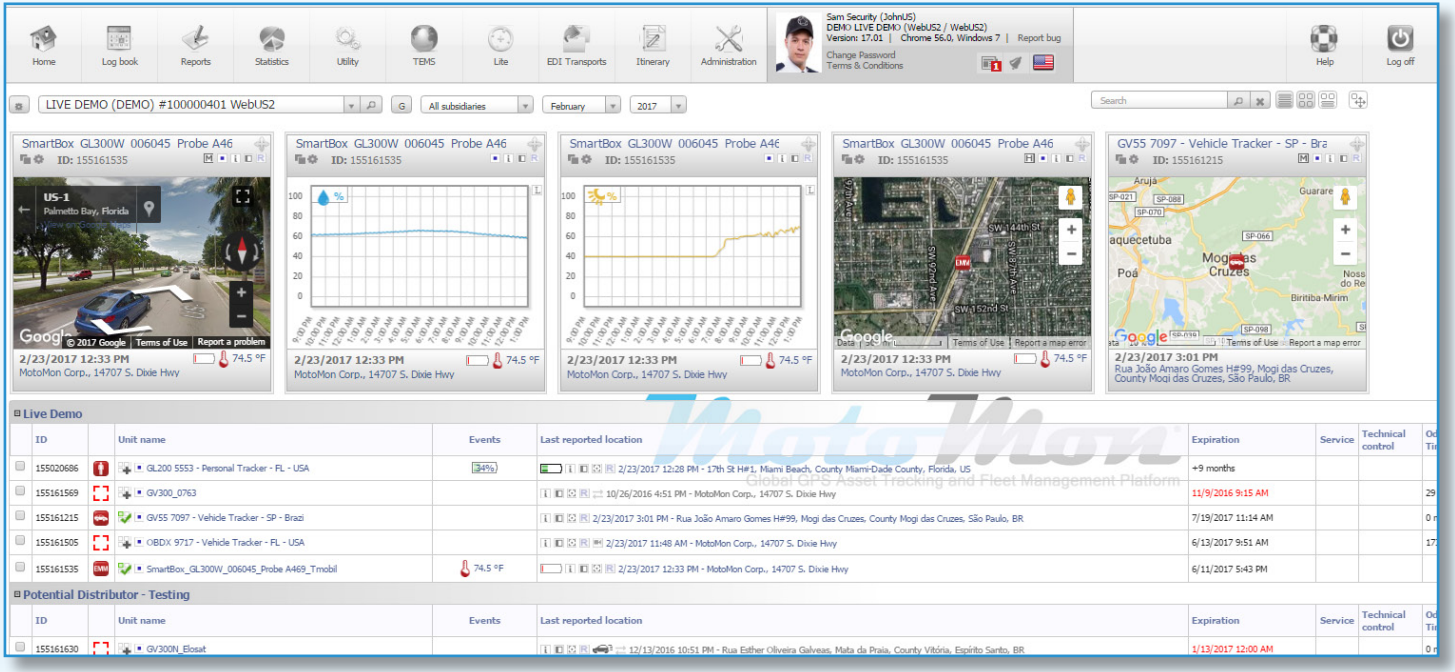
With the AutoGPS tracking platform if GPS signal is lost it dynamically switches over to GSM Localization. You will see cargo moving down the highway in near real time. This feature keeps you connected and tracking as long as there is cellular coverage.

*GSM Localization*



## Home Screen TILES

TILES in the home screen allow you to monitor multiple vehicles or mobile assets along with Probe telemetry data all at the same time on one screen.



# Enhanced Features

## Native applications for smart phones and tablets

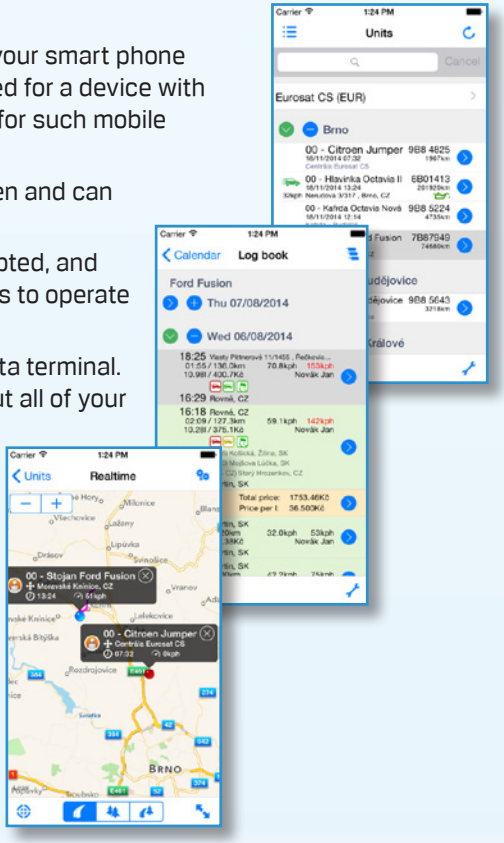
Most all AutoGPS functions can be accessed through the Internet web browser of your smart phone or tablet. The user experience is degraded by the web interface that is not optimized for a device with a small touchscreen. We have therefore created a native client written specifically for such mobile platforms (iOS and Android).

Application interface is highly optimized to be displayed on the mobile device screen and can be fully managed through the touch control.

Data communication between the client and the central servers is of course encrypted, and only minimal amounts of data are being transmitted. This allows mobile applications to operate even through basic GPRS data connection.

The installed program can transform supported smart phone devices into a true data terminal. You can then enter the information about fueling, odometer synchronization or input all of your traveling expenses.

Obviously you can track your vehicle in real time and browse through their list of historical trips. There is also the option to view live video feeds, as long as the vehicle is equipped with the MDVR (Mobile Digital Video Recording) package.




android

Works with iPhone

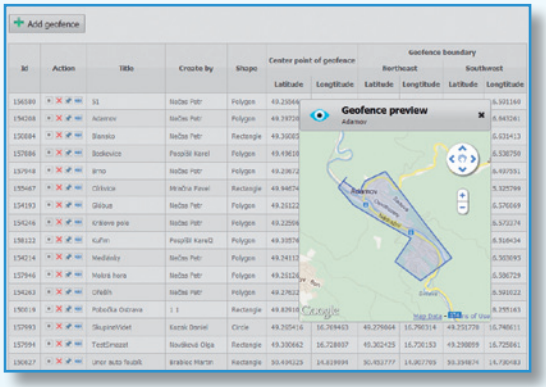
# Enhanced Features

## Geofences

The AutoGPS's application user can easily create multiple enclosed geographic areas of arbitrary shape, also commonly referred to as a virtual geofences.

For these areas it is then possible to associate system alerts that inform the user if the monitored asset breaches the virtual geofence.

*Geofences*



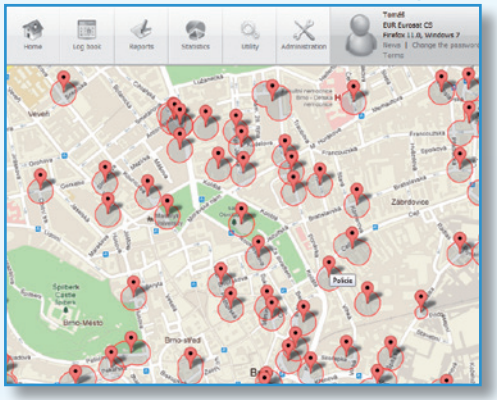

## Border Crossing Detection

If the user wishes to do so he can activate the automatic detection of country or state border crossings.

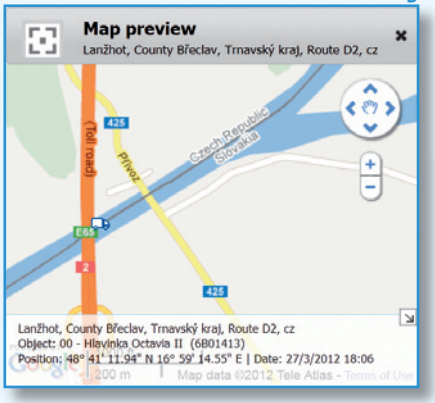
The system then automatically pinpoints the place and time when the vehicle crosses a territorial border.

Reports or exported data generated from these crossings can then serve as a basis for accurate calculations of state gas tax payments.

*User defined points*



*Border crossing*




## User-defined points

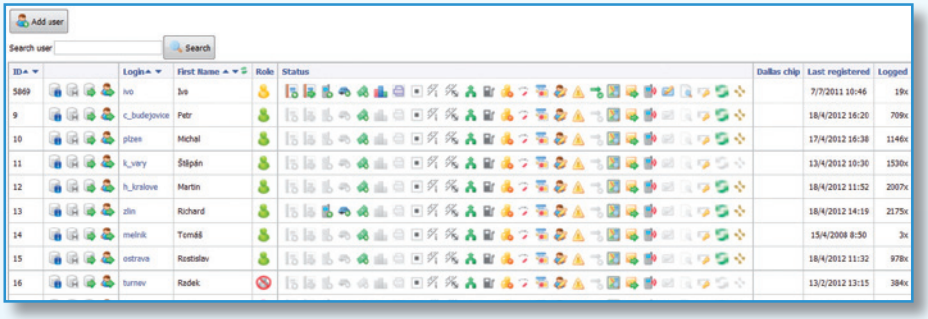
User-defined points allow the user to assign arbitrary text to any point on the map and add other useful information.

User defined point names are then displayed in the Logbook and get shown on the map instead of automatically-generated location address.

# Enhanced Features

## Permissions and system user roles

*User Administration*




Individual system users can have different functions, roles and permissions. An employee working as a driver can only see details of his own vehicle. He can select between different trip types (for example private or business), enter the odometer readings, refueling information and other associated travel costs. The user roles can be assigned at once and then fine-tuned as required by adding and/or removing individual privileges. Managers can generally see and edit most everything. Additionally they can add and remove vehicles or associate employees as a driver of a specified vehicle.

## Monitoring environmental values

This is done by EMX probe which can be attached to the portable GPS tracker which is then used as a communication terminal.

Directly from the AutoGPS application the EMX probe can be programmed to measure temperature, light, humidity, air pressure, sudden impact detection, vibration and 3D orientation. After connecting the external sensor, it can then measure temperatures in the range of -100 °C to +200 °C. The measured values are transmitted in real time to the AutoGPS servers and displayed to the operators through interactive graphs.

*EMX Probe*


Each measured variable can have threshold alarm levels assigned through the application interface. If any of these levels exceed the preset tolerance this is considered to be an alert condition and a system alert is generated.

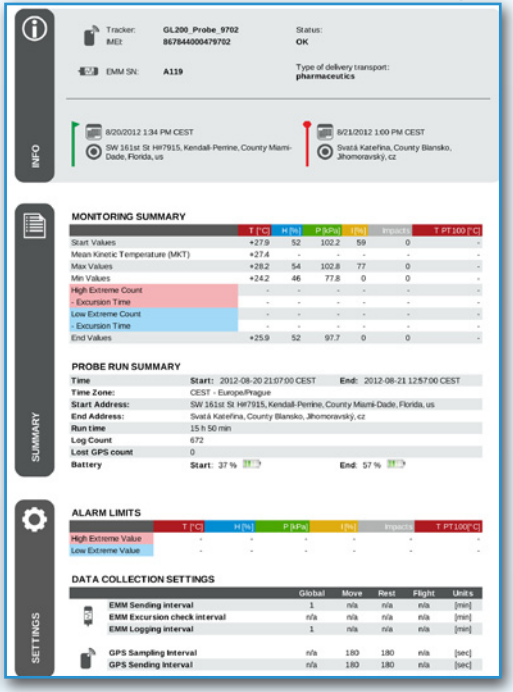
## System T.E.M.S.

Reports from the Transport Environment Monitoring System (TEMS) data can be automatically generated when the device arrives at its destination or when the cargo carton, pallet or container is opened and can also be generated on an as-needed basis.

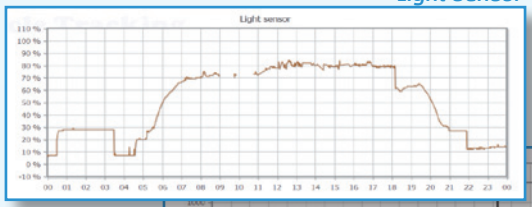
The report is easy to understand with the first page telling the user if there were any excursions from their programmed parameters. If no excursions, a green check mark appears. A red X indicates excursions and the data is appended for review.

This allows for rapid decision making by quality assurance personnel to determine if the cargo product has been compromised.

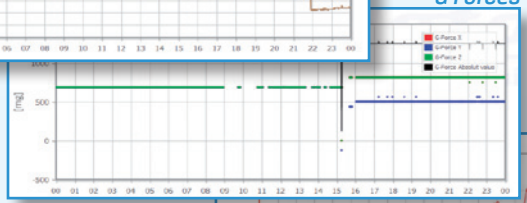
*TEMS Report*



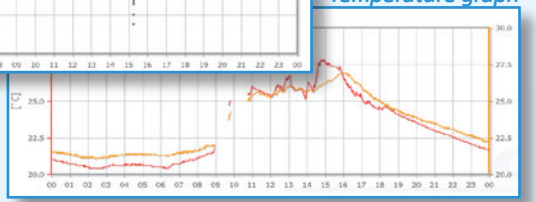

*Light Sensor*




*G Forces*




*Temperature graph*



# Enhanced Features

## Using built in Epsilon or ultrasonic fuel sensor

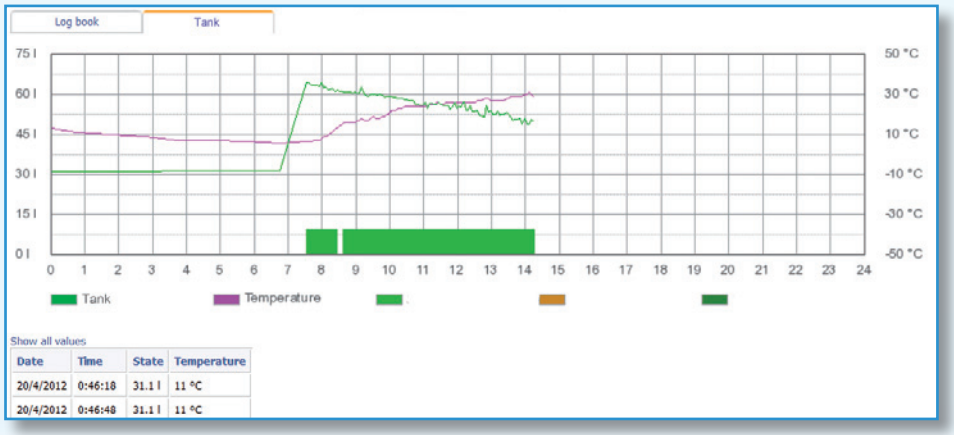
The AutoGPS application supports several direct or indirect fuel level measuring methods.

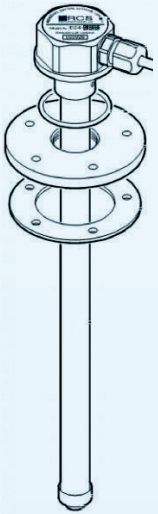
As an alternative solution for vehicles that do not support direct connection to the CAN bus, we offer support for Epsilon fuel sensor rod or ultrasonic sensor.

The sensor measures changes of its capacity which is a linearly dependent on the actual level and temperature of the fuel present in the tank. The measurement accuracy is typically better than 10%.

The acquired capacity changes are converted to digital data, processed by the backend servers and accessed through the AutoGPS application. The fuel level changes are continuously monitored even when the vehicle is parked and its ignition is off. If there is a sudden drop in the fuel level measurements the theft alert event will be triggered.

There could be up to four sensor rods or ultrasonic sensors installed on one vehicle simultaneously.



## SmartBox®

SmartBox combines real-time GPS tracking, surrounding environment sensors, external battery for long life, all in one small magnetic waterproof box. Special sensors measure temperature, humidity, atmospheric pressure, light levels, 3D orientation and impacts.

GPRS tracker adds altitude and GPS position and transmits all the information to our server in real time via mobile data. Our servers process the data, allowing you to view it in graphs, maps or generated alerts.

Power management module can extend 12aH battery life by up to 4 times longer!

- Monitor the temperature of valuable, perishable, chilled, or frozen foods during transport and storage.
- Ensure the integrity and compliance of pharmaceuticals.
- Receive alarms if fragile goods are subjected to shock or impact.
- Get notified if a container or carton is opened prior to arrival at its destination.
- Monitoring of facilities, vehicles and independent shipments.
- Internal 3-axis accelerometer for power conservation and motion detection
- Quad band GSM/GPRS 850/900/1800/1900 MHz
- Dimensions 145x95x34mm
- Internal WCDMA/GPS antennas
- CE/FCC certified


# Enhanced Features

## Route Planner Module

With the RoutePlan electronic logbook module you gain the ability to easily track and plan service routes, making your deliveries or service calls much more efficiently. You create your itinerary by selecting a contract/job from the logbook calendar and then click on the map. Repeat until competed. Prepared routes are then pushed to drivers via mobile application.  Drivers can accept or edit through the app if necessary.  Finally, it navigate tech/driver to the contract jobsite using smartphone or tablet.

## QR or Quick Response Code Tracking

You are now able to track any mobile asset such as a garbage dumpster simply by scanning a QR code. Place QR code on your mobile asset and when it is picked up and dropped off worker scans the code. GPS coordinates from the smartphone is sent and recorded to our servers. All of the logbook functions are the same but it does not require any hardware, installation, power source, sim card, or data plan.

Knowing where your assets are at all times will not only help logistically but also allows you to maximize your return on them. This is by far the most economical way to manage your mobile assets all over the world.

# Enhanced Features

## EDI Messaging

EDI is exchange of documents ele ctronically instead of being handled by people. Having people involved slows down the processing of the documents and also introduces errors. Instead, EDI documents can flow straight through to the logbook application servers and processing can begin immediately.

We have full service integration of EDI messaging through third party systems into our tracking logbook.  This allows you to manage all your shipping logistics information in one platform.

# Frequently asked questions

## How frequently is tracking data refreshed for viewing?
In the Real-Time tracking mode data comes into the servers as quick as every 5-10 seconds.

## Are tracking devices difficult to install?
Basic vehicle/asset installation is 3 wires, ground, constant power, and power that goes on / off with the ignition. We also have portable devices [SmartBox, see pg. 19] which do not require any installation and can run for 6-18 months.

## Can I control anything in the vehicle/asset, like the starter?
Most all devices have multiple controllable Input/Outputs. For example you can disable the starter, get alerted when alarm system goes off, lock / unlock doors and more.

## What is involved in maintaining the tracking device?
There is no maintenance required. Once GPS tracking device is installed you are ready to go.

## What happens if the GPS signal is lost, like putting cargo into trailer?
When cargo goes into trailer you likely will lose GPS signal but with MotoMon's GSM Localization you can continue to track going down the road.

## What kinds of reports are available?
You have access to almost 100 reports. If for any reason you need a customized report we will work with you and create it. We can easily do this as we are the creators of the tracking platform, not a reseller.

## Will I get free upgrades?
Yes, we continually upgrade and monitor our web-based software is to insure the highest level of service and features available in the industry.

# Accessories

## Technology for hardwired installations

Hardwired vehicle GPS tracking devices are the cornerstone of most tracking systems. AutoGPS has the unique ability to support a long list of assorted products and accessories from many different manufactures.

Ranging from simple products that support only the basic GPS monitoring, up to sophisticated devices capable of connecting to the CAN bus, identifying drivers and measuring actual fuel levels.

Today's commonly installed features include trip type selection switches and RFID or Dallas identification chip readers.

The processing of status information about the devices connected to digital or analog inputs of the GPS tracking box has become an easy and straightforward procedure.

Functions of installable accessories are not limited to a passive data collection. There are remotely controlled outputs available which can be used to instantly immobilize a stolen vehicle.

## Tracking of people, animals and cargo

The technology used to track people, animals or goods is fundamentally different from the technology used for vehicle tracking. It requires a small size unit, light weight, water-resistance, maximum sensitivity GPS receivers and the longest possible functionality on a single battery charge. After adding the SmartBox, a waterproof magnetic housing with external battery and 3D motion sensor the operational time can be extend by several months.

The wide range of supported personal tracking equipment can be remotely configured through the user friendly AutoGPS application. This allows you to quickly define optimal control settings parameters for all of your tracking devices.


*Automobile GPS unit*


*Personal tracker*

*Automobile GPS unit*


*Mobile Digital Recorder*

# Testimonials

## Publix Supermarkets

"Mr. Moder, Thank you for all your assistance in the lease of the GPS tracking units we acquired from MotoMon. As you know, we did make an arrest from these thefts and it would not of been possible without the use of your product and the ease of tracking that is available on your dedicated servers. I appreciate all the time you took with me on the phone and in person to assure all our needs were met."

Robert Salazar
Region Loss Prevention Specialist
Publix Supermarkets

## OnTrack Rastreo Satelital,SRL

"As a distributor and customer for more than 5 years I can tell you the MotoMon tracking software and almost any hardware together are a very powerful management tool. The platform has all the features to make your fleet work in a better way. "Efficiency" is the number one priority with this system, and it can give you fast results when this technology is installed"

Raúl Eduardo De León
Owner/Manager
OnTrack Rastreo Satelital,SRL

## CMG - Cargo Management Group

"When we started working with MotoMon few years back they suggested we use their newly developed device called the SmartBox to track our customers freight forwarding shipments. The SmartBox is a customized magnetic box which contains inside a large re-chargeable battery, GPS tracker and probe which in addition to position gives our customers live information on temperature, light, humidity, and more. We started with one to test and now have grown to over 25 unit. Customers have learned to depend on this shipping feature and ask for it most all the time."

Italo Teran
Financial Chief
CMG - Cargo Management Group

# Benefits

## Why use AutoGPS system

The essential elements that will save you money:

- Decrease the number of private trips done on company time, overview of working time efficiency
- Reducing vehicle wear and tear
- Fuel savings and reduced service costs
- Transparent fleet usage, the ability to identify inefficient vehicles and drivers
- Management and control of vehicles movement in fleet logistics based companies
- Synoptic fuel consumption control helps to reduce theft
- Improved vehicle security – ability to locate vehicle in case of theft
- insurance discounts and reduced downtime due to stolen assets

## Case Study

The following savings are based on a vehicle driving an average of 40,000 miles yearly.

Using the Auto-GPS software can typically reduce mileage driven by up to 20%.

This 20% will either not be driven at all or will be properly identified as private trips. When we estimate the approximate fuel cost to be $.35 per mile, the fuel saving would be $2800 per year per vehicle.

### *Table of potential savings:*

| | 1 vehicle | 2 vehicles | 3 vehicles | 5 vehicles | 10 vehicles |
|---|---|---|---|---|---|
| 1 year | $2800 | $5600 | $8400 | $14000 | $28000 |
| 2 years | $5600 | $11200 | $16800 | $28000 | $56000 |
| 3 years | $8400 | $16800 | $25200 | $42000 | $84000 |

There are additional savings like reduced wear and tear, less frequent services, savings from reduced insurance and more.

**The return period of the initial investment is usually less than one year.**

# Options without borders

## How does it work abroad ...

To determine the current position while abroad you can use one of the following methods or a combination thereof:

- Query the actual location via SMS
- On-line tracking by GPRS data


## Query the actual location via SMS

In order to have this function working properly you first need to activate "sms roaming" on the vehicle's sim card. Then when you click on the "Locate" button the system immediately sends an SMS query directly to the tracking unit.

Through the roaming in friendly GSM network the unit can respond with a text message bearing the most recent information about its position.

The received position is stored in the database as well as being displayed on a detailed map.

## On-line tracking by GPRS data

If the SIM card inserted in the mobile unit is benefiting from an active GPRS roaming Service [our sims can operate in over 150 countries], then the user will enjoy the tracking system in the same way as if the vehicle/cargo/mobile asset was in the home GSM network.

If the asset is expected to be operating permanently in the foreign country other than the users home network, it is often cheaper to equip the tracker with a local operator's SIM card having activate GPRS service. After proper configuration the unit will use the Internet to send its tracking data to AutoGPS's backend server no matter where it is currently located.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