



ENAIK00N DGPS-enabler version 2.6

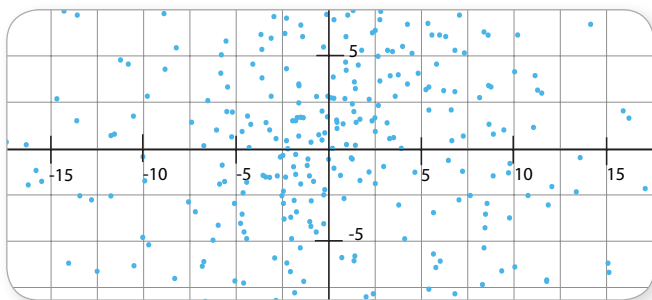
DGPS server for accurate GPS positions

The ENAIK00N DGPS-enabler is an ENAIK00N M2M-commserver service that corrects all incoming GPS positions based on DGPS correctional data.

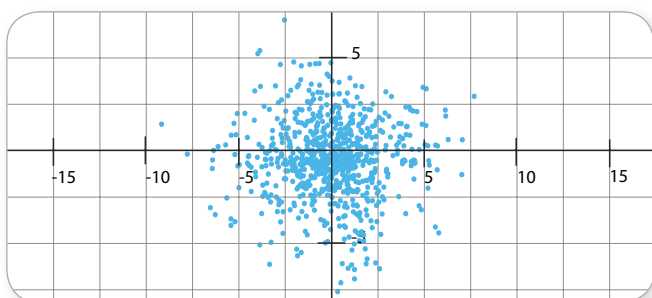
The data needed for the correction is provided from many parts of the world, either through governmental or commercial institutions.

ENAIK00N will let you know if such a source for correctional data is available in your area or if you need to set up your own DGPS reference station.

GPS positions without DGPS correction



GPS positions with DGPS correction



Features of the ENAIK00N DGPS-enabler web service

- allows you to receive and store DGPS correctional data from any source
- corrects the GPS information as soon as it arrives on the server and stores the corrected GPS position along with the original data in the ENAIK00N M2M-commserver database
- all data corrected with the ENAIK00N DGPS-enabler web service can be used with all software provided by ENAIK00N (e.g. inViu pro, inViu web, inViu touch, etc)
- all GPS data arriving at the ENAIK00N M2M-commserver from ENAIK00N tracking devices, or smartphones with ENAIK00N software can be corrected by the ENAIK00N DGPS-enabler web service

Precise GPS information will significantly improve the quality of GPS dependant reports.

The ENAIK00N DGPS-enabler improves the accuracy of the GPS coordinates (by approximately 5 to 10 times) for a very low cost.

Typical accuracy is 2 - 4 metres (6.5 - 13 ft) compared to 12 - 50 metres (40 - 131 ft) with a normal GPS service.

ENAIKOON DGPS-enabler on site package features

The ENAIKOON DGPS-enabler on site package can be used to set up your own DGPS reference station. Such reference stations are required if there is no source of correctional data approximately 1,000 km around your tracked mobile object.

The ENAIKOON DGPS-enabler onsite package consists of the following components:

- the necessary hardware to generate correctional data for the area under observation, and it can be used anywhere in the world
- a server-based software that stores the corrected data in a PC database

The prerequisite for data transmission to the ENAIKOON M2M-commserver is internet connection (e.g. DSL with a reasonably priced flat rate).

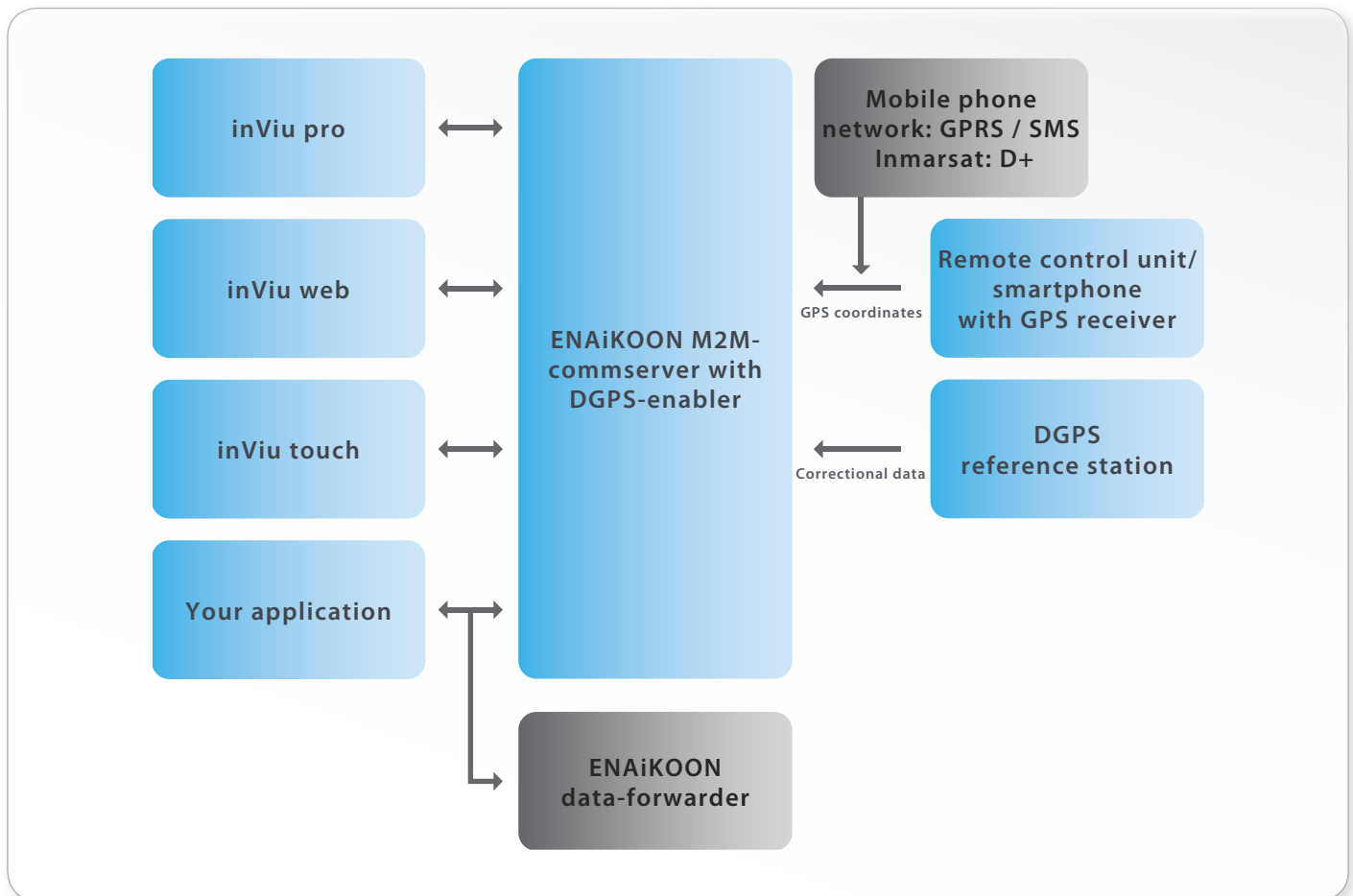
DGPS background information

With DGPS, not one, but two GPS receivers are used. One is the regular GPS receiver of the trackable, while the other is a fixed and mounted unit (e.g. on a building) called a "reference receiver".

The coordinates, where the reference receiver is mounted, have to be precisely measured, during the installation of the reference receiver.

The reference receiver receives inaccurate coordinates from the GPS satellites, then the reference receiver compares these coordinates with its own coordinates, which were precisely determined, during its installation. Then the reference receiver calculates the vector (distance and direction) between the true position of the reference receiver and the position, that was recently reported by the GPS system.

This vector is then transmitted to the server, where the regular receiver also sends the inaccurate coordinates. The coordinates that were measured by the regular GPS receiver are then corrected by adding the vector that was calculated by the reference receiver to the coordinate of the normal receiver.



Since the inaccuracy of GPS is variable, the ENAIKOON DGPS-enabler stores correction vectors every few seconds, along with a timestamp.

As the coordinates coming from the ENAIKOON locate remote control units include a timestamp, it is possible to correct the GPS position of a given trackable at any given time, now or later (e.g. during the billing).

Quite often, DGPS reference stations are provided by large institutions, which are also responsible for the transmission of the correctional signals.

It is possible to use one of these sources for the signal or to set up your own reference station. This is inexpensive, since all that is needed is one ENAIKOON locate unit, a stable location to mount it on (in most cases, you can get an accurate position of your home from your local GEO-institute) and a standard PC. The PC is used to receive the data and to store it, including the ENAIKOON DGPS enabler software, that provides access to the data.

Products and prices

| Product | Part no. | Product description | Price |
|--------------------------------------|------------------------|---|---|
| ENAIKOON DGPS-enabler web service | DGP-03-03 | ASP fee to support one ENAIKOON locate unit with DGPS data | per month per vehicle € 2.90 |
| ENAIKOON DGPS-enabler onsite package | DGP-03-01 | Complete software and hardware package for your own DGPS reference station, which includes the following: <ul style="list-style-type: none"> ● full-featured software license of the ENAIKOON DGPS-enabler onsite software ● 10 objects to be supported with DGPS ● 1 ENAIKOON locate-06 module ● 1 combined GPS / GSM roof antenna, cable 3 m (9.8 ft) ● 1 serial cable, 3 m (9.8 ft) to connect the unit to a PC ● tower PC with 2 x 120 GB, Raid 1, Linux, serial interface for ENAIKOON locate-06 | € 2,990.00 |
| ENAIKOON DGPS-enabler installation | DGP-03-02 | Installation of the on site package software on a Linux server with a fixed IP address and remote access (a prerequisite for ENAIKOON to service the system) The hardware installation must be done by the customer | € 1,490.00 |
| ENAIKOON DGPS-enabler support | DPG-03-07 DGP-03-08 | 24h remote service for the server including all software updates. The administration of the system is not included in the price and is normally carried out by the user. minimum contractual duration: 48 month minimum contractual duration: 24 month | per month per vehicle € 29.00 € 34.00 |