



**GPS TRACKING & FLEET
MANAGEMENT PROPOSAL FOR
BUSINESSES**

OCTOBER 14

AMPENET SOLUTIONS (T) LTD
Presented by: Ampenet Solutions



AMPENET
SOLUTIONS

Brief Profile

Introduction

AMPENET SOLUTIONS (T) LTD is a company that offers GPS Tracking & Fleet Management, IT and Computer Networking solutions. The company was founded on the basic principle of quality service delivery without compromise.

GPS Tracking & Fleet Management solution is one of our core services with asset tracking and management, safety and security as one of the major zones we have focused on with our cutting-edge technological solutions.

With the purpose of improving the quality and safety of products and satisfying the requirements of all kinds of customers, we have obtained different types of certificates for products like CCC, CE, FCC, RoHS



GPS TRACKING & FLEET MANAGEMENT SOLUTIONS

We offer a number of solutions in this area for small to large businesses. Here are some of the solutions we offer that may be of interest to you

A. Fleet Tracking & Management

Our AVL is an ADVANCED GSM/GNSS/Bluetooth tracker with integrated CAN data processor. It is compact 2 in 1 solution: GPS tracker and CAN adapter inside! Device allows reading CAN data from a wide range of various vehicles, including light & electric vehicles, trucks, buses and special machinery. Depending on exact software version Our AVL can be used in advanced applications as heavy logistics, delivery services, and utility transport.



BLUETOOTH 4.0

Grants four various BLE sensors support

3-AXIS ACCELEROMETER

Ensures detailed acceleration data in case of collision

CAN ADAPTERS

Allows CAN bus data reading from light, heavy and special transport

TM2500 MODULE

GSM/GNSS/BLE support

10 - 30 V

DC with overvoltage protection

170 mAh

Back-up battery

MULTIPLE I/O

DIN, AIN, DOUT, 1-Wire - for monitoring and control

128 MB

Internal flash memory

2G BANDS

B2/B3/B5/B8

Figure 1: GPS tracking device

From correct vehicle location, our devices support mileage, speeds, violations, geofence, driver management, buzzer alerts, driver behavior, trip reports and many more.

Applications: Mining, Transport, Banking, Insurance, Taxi, Tour Operations, Logistic etc.

Application for our GPRS/GNSS Tracker

Our AVL is installed in the vehicle cabin, it's fitted with a GSM chip which sends data to the server processed and later relayed to you as the end user. The device is wired in the vehicle's dash and has internal antenna as well as back battery.

Our device has Bluetooth capability that allows it to connect with our other Bluetooth devices, thus offering you a comprehensive one-stop solution.

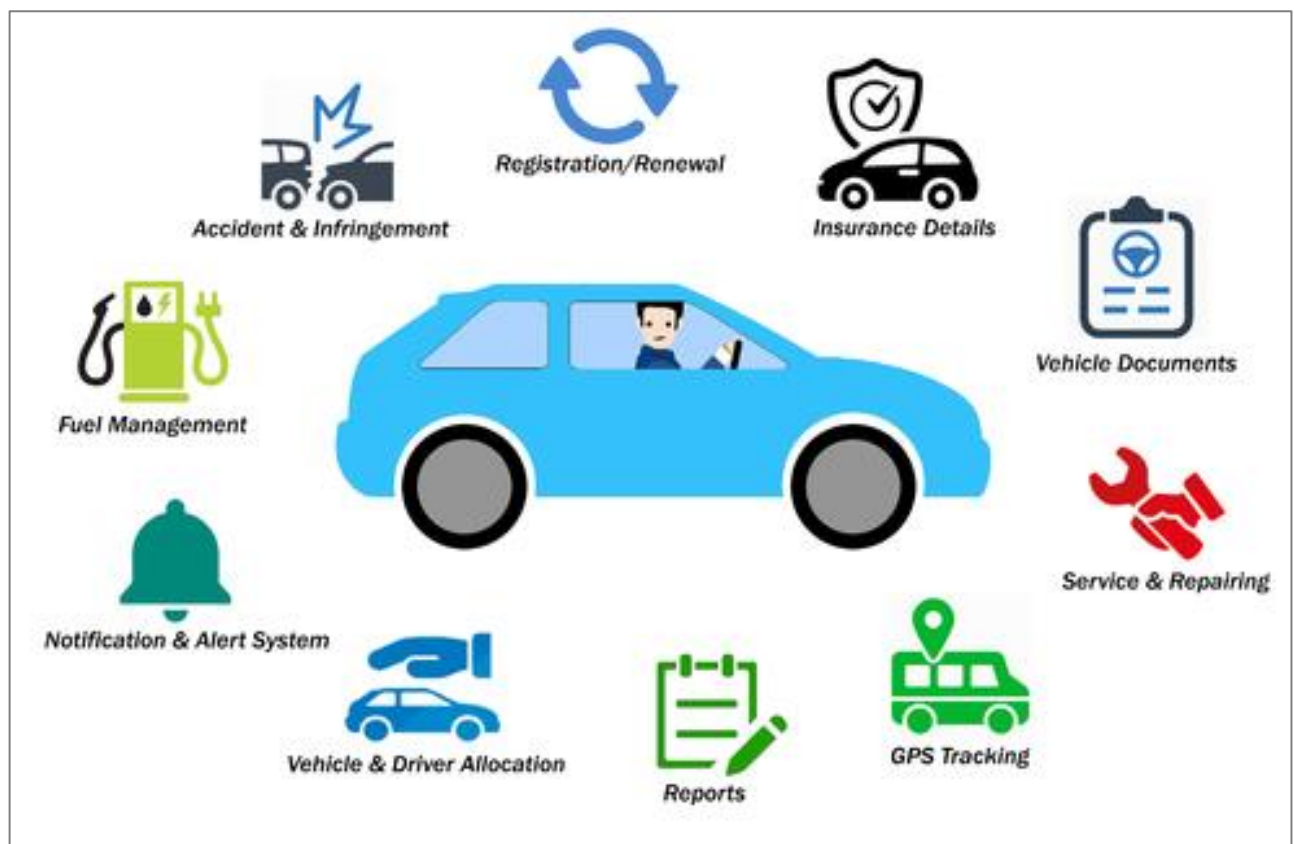


Figure 2: Features possible with a GPS tracking solution

Technical Datasheet for Our GPRS/GNSS Tracker

MODULE	
Technology	GSM/GPRS/GNSS/BLUETOOTH
GNSS	
GNSS	GPS, GLONASS, GALILEO, BEIDOU, QZSS, AGPS
Receiver	Tracking: 33
Tracking sensitivity	-165 dBm
Accuracy	< 3 m
Hot start	< 1 s
Warm start	< 25 s
Cold start	< 35 s
CELLULAR	
Technology	GSM
2G bands	Quad-band 850 / 900 / 1800 / 1900 MHz
Data transfer	GPRS Multi-Slot Class 12 (up to 240 kbps), GPRS Mobile Station Class B
Data support	SMS (text/data)
POWER	
Input voltage range	10 - 30 V DC with overvoltage protection

B. Fuel Monitoring Solution – Wireless Fuel Level Sensor

Our new technological leap into wireless future of telematics with our easy to install and accurate fuel level sensor. Installation of traditional fuel level sensors takes a lot of time. The absence of wires will finally eliminate the tedious and a long process of laying cables through the vehicles entire system. No wires, no problems. Only imagine how much time you can save

7 years of continuous operation with just one battery.

Lithium-thionyl chloride battery + version 4.0 Bluetooth technology with a protocol of low power consumption. This means that the sensor is able to perform its work with one battery for many years.

New, robust, hermetic, shockproof housing.

The body of the sensor is covered with an additional protective casing made of shock resistant polyamide featuring high endurance to various mechanical impact.



Figure 3: Fuel sensor probe

Application: Water Pumps, Trucks and Tankers & many more

Fuel Level Sensor Application



Be in on truck, reservoir tanks, underground tanks, tankers, water pumps and generators, our wireless sensor is installed on the tank collecting data on fuel drains and refilling's.

Fuel level readings transmit to our GPS/GLONASS AVL installed on the vehicle cabin or in the nearby location. The data transmits via GSM. Upon reaching the AVL tracker, the

tracker relays the same to the cloud server and processed. Through our mobile and web

application you are able to get data from the fuel reading, i.e., drains, refill and their exact location where it has happened as well as general fuel consumption.

Considering the rough terrain such as in mining, the sensor can be further adjusted to meet the hard environment, uphill and downhill thus eliminating false alarms.

Technical Datasheet of our wireless fuel lever sensor

Operation Mode	Digital
Digital mode: - interface - communication protocol	Bluetooth LE (BLE)
Measuring error, maximum	1%
Range (at normal conditions in the absence of interference and obstacles when working with the base)	up to 100m
Receiver sensitivity / transmitter power	-90 dB / 0 dB
Ingress protection by GOST 14254	IP67
Electric shock protection according to GOST 12.2.007.0	class III
Operation conditions: - operating temperature - atmosphere pressure	-30 ... +85 °C 84 ... 106,7 kPa
Overall dimensions	no more 80x80x(L+21) mm, where L – length of tubes
Length of measuring tubes	from 1m to 6m
Weight, maximum	0,5 kg

C. Heavy Machinery Work Monitoring – Angle Sensor Technology

Our wireless tilt angle sensor is designed to measure the angle at which certain parts of heavy machinery units tilt and thus helps you to monitor their activity.

Advantages over wired sensors:

- Wireless data transmission via Bluetooth
- Easy and quick to install, no need to worry about wiring
- Easy Configurations via our app

- New Work Mode, Rotation, vertical and horizontal.



Application

Dump Truck/Tipper work control, excavator work control, crane operation control, grader operation control, concrete mixer work control

Dump Truck/Tipper Work Control



Installed at the Dump Trucks Bed, our angle sensor will report every time the bed moves up to dump the load.

This way, you get the data on the exact time when the action took place, how long it took to complete the dump or loading, and how many dumps/loads were executed in general. The sensor communicates with our AVL tracking unit installed at the cabin which further sends data to our tracking and monitoring platform via our cloud servers.

Excavator Work Control



The wireless sensor is installed on the excavator deeper arm to get reports on the movement of the dipper, their frequency, time spent working or idling. This way, you will always know exactly how much work was done during a certain period.

Equally, the sensor communicates with our AVL device installed on the cabin via Bluetooth and sends data to the monitoring platform via our cloud servers.

Crane Operation Control



Our angle sensor is installed on the telescopic boom, and will report every time the boom moves up or down providing you with data on the frequency of such movements and the time spent working.

Similarly, the sensor communicates with our AVL device installed on the cabin via Bluetooth and sends data to the monitoring platform via our cloud servers.

Grader Operational Control



Plow mode of our angle sensor has been designed to monitor the activity of grader blades. Our sensor is installed on the blade or plow and collects all relevant data on every instance it was lowered and working or lifted or idling.

If the driver has to lift the plow/blade to maneuver past obstacles, or turn around, no need to worry about false alarms, because we are able to configure the sensor to ignore short time lifts. Sensor communicates with our AVL tracking system installed at the cabin which further sends data on our tracking and monitoring platform via our cloud servers.

Concrete Mixer Work Control



Our wireless angle sensor is installed on the concrete mixer and monitors the direction at which it rotates at any given moment. This will provide you with data on when and where every loading and unloading of the mixer took place making it easier to better control the work of the mixer.

Similarly, the sensor communicates with our AVL device installed on the cabin via Bluetooth and sends data to the monitoring platform via our cloud servers.

Technical Datasheet of our angle sensor

Radio Channel Frequency	2.4 Ghz
Power Supply Voltage	3...3.7v
Current, no more than	17mA
Data Exchange Output	Bluetooth LE (BLE)
Receiver Sensitivity/Transmitter Power	-96dBm/+4dBm
Data Exchange Protocol	BLE
Range (under normal operating conditions in absence of interference and obstacles when working with the BLE-RS485 adapter)	10M
Margin of error	±1°
Operating conditions: – ambient temperature – ambient atmosphere pressure	-45 ... +50 °C 84 ... 106,7 kPa
Ingress protection marking	IP69S
Explosion proof mark	0Ex ia IIB T6X
Dimensions, no more than	100x100x50 mm
Weight, no more than	0,3 kg

D. High Value Cargo Tracking Solution – Intelligent Smart Electronic Seal

Our electronic seal is designed to be unlocked not by key, but by RFID/remotely password: with big capacity rechargeable batteries, long working time, built in GPS module, built in wireless module, real time online monitoring, global locating, safety control, illegal unlock alarm, rope wire cut, seal tamper alert, back cover alert and so many more.



Figure 4: Portable tracking unit

Advantages:

- While securing the cargo you are able at the same time to monitor its location
- Alerts in case of any attempted tamper
- Portable and easy to configure and use
- Rechargeable and long-lasting battery

Application: Container/Trailer/Cargo Tracking



Our electronic seal is installed during cargo loading in a position where it will act/support as lock mechanism, simple to install, and has a strong magnet attaching to the container.

With built in GPS and GSM system, you are able to monitor the location of the container/cargo, monitor cargo movement speeds, route deviation, excessive idling on designated route, tamper alerts

open and close.

Our seal can only be opened via smart card or special password. This gives you conform regarding security of your cargo.

Technical Datasheet of our intelligent smart electronic seal

Dimension (LxWxH)	195mmx114mmx37mm
Housing Material	Engineering plastics
Weight	700g (with standard accessories)
Built in battery	12000mAh rechargeable lithium battery
Working temperature	-20°C---+60°C
Storage temperature	-40°C---+80°C
Relative humidity	5%--99%
Waterproof Grade	IP65
Average standby current	Less than 0.1mA
Average working current	Less than 90mA
GSM frequency	900/1800/1900 MHz
Size (LxWxH)	194x114x37mm
Weight	About 700g

E. 4G GPS Tracker + WIFI Hotspot

The 4G GPS tracker VT1000 is an advanced and high-cost effective GPS tracker that can provide multiple WIFI hotspot for video camera or passengers. It is equipped with ARM9 high speedy microprocessor; using new and industrial grade modules that have a legal IMEI number and CE certificate, so the VT1000 has high sensitivity and stable performance.

It's main applications include:

- Vehicle Real Time Tracking
- Vehicle Security/Anti-Hijack
- Fleet Management
- Buses
- Cargo logistics assignment
- Taxi assignment
- Ambulance assignment
- Security of rental cars
- Monitoring of public conveyance



It's functions are also very powerful and can support:

- Bidirectional communication (achievable via the microphone and speaker ports on the GPS tracker device)
- 4 A/D connectors for multi fuel sensor monitoring
- Support for unique RFID for automatic anti-theft and driver identification
- Support for OTA (updating online) for upgrading new firmware by GPRS if needed
- Harsh braking & acceleration alarm and accident alarm
- Many useful functions and extensibility for fleet management and vehicle security purpose

TRACKING SOFTWARE

Ampenet GPS tracking software is available both on web application and mobile application both Android and iOS, with unlimited number of users and accessible anywhere on the globe

provided access to internet. How simple and easy having your entire assent at the palm of your hands anywhere.

Features of our Tracking Software

- Online Tracking
- Fuel Control
- Route optimization
- Workforce Management
- Sensor Data Reading
- Geofence Control
- Driver Behavior Monitoring
- Video Telematics
- Flexible Reports Customization
- Easy Integrations with Existing Systems such as SAP and ERP

VALUE PROPOSITION

With our solutions we will help you: -

Obtain:

- i. 10-30% decrease of fuel cost
- ii. 10% decrease of maintenance cost
- iii. 10-30% in mileage cost

Our fleet management system will help you prevent:

- i. Fuel theft
- ii. Transport use for personal use
- iii. Equipment mismanagement
- iv. Irresponsibility

Do you know that GPS systems reduce and minimize human errors and give you peace of mind?

We offer

- i. 24X7X365 services
- ii. Affordable services

- iii. Flexible payment terms
- iv. Durable and long-lasting products
- v. Technical support 24x7
- vi. And many more

CLIENTS

We continue to grow our clientele by building trust and delivering quality services. All our clients are important to us. Here are some of them:

GPS Tracking & Fleet Management	IT & Web Development
Makundi Transport & General Supplies	Drylands Learning and Capacity Building Initiative (DLCI)
One NAGG	Opes Technologies (T) Ltd
Raphael Logistics T LTD	GeoWells International Limited
Dar Ceramica Center	Raddy Distributors Ltd
Castle Hill School	Balcom Group Limited
Tansilica Limited	Kitikai Tours & Safaris Ltd
Shangwe Hardware Ltd	Beacon Group Limited

CONCLUSION

We thank you for going through our proposal and wish to generate you a quote, to do so please help us understand your requirement better by contacting us.

Name: Alpha Robert

Position: Sales Administrator

Email: admin@ampenet.com

Mobile: +255 710 867 157

Website: www.ampenet.com