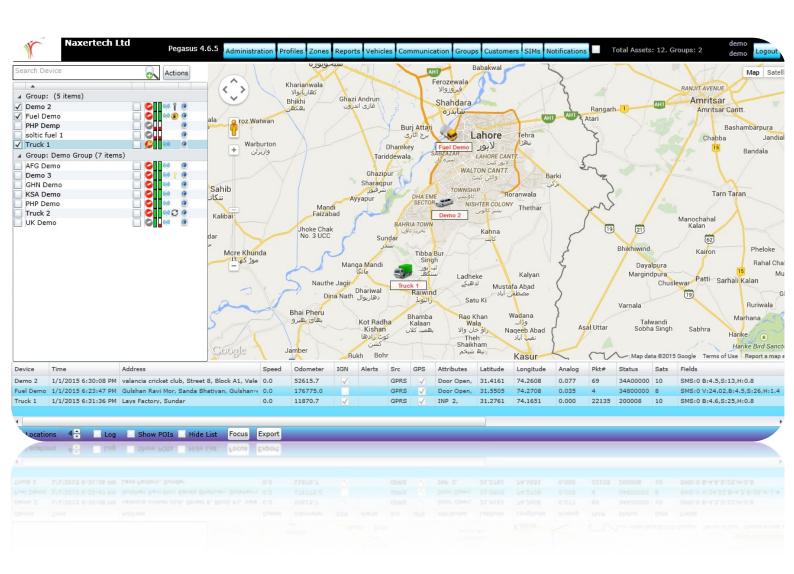


FLEET MANAGEMENT & TRACKING SOLUTION



Pegasus & NTT-101

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Fleet Management & Tracking

An Overview



NaxerTech Limited offers complete solution for real-time monitoring of fleet/ vehicle.

NaxerTech's tracking solution comprises of a commercial grade hardware "NTT-101", manufactured a per European Standards, EMC, EMI and CE certified.

The product operates with unique innovative software "Pegasus", for the purpose of providing a vast variety of comprehensive solutions and services for administrative and business applications, as well as safety and security services for the individual user.

NaxerTech's Fleet Management and Tracking solution has been designed for a variety of fleet sizes offering differing levels of functionality and protection. Utilizing GPS satellite positioning and GSM cellular communication, NaxerTech offers advanced telemetric information and fleet management services. Out solution provides a wide range of benefits such as:

Ease & Accessibility:

No need to install software for fleet Managers and Customer Support personal separately. Out Fleet Manager and Tracking software, Pegasus, is a web-based tracking software, developed on the latest technology platform Silverlight. Pegasus could be accessed from anywhere in the world, all you need is a good internet connection & a browser.

Search & Locate:

Our Vehicle Tracking system allows customers to easily search from thousands of vehicles, pinpoint the exact location of their vehicles and monitor them on digital maps. Our system is integrated with latest Google's digital map which provides system user with specific GIS information such as Governorates, Cities / Towns, Districts/Sub Districts, Main Roads, Street label, POI Icons and POI Label.

Security & Safety:

NaxerTech's solution provides a wide range of software and hardware security. The hardware comes with built-in intelligent GSM jamming detector and remote engine immobilizer module. When GSM jamming module detects any such device, it automatically acts to apply the counter measures thus reducing the theft factor. The software provides other options like hooter, SMS to authorized cell number or both when any GSM jamming device detected by the hardware.

Driver Behaviour & Management:

NaxerTech's solution comes with intelligent sensors including a highly sensitive 50+ channel GPS module and a powerful accelerometer to provide valuable driving intelligence, including harsh acceleration, harsh braking, harsh turns, over-speeding, excessive idling and unauthorized vehicle use. Out Fleet Management and Tracking solution can relay a variety of information regarding driving behavior including vehicle speed, engine start-up/ shut-down and idling time. This information can be used to enforce driving policy and curb unwanted behaviour like excessive speeding, tardiness and extended vehicle idling.

Monitoring & Alert:

Knowing where your vehicles are at the exact same time that you are looking at the map is priceless. We have put together a series of unique and powerful tools that will help you track your vehicles in a user friendly and top technology environment in your computer or any mobile device at any time, as well as run your fleet as easy as you would have never imagined. It is important for dispatchers and management to know every single detail of their operations even when they are not in front of a computer or mobile device. Create unlimited alerts and have them to be delivered via SMS or email to authorized users.

Savings:

Thousands of vehicles equipped with NaxerTech's solution have realized significant cost savings benefits. We offer the most extensive metrics available to help you effectively reduce poor fuel consumption and repairs. Be proactive in keeping your fuel costs down by managing driver behaviours, such as excessive speeding or idling. Even the simplest vehicle repairs can be very costly to your bottom line, especially if you have multiple vehicles on the road. NaxerTech's powerful and industry leading fleet tracking technology helps stop and prevent vehicle abuse.



Hardware Features: NTT-101

GSM/ GPS

- GSM SIM908 Quad Band (850/900/1800/1900Mhz)
- GPRS Class 10 (up to 85.6 kbps)
- SMS (Text/ Data)
- * GPS Accuracy (2.5 meters)
- 50+ GPS Channels ٠
- -160dBm Sensitivity
- Traffic Switching-Multiple IP *
- Traffic Switching-Multiple DNS
- NMEA, GGA, GGL, GSA, GSV, RMC protocol compatible

Interfaces

Digital Inputs

- Input 1. Door Open / Door Close Status
- Input 2. Free to use anywhere
- Input 3. Auto Arm Connected with central locking *
- Input 4. SOS / Panic Button
- Input 5. Ignition ON / OFF
- Input 6. 1- Wire (Temperature Probe, iButton)

Digital Outputs

- Output 1. Output to Turn ON buzzer in case of Jamming device detected
- Output 2. Output to unlock the door
- Output 3. Output to lock the door
- Output 4. Output to Immobilize Engine

Analog Input

Input 1. Analog input can be used for Fuel, Temperature probe and Weight measurement. (0-10VDC)

Security

- **GSM Jammer Detection & Counter Measures**
- Door Lock/ Unlock (SMS/ GPRS)
- ARM with Central Locking
- Engine Immobilizer
- * Auto ARM
- * Time ARM
- **Battery Security**
- i-Button Security

Firmware Upgrade

- OTA (On The Air)
- USB

General Specifications

Dimension: 14.2cm x 6.2cm x 3.0cm

Weight: 130gm

* Supply Voltage: 9V-60V

Battery Power: 3.7V DC, 850mA Li-Ion Battery

Power Consumption Alive: 43mA

Power Consumption Sleep: 10mA *

Operating Temperature: -10°C to +65°C

Storage Temperature: -20° C to $+70^{\circ}$ C

Memory: 8MB Flash Memory

Hardware Add-ons

- LCD Display
- In-vehicle Camera *
- Two way voice interface
- iButton
- **RFID Reader**
- Temperature Sensor

Software Features: Pegasus

Administration

Pegasus provides complete Administration of accounts held under a Master account and follows strict rules to insure system security. Different roles can be created and assigned to the different users of the Pegasus system as per the user level.

SIM Management

Pegasus provides complete SIM management. SIM Manager can add SIM that will be further assigned in device form. SIM, Operator, IMEI, Device ID are all inter-connected and searchable through database.

Vehicle Management

Pegasus provides complete vehicle management system and maintains a complete wear & tear history of a vehicle. Complete maintenance history could be maintained and searchable through database.

Communicate to Device

Pegasus provides separate and completely different module to communicate to the devices. These are different types of commands grouped under separate tabs according to their working and output such as General, Status, Security, Setup and Admin.

Communication Logging

Pegasus also offers a separate module based on communication between the device, customer and Pegasus server. Communication log provides all types of to & fro communication between the device and the Pegasus server. Alerts Log, keeps log of all the alerts generated by the device. Actions Log, keep records of all the actions performed over a device.

Geo-Fence

Pegasus allows Polygonal and Rectangular geofences. These can be created just by clicking on the map. Pegasus supports unlimited number of geo-fences

Points of Interest

POI (Point of Interest) is a dataset containing GPS coordinates that represents interesting and important locations in navigation applications. Pegasus allows importing POIs from KML files. Search a specific POI from the list of thousands and Delete duplicate POIs with ease.

Track Player

Pegasus system provides a unique feature of Track Player which no other web based tracking system provider provides, making Pegasus system an industry leading Web Based Tracking System. Track Player re-draws the movement of the device on the map which is basically based on the Latitude/ Longitude sent by the device to the Pegasus system. In other words a user can watch the Re-Play of the complete movement of the device/ vehicle.

Reports

Detail reports of vehicles or device specific and are structured to pull information from the database in pre-defined formats that are relevant to the type of report requested. Pegasus system offers a variety of report generation. Below is the list of the reports offered by Pegasus:

- History Report
- ٠ Idle Time Report
- * SIM Report
- * Mileage Report
- Trip Fuel Report Action Log Report
- Temperature Report
- **Devices Status Report**
- Vehicle Maintenance Report
- NR/ Unlocked Devices Report

- Trip Report
- **Fuel Reports**
- * Alerts Report
- POI Report
- Fuel Type Report
- **Driver Safety Report**
- Activity Summary Report Trip Report - Excel Sheet
- Genset Report (Generators only)
- Alert Acknowledgement Report

^{*} Drive any output up to 1 ampere.

Engine Immobilization/ Mobilization

- Via Pegasus
- ❖ Via SMS from Authorized Contact Number
- Via Central Locking & acknowledgement over GSM
- Gradual engine immobilization



Cell Phone Tracking Application

- Track your vehicle with our smart app for Android & Windows Mobile
- Smart, Android & Windows phone vehicle tracking app



GSM Jammer Detection & Counter Measures

- Built-in GSM jammer detection (Quad Band)
- Tradeoff between Security & Convenience
- Jammer detection acknowledgement at Control Room
- Programmable actions on jammer detection
 - Engine immobilization
 - Turn-on hooter/ horn
 - Alert via SMS

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Hardware Add-Ons

- ❖ 1-Wire
- iButton
- Fuel Probe
- LCD Display
- Temperature Sensor
- * RFID Reader
- Voice Interface for Two Way Communication



Remote Polling

- Location & Status update on Pegasus
- Location & Status update on authorized cell phone

23 April 2014 05:55

23 April 2014 05:55

Demo

Demo

Harsh Brake

1237.5

1237.6

0

Third Avenue

Third Avenue

- Displays current acceleration & harsh break alerts
- Record number of times acceleration & deceleration

Speed Violation

5.65230

5.65230

-0.00544

-0.00544

- Speed violation audible alert in vehicle
- SMS alerts to authorized cell numbers
- Alert on Pegasus

					Ren	note Polling						
Device	Time	Address	Speed	Odometer	IGN	Alerts	Src	GPS	Latitude	Longitude	Analog	Pkt#
Demo	20 April 2014 04:57	Unity Road	24	1234	٧		GPRS	٧	5.63341	-0.021201	1.016	55
Demo	20 April 2014 04:58	Third Avenue	20	1234.2	٧		GPRS	٧	5.641457	-0.02405	1.016	56
Demo	20 April 2014 04:59	Third Avenue	20	1234.4	٧		GPRS	٧	5.641831	-0.021604	1.015	57
Demo	20 April 2014 05:00	Republic Road	20	1234.6	٧		GPRS	٧	5.649991	-0.010944	1.013	58
Demo	20 April 2014 05:01	Republic Road	10	1234.67	٧		GPRS	٧	5.6515	-0.007389	1.010	59
Demo	20 April 2014 05:02	Republic Road	0	1234.67	٧	Door Open	GPRS	٧	5.652307	-0.00544	1.05	60
Demo	20 April 2014 05:03	Republic Road	0	1234.67		Door Open	GPRS	٧	5.652307	-0.00544	0	61
				Har	sh Brake	& Speed Violation						
Device	Time	Address	Speed	Odometer	IGN	Alerts	Src	GPS	Latitude	Longitude	Analog	Pkt#
Demo	23 April 2014 05:52	Third Avenue	140	1236.5	٧	Over Speed Alert	GPRS	٧	5.641457	-0.02405	0	68
Demo	23 April 2014 05:53	Third Avenue	115	1236.7	٧		GPRS	٧	5.641831	-0.021604	0	69
Demo	23 April 2014 05:54	Third Avenue	120	1236.9	٧		GPRS	٧	5.649991	-0.010944	0	70
Demo	23 April 2014 05:55	Third Avenue	120	1237	٧		GPRS	٧	5.63341	-0.021201	0	71
Demo	23 April 2014 05:55	Third Avenue	95	1237.1	٧		GPRS	٧	5.64145	-0.02405	0	72
Demo	23 April 2014 05:55	Third Avenue	70	1237.2	٧		GPRS	٧	5.64183	-0.021604	0	73
Demo	23 April 2014 05:55	Third Avenue	45	1237.3	٧		GPRS	٧	5.64999	-0.010944	0	74
Demo	23 April 2014 05:55	Third Avenue	20	1237.4	V		GPRS	1/	5.6515	-0.007389	0	75

Harsh Brake Alert

GPRS

GPRS

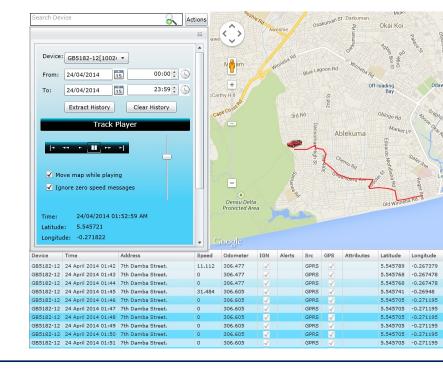
Fields

- SMS Number of SMS sent by the device
- V Voltage of the main battery
- B Voltage of backup battery
- ❖ H HDOP value

SMS:0 V:2.90,B:4.6, S:21, S:20, H:0.9, MaxX:0..18, MaxY:0.05, MaxZ:0.32, MinX:-0.23, MinY:-0.14, MinZ:-0.23 SMS:1 V:2.90,B:4.6, S:21, S:20, H:0.9, MaxX:0..14, MaxY:0.05, MaxZ:0.09, MinX:-0.14, MinY:-0.14, MinZ:-0.14 SMS:2 V:2.87,B:4.6, S:21, S:20, H:0.9, MaxX:0.09, MaxY:0.09, MaxZ:0.09, MinX:-0.14, MinY:-0.14, MinZ:-0.14 SMS:3 V:2.01,B:4.6, S:21, S:20, H:0.9, MaxX:0.23, MaxY:0.14, MaxZ:0.14, MinX:-0.32, MinY:-0.18, MinZ:-0.23 SMS:4 V:2.94,B:4.6, S:21, S:20, H:0.9, MaxX:0.27, MaxY:0.05, MaxZ:0.14, MinX:-0.09, MinY:-0.18, MinZ:-0.23 SMS:5 V:2.94,B:4.6, S:21, S:20, H:0.9, MaxX:0.18, MaxY:0.09, MaxZ:0.18, MinX:-0.45, MinY:-0.18, MinZ:-0.18 SMS:6 V:2.94,B:4.6, S:21, S:20, H:0.9, MaxX:0.14, MaxY:0.09, MaxZ:0.09, MinX:-0.36, MinY:-0.14, MinZ:-0.27

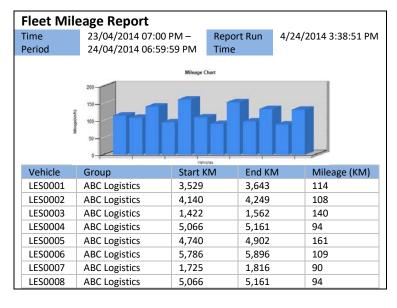
Track Player

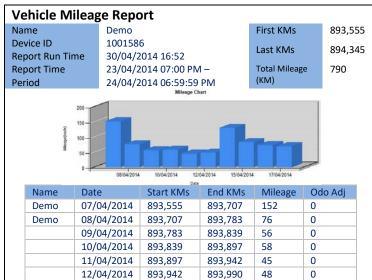
- Playback 180 days history
- Player with playback control & speed features
- Playback non-GSM history with different color
- Playback history with following parameters
 - o Narrated locations
 - Speed in Km/h
 - Odometer Kms
 - o Direction & Headings
 - o Ignition Status
 - o GSM Source (SMS or GPRS)
 - o GSM & GPS Strength
 - o Motions Sensor Impact
 - Alerts Status



Fleet & Vehicle Mileage Report

- Fleet mileage report with graph as per specified time period
- Vehicle mileage report with graph as per specified time period





Driver Behavior Information

- Speed violations
- Harsh brakes/100km
- Driving time over Speed limit
- Driver detail form
- Auto driver identification (Dallas Key)
- Driver behavior score for management decisions

Driver Safety Report

Report Run Time 24/04/2014 02:41 PM

Report Time Period 01/04/2014 00:00 – 15/04/2014 23:59

Score Calculation 100 – (Harsh Brakes/ 100km) – (Speed Violations) – (Driving Time over Speed Limit)

Vehicle	Driver	Total Distance	Harsh Brakes	Harsh Brakes/	Speed Limit	Maximum	Vehicle	Driving Time over	Score
		Driven (Km)		100 Km	Violations	Speed (Km/hr)	Speed Limit	Speed Limit	
LES0001	Driver 1	4,110	12	1.18	6	140	120	00:40:58	29.22
LES0002	Driver 2	3,125	10	0.030	4	145	120	00:30:00	84.29
LES0003	Driver 3	4,250	8	0.093	5	135	120	00:07:24	83.59
LES0004	Driver 4	2,541	7	0.83	2	125	120	00:05:00	98.50
LES0005	Driver 5	5,951	9	0.35	3	135	120	00:10:00	97.01
LES0006	Driver 6	6,123	5	0.45	0	100	120	00:00:00	100
LES0007	Driver 7	3,569	11	1.28	1	123	120	00:01:00	99.89

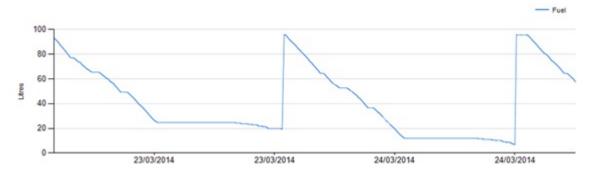
Fuel Report

- Real time fuel monitoring
- Manual fuel entry system
- Average fuel consumption
- Fuel repot with graph
- Fuel fillings report
- Trip based fuel report

Sharp Fuel Report

Name (ID)	Demo
Report Run Time	4/04/2014 6:05:05 PM
Report Time Period	22/03/2014 14:00 – 24/03/2014 23:59
Total Distance (KM)	1078.39
Total Fuel Used (L)	267.33

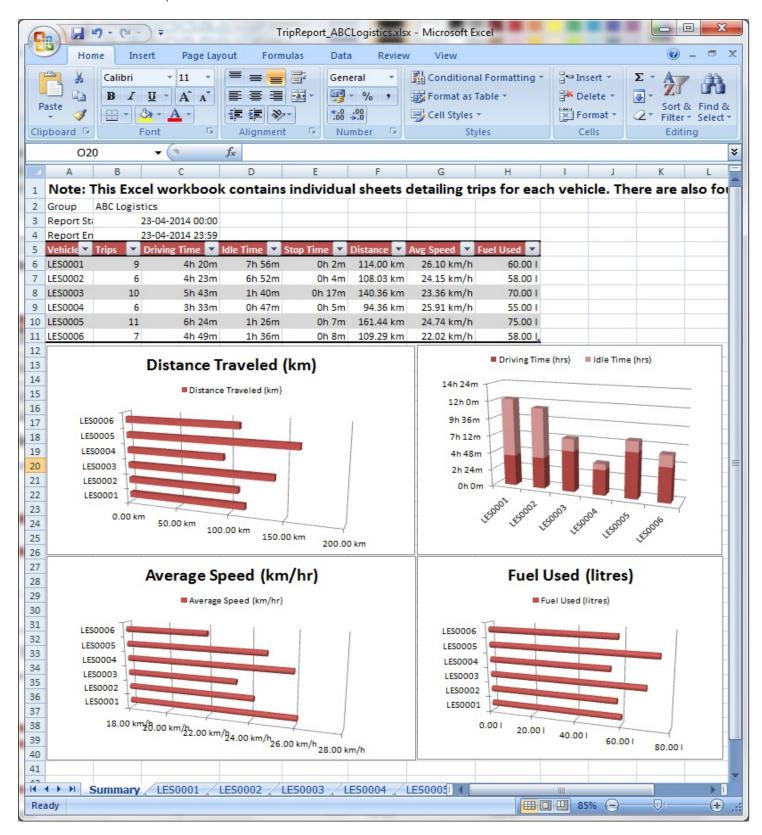
AVG Speed (km/h)	38.06				
Tank Size (L)	100				
First Location	175, Loughboroigh, North West, Lecestershire				
Last Location	Stanford on Soar, Loughboroigh, North West,				
	Lecestershire				



Date	Status	Speed	KM	Fuel	Location
22/03/2014 14:00	Driving	42.60	90,999.30	93.02	175, Loughboroigh, North West, Lecestershire
22/03/2014 14:01	Driving	42.60	90,999.05	92.88	175, Loughboroigh, North West, Lecestershire
22/03/2014 14:02	Driving	51.86	90,999.63	92.78	Meadow Ln, Loughboroigh, North West, Lecestershire
22/03/2014 14:03	Driving	50.00	91,000.73	92.57	Meadow Ln, Loughboroigh, North West, Lecestershire
22/03/2014 14:04	Driving	48.15	91,001.27	92.47	Meadow Ln, Loughboroigh, North West, Lecestershire
22/03/2014 14:05	Driving	35.19	91,002.53	92.24	Stanford on Soar, Loughboroigh, North West, Lecestershire

Trip Excel Report

- Specially designed for large fleets
- Provides complete information of each vehicle such as:
 - Number of Trips
 - o Driving Time
 - o Idle Time
 - o Stop Time
 - o Distance Travelled
 - o Average Speed
 - o Start/ End Odometer Reading
 - Start/ End Location
 - o Time to Next Trip



Android Interface

