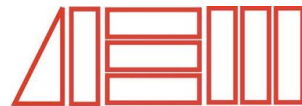

Vehicle Tracking System

AVL – 500

An Overview

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Applied Electro Magnetics Pvt. Ltd (AEM)

AEM is the leading provider of indigenously designed & built technology solutions in India. We have addressed the most challenging real-time communication & collaboration needs of defense and industrial market customers: securely, cost effectively, since 1975.

Introduction

AVL-500 is a vehicle-tracking device that is mounted in a vehicle and tracks the location and speed of the vehicle. Based on GPS, GSM, CDMA and GPRS technologies, the system wirelessly transmits the vehicle's absolute location with an accuracy of 5-10 meters in any part of the world, and publishes it on web-based maps. This information can be viewed online on the Internet.

The system detects harsh-braking, speed, fuel pilferage, mileage, vehicle temperature and a host of other real-time data essential for tracking your fleet of taxis and trucks. It also comes with remote immobilizer to remotely cut-off supply to the fuel tank in case of theft. The device has options for voice calling facilities, Fuel Monitoring System, RFID based attendance, SOS buttons for the driver and provisions for connecting FM-radio and Taxi-Fare Meter.

AVL 500 has been successfully operational in the market for 6 years, with over 20,000 deployments, including OEM arrangements with Tata Motors (for their high-end trucks). Our devices also successfully tracked and Geo-fenced 1800 vehicles used for transporting Athletes for Commonwealth games 2010 over 250 permitted routes.

Applications

Typical applications of Vehicle Tracking System include:

1. Taxi-services (integrated with Taxi Meters)
2. Truck-fleet Mgmt (Fuel Monitoring, speed, harsh-braking detection)
3. Police control Room Vans
4. Vital Component of Intelligent Public Transport Systems (Buses)
5. Ambulance tracking
6. Tracking VIP vehicle movement
7. Safety and Security solutions for transporting high-value consignments
8. Transporting perishable goods (temperature sensor)
9. Call Centre Cabs (RFID for attendance, SOS Button)
10. Vehicle Security (Remote Immobilizer)
11. Schedule Adherence and Employee Attendance solutions for BPO's
12. Cargo Management
13. Tracking of School Buses, Safety and security solutions for Schools

Quality

Based on the powerful RCM-2000 micro-controller architecture, AVL-500 has undergone extensive research and development at the facility of AEM labs to evolve into a robust, world-class technology tool.

- It is manufactured in a **fully automated Robotic SMT line, at AEM's ISO- 9001-2008 certified manufacturing facility** fully conformant to **IPC 610-D** workmanship standards.
- AVL-500 conforms to **IP65** standard of enclosure.
- Post production, each unit undergoes extensive testing in our **automatic testing environment using bed-of-nails test fixtures** also designed and developed by AEM R&D team.
- In addition, AVL-500 meets the **Government of India's Electronics Regional Test Laboratory (ERTL) testing standards** that include Vibration Testing at 20 – 350 Hz Frequency and 1.5g acceleration for 2 hours on each axis: X, Y & Z.



Salient Features

- **Compact and Light Weight:** 135mm(L) x 100mm(W) x 55mm(H), 400Gms. Easy to install and rugged, IP65 Enclosure.
- **Speed Alerts:** Programmable alerts whenever the vehicle goes above a pre-defined speed.
- **Geo-Fence Alert:** Generate alerts if Vehicle moves other than pre defined route or Geo-Fence area.
- **Automated Tracking:** Automated tracking at specified time interval, without sending additional commands to the vehicle.
- **Harsh Braking Detection:** Internal algorithm to calculate the activities.
- **Internal logging:** In case of Network unavailability it will store the vehicle position in memory for later Transmission.
- **Mileage By GPS:** Algorithm to calculate the vehicle's mileage based on GPS.
- **Internal Battery:** The unit draws power from the Vehicle's Battery, but is capable of switching over to its Internal Battery in case of failure/disconnection of main battery.
- **Ignition Status Alert:** Provides remote alerts regarding vehicle's ignition ON/OFF status.

Benefits

AVL 500 ensures substantial improvement in the efficiency of fleet operations, greater field workforce productivity, lower fleet operating costs and better customer service, in the following ways:

- Rugged vehicle tracking device suitable for OEM / After market automotive fitment
- Real-time and/or playback of vehicle's travel path on a digital map including:
 - Current location of the vehicle
 - Distance traveled



- Vehicle speed
 - Number of stops made
 - Duration of stops
 - Location of stops.
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- "Black Box" requiring no user intervention. User does not even need to know of its presence inside the vehicle.
 - 2 way voice communication facility with optional voice kit Built in GPRS / SMS / CDMA communication options.
 - Emergency (SOS) Alert switch & business specific text messaging (Reached Location, Traffic Jam, Breakdown etc.)
 - Generate SMS/E-mail alert in event of over speed, sensor events (Digital Input/Output)
 - Remotely configurable.
 - Customizable to meet client specific requirements and/or monitor events occurring inside the vehicle via sensors integrations Compatible with web based applications over Internet

This cost-efficient device is ideally suited for online tracking of a fleet of vehicles and monitoring the movements and driving patterns of drivers. Through its rich feature-set and built-in digital / analog I/O signals, the device can add tremendous value to fleet management, logistics, cab operators as well as private owners, while enhancing operational efficiency and providing safety and security.