



AEM's AVL – 500 becomes the Only Indigenously Design and Manufactured Vehicle Tracking Device based on CDMA Technology

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.

The Objective

To supply GSM and CDMA Technology based Vehicle Tracking Unit, under the brand name of "Tracko Power" to be sold and distributed through the marketing channels of TMT.



The Client

TMT, a group company of TATA Motors, Pune approached AEM to develop, design and manufacture GSM and CDMA based VTS device under their own brand name of "Tracko Power".

TMT is a very reputed company in Telemetry industry and has big clients like BPCL, L&T, SBI, RBI, Delhi Metro, automation of Delhi BRT corridor. TMT has supplied the devices manufactured by AEM to all these prominent and prestigious customers. Through their marketing network of 19 offices and sub-dealers have till now marketed approx 8,000 plus AEM unit throughout the country.

TMT has now been taken over by Trimble, a US based Multinational. Their decision of taking over TMT is primarily based on the successful performance of our VTS unit, which in turn helped TMT gain an edge in Indian market.

The Approach

A dedicated team of R&D was created within the facility of AEM Labs to take up the designing, development and manufacturing of GSM and CDMA based Vehicle Tracking unit.

AEM not only took up the challenge of custom Electronic Design and Development of CDMA based Vehicle Tracking Devices, but also designed a special enclosure for TMT in a record time of 4 weeks, with custom branding.

AEM also re-designed the existing GSM based devices as per TMT's form factor requirements for a separate GSM model of 'tracko'.

The Technology

- Rabbit – 2000 micro controller architecture
- GSM/GPRS/CDMA: Tri Band (900,1800,1900 MHz) GPRS: Type B, Multi-slot Class 10 SMS
- Up to 6 Digital inputs & 4 Digital outputs, Interfaces for 2 analog inputs
- Two serial port (RS232) interface (Config port, Aux. port for peripherals)
- Handset for 2 way voice communication
- Geo-Fencing
- Two way online TCP-IP connection
- GPS L1 frequency 1575.42 MHZ, 50 channels with high sensitivity & accuracy
- Protection from Over Voltage, Over Current, Reverse Voltage, EMI & ESD (<15KV)
- Alarms:
 - Panic (SOS) button pressed
 - External power cut off
 - GPS Antenna cut off
 - Internal/External Battery Voltage below the threshold value.
 - Vehicle Move/Stop
 - Over speeding
 - Harsh Driving (Acceleration)
 - Harsh Braking (De-acceleration)
 - Device goes out of user defined geo-fence region.
- Remote Control for User-defined Configuration:
 - Support remote control setting, send/receive commands from SERV /Desktop PC, Non Web Solution also supported
 - Remote configure of parameters through SMS
 - Local configuration through Desktop PC.
 - Open protocol for third party software developer
 - Integrated with user's web-map system

The Outcome

AEM has the distinction of becoming the only manufacturer in India with the capability to design and manufacture CDMA technology based VTS devices.

We have been successful in supplying 7000 plus VTS units to TMT, and other TATA Motors group companies, AEM is also an OEM manufacturer directly to TATA motors for their VTS unit fitted in Novus Tipper range of trucks.

Our Commitment

At own initiative, AEM undertook the complete replacement of 250 GSM units post-installation in the field upon TMT reporting a minor problem in their working.

APPLIED ELECTRO MAGNETICS

applying minds to technology...

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