

SCOPE OF WORK FOR INSTALLATION AND MANAGEMENT OF SATELLITE TRACKING SYSTEM .

BACKGROUND

Vehicles must be fitted with a device underpinned by the latest technology that is easy to fit, monitor and comprehensive in terms of information that it can generate according to the requirements of the complete scope of work and all the technical requirements

SCOPE OF WORK AND DELIVERABLES – INSTALLATION AND MANAGEMENT OF SATELLITE TRACKING SYSTEM .

A. On Board Computer (OBC) Hardware Specifications:

- Communication (2G-GPRS class 10, Quad Band: 850, 900, 1800, 1900 MHZ. 3G GSM/GPRS/EDGE: 850,900,1899,1900 MHZ)
- Internal Multi band GSM antennae
- GLONASS has better accuracy at high latitudes.
- GSM Jamming detection
- Internal battery
- Power and ignition input 7-32V
- IP40 rated (min)
- 3D Accelerometer
- Unit Tamper Detection

Driver Behaviour Manoeuvres: (GPS)

- Speeding
- Harsh Brake
- Harsh Acceleration
- Harsh Turn
- Turn and Acceleration
- Turn & Brake
- Off Road
- Excessive RPM
- Impact or Crash detection

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Emergency Data Recording

Daily health reporting

- OTA (over air diagnostics) upgrades and diagnostics
- Vectors change reporting (Curve smoothing)
- Base unit must have not less than 4 inputs to accommodate all peripherals.
Minimum of 2 fixed inputs and 2 configurable inputs

Reporting

- 2 minute or higher report rate
- Black Box data for accident analysis at minimum. 1 Second resolution at least 50 seconds

Driver identification Tag

- Starters inhibit through relay's
- Driver Authorization
- Unauthorized driving alerts
- Driver Tag management
- Remote disable driver identification

Safety Peripherals

- Panic button can also use the call me facility
- Revolutions per minute (RPM) Sensing
- Power Take Off (PTO) Sensing (Must be able to disallow any PTO Engagement in a specified zone)
- True excessive Idling (Engine running detection)
- Starter inhibitor to prevent vehicle from starting after unit was removed by criminals

Bi-Directional "Push to Talk" Voice Kit

- Single or multi-numbering
- Call me button to that will alert control room on screen as well as pre-defined cell numbers
- Covert voice ability
- Device must be an integrated part of the OBC. No Bluetooth devices allowed

In Cab driver feedback

- In Cab Speed buzzer
- In Cab Driver Tag Buzzer. Driver MUST Tag before Buzzer will stop

CANbus Capabilities (operational extra and not part of OBC base units)

- CANH (can high) & CANL (can low)
- J1939 & OBD2 support - adapters for any brand engine
- Contactless CAN adapter
- Diagnostic code reporting
- Standard reporting
- Speed
- RPM
- Odometer
- Fuel level
- Fuel consumption

Fuel Monitoring Capabilities (optional extra and not part of OBC base units)

- Ultrasonic Fuel Sensors (where CANbus is not available)
- Support up to 2 fuel tanks
- Fuel Usage and Consumption
- Fuel Level %

Mobile Data Terminal Capabilities (optional extra and not part of OBC base units)

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- Task assignment acceptance
- Status update
- Text communication
- Navigation to tasks

Video Recorder (MDVR) Specifications Capability (optional extra and not part of the OBC base units)

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- Capture and store all footage for a minimum of 4 days. (Footage downloadable upon request)
- Continuously record 24 hours period or ignition base
- In-cab audio to analysis, verify and monitor communication and other cabin

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sounds

- Remote hard disk capacities 1 TB
- Events stored for a minimum of 180 days
- Event based recording and storage namely: driver behaviour event; and emergency event buffering
- Evidence files to analysis footage for investigation
- Integration with OBCs events (Speeding (with severity bands), panic, impact, PTO and other events as and when required)

B. Software Technical Specifications

Security

- Cloud platform – IP lock deployment – Lock user to configured IP addresses (Platform cannot be accessed externally if enabled)
- Permission based – down to user level
- User password expiry
- ERI to setup and remove users through In-house Administrator

Backups and redundancy

- High availability
- Always-on SQL DBs
- Parallel network infrastructure
- Data restoration

Access to platform

- Support all mainstream browsers
- Smartphone & Tablet – Native (Android, iOS) applications for Drivers and Fleet managers. Mobile web interface for other mobile OS's.

Integration Capabilities (optional extra and not part of OBC base units)

- Dedicated interface within platform that allows custom app development and deployment
- API (application programming interface) that allows integration with in-house ERP (enterprise resource planning) systems (SAP, Tswelopele, and 5D Truck simulator integration).

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Administration & Platform configuration

- User groups
- Vehicle groups
- Vehicle service maintenance reminder
- Vehicle license renewal reminder
- Driver license expiry reminder PRDP
- Vehicle type/class
- Driver tag or finger print management

Map View

- Google maps (Vector, Street View, Satellite View)

Map Overlays

- Points of Interest
- Geo-fences
- Landmarks

C. Notifications/ Messages

Messages

- On Screen
- SMS Push Notifications through APP
- Email

Alert Management

- Power Cut
- Low Battery Warning
- Panic Alert
- Tamper Alert
- Crash/Impact Detection
- Unauthorized driving
- Speeding: (Road Sector, Geo-speed zones, general speed)
- PTO

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- GPS antennae disconnect
- Geo-fence violations (In and Out of geo-fence)
- Specify alert severity
- Type of feedback required (none / optional / mandatory)
- Automatic assignment to vehicles option
- Define schedule of when the alert is active
 - Days of week
 - Time range
 - Shift Alerts

Reminders

- Vehicle license.
- Driver license; medical certificate; Eskom driver permit; Prdp.
- Upcoming service

D. Report Requirements:

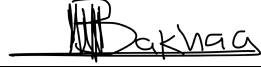
Reports must have ability to be scheduled and emailed in any of the following formats: pdf, Excel, XML or CSV for the duration of the contract at no additional cost.

Minimum Standard Reports required

- Turn-around time analysis TAT Report- Development
- Congestion Reporting- Development
- Excessive Standing Time
- Unit uptime
- Fleet health
- Unauthorized PTO use
- Excessive idling
- Fatigue management
- Automated accident analysis & reconstruction directly after an accident

AUTHORISATION

This document has been seen and accepted by:

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11. Revisions

Date	Rev.	Compiler	Remarks	Signature
05/02/2025	o	Unathi Dontsa	Compiled the SOW	

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