UTRACK®
TOTAL CONTROL

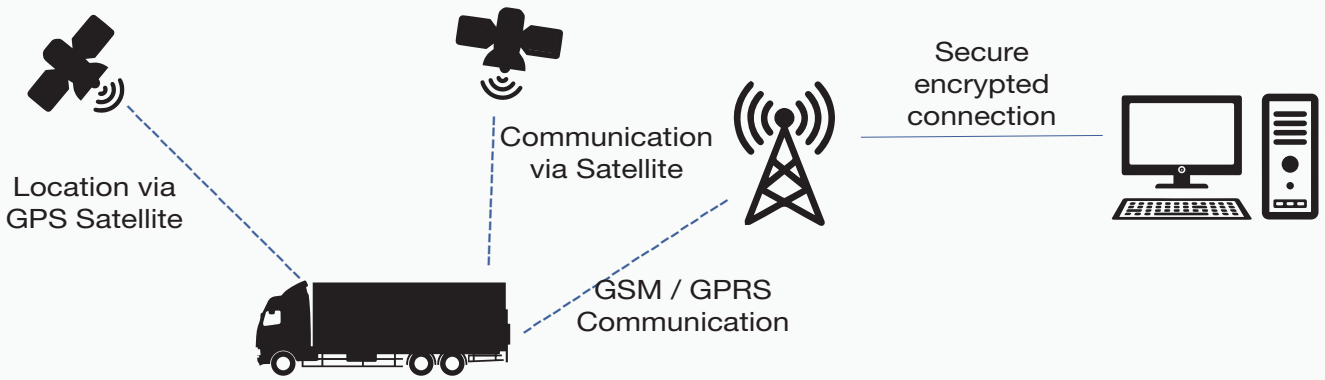
SAT&GSM SOLUTION®

Hybrid System

Utrack Africa Satellite Hybrid Tracking Solution: Functions as a continuous remote Management device of fixed and mobile assets anywhere across the world. The tracking unit communicates with its server via the GSM/GPRS network or using a satellite modem (Iridium satellite) when the GSM/GPRS network is unavailable.

Once an asset (e.g. boat, vessel, vehicle, machine etc.) is equipped with Utrack Hybrid tracking unit, users can monitor and manage the asset using location and data provided by the satellite modem integrated module covering all terrestrial and aquatic areas (e.g. oceans, lakes, remote mining sites & Construction sites) of the world. The solution is designed to address many of the operational challenges, prevalent amongst the commercial fleets. There include basic activity monitoring, reduction of operating costs, and enhancing the management of supply chain.

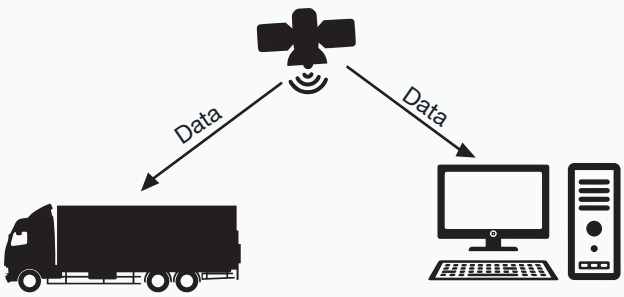
SYSTEM ARCHITECTURE



MAIN FEATURES:

REAL TIME SATELITE HYBRID COMMUNICATIONS:

A Hybrid and GSM communication platform provides data communication redundancy in remote areas ensuring 'Always available' communication. Using Utrack's least cost routing engine, the operator can maintain cost efficiency by limiting the satellite communications instances to high priority events in areas with no GSM coverage.



AUTOMATIC VEHICLE LOCATION (AVL):

Using its onboard Global Positioning System (GPS) receiver the AVL provides accurate location information. Additional information includes trip data, driver identification, input status, output control, speeding and odometer.

OTHER FEATURES:

• ZONE MANAGEMENT (GEOFENCE):
Monitoring entry and exit from user defined geographical areas (referred to as geofences). The downloaded Geofences can be categorized (i.e. customers, fuel depots, mining areas, offloading points etc.).

• ACCIDENT DETECTION & RECONSTRUCTION:
Accurate accident reconstruction with patented algorithms, accident notification and comprehensive reconstruction modules estimate vehicle impact zone and angle of impact.

• DRIVER MANAGEMENT:
Active monitoring of abusive driver behavior, monitored parameters include excessive idle, harsh braking, excessive acceleration, speeding, over-revving and freewheeling. The analyzed information provides the operator with valuable tool to minimize fuel and maintenance costs while maximizing safety.

• VEHICLE BATTERY MONITORING:
Monitor and report vehicle battery health statistics.

• CUSTOM BEEPER FLAGS:
Alert drivers of various vehicle statuses (e.g. seatbelt not fasten while driving.)*

• ENGINE HOURS MONITORING:
Odometer substitute in earth moving equipped and generators.

• SPEED MONITORING:
Maintaining an Optimum Speed by the Driver is very crucial so as to ensure the safety of the driver, vehicle and also fuel economy. User will be alerted if a certain speed is reached, or be alerted if a vehicle exceeds the speed limit by a specified amount.

• VEHICLE BATTERY MONITORING:
Monitor and report vehicle battery health statistics.

• BLE: Bluetooth 4.0 LE:
Monitor and report various BLE sensors including driver ID, Door sensors and driver biofeedback (e.g. heart rate).*

• IN VEHICLE NETWORK:
Provision of in-vehicle network data including fault codes, and odometer (data sources may vary between various makes and models).

• GARMIN FLEET COMPATIBLE:
Garmin Fleet Integration with messaging to UTRACK Web Application.*

• PATTERN RECOGNITION ENGINE:

Patented auto – calibration of 3-axis digital accelerometer for driver behavior and accident detection, capable of 400Hz data for accident reconstruction.

• TRIGGER ENGINE:

Fully customizable user – defines operation sequence and action trigger system allows the automation of actions based on vehicle status variables (e.g 'Set warning light when speed above 20km/h and seatbelt not fastened or "Change speed limit or lock doors upon POI entry).

• HEALTH METRICS REPORTING:

Daily reports of unit performance and diagnostics status.

• POWER MODES:

The unit has the ability to intelligently switch between various power modes subject to its detected ignition status. The device can reduce its power consumption to levels well below industry standards, allowing a vehicle to be utilized for weeks, while not excessively draining the vehicle battery.

• TEMPERATURE MONITORING:

Temperature monitoring of refrigeration compartments.*

OPTIONAL FEATURES (ACCESSORIES): Driver Management Kit, Hands Free Kit, Seat Belt Monitoring, Door Sensor

SYSTEM BENEFITS:

- Full vision of your asset 24/7 regardless of GSM coverage
- Improve operating efficiencies, distribution management and vehicle maintenance
- Enhance Fleet safety and security.
- Reduce Equipments/machines inventories
- Quicker Response to Emergency/Recovery/ Rescue because of GPS Location Accuracy
- Identify Misuse and cost control.
- Better Route Planning
- Maximize Utilization and Efficiency
- Lower communication costs compared to using only satellite transmission.
- Enhance Safety through Better Driver Behavior.

TECHNICAL SPECIFICATIONS:

GPS	
GPS Receiver	uBlox Amy-6M, Glonass Option Available
GPS Spec	50 Channel -160 dBm
GPS Antenna	External
GSM	
Cellular Platform	Telit GE910-Quad (3G Option Available)
GPRS Class	10
GSM Bands	GSM/ GPRS: 850/ 900/ 1800/ 1900 MHz
GSM Antenna	Internal
Iridium Transceiver - Optional	
Iridium Module	Transceiver Model 9602
Physical Characteristics	
Dimensions	120mm x 78mm x 26mm
Operating Temperature	-30C to +70C
Power	
Power Input	9 - 40V DC
Backup Battery (mAh	1100mAh

Inputs & Outputs	
Inputs - Digital	5
Inputs - Frequency	2
Inputs - Temperature Sensors	4
Inputs - Driver ID Port	2
Inputs - Analog	1
Outputs	4
Connectivity	
USB	1 Host
(Serial Ports (RS232	2
In Vehicle Network	J1939/ J1708/ CAN / ISO15765
BLE	Optional
Other	
Accelerometer	3 Axis Digital (16g)
Geofence Storage Capacity	5000

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