



**FUEL PRO<sup>®</sup>**

**ADVANCED FUEL MANAGEMENT AND  
MONITORING SYSTEM VALUE PROPOSITION**

# BENEFITS TO OUR CLIENTS

## UTRACK'S FUEL PRO OPTIMIZES REVENUE

### Great returns on investments

At Utrack we strive to ensure that our clients maximize their returns with our solutions. With our technology focused on OPEX savings, we equipped our clients with technology to reduce significant operational cost. Thus, we are proud to have saved millions for our clients with our solutions.

### Customization - Suit your fleet needs

Finding the right solution has never been easy, and we understand that. That's why, we provide a one-stop platform for all your needs. Our Triton K2 hardware can be tailored accordingly from fuel management to engine diagnostics. Furthermore, our ZONMAX Software is designed to allow full customisation of reports, events, user's management and much more.

### World Class - Service & Support

Fleet management requires heavy responsibilities with a plethora of mobile assets on the move each time. Alongside providing a stable and reliable technology, we are investing heavily providing our partners and clients with exceptional services and support.

### Quality 100% Guaranteed

Our solutions at Utrack are developed in-house and undergo strict quality assurance to ensure excellent performance of our products. The manufacturing process is of substantial quality and certified to comply with: ISO 9001, ISO 13485, ISO 14001, AS 9100.



Superior technology innovation attentiveness to client needs.



Proven large-scale deployments with large scale clients in hard and challenging environment.



Secure platform with redundant data centers and integration tools to easily integrate Utrack products into existing systems.

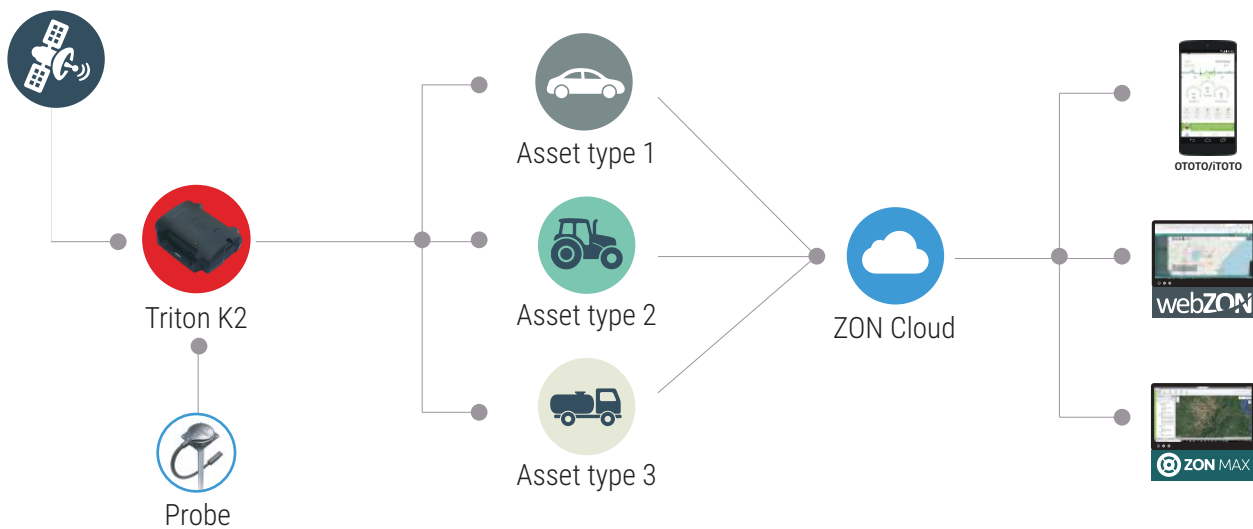
**Utrack**  
**the partner of choice**  
**for your fleet**  
**management solutions.**

## Become a Utrack customer today

Utrack provides high-end fleet management solutions for a variety of industries. The solutions includes Fuel Management, Vehicle Tracking, Driver Behaviour, Engine Diagnosis and more.

# UTRACK FUEL SYSTEM ARCHITECTURE

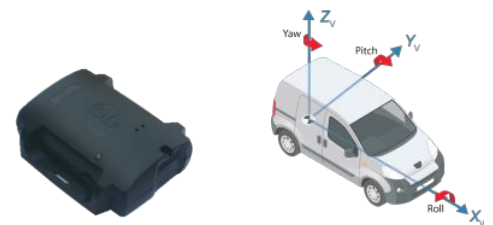
HIGH-END HARDWARE BACKED BY EXCEPTIONAL CLOUD SERVICE



## TRITON K2 SPECIFICATIONS

STATE OF ART TECHNOLOGY IN YOUR HANDS

Features	
Power Supply	9-30V
Power Consumption	Full power mode 0.5 W average (Approx) @12v approx.35mA
	Low power mode 0.2 W average (Approx) @12v approx.12mA
	Deep low power mode 250uA (approx)
Internal backup battery	Li-Ion 950mA
GSM/GPRS	Internal Antenna
	Quad Band GSM/GPRS 850/900/1800/1900MHz
	Quad band GSM/GPRS class 10
GPS	Antenna Type Internal
	Active Channels 48
	Sensitivity -163 db
Driver Identification	Dallas button/ Keypad/ RFID cards
General Purpose Inputs	Up to 5 general purpose inputs, can be configured to analog or digital mode separately.
	Analog 2 can be configured to read an NTC temperature
Outputs	Dedicated Immobilizer Output
	Dedicated in vehicle alert buzzer output



The Triton K2 unit has a built in accelerometer with 0.001g sensitivity for extremely accurate measurement of vehicle road behaviour.



Utrack's Triton K2 is able to connect directly to mobile assets fuel sender line (analog and pulse), engine computer and external fuel sensor. Thus able to extract real and accurate fuel data from any available fuel source.

Memory Logger	7500 messages (Approx)
Storage Temperature	-40 -85 Celsius
Working Temperature	-20 -70 Celsius
Max. Relative Humidity	90%
Weight	120g (Approx)

# UTRACK - FUEL MONITORING

UTRACK's sophisticated fuel algorithm provides real fuel level data and not statistical calculations based on mileage. The fuel activity reports provide a comprehensive breakdown of fuel cycle; consumption rate, refuelling, fuel drop events and general fuel trends. It detects irregular fuel activity and provide reports in order to stop fraud and unauthorized behaviour.

Thus, fuel theft and fraud can easily be detected and alerted. WebZON and ZON MAX smart dashboard provide an instinctive overview to track all the necessary data to prevent theft and fraud.

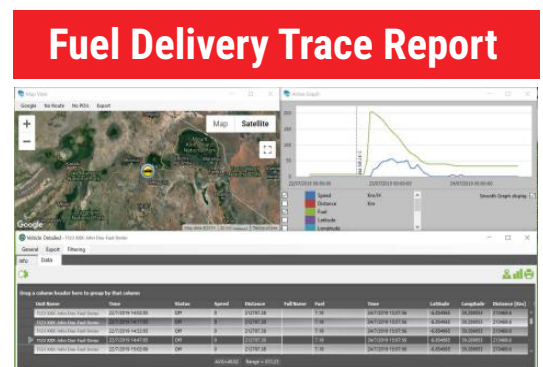
## Fuel Usage Graphs and Charts

Utrack is able to monitor fuel in almost every known asset type and fuel tank shape.



The fuel level in the tank is then monitored in real time through:-

- **Existing Fuel Sender** - Utrack's unit is connected directly to this sender's wires through its analogue input. These fuel senders are usually mechanical, and their purpose is to give indicative fuel level for the vehicle dashboard.
- **Vehicle Engine Computer** - The engine computer collected the raw data information from the same fuel sender described above and Utrack's unit communicates with the engine computer through several types of communication protocols available.
- **Dedicated Fuel Sensor** - An external liquid level sensor is put into the fuel tank for 24/7 fuel monitoring.
- Consumption of fuel is monitored and recorded as:
  - How much fuel was filled in the vehicle
  - How much fuel was consumed
  - How much fuel was drained or siphoned



# FUEL LEVEL SENSOR: FUELLING YOUR BUSINESS

For every business that operates a fleet of vehicles be trucks, locomotives or ships having a handle on fuel costs is critical. Fuel is literally the driving force across every mile, and in many regions accounts for the single biggest slice of operational expenditure. Finding ways to cut fuel costs is a priority.

## FUEL LEVEL SENSORS: QUALITY, RELIABILITY & ACCURACY

Our Fuel and Fleet Management Solutions are globally distributed with high-precision capacitive fuel level sensor. Invented with digital data transmission.

Invented the digital data transmission protocol that has become the defacto industry standard in capacitive fuel-level sensors globally. Our products are used in 110 countries and over 1-million vehicles are equipped with our capacitive fuel-level sensors, sensors that are often emulated by competitors.

## POWERFUL BENEFITS:

Fuel sensors in Utrack's fuel sensor line deliver a wide range of benefits:

- Extreme accuracy of 99.2%
- Consistently high reliability, even in extreme temperatures
- Our sensors are suitable for most fuel tanks (minimum sensor length 150mm, default sizes 700-6000 mm, with the option to shorten to fit the exact tank size even in the field—no special equipment needed)
- Eliminate data noise with Utrack's unique data filtering algorithm
- Wide application area – our sensors can be fitted to tanks on vehicles of virtually any description, on land and on sea and across multiple industries
- Built-in 1500V galvanic isolation for powerlines and communication interfaces protects the sensors and sensor operation in the event of sudden increases in voltage, even in vehicles with no additional galvanic isolation units
- Tamper-proof body for extended reliability and durability
- Consistently high quality of all components, internal and external, is achieved as a result of standardized quality control maintained across all stages of manufacture (ISO certification ISO 9001:2015)
- The quality of components, manufacture and support means that Utrack sensors have an extended product lifetime and are fully guaranteed
- The quality and reliability of our sensors are validated by multiple deployments internationally
- Fully certified across the board: E-mark, CE, FCC, EAC
- Compatible with third-party on-board terminals

# HOW IT WORKS:

## EASY INSTALLATION

Utrack's sensors are designed for easy set-up and calibration by technicians even in field conditions using the mobile calibration station.

Requiring just the starter kit and a laptop running the Utrack Configurator, the technician prepares the tank, cuts (if required) and calibrates the fuel sensor, mounts the sensor and then calibrates the fuel tank. The sensors are then connected to the Utrack or third-party terminal, ready to start logging and monitoring fuel data.

The whole process is straightforward and should take not more than between one and four hours. If necessary, Utrack provides training, guidance and support every step of the way.

### OUR SENSOR LINE:



#### LLS 4

Unprecedented accurate and reliable, extremely tough, with increased all-round protection, including against electrostatic, electromagnetic and conducted interference. The sensor head is specially designed to improve shock resistance while its compact size facilitates installation even in units very close to the fuel tank. The new enhanced cable connection slot with over-moulding is ultra-resistant to humidity, providing protection even when subjected to high-pressure washes. (**ingress protection rating of IP-69K.**)



#### LLS-AF 4

The completely reworked hardware design of the new LLS-AF 4 delivers even better stability. It's intended to be used with the cheapest terminals that don't yet support connection of the LLS 4 digital sensor over RS232/RS485 interfaces. The LLS-AF 4 has analog and frequency-modulated outputs protected by galvanic insulation and working independently throughout the range of power supply voltage. A special 'Tough Road Conditions mode' provides extra smoothing with several levels of filtration algorithms for consistent high performance in extreme road conditions. The new enhanced cable connection slot with over-moulding is ultra-resistant to humidity. The LLS-AF 4 also has an improved **ingress protection rating of IP-69K.**



#### LLS 20230

The **explosion-proof LLS 20230** uses advanced technologies for deployment in hazardous situations and potential explosive zones. Designed for uninterrupted, reliable operation in extreme temperature variations (from -60° to +85° Centigrade) and featuring reverse polarity protection, the LLS 20230 connects and operates via the BIS 20240 block and a special KTZ cable which ensure safe fuel level monitoring installation and operation in the most demanding conditions.

# SPECIFICATIONS:

PARAMETER	LLS 4	LLS-AF 4	LLS 20230
Size, mm	700, 1000, 1500, 2000, 2500, 3000	700, 1000, 1500	1500, 2000, 2500, 3000, 4000, 5000, 6000
Error in measurement, %	±1,0%	±1,0%	±1,0%
Output	RS-232, RS-485	Analog / Frequency	RS-232, RS-485
Programmable baud rate, bit/s	2400, 4800, 9600, 19200, 38400, 57600, 115200 bit/s	19200	2400, 4800, 9600, 19200, 38400, 7600, 115200 bit/s
Power supply voltage, V	7...80	7...45	8,5...10,5
Current consumption, max, mA	40	80	50
Power consumption, max, W	0,4	0.6...0.9	0,4
Ingress protection rating	IP69k	IP69k	IP57
Dielectric strength of galvanic isolation, min, V	1500	250	2500

## OPERATING CONDITIONS

Operating temperature, C	-60 ... +85	- 40 ... +80	- 40 ... +80
Relative humidity at 25 °, %	5 ... 95	5 ... 95	5 ... 95
Air pressure, kPa	84 ... 107	84 ... 107	84 ... 107
Maximum allowed humidity level, %	100	100	100
Resolution, bit	12	12	12
Output range of readings corresponding to the maximum value of measured level	1...4095	5...20V/100...2000Hz	1...4095
Output range of readings corresponding to the minimum value of measured level	0...1023	0...15V/30...1900Hz	0...1023
Absolute error in temperature measurement within the operating temperature range, C	± 2	Not applicable	± 2
Temperature measuring range, C	- 40 ... + 80	- 40 ... + 80	- 55 ... +80
Measurement frequency, s	1	1	1
Interval of automatic data output, s	1 ... 255	Continuous	1 ... 255
Size of internal filter of measurement results, points	0 ... 30	0 ... 30	0 ... 30
Operation mode	Continuous	Continuous	Continuous
Average service life, years	8	8	8

# FUEL PRO ADDITIONAL FEATURES: SMARTER FLEET MANAGEMENT

## Asset Tracking & Management

### Visualize your fleet

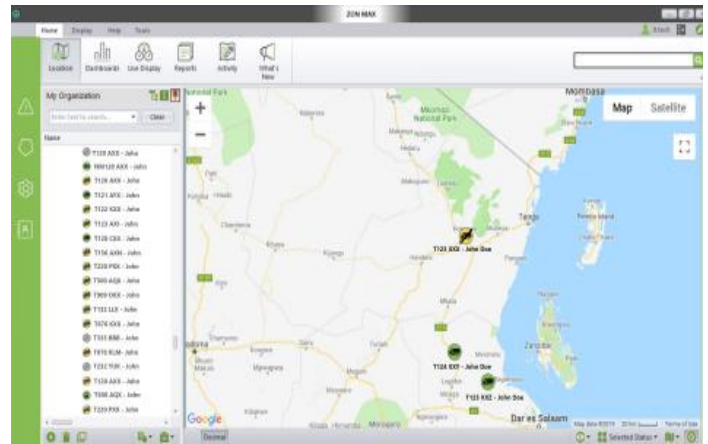
Track your assets location and status in real time. Filter your display by fleets and groups, color and region.

### Live Update

Real-time traffic and address search. Optimized with google maps.

### Geofencing & Unordinary driving hours

Utrack ZON MAX allows clients to set geo-locations either as a Place of Interest (POI) or a Geofence. Whenever the driver leaves or enters these locations, an event and alert is sent.



Immobilizer



Dallas Key

## Driver Identification

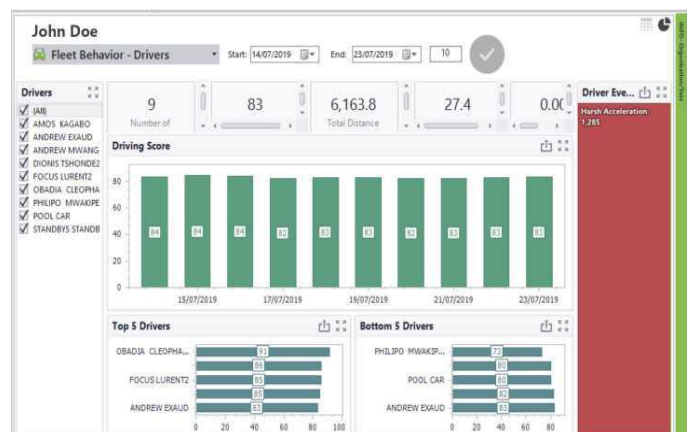
Utrack solutions enables the user to choose between various number of driver identification methods. (Dallas, RFID Cards, Numeric Keypad etc.) The driver identification enables to eliminate unauthorised car use by connecting one of the above methods to the immobilizer. Moreover, the driver identification feature can be used to manage the drivers profile.

Managers can mobilize and immobilize the vehicle remotely using Utrack Software or via direct SMS command.

## Driver Behavior

Utrack driver behavior summary provides information on drivers performances over the course of the desired time period. The driver behavior summary uses Galooli's algorithm to calculate the grade for each driver. The chart reflects both the top 5 drivers and the worst 5 drivers and vehicles.

Thus fleet managers can take action with the information provided to enhance their business productivity and safety of the vehicles.

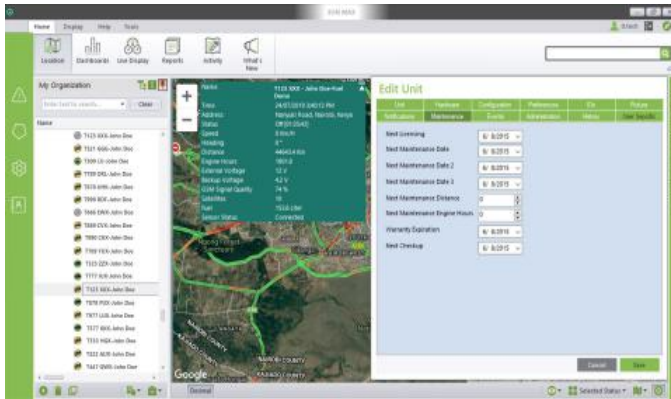




# FUEL PRO ADDITIONAL FEATURES: SMARTER FLEET MANAGEMENT

## Engine Diagnostics

Utrack's platform enables the user to get the engine diagnostics information from various sources. (FMS, ELM 327, OBDII, CAN-bus) This data enables the user to see the current status of the engine parameters (such as oil temperature coolant temperature, engine load and etc.) as well as recognising trends, thus it enables preventive maintenance and alerts upon abnormal engine performance.



## Engine Maintenance & Trends

Fleet Management can improve customers' satisfaction and grant companies efficiency by monitoring severe safety and misuse events. Maintenance alerts are optimized according to the clients requirements and assist in scheduling necessary repair works. Such information can also be used by customers to shop for an optimized service in terms of location, duration and cost.

# ZON MAX: CONNECTED BUSINESS INTELLIGENCE

## Our Platform

Internet of things (IoT) and Machine to Machine (M2M) solutions now provide new opportunity to create and deliver value. Data from connected assets, devices and sensors can enhance business processes, enrich customer processes, and provide dramatic insights into the physical world. Intelligence acquired from connected assets will drive unprecedented business innovation.

## ZON MAX

The core of Utrack's technology is based on the ZON MAX platform. The proprietary ZON MAX allows for the development, customization and management of end-to-end applications and services for the Remote Performance Monitoring (RPM) industry, ZON MAX enables cross-platform multi application solutions for a variety of users, and a unique modular support of systems tailored to customer's needs.



## Events & Alerting

### Events

ZON MAX real time events engine allows you to enter business rules and receive notifications of violations so you can control your assets instead of them controlling you!!



### Alert Systems

Customize your alerts to advisory, caution or warning and set them to be sent via SMS, E-mail and Pop-up, Choose to whom you send which alert and get statistic report and trail of alerts.

### Multizon™

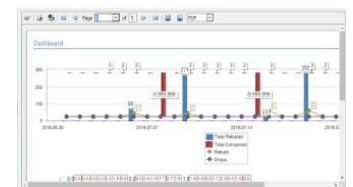
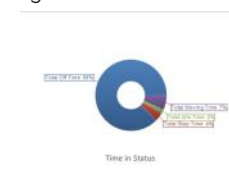
Utrack's ZON MAX boasts the ability of being able to add 4 individual events and use the "and/or" logic to create 1 unique MultiZON event. This allows the administrator to receive unique alarms which is unachievable in any other operation management programs.

## Customized Reports

ZON MAX offers you with a real reporting engine. We believe data provided by the system has to meet your exact needs, so we let you choose your data. Run reports by vehicle, fleet, group or drivers. All are generated in an easy-to-read format that can be printed, saved or set to send automatically to one or more recipients. Most reports allow you to jump to the detailed map view in one click. You can also save your setup for one-click reporting.



Name	Speed	Distance	Address
...	...	...	...
...	...	...	...
...	...	...	...



# ZON MAX:

## CONNECTED BUSINESS INTELLIGENCE

### Live Video

ZON MAX allows managers to see live video streaming coming from their assets in real time. Mobile DVR devices mounted in the assets can display a live high quality video of up to 4 channels. This feature is usually required for safety reasons and can be applied on public transportation or any other high value assets.



### Mobileye Intergration

Mobileye is a driver assistance systems (DAS) providing safety warning to drivers based on image recognition. Mobileye can be easily intergrated into ZON MAX allowing you to receive real time warnings of unsafe driving thus improving safe driver behaviour exceedingly.



### Web & Mobile App

WebZon is designed to provide user access from every web browser and is accessible from all devices i.e PC, Mac, Tablets and more. Our web based application is created to provide our clients with an ease of use and flexibility.

OTOTO/iOTOTO is an initive application for smart-phones, enabling end users to easily track and monitor their fleet or vehicle as well as getting real time alerts on the go.



## TARGET YOUR NEEDS WITH THE RIGHT SOLUTION

**Contact us for more information or a quotation**  
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