








-  **Customer:** distributor of household appliances
-  **Machinery:** highway trucks
-  **Task:** fuel tank monitoring and GPS-tracking
-  **Solution:** DUT-E S7 wireless fuel sensors, CANUp telematics gateways
-  **Result:** reduction of fuel and maintenance costs

Data is hidden from public access. Details on the project can be disclosed upon signing NDA.

CUSTOMER

Customer is a distributor of one of the world's largest manufacturers of household appliances and electronics. Company owns several dozen stores throughout the country. Delivery of goods between warehouses and shops is carried out with company's own trucks.

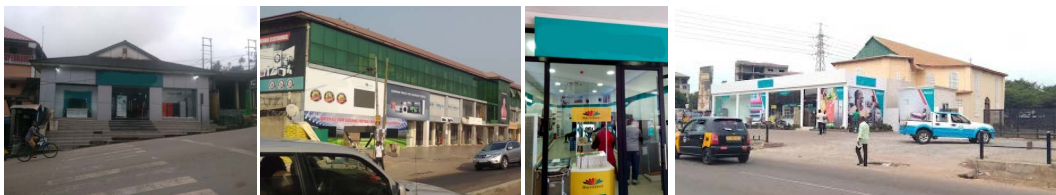
MACHINERY

Chenglong H7 trucks, designed by Dongfeng Motor Corporation (China), is a main type of vehicles used for transporting semi-trailers with the goods.

These vehicles have 6x4 wheel arrangement and are equipped with 6-cylinder diesel engine with cubic capacity of 10.3 liters. Engine power is 400 or 420 hp. Chenglong H7 highway trucks also have fuel tanks with volume of 600 liters.



TASK



Home appliance stores are located in various cities of the country

Trucks cover long distances of 400-500 km. Roads run through deserted places, tropical forests and savannahs. During the trip, some drivers deviate from the route to resolve their personal issues. Thereafter, in order to meet traffic schedule, they have to drive aggressively and overspeed. Such driving style leads to increase in fuel consumption, reduction of lifetime of truck's components and assemblies, as well as increases risk of damage to goods transported, and most importantly, endangers life and health of drivers and pedestrians.

In addition, some drivers had unreasonably high fuel consumption per trip. Customer top management suspected that they were draining fuel on the way, but it was impossible to prove the fact of fuel theft.

For all these reasons, company's management decided to install telematics on trucks. The system was intended to solve the following tasks:

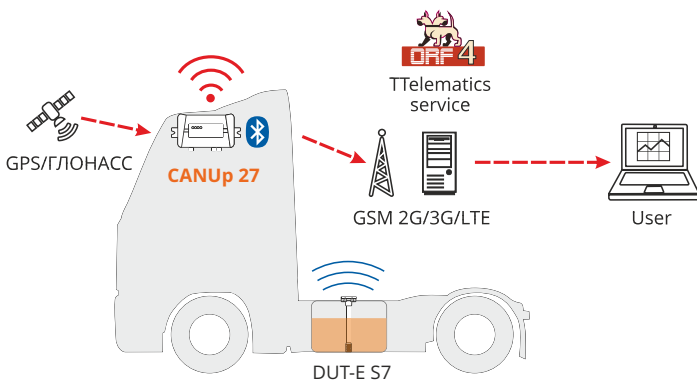
- fuel volume monitoring in fuel tanks of trucks in real time,
- GPS monitoring, online monitoring of truck's route and speed,
- sending notifications about fueling/draining to fleet manager.

Company is careful in choosing suppliers of goods and services. When choosing truck fuel monitoring system, main factors were: quality of onboard equipment, stable operation of software, long-term operational experience, supplier's reliability and reputation. After thorough review of proposals, choice to Technoton truck telematics solution was made.

SOLUTION

Technoton has proposed fuel monitoring system, based on DUT-E S7 wireless fuel level sensors and CANUp telematics gateway, to mount on trucks.

DUT-E S7 wireless sensor measures real fuel level in tank. Data on fuel level is transmitted via BLE (Bluetooth 4.x) to CANUp telematics gateway.



Monitoring system composition

Advantages of wireless fuel level sensors:

- no cables – quick installation and excluded errors during electrical connection;
- built-in battery – DUT-E S7 works without external power supply within 5 years;
- fuel data transfer to smartphone – fuel remaining, volume of refueling at filling station, notifications on fueling/draining.

CANUp telematics gateway receives fuel data from DUT-E S7 via BLE channel and transmits it to ORF4 telematics service. CANUp allows configuring up to 20 Reports, each of which contains up to 10 Parameters. Customer receives online data on the route, speed and location and all necessary information on fuel - fuel level and volume in tank, current fuel consumption, notifications on fuel tank refueling/draining. ORF4 telematics service generates analytical reports on route and fuel for various periods to choose from - daily, monthly, etc.

Irina Radiminskaya, Technoton

“Main customer's task was to track vehicle fleet in real time, monitor fuel drains, obtain detailed information on the route, as well as to display group Reports for all trucks for subsequent data analysis.

Technoton has proposed solution, based on DUT-E S7 BLE fuel level sensors, CANUp telematics gateway and ORF4 telematics service. Now customer is satisfied with telematics solution. The installers are going to equip more customer's vehicles with Technoton devices and carry out scale of the system.”



RESULT

Installation process began in February 2021. At first, more than 20 trucks were equipped with telematics systems by Technoton. Mounting of equipment was carried out in a short period of time - there was no need to lay cables, since wireless BLE sensors were used in the project, configuration of CANUp telematics gateway was done remotely. Thanks to easy and quick installation, delivery schedule was not violated.

During operation of telematics, **fuel costs for highway trucks have decreased by 25-30%:**

- improved driving quality - less speeding, decreased number of drastic accelerations and braking;
- vehicles do not deviate from the route, their mileage has decreased;
- excluded theft of fuel by drivers.

Improved driving quality and mileage reduction increases service life of truck's components and assemblies. Now vehicles need less repair and maintenance. Reduction of repair and maintenance costs is extra point to implementation of telematics system.

Customer CEO

*“Technoton has found an optimal set of onboard equipment and software to solve tasks, we faced. ORF4 telematics service provides operational information on route and speed of trucks, as well as provides accurate and complete fuel data. It is possible to receive analytical reports on any vehicle for any period. Thanks to this data, **we managed to significantly reduce fuel costs and have built a new motivation system for drivers.** Now we plan to equip more trucks in our fleet with Technoton telematics.”*