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## PROFESSIONAL APPROACH WITH AMATEUR SPIRIT



We have been working on Computer Systems and Communication Technologies for twenty five years with principle of customer delight and we make an effort in this way.

Thanks to our young and dynamic team who comes together by our professional approach with amateur spirit, we are walking towards our goal to be the leading company in the sector not only in Turkey but worldwide by increasing our customer portfolio. Our company has received many certification in this line. Products which we developed over the years with all of these experiences and fund of knowledge we provide our solution partners high quality and latest technology services.

Our company which has a precious management personnel who are decisive and persistent and never give up on the policy of "We Will Be with You Tomorrow Too" has started to create corporate project solutions for its solution partners by focusing on project engineering. Our biggest goals are sector leadership and customer delight with years of knowledge, ethic values, and never compromising of our principles.

We have accelerated our studies to make actual our 2018, 2019 and 2020 visions. Thanks to our Software Development and Resource & Development Departments, we are getting on and improving our sources each passing day for new fields and ideas. We aim to grow with our new solution partners, and create new projects which will enrich our country with the modules Integrator and Business Process Model and Notation (BPMN) which we will share with our solution partners to offer the best service for humanity.







## OUR DIFFERENCES

- Parametrically able to perceive the situation of sales or filling when the automation system is closed.
- Operate different brands but the same type of devices over the same port.  
(Eg Probe, Vedeer-Root and Start, Interface, Orpak and Teosis interfaces)
- Conformable for manifold tanks.
- The chance to work spontaneously just like the automation computer is always near to you by using exclusive web and mobile applications.

## OUR ADVANTAGE

- All Domestic Production Equipment
- Robust Software
- Zero Cost in Conversions
- EPDK Data Tracking Unit
- Free Security Software
- Online Service Tracking System
- Stock Tracking
- Tank Tracking
- Unlike the devices brought from abroad, all devices are able to redesign and manufacture in any time in case of need or custom solutions require. Also the fastest and efficient solutions can find.
- Impartial call center and fault recorder allows your gas stations work non-stop or minimum failure.
- You don't need to replacing all ATGs and probes cause of ATG or Probe faulty due to our software and conversions which are compatible with all brand and model hardware equipment in the sector. As a first in Turkey, it is possible to work with different tank devices at the same time in our system.



## PUMP AUTOMATION SYSTEM

The Elpo pump automation system is based on connect to a cash register, pump and interface units into one single computer and they are able to being managed and tracked by using special automation software. Data of sales from pump transmit to system and they record in there. Then these sales data will be reported, calculated and ready to be processed. These data which gathered by computers from the gas station are instantly transfer to the servers of the distributors via web services. Customers can check and follow the fuel supply from the customer screen in the gas station`s market. Gas station`s authorities are able to track and control from internet web interface or mobile devices at any time, and they can make the necessary observation. The pumper recognition system controls which fuel pump take on supplies by which pumper.

### ONLINE PUMP TRACKING

The information on the pump status (amount of fuel, amount of money, licence plate of the fueling vehicle, name-surname of pumper) can be instantly monitored on the market screen during sales, on the web interface in internet environment.

### PURCHASE COMPLETED

After purchase completed and receipt print out from cash register, you are able to see letter which writes "pump is closed" on market`s screen and track amount of fuel, amount of money, licence plate of the fueling vehicle and name-surname of pumper by using internet platform, web interface or mobile device.

### PUMP PRICE ADJUSTMENT

You are able to change product prices in all pumps in one go from automation computer, mobile devices or web interface in case of product-based replacement. It is not necessary to close shift before price fixing even it doesn't affect any shift report.





### **DIFFERENT FUEL PREVENTION**

Tuva Card Reader gives a warning signal if a vehicle purchases fuel second time in same gas station therefore it prevents to give different type fuels.

### **STAFF MEMBER CARD**

This card contains pumper`s (the guy or gal who pumps) information and system doesn`t allow to selling without scan this card before fueling.

### **DISCOUNT AND LOYAL COSTUMER CARD**

In case of apply special discounts for special customers, determine product base discount percentage or monetary discount amount from central computer. Before pumper scan his/her own staff member card, s/he scans the costumers card therefore loyal costumers` price detect by pump then fueling starts as soon as staff member card is scanned too.

### **MOBILE COSTUMER RECOGNITION SYSTEM/MCRS**

This system allows customers who has fleet vehicles or company vehicles are able to determine fuel amount and pay via mobile devices.

### **SPECIFY LIMITS FOR COSTUMER CARD**

Companies with vehicle fleet owners can control their fuel purchases as limit their purchases daily, weekly and monthly by the cards they give to their vehicles.

### **CUSTOMER RECOGNITION SYSTEM / CRS**

After recognized vehicle card for costumers scan on RFID card (in this term vehicle total km data may optionally insert), pump starts to fueling otherwise it doesn`t start. It is able to report fuel consumption, the amount of fuel delivered from the pump, the amount of fuel, and the amount of fuel that the pump delivers from each pump connected to the CRS system, based on fleet, vehicle, company or driver.

### **SHIFT TRACKING**

After one time define in shift planning and switch system, it occurs in internet platform, web interface, and mobile device. It also provides to measure and report pump, gun, pumper and fuel sales amount base on money amount and liter. In pump automation, pumpers can fueling from all pumps. In shift report, receive a report about pump sale and liter information which is related with the pumper. For price and liter amount should be specified and reportable separately by using discount card, it depends on the shift report which receive from pumper.

### **FLEXIBLE REPORTING**

It is as understood by title flexibility to report about sales, vehicle license plate, who fueled gas etc. by using a computer in a gas station, mobile device or in internet platform.





## PUMP AUTOMATION SYSTEM

### GENERAL PROPERTIES

- Point Tracking
- Quick sales
- Vehicle License Plate Tracking
- Tracking of Sales on credit
- Sales Analysis
- Quick and easy to use
- Designable Reports
- Decision-Support Reports
- User-friendly design
- User-based customization
- Compatible equipment
- Designable Printer Output
- Records of transactions
- User Authorization according to transaction and task
- Outputs in different formats (Excel, Pdf, Txt, Xml, Image etc.)



### POMPA OA HOW DOES PUMP AUTOMATION WORK?

Gas station employee scans staff card or customer card on Tuva Card Reader then automation system receives employee's information.



After get consumption information, automation checks employee, vehicle and customer information then approve to pump.



After approving process, fueling starts then receipt print out.





## TANK AUTOMATION SYSTEM

Elpo Tank Automation is a software that is compatible with the Pump Automation system which prepared by Elpo Engineers. Fuel, water and temperature information in the tank are measured one second frequently and to fueling in tanks are automatically detected by electronic measurement probes which installed inside of tanks in gas stations. Tank automation and tank fuel level can be monitored & tracked instantly by station on the internet web interface and on all mobile devices. Reading values of tank fuel levels are stored parametrically as specified intervals in the database. All stored data may transmit to intended server momentarily and they also can be reported any time. On the level of need notification can be received or can insert order automatically by using Tank Automation. Inventory tracking could be under the control with record all necessary details of instant filling (fueling in tank). Further it gets as warning or alert for minimum, maximum and critical stock level and leakage status hence it takes precautions for these prospective situations.

**TANK FILLING;** the fillings made in the tank are recorded with all its details in electronic environment. These records are stored in database and they are available to reach any time.

**TANK ALERT;** Events in the tank like high temperature, low temperature, high water level, low water level, leakage etc. notified to user as warning.

**LEAKAGE INSPECTION;** In case of reduction of fuel from tank without pumping or leakage cause of fitment failure detect then notified to user and alert center as warning.

**MAIN CONTROL;** The instantaneous data of all the tanks in a gas station can be monitored and controlled from a center place or online via mobile devices.

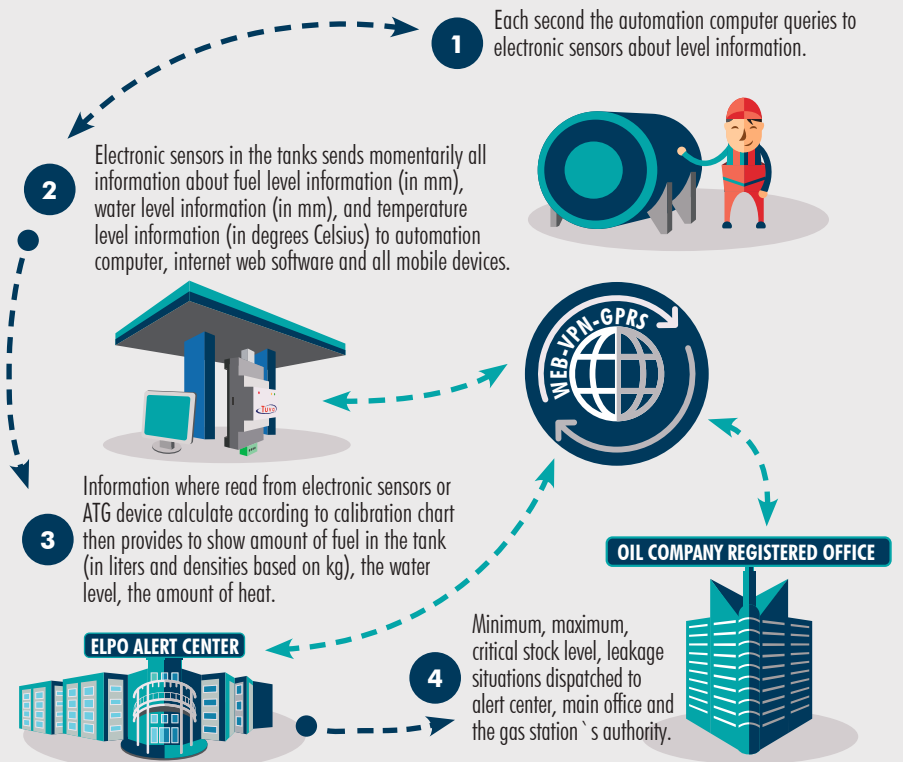
**TANK CALIBRATION;** It is a process to show the amount of fuel in the tank (liter and density in kg basis) at real values. They are displayed as 3D Laser Calibration, calibration pump, tank movements history are compared with each other or by using current calibration chart. Hence specified alarm levels work effectively. Beside this; amount of sales made by pump compare with amount of fuel exhausted from the tank then check as they are equal or not.





## HOW DOES TANK AUTOMATION SYSTEM WORK?

- Each second the automation computer queries to electronic sensors about level information
- Electronic sensors in the tanks sends momentarily all information about fuel level information (in mm), water level information (in mm), and temperature level information (in degrees Celsius) to automation computer, internet web software and all mobile devices.
- Information where read from electronic sensors or ATG device calculate according to calibration chart then provides to show amount of fuel in the tank (in liters and densities based on kg), the water level, the amount of heat.
- At certain intervals it records to automation computer and sends to main server.
- Minimum, maximum, critical stock level, leakage situations dispatched to alert center, main office and the gas station`s authority.

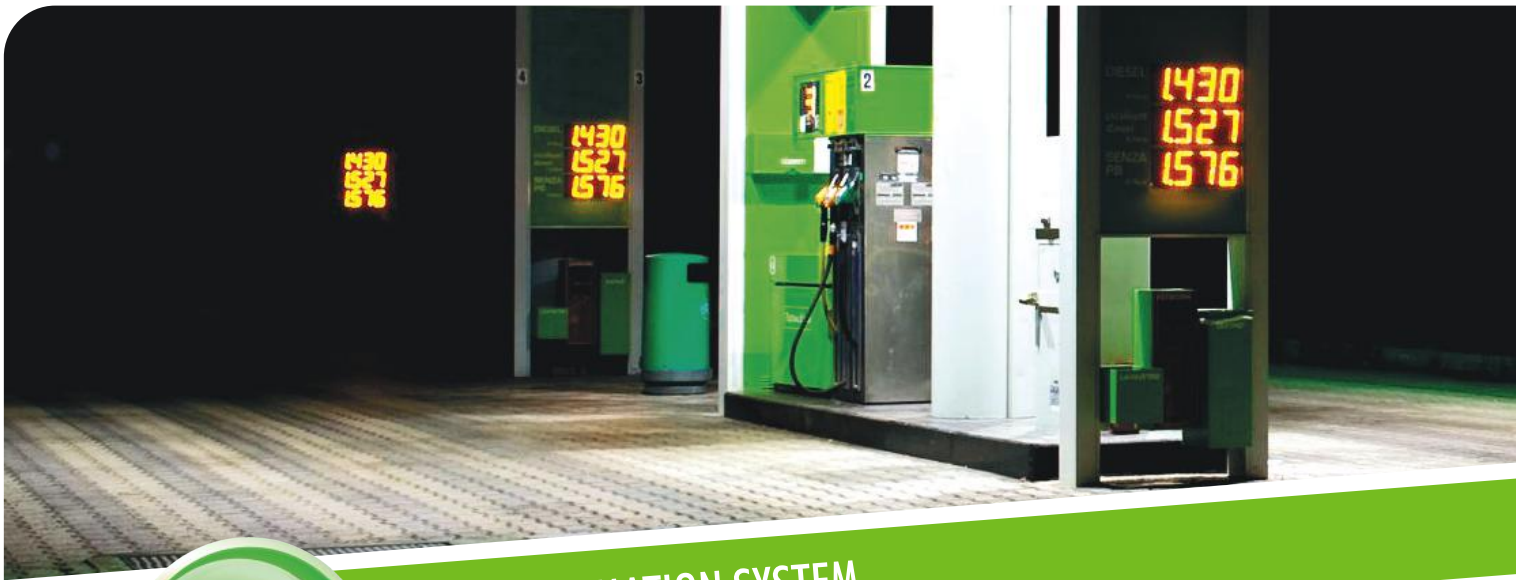


### ELPO TANK TECHNOLOGIES

- Underground Tanks
- Aboveground Tanks
- Special Purpose Tanks
- Mobile Tanks
- Container Tanks
- Vehicle Tank

### TANK AUTOMATION

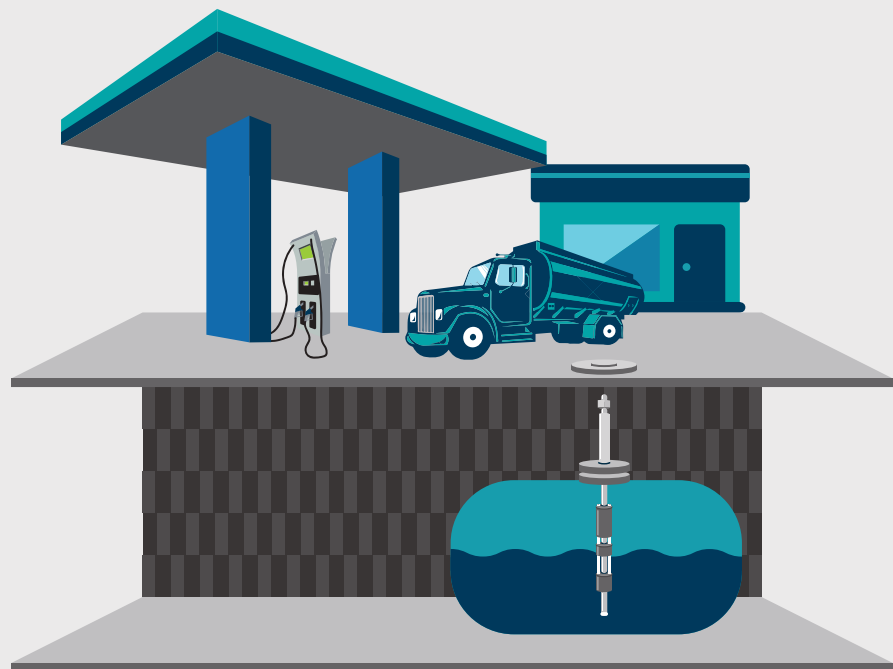
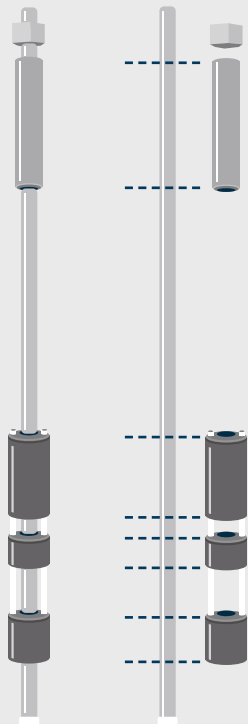
- Management of Fuel Stocks
- Automatic Calibration Process
- Tanks Instant Level Information
- Warning to overflow and leakage
- Provides you Unlimited Service with Comprehensible Visual Design



## TANK AUTOMATION SYSTEM

### HOW DOES PROBE WORK?

Electronic sensors in the tanks send momentarily all information about fuel level information (in mm), water level information (in mm), and temperature level information (in degrees Celsius) to automation computer, internet web software and all mobile devices.









## TANK TRUCK AUTOMATION SYSTEM

ELPO Tank Truck Automation system records sales in electronic platform from pump for mobile sell purpose. Then it dispatch this sale info to main server via GSM, GPS, GPRS. Therefore you are able to check & track and report sales from tank truck in any time and any place.

ETOS which is ELPO Tank Truck Automation provides convenience about set up Tank Automation system by its plug-and-play feature. It is pretty easy to configure to the device. Because ETOS runs with http/soap protocol, it is compatible to other automation systems too.

The truck where this system will be applied on should modify like mechanic counter replace with digital counter. After official inspection, Tank Truck Automation system will be ready to be mounted. Electrical unit and fuel pump gun which is on the truck will connect to hardware and it manages valve of electrical remote controller. Elpo Tank Truck Automation system hardware mount in truck`s cabin.

It is easy to use, prints out receipt from receipt printer according to device model. Optionally it is able to make sell by reading RFID card according to device model. User dependently it prevents make sell before scan the card. That`s why it allows to know who makes the sale. Then it dispatch this sale info to main server via GSM, GPS, and GPRS. It works together with Main Automation.



## HOW DOES TANK TRUCK AUTOMATION SYSTEM WORK?

1 ETOS deutes to pump which is on the tank. It gives fuel according to costumer`s offer.



2 After purchase complete, data will send to server via GPRS.





## VEHICLE RECOGNITION SYSTEM

Vehicle recognition system aim to check & control fuel expense or define daily, weekly and monthly limits. You are always available to attain information like at where, in what time and how much fueling have done. Fueling never starts before fuel pump gun enters into your vehicle`s gas tank. If the fuel pump gun gets out of from gas tank during fueling, fuel pump interrupts fueling immediately therefore you can make sure about your gas is pumping only in your gas tank. Also this feature provides you to analyze your fuel expense and you can take precautions for losses. Thanks to km check feature, you are able to track your vehicle`s performance and even you may guess about your vehicle`s inspection time. Furthermore; you can purchase fuel according your limits, make discount and expand your accounting process with fleet management system in all gas stations where you have contract with.

**ACTIVE VEHICLE RECOGNITION SYSTEM;** in fueling moment the pump communicates with vehicle mounted ID (identification) unit which contains your vehicle`s information and it gets vehicle and kilometer info. As soon as fuel pump gun enters to vehicle`s gas tank, communication starts. Vehicle info transmit to station control unit via vehicle ID unit and tank antenna. After get permit from station control unit, pump starts to fueling. If the fuel pump gun gets out of from gas tank during fueling, fuel pump interrupts fueling immediately. After fueling complete, a receipt prints out which inform about fueling (liter, unit price, type of product, date, hour, license plate).

**PASSIVE VEHICLE RECOGNITION SYSTEM;** in fueling moment the pump communicates with vehicle mounted ID (identification) unit which contains your vehicle`s information and it gets vehicle and kilometer info. As soon as fuel pump gun enters to vehicle`s gas tank, communication starts. Vehicle info transmit to station control unit via vehicle ID unit and tank antenna. After get permit from station control unit, pump starts to fueling. If the fuel pump gun gets out of from gas tank during fueling, fuel pump interrupts fueling immediately. After fueling complete, a receipt prints out which inform about fueling (liter, unit price, type of product, date, hour, license plate).





**FULL CONTROL FOR FUEL CONSUMPTION;** you are able to report daily, weekly and monthly about from where, how much and how many liter of gas you spend per km for your own vehicle or the company bought gas by using Elpo Vehicle Recognition System.

**PRACTICAL AND QUICK FUELING;** you don't need to wait long time for receipt, paying credit or cash etc. processes. You can quickly fueling your vehicle.

**EASY PAYMENT;** you are allowed to all your payments in one place monthly or specific times.

**EASY ACCOUNTING;** it provides to regularize your accounting reports therefore such difficulties like expense receipt arrangement, insert receipt into computer, check receipt and make receipts regularly are solved. Beside it helps to gas station employees like pumpers about operation process.

**LITER, and KILOMETER TRACKING;** using by fuel consume data, we are able to check loss and take precaution for them also you can get know about your vehicle`s fuel consume performance.

## HOW DOES VEHICLE RECOGNITION SYSTEM WORK?

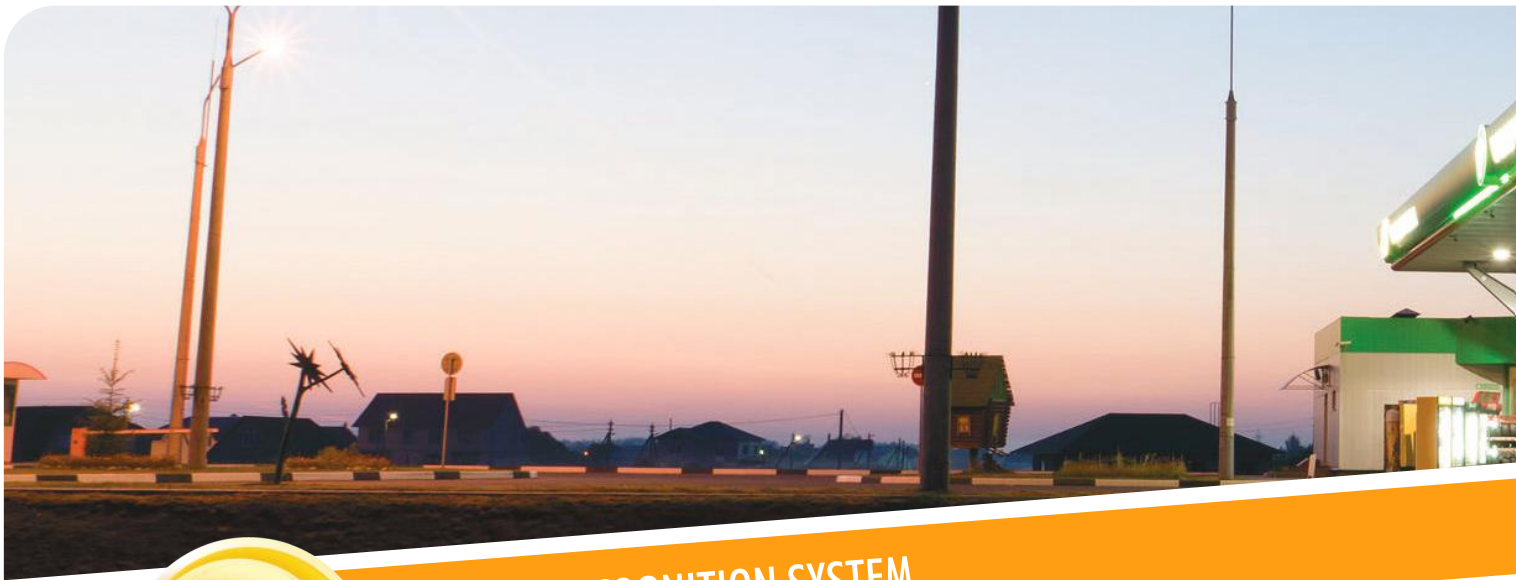
Vehicle which has ELPO Vehicle Recognition unit approaches to fuel pump.

As soon as pumper enters the pump in the vehicle`s fuel tank, system which is mounted on vehicle and RFID which is mounted in fuel pump gun starts to communicate with each other.

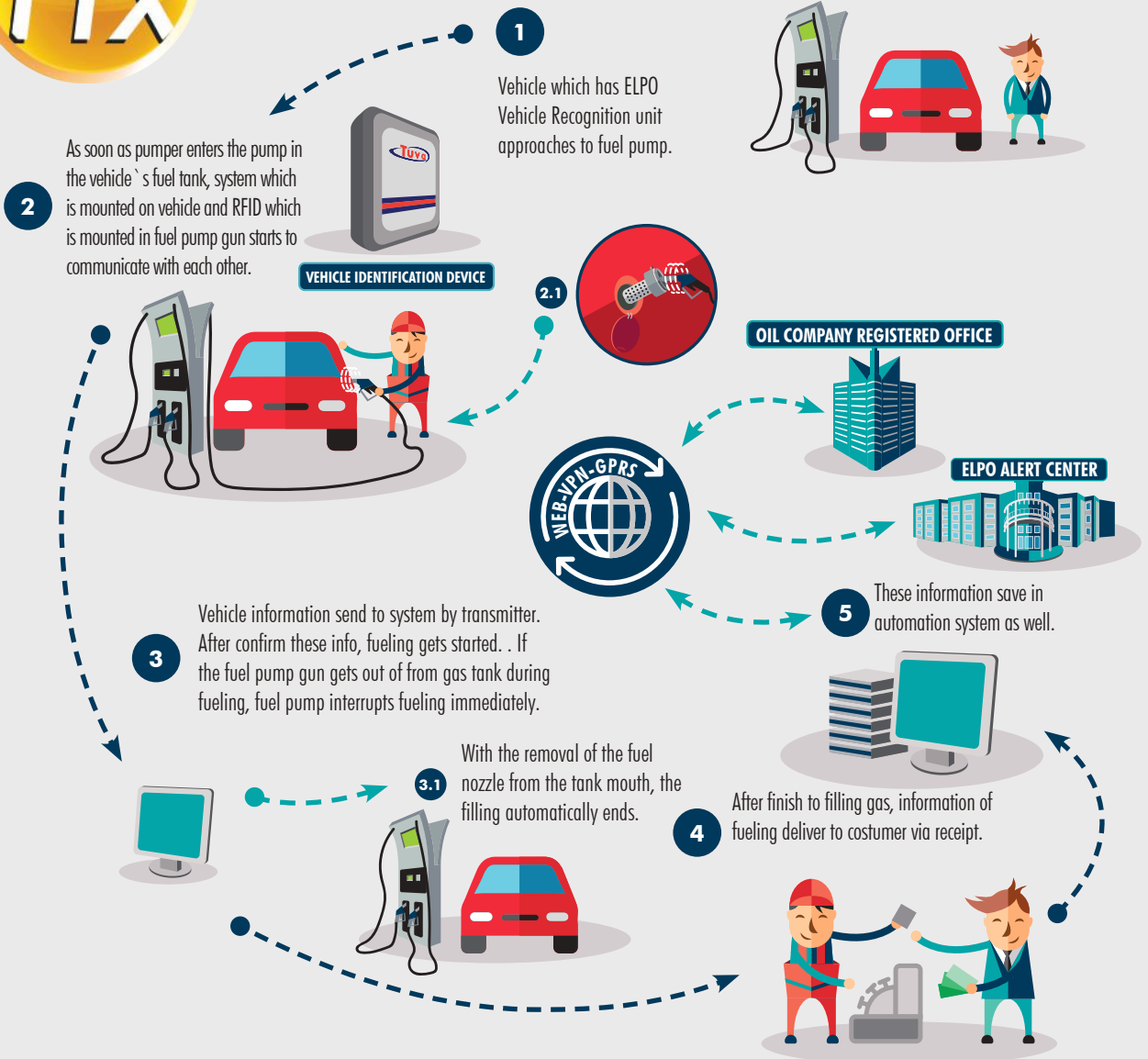
Vehicle information send to system by transmitter. After confirm these info, fueling gets started. . If the fuel pump gun gets out of from gas tank during fueling, fuel pump interrupts fueling immediately.

After finish to filling gas, information of fueling deliver to customer via receipt. Also these information save in automation system as well.





## VEHICLE RECOGNITION SYSTEM





## COSTUMER RECOGNITION SYSTEM

You are able to tracking and kept down in anywhere anytime fueling expense or limit it to daily, weekly, monthly for your any vehicle as where, when, how much it get fuel and how much fuel spends per kilometer by using Costumer Recognition System. It provides you obtain detailed fuel expense and you can take precaution about loss. Thanks to kilometer control, you can follow your vehicle`s fuel expense performance and even you can have an idea about inspection time of your vehicle. Cause of fleet management system integration with Costumer Recognition System, you can buy fuel according to your limits in any gas stations of your contracted company and you can take advantage of it like bulk purchase discount.

RFID technology is used in Costumer Recognition System. This system provides to fast processing and safety environment.

It reports total fuel expense in base of fleet, company and driver, amount of fuel which is given by pump, price amount, vehicle`s total kilometer information and fuel amount, price of each CRS connected pumps.

After scan defined vehicle card for costumer on RFID, it requires to insert total kilometer information. Fueling get starts after kilometer information. In another condition, pump doesn`t start to fueling.

It`s not possible to fueling another one`s vehicle with different defined vehicle card for costumer. (Inserted license plate number in cash register compare with license plate number on vehicle card.)

RFID prevent to fueling different type of fuel into vehicle according to information what inserted in it.

Using card which is given companies they can track their company fleet`s fuel expense daily, weekly, and monthly.

### HOW DOES COSTUMER RECOGNITION SYSTEM WORK?

- Vehicle approaches to any fuel pump.
- Fuel pump gun places in vehicle`s fuel tank
- Costumer or Vehicle card scans by RFID
- Defined price for costumer send to fuel pump gun which is entered to vehicle`s fuel tank. (According to costumer`s contract, price can be discounted or not)
- Fueling starts after vehicle`s kilometer info is scanned and insert RFID card scanner.
- After fueling process is completed, fueling information (liter, unit price, product type, date, license plate number) receipt prints out automatically and it gives to driver.



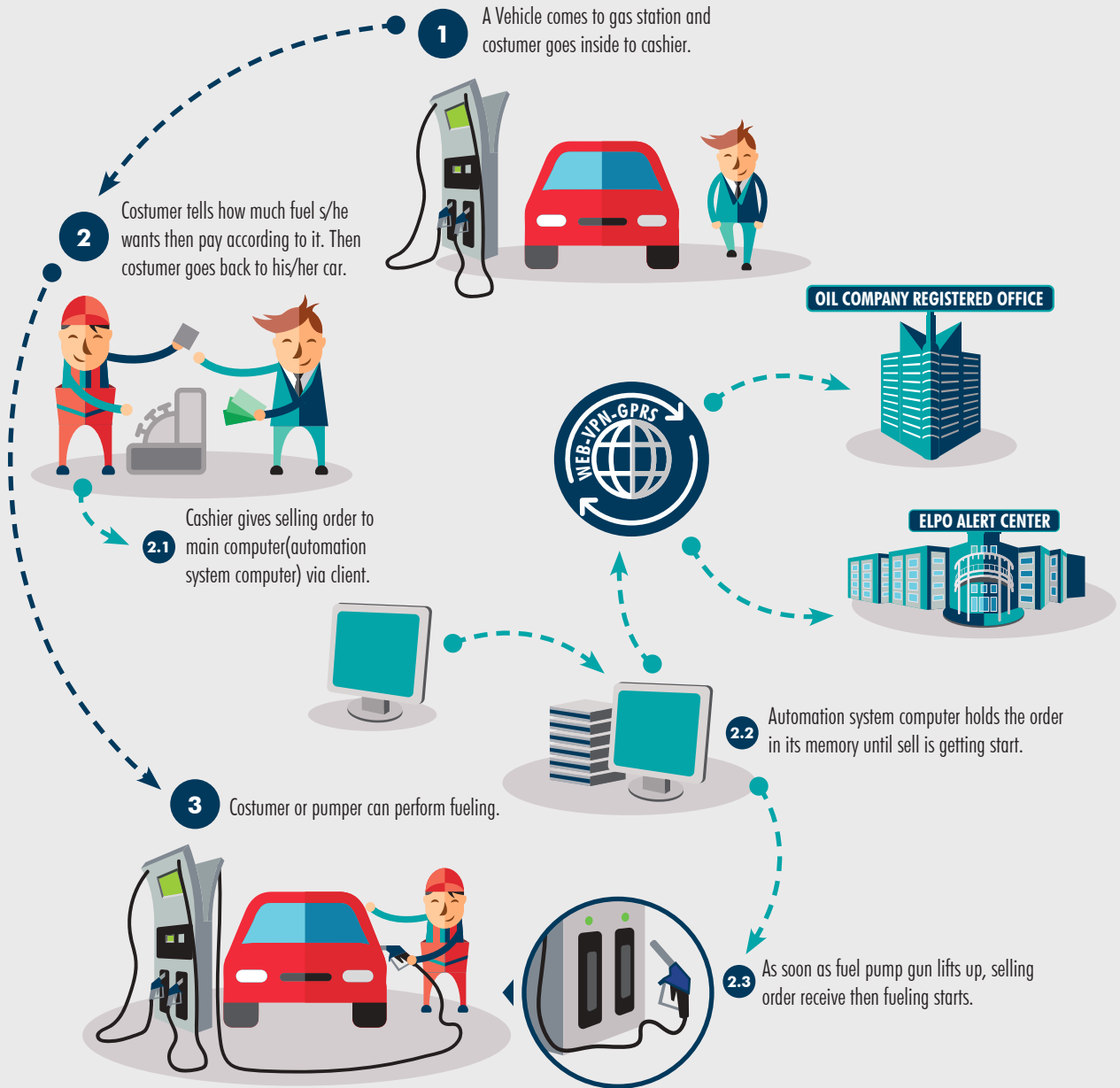


## PREPAID SELLING TRANSACTION (SELF SERVICE FUEL MANAGEMENT SYSTEM)

It's developed according to gas station's working model. In such gas stations which have this system, customer pays to cashier before fueling transaction. This system works without need a cash register. After cashier gives permit to pump for fueling, customers can only fueling their own vehicle, or pumpers can do it. It works with pump automation system. Same network is using between automation system which is installed on main computer(automation system computer) with cashier client which runs by connected to main computer and cashier definition is made by this connection. Therefore sales are recorded by the system as prepaid selling transaction gets activated. Cashiers who made sales and pumps can be analyzed. Given sell permit can be canceled by cashier. Either from Pump Automation and Prepaid Selling Transaction (Self Service Fuel Management System) can track and report sales instantly. Sale pending & sale process status and pump error status can be monitoring on sale tracking. After give sell permit, receipt is printed out or unlimited sell permit can give then print out receipt according to sell. Selling permit is given according to liter or amount of money. Different price define for different fuel, one of these can select before sell order.

### THECNICAL INFORMATIONS

- Fuel automation system set up on main computer(automation system computer) in gas station
- Cashier and employee are defined by main computer(automation system computer)
- Prepaid Selling Transaction (Self Service Fuel Management System) set up upon client which is connected same network
- Employee log in through given user and client
- Selling permit is getting start via employee tracking screen





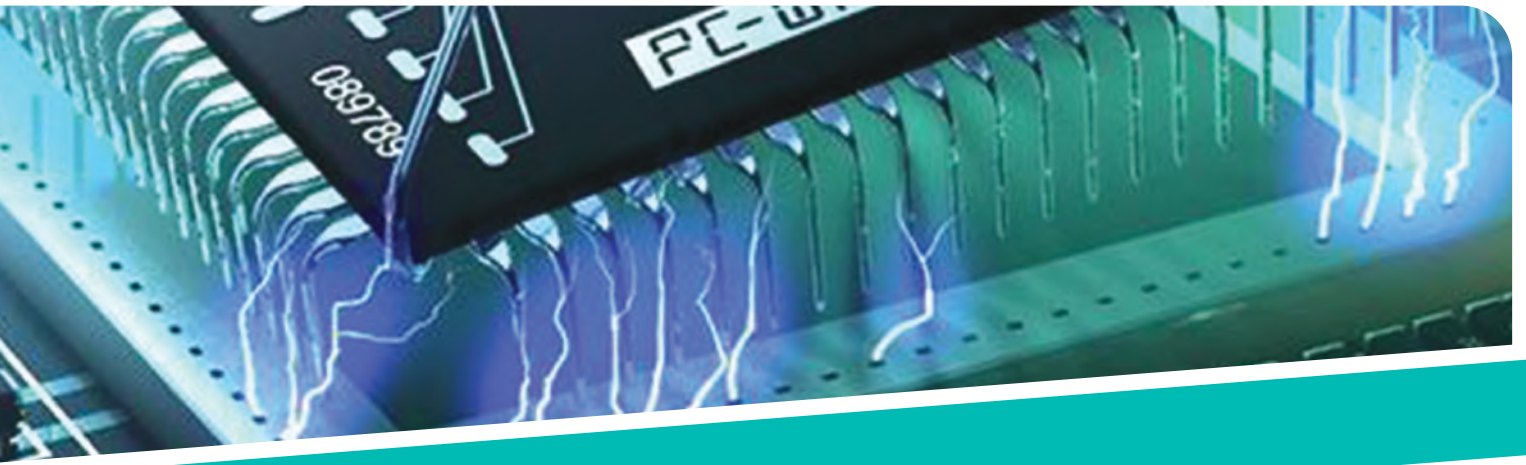
## MAIN STATION MANAGEMENT DASHBOARD

Main tracking system gets information from Pump Automation, Tank Automation, Tank Truck Automation System, Vehicle Recognition System, and Customer Recognition System and it provides you to track and control each status of fuel in main office. This system which develops as it runs in internet and mobile devices by ELPO engineers allows you instant central control and reporting via software from your main office. This system works compatible with our other automations therefore it makes your analyzing and reporting process easier. You are also able to see instantly gas station's pump and tank status synchronously with the station computer.

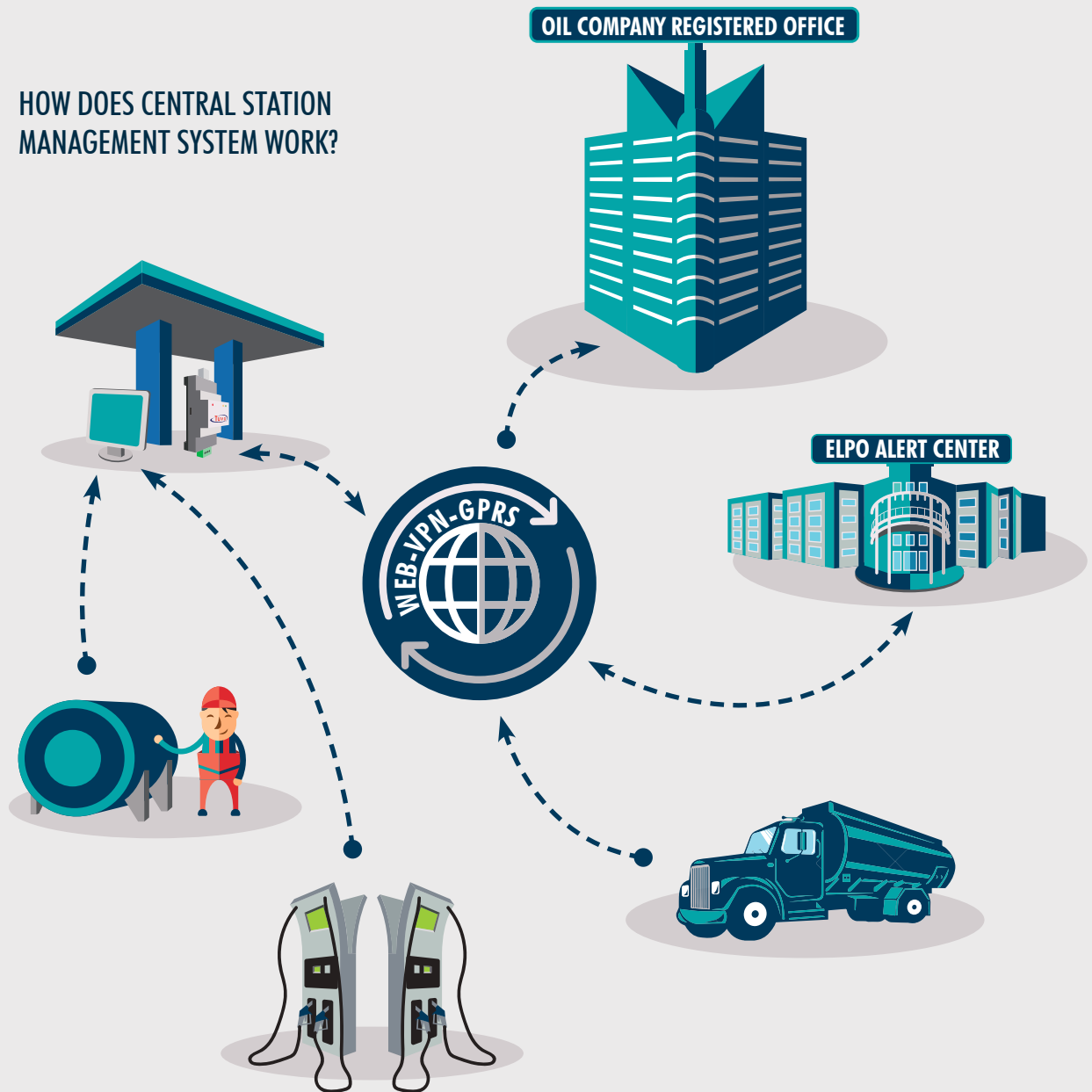
### GENERAL SPECIFICATIONS

- Feature of Making Many Data Analysis on One Screen
- Station Analysis Dashboard
- Monitoring sells from pump
- Monitoring Instant Status of Tank
- Employee Shift Tracking
- To Changing Price of Pump
- Monitoring Instant Status of Price
- Alert and Warning Tracing
- Instant Tank Filling Warning (Filling started, Filling is over)
- Tank Truck Sale Reports
- Analysis(location of gas stations on map, data consistent or inconsistent, tracking online or offline status)
- Failure Tracking (Tracking of pump, tank, automation failure and also tracking when the failure started and finished)
- Suitable for EPDK 1240 Assize
- Alert Management According to EPDK 1240 Assize Requirement
- Information of Dealers
- Consistent or Inconsistent Data Check via Crosstab Query
- Address book (Gas station authority and Emergency Contacts)
- Sales Assistant, Regional Director, Field Manager Analysis and Reports
- Waybill and Waybill Alignment Information
- Define Pump and Fuel Pump Gun
- Tank and Fuel Pump Gun Connections
- Management of Service Password





HOW DOES CENTRAL STATION  
MANAGEMENT SYSTEM WORK?





## ALERT CENTRALIZED MANAGEMENT SYSTEM

Elpo Alert management system is able to determine failure and transmit it to central monitoring station instantly.

### GENERAL SPECIFICATIONS

- It detects failure like CPU, RAM, HDD problems which prevent automation computer`s regular work.
- It close desktop information on the automation computer.
- It blocks another software run which is unknown.
- It controls to automation computer`s connection into main server.
- It tracks pump failure and detects to communication problems.
- It controls if a pump is affixed to tank or not and also controls to sales from pump.
- It prevents to pump sell if the pump is not affixed to tank.
- It gives alert if fuel decrease from tank without any sale.
- It always check tank`s min. and max. water levels and send alert to alert center.
- It always check tank`s min. and max. temperature levels and send alert to alert center.
- It checks tank communication lines and send alert to alert center.
- In case of communication status, it interrupts fueling from pump which is affixed to tank.

## WORKSITE AUTOMATION

The base of Worksite Automation system is connect to pump and tank units to embedded computer. It aims to tracking and management by special software. Sales from pump transmits to the system and systems record them.

These instant sale data is retractable by internet platform, web interface and mobile device. After that they can be reported, calculated and getting ready to be processed. Data which is collected on embedded system instantly transmit to Central Office Servers by GPS connection. Decision of which pump will fueling is under control by using pump recognition system. Therefore it is suitable for shift working system. It works shift working compatible with Vehicle Recognition And Customer Recognition Systems. In Worksite Automation System, data is transmitted by GPS system to Central Office Servers.

When internet connection is not available, data are stored in embedded system. As soon as internet connection appear, data is sent to central server as ciphered. System communicate via GPS and data are stored completely. As long as connection is exist, it is stored in central server.

“You don't need to use only your personal computer anymore”





## FUEL AUTOMATION SYSTEM

### OUR ELECTRONIC DEVICE PRODUCTION

#### TUVA CARD SCANNER/13.56 MHZ Card Scanner



It is a card scanner which can read smart card without touch. Also it's known as RFID 13.56 MHz terminals Mifare. Embedded software on RFID 13.56 MHz card scanner is design by our company according to application differences. This card scanners monte on automation system of the gas station and it can be used in any automation systems.

- It can be tracking sales base on pump.
- It stores all sell/Performance information in anytime of pump operator.
- It is compatible with all promotion and automation systems and it is selected as modules.
- It can reach any type of information like which pump operator fueled.
- It allows to define unlimited pump operator and card.



#### TUVA VEHICLE RECOGNITION DEVICES

It supports fully control for your fuel consumption. Tuva Vehicle Recognition Device track your company's car as where, when, how much does it bought gas? Also it allows you to know how much gas it consumed per km daily, weekly and monthly.

## TUVA CONVERTOR

Our produced convertors is an intermediate modules which allows you to transform RS485 communication protocol to USB. Therefore you can use your USB port as a standard serial port (COM part) and communicate with a device which is connected to your computer.

- It is compatible with USB 1.1 and USB 2.0 High Speed Standards.
- It supports 300 . . . 115.2kb speed.
- Direction control on RS485 side.
- 15KW insulation between ports.
- LED control(which shows device is active)
- This device gets all its energy from USB ports. It doesn't need external supply.
- It detects automatically bound rate from USB side
- ESD(electro-static- discharge)



## ETOS TANKER AUTOMATION DEVICE

It is pretty easy to use it with plug and play feature, it allows you to make easier tanker automation set up. It is also easy to configurator of the device. Thanks to work with ETOS http/soap protocol, it is compatible with other automation systems as well.

We would like to mention again that it is pretty easy to use it. Preferable device model and type it prints out receipt after fueling is done. It means a document is given to customer which contains info about fueling, again preferable device model and type, it is possible to sell by scanning RFID card. Up to customer`s will, parametrically it prevents to sell without scan card and this procedure allows you to know the information who made this sale. It can instant track which fuel is sold. By GSM, GPS, GPRS, data is send to center momentarily. It works together with Center Automation System.





## FUEL-OIL PUMP SYSTEM

**Classic 1 Series**  
Single Fuel-Oil Pump



**Classic 1 Series**  
Double Fuel-Oil Pump



**Classic 3 Series**  
Narrow Case Fuel-Oil Pump







▶ **Classic 3 Series**  
Wide Case Fuel-Oil Pump



▶ **Classic 5 Series**  
Multimedia Fuel-Oil Pump(Leaf)



▶ **Classic 6 Series**  
Multimedia Fuel-Oil Pump





## FUEL-OIL TANK SYSTEM

### MOBILE STATION SOLUTIONS







## CERTIFICATES









7/24

TECHNICAL SERVICE / CALL CENTER

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