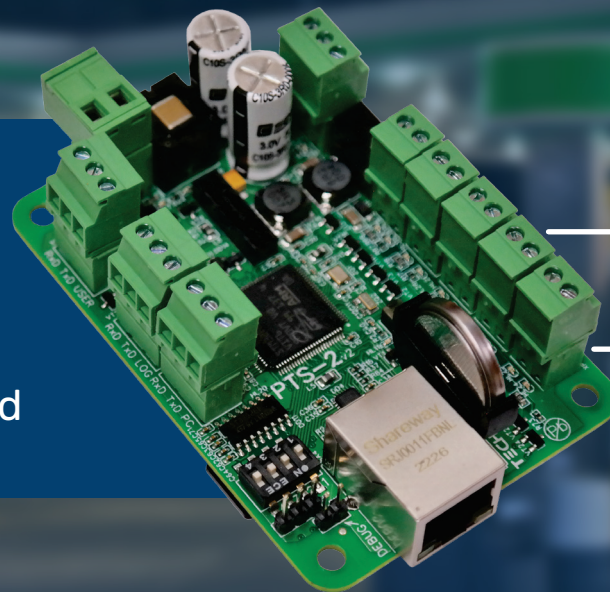# Fuel Management Made Simple

PTS monitor

Less hardware

only PTS-2 controller and
router required to be installed

IoT PTS-2 makes any Gas Station Smart

Nowadays, if the appropriate conditions are met, a gas station can be considered as an object related to the IoT world.
What distinguishes the "IoT Smart Gas Station", the concept of which is being developed by Technotrade, from other approaches?

According to the proposed concept, the IoT Smart Gas Station can be considered as an ordinary Internet thing. Any interaction with it, any information about its operation can be obtained via the Internet, its operation can be controlled by modern means via the Internet. Access to its resources and their properties can be made from anywhere in the world via the Internet.

The proposed concept allows the same and unified interaction at the level of Internet communications with any gas station, regardless of the variety of technological equipment, its quantity and its configuration.

The proposed concept has been implemented by Technotrade on many networks in the world with equipment from different manufacturers, different years of production and different composition.

It is quite simple to "fit" a regular gas station into the Internet space and get the opportunity to interact with it as an Internet thing. All technological equipment of the gas station (dispensing units, level gauges, price boards, receipt printers, card readers, pin pads, terminals, etc.) must be connected to the Internet via IoT PTS-2 forecourt controller, which ensures the control of all this diverse equipment in accordance with its configuration settings.
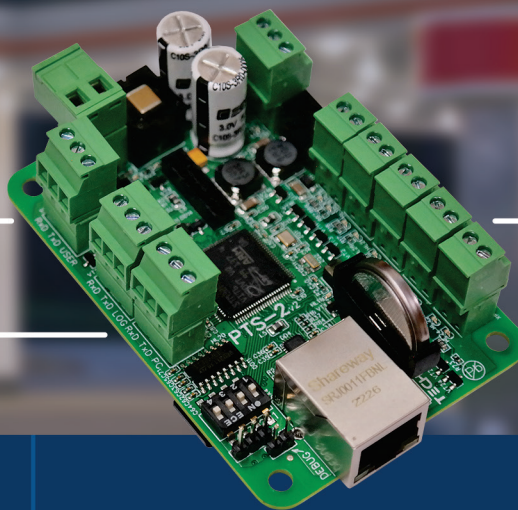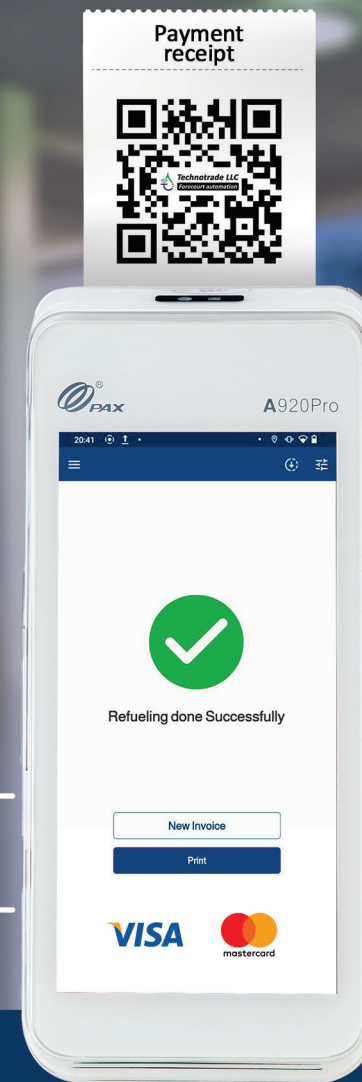
Only 3 devices are needed for automation

A cloud-based fuel management system that's easy to use

Head-Office for fuel retailers

Site status

			Online		Offline
Total Site	3	100%	3	0%	0
Total Probes	2	50%	1	50%	1
Total DU	2	0%	0	100%	2

VIEW REPORT ›

Sales / Inventory Trends

● Sales 1   ● Sales 2   ● Sales 3

Payment channels

52.5%

IoT PTS-2 controller

Payment and self-service application

Payment receipt

Technotrade LLC Forecourt automation

PAX   A920Pro

Refueling done Successfully

New Invoice

Print

VISA   mastercard

What makes the gas station SMART?

Here are some of the opportunities that IoT FCC PTS-2 provides to transform a regular gas station into an IoT Smart Gas Station and some of the reasons why gas station can be called "smart":

- First of all, of course, IoT PTS -2 controller allows IoT gas stations as a regular "smart thing" to be easily integrated into cloud Internet structures of various solutions for collecting transaction data, implementing mobile applications, card solutions of various developers and other payment systems for customer service, into ERP systems, cloud HEAD- offices, advanced driver identification systems based on AVI, etc.

- IoT PTS-2 controller provides developers of various software products and applications with various goals and objectives with a unified tool with a single software interface for working with any gas station as a single object with many parameters and functions. There is a unification of work with various gas stations with different types of equipment and its configuration.

- IoT PTS-2 controller provides easy integration with any gas station equipment via the Internet , allows you to manage and control the operation of any gas station equipment, allows you to authorize fuel dispensers, control the release of fuel, manage price boards, local controllers, self-service terminals, tank monitoring etc.

- IoT FCC PTS-2 allows you to work with gas station equipment, even if the gas station does not have its own static address .

- IoT FCC PTS-2 allows remote configuration of gas station's equipment operation taking into account all configurable equipment parameters and communication protocols used in it.

- IoT PTS-2 controller ensures easy transition to the Smart IoT gas Station category of any traditional gas station by installing just one PTS -2 controller at gas stations, thus creating a Smart Gas Station from any traditional gas station.

- IoT PTS -2 controller provides remote diagnostics and technical support.

- IoT PTS -2 controller provides integration with any

cloud mobile applications, card solutions from various developers and other payment systems for customer service, collects a database of all transactions, provides remote visualization of reports via Web interface

- IoT PTS -2 controller allows you to modify the approach to the organization and meaning of the company's service department, providing it with detailed information not only about equipment failures, but also about statistical indicators of equipment operation, allows you to organize the service department at a higher level.

- IoT PTS -2 controller simplifies the development of POS systems and systems for visualizing the operation of gas stations, since the main accounting functions (registration of receipts of petroleum products, current sales, report generation, diagnostics of equipment operation, etc.) have already been implemented in IoT PTS -2 controller and POS system is assigned only the tasks of analytics and visualization

- IoT PTS -2 controller provides new opportunities - it can be easily "fitted" into the structure of any gas station with an existing POS system, leaving the operation of the existing POS system unchanged; can minimize the composition of equipment at the gas station , taking POS systems to the cloud.

- IoT PTS -2 controller provides installation flexibility - wireless and wired channels for connecting fuel dispensers and other equipment are available using the WFC wireless communication communicator.

- IoT PTS -2 controller simplify the work of service personnel and provide control over their work by recording their actions.

- IoT FCC PTS-2 provides full control over fuel receipts in tanks, fuel sales and registration of all transactions due to integration with multiple brands of gas station equipment, ensures operation with any price brands of fuel dispensers, displays, any level gauges, bank terminals, etc.

- IoT PTS -2 controller has a simple and convenient json interface for communication with the outside world.

The proposed concept has been implemented by Technotrade on many networks in the world with equipment from different manufacturers, different years of production and different composition.
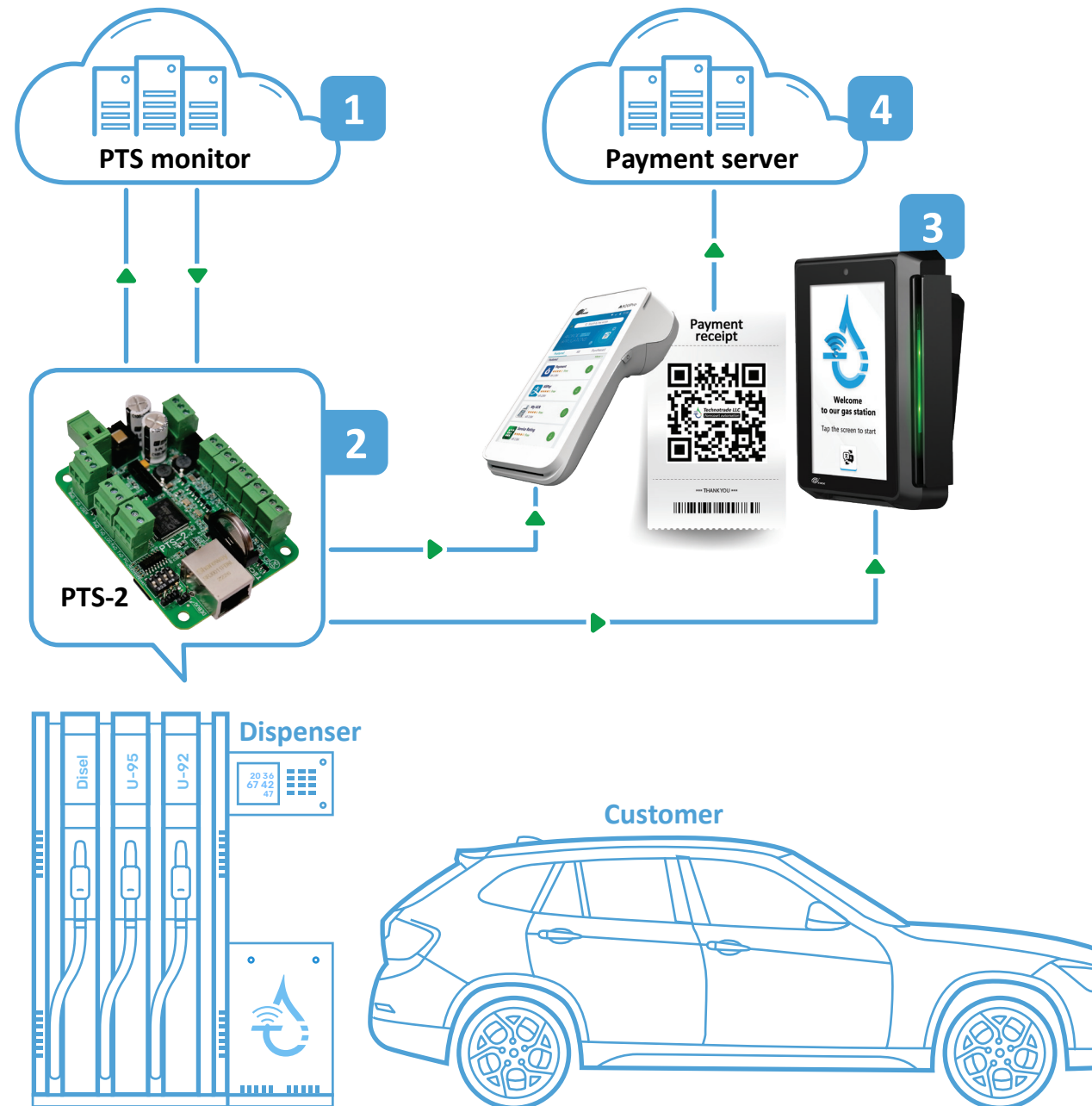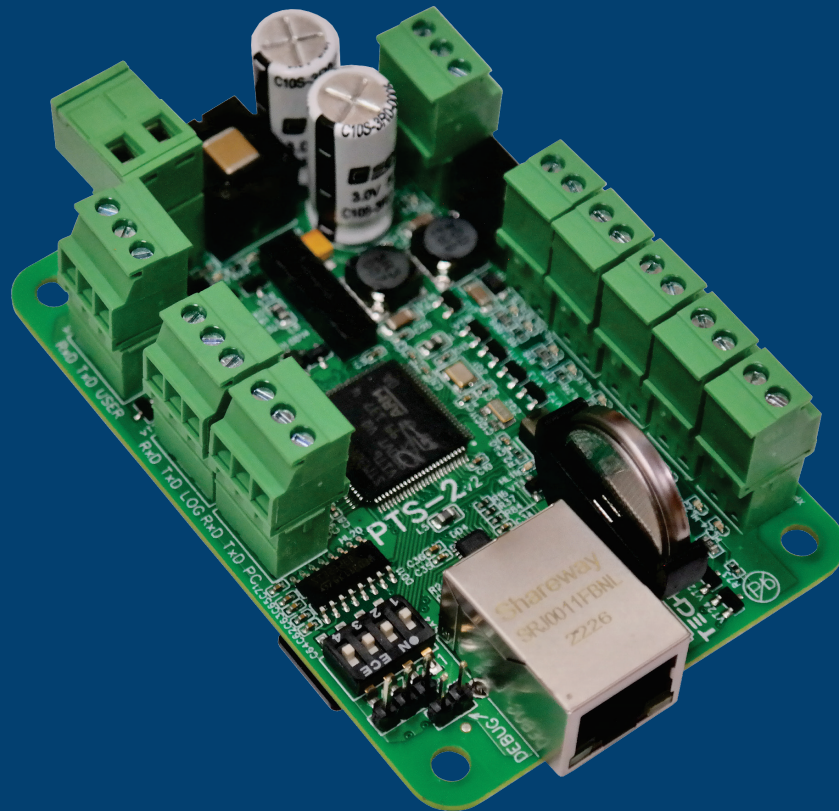
System architecture

The extensive functionality of the IoT PTS-2 can transform your site to a Smart Fuel Station.

- Real-Time Data Monitoring and operation

- Communication and integration with 3rd party applications.

- Remote diagnostics, technical support and maintenance on time.

- Flexible installation: wired and wireless connections are available.
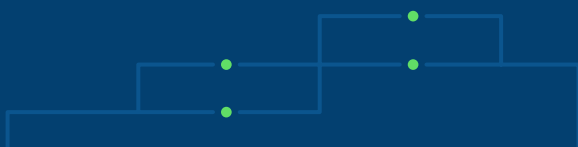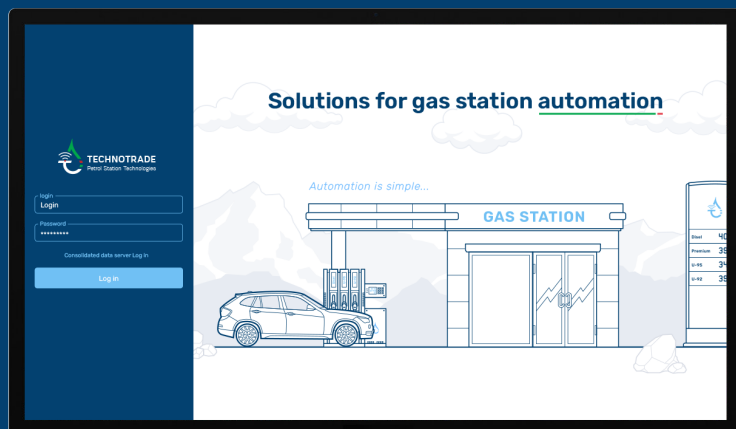

PTS monitor **1**

Payment server **4**

3

Payment receipt

Welcome to our gas station
Tap the screen to start

*** THANK YOU ***

PTS-2 **2**

Dispenser

Disel U-95 U-92

20 36
67 42
47

Customer

Required Hardware

PTS-PAY and **PTS Monitor** application communicates with dispensers through the **PTS-2** forecourt controller. It provides strict control over each transaction/dispensed liter, no human impact and cheating with fuel. Having **PTS-2** at a site, petrol station owner will get major benefits of automation. Separately it's possible to link extra applications, such as Head-Office application for remote control over fuel station.
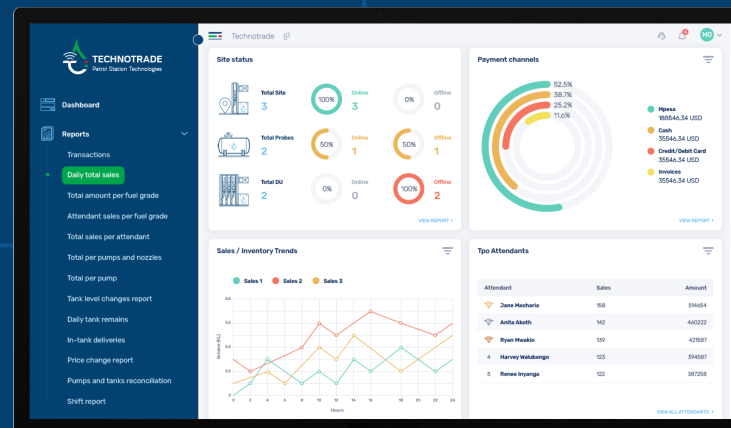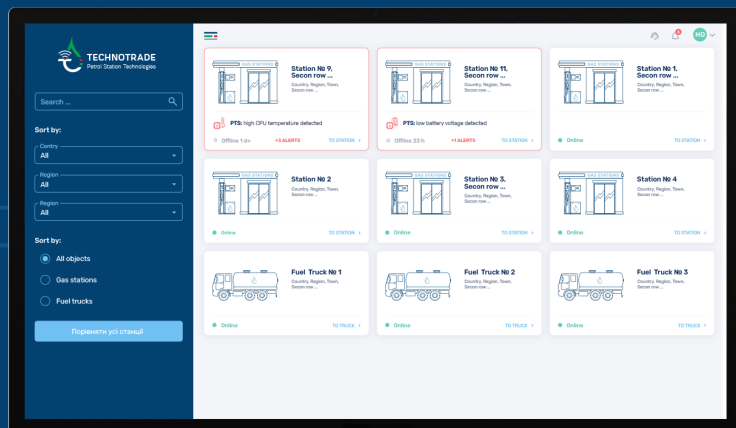
PTS-2

- Bank card size
- IoT device
- Supports over 140 brands of dispensers
- Supervises 50 dispensing places at once
- Built-in web server
- Built-in memory
- Constantly communicates with remote server

PTS MONITOR -
CLOUD-BASED
SOFTWARE FOR
ACCESS EVERYWHERE

Benefits

Sales Data, Real-time transactions

- See fuel sales by type
- Differentiate Payment method (bank card, cash, mobile money, corporate card)

Remote Price Management

- Realtime pricing data
- Remote Price change

Alerts

- Remote diagnostics
- Online technical support

Wet stock Monitoring

- Real-time fuel levels: Monitoring tank levels for different fuel types to prevent runouts and overstocking.
- Delivery tracking
- Loss detection: Identifying discrepancies between fuel sales and inventory (e.g., leaks or theft).
- Low level alerts
- On-time deliveries

Self service

- 24/7 station operation
- Decreased queues

Benefits

Attendants control

- Shift control and cash received

Corporate cards

- Fuel and discount cards for your corporate customers

Reconciliation

- reconcile fuel withdrawals and deposits over time

Automatic tank calibration

- Noninvasive automatic method to calibrate any tank without degassing or station stop

GAS STATION

| Disel | 40.12 |
Premium	39.23
U-95	34.58
U-92	39.01

Disel
U-95
U-92

20 36
67 42
47
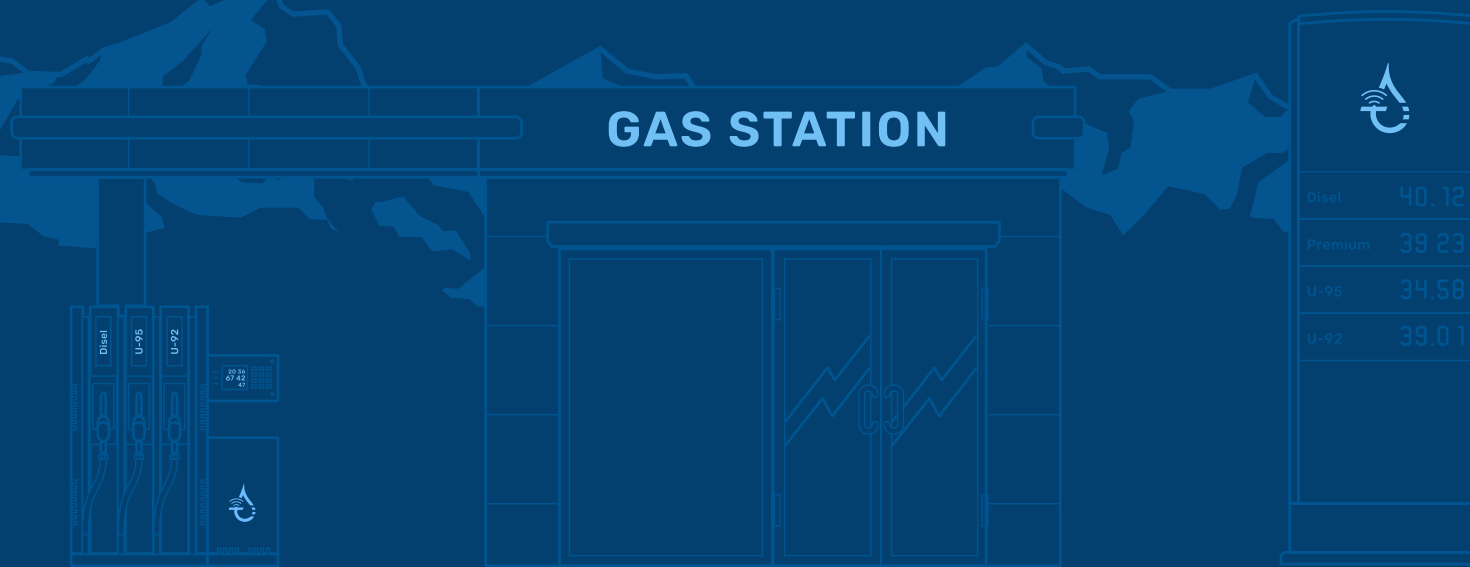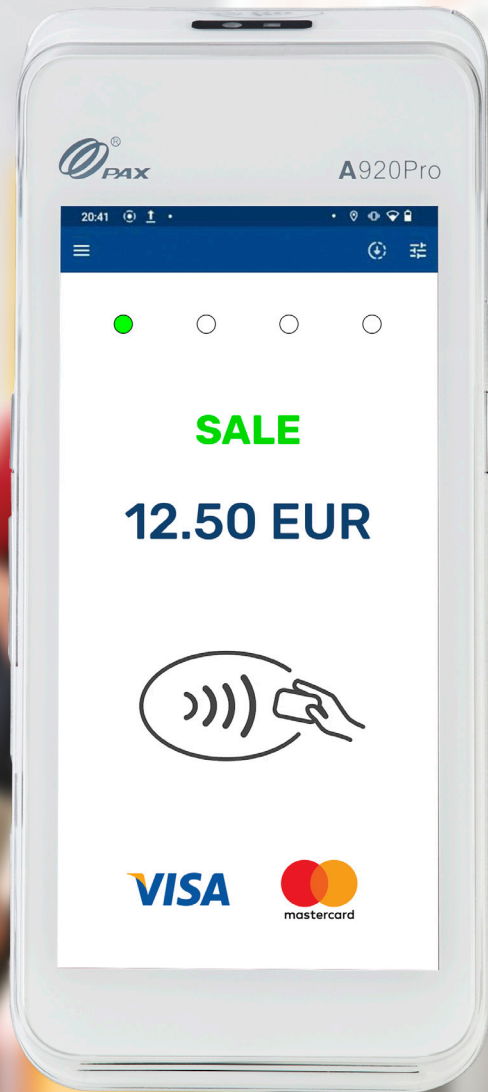
Appointment and features

PTS-PAY application is a forecourt control application which allows fuel station's customers to pay for fuel standing by the dispenser or even without leaving their vehicle.
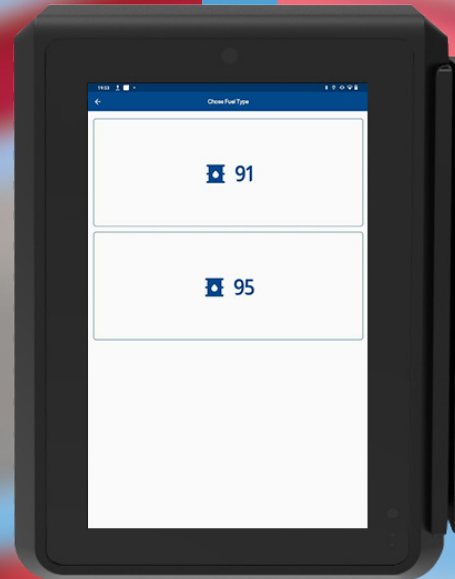
- Installed on POS terminals and smart phone supporting Android OS
- Clear intuitive user interface
- Real-time refueling tracking
- Cash and bank card payments
- Receipt printing
- Convenient for attended and self-service fuel stations
- Compatible with over 140 dispenser brands
- Built-in reporting
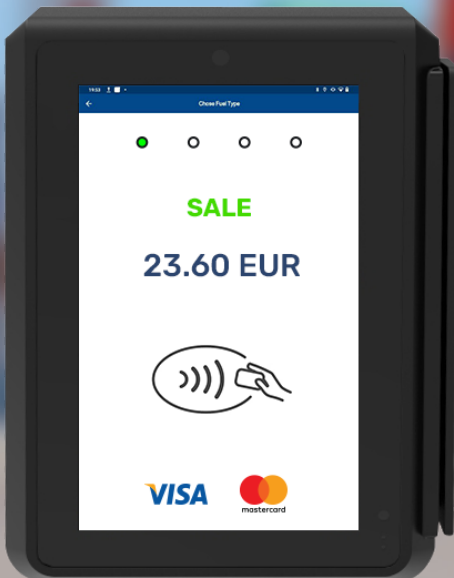- Capable to exchange information with remote server
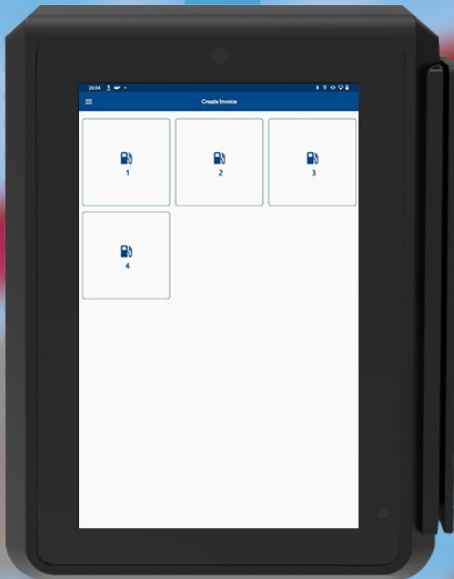
Modes of Operation

Self-service mode of operation

This mode of operation of the application is used on wall-mounted self-service terminals and is convenient for introducing self-service at gas stations.

1. The client independently selects the fuel dispenser number on the terminal screen
2. Enters an order
3. Makes a payment with a bank card, and after confirming the payment, the application authorizes the dispenser
4. Prints a receipt after the fuel supply is completed.

The application can be installed on a POS terminal (for example, PAX etc.)

Benefits for B2B
(petrol station operators):

- speed up services, full or partial elimination of fuel attendants;
- increase sales and margin due to possible 24/7 operation and control of each fuel transaction;
- give your drivers more payment options: cashless and maintenance of various bank cards;
- printing receipts as it requested by local government, correct reporting;
- avoiding leakages and thieves;
- compatibility with different operation methods: operation at the forecourt or in controlling room by cashier, fully self-service or partial engagement of fuel attendants.

Benefits for B2C
(customers of petrol station):

- contactless and safe fueling, no need to interact with fuel attendants;
- get fuel whenever you need due to 24/7 operation of petrol stations;
- payment using different payment methods, including NFC contactless, magstripe and smart card reader, etc.

TECHNOTRADE
PETROL STATION TECHNOLOGIES

Smart. Simple. Cost effective.

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