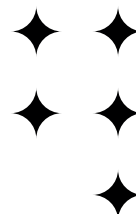


TUNISIAN-JAPANESE COMPANY
OF ELECTRONICS SOTUNEC SARAYA



SOTUNEC
SARAYA



PRESENTATION OF THE COMPANY :

Since 2014, **SOTUNEC SARAYA** has been working on the Internet of Things applied in different fields such as :

- Public lighting
- Smart homes
- Oil
- Hospitals
- Smart Hotels
- The roads

With the aim of saving energy and offering comfort to the user by applying artificial intelligence.

Founded in 2014 by **Emna Ben Ali**, 21 years old, **SOTUNEC SARAYA** has started winning awards and trophies such as:

- National award for the best business plan Tunisia 2015
- Tunisia Innovation Award 2015
- Trophy of the woman entrepreneur of Tunisia 2018
- African and Arab Countries Award for Best Startup Green Tunisia/Lebanon 2018
- Best project financed by BTS Tunisia 2022



- Best project financed by BTS Tunisia 2022
 - Representing Tunisian Startups in HOLLAND, SPAIN, RUSSIA, MAURITANIA, JORDAN, LEBANON, GABON etc..
- SOTUNEC SARAYA** also owns 6 inventions patents (2016/2016 /2020/2022/2022/2022)



Recognized in the Arab and African world, SOTUNEC SARAYA has a very strong relational network in African, Arab and Gulf countries.

With the help of its team of professional engineers, its **SMART** products have been very successful especially in recent years as energy saving is the primary concern of governments. The solution of public lighting has been successful in Tunisia and Africa, which encouraged the founders of SOTUNEC SARAYA (Tunisians and Japanese) to start manufacturing electronic cards in large series, high quality and aimed at all fields.

SOTUNEC SARAYA PRODUCTS :

- **SMART public lighting :**



- The SMART public lighting system is used to control and monitor the street lights remotely and to save up to 70% of energy consumption.

This system communicates via GSM/GPRS/WIFI/CPL/RF/LORA according to the user's needs and depending on the study and free diagnosis of the intervention area and the reliability of the network.

This system is universal, it can be installed in all types of street lights (LED SODIUM HPL etc.)

NB : the dimming option is only valid in LED street lights, in case of existence of other type, it can be replaced by switching on point by point or point on 2 points.

This system consists of two parts :

- **HARDWARE :**

The HARDWARE is equipped with a SMART three-phase energy meter, a MASTER niche and smart switches.

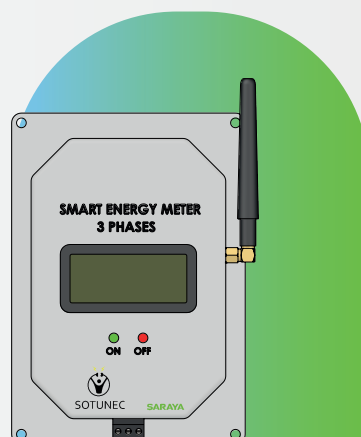


SMART energy meter :

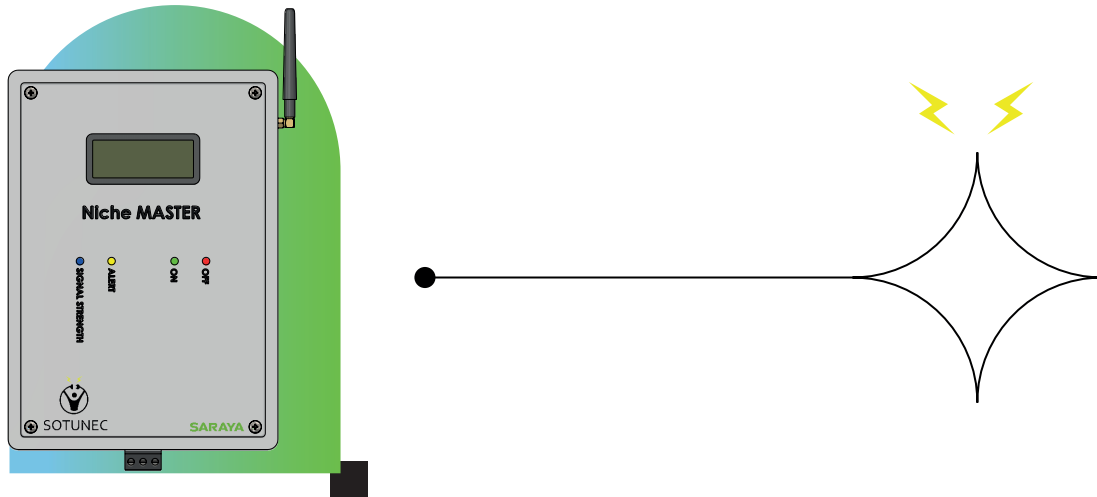
It is a system for measuring consumption, current, voltage, active power, reactive power, apparent power, power factor $\cos \phi$, and 60 other value.

This energy meter is three-phase, communicating via GSM/GPRS/WIFI/CPL/RF/LORA.

Equipped with an LCD display, RS485 port the energy meter can detect anomalies at the distribution station.



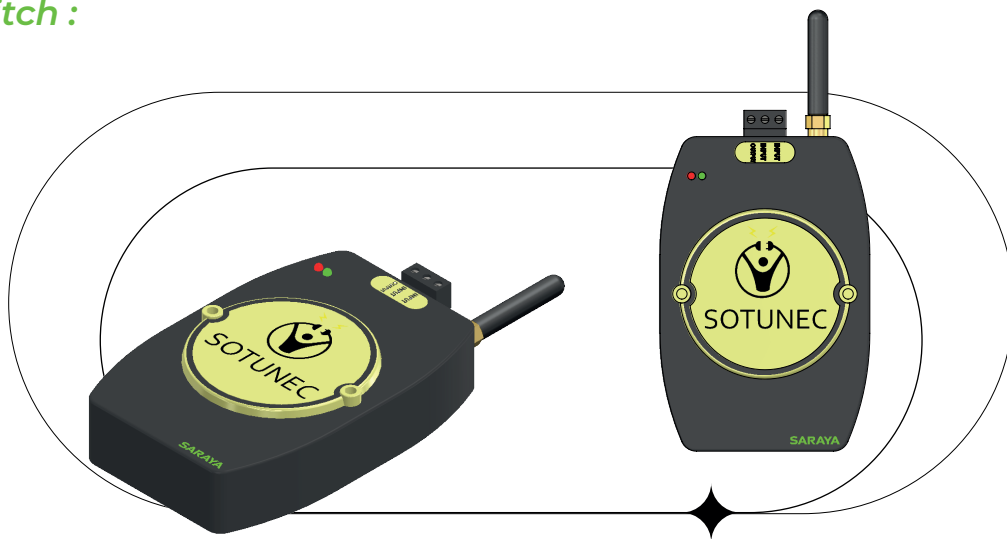
MASTER Niche :



It is the brain of the whole system; the MASTER niche is used to collect information from the smart switch, gateway, energy meter and send it to the server and store it.

The MASTER niche is equipped with an anti-theft system, which contains a camera, which triggers and takes a video if the niche is opened by an unknown person.

Smart Switch :



It is the brain added to each street light to make it SMART and communicative.

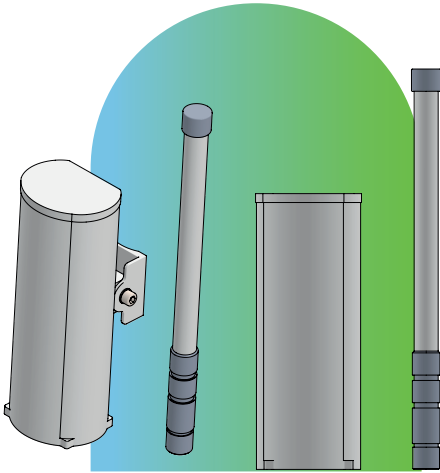
It is a small box that acts as a remote-controlled SMART switch.

This SMART Switch is used to communicate with the GATEWAY to send, receive and execute information received by the user.

In the end, you could say that the SMART Switch is a public lighting agent that monitors each street light 24/7!

It is available in GSM/GPRS/WIFI/CPL/RF/LORA.

Gateway :

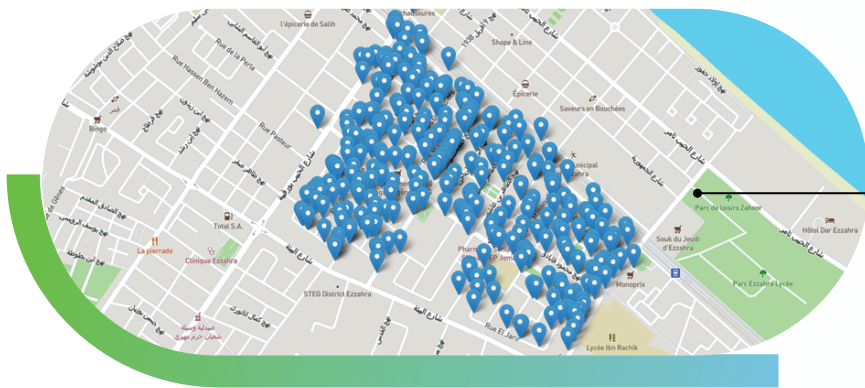


This is the organ that is responsible for covering the surface with connectivity.

Our Gateways can reach a 10km radius of connectivity, which provides us with a smart city infrastructure that will lead us in the future to connect traffic lights, public transport, ambulances, irrigation systems, and any other systems that need to be controlled remotely.

Indeed, the remote management system for street lighting will itself be the infrastructure of a smart city.

• SOFT part :



It is a platform applicable on computer, tablet or Smartphone

This platform contains a digital cartography (MAP), which contains the location of each street light with its status updated in real time.

If the light is on, the color will be GREEN, if it is off, the color will be RED, and if it is out of order the color will be flashing YELLOW.

Also by clicking on the location of the streetlight, the information of the streetlight is automatically displayed such as (type of streetlight SODIUM, LED, HPL etc... date of installation, date of last maintenance etc...)

A bar containing the energy meter readings for each distribution station is displayed with the most important values (consumption, power, current, power factor voltage etc.)

A programming bar for programming the personalised operation of the public lighting network, e.g. (switch on 30 minutes after sunset, decrease the brightness to 30% from 00:00 to 3:00, increase the brightness to 70% from 3:00 to 5:00, and to 100% from 5:00 to sunrise)

- **SMART TRAFFIC LIGHT MANAGEMENT SYSTEM :**



It is a box that serves to control the traffic lights automatically and to supervise them remotely as well as to change the programming remotely.

- Full priority for ambulances.
- Car flow detection and automatic programming according to the recorded values.
- Counter output for 7seg /LCD display.
- No need to go to the niche to change the program, everything is managed remotely.

- **FUEL SMART MEASUREMENT SYSTEM FOR TANKS :**

This system has been very successful, it is used to monitor the fuel level (petrol, diesel, LPG), remotely and display it in real time on the service point manager's computer.

It contains a very high security RADAR sensor, and works with an artificial intelligence method.

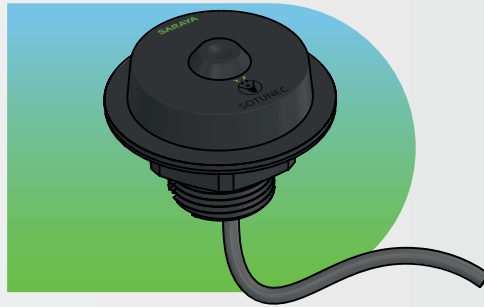
The user sets a safety threshold not to be exceeded, if the fuel level decreases and reaches this safety threshold, a notification on the application accompanied by an SMS on the manager's phone indicating the tank to be filled and the type of fuel.

At the headquarters or supply centre, there will be a control room containing a MAP, on which the service points will be displayed in their locations.

Clicking on one of the service points will show the tank information, levels and notifications (if any).

Example: Company X service point RADES tank 3 Diesel 200L **(2200L requirement)**

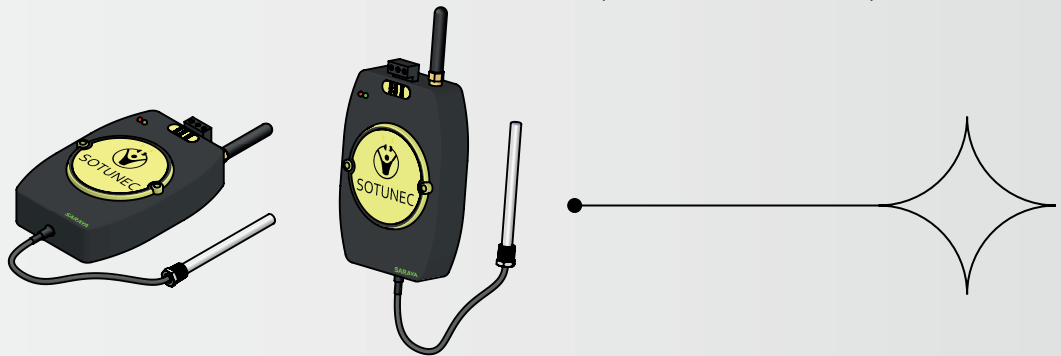
Then, if the safety threshold is reached, an automatic telephone call will be made to the supply centre linked to the area where the service point is located to indicate the lack of fuel, accompanied by an SMS containing the information and a notification in the control room at headquarters.



- **SMART TEMPERATURE MEASUREMENT SYSTEM FOR HOSPITALS :**

This is a system for remote measurement of the ambient temperature, temperature in centrifuges (for analytical laboratories), in refrigerators, and in server rooms. A control room that contains computers, where a platform will be located that will contain all the information, history and alerts.

Generators can also be controlled because of their importance in hospitals.



- **GPS TRACKING :**

It is a vehicle tracking system with the option to stop the vehicle remotely and control the fuel.



- **SMART HOME :**



These are SMART Switches for controlling and monitoring all the equipments in the home such as (lighting, air conditioners, ovens, televisions, refrigerators, blinds windows etc.)

It is available in GSM/GPRS/WIFI/CPL/RF/LORA.

Programming can be done by the user, for example:

At 4.30pm (before arriving home 15min) turn on the air conditioning, close the blinds windows and turn on the oven and TV.

- **SMART INDUSTRY :**



This system is designed for factories that wants to optimize their energy consumption as well as to control their production remotely.

- **SMART BUILDING (FOR HOTELS AND OFFICES) :**

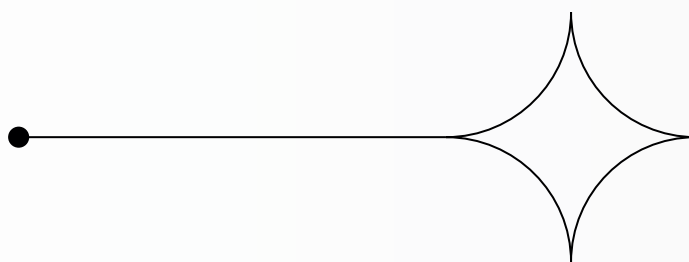
These are the remote-controlled SMART Switches, equipped with a presence sensor, which turn on the lighting or air conditioning only if someone is in the room or office.

With Possibility to control and supervise remotely equipments as well as energy meters and their measurements.

This system helps offices and hotels to save more than 50% of energy and reduce their electricity bill.



ELECTRONIC CARD MANUFACTURING PLANT :



At the beginning of 2023, SOTUNEC SARAYA will start the production of electronic boards with a large production capacity (more than 1000 units per day) and very high quality.

We also offer our services to all companies needing subcontracting in the manufacture of PCBs and assembly components.



SOTUNEC
SARAYA



SCAN ME



SKILLED



QUALITY



SAFETY

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