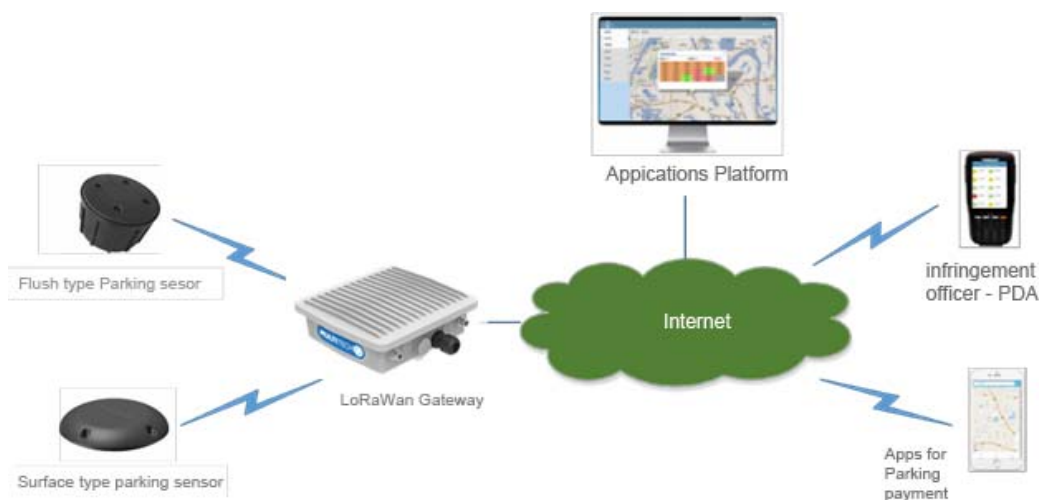| TBS-223 | LoRaWan Dual mode Parking Sensor |
|---------|----------------------------------|

**TBS-223** Wireless Vehicle Detector is a parking space status sensor that supports LoRaWAN long-distance wireless standard. It integrates microwave radar and geomagnetic detection technology. It adopts advanced signal detection algorithm to accurately realize the functions of parking space occupancy detection and parking time statistics. It can transmit parking occupancy information to the cloud service platform, which has a wide application prospects in smart transportation, smart community, intelligent parking and other fields.

**Feature:**

- High reliability: The accuracy of dual-mode detection is 99%. Supported 3 different Operation mode to adapted different environment requirement. Using microwave radar and geomagnetic dual-mode detection technology, the parking space detection accuracy rate can reach up to 99%;

- LoRaWan Wireless communication, built-in battery, no wiring required, easy to install, shorten installation time

- Easy maintenance: The detector has extremely low power consumption and can work up to 5 years. Enclosure designed to support battery replacement. It does not require frequency maintenance and upgrades. It supports Bluetooth wireless upgrade and calibration, detachable structure design supported easy after-sales maintenance.

- In built Temperature and Humidity sensor to measure if the Road are frozen

- Optional - External mounting cradle available for using silicon glue to mounting the unit on the Road to avoid drilling hole.

- Optional - Reflective warning stickers to increase the visibility of the sensor to avoid any inattention accident.

## System structure



Flush type Parking sesor

Surface type parking sensor

LoRaWan Gateway

Internet

Appications Platform

infringement officer - PDA

Apps for Parking payment

## Specification

| | |
|---|---|
| **Model** | TBS-223 |
| **Detection accuracy** | up to 99% |
| **Detection algorithm** | 1) Geomagnetic field only |
| | 2) Radar only |
| | 3) Joint mode -Geomagnetic field activate Radar |
| **Installation Method** | Surface Type |
| **Upgrade Method** | Remote Wireless upgrade |
| **State Monitor** | Low voltage alarm, disturbance alarm |
| **Power Supply** | Built-in 3.6V Lithium battery 20AH capacity |
| **Power switch** | Use Bluetooth to activate with security passcode |
| **Configuration** | Support Android app; |
| **Buffer log** | 10 buffer logs in case there is lost communication with Server |
| | 100 internal logs for debugging |
| **Environment sensor** | In-built Temperature and Humidity sensor |
| **Life Duration** | 5-7 years (based on 5-10 vehicles per day) |

## Radio Parameters

| | |
|---|---|
| **Operation frequency** | AS923/ AU915 /NA915 / EU868 (order by request) |
| **Spreading factor** | 125 kHz ~ 500 kHz |
| **Radio standard** | LoRaWAN |
| **Max output power** | 19 dBm |
| **Sensitivity** | -135 dBm (SF12, 125kHz) |
| **Transmission distance** | 500m -1km (Depends on environment) |

## Physical parameters

| | |
|---|---|
| **Protection level** | IP67 |
| **Operation Temperature** | -40℃ ~ 85℃ |
| **Dimension** | D: 200mm, H: 29mm |
| **Cradle dimension** | D: 216mm, H: 10mm |
| **Weight** | 650 g |
| **Force Resistance** | 10 tonnes |

Distributed by:
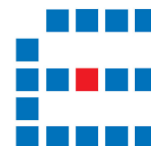
**Elecom Electronics Supply**
Design. Come True.

Email: info@elecomes.com

# Applications

- For Smart parking to locate the empty parking spot

- Time management to reduce the Street parking searching time

- Intelligently assign the Commercial parking spot to guest

- Reduce air pollution by guiding the target vehicle to target Parking spot

- Avoid car park in the restricted zone.

- Suitable for pre-alert when vehicle park in Click and collection application zone


Street Parking Monitoring


Restrcted Parking Control


Public parking monitoring


Residential Vistor parking


Office Parking control

**Picture**