U-Spot

The latest generation wireless NB-IoT sensor from Urbiotica

APARC

- Fast and easy to install – minimal civil work and no maintenance
- Suitable for all outdoor parking areas
- The sensor communicates directly to the Cloud without the need of repeaters or gateways
- 10 years battery life
- Sensors communicate to Dynamic Signage for vacant spaces and provides occupancy data in real time
- The sensor measures the Earth's magnetic field to detect the vehicle presence in a parking spot (measured every 3 seconds)

U-Spot is a wireless and autonomous parking sensor

It uses technology that measures the Earth's magnetic field to detect vehicle presence in a parking spot in real time, including parking sessions and overstays.

Buried in the ground, the sensor is totally invisible

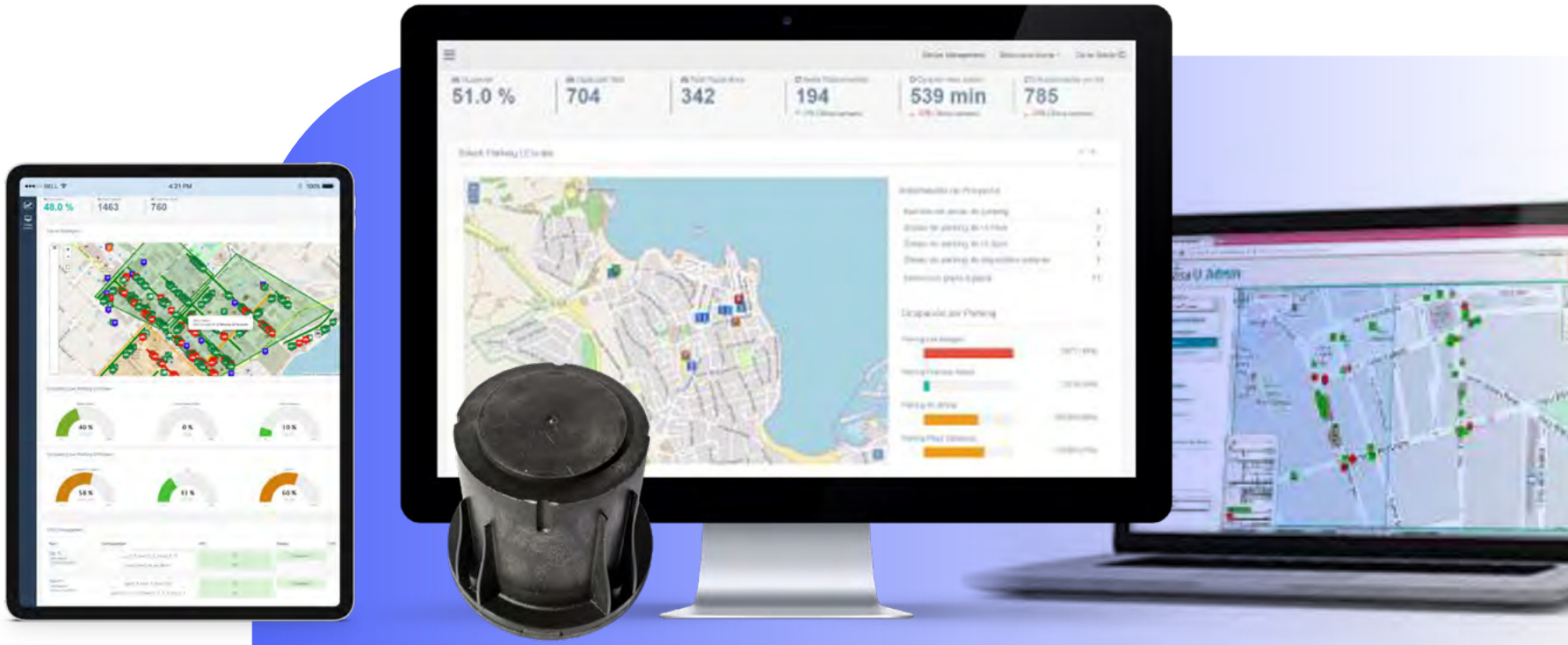
M2M sensor with integrated SIM (gateway-less)

100% weather resistant

Over 98% detection accuracy

Auto-calibration of the sensor

How U-Spot Works



1

U-Spot parking sensor detects a vehicle in a parking spot

The sensor measures the Earth's magnetic field variation in a parking spot, and sends this information to Urbiotica's cloud software platform, U-Admin.

2

Data collected and stored in U-Admin Software Platform

U-Admin processes the magnetic field value sent by the sensor, by applying machine learning algorithms to the entry and exit of vehicles in parking spaces, as well as their parking sessions.

3

Information is distributed to ParkOne

Data is sent to ParkOne Enforcement Module (fully integrated with U-Admin) to help identify parking overstays.

U-Admin

The all-in-one software platform for parking managers

Devices

- U-Spot communicates directly to the cloud, without the need for repeaters and gateways
- Provides highly accurate, real-time data stamped occupancy
- Identifies arrivals and departures
- Provides guidance to available spaces

Operations

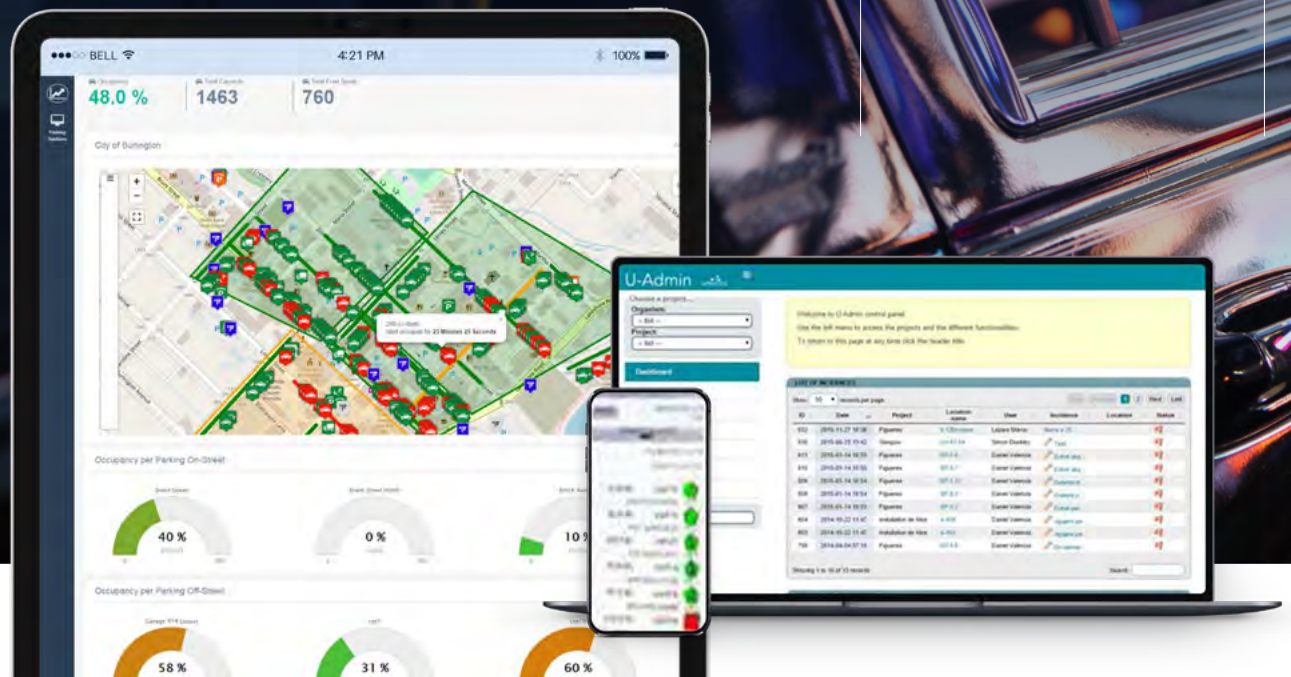
- Analyse the use of parking data/overstays to adjust the parking policy in accordance with Council parking restrictions
- Interact with the system according to real-time events to maintain a high level of reliability and influence
- By capturing overstays in real-time, the system improves revenue by 300%–400%

APIs

- Maximise the use of the parking data with ParkOne Enforcement Module
- Easily identify overstays

Analytics

- View activity and occupancy trends for cost effective car parking management
- Visualise and compare historical data provided by the system to adapt your parking policy
- Monitor the system performance by receiving alerts and analysing performance dashboards
- Follow the evolution of your principal indicators, including, number of rotations, average session time, number of entrances/ exits for off street parking, occupancy rate over time



U-Spot
Technical Specifications and Installation

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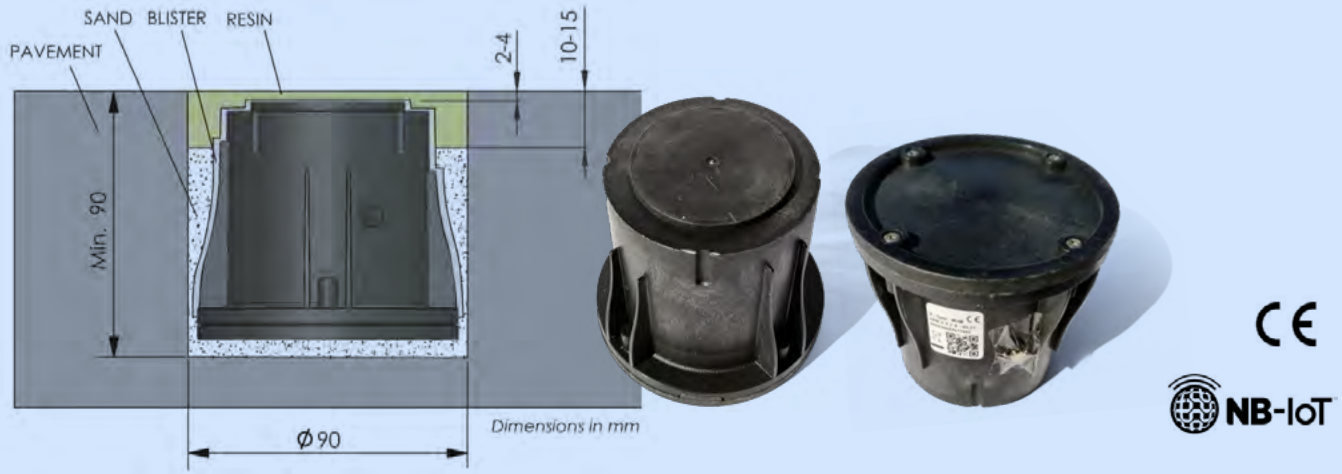
U-Spot Technical Specifications



CE

NB-IoT

Accuracy	Higher than 98%
Sampling rate	Every 3 seconds
Connectivity	LTE band 8 (NB-IoT)
Power supply	Autonomous through battery
SIM Card	SIM on chip (MFF2)
Battery Life	Up to 10 years (under standard coverage quality of the mobile network)
Dimensions	Height: 8.3cm, Base Diameter: 9.5cm by 6.8cm at the top
Weight	345 grams
Ingress protection	IP68 (completely sealed housing)IK10
Pressure resistance	1.5 Tons
Operating temperature range	-33ºC a 65ºC

Buried into the ground – sensor is totally invisible

U-Spot M2M sensor with integrated SIM (no repeaters/gateways required)

100% weather resistant

Over 98% detection accuracy

U-Spot
Getting Started

Getting started

- U-Admin username and password available
- Check that the project is configured in U-Admin
- U-Admin installed on Smartphone

Tools

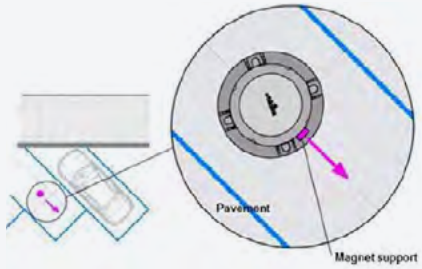
- Electric drill with column support
- Crown 90 mm
- App U-Admin for Android

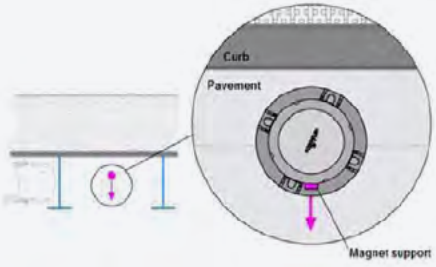
Materials

- Dried sand or similar
- Protective blister delivered with sensor
- Resin, concrete or bitumen

Sensor orientation and installation positions

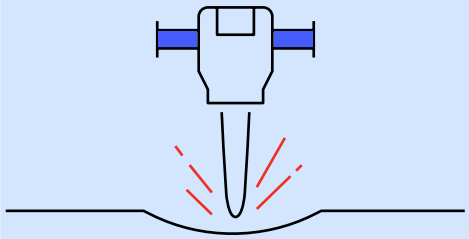
Sensor must be placed in the middle of the bay or at least 50cm away





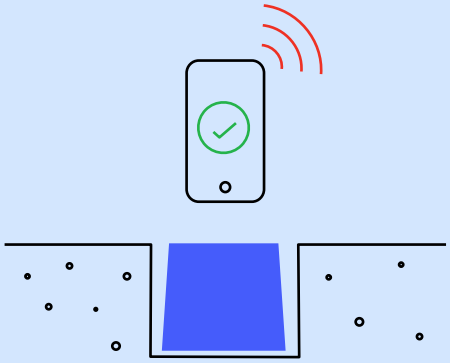
U-Spot Installation Guide

1 Drill a hole



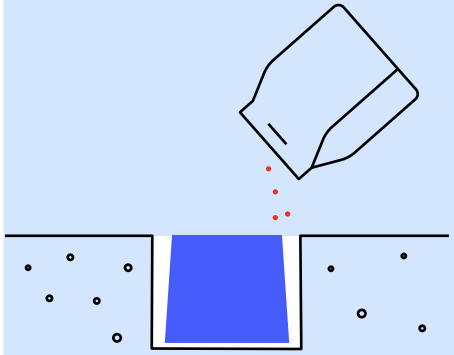
- Drill 90mm deep hole.
- Clean the hole.
- Fill a ~10mm layer of sand (to level the bottom of the hole), (The top of the sensor with its blister will not be deeper than 10mm from the road level).

2 Configure the sensor



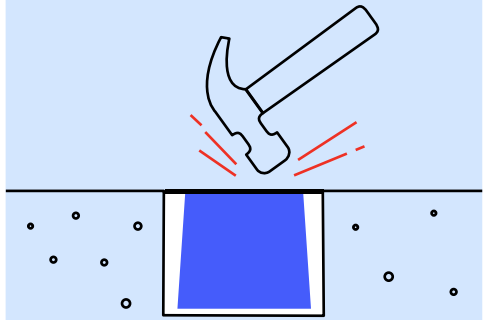
- Program / activate the sensor using U-admin Mobile app.
- Remove the magnet.
- Once the status is green (online after 3-5 minutes), place the sensor above the sand base pointing the magnet to the centre of the street (see “Sensor orientation and installation positions”).

3 Fill in the sides



- Level it on the sand layer (as flat as possible).
- Fill the sides with sand up to ~ 20mm from the road level.

4 Secure the sensor in the ground



- Fill with resin, concrete or bitumen.
- Pack and level the cold-mix using a hammer. Use a small wooden or metal plate to ensure bitumen is flat.

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NB-IoT wireless sensor today.

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