Urbana

Urbana PARKING SENSOR

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S M A R T C I T Y

Born to be smart

Urbana Parking sensor is a smart parking sensor which adopt magnetoresistive sensor as the detection unit. It can monitor the variation of magnetic field on the parking lot showing its status (occupied or free) and communicating with Urbana IoT Platform through LoRaWAN® wireless network. The parking sensor is battery powered and communicates through LoRaWAN® protocol, which has the advantages of high sensitivity, easy installation and long range communication. It is suitable for the management of indoor and outdoor parking lots and roadside parking lots. Urbana Parking Sensor is a plug-and-play solution for integrating any parking lot into Urbana IoT Platform.

Ultimate technology for network connectivity.

The device deploys LoRa® radio technology for last mile communication. This innovative low-power and long-range technology is used by the local controller for communicating with Urbana Lamps. It operates under LoRaWAN® 1.0.2 standard with coverage radius up to 5 Km for indoor scenarios and up to 15 Km for outdoor. LoRa® technology provides the best performances for radio communication in terms of reliability, scalability and obstacles penetration with low power consumption. The maximum power consumption is 19 dBm with 153 dB of link budget and high sensitivity of -138 dBm.

Competitive advantage.

With enhanced features for robust and compact wireless capability, Urbana Parking Sensor delivers rapid time to market and ease of integration for remote control applications at the lowest cost.

Real-time optimization through Urbana IoT Platform.

Optimised for industrial usage to suit field applications and extended lifetime requirements with multiple interface options to provide seamless connectivity for different applications.

TECHNICAL SPECIFICATIONS

Mechanical

Housing:	Solid case
Material:	Plastic, ABS
Load:	5 tons
Dimensions (mm):	150 (D) x 44 (H) mm

Electrical

Power input:	3.6VDC (battery)
Battery lifetime:	4-5 years
	8-10 years*

Environmental

Operating Temperature:	-30/+85 °C
Storage Temperature:	-40/+80 °C
Operating Relative Humidity (max):	100% (non-condensing)
IP Rating:	IP67
Certification:	CE, RoHS

Interfaces and Protocols

Radio Interface:	LoRa®
Protocol:	LoRaWAN®

* On request
** Under processing
Urbana products are continuously evolving. Urbana reserves the right to change technical and formal specifications without any public advice.

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TECHNICAL SPECIFICATIONS

Monitoring parameters

Parking lot status: available/occupied
Time of arrival/departure

Configuration

Plug&Play using Urbana IoT Platform

LoRa™ interface

Frequency	LoRaWAN® 1.0.2 Regional Parameters
Modulation	LoRa®
Stack	LoRaWAN® Certified 1.0.2 - Class C
Sensitivity	-138 dBm (SF 12; SB 125 kHz, CR 4/6)
	-134 dBm (SF 12; SB 250 kHz, CR 4/6)
	-128 dBm (SF 12; SB 500 kHz, CR 4/6)
Output power	+19 dBm
RF Data rate	0.24 to 37.5 kbps
RF Range	up to 15000 m (line of sight)
Transmission current	128 mA (@3.0 V/+19 dBm)
Receive current	11 mA
Stand-by current	<1.8 uA

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TECHNICAL SPECIFICATIONS

160 mm

114 mm

23 mm

15 mm

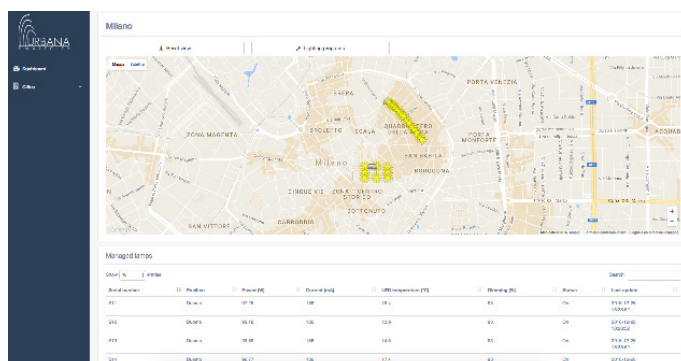www.urbanasolutions.net

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URBANA IoT PLATFORM

Urbana Parking Sensor is compatible with Urbana IoT Platform, a platform that integrates lighting service with a lot of Smart City services like video surveillance, environmental sensors, traffic management, etc.
The module needs the Urbana Gateway to work with the platform. It is sold separately.
Urbana Parking Sensor and Urbana Gateway are plug-and-play devices. Just need to power them on.

Secure cloud access to city management system

Precise geo-location of each single device

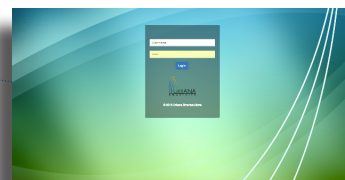On demand statistics and control of system efficiency

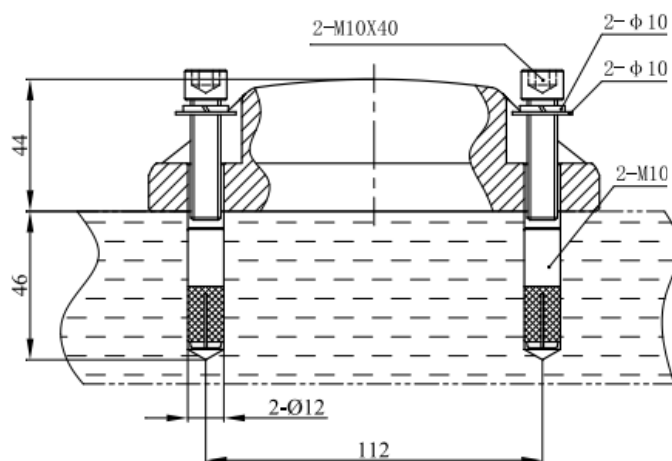System performance and diagnostic values always available

Parking Sensor

Gateway

IoT Platform

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CONNECTION SCHEME

PRODUCT CODE

Products are identified by the following notation.

PRODUCT	FREQUENCY	FIRMWARE	ACTIVATION
PK	868: 863-870 MHz 915: 902-928 MHz	EU:EU868 US:US915 AU:AU915 AS:AS923	A: ABP O: OTAA**

ex. PK868EUA

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