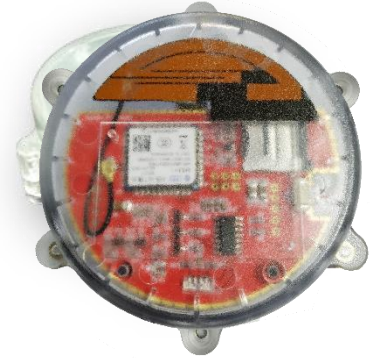


# WiiEMS Parking Sensor System

## -----For Parking Lot Occupancy monitoring

WiiHey's in-ground parking lot sensor enables you to monitor your parking facilities efficiently with real-time, individual vehicle, individual space data. It is the key to smart, active parking lot management.



### FEATURES

- Geomagnetic Sensor & photosensitive sensor;
- Wireless communication for ease of installation;
- Powered by long-life batteries;
- Robust construction to resist both vandalism and accidental damage;
- Easy integration with existing parking management systems;

### APPLICATIONS

- Parking space occupancy detection;
- Vehicle detection in drive-through;
- Vehicle counting in toll booths;
- Enable advanced parking space management and planning;
- Enable advanced parking guide system;

### OVERVIEW

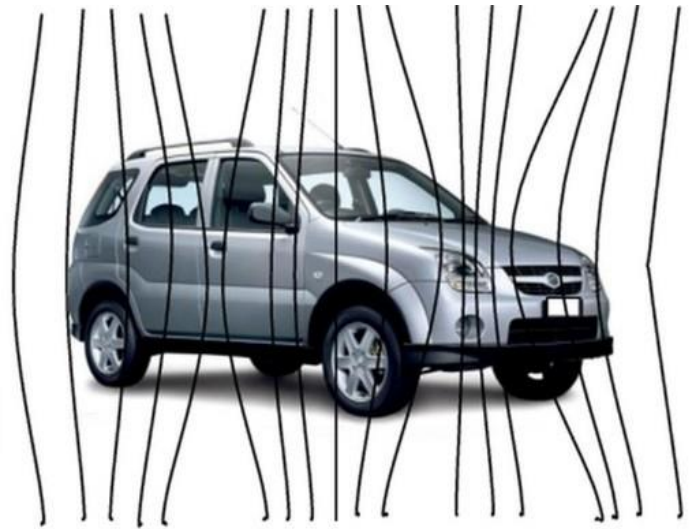
The effectiveness of a parking lot management system is greatly relied on the detection of available parking spaces. WiiEMS offers parking lot sensing technology that can be easily tailored to your existing parking system, to monitor parking traffic, and to gather live, precise information from each individual parking lot space.

The heart of the WiiEMS sensor is a geomagnetic sensor that measures the X, Y, and Z-axis values of the Earth's magnetic field. As vehicles come into the range of the sensor, changes in the surrounding magnetic field occur and are detected.

As auxiliary, the luminance sensor that measures the light intensity. As vehicles drive above the sensor, changes of the brightness occur and are detected.

Each sensor continuously monitors the background magnetic field using advanced filtering and noise reducing techniques to differentiate parking events from other electromagnetic interferences or false events.

The WiiEMS sensor transmits data via LPWAN (Low Power Wide Area Network) technologies, i.e., NB-IoT (Narrow Band-IoT), and is battery powered for several years, it requires no wires for installation and can be easily fitted into each parking lot space.



**The Earth's magnetic field changes caused by vehicles**

## Topology

WiiEMS supports latest wireless communication method -- NB-IoT technology. This technology has transmission ranges of up to several kilometers in urban environments, with very low power consumption, data are then transmitted to cloud sever for further processing and delivery into the end-user's system.



The parking lot sensors



WiiMatrix  
The cloud computing platform



Mobiles & PCs  
The user terminals

## MAIN TECHNICAL PARAMETERS

<b>Parking Lot Sensor</b>	
Sensor	Geomagnetic sensor and auxiliary luminance sensor
Resolution	1.5 Mgauss / 0.028Lux
Measure Range	Up to $\pm 16$ Gauss
<b>Wireless Connectivity</b>	
Network	NB-IoT: LTE Cat NB2 Band1/B2/B3/B4/B5/B8/B12/B13/B17/B18/B19/B20/B25/B28/B66: Transmitting Power: 23dBm $\pm$ 2dB Receiving Sensitivity: -114dBm(no retransmit) -130dBm(with retransmit)
SIM Card Type	Micro SIM Card
<b>Power</b>	
Power source	Built-in lithium battery 8000mAh@3.6V
Battery life	4-5 years
Battery Changeable	Yes
<b>Mechanical</b>	
Case Material	Transparent High Intensity Plastic
Dimensions	$\varnothing$ 90 mm * height 33 mm
Weight	120 g
Installation	Recessed, Mounting
<b>Environmental</b>	
Operating temp	-32 °C to 85 °C
Ingress Degree	IP68
Compressive strength	>20,000 kg

GALLERY

