ParkNode Gen1 Overview

ParkNode Gen 1 is a compact, in-ground LoRaWAN®-enabled geomagnetic parking sensor designed to detect vehicle presence accurately in individual parking spots. It uses advanced geomagnetic sensing to determine real-time occupancy status, with minimal power consumption and long battery life, even in challenging outdoor environments.

Ideal for on-street and off-street smart parking solutions, MacSync-GM1 supports efficient parking management, enforcement, and navigation. It's widely used in smart cities, airports, malls, corporate parks, and gated communities to optimize parking space usage and reduce vehicle idle time

Sensors	Geomagnetic	Microwave Radar (Optional)

Wireless Technology	LoRa

Features

Geomagnetic Sensing Technolgy
Accurate, Long-Life Smart Parking Detection

Temperature & humidity measurement
Optional Sensing for Road Condition

Easy Surface Mounting
Quick, non-invasive installation

Smart Platform Integration
Easy onboarding with Parkomate Platform

High Reliability
Accuracy of dual-mode detection is over 99%

Massive 12Ah built-in lithium battery
Up to 10+ years depending on settings

Supports Macnman Beam Protocol
Direct control, & local device-to-device actions

Secure onboarding with pre-flashed DevEUI / AppEUI / AppKey

Optional Onboard Data Buffering
To prevent data loss in case of network downtime

Compatible with all LoRaWAN® network servers & gateways

▌ Specifications

Measurement

Sensing Type	Geomagnetic
Detection Algorithm	Three-axis joint detection algorithm

Wireless Transmission

Technology	LoRaWAN® (v1.0.4), Macnman Beam Protocol
Antenna	Internal high-efficiency antenna
Supported Bands	IN865 / RU864 / EU868 / US915 / AU915 / KR920 / AS923-1/2/3/4
Tx Power	16 dBm @ 868 MHz 20 dBm @ 915 MHz 19 dBm @ 470 MHz
Sensitivity	-137 dBm @ 300 bps
Activation	OTAA / ABP
LoRaWAN® Class	Class A (default), Configurable to Class C via Maya

Led Status (Optional Version)

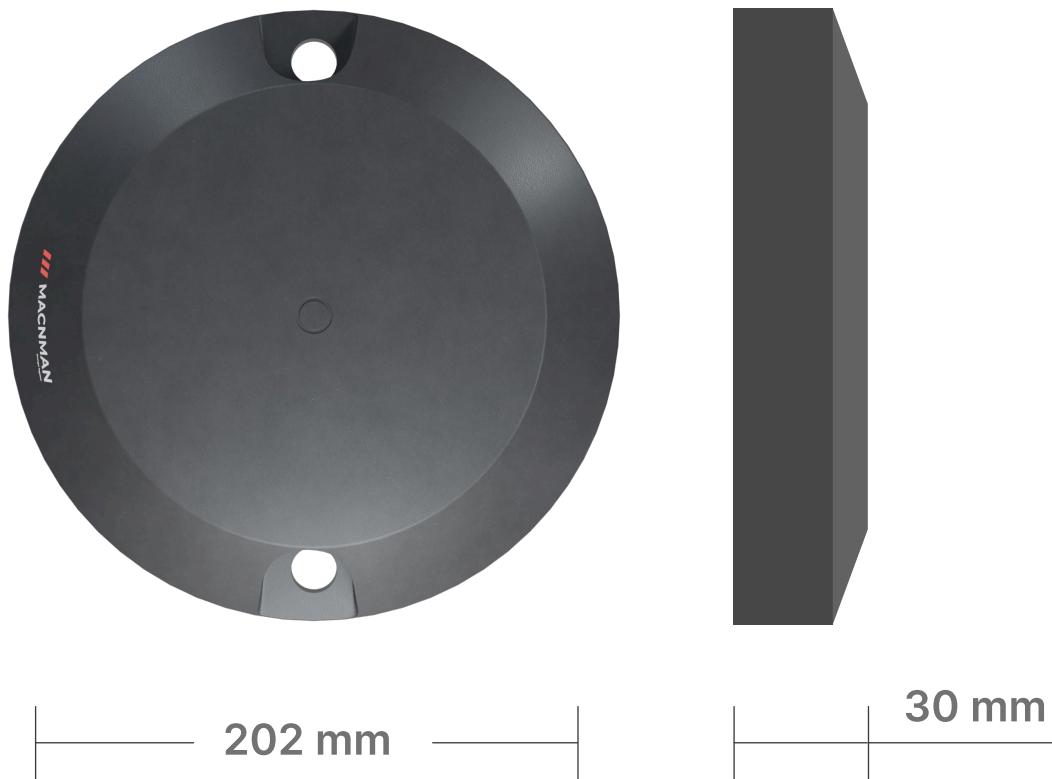|	
LED Type	1 Internal Multi-Color LED - Not Visible on surface
Solid Blue	Device is connected with Maya App
Flashing Blue	OTA (Over-the-Air) update in progress
Slow Blinking Green	Attempting to connect to the LoRaWAN® network
Single Red Blink	A confirmed parameter of MacSync is being modified

Configuration(Optional Version)

Configuration	Via Macnman Maya Android App
Maya Fatures	Threshold / Trigger / Sample based alarm triggers
Stored Records	30,000 Records (accessible via Maya) (optional)
Remote Configuration	Yes - JSON format Data

Physical Characteristics

Power Supply	Inbuilt Battery - 12,000 mAh
Operating Temp	-40°C to +80°C
Humidity Range	0% to 100% RH (non-condensing)
Ingress Protection	IP68 standard
Housing Material	ABS Plastic
Color	Matte Black , Matte Yellow
Weight	~960g (with 12Ah battery)
Dimensions	Φ: 202mm, H: 30mm
Installation	Surface-mounted type
Load-bearing	10 tons

Device Dimensions

202 mm

30 mm

Device Installation

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