



MOKO SMART

# Your Gateway to Seamless Tracking

Outdoor Cellular Gateway



IP67 waterproof



Global network connectivity



Various BLE scanning modes



Various GPS fix modes



Offline data buffering



## MKGW4

Outdoor Cellular Gateway

The MKGW4 is a highly advanced BLE (Bluetooth Low Energy) to Cellular Gateway, exceptionally equipped with precise outdoor GPS positioning. Powered by the cutting-edge Nordic nRF52840 chip, it offers seamless BLE 5.0 and global connectivity through CAT.1 and GSM, along with integrated GPS and LBS fusion positioning technology. Complemented by a sensitive motion sensor, the MKGW4 provides an efficient and reliable solution for critical cold chain monitoring, dynamic logistics transportation management, accurate school bus locating, and enhanced safety.

# Application Scenarios



Logistics Management



Cold Chain Monitoring



School Bus Safety

# General Specs

## Mechanics

|                   |   |
|-------------------|---|
| Material          | ABS+PC  |
| Color             | Grey  |
| Dimension (L*W*H) | 122.4*72.9*33.8 (external wires not included) |
| IP rating         | IP67  |
| IK rating         | IK08 (shake proof)                            |

## Environment

|                       |                               |
|-----------------------|-------------------------------|
| Operating temperature | -20 °C~ 60 °C                 |
| Storage temperature   | -30 °C~ 70 °C                 |
| Humidity              | Maximum 95% non-condensing RH |

## Hardware

|                 |   |
|-----------------|---|
| Power supply    | Main: 5-48V Type-C/DC power supply<br>Backup: 3200mAH Li-on rechargeable battery                                    |
| LED             | 4* intelligent RGB LED (to indicate Power, Switch, Cellular and GPS status)   |
| Switch          | 1* hall sensor, use Magnetic to turn on/off device  |
| Button          | 1* Reset button inside the device   |
| External Memory | 32MB (256Mb), to save offline data  |
| Sensor          | 3-Axis Accelerometer  |
| SIM card        | Nano SIM/ E-SIM   |
| External wires  | DC version: 1*positive power wire,<br>1*negative power wire,<br>1*digital input wire<br>Type-C version: 1*USB cable |

## Bluetooth

|                    |                                       |
|--------------------|---------------------------------------|
| Chip               | nRF52840                              |
| Bluetooth Protocol | BLE 5.0 (support 1M/2M/Coded LE PHY)  |
| Bluetooth Mode     | Scanning and advertising              |
| Antenna            | External/internal antenna is optional |

## Cellular

|      |   |
|------|---|
| Type | Optional Connectivity Versions: CAT.1/GSM |
| Band | Global bands                              |

## GNSS

|          |  |
|----------|--|
| Galaxy   | GPS, Beidou  |
| Accuracy | 2.5M-10M (GPS fixed)   |
| TTF      | Clod start: <=32 s; Warm start: <= 10 s; Hot start:<= 1s                     |
| Antenna  | Internal   |
| Backup   | Cell tower location (LBS) fallback for positioning when GNSS can't get a fix |

## Communication

|               |                                   |
|---------------|-----------------------------------|
| Protocol      | MQTT V3.1.1                       |
| Data security | SSL/TLS                           |
| Data Format   | Hex                               |
| Configuration | APP Bluetooth configuration       |
| FOTA          | Bluetooth DFU and MQTT remote OTA |