

# MOKO SMART Company Overview

Your Trusted IoT Devices Partner



Web: www.mokosmart.com

Email:info@mokosmart.com

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MOKO TECHNOLOGY LIMITED

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### **BLUETOOTH GATEWAY**

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- > GPS TRACKER
- > PANIC BUTTON
- > SENSOR -----
- > INDOOR GATEW

### **USE CASE**





### LORAWAN DEVICE

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### We Are

### **Original IoT Devices ODM & OEM Manufacturer**

MOKO Technology Ltd. is a leading manufacturer and provider of ODM, OEM, and IoT devices in China. Founded in 2006, with rich experience and expertise, the company's extensive experience and refined expertise have helped customers worldwide optimize their business operation in a more efficient and sustainable way.

Since 2013, MOKO has further solidified its position through the establishment of the R&D Center and the launch of its dedicated IoT brand - MOKO SMART. Focusing on cutting-edge IoT technology, MOKO SMART offers a comprehensive range of products incorporating Bluetooth Low Energy, LoRaWAN, WiFi, RFID, GPS, LTE, UWB, and other wireless technologies. This emphasizes products, paving the way for a more connected future.



2020

#### LoRaWAN alliance 2018 member Certificated by UL • Self-developed ERP system online 2016 2012 • Awarded as the China 2006 2022 Mainland National • Set up MOKO factory • Founded in Shenzhen, High-tech Enterprise China 2019 Certificated by TUV 2017 • Focused on IoT(BLE, LoRaWAN, Wi-Fi, etc.) 2013 2009 • Established the SIG Member • Expanded PCB&PCBA R&D center • Certified by ISO9001 business line. started the OEM service

### **Milestone**

#### 2023

• omlox community member

- Launched the UWB Tag
- Authorized MFi
- manufacturer

#### 2024

- Launched MOKO IoT DM system
- Created partner ecosystem
- Launched MOKO online store

• Launched the high-accuracy AoA products



## Bluetooth **Beacon**

A Bluetooth Beacon is a small, battery-powered radio transmitter built on Bluetooth Low Energy (BLE) technology. Functioning akin to a lighthouse, it intermittently emits low-power Bluetooth signals detectable by nearby BLE scanners like mobile devices or gateways. MOKO SMART provides a wide selection of Bluetooth Beacon products, customized with different designs and features to meet various application requirements.

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#### Support Compatibility >>



Eddystone

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### **Features**

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fobs, and helmet tags etc.

#### **Design for Reliability:**

 Rigorous reliability test • Adapt to various temperature

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#### Integrated IoT Sensor:

• Incorporating a variety of IoT sensors, including motion, temperature, humidity, magnetic, IR, PIR, ToF range, water leakage, barometric pressure sensor etc. • Embedded with NFC and LF/HF/UHF RFID • Embedded with a buzzer, LED, or vibration to achieve various alarm applications

• Outstanding RF performance, supports BLE long-range feature up to 1312 feet. • Ultra-low power design for 10+ years battery life • Achieves high-precision BLE AoA positioning (0.5 meter accuracy)

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#### **Diverse Beacon Options:**

• Available in flexible installation methods, such as lanyard, adhesive pasting, screwing, or

#### High-quality Product Performance:

# Bluetooth Beacon Asset Tag

- Pallet and forklift RTLS tracking
   Medical equipment tracking
   Asset theft protection
- > Inventory management
- > Fleet management

#### Applications

M2

Asset Tag

Warehouse & Retail & Transport

IP67 waterproof

• Flexible tracking mode

• BLE Long Range feature

door sensors (optional)

• Temperature monitoring and

• Long-life and replaceable battery

port Healthcare



M1P

LED Tag

M1

Coin Tag

- Coin-size (φ30 \* 8mm)
  - Replaceable battery
  - Prominent LED indicator
  - Built-in motion sensor
  - Bluetooth long range feature

• Coin-size (φ26mm & 5.4g)

Replaceable battery

Built-in motion sensor

• Flexible tracking mode

• Affordable 1 USD Tag

Optional buzzer



- IP67 waterproof
- Brick size
- High impact resistance
- Large capacity (8000mAh) battery for 10+ years life

#### M3 Brick Tag



- Exquisite size (36mm x 23mm x 5mm)
- Replaceable battery
- Flexible tracking mode
- Intelligent power managementCost-effective

M4 Lite Tag

IP67 waterproof

- Replaceable battery
- Built-in motion sensor
- Flexible tracking mode

Intelligent power management

M4 Pro Waterproof Tag

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- Resistant to high temperature of 212°F
- IP68 resistance
- BLE long range feature
- Flexible tracking mode
- Temperature logging/trigger

M5 High-Temp Resistance Tag





M6 Industrial Tag

- IP67 waterproof
- Built-in motion sensor
- Multiple mounting options (magnetic accessory available)
- BLE Long Range feature (optional)
- Available in 3200mAh alkaline battery or 5200mAh lithium-ion battery



- IP67 waterproof
- High capacity 2400mAh rechargeable battery
- Temperature and humidity monitoring (optional)

L01 Location Tag

• BLE5.1 support



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SoftFoam

Asset Tag

- Lightweight and slim design
- Affordable 1 USD tag
- Cost-effective solution
- Supports BLE 5.1
- IP67 Waterproof
- Tear the adhesive to wake up



- Flexible and ultra-thin design
- Zinc-based environmentally friendly battery
- Support for BLE5.1
- Supports NFC and NFC wake up (optional)
- Tear the adhesive to wake up

UT1 Ultra-thin Paper Tag



#### **Bluetooth Beacon**

### **Personnel Tag & Emergency Button**

- > Attendance management
- > Geo-fence and access control
- > Real-time positioning
- > Staff duress alarms
- > Workflow optimization
- > Patient care
- > Workplace utilization



 Replaceable battery • Built-in motion sensor One click SOS button

H1 Keychain



- Credit card size
- IP66 waterproof
- Built-in motion sensor for fall detection

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Healthcare

• 5 years long-life





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H5 Pro RFID Badge	<ul> <li>IP66 waterproof</li> <li>Built-in RFID for access control</li> <li>Rubber button for emergency call</li> <li>RFID/NFC (optional)</li> </ul>
B5 Rechargeable Badge	<ul> <li>Convenient magnetic charging method</li> <li>Supports RFID or NFC</li> <li>Equipped with buzzer, motor, and LED reminder</li> </ul>
H7 Helmet Tag	<ul> <li>Connected worker</li> <li>IP67 waterproof</li> <li>Built-in motion sensor for worker safety</li> <li>Replaceable battery</li> <li>NFC (optional)</li> <li>N)</li> </ul>
H7 Lite Helmet Tag	<ul> <li>Connected worker</li> <li>IP67 waterproof</li> <li>Rubber button for emergency call</li> <li>Built-in motion sensor for worker safety</li> </ul>
H8 Identification	<ul> <li>Compact and portable, easy to carry</li> <li>Button available for emergency situations</li> <li>Replaceable battery to extend the lifespan</li> <li>Buzzer notification</li> <li>RFID / NFC (optional)</li> </ul>

Tag

| 60 **/ BUTTON** 



#### **Bluetooth Beacon**

## Location **Beacon**

- > Indoor navigation
- > Point of interest information
- > Proximity marketing
- > Patient flow optimization
- > Parking space detection



- Long-life and replaceable battery
- Flexible tracking mode
- Ultra-long broadcast range

H2 Navigator



- IP67 waterproof
- 8+ years long-life replaceable battery (2400mAh)
- Low-light energy harvesting (optional)
- L01A Location Anchor
- Bracket accessory for easy mounting • Temperature and humidity monitoring (optional)



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- IP67 waterproof
- BLE long range feature
- Ultra-long lifetime (10400mAh battery / 10+ years)
- Temperature monitoring (optional)





- Replaceable 5200mAh lithium battery, with 10 years of lifespan
- Flexible installation options
- Supports Bluetooth long-range feature
- Simultaneous support of iBeacon and Eddystone

L04 Navigation Anchor



- USB-powered, plug-and-play, battery-free
- High-performance external antenna
- Optional built-in antenna
- Simultaneous support of iBeacon and Eddystone



- High durability
- Impact resistance
- IP68 and IK09 rating
- Parking space detection

**R1** Road Stud

### Bluetooth Beacon Sensor Tag

- > Temperature & humidity monitoring
- > Workspace/storage condition monitoring
- > Room occupancy detection
- > Workplace utilization
- > Smart lighting
- > Inventory level monitoring
- > Tamper alarm
- > Workflow optimization

#### **Applications**



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S01P

**PIR Presence** 

- Human presence detection
- Large capacity (5200mAh) replaceable battery for 5+ years life

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- With 120°horizontal and 60°vertical detection angle
- Flexible mounting methods

• Equipped with hall effect sensor

• 8+ years long-life replaceable battery

IPX4 waterproof

• Tamper alarm

(2600mAh)

Hall sensor for door detection (optional)



- Time-of-Flight ranging
- IP67 waterproof
- Replaceable battery
- 3 meters maximum range
- 10mm magnetic mounting resolution level

#### S02R ToF Range Sensor

- IP67 waterproof
- Exquisite size
- Replaceable battery
- High sensitivity with  $\pm 0.5^{\circ}$ C
- 50000+ temperature data log

#### M4 Pro

#### Temperature Logger



- -20°C ~ +60°C temperature range
- High sensitivity with  $\pm$ 0.3°C accuracy
- IPX4 waterproof
- 2+ years life replaceable battery (1200mAh)
- 4000 T&H data log

H4 Pro Temperature & Humidity



- IP67 waterproof
- -100°C to 100°C measurement range
- 8000mAh long life replaceable battery
- Customizable Measurement Range

M3 Probe PT100 Temperature Probe

- S03D Door Sensor

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L02S Multiple Sensor

- Temperature/humidity/door detection/ barometric pressure options
- -20°C ~ +60°C temperature range
- High sensitivity with  $\pm 0.5^{\circ}\mathrm{C}$  temperature accuracy
- IP67 waterproof
- Long life and replaceable battery



- Cost-effective
- 50000+ temperature data log
- IP67 waterproof
- Cold-chain application
- Tear the adhesive to wake up



## **Bluetooth** Gateway

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A Bluetooth gateway serves as a data bridge between Bluetooth beacons and a cloud server. It collects broadcast data from nearby beacons through scanning and transmits it to the server via WiFi, Ethernet, LoRa, or cellular networks. This facilitates indoor positioning, asset tracking, and real-time status monitoring in a cost-effective manner.

### **Features**

#### **OO** Diverse BLE Gateway Options 00

### $\left[ \begin{array}{c} \\ \end{array} \right]$

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#### **Compatible with MOKO Beacon**

and easy configuration

### Safety and Reliability

• Meets the reliability testing requirements • Device operates reliably for extended periods of time

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- Variety of product forms to meet the needs of different usage environments
- Flexible communication technology selection to match system requirements
- Multiple power supply methods available for easy deployment

• Built-in compatibility with various filtering and parsing rules for MOKO Beacon, enabling quick

• Supports bi-directional communication with MOKO Bluetooth devices, allowing remote

### **Bluetooth Gateway Bluetooth** to Wi-Fi



#### **MK105** EU/FR Plug Gateway

- Easy deployment
- Available in standard European and French plugs
- CE certified



MK107 Series US/UK/EU/FR Plug Gateway

- Dual-frequency option available
- Available in standard UK, US, European, and French plugs
- FCC&UL&CE&UKCA certified





MK110 US Plug Mini Gateway

US Plug Mini Gateway



**MKGW-mini Series** US/UK/EU/AU Plug Mini Gateway

- Mini size
- Equipped with AC output
- FCC&UL certified



- Available in multiple performance versions
- Controllable remote output switch
- FCC&UL certified



- Equipped with three interchangeable AC plugs
- Supports both AC and USB power supply
- ETL/FCC/CE/UKCA/RCM certified



#### **Bluetooth Gateway**

## **Bluetooth to** Wi-Fi/Ethernet





#### MKGW1-BW Pro Indoor PoE Gateway

#### MKGW3 Indoor PoE Gateway

- IEEE 802.3 af standard PoE input and output supported
- Enhanced wireless performance
- for downstream communication



- Ultra small size
- Powered by standard type-A port
- USB & Wi-Fi dual mode, support manage locally or upload to the cloud

• Experience the advanced performance of Bluetooth 5.0 features – 1M/2M PHY and Coded PHY (long range) Connect the Internet via Wi-Fi or Ethernet and access the Server via MQTT, HTTP, TCP or UDP protocols • A simple and user-friendly Web GUI helps you configure the gateway easily and quickly

• WPA2-Enterprise WIFI security mode supported, including PEAP/TTLS/TLS EAP methods

· Compatible with MOKO Beacon for quick filtering and interpretation of MOKO beacon devices, with support

• Locally decode iBeacon, Eddystone (UID/URL/TLM) and all MOKO beacon raw data



#### **Bluetooth Gateway**

## **Bluetooth to** LoRaWAN





LW003-B Indoor Bluetooth Bridge



LW003-B Pro Outdoor Bluetooth Bridge (Rechargeable version and solar panel version are available)

- Built-in temperature and humidity sensor for monitoring environmental condition
- Built-in rechargeable 4200mAh battery
- Multiple scanning modes

- IP67 waterproof
- Superior wireless performance
- Low battery reminder
- Support temperature and humidity monitoring

#### Bluetooth Gateway

## **Bluetooth to** Cellular



#### MKGW4 Outdoor Cellular Gateway

- positioning
- Multiple BLE scanning modes, including real-time scanning and periodic scanning



• Wide voltage range of 8-52V for the main power supply, equipped with a 3000mAh lithium battery backup • Global NB-IOT LTE-M, and CAT.1 network connectivity

• Outdoor GPS and indoor LBS fusion positioning technology, supporting both regular and movement-based

• Offline data buffering to ensure data integrity, with automatic uploading when the network is available

# Bluetooth AoA Locator

#### Achieving Sub-meter Accuracy **RTLS Solution**

MOKO SMART introduces a high-precision positioning Locator based on Bluetooth AoA (Angle of Arrival) technology, achieving sub-meter accuracy. Connected with the MOKO SMART AoA Tag (Personnel/Asset tag), it enables high-precision RTLS applications across various warehouse, retails, exhibition venues, and more. The MOKO SMART Bluetooth AoA Locator engine, providing an open API interface for easy and rapid integration of location data into your application platform.

#### **Key Features**

area

Wide coverage

♦ ♦ IP66 ♦ waterproof IP66

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High accuracy (0) positioning

Cascade

 $\bigcirc$ Connection

Strong Anti-Interference

Flexible integration with multiple APIs

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Network connection Ethernet 10/100Mbps (cascade connection)

Power supply PoE (cascade connection) DC (12 - 30V, 1A)

Weight 582g

Dimensions 180.7 mm × 180.7 mm × 40.7 mm

Waterproof IP66

**Operating temperature** -20°C / + 60°C

Installation mode Ceiling

Installation height Up to 10m

Scan coverage Up to 500m<sup>2</sup> (open area)

Positioning accuracy 0.1m~1m

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#### MKBAL-C30-W **Dual-band Wi-Fi Locator**

#### Network connection Wi-Fi (2.4G + 5G frequency band) Ethernet 10/100Mbps

Power supply DC (12 - 30V, 1A)

Weight 610g

Dimensions 180.7 mm× 180.7 mm× 40.7mm

Waterproof IP66

**Operating temperature** -20°C / + 60°C

Installation mode Ceiling

Installation height Up to 10m

Scan coverage Up to 500m<sup>2</sup> (open area)

Positioning accuracy 0.1m~1m

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## LoRaWAN Node & Gateway

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Based on LoRa® technology, MOKO SMART introduces a range of LoRaWAN gateways and nodes, tailored to your IoT applications across diverse industry verticals. Partnering with MOKO SMART allows you to swiftly gain market entry, foster end-user engagement, and propel your business growth.

### LoRaWAN Node

Experience the versatility of MOKO SMART's LoRaWAN nodes, tailored to various applications for enhanced efficiency: asset management and positioning; personnel safety; energy management;

### **LoRaWAN Gateway**

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MOKO SMART's LoRaWAN Gateway MKGW2-LW is an 8-channel standard LoRaWAN<sup>®</sup>-based gateway designed for indoor use. With its compact form factor, this gateway is effortlessly deployable on roofs, walls, and other indoor environments. Its versatile application extends to smart scenarios, release of the MKGW5-LW Outdoor Gateway.



### LoRaWAN Node **GPS Tracker**

- > Forklift management
- > Asset tracking
- > Livestock tracking
- > Logistics park vehicle monitoring

#### Applications



**Industrial Park** 



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Transport











LW001-BG Pro GPS Tracker (Rechargeable version is available)



LW008-MT Mini GPS Tracker



LW011 Mini Tracker



- Max 5-year lifespan under typical usage
- Supports anti-demolition alarm function
- Supports various working modes such as standby mode, timing mode, periodic mode, motion mode
- Equipped with multiple and highly accurate positioning technologies



- Built-in LR1110 for GNSS and Wi-Fi positioning
- Supports magnetic installation for quick setup
- Compact size, suitable for small-sized devices
- High durability and impact resistance

- Support cloud auxiliary operation (downlink for position, man down detection and alarm function)
- Multiple working mode to balance power consumption
- Cost-effective
- Sleek bar-shaped design, suitable for container installations.
- IP67 waterproof rating.
- Supports anti-tampering alarm.
- Typical lifespan of 5 years.

### LoRaWAN Node Panic Button & Smart Badge

> Emergency alert

> Personnel safety

#### Applications





- Compact and portable design
- Suitable for various indoor and outdoor applications
- Easy charging
- Built-in motor and LED indicator

- Convenient magnetic charging method
- Prominent alarm button with clear buzzer sound
- IP67 waterproof for enhanced durability
- Multiple positioning technologies for accurate tracking

- Credit card size
- Convenient magnetic charging method
- Built-in buzzer and motion sensor
- Multiple positioning technologies for various indoor and outdoor applications



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### LoRaWAN Node

## Sensor

- > Energy management
- > Occupancy detection
- > Parking lot management
- > Environmental monitoring

#### Applications



Smart offices Shopping Mall

Parking Lot































LW007-PIR PIR Sensor



LW009-SM Pro Surface-Mounting Vehicle Detector



- Easy to use and deploy
- Accurate measurement of active power consumption
- High precision power measurement with accuracy up to  $\pm 0.5\%$
- Supports for load detection and overload protection

- Occupancy or motion detection
- Door/Window status detection
- Highly sensitive temperature and humidity sensor
- Maximum 5-year lifetime under typical scenario



- Compact size IP68 waterproof
- Support BLE scan
- Micro Microwave radar & geomagnetic detection



- High detection precision • 5 years lifespan





#### MKGW2-LW Indoor Gateway

- Supports WiFi AP hotspot access gateway
- One-click reset function
- Download log function for troubleshooting



• WEB interface for convenient configuration and status viewing





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## **Healthcare**

#### Overview

Ensuring a secure working environment is always crucial due to the increased risk of violence faced by healthcare workers. Whenever a staff member requires aid or encounters a safety threat, MOKO SMART's RTLS products can enable them to swiftly seek assistance from their present location. Empowering employees with real-time security responses provides them with peace of mind, enabling better focus on patient care.

#### Staff Duress & Panic Alerting



## Transport

#### **Overview**

In the transport and telematics industries, fleet operators often encounter various challenges that are not easy to control, leading to safety risks for both drivers and vehicles, ultimately resulting in increased costs. IoT technology facilitates the connection of vehicles, systems, and data exchange, thereby enhancing vehicle management, condition monitoring, and driver safety.





# Warehouse & Logistics

#### Overview

Real-Time Location Systems (RTLS) are now a vital part of the warehouse and logistics industries, serving a growingly crucial role. Efficient flow within warehouse and logistics operations helps cut costs and reduce the risks of loss and damage. As the industry evolves, asset visualization emerges as a crucial success factor, effectively improving goods management and overall operational efficiency.



#### **Access Control**



Personnel Safety

BLE Location Anchor

#### Overview

Personnel safety remains the top priority across all industries. IoT solutions have revolutionized the approach to enhance safety measures by offering a range of tailored features such as real-time monitoring, panic buttons, and emergency alerts. By integrating these advanced IoT capabilities, supervisors can significantly enhance their ability to protect their workforce and mitigate risks on workplace to a great extend.



## Facility

#### **Overview**

The integration of IoT technology is revolutionizing facility management. The real-time environmental insights of IoT offered allow managers to monitor systems, streamline maintenance, and improve occupant experiences. As the IoT continues to evolve, managers will have more tools and resources at their fingertips to create smarter, more efficient and sustainable building operations.

#### **Environment Monitoring**



LW005





## **Exhibition**

#### **Overview**

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The IoT has significantly transformed exhibition industry by enhancing connectivity, interactivity and efficiency of events. By utilizing IoT, organizers can harness beacons and sensors to collect real-time data on indoor navigation, attendee behavior, and exhibition traffic patterns. This data-driven approach personalizes attendee experiences, enhances overall exhibition comfort, and boosts the work efficiency of exhibition staff as well.





### We Are Trusted By

At present, we have developed partnerships with over 100 globally renowned companies and successfully completed more than 200 projects.

We regard sustainable business relationships with our suppliers and customers, along with scalable systems, as the essential foundation for achieving mutual success. Our goal is to cultivate win-win collaborations that improve people's lives by enhancing convenience, efficiency, and comfort.



"The LW001 was the best device for the requirements and we've bought lots of MOKO stuff in the past which we like so it seemed like a good way forward."

Ben Caster, a UK client

"I have worked within this space for many years and I can honestly tell you their products are great quality and service is great. If you have had any experience with other vendors, MOKO SMART is top of their game"



is fantastic."

"By integrating MOKO SMART's BLE&LORAWAN device into the entire positioning system, it improves staff safety and operational efficiency. MOKO device provides new ideas for indoor positioning."



"Definitely, we caught some quy's trying to steal solar panels these nights. The movement trigger mechanism of the LW001-BG pro

Heinrich , a Australia client