



MOKO SMART

LW003-B Datasheet



LW003-B

Datasheet

Version 2.1

MOKO TECHNOLOGY LTD.
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Contents

1 Description.....	1
2 Features	1
3 Specifications	1
4 Hardware Interfaces and Indicator	2
5 Mechanical Size	4
6 Package Information	4
7 Order Information	5
8 Revision.....	6
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1 Description

LW003-B is a BLE-LoRaWAN gateway integrating LoRa and Bluetooth wireless communication, LW003-B can scan BLE Beacon data and send data to LoRaWAN-Based gateway, and then upload to server, so as to realize environmental monitoring and indoor positioning.

2 Features

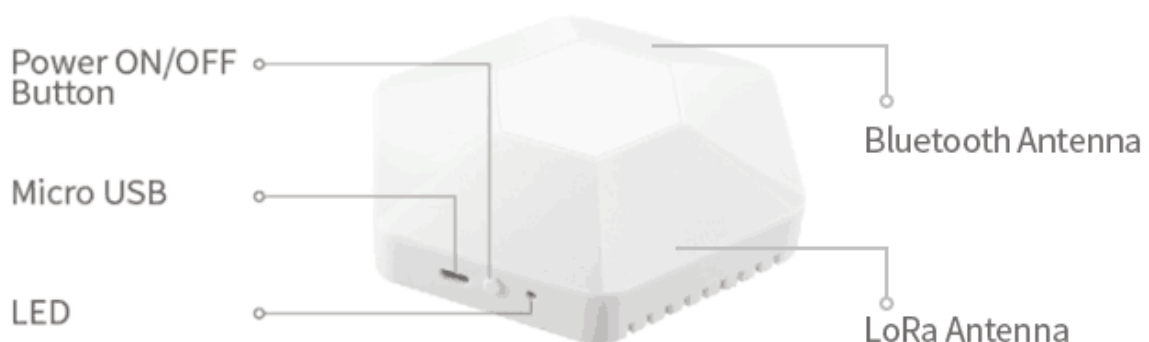
- Based on LoRaWAN Protocol
- Support for multicast
- Support for configuring ABP and OTAA modes with MKLoRa APP
- Support Firmware update Over The Air (OTA)
- Support for configuring LoRaWAN-Based parameters by downlink command
- Low battery indicator
- Support battery power and direct power supply
- Built-in 4M FLASH memory chip, can support 20,000 pieces of data local storage at most
- Ultra-Low Power, Max 20 days operating time (Data are reported once every 3 minutes)

3 Specifications

Categories	Parameter	Value
LoRa Wireless Specification	LoRa Protocol	LoRaWAN V1.0.3
	Lora Frequency	EU868/AU915/US915/AS923/IN865/KR920/EU433/CN470/CN779
	Tx Power	Max 21dBm
	Sensitivity	-137dBm@SF12 300bps
	LoRa Communication Distance	Up to 4 km (in urban open space)
BLE Wireless Specification	Bluetooth® (BLE)	V4.2
	TX Power	Max 8 dBm

	BLE Communication Distance	Up to 50m in free space
Physical Parameter	Dimension	122.7mm×109mm×36mm (±2mm)
	Net Weight	165 g±2g
	Shell Material	ABS
Power supply Specification	Power Supply	Micro USB or Battery
	Charger Time	3.5 hours@5V/2A
	Battery characteristics	4200mA rechargeable battery
Power Consumption	Operating Current	< 180mA
	Sleep Current	< 15uA
Application Parameter	Operating Temperature	-20 ~ + 60°C
	IP Rating	No waterproof

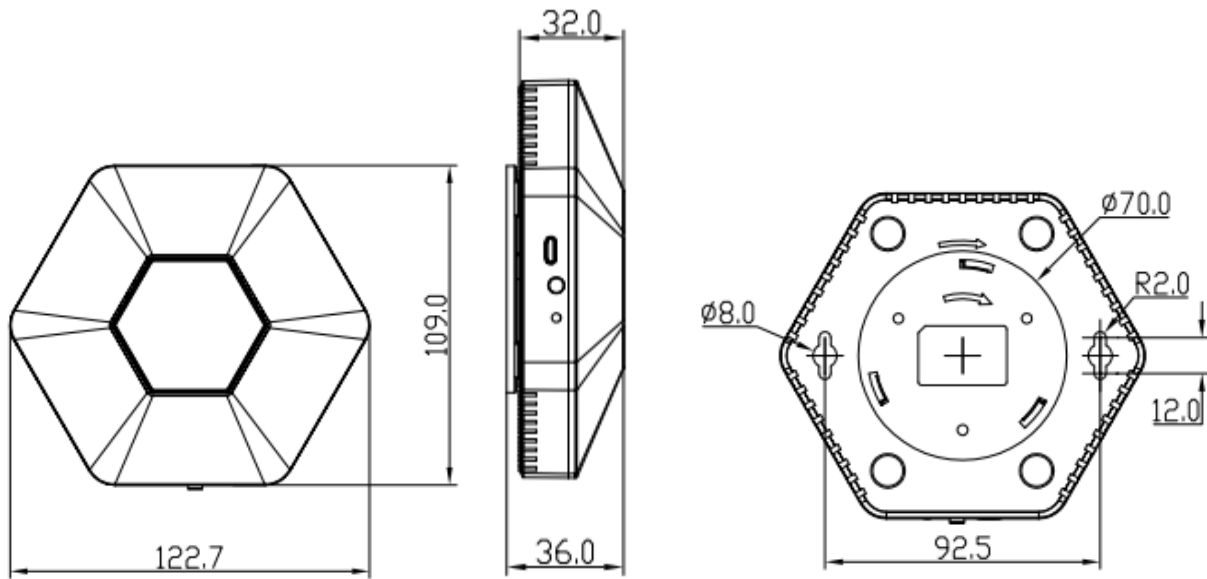
4 Hardware Interfaces and Indicator



Items	Indicator	Operation	Remark
Turn ON	Solid blue and keep 3S	Press and hold the power button for 5 seconds till the LED indicate blue and release. The LED will indicate blue for 3 seconds to	

		show the LW003 is turned on.	
Turn OFF	Red LED Blink 3S	Press and hold the power button for 5 seconds till the red indicator flashes quickly and release. The indicator will flash red for 3 seconds to show the LW003 is turned off.	
Join LoRa Network	Solid green and keep 3S	If the device had never joined any network, after turning on, the device automatically sends join request	It will send join request automatic after power on the device or save "LoRa Setting" parameter in APP
Login in	Green LED Blink 1S	Connect to the device via APP successfully	
Login out	Red LED Blink 1S	APP disconnect to the device	When the device in alarm status the indicator may be not visible
Firmware Upgrade	Green LED Blink during the upgrade	Firmware upgrade via OTA in DFU mode	
	Solid Blue and keep 3S after upgrade successfully		
	Solid Red and keep 3S after upgrade failed		
Charging	Blue LED blink	Plug in Micro USB charger	Without battery version no indicator
Full Charged	Solid blue	Plug in Micro USB charger	Without battery version no indicator
Low Battery Reminder	Red LED blink once every 30s	Battery level lower than 10%	
Over-limit Indication	Solid Red	Solid red when the device is in Over-limit status	

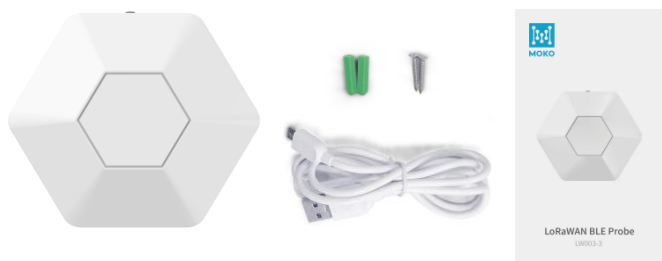
5 Mechanical Size



Unit: mm

6 Package Information

Item	Qty	Remark
LW003-B	1	
Micro USB cable	1	
Positioning screws	2	Used for fixing on the wall
Expansion rubber plug	2	Used for fixing on the wall
User Leaflet	1	



7 Order Information


Product Type	Product Description
LW003-B-US915	915Mhz LoRaWAN BLE Probe without battery-North America, AU915/US915/AS923/EU868/IN865 compatible
LW003-B-EU868	868MHz LoRaWAN BLE Probe without battery-Europe, AU915/US915/AS923/EU868/IN865 compatible


8 Revision

Version	Description	Editor	Date
1.0	Initial version create	iris	2020-07-08
1.1	Adjust document structure	iris	2020-09-11
2.1	Suitable for firmware version V2.0.7 &HW Version V2.1	Allen	2021-04-16



MOKO TECHNOLOGY LTD.

 4F,Buidling2, Guanghui Technology Park,
MinQing Rd, Longhua, Shenzhen, Guangdong, China

 Tel:86-755-23573370-829

 support_lora@mokotechnology.com

 <https://www.mokosmart.com>

