

W1-BeaconX Pro Datasheet



MOKO TECHNOLOGY LTD.

www.mokosmart.com

1. Description

The W1-BeaconX Pro is a portable tag with **3-axis accelerometer sensor**^①, which can advertise iBeacon, Eddystone and Sensor datas.

It has a **portable case shape, accurate hardware and robust firmware**.

All the parameters of W1-BeaconX Pro can be modified and all the sensor datas can be checked. Please check out our BeaconX Pro app, available for iOS and Android.

^① 3-axis accelerometer Sensor: STMicroelectronics® LIS3DH

2. Features

Firmware and chipset

- Programmed MOKO standard MkBeaconX firmware;
 - Ultra-low power consumption chipset Nordic® nRF52 series with 32 bit ARM® Cortex-M4 CPU.
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Compatibility

- Compatible with **Apple iBeacon** and **Google Eddystone**;
 - Compatible with standard Eddystone Configuration GATT Service;
 - Compatible with all Bluetooth® 5.0 devices.
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Replaceable Battery and Battery Level

- High quality replaceable CR2032 coin battery(225mAh);
 - Up to 1 year battery lifetime (at default settings);
 - Easy to get the real-time battery level notification.
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Configurable SLOTS and parameters

- Up to 6 configurable SLOTS;
 - Each SLOT can be set to iBeacon, UID, URL, TLM, Device Info and 3-axis Sensor data;
 - Device Name, Password, Connection Mode, Advertising Interval, Tx Power and 3-axis Sensor Parameters all are configurable;
 - Special Configuration APP (**BeaconX Pro**), available for iOS and Android.
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Flexible sensor function

- 3-axis accelerometer has dynamically user-selectable full scales of $\pm 2g/\pm 4g/\pm 8g/\pm 16g$ and the parameter is configurable ;
 - 3-axis accelerometer is capable of measuring accelerations with output data rates from 1 Hz to 100 Hz and the parameter is configurable;
 - User can get the raw data of the 3-axis sensor sampling data from the device in real time;
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Trigger function

- Support motion trigger;
 - Control the device to start advertising all the time, stop advertising, or advertise for a while.
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Transmission Power Levels

- 9 adjustable grades;
 - Transmission power range: -40dBm to +4dBm.
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Long Range

- The max. Range 40 meters in the open space;
- The range depends on the physical environment.

Security

- Configurable password (1-16 characters);
- With or without password (Lock/Unlock parameters);
- AES-128-ECB. encrypt.

Connection Mode

- Advertising mode, non-connectable;
- Configuration mode, connectable.

Custom made mounting

- 3M sticker;
- Logo and color customizable;
- Provided with your own configuration.

OTA and DFU

- Supported upgrade via Over-The-Air;
- Nordic® official Device Firmware Upgrade(DFU);
- Reserved J-Link port on the board for programming.

3. Physical Characteristics

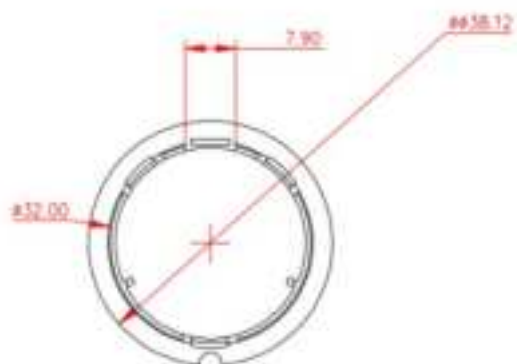
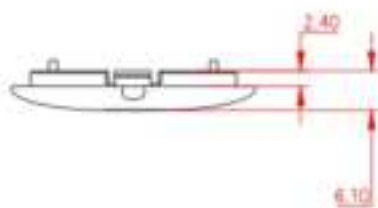
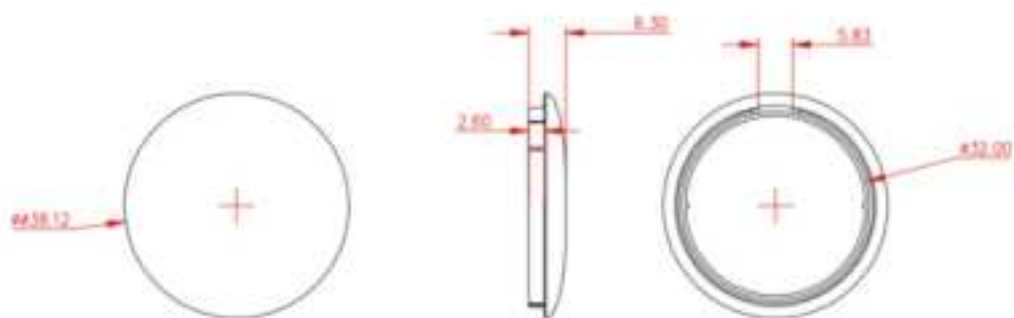
Item	Value	Remarks
Case Color	White	Other colors can be customized
Main Material	ABS	-
Battery Model	CR2032	Coin battery, 1pc, 225mAh
Battery Lifetime	Up to 1 year	At default settings ^② and without selfdischarge factor
Operation Voltage	1.8~3.6V	DC
Average Current	27.52 uA	At default settings ^③
Transmission Range	40m(+4dBm)	Maximum, in the open space
Antenna	50ohm	On board/PCB Antenna
Size	Φ26x7.1mm	Refer to mechanical draws for details
Net Weight	5.4g	With battery
Operating Temperature	-25 to +60°C	-
Storage Temperature	20 to +30°C	-
Certifications	FCC/CE	-

②③ Default setting: 1 Active SLOT(Device Info), 0dBm TX power and 1000ms Advertising Interval.

4. Configurable Parameters

Item	Value	Default Setting	Range and Remarks
iBeacon	UUID	-	16bytes
	Major	-	0~65535
	Minor	-	0~65535
UID	Namespace	-	10bytes
	Instance ID	-	6bytes
URL	Encoded Scheme Prefix	-	4types: http://www. https://www. http:// https://
	Encoded URL	-	2-17 bytes
TLM	-	-	TLM shows only one in the broadcast.
Device Name	-	BeaconX Pro	Up to 20 characters
Advertising Interval	-	1000ms	100~10000ms, Unit:100ms
Tx Power	-	0dBm	-40dBm to 4dBm, 9 adjustable grades
Password	-	Moko4321	1-16 characters or NO password
Connection Mode	-	Connectable	Connectable/Unconnectable
Trigger	Device moves	-	Always advertise
			Start advertising after a static period time (1~65535s)
			Stop advertising after a static period time (1~65535s)
3-axis accelerometer Sensor	Scale	±2g	±2g, ±4g, ±8g, ±16g
	Output data rate	10 Hz	1 Hz, 10 Hz, 25 Hz, 50 Hz, 100 Hz
	Sensitivity	7	7 to 255

5. mechanical draws



7. Declaration

The contents of this datasheet are subject to change without prior notice for further improvement. MOKO team reserves all the rights for the final explanation. Please contact MOKO sales team or visit <https://www.mokosmart.com> to get more related information if needed.

8. Contact Information

MOKO TECHNOLOGY LTD. Address: 4F,Buidling2, Guanghui Technology Park, MinQing Rd, Longhua, Shenzhen, Guangdong, China E-mail: Support_BLE@mokotechnology.com Website: <https://www.mokosmart.com>

Revision History

Revision	Description	Approved	Date
V1.0	Initial Release	Hannah	2020.04