

W2 Series Beacon (W2) Datasheet



MOKO TECHNOLOGY LIMITED

www.mokosmart.com

Label Position

FCC ID:2AO94-W2

Note: Because the EUT is too small, Label only be placed in the User Manual

1. Description

- The W2 has a ** wearable bracelet shape, waterproof construction, precise hardware, powerful firmware and touch buttons**. It has a rechargeable lithium battery and a simple USB direct charging method.
 - iBeacon format broadcast function: positioning, advertising and marketing, personnel or material information management, etc. Such as used in hospitals, shopping malls, libraries, schools, factories, warehouses, etc.
 - Scanning device function: to realize the tracking of equipment or personnel, and record the equipment or personnel who have approached at different times. For example, it is used to collect people who have been in contact with infectious disease patients within a limited time within the medical scope.
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2. Features

Firmware and chipset

- Programmed MOKO standard MKiBeacon3.0 series 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** ;
 - Compatible with all Bluetooth® 4.2 devices.
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High quality Battery and long lifetime

- High quality rechargeable lithium battery (80mAH 3.7V);
 - Simple USB direct charge;
 - Easily get real-time battery notifications.
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Transmission Power Levels

- 9 adjustable grades;
 - Transmission power range: -40dBm to **-0.89dBm**.
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Long Range

- The max. Range 55 meters in the open space (-0.89dBm TX power) ;
 - The range depends on the environment where the W2 series Beacon is placed.
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Data storage

- Can save 46,875 broadcast data when there is external FLASH, and save 800 broadcast data when internal FLASH.
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Connection Mode

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

Custom made mounting

- Color customizable;
- Easy to print a customization logo/branding on the case.

- Provided with your own configuration;
- Customizable software, hardware and structure.

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.LED and Vibration reminder

Function	Operation	LED or vibrate Status	Remarks
Power on	Long press 5S in the shutdown state	the light flashes quickly for 3s	-
Shutdown	The default button cannot be turned on, but can be turned off using APP.	the light stays on for 2s and continuously vibrate for 2s	-
Connect Beacon	APP Connect Beacon	Light flashes 1S and vibrate for 0.5s	-
Disconnect	APP and Beacon disconnect	Lights up 1S	-
LED storage reminder>	The condition to store the scan to Beacon is reached	On-off-on-on-off-on-off, 3 cycles, each time on 500ms, every 500ms Off by default	-
Motor storage reminder	Meet the condition of storing the scanned Beacon	The motor vibrates 3 times, each time 500ms, interval 500ms	Remind the user to find that there is a Beacon close, you can control the reminder switch, the default is on
Upgrade	Operation DFU upgrade in the air	Light flashes during the upgrade process / lights up for 2S after successful upgrade	-
Low battery reminder	For rechargeable Beacon, the battery is less than 3685mV (10%)	The lamp flashes twice every 30s	-
Charging	Charging	The lamp is always on	Before charging, if the device is off, the Beacon will automatically turn on when charging
Charge	Charge complete	Light off	-

4. Physical Characteristics

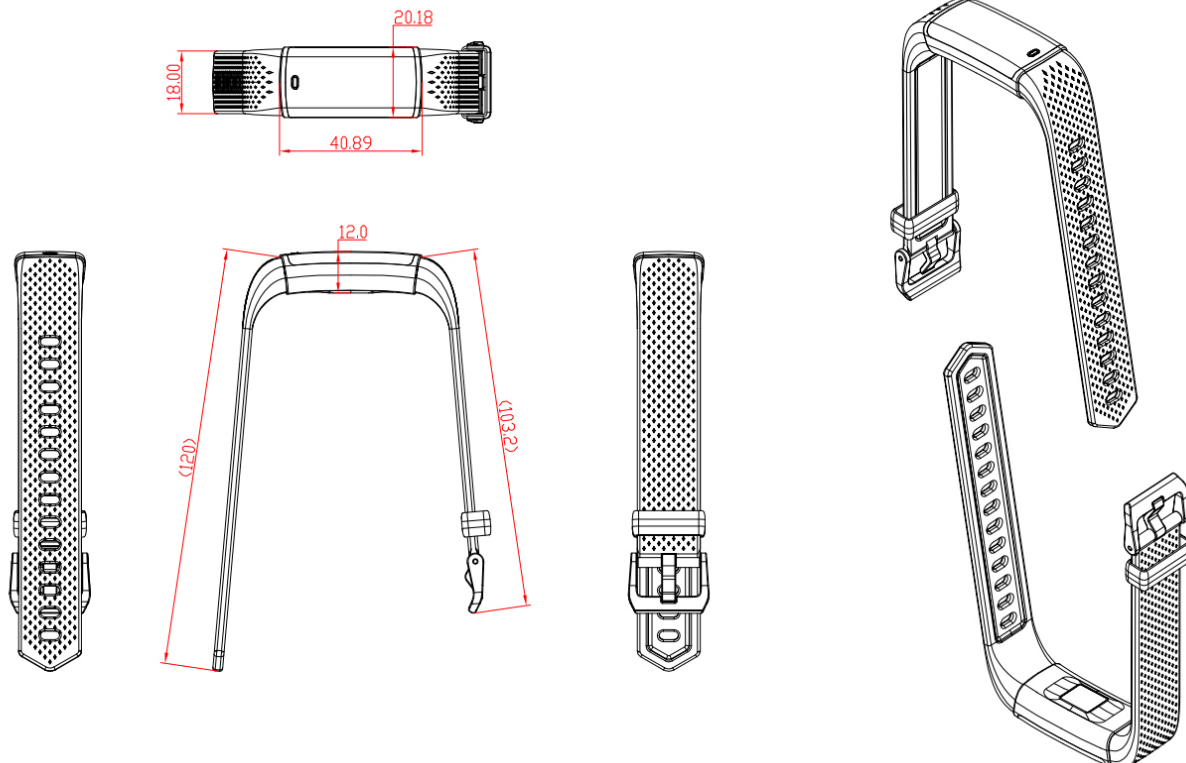
Item	Value	Remarks
Case Color	silver gray	Other colors can be customized
Main Material	ABS	-
Battery Model	Lithium polymer battery	Lithium battery, 80mAH 3.7V
Battery Lifetime	About 27 hours	At default settings ^② and without selfdischarge factor

Waterproof Level	IP67	-
Static Current	18 - 19uA	Device is power off
Average Current	2.81mA	At default settings ^③
Transmission Range	-	4dBm TX power, in the open space
Antenna	50ohm	Ceramic Antenna
Size	Body size: 40.89x20.18x12mm Wearable range: 13cm~21cm	Refer to mechanical draws for details
Net Weight	-	With battery
Operating Temperature	-20 ~ +60°C	-
Storage Temperature	20 ~ +30°C	-

②③ Default setting, 0dBm TX power and 1000ms Advertising Interval.

6. Mechanical Draws

All dimensions is mm.



7.FCC STATEMENT

1. This device complies with Part 15 of the FCC Rules. Operation is subject to the following two conditions: (1) This device may not cause harmful interference. (2) This device must accept any interference received, including interference that may cause undesired operation.
2. Changes or modifications not expressly approved by the party responsible for compliance could void the user's authority to operate the equipment.

NOTE: This equipment has been tested and found to comply with the limits for a Class B digital device, pursuant to Part 15 of the FCC Rules. These limits are designed to provide reasonable protection against harmful interference in a residential installation. This equipment generates uses and can radiate radio frequency energy and, if not installed and used in accordance with the instructions, may cause harmful interference to radio communications. However, there is no guarantee that interference will not occur in a particular installation. If this equipment does cause harmful interference to radio or television reception, which can be determined by turning the equipment off and on, the user is encouraged to try to correct the interference by one or more of the following measures: Reorient or relocate the receiving antenna. Increase the separation between the equipment and receiver. Connect the equipment into an outlet on a circuit different from that to which the receiver is connected. Consult the dealer or an experienced radio/TV technician for help.

FCC Radiation Exposure Statement This equipment complies with FCC radiation exposure limits set forth for an uncontrolled environment. This equipment should be installed and operated with minimum distance 5mm between the radiator & your body

8. Technical support

Item	File Name	Link
Configure APP for Android	Tracker	https://cloud.mokosmart.com/index.php/s/ss4GkrN58FTENXK
Tracker DFU APP for Android	Tracker DFU	https://cloud.mokosmart.com/index.php/s/NpJSjtYReX7Maob
User Manual	MOKO Tracker User Manual	http://doc.mokotechnology.com/index.php?s=/page/205
SDK for Android APP	--	https://github.com/MOKO-Tracker/Android-SDK.git
SDK for iOS APP	--	https://github.com/MOKO-Tracker/iOS-SDK

9. 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.

10. Contact Information

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<https://www.mokotek.com/>

11.Revision History

Revision	Description	Approved	Date
V1.0	Initial Release	Kevin	2020.05.06