Product Specification

L03 Anchor Pro

Version 1.0

Revision History

Version	Data	Notes	Contributor(s)
V1.0	Nov 29, 2024	Initial version	Carl

About document

This **product specification** was designed to help users to know the hardware overview and feature instructions of **L03 Series Products**. Through this document, users will be initial to understand the application scenarios, hardware specifications, basic instructions as well as packaging information of product.

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1. Overview

This *Product specification* is mainly applicable for MOKO **L03 Series Products**, which contains:

✧   *L03A-Location Beacon, with* Alkaline battery

✧   *L03H-Location Beacon, with higher capacity ER14505 battery*

L03 series products - Overview							
Product model	Battery type	Button	Magnetic switch	Use cases	Applicable series firmware	Applicable configuration APP	Using environment
L03BA	4xAA Alkaline 6400mAh	Yes	No	Location Anchor	BXP-D	BeaconX Pro	0°C / + 40°C
L03BH	4xER14505 10400mA	Yes	No				-20°C / + 60°C
L03A	4xAA Alkaline 6400mAh	No	Yes				0°C / + 40°C
L03H	4xER14505 10400mAh	No	Yes				-20°C / + 60°C

Table 1: *Overview of L03 series products*

L03BA and L03BH are models with physical buttons, and they differ only in the battery type. Similarly, L03A and L03H are models without physical buttons, and they differ in the battery type. The product specifications shall be similar and mainly contained below parts:

➢   ***Product brief***

➢   ***General specifications***

➢   ***Basic instructions***

➢   ***Ordering information***

➢   ***Package information***

For more information about user guidance of product functions and configuration APP, please contact our sales team directly for official document.

2. Product brief

As the first super-large battery anchor beacon, L03 has the characteristics of ultra-long battery life and ultra-long-distance coverage.

Appearance overview of L03 series products. with button(left)/without button(right)

3. General specifications

3.1 Hardware specifications

Hardware Specifications		
Item	**Specs**	**L03**
Casing	**Dimension**	74.00mm*74.00mm *24.00mm
	Material	PC+ASA
	Waterproof	IP67
	Color	White
	Installation	3M sticker/Bracket (screw or cable zip tie)
Connectivity	**Bluetooth**	BLE 5.1
	Long range mode*	Yes
	Transmission range*	Legacy mode - 150 meters
		Long range mode – 350 meters
Hardware	**Accelerometer sensor**	Optional
	Temperature sensor	Optional
	Buzzer	Optional
	Button	Optional
	Magnetic switch	Optional Model without button is equipped with magnetic switch to turn device on or off
	LED	L03BA/L03BH: Annular RED indicator (RGB optional) L03A/L03H: Single LED indicator
	Capacity	L03BA (with button) 6400mAh L03BH (with button) 10400mAh L03A 6400mAh L03H 10400mAh
	Replaceable battery	Yes
	Storage temperature	-20°C / + 70°C (without battery) 10°C / + 25°C (with battery)
	Operating temperature	L03A/L03BA (Alkaline battery) 0°C / + 40°C L03H/L03BH (ER14505 battery) -20°C / + 60°C
Regulatory	**Certifications**	FCC | CE | RoHS | REACH

Table 2: *Hardware specifications of L03 series products*

*Transmission range tested in the open area and no obstacles in the route.

*Long range mode means "Coded PHY advertising mode".

3.2 Lifecycle estimation

Please refer to documents – "***MOKO Beacon_Battery Lifecycle summary***" for more details on battery lifecycle.

Remark: L03 series products can be applicable for different series firmware, please double check before battery lifecycle calculations.

3.3   LED functionality

Here we have described the LED response status in some common situations.

LED response status		
Scenarios	**LED color**	**Response**
Power ON	Red	Blinking for 3 seconds
Device connect	Red	Blinking 400ms (100ms on – 100ms off)
Power OFF	Red	Solid for 3 seconds
Factory restore	Red	Solid for 3 seconds and then device reboot
DFU upgrade	Red	Blinking during DFU upgrade, and solid for 3 seconds after finished, then device reboot
Low battery	Red	Blinking 400ms every 10 seconds
LED notification	Red	Blinking once --- Trigger mechanism applied

Table 3: *LED response status in various situations*

4. Basic instructions
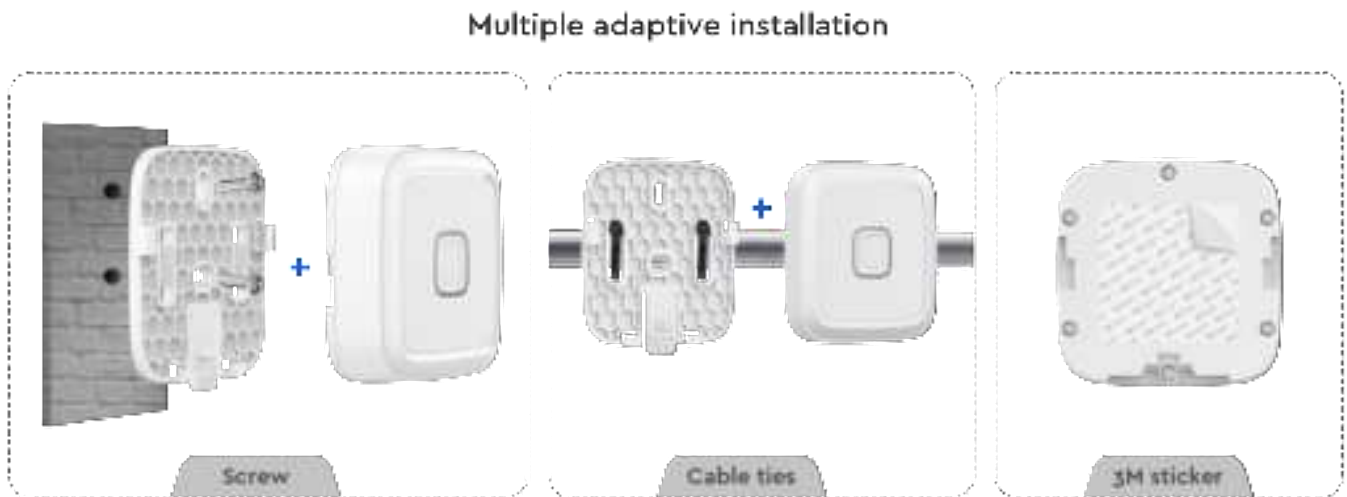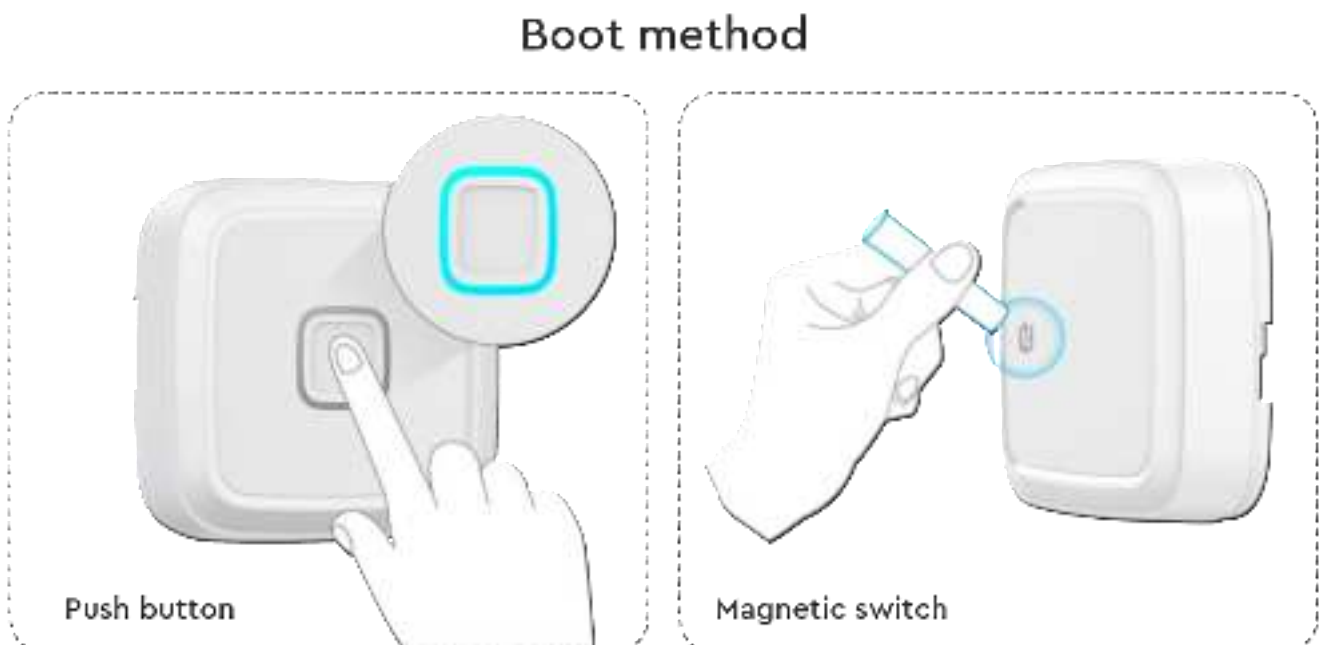
4.1 How to install device

Figure 1: *How to install L03 series products*

4.2 How to power ON/OFF device

Power ON: Long press button (or take the magnet to approach to the magnetic switch positions if hardware contains the magnetic switch), hold on for 3 seconds and then Red LED will keep blinking for 3 seconds to indicate device power on status.

Power OFF: Long press button (or take the magnet to approach to the magnetic switch positions if hardware contains the magnetic switch), hold on for 3 seconds and then Red LED will keep solid for 3 seconds to indicate device power off status.

*Can be set to non-key shutdown mode, only shutdown via APP

4.3   How to restore factory settings

There have two ways to restore factory settings.

➢   **Software reset:** Connect with device through configuration APP and then execute "Reset Beacon" operations to finish the software reset.

➢   **Hardware reset:**

➢   **Step 1:** Keep the device power OFF.

➢   **Step 2:** Long press button (or take the magnet to approach to the magnetic switch positions) , hold for more than 10 seconds, during that device will power on and LED start flashing for 3 seconds.

➢   **Step 3:** After Long press button (or take the magnet to approach to the magnetic switch positions) for more than 10 seconds, release button (or take away the magnet) and then single press button (or approach to magnetic switch) again within 2 seconds, then device will proceed on factory reset, along with the LED solid for 3 seconds.

➢   **Step 4:** Device will reboot and LED start flashing for 3 seconds to indicate the factory reset success.

Figure 2: How to reset L03 Series Products

Remark: Software reset won't reset connection password.
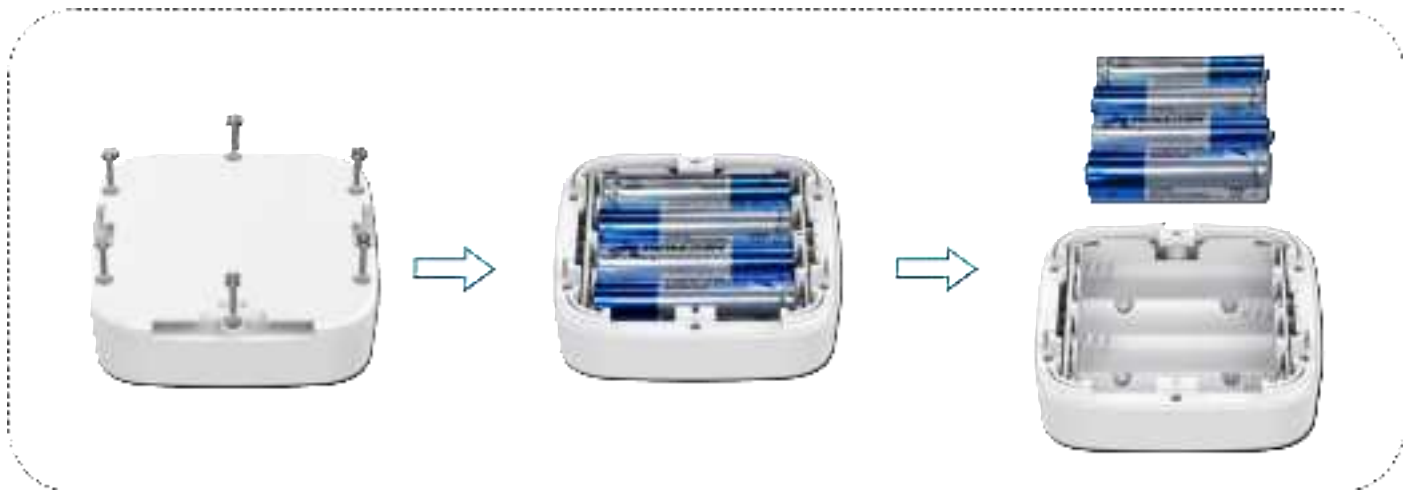
4.4　How to replace battery

Figure 3: *How to replace the battery of L03 series products*

5. Ordering information

Ordering information				
Ordering model	**Battery**	**Sensor**	**Button**	**Product ID**
L03BA-T(SL)AN	Alkaline battery 6400mAh	3-axis accelerometer-NO temperature logger-NO	YES	
L03BH-T(SL)AN	ER14505 battery 10400mAh	3-axis accelerometer-NO temperature logger-NO	YES	
L03A-T(SL)AN-HA	Alkaline battery 6400mAh	magnetic switch-YES 3-axis accelerometer-NO temperature logger-NO	NO	
L03H-T(SL)AN-HA	ER14505 battery 10400mAh	magnetic switch-YES 3-axis accelerometer-NO temperature logger-NO	NO	

6. Package information
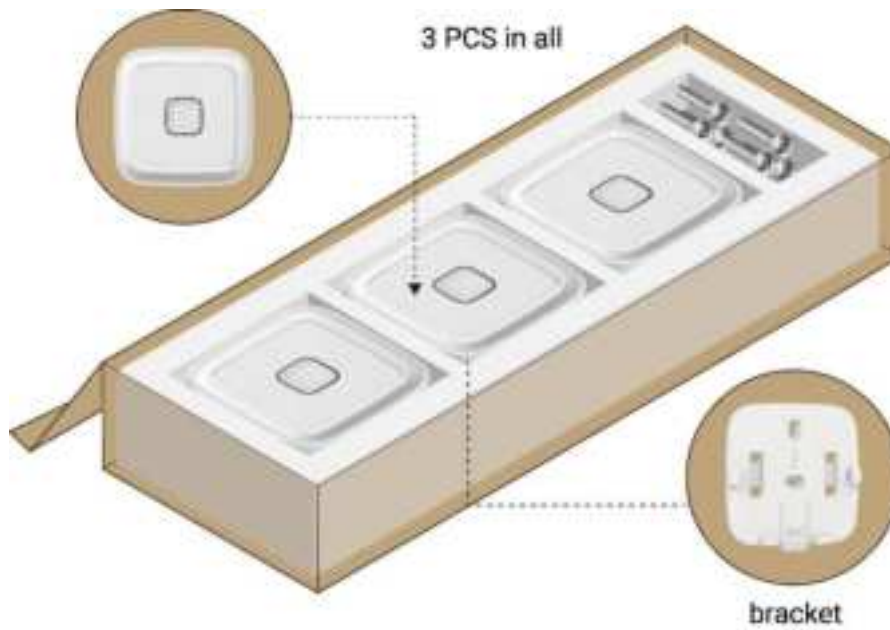
Figure 4: Packaging information of L03 series

Package information			
Ordering model	Item	Giftbox	Carton box
L03 series	L03BA/L03BH/L03A/L03H Device	3pcs/Giftbox	10pcs/Carton
	3M sticker	3pcs/Giftbox	10pcs/Carton
	Bracket	3pcs/Giftbox	10pcs/Carton
	Screw & Rubber plug (package unit)	18pcs/Giftbox	10pcs/Carton

Table 4: Package information of L03 series products

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.
RF warning statement:
The device has been evaluated to meet general RF exposure requirement. The device can be used in portable exposure condition without restriction.

Contact

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