



MOKO SMART



Product Specification

S05T Temperature Logger

Version 1.0



MOKO TECHNOLOGY LTD.

Revision History

Version	Data	Notes	Contributor(s)
V1.0	Jan 17, 2025	Initial version	Leo

About document

This **product specification** was designed to help users to know the hardware overview and feature instructions of **S05T Temperature Logger Products**. Through this document, users will be initial to understand the application scenarios, hardware specifications, as well as basic instructions of product.

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1. Overview

This *Product specification* is mainly applicable for MOKO **S05T Temperature Logger Products**, and mainly contained below parts:

- [Product brief](#)
- [General specifications](#)
- [Basic instructions](#)

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

2. Product brief

S05T Temperature Logger is a disposable temperature logger distinguished by its low cost, lightweight design, and customizable flexibility. This logger efficiently captures temperature data during asset storage and throughout the whole transportation process, while simultaneously tracking its real-time location and temperature information.

Moreover, it boasts a capacity to store up to 60,000 groups of sensor data. This data, whether stored or in real-time, can be uploaded to the cloud via trackers or BLE gateways for continuous monitoring. Additionally, using MOKO's standard app, customers can connect to the device to export historical temperature data and analysis reports in Excel format as required.



Figure 1: Appearance overview of S05T Temperature Logger

3. General specifications

3.1 Hardware specifications

General specifications of S05T Temperature Logger		
Physical	Dimensions(L*W*H)	49.6mm*28.8mm*4.7mm
	IP rated	IP67
	Color	White
	Installation	Sticker
	Material	EVA, PVC
Connectivity	Bluetooth	BLE 5.0
	MCU	Silicon Labs series
	Maximum Tx Power	+6dBm
	Long range mode*	Yes
	Transmission range*	Legacy mode - 150 meters Long range mode - 350 meters
Hardware	Accelerometer sensor	Optional
	Temperature sensor	Accuracy tolerance : $\pm 0.5^{\circ}\text{C} \sim \pm 0.2^{\circ}\text{C}$ (-30 $^{\circ}\text{C}$ ~ 0 $^{\circ}\text{C}$) $\pm 0.2^{\circ}\text{C}$ (0 $^{\circ}\text{C}$ ~ 60 $^{\circ}\text{C}$)
	Humidity sensor	No
	LED	1*Green LED + 1*Red LED
	External Flash	512K Bytes (Supports storage of 60000 sets of temperature data)
	Battery Capacity	220mAh
	Battery lifespan	2 years (Default setting*)
	Replaceable battery	No
Regulatory	Operating temperature	-30 $^{\circ}\text{C}$ ~ 60 $^{\circ}\text{C}$
	Certifications	FCC CE RoHS REACH

Table 1: Hardware specifications of S05T Temperature Logger

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

Long range mode*: Means “Coded PHY advertising mode”.

Default setting*: The S05T Temperature Logger lifetime estimated based on standard working mode under 25 $^{\circ}\text{C}$ conditions.(0dBm Tx Power | 3000ms ADV interval | 10s sampling interval | No accelerometer sensor)

Remark:

1. Please do not tear the shell of the product, so as not to affect the waterproof performance of the product
2. Although the product has IP67 waterproof performance, but due to the characteristics of the product material, it is not recommended to let the product for a long time in a state of submerged water, otherwise the product may be damaged.

3.2 Lifecycle estimation

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

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	Green	Blinking for 3 seconds
Device connect	Green	Blinking twice
Device status checking	Green / Red	<p>Single click the button, the led will solid for 1 second according to the device status.</p> <hr/> <ul style="list-style-type: none"> ➤ If the temperature trigger broadcast function is enabled. <ul style="list-style-type: none"> ■ Single click the button, the Green led solid for 1 second Indicates that no trigger events have occurred on the device during the work period. ■ Single click the button, the Red led solid for 1 second indicates that a trigger event has occurred on the device during the work period. <hr/> ➤ If the temperature trigger broadcast function is disabled. <ul style="list-style-type: none"> ■ Single click the button, the Green led solid for 1 second Indicates that the device is in the power-on operating state. ■ Single click the button, the Green led is not working, indicates that the device is turned off or the device is out of power.
Power OFF	Red	Solid for 3 seconds
Hardware reset	Red	Solid for 3 seconds and then device reboot
Software reset	Red	Solid for 3 seconds and then device reboot
DFU upgrade	Red	Blinking during DFU upgrade, and solid for 3 seconds after done
Low battery	Red	Blinking twice every 10 seconds
LED notification	Red	Customized notification mechanism
Remote reminder	Red	Customized notification mechanism

Table 2: LED response status in various situations

4. Basic instructions

4.1 How to power ON/OFF device?

Power ON: Long press the button, hold on for 3 seconds and then **Green LED** will **keep blinking** for 3 seconds to indicate device power on status.

Power OFF: Long press inner button, hold on for 3 seconds and then **Red LED** will **keep solid** for 3 seconds to indicate device power off status.

Remark: The device does not support power-off via button by default. If you need this feature, you can enable it by modifying the parameters through the app.

4.2 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:** Long press the back button for 10s or more, then release button and single press back button again within 2s, then device will proceed on factory reset, along with the red LED solid for 3 seconds. At last, Device will reboot and the green LED start flashing for 3 seconds to indicate the factory reset success.

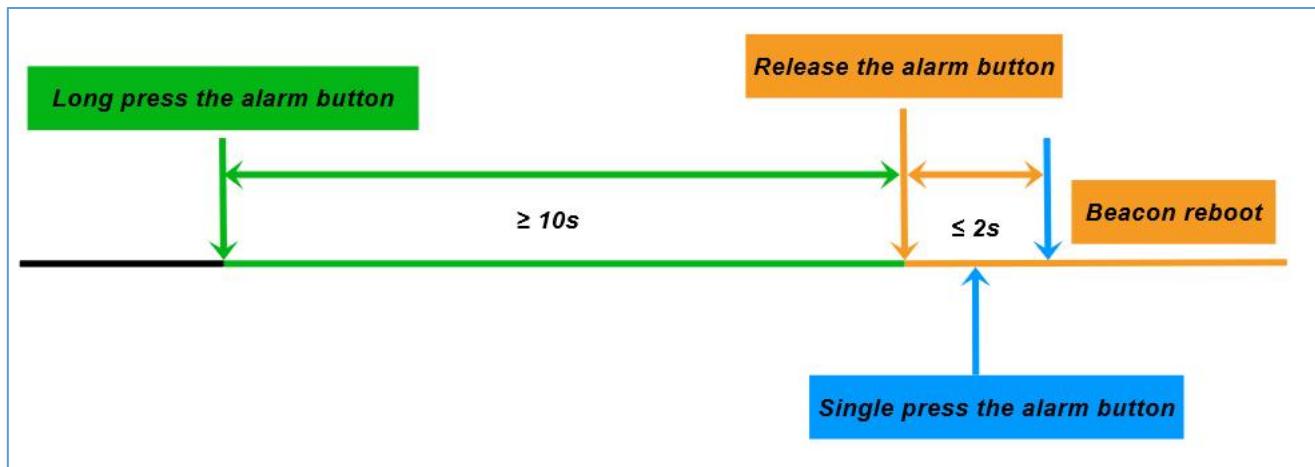


Figure 2: How to reset S05T Products?

Remark:

1. Software reset won't reset connection password.
2. The hardware factory reset feature is enabled by default. If you don't need this function, you can disable it through the APP.

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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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