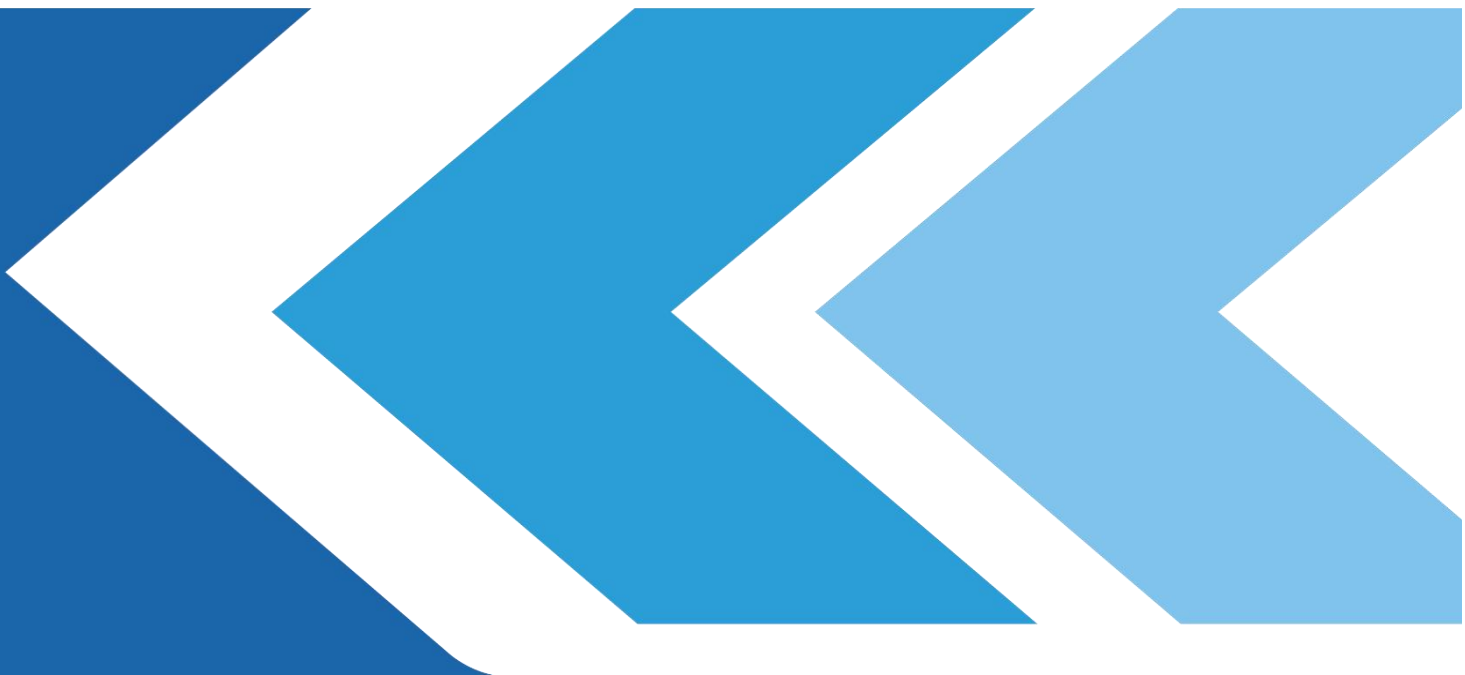




WE-T241-C Location Tag



brief introduction

The WE-T241-C is a card-type positioning tag developed by Hainan Shidian Technology Co., Ltd. using ultra-wideband (UWB) technology. It supports high-precision positioning through TDoA, ToF, and AoA methods, with auxiliary positioning via BLE, barometer, and three-axis accelerometer.

The tag supports active SOS alerts, low battery alerts, and prolonged inactivity alerts, with vibration and buzzer notifications. It features a LoRa module for long-range device communication.

The tag supports both badge-style and armband-style wear, with built-in RFID access control. It features IP67 protection and meets explosion-proof standards (Ex iB IIC T6 Gb/Ex iB IIIC T80 °C Db), making it ideal for industrial, power, and construction applications.

leading feature

- **Based on IEEE 802.15.4z UWB**

- Nanosecond-level ultra-wideband pulse signals achieve centimeter-level positioning accuracy

- **The applicable area is wide.**

- High-band (CH5/CH9) design, supporting global applications

- **ultra long distance communication**

- LoRa enables long-range device communication

- **BLE 5.1**

- Auxiliary positioning, enabling Bluetooth positioning integration

- **ultra low power**

- Smart sleep mode and ultra-low power consumption design

- **Light and easy**

-Compact design for easy carrying and moving

- **levels of protection**

-IP67 protection rating, better environmental adaptability

- **SOS key**

-Active alert, one-click distress call

- **Vibration, Beep**

The platform issues an alarm with vibration and audible alerts.

- **RFID**

-ISO 14443A 13.56MHz IC card, supporting access control management and other functions

Product image



WE-T241-C Personnel Card Label

size of product

project	description	
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summary

product model	WE-T241-C	
Related regulations	IEEE 802.15.4z	
	IEEE 802.15.1	
USB	4 pin magnetic charging	
charging voltage	DC 5 V	
instantaneous power dissipation	< 1 W	
Standby time	XP scene ¹	>1 month
	Collision Avoidance Scenario 2	about 7 days
	AoX scene	TBD
refresh rate	0.1~20 Hz (adjustable)	
Light indicator status	Charging	Red always on
	Fully charged	Always green
	Low battery (working)	Red Flash
	Normal power (operating)	Green Flash

UWB radio frequency specifications

operating frequency band	6.24 GHz~6.73 GHz (channel 5)
	7.74 GHz~8.23 GHz (channel 9)
physical rate	850 Kbps
	6.8 Mbps

Output power (25°C)	≤-41 dBm/MHz (typical), adjustable power
channel width	≥ 500 MHz

Radio frequency specifications (LoRa) (optional)

operating frequency band	470~510 MHz
transmission speed	17 Kbps@ CR=1, SF=5, BW=125 KHz
Max transmit power	22 dBm@17 Kbps
Maximum transmission distance	≥ 1 Km

Radio Frequency Specifications (BLE)

operating frequency band	2.4 GHz~2.4835 GHz
physical rate	1 Mbps
Output power (25°C)	0 dBm (typical value)

RFID (Optional)

standard agreement	ISO 14443A
carrier frequency	13.56 MHz
transmission speed	106 Kbps

Software specifications

UWB work pattern	TDoA/ToF/AoA
dormancy	Smart hibernation
Alarm upload	SOS active alert
	Low battery alert

	fall alarm
	Extremely long static alert
Alert Issuance	Vibration (prompt, alarm, severe alarm)
	Buzzer (Alert, Warning, High Alert)
auxiliary positioning	The auxiliary positioning is realized by BLE, three-axis accelerometer and barometer.
data backhaul	Supports LoRa communication for long-distance backhaul
upgrade	UART, OTA
configure	UART interface, CLI configuration

physical specification

Size (mm)	57mm×87.5mm×7mm
Weight (g)	36 (excluding packaging)

environmental specification

temperature	working temperature	-20°C~60°C
	Storage temperature 2	-30°C~70°C
humidity	working humidity	5%~95% no condensation
waterproof and dustproof	IP67	
flame retardant rating	UL94 V-0	
RoHs	compatible	
compliance	EMC	GB/T 17626-2 IEC 61000-4 Class A
	SRRC	MIIT Standard [2008] No.354

1. XP scenario standby duration: test data from Shidian Technology's laboratory under typical working conditions.

(Typical operating model: UWB TOF mode, 1Hz frequency, 10-hour daily active time with 14-hour sleep duration)

Rechargeable battery products should be charged to approximately 80% capacity every 6 months or 50% of the expected charging time for maintenance.

2. Collision avoidance scenario standby duration: Shidian Technology Laboratory's typical operational model test.

(Typical anti-collision operation model: tag operates at 3Hz, with 8 hours of daily operation and 16 hours of sleep mode)

3. Storage temperature: The product can be stored within this temperature range without damaging the positioning label. For optimal battery longevity, the recommended storage temperature is 0–45°

C.

Delivery content

name	Brief specification	quantity	number of order
WE-T241-C	Employee Card Label	1	AA01UT320000

Optional accessories (not included in the delivery scope. Please contact Shidian's business department in advance if needed)

name	Brief specification	quantity	number of order
cutting ferrule	105*90mm, transparent PE	1	AD1201010500
RFID labeling	RFID-enabled green label, medium card	1	AD1001000100
magnetic charging cable	4-pin, cable length 600mm, wire diameter 2.9mm	1	AD1302000100