



UT-311 asset tag



Introduction

UT-311 is a asset positioning tag developed by Woxu wireless Co., Ltd. based on UWB technology, used with Woxu positioning system to achieve centimeter-level positioning. The tag adopts an ultra-low power consumption design, and can obtain several years of battery life with a disposable battery, which greatly prolongs the maintenance cycle and reduces input costs. The product is small in size and light in design, and supports various installation methods of adhesive backing/screw/tie. IP43/IP68 two protection levels are designed to meet the application requirements of different environments, and are widely used in the positioning and management of assets in various application scenarios such as industrial manufacturing, warehousing and logistics, hospital elderly care, and smart office.

Main feature

- **High precision positioning**

- Nanosecond-level pulse signal to achieve centimeter-level positioning accuracy

- **Applicable to a wide range of regions**

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

- **Ultra-low power consumption**

- Intelligent sleep, ultra-low power consumption design, one-time battery

life up to 5 years ^{*1}

- **Lightweight and convenient**

- Small size design, support multiple installation methods

- **Protection level**

- Optional IP68 version, better environmental adaptability

Product picture



1 Specification

Item	Description
Overview	
Model	UT-311
Related Specifications	IEEE 802.15.4z
Instantaneous power	<0.2W

Standby time* ¹	5 years	
Power supply	disposable lithium battery	
Installation method	adhesive backing/screw/tie	
light status	Green blink	Normal (Operating)
	Red blink	Low power (Operating)

RF Spec. (UWB)

Frequency Range	6.24GHz~6.74GHz (channel 5)	
	7.74GHz~8.24GHz (channel 9)	
Physical Rate	6.8 Mbps	
Output power (25°C)	-41.3dBm/MHz (typical)	
Channel bandwidth	≥500MHz	
Antenna gain	0.5dBi	

Software Spec.

UWB Operating mode	TOF/TDOA	
positioning frequency	0.1~20Hz (system settings)	
Sleep mode	Smart mode	
Alarm upload	Low power alarm	
Upgrade	OTA	
Configure	OTA	

Physical Spec.

Dimensions (mm LWH)	60×25.5×11
weight (g)	15.3

Environmental Spec.

Temperature	Operating	-20°C~60°C
	Storage ^{*2}	-30°C~70°C
Humidity	Operating	5%~95% non condensing
Protection level ^{*3}	IP43/IP68	
Flammability rating	UL94 V-2	
RoHs	Compatible	

Explanation:

*1. Standby time: typical working model test data of Nanjing Woxu Laboratory
(Typical working model: UWB working mode TOF, working frequency 1Hz, tag working time 1 hour a day, sleep time 23 hours)

*2. Storage temperature: The product is stored within this temperature range, and the positioning tag will not be damaged, but the recommended temperature for long-term storage of battery life is 0~45°C.

*3. Protection level: The default version IP43 protection level meets splash and waterproof in all directions, optional IP68 protection level

Delivery content

Model	Specification	Quantity	Order number
UT-311	Positioning asset tag	1	AA01UT311000

	(IP43)		
UT-311	Positioning asset tag (IP68)	1	AA01UT311001
installation kit	Screw/adhesive	1	/