Brilliant IoT TB1000-g

Product Overview

TB1000-g is a UWB high-precision positioning tag developed by Brilliant IoT. The tag features standard license plate size with a sleek and minimalist design. It incorporates a built-in omnidirectional antenna and a rechargeable lithium battery, making it lightweight and comfortable to wear. Featuring built-in IC card functionality, the tag can be extended to access control, consumption and other scenarios. Furthermore, it is also suitable for diverse industries including industrials, judicial settings, construction, healthcare, senior care, and more.

Equipped with Brilliant IoT's Brilliant IoT positioning technology, the tag maintains stable operation even in complex multi-path environments. This is achieved through intelligent anti-jamming algorithms and multipath suppression mechanisms, making it an ideal solution for sectors like industrials, judicial settings, and construction.

Product Appearance

Product Features

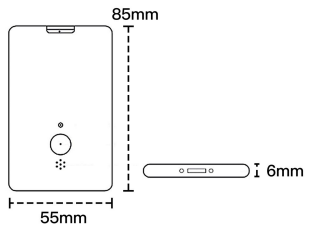
1. High-precision Positioning

a. Integrate Brilliant IoT's high-precision UWB positioning technology - an industry leader with over 10 years of experience.
b. Based on Brilliant IoT positioning technology, it can still provide sub-meter positioning accuracy in complex metal scenes.
c. Positioning frequency up to 30Hz
d. Stable trajectory without interference

2. Intelligent Interaction Design

a. Support LED flashing/beeping/vibrating combined alarms
b. One-touch SOS alarm, rapid reporting of emergencies
c. Compatible with RFID, universal access control/consumption system, and multi-purpose card

Technical Specifications

Hardware Specifications	
Dimensions	85mm × 55mm × 6mm 
Weight	30g
Wearing	Lanyard
Power Supply	Rechargeable lithium battery*1
Battery Capacity	480mAh
Charging Methods	DC 5V, USB Type-C
Charging Time	4 ~ 6 hours

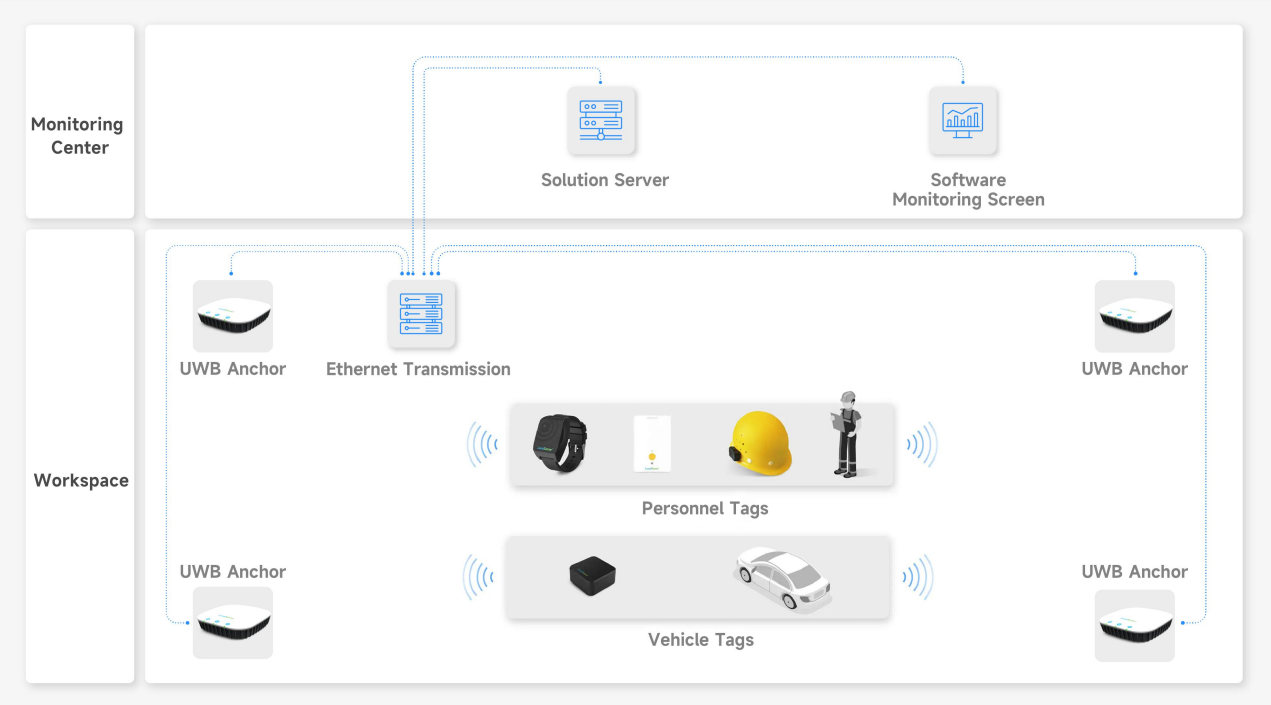
Battery Life	Typical working conditions 45 days; Enhanced range 120 days*2
One-touch Alarm	Support
Alarm Modes	Support indicator light, vibration, and buzzer
Power-saving Modes	Built-in accelerometer enables auto-sleep for power saving
RFID	Built-in RFID coil, be compliant with ISO14443A
UWB Positioning Specifications	
Antenna Type	Built-in omnidirectional antenna
Radio Frequency Band	6.1GHz ~ 6.9GHz
Positioning Accuracy	10cm*3
Positioning Frequency	Maximum 30Hz
RF Communication Range	≥50m
Operating Environment	
Protection Grade	IP65
Operating Temperature	-20℃ ~ 70℃
Storage Temperature	-40℃ ~ 85℃
Operating Humidity	10% ~ 90%, non-condensing
Storage Humidity	5% ~ 95%, non-condensing
Certifications	
Certifications	CE, FCC, RoHS

Note:

*1: In order to effectively extend the service life of lithium batteries and keep them in the best condition, it is recommended that the charging interval be no more than 6 months.
*2: Due to the impact of battery life, ambient temperature and other factors, the actual endurance time varies. Typical working condition: positioning under four anchors, working at 1Hz for 8 hours per day, dormant for 16 hours. Enhanced endurance: positioning under four visible anchors, working at 0.1Hz for 8 hours per day, dormant for 16 hours.
*3: Under open and interference-free conditions (e.g., no obstruction, no reflection, stable signal), the accuracy can reach 10cm.

Application Topology

After the tag and the anchor carrying out distance ranging, data obtained by the anchor will be transmitted to the server with the help of a network cable. And after the server receives the data, it is then handed over to the settlement engine for calculation and processing, and the result will finally be presented on the page.



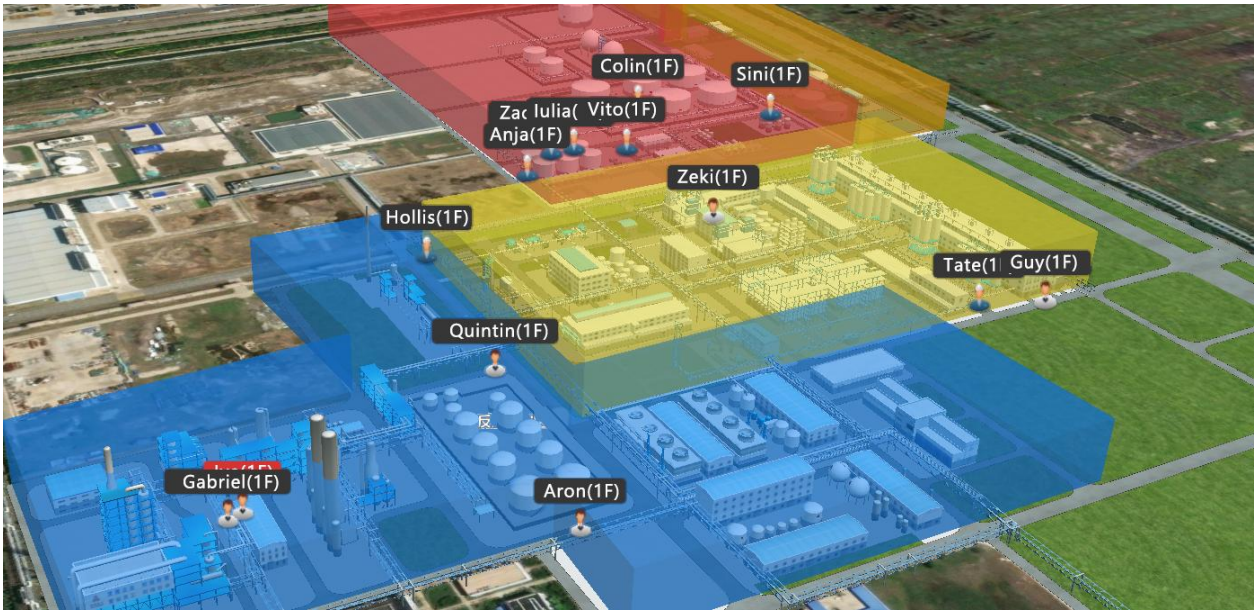
Positioning-based Applications

Visualized Management Screen

It can display the real-time positioning of all tags on a 2D map, a tilted photographic map, or a 3D model map, which provides managers with an overall view. Through supervision of the large screen, managers can track the real-time understanding of the position of a person or object. Moreover, when an alarm is triggered, visual positioning facilitates immediate understanding of the incident and its status.

Geofencing

The system allows for the flexible creation of geofences and provides multiple alarm modes/types, such as in/out fence alarms, distress alarms, missing alarms, area crowding alarms, and staying alarms. It also supports dual alarms both on the tag system and monitoring system.



Trajectory Retracing and Analysis

It supports tracing back past tag positioning data, displaying it in trajectory diagram, and associating it with alarms and monitoring videos occurring in the trajectory. Moreover, it possesses multi-fold speed playback, one-touch full track display and other functions to realize efficient and accurate tracking and analysis.

For more information, such as security camera linkage, area statistics, automatic attendance, automated inspection, linkage of access control systems, etc., please contact Brilliant IoT for more industry solutions.

More Information

If you want to get more related information, please don't hesitate to click our website:

https://www.brilliantinfosys.com

Or you can contact us through:

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