GT-130 Reference Guide

GIPS Technology Co., Ltd

Content

1 INTRODUCTION

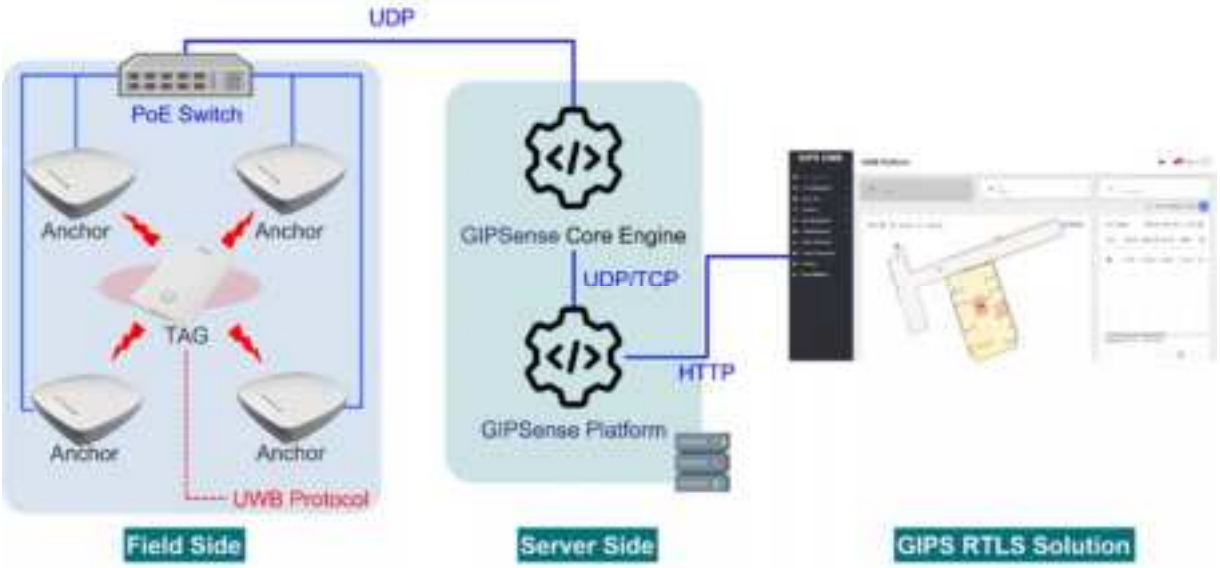
1.1 Main Features

- Meet IEEE 802.15.4a UWB
- BLE 5.0
- SOS Button
- Vibration, Buzz Alert
- IP66
- RFID (ISO14443A)
- ToF/TDoA Mode Supported
- Smart Rest Mode

1.2 Description

GT-130 is the UWB tag used in GIPS Real Time Location System (RTLS) solution, supports the TOF / TDOA positioning algorithm. GIPS RTLS solution can be applied in hospital, factory, warehouse and other fields.

The typical deployment structure is shown as below figure, GT-130 is attached on the monitored item such like staff, equipment, etc. UWB tag emits the signal to the UWB anchors in the field side, and can be positioned on the server. GT-210 could be configured or issued by the software on the server side through the UWB anchor.



1.3 Product outline

1.3.1. Product Pictures

1.3.2. Product outline

2 PRODUCT SPECIFICATION

General	
Standard	IEEE802.15.4a BLE 5.0
External I/O	SOS button, 4-pin connection
Dimension (mm)	88x56x9.1
Weight (g)	40
Power Requirement	+5V DC-in with 4pin Magnetic attraction
Battery Life	>1month, at 1Hz, ToF mode with smart rest >3month, at 1Hz, TDoA mode with smart rest
Power Dissipation	< 1W (Instant)
Indicator Light	• Three Color LED: Red Flicker: Low Power Status / SOS alert Green Flicker: Flash while uwb is working Blue Flicker: Charging Status / BLE connecting mode Blue Light: Charging Full

Temperature	• Charging: 0°C~45°C • Operating: -20°C~60°C • Storage: -10°C~55°C
Humidity	• Operating: 0%~90% without condensation • Storage: 0%~90% without condensation
UWB	
Working Frequency	3.25GHz~6.75GHz (Channel 2/3/5)
Physical Rate	110 Kbps / 850 Kbps / 6.8 Mbps (Adjustable)
Output power (25ºC)	-41.3dBm/MHz
Channel Bandwidth	500 MHz
Antenna Specification	Chip antenna, peak gain 5dbi (average)
Working Mode	ToF / TDoA
BLE	
Protocols	Bluetooth v5.0 BR/EDR and BLE specification
Radio	2.4 GHz Nordic's proprietary 1 Mbps and 2 Mbps mode
Antenna Specification	Chip antenna, peak gain 3.77dbi (typical)
Output power (25ºC)	+2 dbm
Receiving sensitivity	-96 dbm
Others	
Message Upload	SOS alert Low battery alert Smart rest
Alarm Issuance	Vibration Buzzer Red Flash
Configuration Tools	GIPS_Tag_Monitor_v1.0.0(Android APP)

Federal Communication Commission Interference Statement

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 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.

FCC Caution: To assure continued compliance, any changes or modifications not expressly approved by the party responsible for compliance could void the user's authority to operate this equipment. (Example - use only shielded interface cables when connecting to computer or peripheral devices).

FCC Radiation Exposure Statement

This equipment complies with FCC RF radiation exposure limits set forth for an uncontrolled environment. This equipment should be installed and operated with a minimum distance of 0.5 centimeters between the radiator and your body.

This transmitter must not be co-located or operating in conjunction with any other antenna or transmitter.

The antennas used for this transmitter must be installed to provide a separation distance of at least 0.5 cm from all persons and must not be co-located or operating in conjunction with any other antenna or transmitter.

UWB systems operating under the provisions of this section shall bear the following or similar statement in a conspicuous location on the device or in the instruction manual supplied with the device: “This equipment may only be operated indoors.

Operation outdoors is in violation of 47 U.S.C. 301 and could subject the operator to serious legal penalties.”

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, and (2) This device must accept any interference received, including interference that may cause undesired operation.