

GTAG - 9970 Series

Multi-Purpose Positioning TAG

User Manual

Thank you for choosing our GTAG - 9970 series multi-function smart positioning TAG. This positioning TAG is waterproof and explosion proof. It also comes with 3 programmable customer button and extra battery capacity (2000mAh). In addition to that, this product is CE compliant and acquired explosion certificate issued by IRTA (Ex ib IIC T4 Gb). More importantly, it adopts the latest low-power IoT technology and integrated both positioning technology and motion sensor. Special features of this product included SOS, indoor positioning, geo-fencing, and historical pathway. All in all, these data will be automatically uploaded to the platform and end user's device for quick observation of the monitoring status.

Product Overview:

1. GTAG-9970 positioning TAG has a Low-power Internet of Things + Ultra-Low power processor to achieve ultra-long standby time whilst being compact at the same time. It is suitable for waterproof, explosion-proof applications.
2. GTAG-9970N has a built-in NBIOT full Netcom module to achieve the data transmission function.
***NB-IoT SIM card will be supplied by the user.**
3. GTAG-9970C has a built-in 4G CAT1 full Netcom module, which can achieve the voice call function.
***The 4G CAT1 SIM card will be supplied by the user.**
4. 4G Cat.1 Low Energy IoT + Ultra-Low Energy Bluetooth SOC Main Controller = Ultra-long standby
5. 3 programmable buttons (Default setting: power ON/OFF, SOS and Unoccupied)
6. Seamless indoor and outdoor positioning (GPS + Beidou, Wi-Fi, anchor and motion sensor).
The motion sensor detects movement and enters low-power standby if no movements are detected.
7. Low power Bluetooth as standard for indoor positioning (Scanning Beacon, Broadcasting, AOA)
8. 4G Cat.1 version: built-in speaker and audio amplifier: support voice reminder, TTS voice broadcast
9. Support breakpoint resumable transmission (in the event where there is no signal, the positioning and step counting data will be stored and resume when the signal is recovered).
10. Optional: 125KHz (non-inductive attendance recording, alert in hazardous areas, etc.)
11. Optional: 13.56MHz RFID (M1 card or CPU card, access control, payment, etc.).
Default: white buttons, optional "red buttons"

Configuration:

(Note: ● indicates this feature is included; ○ indicates this feature is not included).

The GTAG-9970N and GTAG-9970C locator cards look identical.

Model	Technology	Speaker	GPS Beidou	Dual-band Beidou	Wi-Fi	BLE	125K	RFID	Features
GTAG-9970N	NBLoT	○	●	○	●	●	○	Optional	Low-power positioning Tag
GTAG-9970C	4G Cat.1	●	●	○	●	●	○	Optional	4G Cat.1 Positioning Tag



Standard: Decals can be applied by the user



Specifications:

Items	Categories	Description
Form factor	Size/weight	102.8 x 61 x 12mm / 80 grams
	Product color	Cream
	Material	PC+ABS (Explosion-Proof Material)
	Wearing style	Lanyard
Platform solutions	Main control chip	Bluetooth Low Energy BLE5.1 (support OTA, BLE broadcast, Beacon Scanning, host, and peripheral connection)
	memory	64Kbits SRAM + 1Mbits Flash (support resumable storage)
Network Schemes GTAG-9970N	Network standard	NBLoT (Model: GTAG-9970N)
	Network Bands	B3/B5/B8/B20/B28
	SIM card	Standard: (provided by the manufacturer).
Network Schemes GTAG-9970C	Network standard	4G Cat1 Full Netcom (Model: GTAG-9970C).
	Network Bands	LTE-FDD: B1/B3/B5/B8 LET-TDD: B34/B38/B39/B40/B41
	SIM card	Standard: (provided by the manufacturer).
Positioning performance	Method	GPS Beidou + Wi-Fi + LBS + Low-power BLE
	Accuracy	5 ~ 20 meters in open area (satellite positioning equipment can correspond to 1/4 of the unshielded sky)
	Wi-Fi accuracy	Depending on the density of the surrounding Wi-Fi, generally 10 ~50 meters
	BLE accuracy	The deployment density of Bluetooth Beacon can realize point, surface and stereo positioning (If the Beacon deployment density is 6-8 meters, the accuracy is 1-3 meters; if it is used with the AOA Bluetooth gateway, it can reach the level of 1 meter)
	Motion detection	Built-in high-precision accelerometer, Low-power mode when no movements are detected *no data will be uploaded
Interactive	LED indicator	Red + Blue LED (Charging Indicator; Working Status Indicator)
	Button	3 buttons (status indicator, SOS, power on/off)
	Voice alerts	Built-in speakers and audio amplifier: support voice reminder (optional)
Electrical characteristics	Built-in battery	2000mAh Li-ion Rechargeable Battery / Operating Voltage 3.7V / Charging: 3.5 hours
	Charging port	Micro USB charging cable (standard, included in the shipment)
	charger	5V/1A (optional, standard version not included)
	Working hours	Standby hours: 30 days General usage: 10-15 days (Frequency: 10 minute per transmission)
Environmental characteristics	Operating temperature	-10°C ~ 60°C
	Storage temperature	-30°C ~ 80°C
	Operating humidity	-10%~85% HR
	Waterproof dustproof rating	IP54
Business functions	Geo-fence	The platform supports circular, custom area, and administrative area Only support circular area for mobile device users.

	Historical pathway	Historical data queries can be performed for more than 100 days
	Alarm function	SOS alarm, fence alarm, fence outside alarm, out of fence alarm, low power alarm, shutdown alarm, etc
	Platform features	The platform supports users to change the logo and name, hierarchical management and other functions
	125K	Reserved, None by default (optional)
Extra features:	Breakpoint resumption	Yes (Data stored when signals are unavailable; resume when network reconnects)
	Accelerometer	Support step count, motion detection
	Payment Function	Optionally equipped with NFC tag (RFID M1 card, or CPU card)
Compliance	CE marking	Yes
	Explosion-proof certification	Ex ib IIC T4 Gb explosion-proof approval
Scope of delivery	Standard configuration	TAG*1, charging cable*1, sticker* 2, lanyard, card sleeve*1
	Optional	Bluetooth Beacon, RFID tag, charger

GTAG-9970N Software Version:

1. "High frequency" UDP version: frequency 15S GPS priority high-frequency positioning version.

- Left button to check the network access status,
- Middle button for emergency SOS.
- Long press the right button to power ON/OFF the device

2. "Default version" AEP platform: NB-IoT low-power Internet of Things.

The positioning data is calculated based on GPS/Beidou and Wi-Fi infused data every 10 minutes.

If there are no movements detection, low power mode will be entered. To exit, re-use the product.

- Left button to check the network access status,
- Middle button for emergency SOS.
- Long press the right button to power ON/OFF the device

The format in which the TAG is reported.

The data reported by the TAG is sent to the server in the JSON format of UDP reporting. Details: Please refer to the attached UDP Protocol_20231115.docx

Modify the server address and port number reported by the TAG.

The TAG sends data to the server, and the IP address and port number of the server reported by the TAG can be changed to the required address.

Check out the attachment "Modify the IP and Port Number of the Server .docx" and the response "Set IP and PORT.mp4" video

Use of PC servers

Please refer to the attached "PC Server Usage Help .docx". It simulates the data reporting, positioning, history path of the device, and saves the data to Excel.