

ES457

1. General Description

ES457 is a mini waterproof GPS tracker with long standby time that can be used for both person and pet. It can last 6 months with one report per day mode. It supports intelligent modes such as Home-WiFi mode (no tracking at home), vibration mode (no tracking if the person or pet is not moving around). User can choose appropriate mode to balance between standby time and real-time tracking. The person or pet can also be tracked by WiFi positioning where GPS signal is not available.



2. Main Functions

- **Tracking:** Send GPS information to server with configurable report interval
- **Power Saving by Report Interval:**
 1. LTE and GPS will be shut down at most times in one report per day mode
 2. LTE, GPS and MCU in sleep mode in long report interval (e.g. >3 minutes) mode
 3. LTE, GPS and MCU in active mode in short report interval (< 3 minutes) mode
- **Home WiFi mode:** Turn off GPS if Home WiFi is found to save power consumption
- **Vibration Mode:** Report location information only when moving is detected
- **WiFi-positioning:** Report WiFi MAC address when GPS signal is not available
- **Bluetooth:** BLE can support advertising feature
- **Low Battery Alarm:** Send alarm when battery voltage is low
- **Storing Message:** Store messages if out of cellular coverage
- **Waterproof Case:** IP65 waterproof
- **OTA (Over the Air):** Firmware can be remotely upgraded

3. Specification

Physical and Electrical

Dimensions: 40*50*16mm

Weight: 36g

Battery capacity: 680mAh

Supply Voltage: 3.3VDC ~ 4.2VDC

Power Consumption:

- Active mode: <72mA @4VDC
- Power Saving mode: <4mA @4VDC
- Deep sleep mode: <10µA @4VDC

Operation temperature: -20°C to 65°C

Storage temperature: -20°C to 65°C

LTE Module: Quectel BG77

Antenna: Built-in Cellular and GPS antenna

Charging Method: Magnetic charging

LED Indicators: 3 for GPS, cellular
and charging status

SIM Card: Nona SIM(4FF)

GPS Specifications

Sensitivity Tracking: -158dBm

Position Accuracy (CEP50): <2.5m(Open Sky)

Cellular Communication

Cat M1:

LTE-FDD: B1/B2/B3/B4/B5/B8/B12/B13/B18

B19/B20/B25/B26/B27/B28/B66/B85*

Cat NB2:

LTE-FDD: B1/B2/B3/B4/B5/B8/B12/B13/B18

B19/B20/B25/B28/B66/B71/B85*

Protocol

HTTP/TCP/UDP/SMS/MQTT