ES421

1.General Description

ES421 is a 4G (Cat-1) waterproof GPS asset tracker. Carefully designed for long battery life, it can last 5 years under one report per day mode with 7800mAh battery. Embedded with magnets, it can easily attach to vehicle, trailer, container for asset tracking. ES421 will automatically switch to cell-ID based location reporting whenever GPS is not available.

2.Main Functions

- **Tracking:** It sends GPS (Location, speed) information to server with configurable report interval.
- **3-Axis Accelerometer:** Using embedded accelerometer and carefully designed algorithm to detect the vehicle/asset trip start/stop with accuracy.
- **Moving Wakeup:** Device will automatically wakeup to report data to server when it senses moving of the asset and power down itself when it is stationary.
- **Storing Message:** The device stores up to 50 messages if out of coverage and send the stored messages once the device regains coverage.
- **Power Saving Mode:** By optimizing GPS acquisition timer and using super low-power CPU to achieve super-low power consumption and super-long battery life.
- **Battery Low Warning:** When battery level is low, it will send low-battery alarm message.
- **Flexible Battery Selection**: Two kinds of choices: 7800 or 10200 mAh.
- **Drop Alarm:** Using embedded light sensor to detect the drop/detach from the tracking object.
- **Cell-ID Based Location:** Device reports cell-ID based location information where GPS is not positioned.
- **OTA (Over the Air):** The device's configuration, setting and firmware can be remotely upgraded.
- **Waterproof Case:** IP65 waterproof.

3. Specification

Physical and Electrical

Dimensions: 86mm*62mm*33mm

Weight: 286g

Battery capacity: 7800/10200 mAh

Supply Voltage: 3.3V~4.5V

Power Consumption:

    -Active mode:< 78 mA @3.8VDC

    -Sleep mode:<4 mA @3.8VDC

    -Deep Sleep Mode:< 60 uA @3.8VDC

Operation temperature: -20℃ to 65℃

Storage temperature(Without battery):

-40℃ to 85℃

3 LEDs for charging, GPS and Network;

USB2.0

Built-in Cellular and GPS antenna

Charging mode: USB charging

Module: LongShang

GPS Specification

-162dBm Tracking Sensitivity

Accuracy（Open Sky): <2m (CEP50)

Cellular Communication

Cat.1:

LTE FDD: B1/B3/B5/B8

LTE TDD: B34/B38/B39/B40/B41

GPRS:

900/1800MHz

Protocol: TCP/UDP/ HTTP