

# ES436S

## 1. General Description

ES436S is a 4G&D2C (LTE Cat.1) asset GPS Tracker based on Starlink Direct-to-Cell (D2C) satellite technology, which allows the device to connect directly to the satellite in remote areas where terrestrial networks are unavailable or unreliable. Yet, in areas with terrestrial network coverage, the device can still communicate via ground-based cell towers. Equipped With a 2500mAh battery, it can last 2 years in daily reporting mode. Vibration mode is useful for the applications that do not require position information when stationary saving data communication and power consumption. Thanks to its embedded magnets, ES436S can be easily installed to many objects with iron surface.



## 2. Main Functions

- **D2C Real-time Tracking:** High-speed, low-latency, track assets in remote areas such as deserts, forests, mountains and sea where there is no terrestrial network coverage
- **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
- **Long Standby Time:** It can last 2 years under one report per day mode with 2500mAh battery
- **Trip Start and Trip End Detection:** Report trip start and trip end
- **Drop Alarm:** Light sensor is used to detect the drop/detach from the tracking object
- **Vibration Mode:** Report location information only when moving is detected
- **Bluetooth:** Bluetooth direction finding
- **LBS Positioning:** Report cell-ID info when GPS signal is not available
- **Built-in Magnets:** Embedded with magnets, it can easily be installed to vehicles, trailers, containers
- **Low Battery Alarm:** Send alarm when battery voltage is low
- **Storing Messages:** Store messages if out of cellular coverage
- **Geofence:** Supports multi circle and polygon geofence setting
- **OTA (Over the Air):** Firmware can be remotely upgraded

## 3. Specification

### Physical and Electrical

Dimensions: 80mm\*50mm\*23mm

Weight: 130g

Battery Capacity: 2500mAh

Supply Voltage: 3.3VDC ~ 4.2VDC

Power Consumption:

-Active mode: < 70mA @4VDC

-Power saving mode: <4mA @ 4VDC

-Deep Sleep Mode:< 60μA @4VDC

Operation Temperature: -35°C to 75°C

Antenna: Built-in cellular and GPS antenna

Charging Method: USB charging

LED Indicators: 3 for GPS, cellular and

charging status

SIM Card: Micro SIM(3FF)

### GPS Specifications

Sensitivity Tracking: -157dBm

Position Accuracy (CEP 50):<2.5m(Open Sky)

### Cellular Communication

CAT.1

LTE TDD: B1/B2/B3/B4/B5/B7/B8/B12/

B13/B18/B19/B20/B25/B26/B28/B66

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

### Protocol

HTTP/TCP/UDP/SMS/MQTT