

ES321

1. General Description

ES321 is a 3G (W-CDMA) waterproof GPS asset tracker. Carefully designed for long battery life, it can last 5 years (one report per day) with 7800mAh battery. Embedded with magnets, it can easily attach to vehicle, trailer, container for asset tracking. It will wake up for reporting location information when it senses moving of the asset and power down itself when it is stationary. It supports TCP/UDP and HTTP for reporting location information. ES321 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.
- **Geofence:** It supports circle and polygon setting.
- **3-Axis Accelerometer:** Using embedded accelerometer and carefully designed algorithm to detect the vehicle/asset trip start/stop with accuracy.
- **Storing Message:** The device stores up to 300 messages if out of coverage and send the stored messages once the device regains coverage.
- **Moving Wakeup:** Device will automatically wakeup when it senses moving of the asset and power down itself when it is stationary.
- **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: 7800mAh or 10200mAh.
- **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: 7800/10200mAh

Supply Voltage: 3.3V~4.5V

Power Consumption:

-Active mode:< 72mA @3.8VDC

-Sleep mode:< 5mA @3.8VDC

-Deep Sleep Mode:< 60uA @3.8VDC

Operation temperature: -20°C to 65°C

Storage temperature(Without battery):

-40°C to 85°C

3 LEDs for charging, GPS and Cellular status; USB2.0

Built-in Cellular and GPS antenna

GPS Specification

-162dBm Tracking Sensitivity

Accuracy (Open Sky): <2m (CEP50)

Cellular Communication

W-CDMA

ES321A(USA): 850/1900 MHz

ES321JE(Japan/Softbank): 900/2100 MHz

ES321J(Japan/Docomo): 850/2100 MHz

ES321E(Other Countries): 900/2100 MHz

Output Power: 0.25W

GSM/GPRS: 850/900/1800/1900 MHz

Output Power:

GSM850/900: 2W

DCS1800/PCS1900: 1W

Protocol: HTTP/TCP/UDP/SMS