ES311

1. General description

ES311 is a 3G (W-CDMA) waterproof GPS tracker. It supports TCP/UDP and HTTP for reporting location and sensor information. Other than the basic feature of location report, it can be integrated with relay, camera/dashcam, RFID reader, fuel sensor, temperature/humility sensor, flow meter and many other sensors with 5 IOs (factory configurable combinations of up to 3 digital inputs, 2 digital outputs, 3 analog inputs (A/D), 1 UART or 1 RS232C). It can work in humid environment because of its waterproof design.

2.Main Functions

- **Tracking:** It sends GPS (Location, speed) and sensors (if any) information to your application server with configurable report interval (moving or stationary).
- **Geofence:** It supports circle and polygon setting.
- **Backup Battery:** 400mAh, it sends a message if the power supply harness is disconnected.
- **Over Speed Limit:** Reports over-speed limit.
- **Mileage:** Reports trip start, trip end and the mileage.
- **3-Axis Accelerometer:** With a built-in 3-axis accelerometer, the device can detect trip start/trip end, and to report harsh braking, harsh acceleration, and impact.
- **Storing Message:** The device stores up to 300 messages if out of coverage and send the stored messages once the device regains coverage.
- **Power Saving Mode:** Device automatically switch to low-power mode when it detects engine is OFF.
- **GPIO and UART:** The device has 5 configurable IOs. It can be configured as 3 digital inputs, 2 digital outputs; 2 digital input, 1 analog input and 2 digital outputs; 1 digital input, 1 analog input, 1 digital output and 1 UART. These IOs can be used for engine starter on/off detection, immobilization of engine starter, door lock, and for connecting to various types of sensors.
- **Waterproof Case:** IP65 waterproof.
- **OTA (Over the Air):** The device's configuration, setting and firmware can be remotely upgraded.

3. Specification

Physical and Electrical

Dimensions: 89mm *46.5mm *17.5mm

Weight: 69g (without wire) 147g(with wire)

Input voltage range: 9-36VDC

Power consumption:

- Active mode: < 43mA @12VDC
- Sleep mode: < 17mA @12VDC

Operation temperature: -20℃ to 65℃

Storage temperature(Without battery): -40℃ to 85℃

GPS specification

-157dBm Tracking Sensitivity

Accuracy（Open Sky):< 2m (CEP50)

Comprehensive IOs

3 inputs and 2 outputs

1 A/D input and UART

2 LEDs for GPS and Cellular status

Built-in Cellular and GPS antenna

Cellular Communication

W-CDMA

ES311A(USA): 850/1900 MHz

ES311JE(Japan/Softbank): 900/2100 MHz

ES311J(Japan/Docomo): 850/2100 MHz

ES311E(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