

# ES501



## 1. General Description

ES501 is an IoT device, which can be used for engine on/off detection by HALL effect sensor, and calculating the engine working hours. It can also detect the person who is operating the machine (for example, lawn mower) with that engine. It can also detect the malfunction of the engine or hash operation of the machine.

## 2. Main Functions

- **Report engine working hours:** It sends machine on/off timestamps via ES500 periodically so that at server or with a smartphone APP, user can know exactly the engine on/off time and so that the working hours.
- **Report the person who is operating the machine:** Let the person who operating the machine carry a BLE tag, the device will detect the tag ID and report the ID together with the engine on/off information via ES500 to the server.
- **Detect the rough handling of the machine:** The device can detect the collision of the machine with its embedded 3-axis accelerometer.
- **Low power mode:** With its 3-axis accelerometer, the device will go to sleep mode and save the power consumption when there is no vibration detected from the machine.
- **Storing Message:** The device can store message when there is no ES500 nearby, and send out stored message when it finds ES500 nearby.
- **OTA (Over the Air):** the FW of device can be upgraded via OTA.

## 3. Specification

### **Physical and Electrical**

Dimensions: 75\*45\*18mm Weight: 115g

Input voltage range: 2.6-3.3VDC

Power Consumption:

-Standby average current: 20 uA

-Working average current: 13.1mA Operation

temperature: -30 ° C to +85 ° C Storage

temperature : 40 ° C to +85 ° C

-Built-in BLE Module: CYBT-343026-01