

## Device

# Rinho SMART IoT

*Power and versatility for superior connectivity. This device revolutionizes vehicle telemetry by integrating advanced technologies into a robust and practical system. With its wide range of inputs and outputs, it offers exceptional connectivity possibilities. Experience complete and secure control of your vehicles, backed by the efficiency and durability of a state-of-the-art system.*



### Main Functions

- ✓ 100% programmable device
- ✓ Real-time tracking
- ✓ Vehicle recovery
- ✓ Complete alarm system with local or remote
- ✓ Motorcycle vehicle tracking
- ✓ Fleet management
- ✓ Driver Management

*Driving profiles and driver identifier*

### Supported Technologies

 **LTE & GSM**

 **WIFI** (Special Connectivity)

*WiFi connectivity on our tracking device offers a unique advantage: the ability to collect data in remote areas or areas with weak cell signals.*



-  FOTA (Firmware Over-The-Air)
-  Country code detection (**MCC**)
-  **Accelerometer** triaxial 8G
-  Communication via **TCP/UDP**
-  Communication **Bluetooth LE** as a virtual port
-  Multiple modes of **low consumption**

### Technical Features

-  Integrated GSM and GPS antennas
-  Event engine with 196 configurable rules
-  **9** digital inputs and 7 analog inputs
-  **3** digital outputs
-  **1** ignition input
-  **2** 1-Wire inputs for iButton keys and temperature sensors
-  Event and alarm notification buffer
-  Generation of predefined and configurable reports
-  Reading and decoding real-time information from the vehicle's ECU

### Integrated CANBUS Protocols

-  SAE J1939
-  OBDII
-  EBS
-  IESCAN

### BLE protocols

-  iBeacon, Eddystone UID/TLM, Escort and Moko Smart

### Main Applications

- ✓ Real-time vehicle location
- ✓ Access control and driver management
- ✓ Asset tracking
- ✓ Environmental control
- ✓ Security

### Optional

-  RF433MHz Receiver Module (Optional)

## Technical Specifications

### Processing and Configuration

**Processor:** ESP32 / 32 bits  
**Configuration protocol:** TAIP  
**Configurable Rules (RL):** 196  
**Log Reports (DL):** 49152  
**Buffer Report (BU):** 2768

### Cellular Connectivity

**Cellular Module:** Quectel EG915U-LA  
Compatible technologies:  
LTE Cat 1 - GSM/GPRS/EDGE  
Supported LTE-FDD bands:  
B2 / B3 / B4 / B5 / B7 / B8 / B28 / B66  
Supported GSM bands:  
850 / 900 / 1800 / 1900 MHz  
**Indoor Cellular Antenna:** Yes  
**SMA connector for external cellular antenna.:** Yes  
**SIM 0:** Yes  
**SIM 1:** Yes  
**IP Destinations:** 4  
**SMS Destinations:** 5  
**FOTA Cellular / Wifi:** Yes / Yes  
**UDP and TCP protocols:** Yes  
**DNS domain resolution:** Yes  
**Jamming detection (JMD):** Yes

### GPS and Positioning

**GPS Module:** Quectel LC86G  
(GPS, GLONASS, BDS, Galileo, QZSS)  
**Internal GPS Antenna:** Yes  
**SMA connector for external GPS antenna.:** Yes  
**GPS Status Indicator:** 1 LED Bicolor

### Power Supply and Consumption

**Operating voltage:** 8 to 38 VDC  
**Backup battery:** Li-Ion battery 3.7 VDC 1300mAh with BPM  
Power consumption during operation: ~60 mA @12V / ~48 mA @24V  
Current consumption under load: ~210 mA @12V / ~170 mA @24V  
Power consumption in sleep mode: < 2 mA @12V  
**Power supply protection:**  
Against polarity reversal

### Inputs, Outputs, and Sensors

**GPIO Inputs/Outputs:**  
9 Digital Inputs  
7 Analog Inputs  
1 Ignition Input  
3 Digital Outputs  
**OneWire Port 0 and 1:** Yes  
**Compatible temperature sensors:** DS18S20, DS18B20  
**Compatible iButton keys:** DS1990  
**Compatible with TELEMETRIC flow meter:** Yes  
**Triggers by Caller ID (CID):** 10  
**Braking/acceleration triggers (DV):** 8  
**Time/distance (TD) triggers:** 32  
**Analog Range (AR) Triggers:** 12  
**User triggers (UV):** 16

### Vehicle and Driver Management

**Total / Partial Odometer:** Yes / Yes  
**Ignition Pin (IGN):** Yes  
**Main voltage sensor:** Yes  
**Driver Management (ICL):** 100

### Communication Interfaces

**CANBUS Port:** Yes (CAN H and CAN L pins)  
**Serial Port TR0 (TTL 3V3):** Yes  
**Bluetooth BLE connectivity:** Yes  
**WIFI connectivity:** Yes – 2.4 GHz (802.11b Rx)  
**RF Connectivity:** Yes Optional - 433MHz  
**Supported CANBUS protocols:**  
OBDII, J1939, IESCAN  
**Text buffers (XB):** 8

### Event Intelligence

**Event engine:** 196 rules  
**User variables (Volatile / Non-Volatile):** 32 / 32  
**NT Accumulators (Volatile / Non-Volatile):** 16 / 16  
**Waypoints (WP):** 32  
**Polygonal regions (RG):** 32  
**Speed thresholds (VL):** 16

### Physical and Environmental

**Enclosure:** High impact ABS plastic, IP30  
**Dimensions:**  
80mm x 65mm x 30mm  
**Weight:** 70 g  
**Operating temperature:**  
-15 °C to +60 °C  
**Humidity:** 90% at +60 °C  
**Accelerometer:** Triaxial, 8G  
**Cellular Status Indicator:** 1 LED Bicolor  
**Audio:** No