

Smart Telemetry for Battery Power System of e-Mobility

Technology Overview

The smart telemetry is a system for remote monitoring of the status and parameters of the battery system in electric vehicles. The system front-end comprises Global Positioning System (GPS) and 3rd Generation/4th Generation cellular communication (3G/4G) enabled devices with built-in sensors to provide battery stack monitoring and data-logging capabilities. Data collected are relayed in real-time to data centre at the system back-end. The system is a plug and play setup, and it comes with remote system recovery function from the server.

Features & Specifications

- Measurement type supported:
 - Voltage: 0 to 90Vdc, 100mV resolution
 - Current: -150 to 150A, 200mA resolution
 - Temperature: 0 to 100°C, 0.5°C resolution
- Work with BMS (Battery management system)
- GPS accuracy: < 1m
- Hot start: 1 second
- Cold start: 26 seconds
- 2-level sleep mode for energy saving
- 32-bit ARM based microprocessor
- HSDPA 21.1 Mb/s, HSUPA 5.76 Mb/s
- Real-time monitoring and remote control
- RFID technology based user management
- MQTT/HTTP compatible
- Work with local backend/cloud platforms



Customer Benefits

- Improved productivity
 - Reliable real-time remote monitoring to battery power system
 - Usage report to the owner
- Enhanced safety
 - Real-time fault diagnostics and warning system
 - Worldwide tracking and user management system
- Reduced cost for management
 - Automate system upgrading
 - One-stop and customized capabilities

Potential Applications

- Urban electric vehicle positioning, battery power management, and user management
- Stationary energy storage
- Industry remote data acquisition and real-time transmission
- Maritime and military applications

