# (BMS) PRO: BMS 16S-60A
# BATTERY MANAGEMENT SYSTEM

## Introduction

Bacancy's BMS Pro is a cutting-edge battery management system that meets the rigorous standards of the Indian Government's AIS-156 amendment-3. This state-of-the-art system is equipped with unique and highly flexible features, making it one of the most reliable and efficient solutions for battery management needs.

One of the key advantages of BMS Pro is its exceptional security measures that help protect batteries from overcharging, over-discharging, and overheating, thereby ensuring their longevity and reliability. Moreover, BMS Pro offers advanced cell balancing features that prevent cell overvoltage or Undervoltage, which can significantly improve battery performance and lifespan

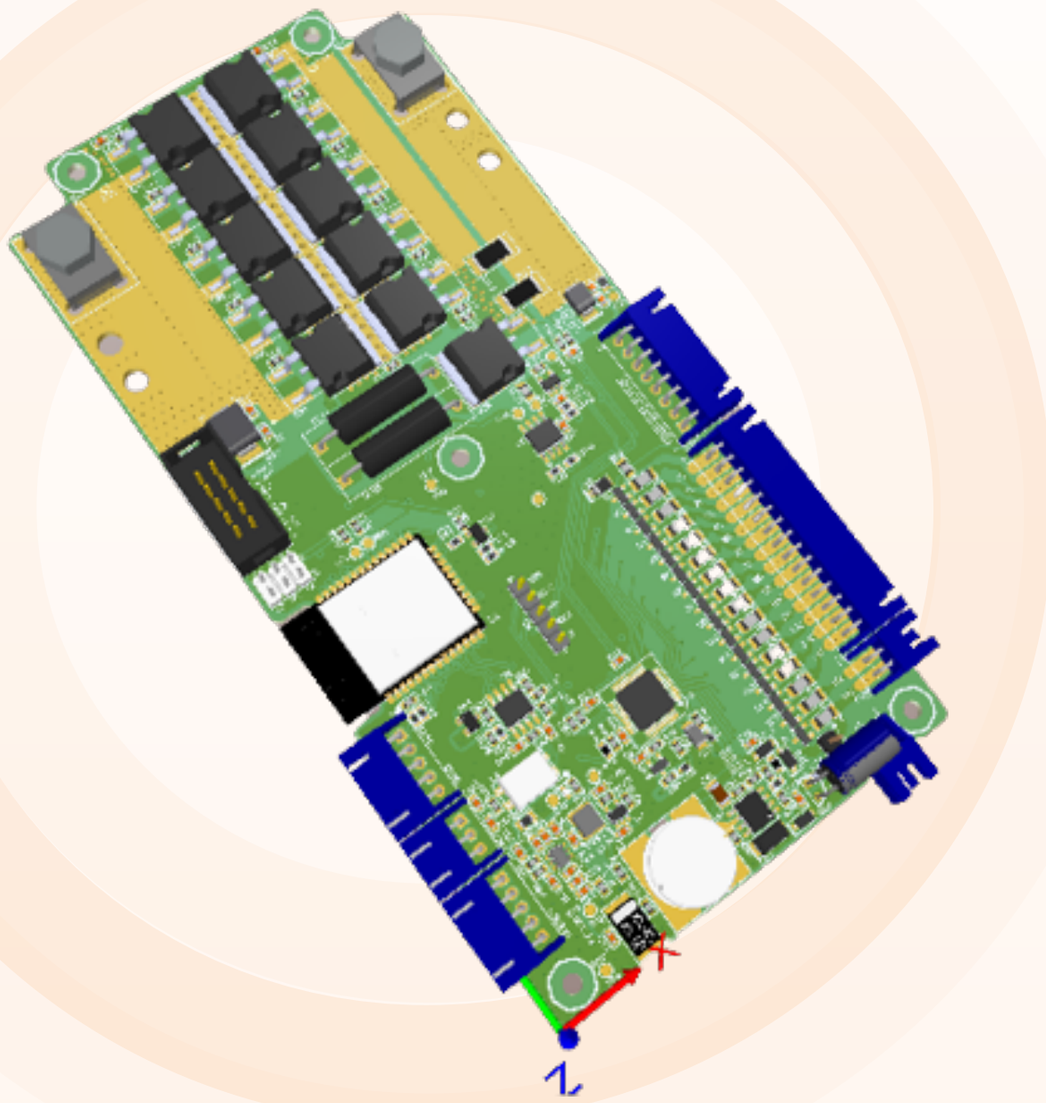
In addition, BMS Pro provides precise estimations of both state of charge (SOC) and state of health (SOH), which are essential for monitoring battery performance and predicting its life expectancy accurately. This feature can help businesses save money by avoiding premature battery replacements and ensuring optimal battery usage. BMS Pro also supports multiple communication protocols, including CAN, BLE, and 4G, making it highly versatile and compatible with a wide range of battery types and configurations.

Bacancy's BMS provides exceptional levels of performance and functionality for battery management needs in various applications. With its advanced features and capabilities, BMS Pro offers unparalleled reliability, efficiency, and flexibility, making it an ideal solution for businesses seeking to optimize battery usage and performance.

# (BMS) PRO: BMS 16S-60A
# BATTERY MANAGEMENT SYSTEM

BACANCY

## Key Features



- Cell voltage measurement accuracy of up to ±10mV
- Current measurement accuracy is up to 2% at calibration point.
- Very low quiescent current
- Passive balancing; default up to 150mA (scalable upon request)
- Continuous discharge current up to 60A
- SOC algorithm with OCV compensation with SOC accuracy to within ±4%
- ±2 °C accuracy in temperature measurement
- Comply with recent AIS-156 amendment-3.
- Optional support for small OLED, Buzzer, FAN, Smoke detection sensor, Ignition Signal.


## Key Features

- Plug & Play support for Bacancy's Telematics
- Fully configurable parameters to support various types of cell and use cases
- Supporting BLE, Wi-Fi, and GSM/GPRS communication
- Non-isolated CAN communication
- Accurate estimation of SOC/SOH
- Passive Cell Balancing
- Secure MQTT feature available for cloud communication
- Firmware upgrade over the air via a cloud interface
- Alert, Fault and Diagnose Event logging

systems@bacancy.com www.bacancysystems.com 9016028817

# (BMS) PRO: BMS 16S-60A
# BATTERY MANAGEMENT SYSTEM

BACANCY

## Key Technical Specifications

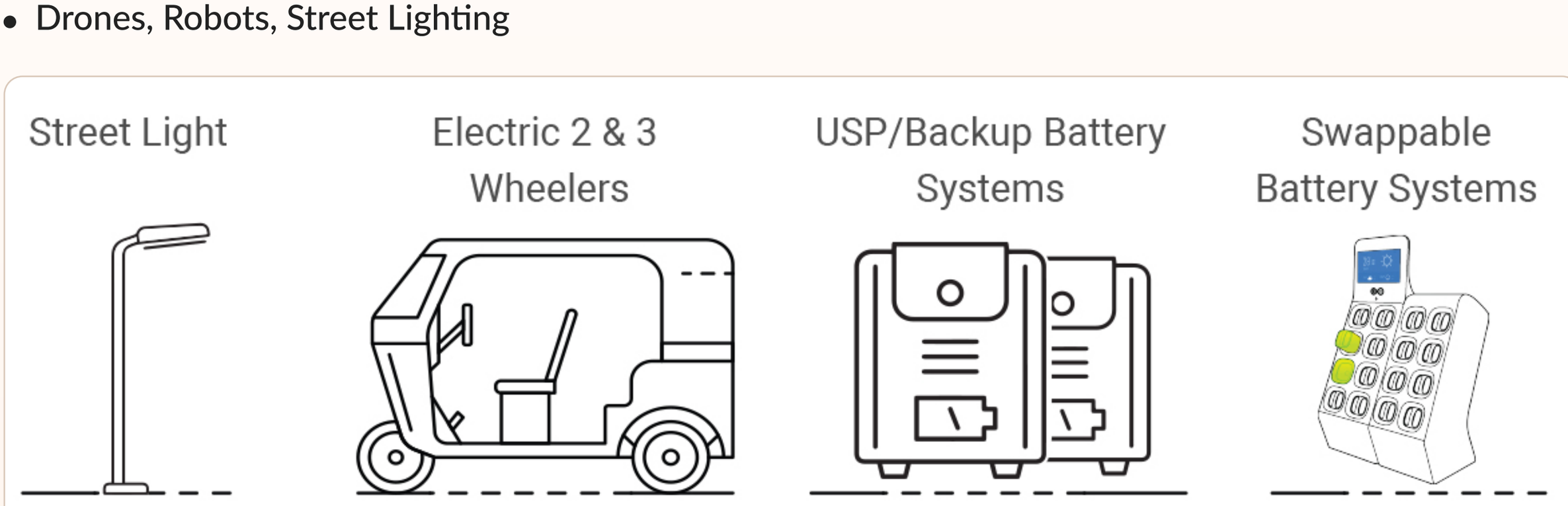
| Parameters | Specifications |
|---|---|
| Cells to be monitored | 8s - 16s |
| Operating temperature | -20 to 85°C (5 to 95% RH) |
| Supported Cell Chemistry | NMC/NCM, LFP |
| Cell voltage measurement range | Up to 5V |
| Cell Voltage measurement accuracy | ± 10mV |
| Cell balancing topology | Dissipative (Passive) |
| Operating Voltage Range | 19V to 70V |
| Temperature sensor | 4 external NTC for battery pack and 2 on-board PCB sensors |
| Charging and discharge current | Continuous 60A |
| Peak discharge current (30 Sec) | ~80A |
| Active consumption | ~1.21 W (With Active 4G Module + BLE + Wi-Fi) |
| Idle Sleep Consumption | ~0.25 W without ignition, ~0.083 W with ignition |
| Fully Discharge Sleep Consumption | ~0.083 W (Both with/without Ignition type BMS) |
| Communication | Wireless \| BLE 4.2 \| WiFi Non-Isolated CAN, GSM/GPRS interface |
| Digital I/O pins | 2 Output Pin For FAN and Buzzer And ADC based 1 Input Pin for Smoke sensor |
| SOC, SOH calculation | Coulomb counting and OCV models |
| Safety Features | Over/Under cell voltage, Over/Under temperature in charge & discharge, Over current in charge and discharge, Pack Over/Under Voltage, MOSFET failure Notification |
| Dimensions (mm) | 156x78x20 (L X W X H) |

# (BMS) PRO: BMS 16S-60A
# BATTERY MANAGEMENT SYSTEM

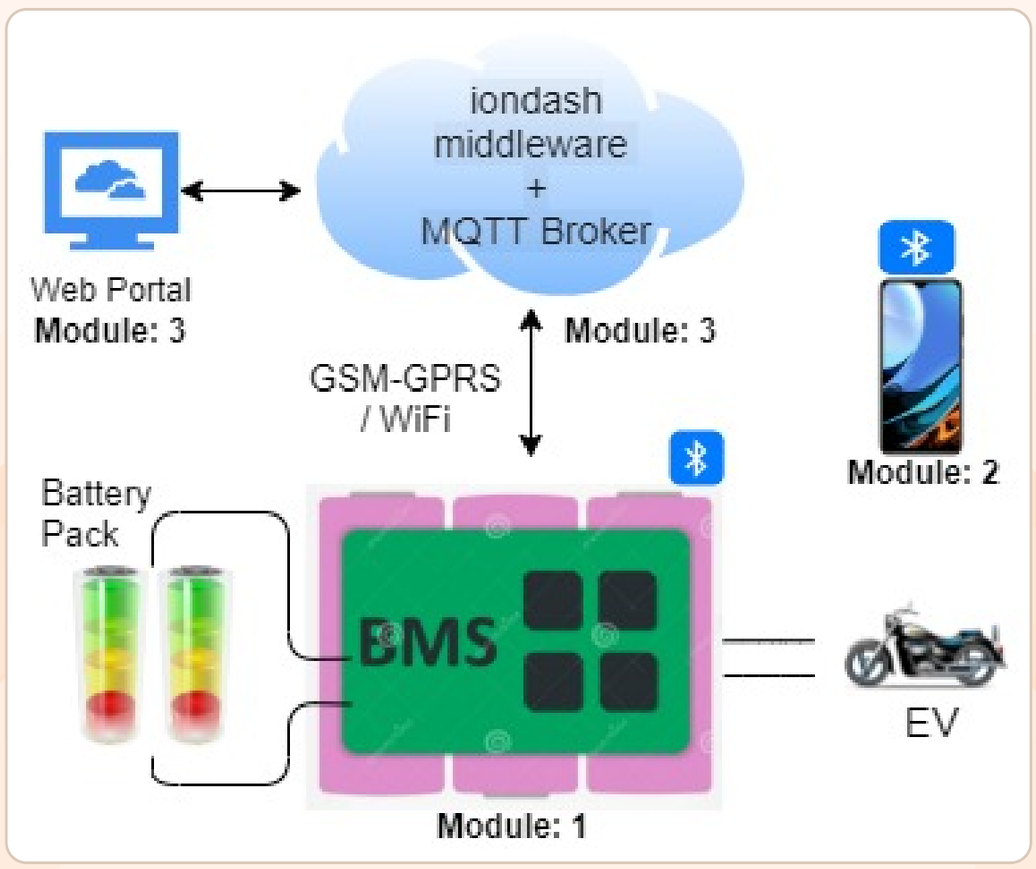
BACANCY

## Applications

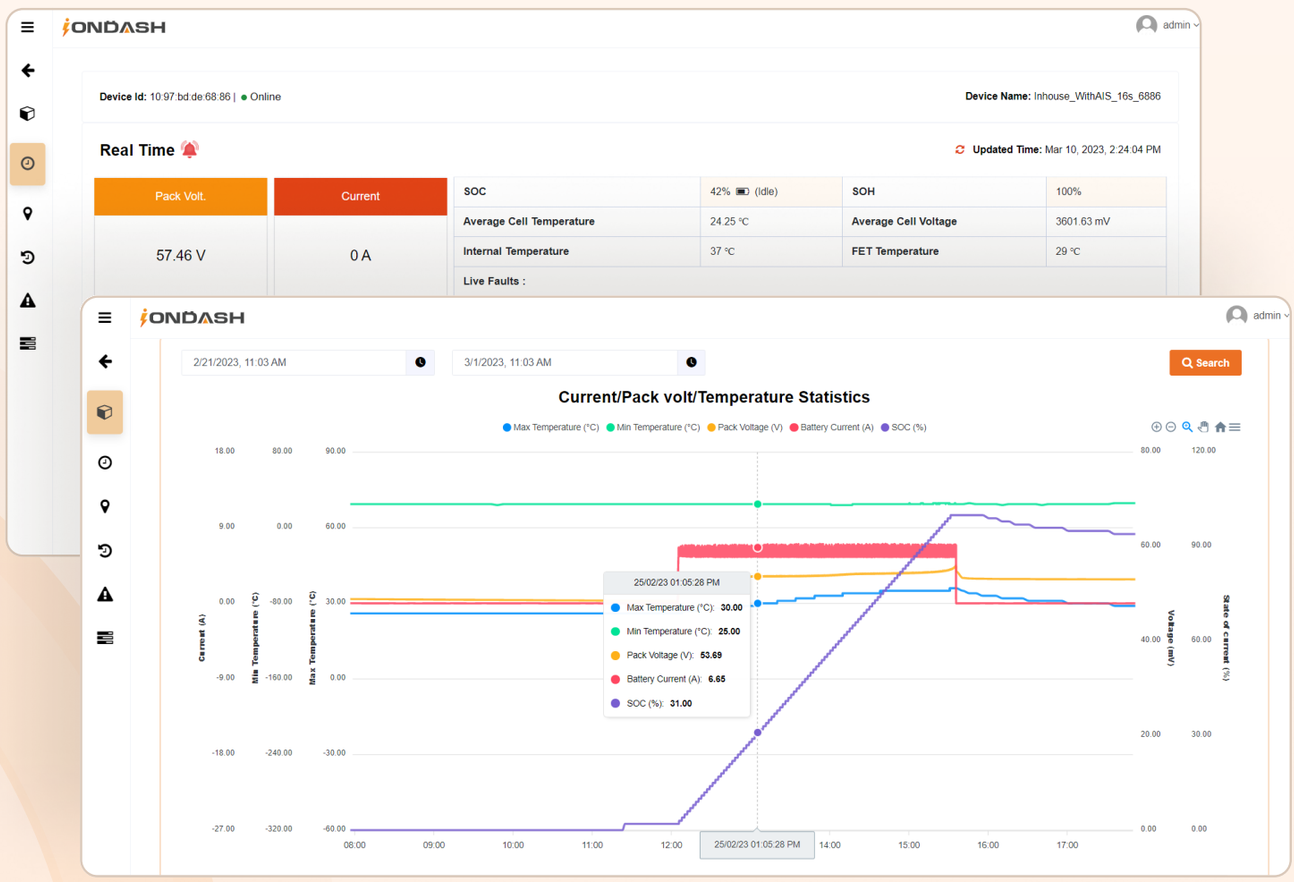
- Mobile & Stationary Electrical Storage Equipment
- Electric & Hybrid Electric Vehicles
- Drones, Robots, Street Lighting
- Industrial & Home Storage
- Backup Battery Systems




## System Overview




## Iondash Cloud BMS Analytics




systems@bacancy.com
www.bacancysystems.com
9016028817