Battery Management System

PACK DETAILS

Maximum Current	:	150 A
Pack Voltage	:	80 V
Temperature Zone	:	8
Max Serise Cell	:	16

OERATING CURRENTS

Normal Mode	:	280 µA
Sleep Mode	:	24 µA
Deep Sleep	:	10 µA
Shutdown	:	1 µA

COMMUNICATION

CAN

RS-232

RS-485 / MODBUS

BLE / BLUETOOTH

GSM / GPRS

MEASURMENTS

Length	:	140 mm
Height	:	15 mm
Width	:	65 mm
Weight	:	80 grm
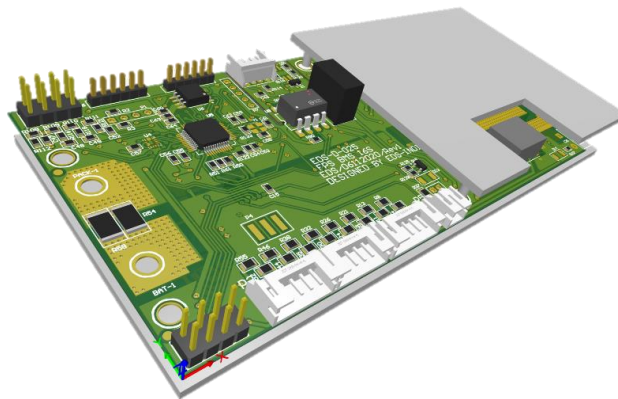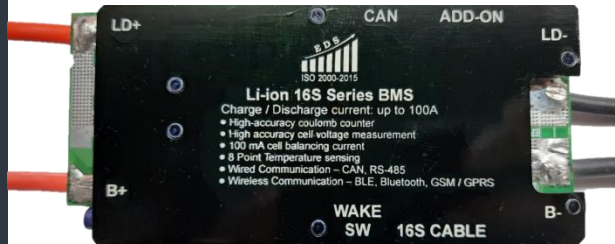
The Battery Monitoring System (BMS) Designed by EDS-India is based on a Texas Instrument AFE & ARM Cortex 32-bit MCU from ST Microelectronics, the advance features inbuilt in the model along with various communication modes makes this the front runner BMS design in industry

- ❖ 2 Independent ADCs : simultaneous current and voltage sampling
- ❖ High-accuracy coulomb counter with input offset error < 1 µV (typical)
- ❖ High accuracy cell voltage measurement < 10 mV (typical)
- ❖ Maximum cell balancing current through a single cell : 50mA
- ❖ Supported Multiple Protection (Voltage, Current & Temperature)

- Battery monitoring capability for 3-series to 16- series cells

- Integrated charge pump for high-side NFET protection with autonomous recovery

- Extensive protection suite including voltage, temperature, current, and internal diagnostics

- Two independent ADCs for simultaneous sampling

- Multiple Power Modes

  Normal , Sleep, Deep Sleep & Shut Down

- Internal Temperature Sensor along with External thermistors.

- Auto Cell Balancing

- Hardware Coulomb Counter for SOC & SOH calculations

- Individual Cell Impedence measurement

- Auto Recovery from Errors

EDS-INDIA

Technical Specification

PROTECTION

Voltage

Current

Temperature

Internal Diagnostics

ADVANCE FEATURE

Cell Impedence Measurement.

With 2 independent ADCs for

simultaneous sampling

Hardware Coulomb Counter

For SOC & SOH Calculations

CONFIGURATION

Via BLE over Android App

Via USB using eBMS Suite

TECHNICAL SUPPORT

Fully indeginised Indian design
with dedicated engineering
team and product Manager to
provide complete technical
support in a limited time. Any
customization in communication
protocol or design feature
enhancement is easily possible.

PARAMETER	VALUE	RANGE
Maximum Cell Voltage	5.5V	
Short Circuit Current Detection	Upto 500A	
Over Charge Current Detection	Upto 200A	
Over Discharge Current Detection	Uotp 200A	
Cell Balancing Start Voltage	Configurable	0.0 – 5.0 V
Cell Balancing Stop Voltage	Configurable	
Cell Over Voltage Over Protection	Configurable	1012 – 4554 mV
Cell Over Voltage Protection Recover	Configurable	
Cell Under Voltage Over Protection	Configurable	
Cell Under Voltage Protection Recover	Configurable	
Supported Thermistor	8	4 AFE + 4 MCU
Cell Over Temperature (Charging)	Configurable	-40° C to 120°C
Cell Over Temperature Recover (Charging)	Configurable	
Cell Over Temperature (Discharging)	Configurable	
Cell Over Temperature Recover (Discharging)	Configurable	
Cell Under Temperature (Charging)	Configurable	
Cell Under Temperature Recover (Charging)	Configurable	
Cell Under Temperature (Discharging)	Configurable	
Cell Under Temperature Recover (Discharging)	Configurable	
Pre Charge MOSFTE Start Voltage	Configurable	0.0 – 5.0 V
Pre-Charge MOSFET Stop Voltage	Configurable	