



### Features

- Cell Monitoring
  - 3-112 lithium ion cells
  - 1mV accuracy
- Cell Balancing
  - 20mA passive
- Temperature Monitoring
  - 16 distributed
  - 4 gnd referenced
  - 0.5°C accuracy
- Contactor Control
  - High side
  - Low side
  - Precharge
  - Economized or Basic
- Pack Voltage Monitor
  - 0-500V range
  - 50mV accuracy
  - Pack V measurement
  - Output V measurement
- Pack Current Monitor
  - Default -350 → 350A
  - Default 50mA accuracy
- Communications Buses:
  - 2 CAN bus channels
  - 1 LIN channel
  - 1 USB channel
- Low Quiescent Current
  - 50μA sleep mode
  - 15μA power down mode
- Environmental
  - IP-67 rated connectors
  - Fully potted
  - Aluminum enclosure
- Regulatory
  - CE pending
  - Mil. Std. 810 pending
  - ISO26262 pending

### General Description

The BMS11203 is an Automotive Grade Battery Management System (BMS) designed for automotive, recreational (4-wheelers, etc.), e-Bike, and energy storage applications.

In contrast to existing off-the-shelf solutions, the BMS11203 has full safety isolation, extremely low quiescent current (protects the pack when fully discharged), and is IP-67 weatherproofed for safety and reliability.

The BMS11203 provides two isolated 56 cell Stack Monitors which can be configured in series (up to 112S) or in parallel (up to 56S). The Stack Monitors measure cell voltage and temperature in addition to performing passive cell balancing. Communications interfaces include 2 CAN bus channels, 1 LIN channel, and 1 USB channel. GPIO interfaces include High Voltage Interrupt protection (analog safety interlock) and drive circuits for 3 contactors.

As an automotive grade system, the BMS11203 comes fully potted in an aluminum enclosure with IP-67 waterproof automotive-grade connectors, which are keyed to prevent incorrect mates. The system is plug-order independent.

The BMS11203 uses AEC-Q qualified components and is designed, manufactured, and assembled in the U.S.A.

