



# n3-BMS™

## Third Generation Battery Management System for High Voltage Applications

The n3-BMS is an ISO 26262 certified, flexible, cell chemistry agnostic distributed BMS with next-gen features implemented to address some of the most pressing safety and performance challenges heavy vehicle OEMs and battery makers face.

While the n3-BMS is ISO 26262 certified, it remains an off-the-shelf, flexible solution, offering significantly decreased time to market by cutting down years of work involved with the development and the certification process. This process involves submitting hundreds of documents to an accredited organization, rigorous testing, and in-depth safety considerations.

The n3-BMS features a unique software structure that separates functional safety-related features of the BMS into a Base Software Layer (BSW), with the remaining functionality placed under an Application Software Layer (ASW). This allows users to adjust key BMS parameters without risking the ISO 26262 certification. In addition, customers have the flexibility to use any number of CMU channels between 6 and 12.

Furthermore, with its dual-core lockstep CPU and ASIL C compliant ASIC, along with advanced algorithms, the n3-BMS is capable of high measurement accuracy.

### Highlights

#### Safety

- ISO 26262 ASIL-C certified
- Open circuit detection

#### Usability

- RTC + logging of events, errors, and warnings
- BMS Creator PC tool for easy configuration
- Compact CMU for easy integration

#### Battery Life

- High frequency sampling of current (6 ms) allows optimal detection of pulses
- Powerful and intelligent passive balancing at 200mA per cell

#### Performance

- Certified at 34.03 FIT rate (1x MCU 8x CMU)
- Flexible Base Layer Software & Application Layer Software architecture
- Calibrate safety and non-safety parameters in the battery without the need for a new SW release

### Features

- ISO 26262 certification provided by TÜV SÜD
- Adjustable Functional Safety related parameters
- High Voltage scalable system for up to 360 cells or 1000V

### Applications

