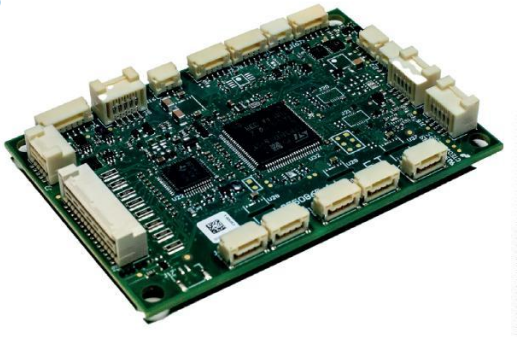
DRIVING THE MOBILITY
OF TOMORROW

GUARDION-IQ™ NEXT GENERATION BATTERY MANAGEMENT SYSTEMS

BMS



HVM

OVERVIEW

Eberspaecher Vecture is launching Guardion-IQ™ a new BMS platform in 2026. Featuring a cost-effective modular design, it will deliver industry-leading scalability and functionality while offering one of the most compact BMS architectures available. The platform includes specialized Battery Modules/ System Controllers to support a wide range of low voltage (12 V-100 V) and high voltage (100 V-1,500 V) systems:

- Single-module controller for contactor based BMS
- Controller for Integrated BMS with and without secondary protection
- Main controllers for series or parallel distributed system
- Auxiliary controller for modules in a distributed system
- High Voltage Module (HVM) monitors up to 3 high-voltage connections for systems up 1,500 V – includes a Ground Fault Detection (GFD) circuit

In addition to off-the-shelf products, the modular and scalable architecture, will enable fast and seamless customization offering several advanced options:

- Redundant Secondary Safety Protection
- Contactor Drivers
- Protection and Sensing Modules

The ability to easily mix-and-match options ensures that solutions can be precisely and cost effectively tailored to the unique needs of our customers, providing exceptional performance, enhanced safety, and operational efficiency.

FEATURES

- Standardized Analog Front End (16S) and microprocessor
- Usable from 3S to 16S without design modifications with either CAN or SMB interfaces
- Dimensions 80mm (L) x 55mm (W) x 12mm (H)
- Passive cell balancing
- Connector options for vertical/horizontal orientation
- Redundant secondary safety protection circuits
- Microprocessor-based SOC/SOH algorithms
- Most parameters are configurable with GUI for fast customer prototyping
- Low quiescent current: less than 10uA in shutdown
- CAN based bootloader with optional BLE/Wi-Fi connectivity for firmware updates

BENEFITS

- Modular architecture for flexible integration across multiple applications
- Enhanced scalability, accommodating both small-scale and large-scale systems
- Compact architecture frees up valuable space within devices or installations
- Weight reduction impacts performance, range, and usability in many applications
- Upgraded components, delivering improved durability and efficiency
- Compliance-ready design to assist partners in meeting their functional safety requirements

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