MODULAR BATTERY MANAGEMENT SYSTEM

Battos™

High Voltage modular Battery-Management-System

Li-BMS™ Product Family - Scalable measurement, monitoring and control system for lithium-ion energy storage.

Ideal platform for prototyping and development. Rich set of features and interfaces. Powerful, secured computing unit for monitoring, configuration and visualization.

Supports cell balancing and hardware redundancy. Open and flexible software architecture with LionEye™ user interface.

LIGHT BATTERY
based on the LIGHT Battery Concept

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24x
up to 288 Cells

LION Smart
BATTOS™ I HV Modular Battery-Management-System

- Li-BMS™ Product Family - Scalable lithium-ion energy storage measurement, monitoring and control system
- LionEye™ user interface - for configuration, visualization, monitoring and easy configuration

LION Control Module™
Powerful, secured computing unit; open and flexible software architecture

LION Measure Module™
High accuracy measurement for up to 12 cells with passive balancing and hardware redundancy

Features

32-bit MCU for Automotive and Industrial
- S32K146 Arm® Cortex®-M4F
- ISO26262 ASIL-B Compliant

Safety Power System
- MC35FS4503
- High robustness and reliability
- ISO26262 ASIL-D Compliant

I/O
- 5 x HV-Contactor
- 2 x Load (relays, fans, pumps)
- 4 x Analog-Inputs (for optional periphery)
- External HV-InterLock
- Expansion Module for customizing (GPIO, PWM, SPI, PIC, UART, ADC)

Communication Interface
- CAN
  - Main CAN, with CAN-FD up to 2 Mbit/s
  - Periphery CAN, for VI-Sensors
  - Isolated CAN, with CAN-FD up to 2 Mbit/s
- IsoSPI 2x for Measurement Module (LMM) up to 1 Mbit/s
- Bender Insulation Monitoring Devices (IMD)
- UART (TTL)
- UDS-conform CAN layer
- RTOS
  - Low response times
  - Easily portable to ISO 26262 ASIL-D pre-certified SafeRTOS

Memory Interface
- µSD-Card up to 4 GB
- EEPROM up to 1 Mbit

Rasum
- RTC + logging of events, errors and warnings

Chipset
- Measurement Analog Device LTC6811
- Redundancy Analog Device LTC6801

Communication Interface
- IsoSPI
- SafetyLoop (redundant path)

Performance
- Optimized low power consumption mode
- ±1 °C accuracy in temperature measurement
- Passive balancing procedure at 100 mA
- Cell voltage sampling time 100 ms (Down to 20 ms is possible, typical)

Specifications

LION Measure Module™

Voltage Measuring channels
- 5 - 12

Measuring range
- 0.7 V - 5.0 V

Accuracy
- ±1.5 mV

Temperature Measuring channels
- 0 - 3

Measuring range
- -40 °C - +85 °C

Accuracy
- ±1.5 °C

Dimensions L x B x H
- 140 mm x 100 mm x 9 mm

Weight
- ca. 56 g

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