

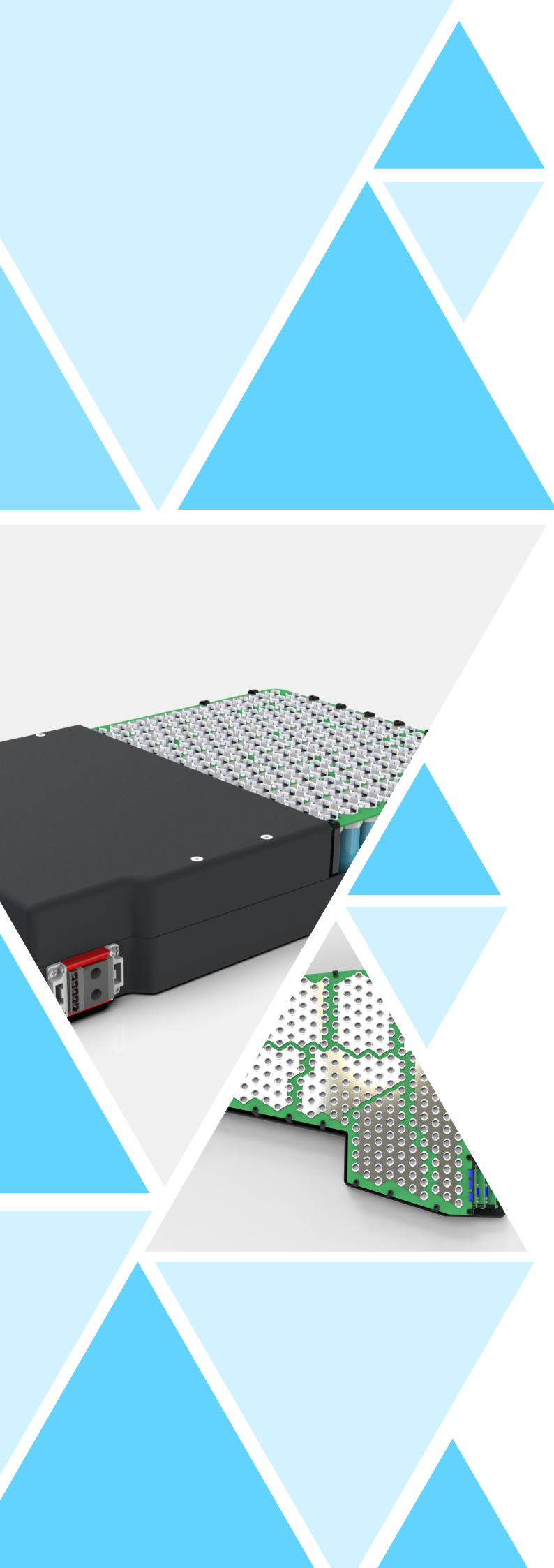


EMECTRIC
tailored → batteries

SAFE
FLEXIBLE
ECONOMIC

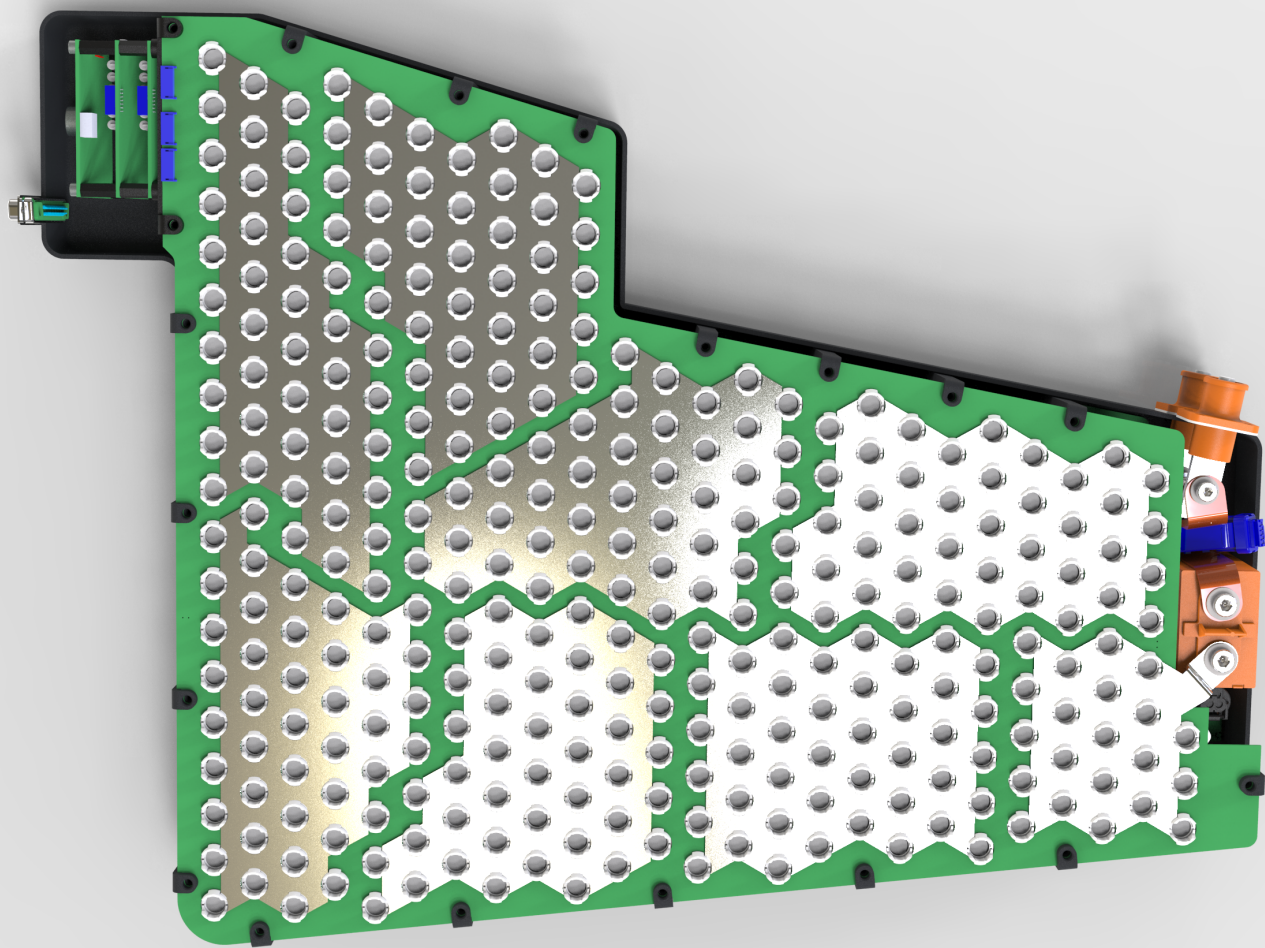
BATTERY SYSTEMS

WWW.EMECTRIC.COM



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- 5 Offer
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ABOUT US

TAKING FLIGHT: FLEXIBILITY ON THE CELL LEVEL

The EMECTRIC battery system was designed during the development of an electric propulsion system for gliders. Therefore, our battery system is characterized by the highest demands of performance, weight and safety standards. It was particularly important to us to be able to assemble geometrically different battery modules as flexibly as possible in order to make drive systems for different aircraft types possible. The final result? A lithium-ion battery system which can be completely tailored to each customer's unique requirements.

So whether you need a solution for aviation applications, e-mobility or other electrification projects, we have the solution for you.

We design the battery while you stay in control of the space – without having to invest in molds. The battery grows easily with your project - so you remain flexible throughout the project, until the final space is fixed.

With unique design capabilities, the flexible modular concept provides freedom for rapid prototyping and small-scale production with minimal initial investment.

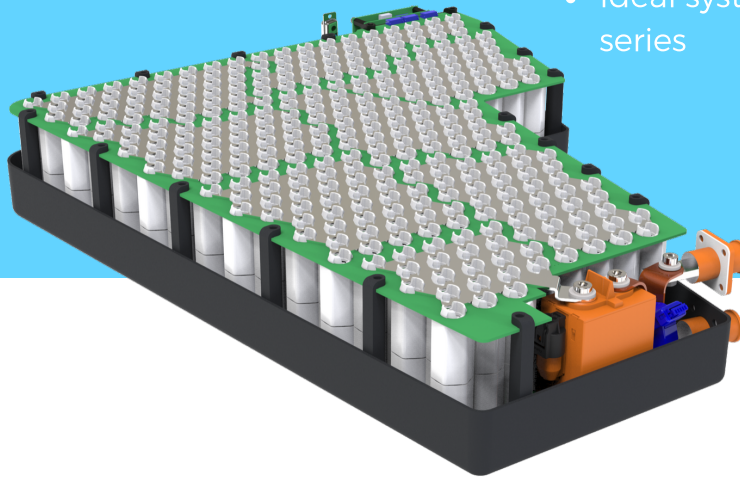
BATTERY SYSTEM TAILORED TO YOUR NEEDS

SAFE

- Stable and solid structure
- Single cell fuses
- High protection against TR cascading
- Battery Management System

FLEXIBLE

- Modules are individually separable from the overall system
- Perfect space utilization through cylindrical cells
- Modular design allows individual system topology
- Ideal system from prototype to series



POWERFUL

- Gravimetric energy density: 200 Wh/kg (high current) up to 233 Wh/kg (high energy) at system level
- Volumetric energy density: 350 Wh/l (at system level)
- Global standard of Lithium-Ion cylindrical cells - upgrade to new cell chemistries as soon as they are available

OPTIMAL INTEGRATION AND COST

- CAN bus freely configurable
- Optional cockpit instrument for visualization of the battery data
- Electrical connections flexible - power to data
- Individual housing and mounting types

Minimal initial investment for prototypes

DATA SHEET

TAILORED BATTERY

Nominal capacity According to customer requirements

Voltage (nom.) 24 to 1000+ V

Module configuration Individual

Gravimetric energy density 200-230 Wh/kg

Cell technology Lithium-Ion (NCA/NMC)

Cell type Cylindrical cells 18650, 2170

Measurements and weight According to space requirement

Battery-Management-System

- Single voltage
- Temperature
- SOC Estimation
- SOH Estimation
- Galvanically isolated CAN interface
- Overcurrent protection
- Protection against overcharging, deep discharge
- Cell Balancing
- Freely configurable

Safety features Single-cell fuses, cells embedded in non-flammable matrix, safety enclosure, main contactor, high-end connector

Max. continuous discharge 3C

Max. continuous charge 1C

Temperature management Passive or active

Lifetime (up to 80% capacity) Up to 3.000 cycles

Operating temperature -5 to +50°C (passive cooling)

WE ACCOMPANY YOU THROUGH THE WHOLE PROJECT

ENGINEERING



Concept/
Design

RAPID PROTOTYPING



Fast and economic
market entry

QUALIFICATION



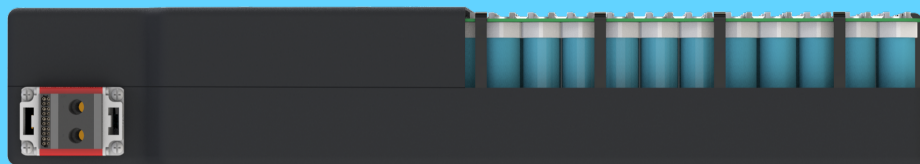
Documentation,
Preparing packs for
certification tests

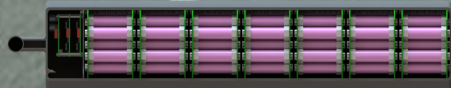
SERIES PRODUCTION



Experiences with the
prototype can be easily
transferred to series
production

SERVICE





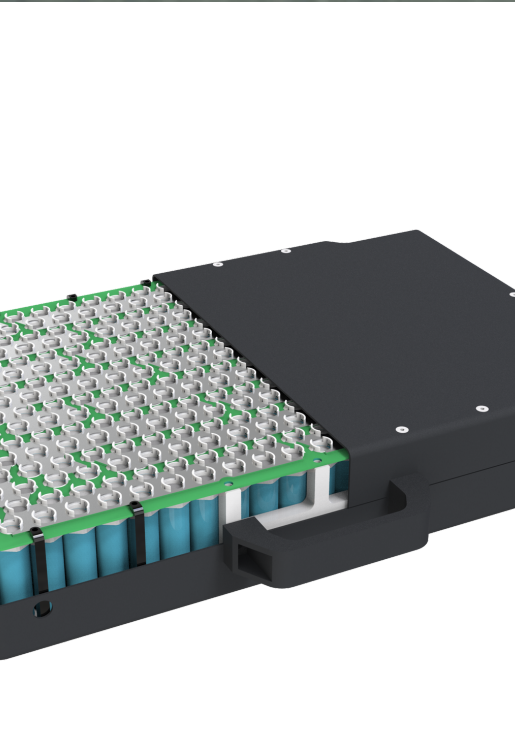
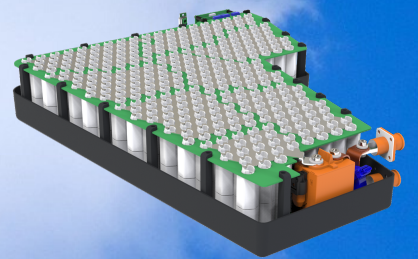
E-Mobility

Maximum flexibility with low investment costs



Aviation

Highest safety, low weight and perfect space utilization



Shipping industry

Highest safety with maximum power





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