

Power electronics

Engineering support across battery systems, charging behavior, power-stage integration, and embedded monitoring. We connect electrical requirements with software control, telemetry, and measured system behavior.

WHAT WE CAN DO

- 01

Battery monitoring

Measurement interfaces, state reporting, diagnostic data, and battery-management integration.
- 02

Charging control

Explicit state machines, operating limits, fault handling, and charging-system coordination.
- 03

Power-stage integration

Control interfaces and system integration for conversion and power-delivery requirements.
- 04

Telemetry & profiling

CAN or local telemetry, useful instrumentation, and measurement-led power investigation.

TECHNOLOGIES & WORKING AREAS

Battery management / Charging state machines / CAN telemetry / Power profiling / Embedded control

A CLEAR PATH TO HANDOVER.

WHAT YOU RECEIVE

- Agreed electrical and embedded design deliverables
- Control-state and interface documentation
- Telemetry and diagnostic implementation
- Bench test procedures and measured results
- Integration notes and technical handover

HOW THE WORK PROGRESSES

- 01 **Establish limits**
Electrical ratings, battery chemistry, and behavior.
- 02 **Define control**
States, interfaces, limits, and fault responses.
- 03 **Integrate & instrument**
Connect monitoring and control on the bench.
- 04 **Verify operating cases**
Normal, boundary, and fault conditions.

RELEVANT ENGINEERING

BMS Charging Station

JK-BMS telemetry over CAN, ESP32 gateway, and charging-state control.

ESP32 Battery SoC/SoH Monitor

On-device battery-state models integrated with sensors and a dashboard.

TO SCOPE YOUR PROJECT

- / Electrical architecture and operating ratings
- / Battery or power-stage documentation
- / Control and protection requirements
- / Measurement equipment and test constraints

LET'S DISCUSS YOUR PROJECT

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