HORIBA MIRA

TEVVA Battery Pack Performance and System Integration Validation

Case Study Overview

HORIBA MIRA identified two likely cells which were characterised in our Advanced Battery Development Suite to develop BMS “digital twin” data for simulation use.

The customer built packs in parallel to maintain timing, after which integration with BMS and testing/validation was undertaken.

Through HORIBA MIRA’s Powertrain Test and Development Centre, rig testing (battery / hybrid BMS, VCU, EDU, OBC + HiL (truck digital twin) various system issues were quickly identified that made the solution more robust prior to build.

Successes and Benefits

- Only one module used to simulate the whole pack, saving significant cost / time
- Early calibration of BMS with one module was robust and accurate when integrated into the pack, giving 90% usable energy from outset of pack level development
- Full pack conditioning over the environmental range identified optimal fast charge rate
- HiL rig testing quickly identified a number of system issues that were more easily and quickly resolved in this environment