

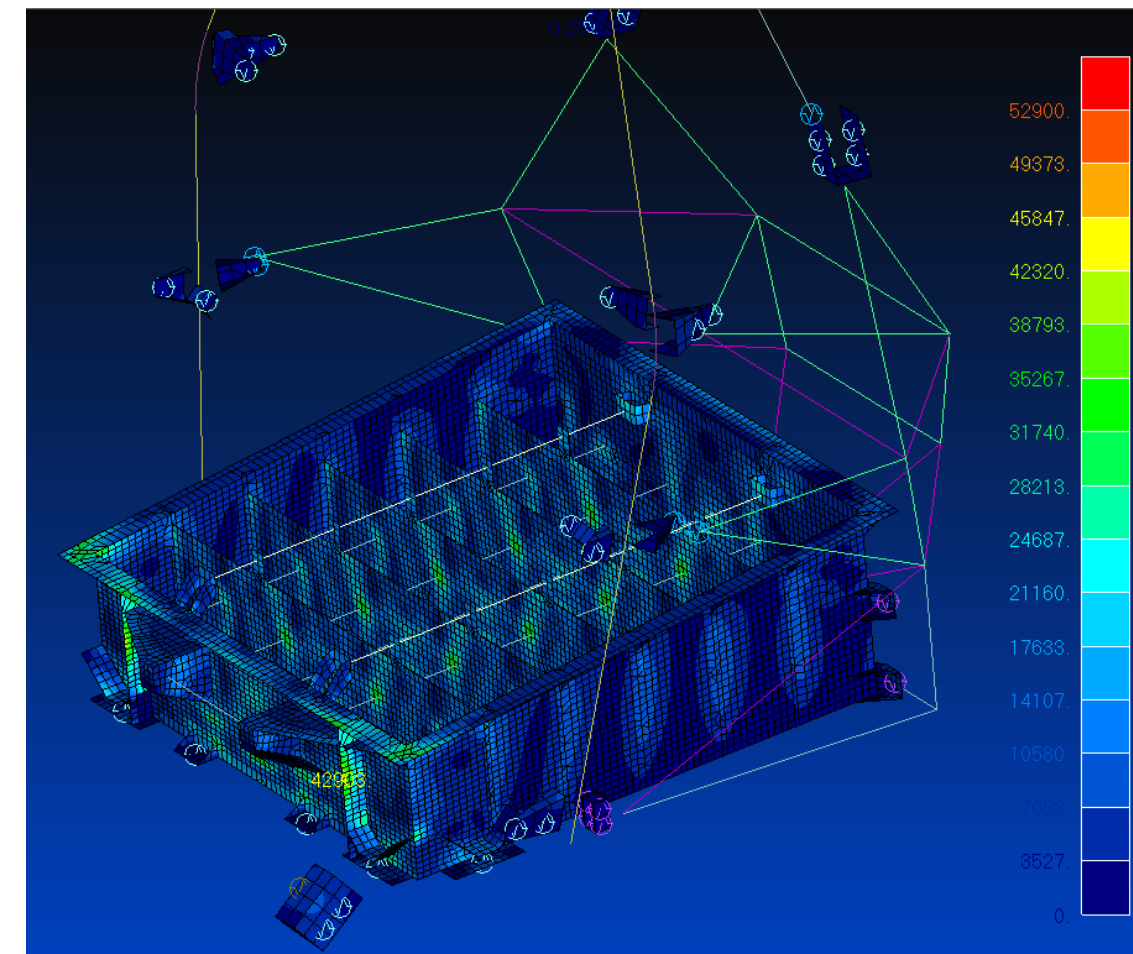


WR-218e Battery

Battery Pack Specs

- Nominal Voltage: 216 VDC
- Capacity: 31 Amp-hours
- Energy: 6.70 Kilowatt-hour
- Built from 120 cell modules (60s2p)
- Each module is 1s5p and has integrated temperature sensors and cell level fuses
- Student designed Battery Management System Priority Power Multiplexer for seamless switchover from LV Batt to the DCDC
- Onboard diagnostics MCU that measure all shutdown circuit signals

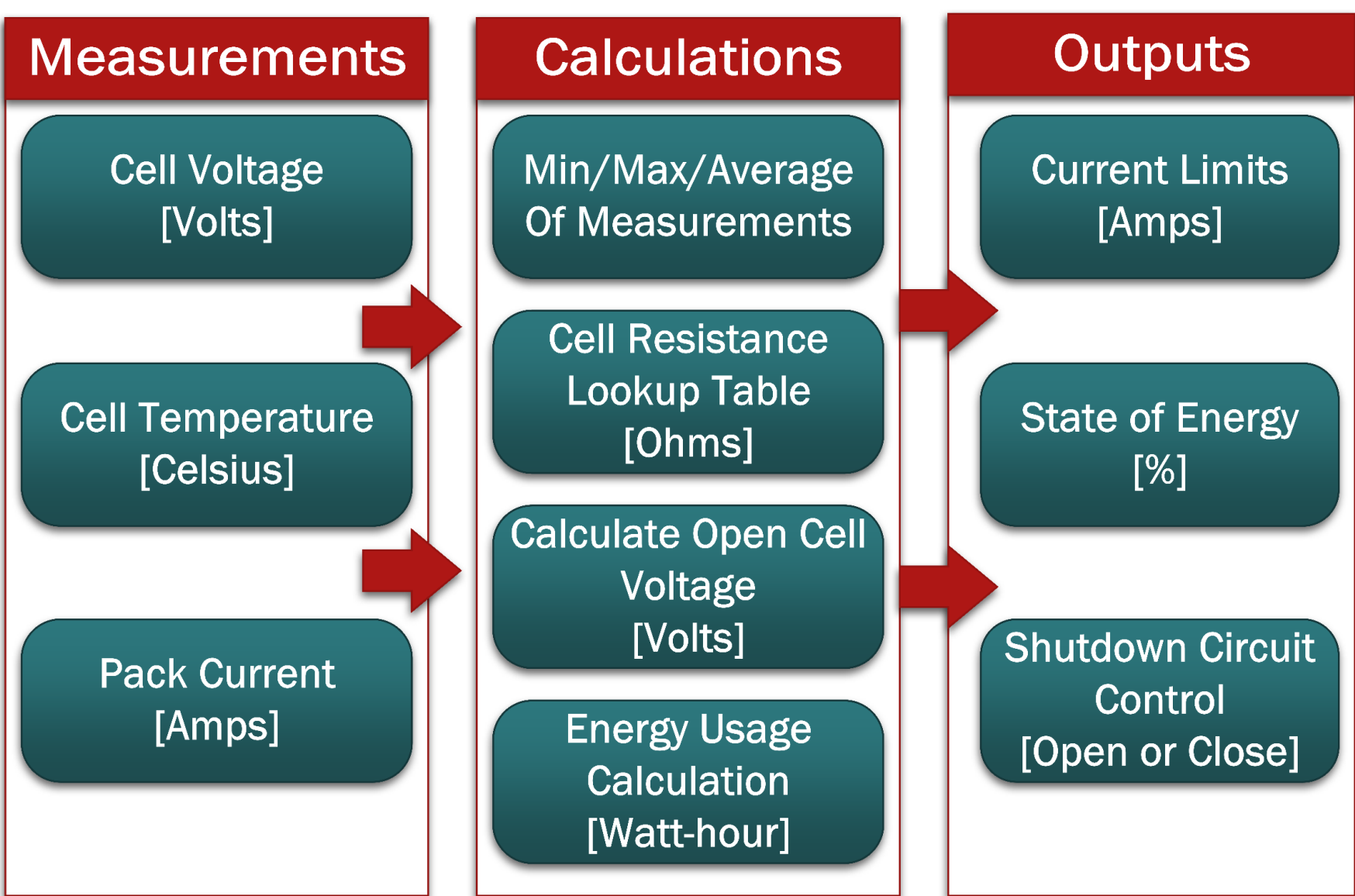
Femap Analysis of Accumulator, 40G Longitudinal Forward



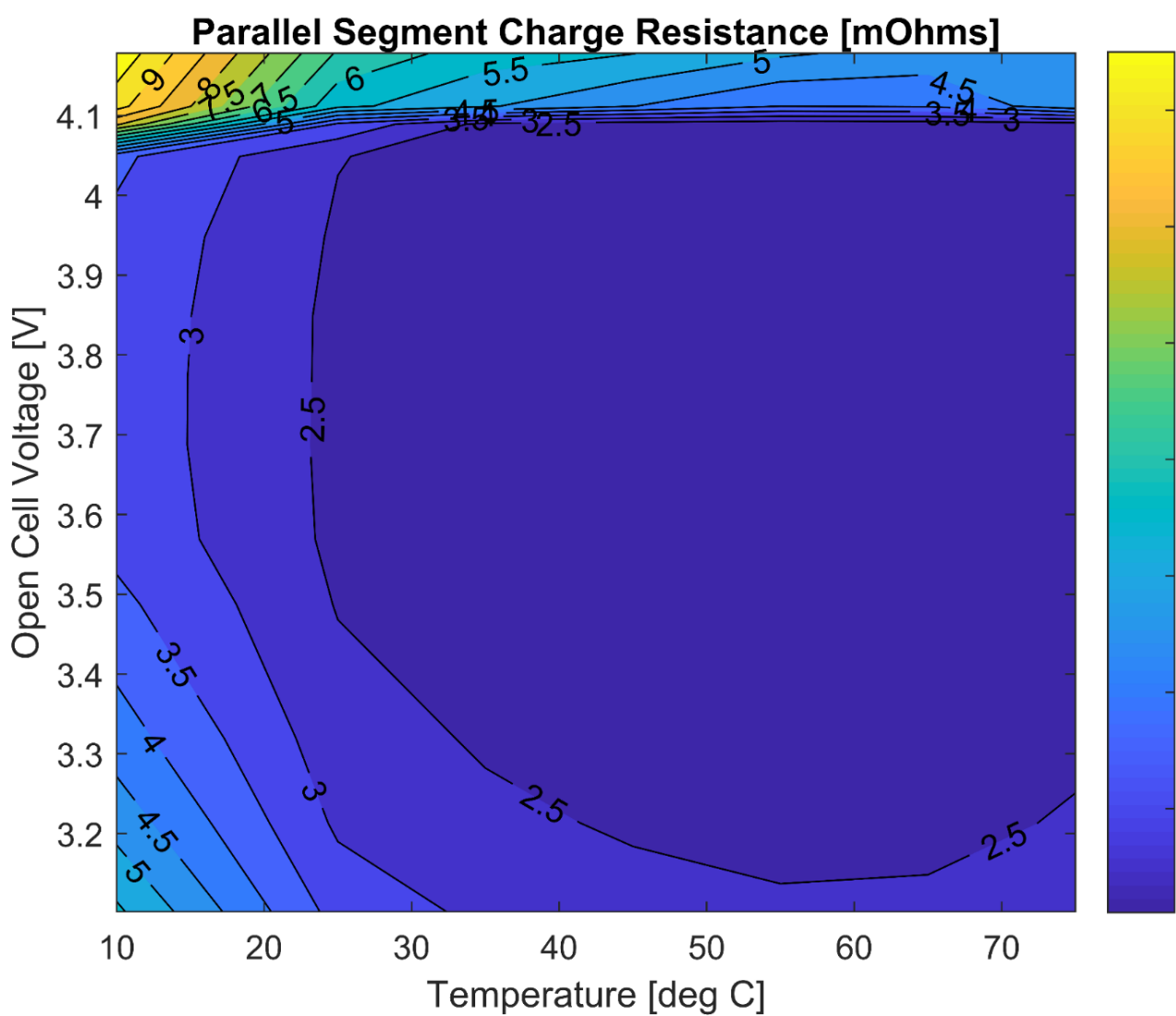
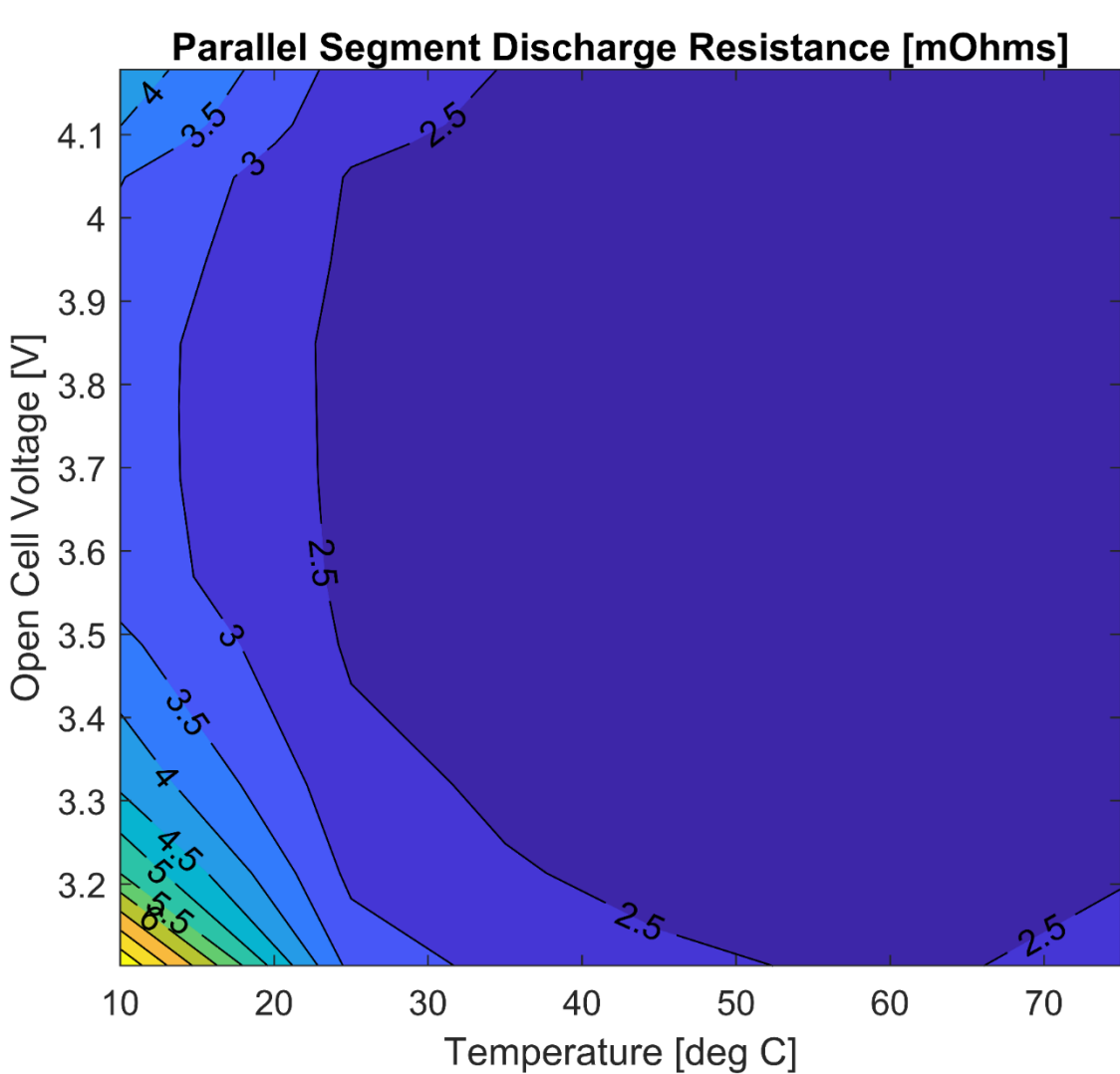
Battery Management System

- Cortex-M4 MCU with the LTC6811 BMS IC
- Monitors cell voltages, cell temperatures and pack current
- Makes sure the cells are within their safe operating limits
- Reports Troubleshooting codes to quickly troubleshoot fault scenarios

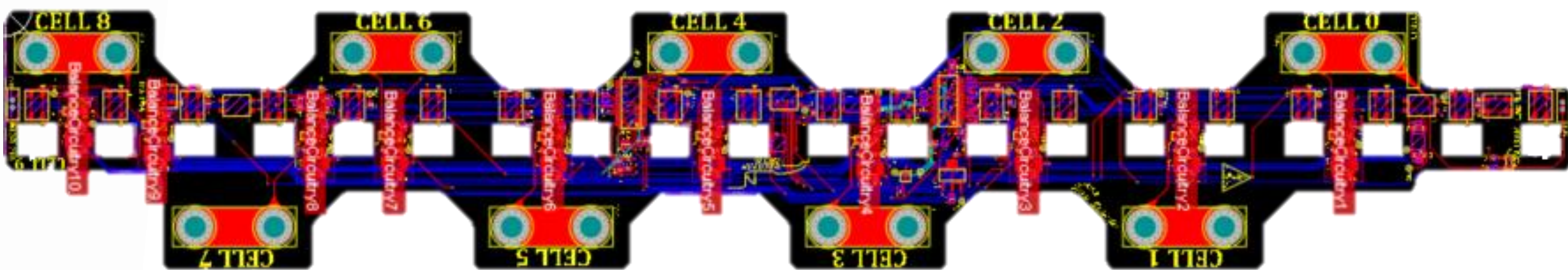
Battery Management System Dataflow



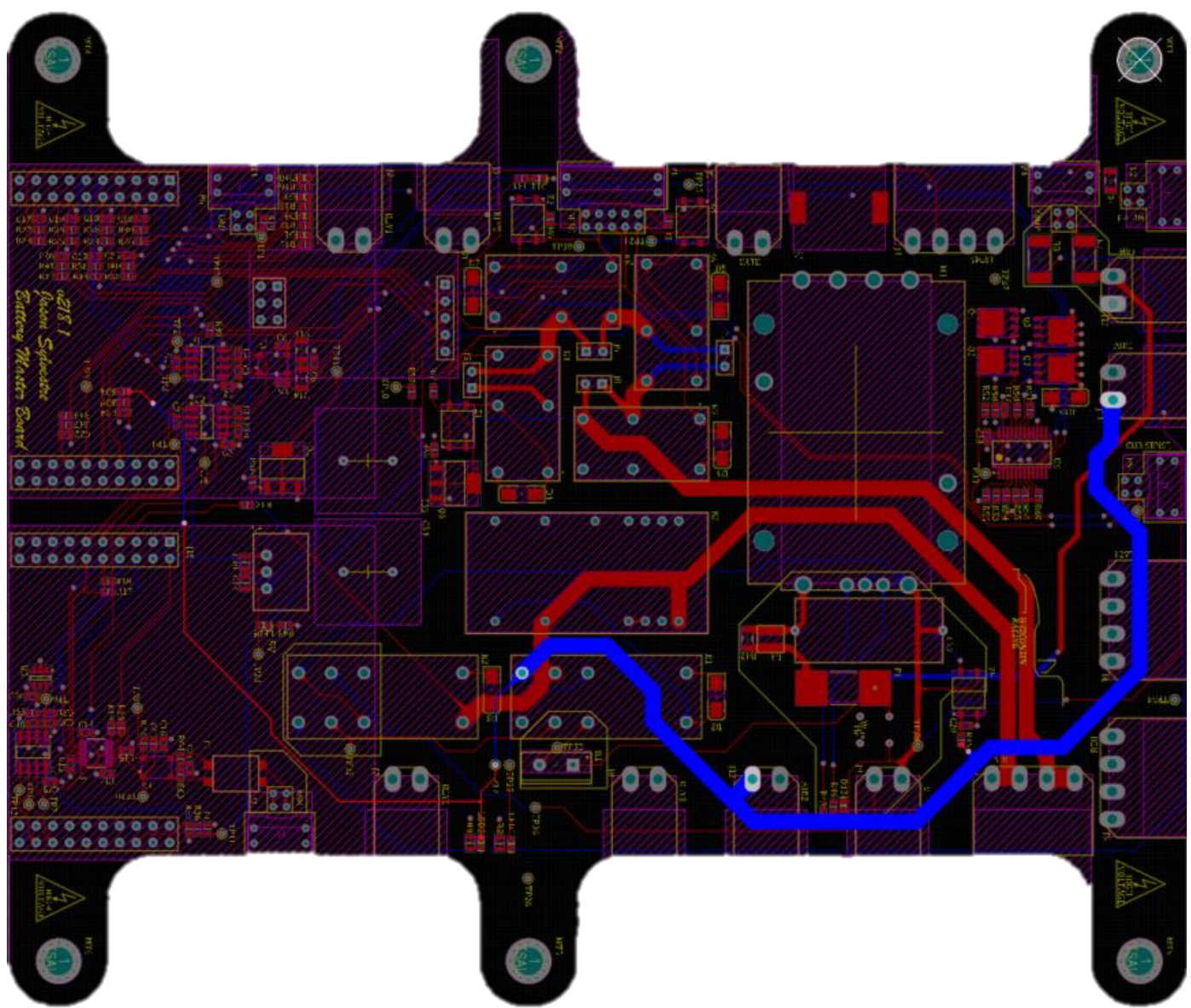
Cell Resistances



Battery Slave Board



Battery Master Board



Battery Pack Sponsors

