

FPGA

Aerospace

Project
Management



Systems
Engineering



Electrical
Engineering



Quality
Assurance



BATTERY UNIT FPGA CODE DEVELOPMENT

APPROACH

- Assess partially complete client FPGA code
 - > Perform gap analysis on client code
 - > Communicate and gain buy-in before starting code rewrite
- Partner with client to define new functionality and document FPGA requirements
- Independently manage FPGA code so client can focus on hardware design
- Create FPGA code using best practices for documentation, comments, and notes so client can easily read and modify code if desired

RESULTS

- Architected and diagrammed code to lay foundation and communicate planned FPGA code
- Defined FPGA serial communication protocol
- Coded FPGA modules and simulation test benches
- Verified FPGA code through simulation to ensure it met requirements
- Delivered complete code package, code architecture, state machine diagrams, and verification test reports

KEY TOOLS & TECHNOLOGIES

- Microsemi RTAX-S/SL family
- Libero design suite
- VHDL (Very High-Speed Integrated Circuits Hardware Description Language)
- EAR restrictions

ALTEN TECHNOLOGY