

Avicell Converter: Fuel Cell Booster for Airplanes

Bidirectional Half-bridge Converter

- 850 V, 500 A
- 100 kHz Multi-phase Boost Converter
- FreeRTOS Supervisor and Energy Manager
- FPGA-based Control Loop and Safety
- Avionic 28 V Analog and Digital Interface
- Isolated CAN Control

DCDC converter prototype for fuel cells and HV-board net application. Various implemented control loops can connect different power sources and sinks in the aircraft. Limits for voltage, current and parameters for droop control allow autonomous operation with or without a master controller.