



DC Power

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Power Solutions

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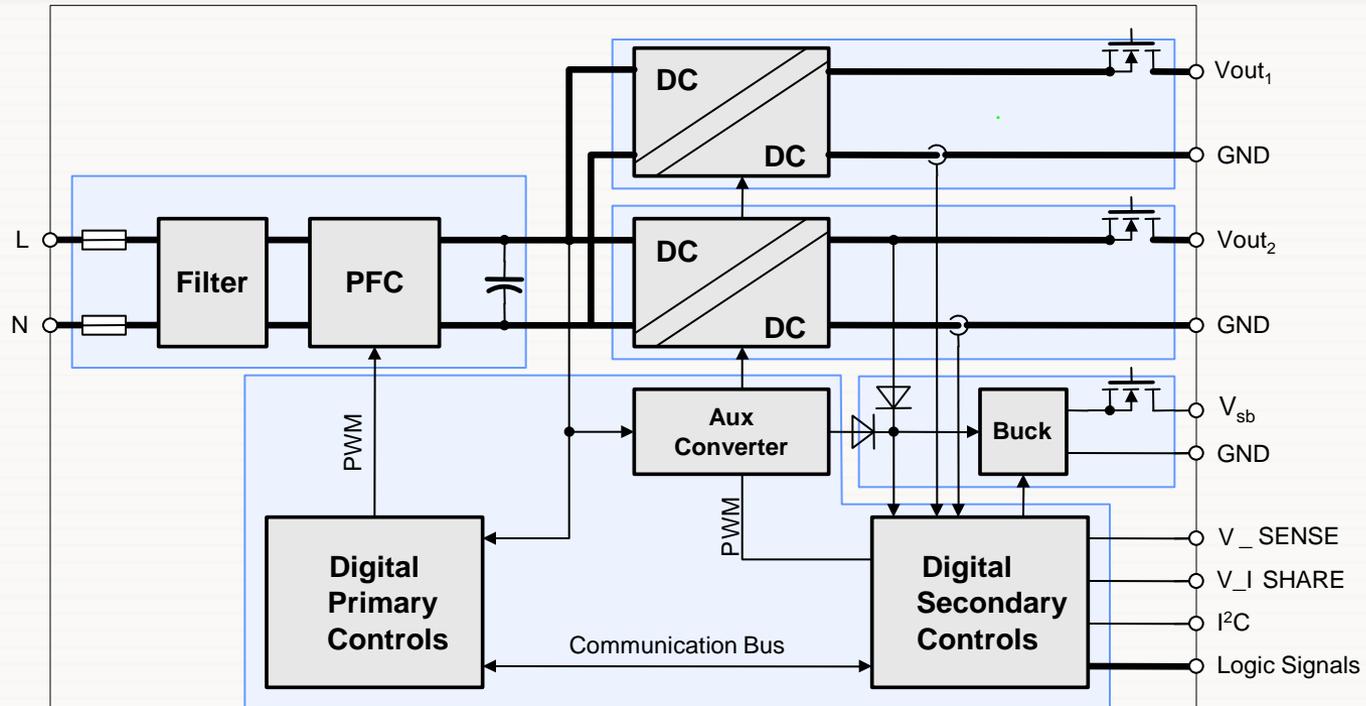
Power-One Overview

- 40+ Years in AC to DC, DC to DC and Inverters
- Key Markets:
 - Industrial
 - Data Server & Storage
 - Datacom / Network
 - Transportation
- Division of ABB

“X” KW Bulk Power for Hydrogen Generation

- Standard AC Input
 - 220 VAC Single Phase
 - 480 VAC Three Phase
- Common Characteristics:
 - Robust components to handle AC surges and load transients
 - Output DC controllable and variable across load envelope
 - V_o to V_{max} , I_o to I_{max} controllable to any point on system load profile
 - Wide controllability limits efficiency possible
 - Parallel for scalability of design

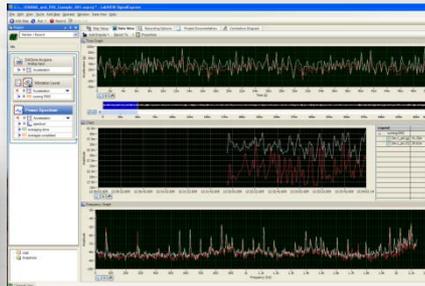
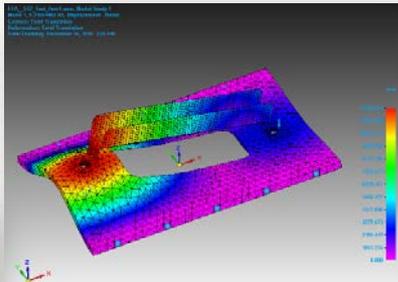
Electrical Design



- Full digital control delivers flexible, accurate, reliable performance

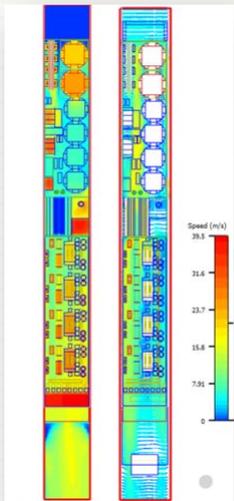
Mechanical Design

Stress and Vibration Simulation



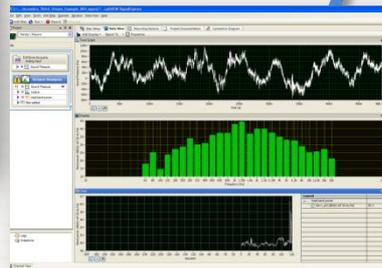
Acoustic Measurements

Thermal Simulation

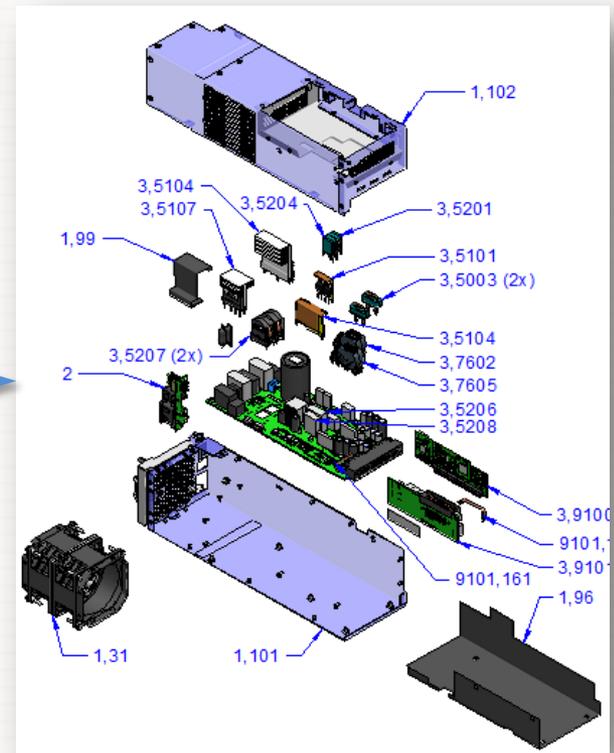


Airflow, Pressure and Temperature Measurement

Linear and Rotational Vibration and Shock Measurements



Final Mechanical Design



Increasing Reliability and Reducing Cost

- Modularized Power with Standardized Requirements
- Robust Requirements Definition process with PS manufacturer, to include system requirements
- Specification linked to RD requirements
- Robust test program to verify PS performance... and test cases in system application to validate system performance

Flexible Remote Power Applications



- Site in Jordan with GENSET and solar panels
- Can be remotely performance monitored with GUI and web application

Questions?