OPAL-RT assists avionics system supplier in testing controllers by providing high quality and reliable test benches. For sea, land, air and space applications, OPAL-RT provides real-time simulation solutions that deliver ROI, time-saving and quality improvement to the most sophisticated aerospace and defense projects.

**Custom Hardware-In-the-Loop Solution**

**OPAL-RT Aerospace Test Bench**
- From software to hardware
- From project management to commissioning
- From blueprint to success

**A Complete Aerospace HIL Test Bench**

**Hardware**
OPAL-RT’s unique approach integrates commercial-off-the-shelf technologies to offer an unmatched combination of performance, openness, and affordability. All hardware platforms are based on a modular and flexible design that can be fully customized to meet specific IO requirements.

**Software**
OPAL-RT incorporates an array of software technologies providing a complete and integrated environment:
- **RT-LAB**: Flagship software allowing users to easily convert model-based design into real-time application
- **TESTDRIVE**: Versatile and intuitive HMI including a powerful test scripting toolbox
- **Orchestra**: Framework for heterogeneous co-simulations, intended to work under real-time constraints

**Project Management**
OPAL-RT demonstrates its commitment to quality & customer satisfaction with its ISO 9001:2008 certification and stays a step ahead by following standards & requirements of the aerospace industry design review process to reduce time to market & costs
Related Projects

- Air Management and wing anti-icing system
- Auxiliary Power Units (APU)
- Auto-pilot system
- Satellite positioning system
- Flight simulator core computing for pilot training
- Satellite solar panel electrical motor positioning simulation
- Standardization test bench
- More-Electric Aircraft and All-Electric Ships
- FADEC

Success Stories

**EMBRAER**

The development of the EMB-170 Jet has benefited from an expanded modeling and simulation capability provided by OPAL-RT. The aerodynamics model and its accuracy became an important part of the design development phase. OPAL-RT’s unique expertise allowed EMBRAER to accelerate product development time by matching the structure of the Simulink model and flight test data. In addition to the OPAL-RT Real-Time Simulator, EMBRAER selected OPAL-RT’s DINAMO application for model trimming and parameter estimation during the product development phase. EMBRAER is currently using OPAL-RT Real-Time SIMULATOR in the development of new flight simulator technologies.

**LIEBHERR**

Liebherr selected OPAL-RT’s Real-Time simulator to test and validate the integrated air management system control and the test integration with the avionics. More than 5 different Liebherr air management programs are currently using OPAL-RT’s simulators for tests and validation all around the world.

Our Customers (partial list)

About OPAL-RT TECHNOLOGIES

OPAL-RT is the world leader in the development of PC/FPGA based Real-Time Digital Simulator, Hardware-In-the-Loop (HIL) testing equipment and Rapid Control Prototyping (RCP) systems to design, test and optimize control and protection systems used in power grids, power electronics, motor drives, automotive industry, trains, aircrafts and various industries, as well as R&D centers and universities.

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