

LAB-VOLT/OPAL-RT 2-kW Real-Time DFIG Laboratory Kit

OPAL-RT real-time simulator solutions make it possible to learn, study and test power electronics control, and fully exploit Lab-Volt's 2kw DFIG Laboratory kit's possibilities.



The LAB-VOLT/OPAL-RT 2-kW Real-Time DFIG Laboratory kit includes the hardware, software and accessories necessary to design and test hands-on practices and experiments in the fields of Electrical Machinery, Power Converter applications and Wind Energy Conversion Systems (WECS). This Laboratory has been seamlessly integrated to represent a valuable asset for your training, education or research program.

By using OPAL-RT's powerful real-time simulation tools along with Lab-Volt's "Renewable Energy" kit, users will be able to design, model and implement from simple to complex real-world control strategies in the field of power electronics and its applications.

Product Highlights

Control strategies design using RT-LAB and MatLab/Simulink/SimPowersystems/Stateflow.

RT-LAB, fully integrated with MATLAB/Simulink®, is the open Real-Time Simulation software environment that has revolutionized the way Model-based Design is performed.

Total integration of Labvolt laboratory with OPAL-RT OP5600 simulator and OP8660 HIL Controller .

The OP5600 is a complete simulation system comprising a powerful target computer, a flexible high-speed front-end processor and a signal conditioning stage. With its multiple parallel cores, the OP5600 has the capacity to run, in real time, elaborate Matlab models that can represent a complex physical system, its associated controllers or both. The OP5600 interfaces to real world systems through its comprehensive digital and analog I/Os.

The OP8660 features high voltage and current probes specifically customized for Lab-Volt's Laboratory kit power ratings. The OP8660 can also output the firing pulses to control two IGBT inverter modules and can read two ABZ position encoders. Finally a wide array of digital and (low power) analog I/Os are available for the user.

Step-by step tutorial and operational demonstration.

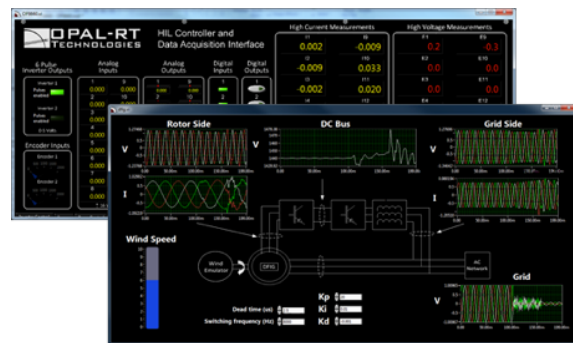
Made and performed by students for students under OpAL-RT supervision, full documentation is provided to go as fast as possible into the applications.

The operational demo includes:

1. Control of Lab-Volt's Dynamometer
2. Control of Lab-Volt's Inverter
3. Control of Lab-Volt's WRIM
4. Advanced control technique of the DC-link bus.

Visualization and control with built-in user interface

All models come with an intuitive visualisation and control interface allowing users to easily operate, calibrate, change control parameters and even program automatic testing and data recording.



Worldwide OPAL-RT support provided everywhere, anytime

All Opal-RT customers can rely on experienced applications engineers located all around the world, trained and experienced with the Labv-Volt laboratory application.



From Imagination... to Real-Time

OPAL-RT KIT SPECIFICATIONS

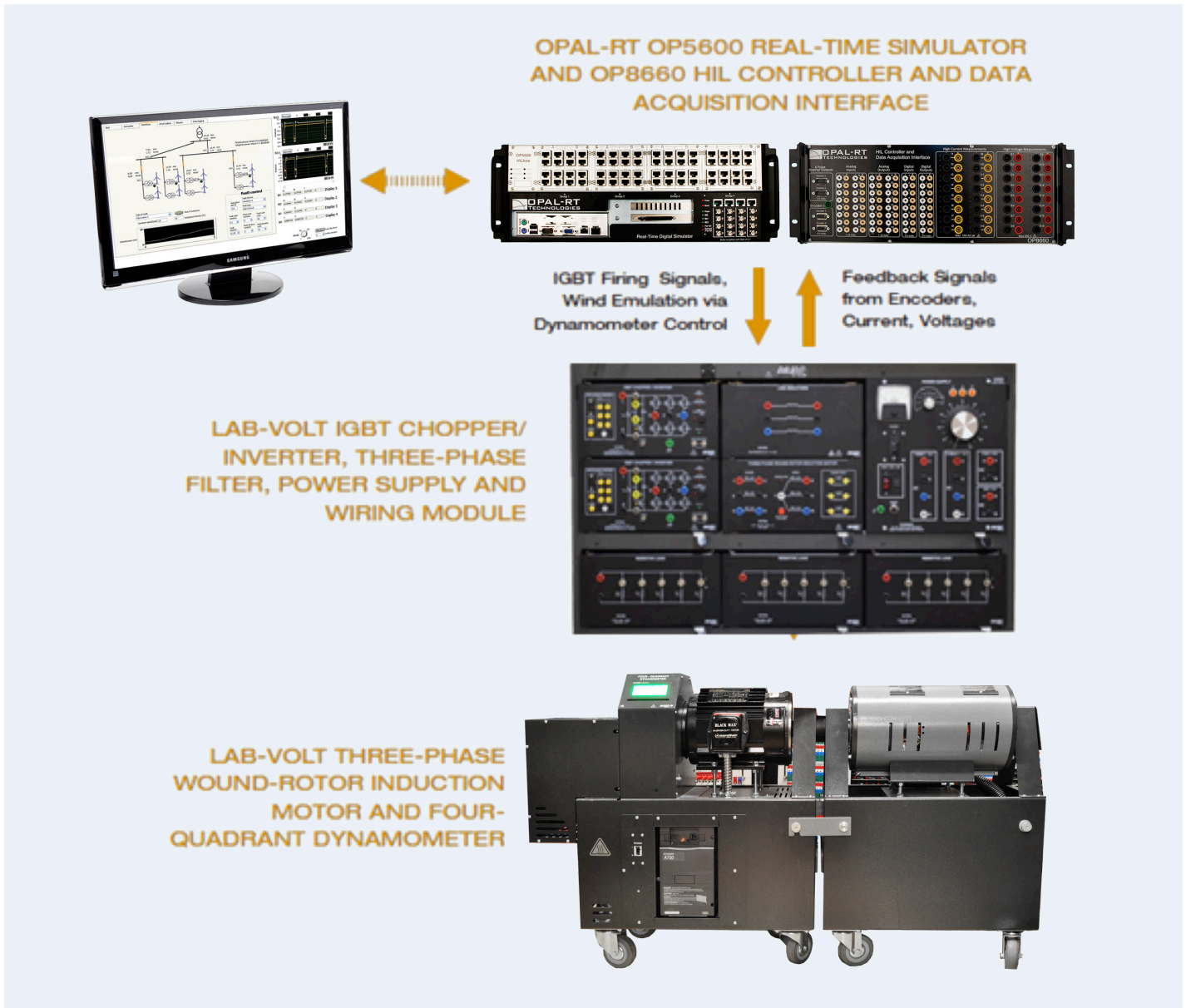
Hardware	1X OP5600 Real-Time Digital Simulator 1X OP8660 HIL Controller and Data Acquisition Interface
Software	RT-LAB suites for LABVOLT Laboratory (RT-LAB, RT-EVENTS, TESTDRIVE)
Courseware	2 kW DFIG LABVOLT/OPAL-RT Tutorial
Optional	On-site training Web training

LABVOLT KIT SPECIFICATIONS

2-kw DFIG Laboratory kit (8013-A) Including (partial list):

1X 8505 W.R.	Inducton Motor DFIG
1X 8506 W.R.	Motor Module DFIG
1X 8525 -00	Power Supply

Typical Configuration



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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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