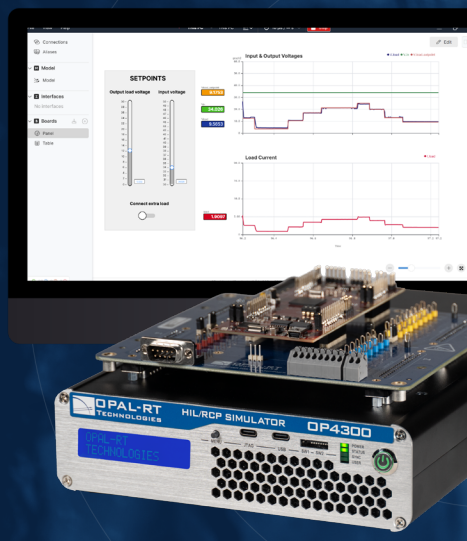
OPAL-RT TECHNOLOGIES

Bring power electronics hardware-in-the-loop (HIL) testing into your lab, without the complexity.

Our HIL Starter Kit helps you teach real-world power electronics in minutes, instead of months.



THE CHALLENGE

Students graduate with theory, but no real world experience.

Most teaching labs struggle to adopt hardware-in-the-loop (HIL). This is because HIL is:

- ✕ expensive to deploy
- ✕ complex to implement
- ✕ risky for students

OUR SOLUTION

Presenting the OPAL-RT HIL Starter Kit.

Work with a compact, all-in-one platform that connects real control hardware to real-time power electronics models.

Be up and running in minutes

No setup overhead.

No previous HIL experience required

Designed for first-time users.

Safe for experimentation

No risk to your hardware.

Compact & portable

Fits in any lab environment.

CHOOSE US

OPAL-RT is trusted by educators worldwide. Contact us to request a demo and start teaching real-world power systems today.

- ✓ serving 100+ teaching labs and universities
- ✓ control loops at 1 µs time steps
- ✓ wide range of power electronics applications

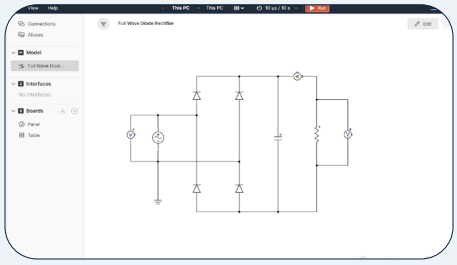
https://www.opal-rt.com/hil-starter-kit-lp/

From model to control to validation, all in one platform.

OPAL-RT TECHNOLOGIES

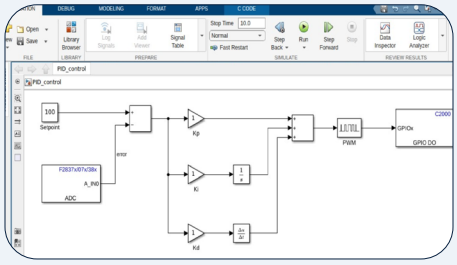
SYSTEM ARCHITECTURE & WORKFLOW

Real-time simulation, control, and validation in one unified workflow.



1) Configure your real-time simulator

Model your power electronics in schematic editor.



2) Configure your control prototype

Deploy your algorithm using MATLAB/Simulink.

3) Run your scenarios on your Host PC

Automate testing using Python API.

KIT SPECIFICATIONS

Hardware overview		
OP4300 — REAL-TIME SIMULATOR	**OP8667 — CONTROL PROTOTYPE (RCP)**	**INCLUDED**
AMD Kria™ K26: ✓ 32 Digital Inputs / 32 Digital Outputs ✓ 16 Analog Inputs / 16 Analog Outputs	TI C2000™: ✓ 16 Analog Inputs / 6 Analog Outputs ✓ 28 Digital Outputs / 15 Digital Inputs ✓ SPI & UART ✓ Quadrature encoder inputs ✓ Resettable via simulator	✓ Cables ✓ Software ✓ Courseware ✓ Optional transport case

Other HIL Starter Kit benefits			
INCLUDED TEACHING EXAMPLES	**DESIGNED FOR LAB INTEGRATION**	**ACADEMIC PRICING**	**WARRANTY & SUPPORT**
✓ DC-DC Buck converter ✓ DC-DC Boost converter ✓ AC-DC conversion with Power Factor Correction (PFC) ✓ Regulated DC-AC inverter with switchable RL load ✓ DC-AC inverter with PMSM motor control	✓ Pre-built models and experiments ✓ Structured lab exercises ✓ Ready-to-use teaching material	✓ Entry-level systems designed to fit academic budgets	✓ 1-year warranty ✓ 30-day return policy

LET'S GET IN TOUCH

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opal-rt.com