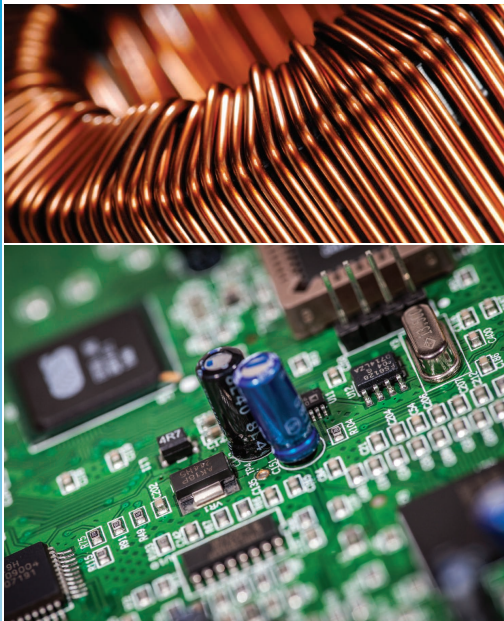


LEADING *the world in* POWER ELECTRONIC SIMULATION

“PSIM has a comprehensive library of generic power electronics components, signal sources, control blocks, and measurement functions. It is quick and easy to set up, simulate, and probe even a very complicated system ... It became an indispensable tool that I am turning to on a daily basis.”

—Richard Redl, Redl Consulting



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PSIM[®]

Simulation environment for
POWER ELECTRONICS AND MOTOR DRIVES

Exceptional Performance

- Fast simulation speed
- Intuitive and easy to use
- Comprehensive motor drive library
- Flexible control simulation
- Custom C code
- Automatic code generation for DSP hardware
- Link to 3rd-party software
- Design solutions for motor drive and HEV systems

For more information and to purchase: WWW.POWERSIMTECH.COM

With fast simulation and friendly user interface, PSIM provides a powerful and efficient environment for all your power electronics and motor drive simulation needs.

FRIENDLY USER INTERFACE

PSIM's graphic user interface is intuitive and very easy to use. A circuit can be set up and edited quickly. Simulation results can be analyzed using various post-processing functions in the waveform display program Simview. In addition, PSIM is interactive. It allows users to monitor simulation waveforms and change parameters on-the-fly. This makes it extremely easy to fine tune a system until desired performance is achieved.

FAST SPEED AND ROBUST ENGINE

PSIM is one of the fastest simulators for power electronics. It is capable of simulating large and complex power converter and control systems in a short time. Besides, PSIM's simulation engine is very robust, and it does not have the convergence problem that many other simulation software suffer.

FLEXIBLE CONTROL SIMULATION

One of PSIM's key strength is its ability to simulate

complex control circuitry. A control circuit can be represented in various forms: analog op. amp. circuit, s-domain or z-domain transfer function block diagram, C code, or in Simulink®. The control library provides a comprehensive list of function blocks, making it possible to build any control circuit quickly and conveniently.

AC SWEEP ANALYSIS

AC sweep analysis (or frequency response analysis) is an important tool in designing control loops. While many simulation software require a circuit to be represented by average models first before performing ac sweep, PSIM is capable of performing ac sweep with the circuit as it is in switchmode. This makes it particularly convenient to determine circuit impedances, open-loop frequency response, and closed-loop bandwidth and stability.

CUSTOM C CODE

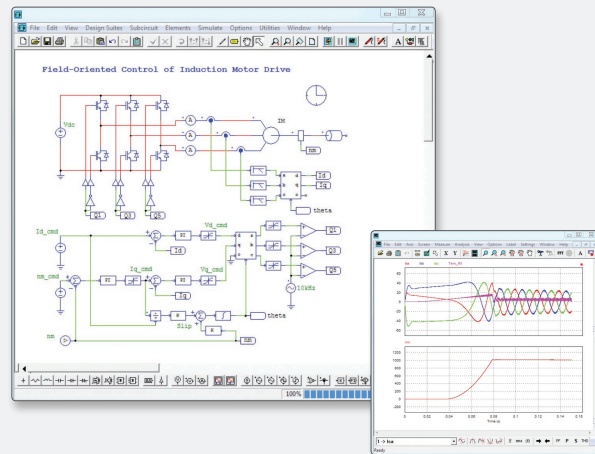
PSIM supports custom C code through a built-in C interpreter and external DLL blocks. This allows users to implement virtually any model or control circuitry in C code, and significantly expands PSIM's flexibility.

ADD-ON MODULES

PSIM provides a list of add-on Modules to address specific needs in various applications, such as motor drives, digital control, renewable energy, DSP and FPGA support, and controller design. These Modules give users the flexibility to tailor PSIM for ones' own needs, and significantly enhance PSIM's capability.

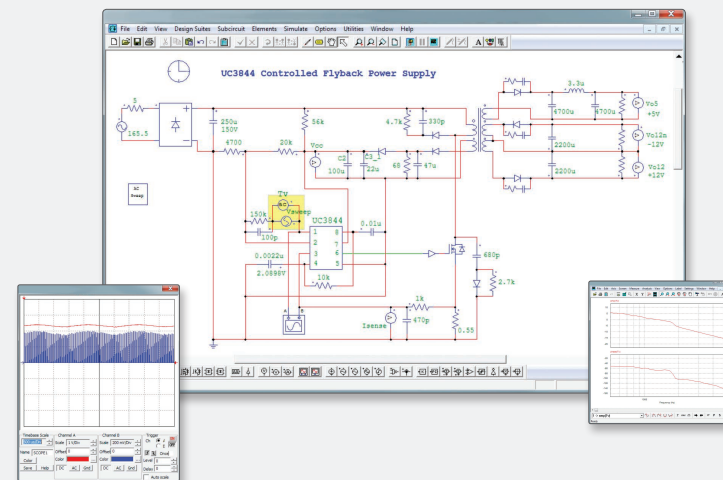
APPLICATIONS

- Switchmode power supplies
- Electric motor drives
- Industrial and consumer electronics
- Power management
- Renewable energy
- Automotive and transportation
- Aerospace and defense



Motor Drive System: The example above shows an induction motor drive system with field-oriented control. With built-in blocks such as abc-dqo transformation blocks, PI controllers, and low-pass filters, the setup of a motor drive system in PSIM is very simple and the schematic layout is easy to follow.

AC Sweep: The example below shows the measurement of the voltage loop bandwidth of a multi-output flyback converter, with the ac perturbation source highlighted in yellow. The ability to determine the control loop performance in switchmode circuit is a powerful tool for controller design and stability analysis.



ADD-ON MODULES

- Motor Drive:** For adjustable speed drives and motion control
- Digital Control:** For digital control systems in z-domain
- SimCoupler:** For co-simulation with Matlab/Simulink®
- Thermal:** For quick power loss calculation
- Renewable Energy:** For solar power, wind power, and battery storage systems
- HEV Design Suite:** For designing hybrid electric vehicle powertrain systems
- Motor Control Design Suite:** For design of ac motor controllers
- SimCoder:** For automatic code generation
- F2833x and F2803x Targets:** For code generation for Texas Instruments' F2833x and F2803x series DSP
- MagCoupler and MagCoupler-RT:** For co-simulink with JMAG® and link to JMAG-RT files for finite element analysis
- ModCoupler-VHDL and ModCoupler-Verilog:** For co-simulation with ModelSim® for VHDL and Verilog support
- PsimBook Exercise:** Unified documentation and simulation environment

ADDITIONAL SOFTWARE

SmartCtrl and SmartCtrl Pro: For analog and digital controller design