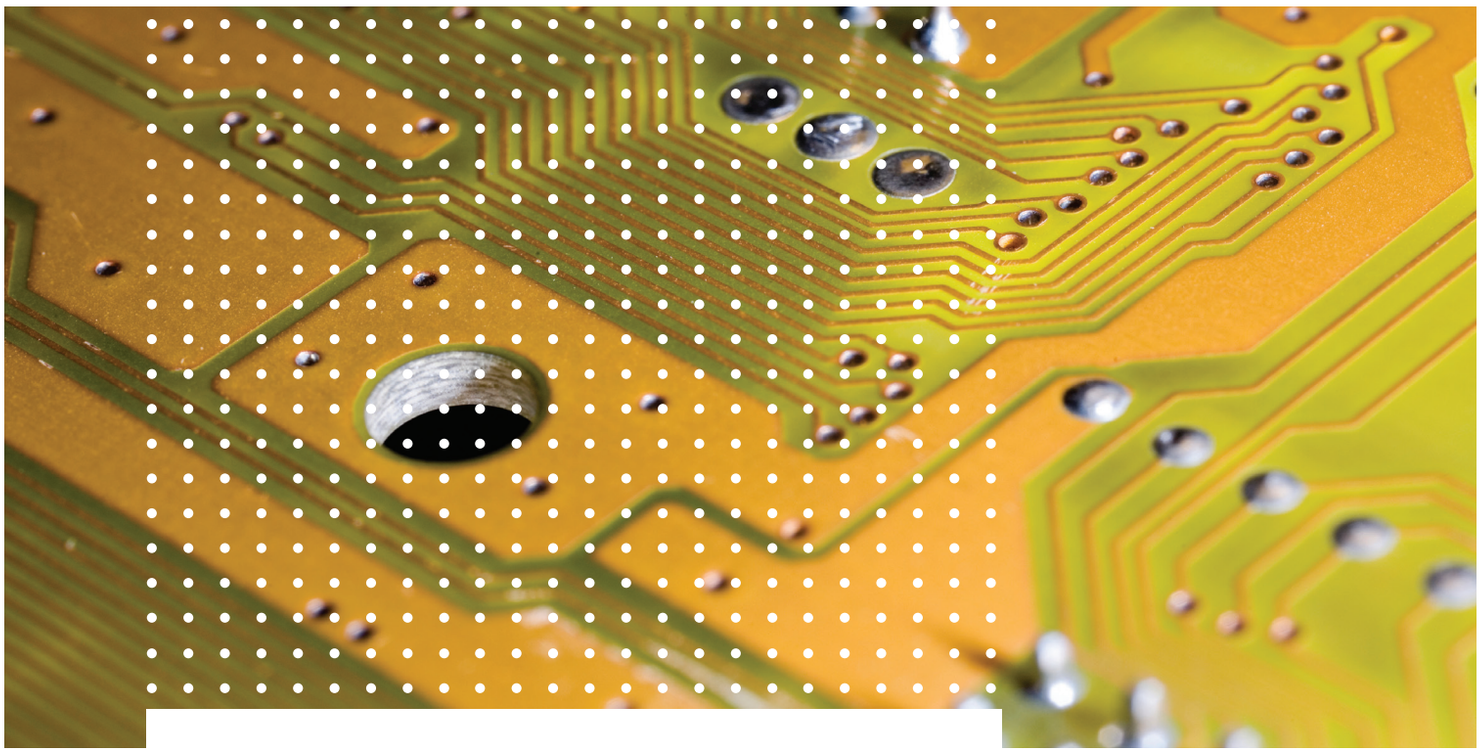
PSIM

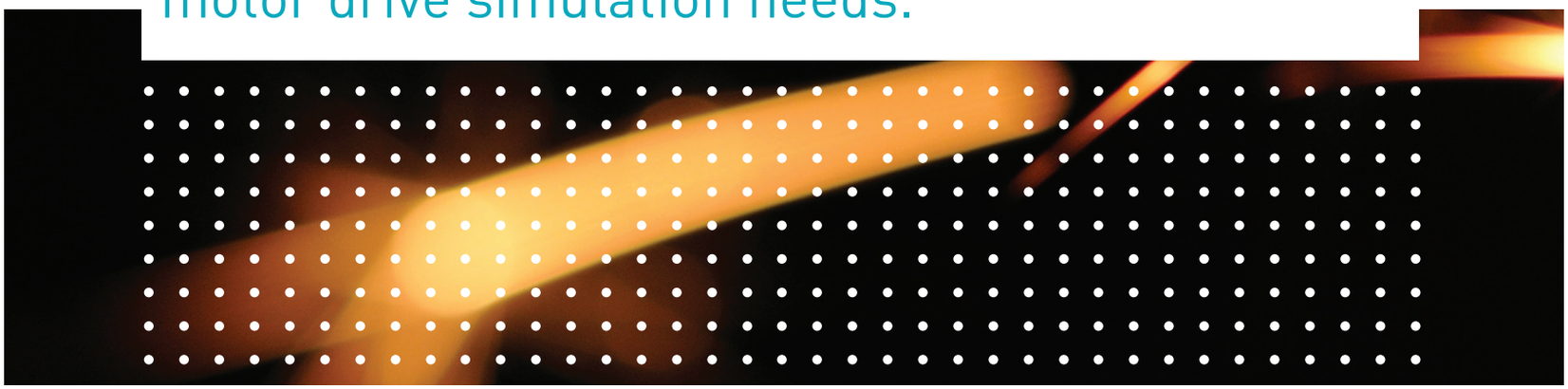


The ultimate simulation environment for power electronics and motor drives

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

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 from which many other simulation software suffer.

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.

FLEXIBLE CONTROL SIMULATION

One of PSIM's key strengths 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.

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 one's 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

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 controller design of motor drive systems

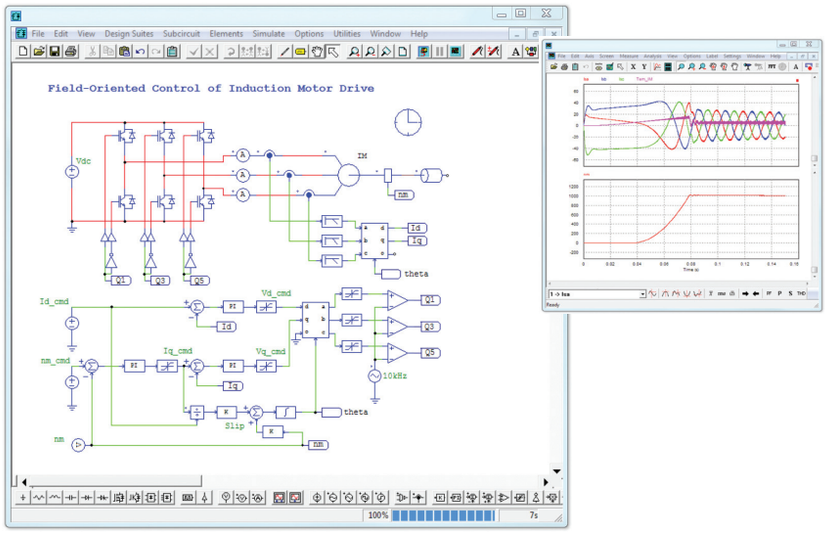
SimCoder
For automatic code generation

F2833x and F2803x Targets
For code generation for Texas Instruments' F2833x and F2803x series DSP

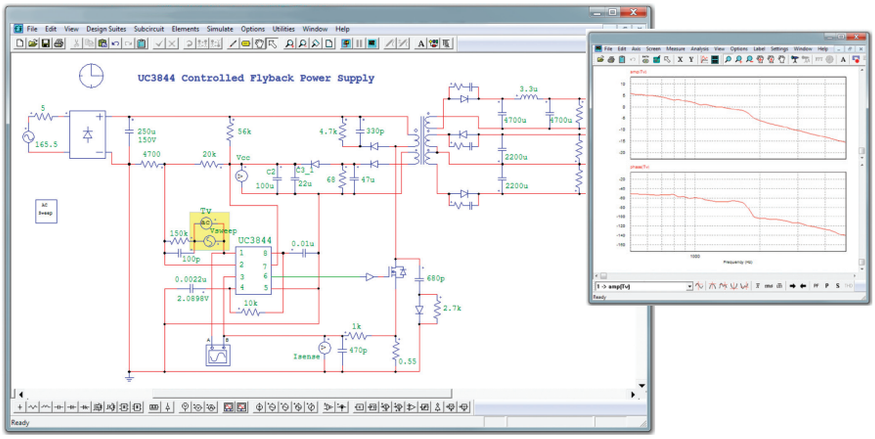
MagCoupler and MagCoupler-RT
For co-simulation with JMAG® and link to JMAG-RT files for finite element analysis

ModCoupler-VHDL and ModCoupler-Verilog
For co-simulation with ModelSim® for VHDL and Verilog support

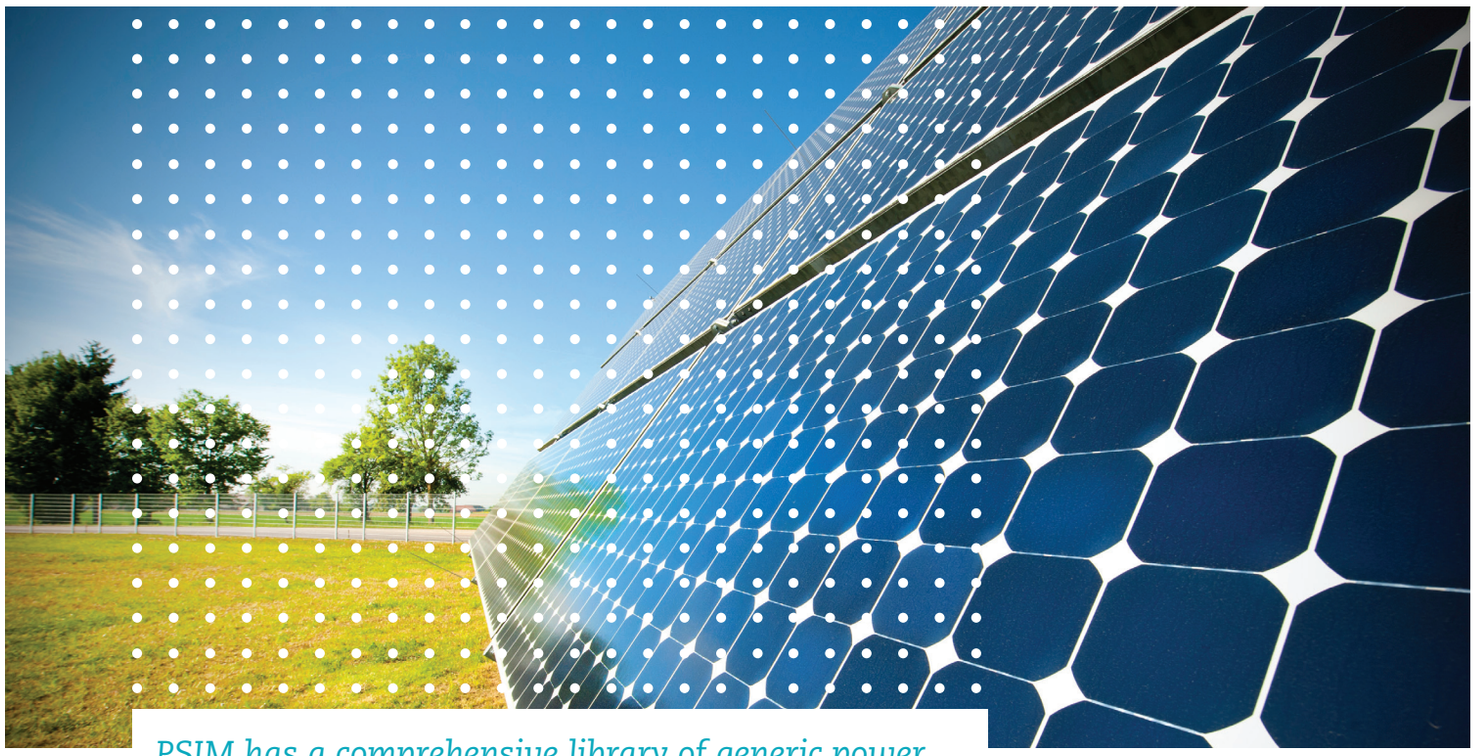
PsimBook Exercise
Unified documentation and simulation environment



Induction motor drive system with field oriented control



Voltage loop bandwidth measurement of multi-output flyback power supply



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*

PSIM CUSTOMERS

- Cummins
- Honeywell
- Eaton Corporation
- John Deere
- NASA
- WEG Drives & Controls
- ST Microelectronics
- Airbus
- SNCF
- Schneider
- Honda
- Mitsubishi Electric
- Panasonic
- Fuji Electric
- Toshiba
- Toyota
- Hitachi
- Denso
- LG Electronics
- Samsung

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