SIMBA

Applications

- AC/DC and AC/AC converters
- HEV powertrain systems
- Industrial applications
- Motor drive
- Power/Battery management
- Renewable energy
- Switchmode power supply
- Electric vehicle battery charger
- Resonant converters
- Multi-level power converters

Product Brochure

Reinventing Power Electronics Simulation

POWERSYS

What is SIMBA?

SIMBA IS A POWER ELECTRONICS SIMULATION SOFTWARE WITH UNPRECEDENTED SPEED, ACCURACY AND SIMPLICITY.

Simba is a modeling and simulation software for power electronics engineers. With an intuitive and sleek interface, it helps engineers analyze and design complex systems such as power supplies, motor drives or grid-connected converters.

SIMBA is a new generation of simulation software for power electronics which offers an unprecedented speed, accuracy and simplicity.

It minimizes the engineering time, to design better power electronics converters:

- Accurate, faster and more powerful solver,
- Scripting capabilities with high integration in the workflow,
- Massive calculation capabilities.

Key Features

- **Large component libraries**
- **Sleek graphical user interface**
- **Real time scope**
- **Custom C code**
- **Transient solver with a predictive time step**
- **.xml file importation for thermal analysis**
- **Python module**
- **Flexible control simulation**
- **Automatic steady-state detection**
- **Public roadmap contribution**
- **Open source documentation**
- **Thermal analysis**
- **Parametric analysis**
- **Massive and parallel simulation**

Why use SIMBA?

MINIMIZE THE ENGINEERING TIME TO DESIGN BETTER POWER ELECTRONICS CONVERTERS

1 **Faster power electronics design without compromising on accuracy**

SIMBA is a versatile simulation platform that offers unparalleled convenience and lightning-fast simulation speed making it the go-to solution for all your power electronics and motor drive simulation requirements. Its advanced variable time step solver ensures fast simulation without sacrificing accuracy, which makes it highly efficient for simulating converter systems of any scale and performing extensive parallel calculations.

2 **Seamless integration in user's development workflow**

The inclusion of a Python module in SIMBA further amplifies its capabilities, enabling users to leverage scripting for automation and optimization tasks. The Python module also facilitates SIMBA simulations on pre- and post-processing, effectively eliminating the need for traditional user files created using Excel that accompany circuit simulation files. This integration capability enables any user to extract maximum value from SIMBA, ensuring superior performance and results. Simba's fully customizable library is designed to enable you to save any subsystem and reuse it in all your project designs, providing a more streamlined and efficient workflow.

3 **Tailored and efficient power converter designs**

Simba provides a robust simulation environment that enhances efficiency and productivity, leading to reduced development costs and faster time-to-market. Furthermore our clients are involved and contribute actively to the software's roadmap for ongoing improvements.

3 WAYS TO USE SIMBA:

1. **Desktop**
2. **Python Module**
3. **Online**
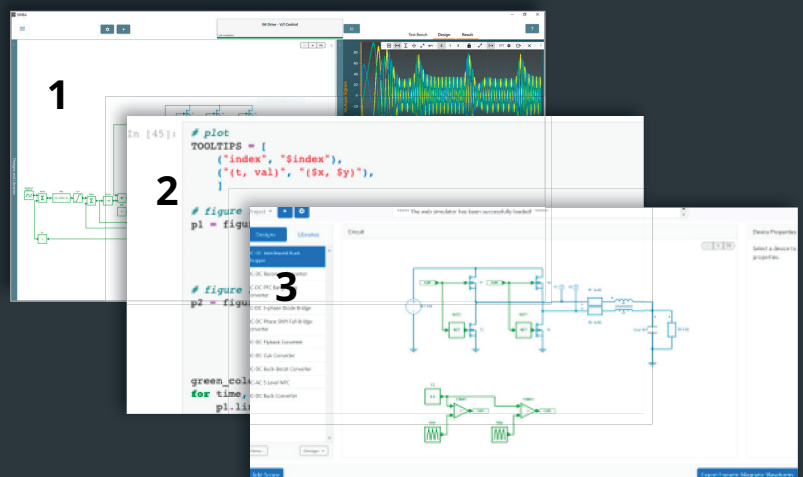
POWERSYS

Powersys & SIMBA: a perfect match to revolutionize Power Electronics Design

Contact us

Powersys France
sales@powersys.fr - +33 442 610 229

Powersys America
sales.usa@powersys-solutions.com - +1 248 564 2000

PWSIM India
sales.india@powersys-solutions.com - +91 80 6816 0000

Powersys GmbH
sales@powersys-solutions.com - +49 (0)1 51 46 36 01 48

simba.io