

Easily verify your digital control algorithm on DSP hardware

PSIM's PIL Module will enable you to perform a Processor-In-the-Loop (PIL) simulation and easily verify your digital control algorithm on Texas Instruments DSP hardware.

In a regular simulation, PSIM simulates both the power stage and the control algorithm. In a PIL simulation, the power stage is still simulated by PSIM, but the control algorithm is now running on physical DSP hardware.

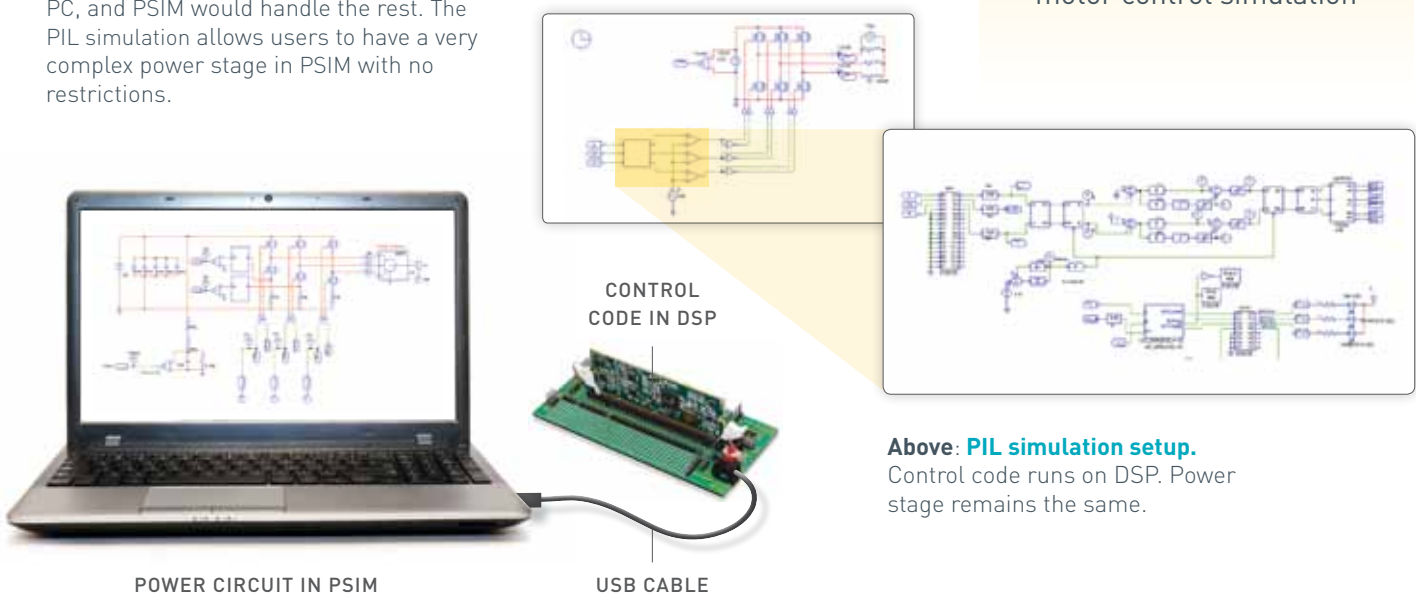
Setting up a PIL simulation in PSIM is very easy. After a few minor edits to the code, one simply connects the DSP hardware with a JTAG emulator to the PC, and PSIM would handle the rest. The PIL simulation allows users to have a very complex power stage in PSIM with no restrictions.

While the PIL simulation is running, one can use the runtime graph windows to watch simulation waveforms in progress. This makes it possible to monitor and display waveforms inside the DSP. It is also possible to debug the DSP code using TI's Code Composer Studio, making this a very convenient way to debug DSP code.

The PIL Module is an indispensable tool to validate your DSP code and speed up the development process.

FEATURES & BENEFITS

- ♦ Rapidly iterate and verify the control algorithm without the need to build an actual power stage prototype
- ♦ Easily test and evaluate system performance under different operating conditions
- ♦ Support TI's InstaSPIN motor control simulation



Above: PIL simulation setup.
Control code runs on DSP. Power stage remains the same.