



Customized and Flexible Industrial HIL Systems

Customized and flexible Industrial HIL System for Control Units Testing and Certification



- ٠ learning how to use the HIL System.
- No interface board is required.
- Sampling time under 200ns.
- Ideal or non-ideal devices.
- Control units and algorithms can be **certified**.

Powerful Simulation Engine

Simulate any power converter tropology.

DC/AC

- Fully adapted models for each customer applications and DUT.
- Based on proprietary simulation engine.





Samples of PSC-HIL products currently in operation

Includes a totally **customized extension board** to adapt the simulated waveforms to the DUT sensor analog inputs, with current and voltage amplifiers.



PSC-HIL Platform: GT-500

500ns simulation time-step

Analog I/O	80 I/O	150kHz (bandwidth)
Digital Ouput	32 outputs	1kHz (bandwidth)
Digital Input (optocoupled)	24 inputs	$1,3\mathrm{kHz}$
Configurable Digital I/O	25 signals	
PWM	18 signals	100MHz
CAN bus	2	
RS485 full duplex	2	
UART	2	
ETHERNET 10/100/1000	1	

Additional functionalities

- Customized electrical grid simulators (voltage sags, unbalanced operation, harmonics, line impedance).
- Custom generator-motor models (induction motor-generator, PMSM, DFIG). ٠
- ٠ Customized storage system models (batteries and BMS, ultracapacitors).
- Customized **power source models** (photovoltaic panels, wind models, fuel cells).
- Power losses emulation (IGBT, SiC).

Desktop User Application

Allows remote monitoring and control of the converter. Parametrize each of the simulation parameter effortlessly.

PSC Embedded Oscilloscope

Remote real-time monitoring of the converter simulated waveforms (with simulation time-step resolution).





Power Smart Control SL

Avda. Gregorio Peces Barba, 1 28919 Leganes (Madrid), Spain

