

Typhoon HIL404

Record Breaking Speed
200ns | Lowest time step ever



Highlights :-

- ❖ Down to 200ns time-step
- ❖ 3.5ns GDS oversampling on all DIs
- ❖ Real time emulation of non-linear machines with spatial harmonics
- ❖ Down to 200ns Analog Output update rate
- ❖ Up to 4 cores FPGA processor configurations
- ❖ Real-time emulation of semiconductor power losses

Main Processor - FPGA

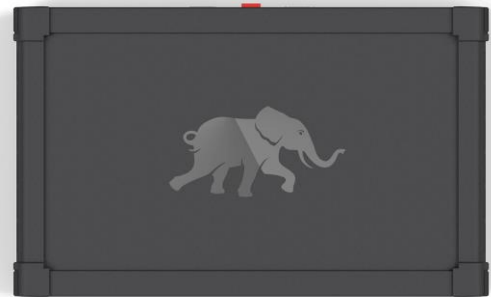
- 75% faster from Typhoon HIL402 - FPGA

Co-processor - CPU

- 10x faster from Typhoon HIL402 - Co-processor-CPU

Analog & Digital - IO

- 2.5x faster from Typhoon HIL402 - analog & digital - IO



Analog - IO

16bit Analog IO resolution

Down to 200ns Analog Output update rate on all 16 channels

Digital - IO

3.5ns GDS oversampling on all Digital Input

3.5ns PWM modulators available on all Digital Outputs

Parallel

Connect upto 4 HIL404 Devices

Communicate

With other real time device

Interface via

Ethernet | CAN | RS232 | GPIO | HSSL | JTAG



HIL404 Technical Specifications

Processor	Up to 4 core
Channels	16 x Analog inputs (AI) 16 x Analog outputs (AO) 32 x Digital inputs (DI) 32 x Digital outputs (DO)
GDS Oversampling resolution	3.5ns
Resolution	16 bit
Analog IO voltage range	± 10 V
Built-in scope	Yes
Machine models support	Basic Advanced
Connectivity	Ethernet CAN RS232 GPIO HSSL JTAG USB 3.0
Compatibility	HIL DSP Interface HIL Breakout board HIL dSpace Interface HIL uGrid DSP Interface
Software	HIL Control Center

Simulation Software with Real Time Interface :

Simulator is not dependent on any third-party simulation Software. It has own simulation software with below mentioned specifications:

- Permanent software license for modelling as well as for Real-time Interface with lifetime free updates and an unlimited number of software users.
- Academic premium toolbox package with Graphical User Interface (GUI/SCADA).
- Modeling environment for plant as well as Signal Processing with embedded library of components and toolboxes like, i) Converter toolbox, ii) Microgrid toolbox, iii) Power System toolbox, iv) Signal processing toolbox, v) Test Suite and vi) Communication toolbox having IEC61850, UL 1741, CAN Bus protocol, Ethernet, DNP3, MOD Bus protocol etc.
- All the switching components in library have Internal (for simulation and real-time simulation) or external (HIL simulation) both control option during modeling.
- Ability to run Plant simulation without controller if required for feasibility testing of plant.
- High resolution built-in real time signal monitoring oscilloscope with 16 channels.
- Dedicated solvers for switching devices, machines, signal generators, LUTs, etc. are available with simulation software.
- Simulation of numerical signals with multiple execution rates.
- Test environment for testing models and generating Test-Reports.
- Scripting Environment based on python. In-built API for automation as well as for communicating with other simulation software.
- Option for importing code generated for controller from simulation software like MATLAB, Simulink, LabView, PSIM etc. Option for importing .dll files generated from PSCAD, EMTP, PSSE-DigSilent etc.

Typhoon HIL GmbH, Switzerland

Sole Authorized Distributor

Quarbz Info Systems

2nd Floor, 14/147, Skylark Complex, Chunniganj, Kanpur - 208001, U.P.

Contact No. : +91-9838071684 - 85 Email ID : hil.info@quarbz.com Website : www.quarbz.com