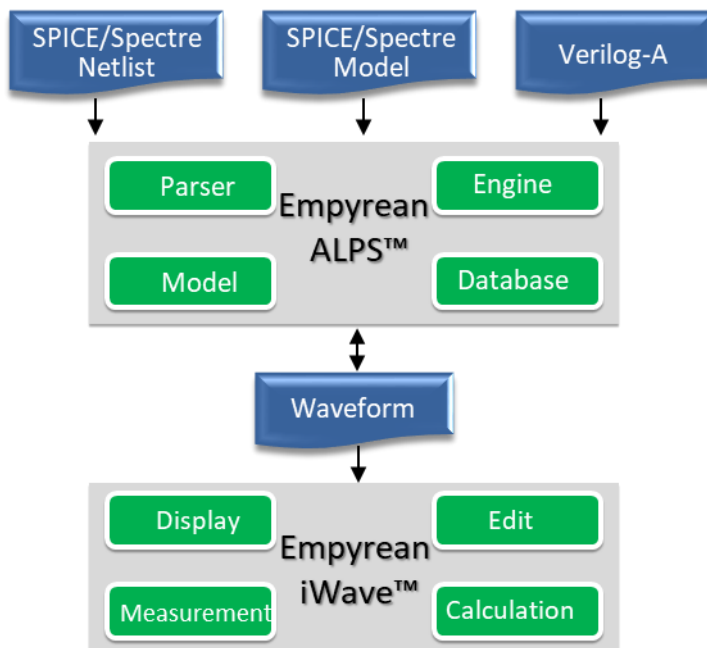


Empyrean ALPS™

Accurate Large-Capacity Parallel SPICE



Overview

Advance process node geometry reduction, increasing transistor counts, increasing design complexity, FinFET 3D parasitics are all significant factors challenging traditional SPICE simulation. Meeting these challenges has meant simulation runs measured in weeks, compromised performance and reduced yields. Unfortunately, current parallel SPICE simulators are inadequate to handle these challenging jobs, even taking months for some post-layout simulations.

Aggressive RC reduction is commonly used to improve performance to the detriment of accuracy. Additionally, users often need to customize individual case settings to converge on targeted results. SPICE deficiencies increase simulation iterations and extend the design cycle.

Empyrean ALPS™ (Accurate Large-scale Parallel Simulator) is the next-generation high-performance high-accuracy true SPICE simulator. ALPS delivers 100% SPICE accuracy on circuits with over 50M elements. ALPS proprietary Smart Matrix Solving technology provides efficient matrix preconditioning to enable faster convergence and runs 2-3x faster pre-layout and 3-8x faster post layout than other parallel SPICE simulators.

Features and Benefits

• Simulation

- ❑ >50M-element capacity
- ❑ Advanced parallel technology provides good linearity when running multi-threading simulations and 3-8x faster than other parallel SPICE
- ❑ Fastest mixed-signal simulation and co-simulation with all leading Verilog simulators
- ❑ Best convergence and performance for power circuit especially in high voltage design
- ❑ Comprehensive static and dynamic circuit checks
- ❑ Support save/recover during simulation
- ❑ Unique netlist encryption tool for IP protection
- ❑ Seamless integration with leading design environments
- ❑ Certified by leading foundries
- ❑ Support the latest 7nm process

• Matrix Solving

- ❑ Integrated with >10 matrix solving algorithms for best convergence and performance
- ❑ Smart Matrix Solver deliver 5x to 10x speedup than traditional matrix solver without any accuracy loss

Functionality

Accuracy

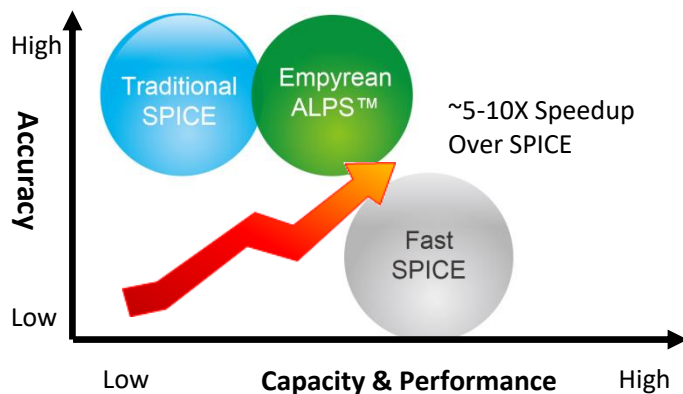
ALPS guarantees 100% SPICE accuracy, solves the whole circuit equation and doesn't use any model simplification. The results have been verified by silicon data.

Speed

By using zero-accuracy-loss matrix solver and advanced multi-threading algorithm, ALPS delivers 7-10x speedup over traditional SPICE and 3-8x speedup over parallel SPICE in post-layout simulation.

Capacity

With advanced memory management, ALPS can simulate circuit with >50M elements. Achieved 100% SPICE accuracy with Fast SPICE like capacity.



Specifications

Circuit Simulation Analysis

- Support OP, DC, Tran, AC, PZ, Noise, Transient Noise analysis
- Support multi corner, alter, sweep analysis
- Support Monte Carlo and fast Monte Carlo analysis

Format Support

- Support mainstream model and languages
- BSIM3, BSIM4, BSIMSOI, BSIMCMG, PSP, MOSVAR,
 - MOS1, MOS3, TFT, HiSim_HV, MOS20
 - BJT, JFET, DIODE
 - S-element/Nport
 - support Verilog-A, Verilog

Design Flow Integration

- Industry leading EDA design environment
- Command line mode

Platform Support

- X86 64-bit:
- Red Hat Enterprise V4, V5, and V6

Sales Contacts

Headquarters

Huada Empyrean Software

2F Building A, Wang Jing Hi-Tech Park,
No.2 Lizezhong'er Road Chaoyang
District, Beijing, 100102, P. R. China
TEL: +86-10-84776888
FAX: +86-10-84776889
Web: www.emyrean-tech.com
EMAIL: info@emyrean-tech.com

USA

ICScape Inc.
4030 Moorpark Ave, Suite 100,
San Jose, CA 95117, USA
TEL: +1-408-736-8886(N. CA)
www.icscape.com
E-mail: info@icscape.com

Singapore

MEDs Technologies Pte.Ltd.
5012, Ang Mo Kio Avenue 5 #04-01
Techplace II, Singapore 569876
Tel: +65 6453 8313
Fax: +65 6453 7738
www.meds-tech.com

Korea

linkGlobal21
#301, 81, Hyeonam-ro, Suji-gu,
Yongin-si, Gyeonggi-do, Korea
Tel: +82-70-5138-0700
www.lg21.net/
E-mail: eda@linkglobal21.com

Japan

SYNKOM CO.,LTD
Shin-Yokohama Station BLDG 3F,
Shin-Yokohama 2chome 6-13 Kouho-ku,
Yokoama, 222-0033, Japan
Tel: +045-479-4168
Fax: +045-479-4169