Synopsys CustomSim Selected by GSI Technology for High-Speed SRAM Simulation

Silicon-Accurate Results and 6X Faster Performance Cited as Key Decision Criteria

MOUNTAIN VIEW, Calif., Oct. 13 /PRNewswire/ -- Synopsys, Inc. (Nasdaq: SNPS), a world leader in software and IP for semiconductor design, verification and manufacturing, today announced that GSI Technology, a leader in high-density, high-speed monolithic SRAMs, has selected Synopsys' CustomSim™ FastSPICE solution for the development and verification of its leading-edge designs. GSI Technology's 144-megabit (Mbit) SigmaQuad SRAMs achieve data bandwidths in excess of 72 gigabits per second (Gbps). In order to maximize yield with such aggressive timing specifications, extensive full-chip transistor-level simulations need to be run over multiple process, voltage and temperature corners. CustomSim delivered confirmed silicon-accurate results while simulating more than six times (6X) faster than competitive solutions. The comprehensive suite of analysis features included with CustomSim enabled GSI Technology to significantly accelerate tasks such as full-chip fanout analysis and leakage power characterization.

"GSI Technology designs a large selection of synchronous and asynchronous SRAMs, most of which are the fastest and lowest-power devices of their type in the world. We depend on transistor-level simulation and custom hand-crafted layout to extract the highest performance from our designs while minimizing power consumption," said Patrick Chuang, senior vice president of memory design for GSI Technology. "Our previous FastSPICE solution from a competing EDA vendor was generating unreliable timing data that prevented us from taping out. CustomSim delivered silicon-accurate results six times faster, allowing us to run more corners and tape out with confidence."

CustomSim, an integral part of Synopsys' Discovery™ Verification Platform, unifies the best-in-class NanoSim®, HSIM® and XA FastSPICE technologies with added multi-threading capabilities for high-capacity, high-performance circuit simulation. For full-chip mixed-signal verification, CustomSim is tightly coupled to VCS® functional verification through Direct Kernel Integration and is integrated into a unified analog/mixed-signal (AMS) verification environment which simplifies usability through a common set of inputs, outputs and device models.

"Higher sensitivity to process and temperature variation is increasing the need for fast and accurate simulation of multimillion-transistor designs," said Bijan Kiani, vice president of product marketing at Synopsys. "Full-chip multidimensional corner case analysis with CustomSim enables companies like GSI Technology to maximize yield and bring competitive products to market faster."

About Synopsys

Synopsys, Inc. (Nasdaq: SNPS) is a world leader in electronic design automation (EDA), supplying the global electronics market with the software, intellectual property (IP) and services used in semiconductor design, verification and manufacturing. Synopsys' comprehensive, integrated portfolio of implementation, verification, IP, manufacturing and field-programmable gate array (FPGA) solutions helps address the key challenges designers and manufacturers face today, such as power and yield management, system-to-silicon verification and time-to-results. These technology-leading solutions help give Synopsys customers a competitive edge in bringing the best products to market quickly while reducing costs and schedule risk. Synopsys is headquartered in Mountain View, California, and has more than 65 offices located throughout North America, Europe, Japan, Asia and India. Visit Synopsys online at https://www.synopsys.com.

About GSI Technology

Founded in 1995, GSI Technology, Inc. is a leading provider of high performance SRAMs primarily incorporated in networking and telecommunications equipment. Headquartered in Sunnyvale, California, GSI Technology is ISO 9001 certified and has world-wide factory and sales locations. For more information, please visit http://www.gsitechnology.com.

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