Synopsys VCS Used by Graphcore to Verify Next-Generation Colossus GC200 IPU

VCS Delivers Highest Verification Throughput for a 50 Billion+ Transistor Design

MOUNTAIN VIEW, Calif., July 20, 2020 /PRNewswire/ -- Synopsys, Inc. (Nasdaq: SNPS) today announced that Graphcore used the Synopsys VCS® simulation solution with Verdi® debug to verify its recently announced game-changing Colossus™ GC200 Intelligence Processing Unit (IPU). Graphcore's second generation IPU is the most complex microprocessor ever built, featuring 59.4Bn transistors and 1,472 independent processor cores. Synopsys VCS enabled Graphcore to achieve significantly higher simulation throughout for their massively parallel IPU design, specifically aimed at machine intelligence workloads.

"The ability to perform comprehensive verification of our IPU accelerators requires daily simulation regressions that include thousands of complex test scenarios," said Phil Horsfield, vice president of Silicon at Graphcore. "Synopsys VCS and Verdi interactive debug solutions are ideally suited for our large design, enabling our simulation teams to reduce regression turnaround time, resulting in a significant productivity boost for our verification efforts."

Graphcore's Colossus GC200 IPU is designed for machine intelligence workloads and is the fastest and most flexible platform for current and future machine intelligence applications. VCS delivers significant simulation performance speed-up by taking full advantage of many-core processor architectures to deliver 2X to 5X simulation performance gains versus single-core processor architectures for large designs. VCS' native integration with Verdi debug enables automation of difficult and tedious debug processes associated with complex artificial intelligence (AI) SoCs.

"We continue to extend our lead in simulation through collaborations with verification teams in AI chip design," said Rajiv Maheshwary, VP of marketing and business development in the Verification Group at Synopsys. "These teams increasingly require high performance and fast turnaround times to deliver highly differentiated chip designs. VCS with Verdi delivers significant productivity gains, enabling our customers to accelerate their time-to-market by months in this critically fast-paced market."

Additional Resources

For more information about VCS functional simulation solutions from Synopsys, please visit: https://www.synopsys.com/verification/simulation/vcs.html

About Synopsys

Synopsys, Inc. (Nasdaq: SNPS) is the Silicon to Software™ partner for innovative companies developing the electronic products and software applications we rely on every day. As the world's 15th largest software company, Synopsys has a long history of being a global leader in electronic design automation (EDA) and semiconductor IP and is also growing its leadership in software security and quality solutions. Whether you're a system-on-chip (SoC) designer creating advanced semiconductors, or a software developer writing applications that require the highest security and quality, Synopsys has the solutions needed to deliver innovative, high-quality, secure products. Learn more at www.synopsys.com.

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