Synopsys Fusion Design Platform First to be Certified by Samsung Foundry for 5LPE Process with EUV Technology

AI-enhanced, Cloud-ready Platform with Fusion Technology Accelerates Next Wave of Industry Innovation

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Highlights:

- Samsung certified Synopsys Fusion Design Platform for 5LPE process technology using 64-bit Arm Cortex-A53 and Cortex-A57 processors
- Fusion Design Platform redefines conventional design tool boundaries to deliver full-flow better QoR and faster TTR, now for Samsung Foundry's advanced 5LPE process

Synopsys, Inc. (Nasdaq: SNPS) today announced that Samsung Electronics has certified the Synopsys Fusion Design Platform™ for Samsung's 5-nanometer (nm) Low-Power Early (LPE) process with Extreme Ultraviolet (EUV) lithography technology. The AI-enhanced, cloud-ready Fusion Design Platform provides unprecedented full-flow quality-of-results (QoR) and time-to-results (TTR), enabling the full entitled performance and low power delivered by Samsung's 5LPE process technology to accelerate the next wave of semiconductor designs, including high-performance computing (HPC), automotive, 5G, and artificial intelligence (AI) market segments.

"Through our 7-nanometer product shipment and the successful completion of 5-nanometer process development, we've proven our capabilities in EUV-based nodes. Using the Synopsys Fusion Design Platform, our mutual customers will be able to design the most competitive 5LPE SoC products for the full entitled performance and low power applications," said JY Choi, vice president of Foundry Design Technology Team at Samsung Electronics. "Synopsys continues to be our vendor of choice for collaboration on new node development and enablement, so our foundry customers can confidently ramp their designs to volume production in all market segments, including automotive, AI, high-performance computing, and mobile."

Samsung Foundry certified the Fusion Design Platform using the 64-bit Arm® Cortex®-A53 and Cortex-A57 processors, which are based on the Armv8 architecture. Key tools and features of the Synopsys Fusion Design Platform optimized for Samsung 5LPE process technology include:

- Fusion Compiler™ RTL-to-GDSII Solution: Highly optimized full-flow support for latest 5LPE design rules delivering optimum design routability and convergence coupled to fastest TTR
- IC Compiler™ II place-and-route: EUV single-exposure-based routing with optimized 5LPE design rule support, single fin variant-aware legalization, and via stapling to ensure maximum utilization while minimizing dynamic power
- Design Compiler® Graphical and Design Compiler NXT RTL synthesis: Correlation, congestion reduction, pin access-aware optimization, 5LPE design rule support, and physical guidance for IC Compiler II
- IC Validator physical signoff: Cloud-optimized physical signoff including DRC, LVS, and Fill. Innovative Explorer DRC and Live DRC technologies for enhanced productivity
- PrimeTime® timing signoff: Near-threshold ultra-low voltage variation modeling, via variation modeling, and placement rule-aware engineering change order (ECO) guidance
- StarRC™ parasitic extraction: EUV single pattern-based routing support, and new extraction technologies, such as coverage-based via resistance and vertical gate resistance modeling
- RedHawk™ Fusion: ANSYS RedHawk-driven EM/IR analysis and optimization within place-and-route
- Synopsys TestMAX™ DFT and Synopsys TestMAX ATPG test: FinFET-based, cell-aware, and slack-based transition testing for higher test quality
- Formality® equivalence checking: UPF-based equivalence checking with state transition verification

Synopsys' Fusion Design Platform is in active production usage at market-leading companies; it redefines conventional design tool boundaries with the fusion of best-in-class optimization and industry-golden signoff and design-for-test (DFT) tools, enabling the most predictable full-flow convergence with the fewest iterations. The AI-enhanced platform boosts designer productivity by speeding up computation-intensive analyses and leverages past learning to achieve superior QoR. The Fusion Design Platform provides a streamlined cloud-ready design environment and is enabled on major public cloud providers' and Synopsys-hosted infrastructure.

"Our long and successful collaboration with Samsung Foundry has enabled our mutual customers to adopt Synopsys' market-leading solutions early, certified on Samsung's most advanced node," said Sassine Ghazi, general manager of Synopsys' Design Group. "Combining the 5LPE benefits in power, performance, and gate density with the Synopsys Fusion Design Platform QoR and TTR advantages will enable our mutual customers

to differentiate their next-generation products. Synopsys continues to focus on providing the best solutions for joint customers."

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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