Samsung Foundry Certifies Synopsys Design Compiler NXT for 5/4nm FinFET Process Technologies

More than 100 customers have adopted Design Compiler NXT since its introduction one year ago

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Highlights:

- Customers adopting Design Compiler NXT report significant reduction in runtimes together with improvements in power, performance and area (PPA)
- New advanced optimizations, such as concurrent clock and data (CCD) optimization, are essential for meeting PPA goals at advanced nodes
- Samsung Foundry customers benefit from an 8 to 10 percent improvement in PPA that Design Compiler NXT delivered in the qualification process with 2X faster throughput

Synopsys, Inc. (Nasdaq: SNPS) today announced that the Synopsys Design Compiler® NXT synthesis solution has been qualified by Samsung Foundry for its 5/4-nanometer FinFET process technologies. Design Compiler NXT, an integral part of the Synopsys Fusion Design Platform™ solution, is the latest innovation in the Design Compiler family of RTL synthesis products, extending the market-leading synthesis position of Design Compiler Graphical. It has surpassed well over 100 customer deployments since its release in March 2019.

Design Compiler NXT features fast, highly efficient optimization engines and a new approach to distributed synthesis that does not sacrifice quality-of-results (QoR). Customers adopting Design Compiler NXT are reporting significant reduction in runtimes together with improvements in power, performance and area (PPA). In the 5/4nm FinFET processes, Samsung Foundry observed an 8 to 10 percent improvement in PPA with a 2X faster throughput with Design Compiler NXT.

"As a leading provider of advanced-node foundry services, we strive to provide our customers with production silicon that meets or exceeds their power, performance and area goals," said Sangyun Kim, vice president of Design Technology Team at Samsung Electronics. "Through our extensive collaboration with Synopsys, we are enabling our customers to use best-in-class tools like Design Compiler NXT for the Samsung Foundry 5/4nm FinFET processes so they can successfully achieve their PPA targets."

Design Compiler NXT features new advanced optimizations, such as power-driven mapping and structuring techniques and concurrent clock and data (CCD) optimization, that are essential to meet PPA goals at advanced nodes. To deliver tight correlation and superior QoR at the most advanced process nodes, Design Compiler NXT shares a common library and advanced placement technologies with the Synopsys IC Compiler™ II place-and-route solution, in addition to a new, highly accurate approach to resistance and capacitance estimation and capabilities required for advanced process nodes.

"Through our collaboration with Samsung Foundry, our mutual customers will benefit from Design Compiler NXT's improved runtime, QoR, and convergence for the Samsung Foundry's 5/4nm FinFET processes," said Abhijeet Chakraborty, vice president of engineering, Design Group at Synopsys. "With more than 100 customer deployments completed, the innovation in Design Compiler NXT has benefited both established and emerging node customers by delivering unparalleled QoR gains and accelerated time to results. We are committed to continuously bringing best-in-class synthesis innovations to our Design Compiler family of products."

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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