Synopsys Extends Synthesis Leadership with Next-Generation Design Compiler

Design Compiler NXT Boosts Runtime by 2X, QoR by 5 Percent, and Provides Support Down to 5nm and Beyond

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Highlights:

- Design Compiler NXT incorporates innovative and efficient optimization engines delivering 2X faster runtime and cloud-ready distributed synthesis that boosts runtime further
- Advanced-node support, including common libraries and aligned RC extraction with IC Compiler II, delivers extremely tight correlation down to 5nm and beyond
- New timing and power optimizations extend Design Compiler's QoR advantage, essential for high-performance and low power designs
- Design Compiler NXT is plug-and-play, UI- and script-compatible with Design Compiler Graphical

Synopsys, Inc. (Nasdaq: SNPS) today announced Design Compiler® NXT, the latest innovation in the Design Compiler family of RTL Synthesis products, extending the market-leading synthesis position of Design Compiler Graphical. Semiconductor market drivers like artificial intelligence (AI), cloud computing, 5G, and autonomous transportation increase the demand for smaller, higher-performance and more power-efficient integrated circuits (ICs) while meeting demanding delivery schedules. Design Compiler NXT's key innovations are targeted at addressing these market needs.

"Design Compiler Graphical has been the trusted synthesis tool for our designs for many years and a key enabler to the development of our advanced SoCs and MCUs," said Tatsuji Kagatani, vice president, Shared R&D Division 2, Broad-based Solution Business Unit, at Renesas Electronics Corporation. "We are collaborating with Synopsys on the latest synthesis technologies in Design Compiler NXT and are looking forward to deploying them on our designs to help meet our ever-increasing pressure of time-to-market and higher QoR."

New optimizations in Design Compiler NXT include power-driven mapping and structuring techniques, Concurrent Clock and Data (CCD) optimization, and a new approach to distributed synthesis that does not sacrifice quality-of-results (QoR). 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 IC Compiler™ II, in addition to aligned RC, net topology, and density modeling.

"The Design Compiler family of products has been leading the market for more than 30 years, and is the vehicle for delivery of the greatest synthesis innovations such as test, power, datapath, and physical synthesis," said Shankar Krishnamoorthy, senior vice president of engineering, Design Group at Synopsys. "Design Compiler NXT incorporates the latest synthesis innovations, delivering significantly faster runtimes, unbeatable QoR, and extremely tight RC and timing correlation with IC Compiler II. Once again, Synopsys is evolving the state-of-the-art in RTL synthesis to enable today's extremely complex leading-edge designs."

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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