

Synopsys Announces FPGA Synthesis Support for Xilinx's Newest ISE Design Suite 13

Synplify and Symphony Product Families Deliver Capacity and Faster Runtime for Multi-Million Gate Designs

Highlights:

- Designers using Synopsys' Synplify Pro® and Synplify® Premier FPGA synthesis software, in conjunction with Xilinx's latest ISE Design Suite 13, can achieve high design performance for Virtex®-7, Kintex®-7 and Virtex-6® devices.
- The hierarchical design capabilities of the Synplify Pro and Synplify Premier software enable design methodologies to support team-design collaboration resulting in faster FPGA design development and increased efficiency.
- With Synplify Premier software's Fast-Mode, multiprocessing and automatic compile-points technologies designers can speed FPGA synthesis by up to 10X.
- Synplify Pro and Synplify Premier software along with ISE deliver a jointly-developed Design Preservation flow, shortening design cycle time by avoiding re-verification of pre-verified blocks.
- Symphony hierarchical High-Level Synthesis design methodology delivers optimized RTL code for multi-million gate designs that the Synplify synthesis tools use to achieve high quality of results for Virtex-7 devices.

MOUNTAIN VIEW, Calif., March 8, 2011 [PRNewswire/](#) -- Synopsys, Inc. (Nasdaq: SNPS), a world leader in software and IP for semiconductor design, verification and manufacturing, today announced [Synplify Pro](#), [Synplify Premier](#) and [Symphony](#) synthesis support for Xilinx's latest ISE® Design Suite (IDS) 13, which provides support for their 28-nanometer (nm) 7 series FPGAs. Synopsys' advanced [FPGA synthesis tools](#) include a hierarchical project manager that enables team-design collaboration with a mixed bottom-up/top-down approach that is highly integrated with Xilinx's SmartGuide incremental place & route (P&R) technology, delivering faster RTL-to-board implementation.

"FPGA device technology is advancing rapidly toward ASIC-like complexity," said Tom Feist, senior director, IDS marketing at Xilinx. "The Synopsys synthesis software along with our new IDS 13 enables our customers to successfully take advantage of the capabilities this complexity brings with it, and our collaboration with Synopsys lets our customers produce the best results."

Symphony [high-level synthesis](#) creates optimized FPGA implementations for use with Synplify Pro and Synplify Premier software and includes integration features such as technology characterization, constraint generation for multi-rate, multi-clock implementations, and support for advanced device hardware such as multipliers, DSP units and memories. Together, the Synplify Pro/Synplify Premier design software and the Symphony High-Level Synthesis tools provide a comprehensive synthesis solution that helps eliminate months of time spent hand-coding RTL while reducing risk in large, multi-million gate designs.

The Synplify Pro and Synplify Premier design tools offer faster runtimes which are especially important for high-density designs. The Synplify Premier software's Fast-Mode enables up to 4X faster runtimes than normal logic synthesis, and when combined with multiprocessing, can achieve up to 10X faster runtimes. When used for [FPGA-based prototyping](#) projects, Synplify Premier software automatically converts the gated clocks, generated clocks and tri-states present in many ASIC designs into the target FPGA, making RTL code changes unnecessary. Synplify Premier software also includes extensive SystemVerilog language support and native support for [DesignWare® IP](#), which allows the same IP code used in the design to be available within the FPGA-based prototype.

Because of their close collaboration, Synopsys and Xilinx offer several optimized and integrated tool features. For example, Synplify Pro and Synplify Premier software and Xilinx's ISE Design Suite deliver a jointly developed Design Preservation flow, allowing users to iterate on targeted portions of the design while maintaining the performance of pre-implemented, pre-verified design blocks. The Synplify Pro software's integration with the Xilinx Embedded Design Kit (EDK) makes it easy for MicroBlaze processor users to include EDK generated components in their Synplify project.

"We have been working closely with Xilinx to provide best-in-class FPGA synthesis support for Xilinx's newest FPGA devices," said John Koeter, vice president of marketing for the Solutions Group at Synopsys. "The scalability, capacity and performance ranges of the 7 series FPGAs open up new applications for FPGAs. Using Synopsys' Synplify and Symphony software helps our mutual customers to take full advantage of these larger devices while improving quality of results, achieving faster time-to-market and lowering their design risk."

Designers using the Synopsys FPGA design tools get fast time-to-results for complex FPGAs, area optimization for lower part

cost, power reduction and incremental and team-design capabilities for faster FPGA deployment. Synopsys FPGA design tools include [Synplify Pro](#) logic synthesis, [Synplify Premier](#) advanced FPGA implementation and [Identify®](#) integrated RTL debugger. Synopsys FPGA design tools provide additional value by offering [DesignWare® IP](#) support, links to high-performance [VCS®](#) functional verification solutions, integration with [Synphony C Compiler](#) and [Synphony Model Compiler](#), and an ASIC-compatible synthesis flow for [FPGA-based prototyping](#).

Availability

Synplify Pro, Synplify Premier and Synphony software support for Xilinx's latest ISE Design Suite 13, including support for their 28-nm 7 series FPGAs, is available now. For more information on Synopsys' FPGA Implementation products visit <https://www.synopsys.com/fpga>. For more information on Xilinx's 7 series FPGAs, please visit <https://www.xilinx.com/support/documentation/selection-guides/7-series-product-selection-guide.pdf>

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 approximately 70 offices located throughout North America, Europe, Japan, Asia and India. Visit Synopsys online at <https://www.synopsys.com/>.

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