

Synopsys, STMicroelectronics and Samsung Collaborate to Accelerate Adoption of 28-nm FD-SOI Technology for SoC Design

Synopsys Galaxy Design Platform Enables Designers to Take Full Advantage of High-Performance and Low Power of 28-nm FD-SOI

MOUNTAIN VIEW, Calif., June 4, 2014 /PRNewswire/ --

Highlights:

- Collaboration extends the Synopsys design flow to Samsung in support of [Samsung and STMicroelectronics's strategic agreement](#) to offer dual sourcing of ST's 28-nm FD-SOI technology
- Synopsys [Galaxy Design Platform](#) is production-proven on ST's 28-nm FD-SOI technology in several SoCs with multi-core processors
- Pre-validated Synopsys [Lynx Design System](#) technology plug-in for ST's 28-nm FD-SOI expedites design setup and closure

Synopsys, Inc. (Nasdaq: SNPS), a global leader providing software, IP and services used to accelerate innovation in chips and electronic systems, today announced it has extended its collaboration with STMicroelectronics to include Samsung Electronics, enabling broader market adoption of ST's 28-nm FD-SOI technology for SoC design. Synopsys' Galaxy™ Design Platform is production-proven on multiple designs based on ST's 28-nm FD-SOI technology. This collaboration extends the Galaxy design flow to Samsung in support of their strategic agreement to offer dual sourcing of ST's 28-nm FD-SOI technology. Developed over a multiyear collaboration with ST, the design flow enables concurrent area, power and timing optimizations to enable engineers to optimize their designs for the ST 28-nm FD-SOI process.

"The close collaboration between ST design teams and Synopsys led to advanced silicon-proven design enablement solutions that fully leverage the performance and power promise of FD-SOI technology and provide the foundation needed to meet tight time to market windows," said Philippe Magarshack, executive vice president, Design Enablement and Services, STMicroelectronics. "Our close collaboration with Synopsys has already enabled many successful tapeouts with mutual customers using Synopsys' Galaxy Design Platform and Lynx Design System."

The Synopsys design flow for ST's 28-nm FD-SOI is compatible with the Lynx Design System, a full-chip design environment providing innovative automation and visualization capabilities that enable higher designer productivity and faster design closure. A technology plug-in using ST's 28-nm FD-SOI Process Design Kit (PDK), standard cells and memories, adapts the production-proven Galaxy Design Platform-based RTL-to-GDSII flow for 28-nm FD-SOI SoC designs, accelerating project setup and execution. Lynx automation simplifies and accelerates many critical implementation and validation tasks, including back-bias management across the flow, special connection checks, In-Design physical verification for well connections and UPF supply set management for N-wells and P-wells.

Galaxy advanced design enablement features like the IC Compiler™ tool's concurrent clock and data optimization, layer-aware optimization, physical datapath and comprehensive support for hierarchical and low power design features can also be directly accessed by Lynx users for high-performance and low power CPU and GPU design.

"28-nm FD-SOI is an ideal solution for customers looking for extra performance and power efficiency at the 28-nm node without having to migrate to 20-nm," said Dr. Shawn Han, vice president of foundry marketing, Samsung Electronics. "Our close collaboration with Synopsys and ST will enable designers to reduce risk, accelerate time-to-market, minimize power and maximize performance to expand 28-nm FD-SOI adoption."

"Because the Galaxy Design Platform is silicon-proven on ST's 28-nm FD-SOI process with multiple tapeouts of low power designs running in the gigahertz frequency range, customers can adopt this technology with confidence," said Antun Domic, executive vice president and general manager, Design Group at Synopsys. "Combined with the Lynx Design System and [DesignWare® IP](#), the Galaxy Design Platform enables engineers to derive maximum benefit from the FD-SOI process and our continued collaboration with ST and Samsung will ensure ease of adoption of FD-SOI for SoC design."

Availability

The Synopsys Galaxy Design Platform and Lynx Design System with support for ST and Samsung 28-nm FD-SOI process technology are available now from Synopsys. The 28-nm FD-SOI-enabled PDK, standard cells and

memories for early design are available now from Samsung.

About Synopsys

Synopsys, Inc. (Nasdaq:SNPS) accelerates innovation in the global electronics market. As a leader in electronic design automation (EDA) and semiconductor IP, Synopsys delivers software, IP and services to help engineers address their design, verification, system and manufacturing challenges. Since 1986, engineers around the world have been using Synopsys technology to design and create billions of chips and systems. Learn more at www.synopsys.com.

Editorial Contacts:

Sheryl Gulizia
Synopsys, Inc.
650-584-8635
sgulizia@synopsys.com

Lisa Gillette-Martin
MCA, Inc.
650-968-8900, ext.115
lgmartin@mcapr.com

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