Synopsys Tools Enable Secure, Efficient IoT Designs Based On New ARM Cortex-M23 and Cortex-M33 Processors

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Highlights:

- Galaxy Design Platform tools, including IC Compiler II place-and-route, Design Compiler Graphical synthesis and Custom Compiler custom design solution, enable power- and cost-efficient implementation of IoT designs
- Verification Continuum Platform technologies accelerate architecture optimization, software development, hardware/software integration and bring-up, system validation, design verification and debug
- Software Integrity Platform, including Coverity, Defensics and Protecode tools, helps build-in software cybersecurity and quality

Synopsys, Inc. (Nasdaq: SNPS) today announced broad tool support for designers creating Internet of Things (IoT) products using the new ARM® Cortex®-M23 and Cortex-M33 processors, the first based on the new ARMv8-M architecture that ARM also announced today. Synopsys' design solutions—spanning digital and custom mixed-signal System-on-Chip (SoC) design, hardware/software integration and validation, prototyping, software bring-up, functional safety verification and software integrity—accelerate product design and help ensure functional safety of IoT products based on these new ARM processors.

"Optimized embedded solutions designed to work in the most constrained environments are essential to unleash the full potential of the IoT," said Nandan Nayampally, vice president of marketing and strategy, CPU Group, ARM. "The Cortex-M23 and Cortex-M33 processors will strengthen any edge device with ARM TrustZone™ processor security technology, enhanced performance and energy-efficiency. Synopsys' extensive design solution will support developers in the rapid rollout of these new technologies through a comprehensive tool suite that will enable optimized IoT SoCs for any market."

Synopsys solutions available today to support development of IoT products with the new ARM Cortex-M23 and Cortex-M33 processors include:

- Galaxy™ Design Platform, including Design Compiler® Graphical, IC Compiler™ II place-and-route and Custom Compiler tools, implements power-efficient and cost-effective digital and mixed-signal IoT designs in FinFET as well as mature process technologies
- Verification Continuum™ Platform technologies, including:
    - Virtualizer™ Development Kits (VDKs) with ARM Fast Models, including the Cortex-M23 and Cortex-M33 models, enable early development, bring-up, and test for boot, OS, firmware and power management software (available today for early adopters)
    - Platform Architect™ analysis with Multicore Optimization (MCO) technology, integrated with ARM Cycle Models, enables architecture optimization and hardware/software performance validation of IoT designs based on the new ARMv8-M processors (Platform Architect support planned to be available in early 2017)
    - HAPS® physical prototyping solution accelerates software development, hardware/software

integration and system validation
    - VCS® functional verification and ZeBu® emulation solutions with Verdi® HW SW Debug deliver fast emulation and prototype performance, and speed hardware/software bring-up and debug
- Software Integrity Platform, including Coverity®, Defensics® and Protecode™ tools, helps build-in cybersecurity and quality through software signoff

"Our design solutions for ARM's new IoT IP build on more than 20 years of collaboration with ARM as well as our proven tools for designing IoT and embedded products," said Glenn Dukes, vice president of strategic alliances at Synopsys. "Early adopters of ARM's first ARMv8-M processors can get started today with Synopsys' solutions spanning silicon to software design."

For more information about Synopsys optimized solutions for ARM-based design, please see http://www.synopsys.com/ARM.

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 quality and security solutions. Whether you're a system-on-chip (SoC) designer creating advanced semiconductors, or a software developer writing applications that require the highest quality and security, Synopsys has the solutions needed to deliver innovative, high-quality, secure products. Learn more at www.synopsys.com.

Forward-Looking Statements

This press release contains forward-looking statements within the meaning of Section 21E of the Securities Exchange Act of 1934, including statements regarding the expected release and benefits of Platform Architect™ analysis with Multicore Optimization (MCO) technology, integrated with ARM Cycle Models. Any statements that are not statements of historical fact may be deemed to be forward-looking statements. These statements involve known and unknown risks, uncertainties and other factors that could cause actual results, time frames or achievements to differ materially from those expressed or implied in the forward-looking statements. Other risks and uncertainties that may apply are set forth in the "Risk Factors" section of Synopsys' most recently filed Annual Quarterly Report on Form 10-Q. Synopsys undertakes no obligation to update publicly any forward-looking statements, or to update the reasons actual results could differ materially from those anticipated in these forward-looking statements, even if new information becomes available in the future.

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