Synopsys and ARM Expand Collaboration to Accelerate Software Development for ARM-based Designs

Collaboration Provides Synopsys with Access to the Latest ARM® Fast Models for Use with Virtualizer Development Kits

MOUNTAIN VIEW, Calif., Nov. 10, 2015 **Highlights:**

- New agreement builds on successful multi-year virtual prototyping partnership and enables access to the latest ARM Fast models, including the recently announced ARM Cortex®-A35 processor
- Synopsys Virtualizer™ Development Kits (VDKs) include processor models, reference designs, multicore software debug and analysis tools and reference software stacks enabling efficient OS bring-up, driver and firmware development up to 12 months prior to silicon
- VDKs are a key element of Synopsys' end-to-end prototyping solutions that enable rapid architecture exploration, software development, hardware/software integration, and system validation

Synopsys, Inc. (Nasdaq:SNPS) today announced the extension of a multi-year licensing agreement with ARM to provide the latest ARM Fast Models for ARM Cortex processors, including the recently announced ARM Cortex-A35 core, as part of Synopsys Virtualizer Development Kits. Synopsys VDKs are software development kits using virtual prototypes as the embedded target. Utilizing the VDK for ARM Cortex processors, software teams can start development of software for ARM Cortex-based SoC (system-on-chip) designs up to 12 months prior to hardware availability, accelerating operating system bring-up as well as firmware and device driver development.

In addition to using reference VDKs from Synopsys, developers can use the combination of ARM processor models with Synopsys' Virtualizer tool set to rapidly create and deploy custom VDKs for software development teams. The VDK Family for ARM Processors comes with reference virtual prototypes that incorporate models of ARM Cortex processors such as the latest ARM Cortex-A35 core, as well as ARM big.LITTLE™ configurations and models of Synopsys DesignWare® Interface IP.

"With ARM processors being deployed across multiple applications, including mobile, automotive, infrastructure and IoT, it is important to provide developers with a strong ecosystem of software and development tools to help them manage the increasing software complexity in these applications," said Hobson Bullman, general manager, development solutions group at ARM. "Our collaboration allows Synopsys to distribute the latest ARM Fast Models with their VDKs to provide developers with a virtual prototyping solution to start software development much earlier in the design cycle and gain a competitive edge in the market."

Synopsys VDKs are a part of Synopsys' end-to-end prototyping solution, which include products that address architecture exploration, software development and testing, hardware/software integration and system validation. Using the latest ARM Fast Models with Synopsys VDKs, developers can start software development tasks such as OS bring-up, driver and firmware development up to 12 months before silicon. In addition, architects can derive a task graph from realistic software scenarios and use it to start architecture exploration for their next-generation SoC. VDKs can also be combined with physical prototyping to get the best of both worlds – fast bring-up of software for ARM-based designs with real world I/O interfaces on Synopsys' HAPS® FPGA-based prototyping systems.

"Synopsys' long collaboration with ARM helps software development teams take advantage of ARM's latest processors and accelerate their software development effort," said Joachim Kunkel, executive vice president and general manager, solutions group at Synopsys. "Using VDKs for ARM Cortex Processors, software developers have an embedded software target at the earliest stage possible to start work on their next-generation devices."

Availability & Resources
The Synopsys VDK Family for ARM Cortex Processors is available now.

- Learn more about VDKs: http://www.synopsys.com/Prototyping/VirtualPrototyping/Virtualizer-Development/Pages/vdk-family-arm.aspx

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 16th 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.

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