Synopsys Unveils Virtualizer Development Kits to Accelerate Software Development for ARM big.LITTLE Processing

VDK Family Delivers Fast Software Bring-Up and Better Debug Control for Quad-Core ARM® Cortex™-A15 MPCore™ Processor and ARM big.LITTLE™ Processing-Based Designs

- VDKs are software development tools integrating fast, functional models of specific multicore systems, multicore software debugging/analysis tools and reference software stacks
- Software development up to 12 months before board availability
- Out-of-the-box support for Linux, Android and multicore task migration software to speed software development for ARM big.LITTLE processing
- Plug-n-play integration with software debuggers from ARM, Lauterbach and GNU
- Multicore/multicluster software analysis capabilities to best utilize big.LITTLE processing performance and energy efficiency capabilities
- Configurable Cortex processor subsystem, customizable by adding other system components

Highlights:

MOUNTAIN VIEW, Calif., March 21, 2012 /PRNewswire/ -- Synopsys, Inc. (Nasdaq: SNPS), a world leader in software and IP used in the design, verification and manufacture of electronic components and systems, today announced the first release of the Virtualizer™ Development Kit (VDK) Family for accelerating software development. The VDK Family for ARM Cortex Processors contains multiple reference designs, analysis and debug software tools for the Cortex-A15 MPCore processor and ARM big.LITTLE processing. By using the VDKs developers can now optimize for performance and energy efficiency prior to board availability. The reference designs can easily be customized for device specific requirements using Synopsys' Virtualizer solution.

"Synopsys' virtual prototyping technology has helped us accelerate software development before with great results, as we were able to demonstrate with the OMAP5430 processor," said Vincent Verfaillie, development platforms and tools manager, Texas Instruments Incorporated (TI). "We continue to use their VDK solution to deliver the capabilities we need for early software development and a fast ramp up with our big.LITTLE processing platform."

Increased Software Control and Visibility

The visibility and controllability offered by the Synopsys VDK for big.LITTLE processing-based designs enable debug and analysis capabilities that allow software developers to optimize big.LITTLE processing-based designs for performance and energy-efficiency. Using Synopsys' VDK, developers for innovative mobile and consumer devices can optimize their code based on realistic end user experiences as well as minimize software/hardware integration issues. The VDK offers developers the ability to optimize Linux, Android and big.LITTLE power management using record and replay of real world scenarios.

"As companies are adopting our big.LITTLE processing to enable both next generation performance and energy-efficiency for smart, connected devices, ARM and its partners have paved the way by encouraging a strong ecosystem," said Jim Nicholas, vice president of marketing, processor division, ARM. "By offering the VDK Family for ARM Cortex Processors, supporting our Cortex-A15 MPCore and big.LITTLE processing, Synopsys is able to offer this partner ecosystem a highly effective solution for early software development and help facilitate innovation."

Pre-configured for Android, Linux and big.LITTLE Processing

The VDK Family for ARM Cortex Processors comes pre-configured for Linux (Vanilla 2.6.38) and Android (Gingerbread 2.3.4) operating systems (OS) as a starting point for developing actual device software. In addition, the VDK Family is pre-configured for the multicore task migration software layer between the big.LITTLE processing cluster, which includes ARM Cortex-A15 MPCore and Cortex-A7 MPCore processors, and the client OS. This layer dynamically migrates the software between the processors for performance and power optimization. The VDK allows developers to take advantage of this new layer and provides support for debugging and optimizing the software running on multicore hardware like big.LITTLE processing. These VDKs include common interfaces and peripherals such as: USB3.0, Ethernet, UART, LCD, keyboard, battery, memory, and more.

"Synopsys' first VDK family empowers customers like Texas Instruments to take full advantage of ARM's latest processing technology and reduce time-to-market for their next- generation products," said John Koeter, vice president of marketing for IP and systems at Synopsys. "Synopsys' VDKs targeted for big.LITTLE processing and Cortex-A15 processor-based designs

provide software developers with the necessary tools to optimize software much earlier in their project development cycle."

Availability

The VDK Family for ARM Cortex Processors will be generally available in the second quarter of calendar year 2012.

For more information about Synopsys' Virtualizer Development Kit Family, including compatibility with ARM tools and popular software debuggers, please visit: www.synopsys.com/VDK4big-LITTLE.

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 http://www.synopsys.com.

Forward Looking Statements

This press release contains forward-looking statements within the meaning of Section 27A of the Securities Act of 1933 and Section 21E of the Securities Exchange Act of 1934, including statements regarding the expected general availability of Synopsys' VDK Family for ARM Cortex Processors. These statements are based on current expectations and beliefs. Actual results could differ materially from those described by these statements due to risks and uncertainties including, but not limited to, unforeseen production or delivery delays, failure to perform as expected, product errors or defects and other risks detailed in Synopsys' filings with the U.S. Securities and Exchange Commission, including those described in the "Risk Factors" section of Synopsys' Annual Report on Form 10-K for the fiscal year ended October 31, 2011.

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