Synopsys Launches DesignWare ARC Software Development Platforms to Accelerate Software Development of ARC Processor-based SoC Designs

Pre-Verified Hardware and Software Platforms Integrate ARC Processors, Peripherals, Operating Systems and Software Development Tools to Enable Immediate Productivity

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Highlights:

- New DesignWare ARC Software Development Platforms integrate hardware and software to accelerate software development for ARC 600, 700, AS221BD, EM and HS processor-based designs
- Silicon-proven hardware consists of multiple ARC processors and a rich set of peripherals including DesignWare USB, Ethernet, UART, GPIO, SPI, I^2C and Secure Digital IP to provide a complete software development platform
- Pre-verified software, including Linux and MQX operating systems, device drivers and application examples allow designers to be immediately productive
- Synopsys MetaWare Development Toolkit and open source GNU Toolchain offer optimized environments for embedded software development, debugging and profiling
- Built-in HapsTrak connector enables designers to rapidly implement ARC-based SoC prototypes using Synopsys' leading HAPS FPGA-based prototyping solution

Synopsys, Inc. (Nasdaq: SNPS), a global leader providing software, IP and services used to accelerate innovation in chips and electronic systems, today announced the new DesignWare® ARC® Software Development Platforms to accelerate software development and debug of ARC processor-based system-on-chip (SoC) designs. The ARC AXS101 and AXS102 Software Development Platforms are complete and ready-to-use hardware and software platforms that include ARC processors, peripherals, pre-built Linux and MQX operating systems, device drivers, and application examples, enabling designers to start software development prior to SoC availability. The ARC Software Development Platforms' wide range of peripheral I/Os, including licensable DesignWare Interface IP such as USB, Ethernet, UART, GPIO, SPI, I^2C and Secure Digital (SD), allow designers to use the same hardware and drivers in the final SoC implementation, reducing development effort. Additionally, the built-in HapsTrak® connector on the ARC Software Development Platforms allows designers to quickly implement SoC prototypes using Synopsys' industry-leading HAPS® FPGA-based prototyping solution.

"Software development is often the most critical and resource-intensive portion of the overall SoC development process," said Clint Cole, CEO of Digilent, Inc. "Synopsys' ARC Software Development Platform offers a pre-validated, integrated solution that allows software engineers to start developing software much faster and earlier in the design cycle, helping to achieve aggressive time-to- market schedules, while reducing the overall development effort."

The ARC Software Development Platforms include CPU daughter cards that enable real-time software development, validation, code porting, software debugging and analysis on real hardware. The AXS101 Software Development Platform incorporates the AXC001 CPU Card that supports the ARC 625D, 770D, EM4, EM6 and AS221BD processors in an ASIC implementation, delivering at-speed operation. For example, the ARC 770D processor can run up to 800 MHz. The ARC AXS102 Software Development Platform includes the AXC002 CPU Card that supports the new ARC HS34 and HS36 processors in an FPGA implementation, ideal for the development of SoCs for high-performance embedded applications.

The built-in HapsTrak connector provides a fast tunnel, operating at up to 150MHz through the ARM® AMBA® AXI™ interconnect, enabling designers to easily connect the ARC Software Development Platform to Synopsys' HAPS FPGA-based prototyping system, where additional CPUs, peripherals or other custom logic can be integrated into the design for full SoC prototyping. In addition, five Digilent Pmod™ Compatible connectors support the integration of other custom and commercially available hardware extensions.

The ARC Software Development Platforms are supported by Synopsys' ARC MetaWare Development Toolkit, enabling the development and debugging of highly optimized, high-density code. Also available for the ARC Software Development Platforms are the open source GNU Toolchain and Synopsys ARC MetaWare Lite tools, which give designers flexibility to choose the ideal software development environment for their needs. ARC MetaWare Lite is a free version of the ARC MetaWare Development Toolkit that can be used for software applications of up to 32Kb code size.

"As embedded designs grow in complexity, designers need integrated hardware and software solutions to help them speed their SoC development process and meet crucial project schedules," said John Koeter vice president of marketing for IP and

systems at Synopsys. "Synopsys' ARC Software Development Platforms provide embedded software engineers an ideal, ready-to-use solution for efficient coding. By integrating all the required hardware and software into a single development platform, Synopsys has made it significantly easier for embedded designers to accelerate the development of their ARC processor-based SoCs."

Availability

- The Synopsys ARC AXS101 Software Development Platform, including the AXC001 CPU Card for ARC 625D, 770D, EM4, EM6 and AS221BD processors, is available now.
- The Synopsys ARC AXS102 Software Development Platform, which includes the AXC002 CPU Card for ARC HS34 and HS36 processors, is scheduled to be available March 2014.

About DesignWare IP

Synopsys is a leading provider of high-quality, silicon-proven IP solutions for SoC designs. The broad DesignWare IP portfolio includes complete interface IP solutions consisting of controllers, PHY and verification IP for widely used protocols, analog IP, embedded memories, logic libraries, processor cores and subsystems. To support software development and hardware/software integration of the IP, Synopsys offers drivers, transaction-level models, and prototypes for many of its IP products. Synopsys' HAPS FPGA-Based Prototyping Solution enables validation of the IP and the SoC in the system context. Synopsys' Virtualizer™ virtual prototyping tool set allows developers to start the development of software for the IP or the entire SoC significantly earlier compared to traditional methods. With a robust IP development methodology, extensive investment in quality, IP prototyping, software development and comprehensive technical support, Synopsys enables designers to accelerate time-to-market and reduce integration risk. For more information on DesignWare IP, visit: http://www.synopsys.com/designware.

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.

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