Synopsys' New ARC IoT Development Kit Accelerates Software Development for Sensor Fusion, Voice Recognition and Face Detection Designs

Platform Consisting of ARC Data Fusion IP Subsystem, Peripherals, Operating System and Software Development Tools Enables Immediate Productivity

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Highlights:

- DesignWare ARC IoT Development Kit includes the necessary hardware and software to speed software development and debugging of ARC EM processor-based designs
- Silicon-proven hardware consists of DesignWare ARC Data Fusion IP Subsystem and interfaces such as USB, UART, SPI, I^2C, I3C, PWM, SDIO and ADCs
- Synopsys' embARC Open Software Platform provides pre-verified software for the Development Kit, including drivers, FreeRTOS operating system, middleware and application examples
- Synopsys MetaWare Development Toolkit offers a high-productivity programming environment including optimized compiler, debugger and libraries

Synopsys, Inc. (Nasdaq: SNPS) today announced the new DesignWare® ARC® IoT Development Kit to accelerate software development and debug of ARC processor-based system-on-chip (SoC) designs. The ARC IoT Development Kit includes a silicon implementation of the ARC Data Fusion IP Subsystem as well as a rich set of peripherals commonly used in IoT designs such as USB, I3C and PWM. The Development Kit is supported by Synopsys' MetaWare Development ToolKit, which includes a compiler, debugger and libraries optimized for maximum performance with minimal code size. In addition, the embARC Open Software Platform gives developers online access to device drivers, application examples and a suite of free and open-source software that enables them to speed software development for their ARC-based embedded systems.

"The ability to start software development early in the design process is critical for companies to achieve their time to market," said Larry Lee, Vice President of Marketing and Sales at Brite Semiconductor. "By providing a complete hardware and software IoT Development Kit that is anchored by the ARC Data Fusion IP Subsystem, Synopsys enables developers to rapidly prototype software and speed development of future ARC-based SoC designs."

The ARC IoT Development Kit includes an ASIC implementation of the DesignWare ARC Data Fusion IP Subsystem running at 150MHz on SMIC's 55-nm, ultra-low power process. The ASIC also integrates a wide range of common peripheral interfaces including USB, UART, SPI, I^2C, I3C, RTC, PWM and SDIO to enable designers to use the same hardware and drivers in the final SoC implementation, reducing the development effort. The Development Kit has an on-board Bluetooth low-energy module for connecting to wireless networks and a 9-Axis (gyro, accelerometer and compass) sensor for developing wearable and other IoT applications. The ARC IoT Development Kit is extensible through the available Arduino, mikroBus and Pmod connectors.

The ARC IoT Development Kit is supported by a robust ecosystem of development tools and software including the MetaWare Development Toolkit, which enables the development and debugging of highly optimized, high-density code. In addition, Synopsys' embARC Open Software Platform gives software developers online access to a comprehensive suite of free and open-source software such as device drivers, FreeRTOS IoT middleware and application examples that ease the development of code for IoT applications. The software in the embARC Open Software Platform includes popular protocols used in IoT devices and networking stacks such as lwip and commonly used security protocols including MatrixSSL, WolfSSL and TinyDTLS. The latest version of embARC Open Software Platform also supports the OpenThread protocol, an open-source implementation of the Thread networking protocol released by Nest Labs, Inc.

"With embedded software development consuming a significant portion of the design process, having an integrated hardware and software solution is key to helping teams speed the SoC development process and meet crucial project schedules," said John Koeter, Vice President of Marketing for IP at Synopsys. "Synopsys' ARC IoT Development Kit provides software engineers with a silicon-proven platform that integrates all the necessary hardware and software to help them accelerate the development of their ARC processor-based SoCs for the Internet of Things."

Availability
The ARC IoT Development Kit and associated software is scheduled to be available in Q4 2017.

About DesignWare IP
Synopsys is a leading provider of high-quality, silicon-proven IP solutions for SoC designs. The broad DesignWare IP portfolio includes logic libraries, embedded memories, embedded test, analog IP, wired and wireless interface IP, security IP, embedded processors and subsystems. To accelerate prototyping, software development and integration of IP into SoCs, Synopsys' IP Accelerated initiative offers IP prototyping kits, IP software development kits and IP subsystems. Synopsys' extensive investment in IP quality, comprehensive technical support and robust IP development methodology enables designers to reduce integration risk and accelerate time-to-market. For more information on DesignWare IP, visit www.synopsys.com/designware.

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 security and quality solutions. Whether you're a system-on-chip (SoC) designer creating advanced semiconductors, or a software developer writing applications that require the highest security and quality, 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 the DesignWare ARC IoT Development Kit. 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 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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