Rambus Selects Synopsys' ARC EM Processors for Embedded Security Platform

ARC EM Processors' Leading Performance Efficiency Delivers Area and Power Savings for IoT and Mobile Applications

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Highlights:

- ARC EM processors selected for their small footprint and superior performance efficiency, delivering 3.5x more DMIPS/milliwatt than competitive alternatives
- Highly configurable core delivered optimum combination of performance, area and power for target application
- Comprehensive MetaWare Development Toolkit generated highly efficient code

Synopsys, Inc. (Nasdaq: SNPS) today announced that Rambus selected Synopsys' silicon-proven DesignWare® ARC® EM Processors for its next-generation security platform. Rambus selected Synopsys' ARC EM processors over alternative processor solutions for their extremely small area, superior performance-efficiency and excellent code density. ARC EM processors are configurable and extensible, enabling the addition of custom instructions and hardware accelerators to boost performance, while reducing energy consumption and area for applications including secure mobile banking, content protection and IoT device security.

"As the amount of sensitive and valuable data stored in and communicated across mobile and IoT devices continues to grow, there is an increased need for robust security implemented in a constrained area and power budget," said Eric Spanneut, vice president of security products, Rambus Security Division. "We selected Synopsys' ARC EM processors for the area savings and performance efficiency. The combination of configurable hardware with a full suite of software development tools helps accelerate the development of our advanced security platform, which will enable our customers to deliver secure and protected SoCs for their embedded applications."

The Rambus Security division specializes in embedded security solutions to combat the worldwide threat to data integrity especially as more devices are connected to the cloud. Their technologies span areas including tamper resistance, content protection, network security, media and payment and transaction services, and are designed into eight billion security products annually.

DesignWare ARC EM Processors are based on the scalable, 32-bit ARCv2 instruction set architecture (ISA), which provides excellent performance and code density for embedded applications. ARC EM Processors offer:

- Configurability, allowing designers to implement only the logic required to meet the specific performance requirements for each processor instance in an SoC, enabling significant power and area savings
- ARC Processor EXtension (APEX) technology, which lets users add custom instructions, registers and hardware to dramatically improve application-specific performance while reducing energy consumption and code size
- Pre-built and verified processor hardware options to accelerate common cryptography standards
- An ARC Enhanced Security Package with Synopsys' proprietary technology for implementing a trusted execution environment

The ARC EM processor family is supported by a robust ecosystem of development tools and software, including the MetaWare Development Toolkit and ARC EM Starter Kit. In addition, Synopsys' embARC Open Software Platform gives ARC EM software developers online access to a comprehensive suite of free and open-source software that eases the development of code for IoT and other embedded applications.

"Synopsys enables companies like Rambus to meet the demanding performance and area requirements of their designs with highly-efficient processors that can be tailored for their specific applications," said John Koeter, vice president of marketing for IP at Synopsys. "By selecting ARC EM cores for their security platform, Rambus is able to focus on their product differentiation and deliver highly reliable security solutions with value-added services to their customers."

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 http://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.

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