Synopsys' DesignWare Audio IP Achieves First-Pass Silicon Success in Leading 65-nm and 55-nm Process Technologies

High-performance, Low Power DesignWare 96 dB Hi-Fi Audio IP Optimized for Mobile Multimedia and Digital Home SoC Applications

MOUNTAIN VIEW, Calif., Oct. 26, 2011 /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 that its DesignWare® 96 dB Hi-Fi Audio IP has achieved first-pass silicon success in 65-nanometer (nm) and 55-nm process technologies for multiple foundries. The DesignWare 96 dB Hi-Fi Audio IP is optimized for high-performance, low power dissipation and small area, making it ideal for consumer electronic system-on-chip (SoC) applications such as portable media players, smart phones, CD/DVD/ Blu-Ray Disc players/recorders, digital TV and digital cameras. By providing a silicon-proven, modular audio IP solution that meets high performance SoC requirements, Synopsys enables designers to optimize their audio subsystem within the SoC and reduce integration risk.

The DesignWare 96 dB Hi-Fi Audio IP portfolio offers a comprehensive feature set, such as line and microphone inputs, headset, loudspeaker and line driver outputs, programmable gain amplifiers and power management blocks. This allows designers to select the specific functionality for their target application, resulting in area and power savings. Synopsys' audio IP family of audio codecs, including both record channel analog-to-digital converters (ADCs) and playback channel digital-to-analog converters (DACs), achieves excellent silicon performance with high signal-to-noise ratio (SNR) in excess of 100 dB for the playback channel and 94 dB for the record channel. In addition, the DesignWare Audio IP delivers audio pop-suppression performance of -80 dBV with flexible start-up/down timing control for a high-quality audio experience.

"There is a growing inclination among chip vendors to integrate high-performance multimedia functionality into their SoC designs to achieve better audio/video and graphics performance, while keeping power consumption at an optimum level," said Ganesh Ramamoorthy, research director at Gartner. "We expect differentiated IP such as general purpose analog and analog mixed-signal IP will continue to grow at a CAGR of over 9% over the next five years. IP vendors who are providing feature-rich Hi-Fi audio IP solutions will play a key role in the development of SoCs requiring audio processing." (See: ID Number: G00213215/26 May 2011).

"For the past 15 years, Synopsys has delivered high-quality audio IP that has been successfully integrated in more than 100 million chips," said John Koeter, vice president of marketing for IP and Systems at Synopsys. "We continue to expand our DesignWare Analog IP portfolio with silicon-proven solutions that support the latest process technologies and offer a range of functions that can be quickly embedded into advanced SoCs."

Availability
The silicon-proven DesignWare 96 dB Hi-Fi Audio IP in 65-nm and 55-nm processes is available now for multiple foundries. Additional DesignWare Audio IP is also available in processes from 180-nm to 40-nm. For more information on DesignWare Audio IP, please visit: http://www.synopsys.com/audio.

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 and configurable processor cores. In addition, Synopsys offersSystemC™ transaction-level models to build virtual prototypes for rapid, pre-silicon development of software. With a robust IP development methodology, reuse tools, extensive investment in quality 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. Follow us on Twitter athttp://twitter.com/designware_ip.

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.

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