

# Synopsys Announces 40th DesignWare Audio Codec IP

Broad DesignWare Audio IP Portfolio Shipped in More Than 100 Million Units

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MOUNTAIN VIEW, Calif., Oct. 28 /PRNewswire-FirstCall/ -- Synopsys, Inc. (NASDAQ: SNPS), a world leader in software and IP for semiconductor design, verification and manufacturing, today announced the availability of its 40th audio codec IP with the release of the DesignWare® 96 dB Hi-Fi Audio IP in the SMIC 65-nanometer (nm) process. Synopsys has been a leading provider of audio IP for more than twelve years and provides designers with high-quality audio IP solutions supporting 20 different process nodes, from 180-nanometer (nm) to 65-nm processes and with performance levels from 80 dB to 103 dB. By providing a broad portfolio of silicon-proven audio IP solutions that is backed by local technical support experts across all major geographical regions and shipped in more than 100 million units, Synopsys has gained the trust of designers in helping them lower integration risk, speed time-to-market and achieve first-pass silicon success for their SoC designs.

"SMIC and Synopsys have had a successful long term collaboration on the development of DesignWare Mixed-Signal IP for SMIC's process technologies," said Max Liu, vice president of Design Services center at SMIC. "With the availability of the DesignWare Audio Codec in the SMIC 65 LL process, we are enabling our mutual customers to integrate these important audio functions into their SoCs and quickly ramp into volume production."

The DesignWare Audio IP solution offers a comprehensive feature set for audio record and playback channels. The record channel includes features such as analog-to-digital converters (ADCs), volume control, channel filters, microphone biasing and microphone amplifiers. The playback channel includes elements such as digital-to-analog converters (DACs), channel filters, mixers, volume control and line, headset and loud speaker drivers. These features enable designers to deliver the best audio capabilities for cost- and power-sensitive consumer electronic applications. By offering audio codec solutions that deliver high performance margins and are designed to be robust in a noisy SoC environment, Synopsys significantly eases the integration effort of audio IP into embedded designs.

"As a leading provider of analog IP, Synopsys continues to expand its silicon-proven DesignWare IP portfolio with flexible, high-quality audio IP solutions that support a broad range of application requirements and deliver performance levels similar to discrete components," said John Koeter, vice president of marketing for the Solutions Group at Synopsys. "With proven solutions in 20 different process technologies and more than 100 million units shipped, Synopsys' high-quality DesignWare Audio IP solutions are trusted by designers to help them reduce integration risk and achieve the performance, power and area requirements of their feature-rich audio SoCs."

## Availability

The DesignWare 96 dB Hi-Fi Audio IP for SMIC 65-nm processes is expected to be available in Q4 2009. The DesignWare Audio IP solutions are available in leading foundries and advanced technology processes from 180-nm to 65-nm . For more information on the DesignWare Audio IP solutions, please visit: <http://www.synopsys.com/audio> .

## About DesignWare IP

Synopsys is a leading provider of high-quality, silicon-proven interface and analog IP solutions for system-on-chip designs. Synopsys' broad IP portfolio delivers complete connectivity IP solutions consisting of controllers, PHY and verification IP for widely used protocols such as USB, PCI Express, DDR, SATA, HDMI, MIPI and Ethernet. The analog IP family includes Analog-to-Digital Converters, Digital-to-Analog Converters, Audio Codecs, Video Analog Front Ends, Touch Screen Controllers and more. In addition, Synopsys offers SystemC transaction-level models to build virtual platforms for rapid, pre-silicon development of software. With a robust IP development methodology, 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 at [http://twitter.com/designware\\_ip](http://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, software-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 more than 65 offices located throughout North America, Europe, Japan, Asia and India. Visit Synopsys online at <http://www.synopsys.com/>.

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