

# Synopsys First to Deliver High-Performance Audio IP in 40-nm and 55-nm Process Technologies

Low Power, Compact and Highly Modular DesignWare 96 dB Hi-Fi Audio IP Enables Easy Integration into a Broad Range of SoC Applications

MOUNTAIN VIEW, Calif., July 28 [PRNewswire-FirstCall](#)/ -- Synopsys, Inc. (Nasdaq: SNPS), a world leader in software and IP for semiconductor design, verification and manufacturing, today announced the addition of the DesignWare® 96 dB Hi-Fi Audio IP in the 40-nanometer (nm) and 55-nm process technologies to its broad portfolio of high-quality audio IP solutions. Synopsys is the first IP provider to offer audio codecs, digital-to-analog converters (DACs) and analog-to-digital converters (ADCs) in these advanced processes. The DesignWare Audio IP portfolio offers performance levels from 80 dB to 103 dB and is available in more than 20 different process nodes, from 180-nm to 60-nm, and now down to 40-nm. The IP is targeted for consumer electronic applications requiring Hi-Fi playback and record capabilities with very low power consumption and small silicon area, such as portable media players, mobile phones, smart phones, CD/DVD/Blu-ray players/recorders and digital cameras.

The DesignWare Audio IP is modular, allowing designers to easily select the specific features for their target applications and includes a rich set of functions such as signal processing, signal conditioning, clock management, power management and high-efficiency Class G drivers. Designed for low power consumption and small silicon area, the DesignWare Audio IP enables designers to quickly implement the required audio functionality into their system-on-chip (SoC) while meeting high performance requirements. By offering audio IP that is designed to be robust in an electronically noisy SoC environment, Synopsys significantly lowers the integration effort of audio IP into embedded designs.

"With more than 100 million chips shipping with DesignWare Audio IP, Synopsys continues to deliver IP solutions that enable designers to quickly incorporate key audio functionality into their SoCs and meet their critical project schedules," said John Koeter, vice president of marketing for the Solutions-Group at Synopsys. "By being first with audio IP for the 40- and 55-nanometer processes and providing silicon-proven IP in more than 20 different process technologies, Synopsys' helps designers achieve the performance, power and area requirements of their feature-rich SoCs and reduce integration risk."

## Availability

The DesignWare 96 dB Hi-Fi Audio IP for TSMC 40-nm and 55-nm processes is available to early adopters now. 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 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, Ethernet, HDMI and MIPI IP including 3G DigRF, CSI-2 and D-PHY. 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 us on the web at: <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, 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 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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