

# Synopsys and GLOBALFOUNDRIES to Develop DesignWare Interface PHY IP for 28-nanometer Technologies

Collaboration Enables Faster Time-to-Volume for Advanced High-Performance SoC Designs

MOUNTAIN VIEW, Calif., Aug. 4 /PRNewswire-FirstCall/ -- Synopsys, Inc. (Nasdaq: SNPS), a world leader in software and IP for semiconductor design, verification and manufacturing, and GLOBALFOUNDRIES, a leading provider of advanced semiconductor technology and manufacturing services, today announced an agreement to develop the Synopsys DesignWare® SuperSpeed USB (3.0), USB 2.0, HDMI 1.4 Tx and Rx, DDR3/2, PCI Express® 2.0 and 1.1, SATA 1.5/3 Gbps and 6 Gbps, and XAUI PHY IP for GLOBALFOUNDRIES' 28-nanometer (nm) "Gate First" High-k Metal Gate (HKMG) process technologies. The collaboration will enable mutual customers to differentiate their 28-nm designs with a high-quality IP portfolio targeted at next-generation electronic system-on-chips (SoCs). The long-standing relationship between the two companies has resulted in the successful development of DesignWare PHY IP from 180-nm to 32-nm process technologies. GLOBALFOUNDRIES and Synopsys are the first to announce the development of USB, PCI Express, DDR, HDMI, SATA and XAUI PHY IP targeting 28-nm process technologies with scalability to future generations.

GLOBALFOUNDRIES' 28-nm high performance (HP) and super low power (SLP) technologies are optimized for fast processing with minimal leakage, making them ideal for a wide variety of applications from high-performance graphics and wired networking to low-power wireless mobile applications that require high processing speeds, small feature sizes, and long battery lifetime.

"This is another demonstration of the value delivered by our close collaboration with members of the GLOBALFOUNDRIES ecosystem," said Walter Ng, vice president of the IP ecosystem at GLOBALFOUNDRIES. "Our 28 nanometer HKMG processes with 'Gate First' technology are aimed at delivering a new level of performance and power efficiency for the next generation of SoC designs. By combining our leading-edge manufacturing capabilities with Synopsys' established leadership in delivering high-quality IP for the most advanced processes, we will enable our mutual customers to quickly ramp into high volume and bring their innovations to the marketplace."

Synopsys provides complete solutions consisting of digital controllers, PHYs and verification IP for commonly used protocols such as USB, PCI Express and SATA. The DesignWare PHY IP solutions target a broad range of high-performance, ultra low-power mobile and consumer applications, where the key requirements include minimal area and low dynamic and leakage power consumption. The PHY IP is designed to tolerate process, voltage and temperature variations and supports multiple power management features.

"By collaborating with GLOBALFOUNDRIES to deliver our PHY IP in the 28 nanometer process, Synopsys enables designers to meet the growing demands of a new generation of lower power, higher performance SoCs," said John Koeter, vice president of marketing for the Solutions Group at Synopsys. "Our successful track record of providing proven solutions in the GLOBALFOUNDRIES processes gives designers confidence that they can quickly migrate to this advanced process technology with significantly less risk and improved time-to-market."

## Availability

Front-end design views for the DesignWare PHY IP supporting GLOBALFOUNDRIES' 28-nm process technologies are available now. Initial design kits and DesignWare PHY IP are scheduled for availability in Q1 of 2011. Additional products will be released throughout 2011. For more information on the DesignWare USB, PCI Express, DDR, HDMI and SATA PHY IP solutions, please visit: <http://www.synopsys.com/designware>.

## 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 including USB, PCI Express, DDR, SATA, Ethernet, HDMI and MIPI IP including 3G DigRF, 4G 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 prototype 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 GLOBALFOUNDRIES

GLOBALFOUNDRIES is the world's first full-service semiconductor foundry with a truly global manufacturing and technology footprint. Launched in March 2009 through a partnership between AMD (NYSE: AMD) and the Advanced Technology Investment Company (ATIC), GLOBALFOUNDRIES provides a unique combination of advanced technology, manufacturing excellence and global operations. With the integration of Chartered in January 2010, GLOBALFOUNDRIES significantly expanded its capacity and ability to provide best-in-class foundry services from mainstream to the leading edge. GLOBALFOUNDRIES is headquartered in Silicon Valley with manufacturing operations in Singapore, Germany, and a new leading-edge fab under construction in Saratoga County, New York. These sites are supported by a global network of R&D, design enablement, and customer support in Singapore, China, Taiwan, Japan, the United States, Germany, and the United Kingdom. For more information on GLOBALFOUNDRIES, visit <http://www.globalfoundries.com>.

## **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/>.

## **Forward-Looking Statements**

This press release contains forward-looking statements within the meaning of Section 27A of the Securities Act of 1933 and Section 21E of the Securities Exchange Act of 1934, including statements regarding the expected benefits of the collaboration between GLOBALFOUNDRIES and Synopsys, and the expected benefits and availability of DesignWare USB, PCI Express, DDR, HDMI, SATA and XAUI PHY IP targeting 28-nm process technologies. These statements are based on current expectations and beliefs. Actual results could differ materially from those described by these statements due to risks and uncertainties including, but not limited to, engineering difficulties and other risks as identified in the section of Synopsys' Annual Report on Form 10-K for the fiscal year ended October 31, 2009, and subsequent forms 10-Q, entitled "Risk Factors."

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