

# Sequans Communications Achieves First-Pass Silicon Success with Synopsys DesignWare USB 2.0 nanoPHY IP

High-Quality USB 2.0 nanoPHY IP Delivers Exceptionally High Yield, Small Area, and Low Power Consumption for Advanced WiMAX Mobile Station

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MOUNTAIN VIEW, Calif., Jan. 14 /PRNewswire-FirstCall/ -- Synopsys, Inc. , a world leader in software and IP for semiconductor design and manufacturing, today announced that Sequans Communications has achieved first-pass silicon success for its high-performance SQN1130 WiMAX mobile station system-on-chip (SoC) utilizing Synopsys DesignWare® USB 2.0 nanoPHY IP. Sequans, the world's leading WiMAX chipmaker, selected Synopsys' silicon-proven IP because it met their area, power and performance requirements. With DesignWare IP, Sequans was able to achieve greater than 99.7 percent yield, as measured in more than a quarter of a million chips. Sequans also benefitted from having comprehensive well-written documentation and access to an experienced technical support team, enabling them to reduce integration risk and speed time-to-market.

Sequans' advanced Mobile WiMAX baseband chip, the SQN1130, implements a unique, low-complexity MIMO algorithm, mimoMAX™, that delivers high data throughput with very low power consumption. Sequans needed a USB 2.0 PHY core that would meet their low power and small area requirements. After evaluating several IP providers, Sequans selected Synopsys DesignWare USB nanoPHY IP because it was 30 percent lower in area and up to 15 percent lower in power compared to other IP offerings. In addition, the tunability feature of the DesignWare USB 2.0 nanoPHY IP allowed Sequans to maximize performance in the USB system by enabling quick, post-silicon adjustments that occur due to unexpected chip/board parasitics or process variations, without modifying their existing design.

"Faced with a critical time-to-market window, it was essential for us to select an established USB IP provider who had an extensive track record of proven products in the market and a knowledgeable technical support team," said Laurent Sibony, director of ASIC design at Sequans Communications. "We knew Synopsys DesignWare USB IP would be of high quality. Developing the IP internally was never an option for us because it was not our core competency. Instead, we relied on Synopsys' expertise in standards-based IP to help us meet our goals and achieve first-pass silicon success for our SQN1130 chip."

"Companies such as Sequans who are developing innovative products rely on Synopsys to provide proven IP solutions that will help them win in a competitive market," said John Koeter, vice president of marketing for the Solutions Group at Synopsys. "As a leading provider of USB IP, Synopsys is focused on developing high-quality IP that is technically differentiated in terms of feature set, area and power, enabling designers to reduce integration risk and meet their design requirements."

## Availability

The DesignWare USB 2.0 nanoPHY IP is available now and is an integral part of the Eclipse™ Low Power Solution. For more information, visit: [http://www.synopsys.com/dw/ipdir.php?ds=dwc\\_usb2\\_nanoPHY](http://www.synopsys.com/dw/ipdir.php?ds=dwc_usb2_nanoPHY).

## About DesignWare IP

Synopsys offers a broad portfolio of high-quality, silicon-proven digital, mixed-signal and verification IP for system-on-chip designs. As a leading provider of connectivity IP, Synopsys delivers the industry's most comprehensive solutions for widely used protocols such as USB, PCI Express, SATA, Ethernet and DDR. In addition to connectivity IP, Synopsys offers SystemC transaction-level models to build virtual platforms for rapid, pre-silicon development of software. When combined with a robust IP development methodology, extensive investment in quality and comprehensive technical support, DesignWare IP enables designers to accelerate time-to-market and reduce integration risk. For more information on DesignWare IP, visit <http://www.synopsys.com/designware>.

## About Synopsys

Synopsys, Inc. is the world leader in electronic design automation (EDA), supplying the global electronics market with the software, intellectual property (IP) and services used in semiconductor design 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 60 offices located throughout North America, Europe, Japan, Asia and India. Visit Synopsys online at <http://www.synopsys.com/>.

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