

Synopsys Surpasses 3000th USB IP Design Win and 1000th PCI Express IP Design Win

Use of Silicon-Proven DesignWare IP by More than 600 Companies Demonstrates High Quality and Low Integration Risk

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Highlights:

- With 3,000 USB and 1,000 PCI Express IP design wins, Synopsys is the low-risk choice for designers implementing these standards into their SoCs
- Complete solutions for these protocols (PHY, controller, verification IP and prototyping views) enable rapid integration in SoC designs
- Extensively proven in silicon with more than 140 process ports from 180- to 20-nm, with 16/14-nm FinFET in development
- Certified more than 150 times, combined, by the USB-IF and PCI-SIG standards bodies, ensuring interoperability with billions of devices worldwide

Synopsys, Inc. (Nasdaq:SNPS), a global leader providing software, IP and services used to accelerate innovation in chips and electronic systems, today announced that its [DesignWare® USB PHY and Controller IP](#) has surpassed 3,000 design wins, and that its [DesignWare PHY and Controller IP for PCI Express®](#) has surpassed 1,000 design wins. [More than 600 companies](#) have selected Synopsys DesignWare IP for USB and PCI Express to accelerate their designs because the IP offers high quality, standards compliance, and third-party interoperability testing along with the key features needed to support their designs' performance, power and area requirements.

"We chose DesignWare IP to improve our overall quality and time-to-market," said John Cummins, senior vice president, worldwide sales and marketing, DisplayLink. "We selected Synopsys because of their demonstrated high-quality USB IP that has been implemented in thousands of designs, and we were confident that the IP would function as required. With Synopsys USB 3.0 IP, we achieved first-pass silicon success and shipped millions of USB 3.0 products on schedule."

"We have used Synopsys IP in our multimedia SoCs for more than ten years as we believe Synopsys provides the most complete and flexible USB and PCI Express IP solutions in the market," said Jessy Chen, executive vice president of Realtek. "Using high-quality DesignWare IP in our designs enabled us to reduce our IP integration risk and be the industry's first to earn USB-IF certification for a USB 3.0 card reader."

Synopsys' complete USB and PCI Express solutions include controller IP, PHY IP, verification IP and the HAPS® FPGA-based prototyping platform, which together simplify the IP integration and validation process, and accelerate time-to-market. DesignWare USB IP has been certified by the USB-IF standards body more than 100 times and DesignWare IP for PCI Express has been certified by PCI-SIG more than 50 times, ensuring interoperability with billions of devices worldwide. In addition to supporting SuperSpeed, High-Speed, Full-Speed and Low-Speed USB modes, DesignWare USB 3.0 IP enables the fastest SuperSpeed USB data transfer speeds while lowering overall power consumption for mobile SoC designs. The low-power, low-latency DesignWare IP for PCI Express 3.0 provides full coverage of the PCIe specification (1.x, 2.x, 3.0, M-PCIe and optional features) across Switch, Endpoint, Dual Mode, and Root Complex port types, with embedded DMA, SR-IOV, and ARM® AMBA® 4 AXI™, AMBA 3 AXI and AMBA AHB™ interfaces to meet the requirements of the enterprise, consumer and mobile markets. Synopsys has ported DesignWare PHY IP for USB and PCI Express to more than 140 process technologies; the IP is readily available from all leading foundries in processes from 180-nanometer (nm) to 20-nm, providing designers with easily accessible, silicon-proven IP.

"To accelerate our time-to-market in the highly competitive cable operator space, the IP that we use must be rock solid," said Kent Goodin, executive vice president of engineering, Zenerge. "After achieving first-pass silicon success using Synopsys DesignWare IP for USB 2.0 and PCI Express 1.0 in our ZN200 Quad Stream Transcoders, it was a clear decision to use Synopsys USB 3.0 and PCI Express 2.0 IP solutions in our next-generation transcoders. The IP consistently works as advertised and allows us to focus our resources on creating our own innovative technology."

"As the leading provider of USB and PCI Express IP, and with 28 combined years of participation in the USB-IF and PCI-SIG standards bodies, Synopsys is in a unique position to fulfill customers' needs for high quality, proven IP solutions that help them deliver innovative products," said John Koeter, vice president of marketing for IP and systems at Synopsys. "With more than 1,900 IP engineers and significant investment in our design, lab and compute infrastructure, Synopsys continues to provide designers with the trusted IP needed to help

them achieve silicon success and meet their time-to-market pressures."

Availability & More Information

DesignWare IP for USB (1.0, 2.0 and 3.0) and PCI Express (1.x, 2.x and 3.0) are available now. DesignWare IP for USB 3.1 and PCI Express 4.0 are in development.

See what more of our customers say about [reducing risk by using DesignWare IP for USB and PCI Express](#).

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, processor cores and subsystems. To support software development and hardware/software integration of the IP, Synopsys offers drivers, transaction-level models, and prototypes for many of its IP products. Synopsys' HAPS® FPGA-Based Prototyping Solution enables validation of the IP and the SoC in the system context. Synopsys' Virtualizer™ virtual prototyping tool set allows developers to start the development of software for the IP or the entire SoC significantly earlier compared to traditional methods. With a robust IP development methodology, extensive investment in quality, IP prototyping, software development 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>.

About Synopsys

Synopsys, Inc. (Nasdaq:SNPS) accelerates innovation in the global electronics market. As a leader in electronic design automation (EDA) and semiconductor IP, Synopsys delivers software, IP and services to help engineers address their design, verification, system and manufacturing challenges. Since 1986, engineers around the world have been using Synopsys technology to design and create billions of chips and systems. Learn more at www.synopsys.com.

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