Synopsys Announces DesignWare IP for PCI Express with PCI-SIG I/O Virtualization Technology

New DesignWare IP Lowers Power, Reduces Cost and Increases Performance for Enterprise Computing Systems

MOUNTAIN VIEW, Calif., June 11 /PRNewswire-FirstCall/ -- Synopsys, Inc. (NASDAQ: SNPS), a world leader in software and IP for semiconductor design and manufacturing, today announced the availability of DesignWare® IP for PCI Express with PCI-SIG® Single Root I/O Virtualization (SR-IOV) technology. The PCI-SIG I/O Virtualization (IOV) technology, which builds on the PCI Express (PCIe) protocol stack, reduces the system hardware requirements by enabling the simultaneous sharing of peripherals across multiple CPUs or operating systems. By supporting the PCI-SIG IOV technology, the new DesignWare IP allows resources to be allocated more easily and efficiently, thus lowering power, improving performance and reducing overall costs in blade servers, storage and networking applications used in enterprise computing systems.

"With the increased bandwidth demands in next-generation enterprise computing infrastructure applications, the PCI-SIG IOV technology can help reduce the cost and increase the performance of virtualized systems," said Al Yanes, PCI-SIG chairman and president. "As an active member of PCI-SIG, Synopsys continues to help designers quickly adopt the latest PCI Express specifications by providing IP that allows them to easily integrate the PCI-SIG SR-IOV technology in their chips."

Synopsys offers a complete DesignWare IP solution consisting of digital controllers, PHY and verification IP, all of which fully support the PCI-SIG SR-IOV 1.0 specification. As the leading provider of PCI Express IP, Synopsys collaborated with key companies developing products for enterprise computing to help ensure that the DesignWare IP for PCI Express with PCI-SIG SR-IOV technology contains the necessary features required to serve this market. The DesignWare IP operates at 2.5 GT/s or 5.0 GT/s per lane and is fully configurable. It supports multiple Physical Functions (PF) and Virtual Functions (VF) such as Alternative Routing ID Interpretation (ARI), Function Level Reset (FLR), and Address Translation Services (ATS), providing designers with the ability to select the optimal feature set required for their target design. In addition, the IP preserves the existing DesignWare IP for PCI Express application interface, allowing easy integration of SR-IOV technology into a system on a chip (SoC).

"After evaluating other vendors, Synopsys' high performance, low latency and low gate count DesignWare IP, combined with the SR-IOV technology, was the ideal solution for us," said Bruce Tolley, vice president of marketing at Solarflare. "Synopsys is well known in the industry for delivering high-quality IP, and we look forward to continuing our relationship with them to develop our next generation 10G Ethernet controllers for server adapters utilizing the SR-IOV technology."

"The enterprise computing market is driving the need for advanced functionality such as I/O virtualization in the PCI Express standard," said John Koeter, senior director of marketing for IP and Services at Synopsys. "Our new DesignWare IP for PCI Express with PCI-SIG SR-IOV technology implements the necessary features for this dynamic market and helps designers lower integration risk and meet their critical market windows."

Availability

The complete DesignWare IP for PCI Express solution with support for PCI-SIG SR-IOV is available immediately for early adopters, with general availability expected at the end of June. For more information, please visit: https://www.synopsys.com/pciexpress or visit Synopsys at booth number two at the PCI-SIG DevCon, http://www.pcisig.com/events/devcon_08.

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 the leading provider of connectivity IP, Synopsys delivers the industry's most complete 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 https://www.synopsys.com/designware

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 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 60 offices located throughout North America, Europe, Japan, Asia and India. Visit Synopsys online at https://www.synopsys.com/.

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