Synopsys' DesignWare IP Core for PCI Express First to Pass PCI-SIG Compliance Tests

Tested, Integrated IP Reduces Risk, Shortens Time to Market for PCI Express Designers

Synopsys, Inc. (NASDAQ: SNPS), the world leader in semiconductor design software, today announced that its DesignWare® Endpoint Controller intellectual property (IP) Core for PCI Express™ is the first such IP to successfully pass compliance tests from the PCI-SIG™. Designers using Synopsys' DesignWare Core for PCI Express will have increased confidence that the IP will work seamlessly with any design based on the PCI Express standard. The DesignWare Endpoint Controller Core for PCI Express incorporates the Transaction Layer, Data Link Layer and Physical Layer of the PCI Express protocol into a synthesizable core and is designed to work with physical layers (PHYs) that comply with the PIPE interface standard, including the recently announced PCI Express PHY from Synopsys. By passing the compliance tests, the DesignWare Core for PCI Express reduces development and integration risk, thereby improving time to market.

Synopsys' extensive use of state-of-the-art verification technology and methodology while designing the DesignWare Core for PCI Express was a critical factor in passing all of the compliance tests quickly. This approach included using the DesignWare verification IP (VIP) for PCI Express architecture to verify the endpoint controller core, and an FPGA hardware add-in card for compliance and interoperability testing. The hardware add-in card is configured as a 10/100 Ethernet application for testing in PCI Express architecture-based systems and uses a daughter card to enable interoperability testing of the DesignWare Core for PCI Express with PIPE compliant PHYs.

"As PCI Express technology is experiencing rapid adoption in the industry, compliance testing is critical to ensure interoperability of products based on the PCI Express architecture. The PCI-SIG has established a set of compliance tests, which products must pass to be included in the PCI-SIG Integrators List," said Tony Pierce, PCI-SIG Chairman. "PCI-SIG appreciates Synopsys' development of IP enabling designers to accelerate the development of innovative products based on the PCI Express standard which greatly helps member companies to shorten their development cycle. We are pleased to see that Synopsys is included in the first group of member companies whose PCI Express-based product has passed the compliance tests and is on the Integrators List."

"Synopsys, as the leading provider of PCI IP, takes an active role in promoting and supporting standards like PCI Express and the PIPE interface to achieve interoperability and ease of integration," said Guri Stark, vice president of Marketing in the Solutions Group at Synopsys. "Testing our DesignWare Core for PCI Express with the PCI Express protocol stack and other PCI Express systems increases confidence for SoC designers that they are using proven IP cores which will work seamlessly in their design. Our customers depend on our commitment to third-party interoperability and compliance testing to reduce their risk and enable them to deliver successful products."

Synopsys' complete, integrated core reduces design risk for PCI Express users, because the different protocol layers have been tested and proven to work together. By using tested, integrated IP, designers can concentrate on the value-added portions of their system-on-chip (SoC) designs and reduce their end products' time to market. Designers can further increase productivity and reduce integration risk by using both the digital endpoint controller and mixed-signal PCI Express PHY from Synopsys. The DesignWare Core's high-performance, pipelined architecture provides maximum sustainable throughput while achieving low latency and a low gate count. The DesignWare Core for PCI Express was designed by the same Synopsys engineers who designed the industry leading PCI and PCI-X® cores, which are used in more than 400 production designs by more than 250 different companies.

Pricing and Availability

The DesignWare Endpoint Controller Core for PCI Express is available today. The verification suite is available today in the DesignWare Library and the DesignWare Verification Library, as well as separately. The DesignWare PCI Express PHY is available for early adopters today. For more information on DesignWare IP, please visit www.designware.com.

About DesignWare Cores

DesignWare Cores provide system designers with silicon proven, digital and analog connectivity IP for some of the world's most recognized products including communications processors, routers, switches, game consoles, digital cameras, computers and computer peripherals. Provided as synthesizable RTL source code or in GDS format, these cores enable designers to create innovative, cost-effective systems-on-chips and embedded systems. Synopsys provides flexible licensing options for the DesignWare Cores. Each core can be licensed individually, on a fee-per-project basis or users can opt for the Volume Purchase Agreement, which enables them to license all the cores under one simple agreement.

About Synopsys

Synopsys, Inc. is the world leader in electronic design automation (EDA) software for semiconductor design. The company delivers technology-leading semiconductor design and verification platforms and IC manufacturing software products to the global electronics market, enabling the development and production of complex systems-on-chips (SoCs). Synopsys also provides intellectual property and design services to simplify the design process and accelerate time-to-market for its customers. Synopsys is headquartered in Mountain View, California and has offices in more than 60 locations throughout North America, Europe, Japan and Asia. Visit Synopsys online at https://www.synopsys.com/ .

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