

Synopsys' New DesignWare Bridge IP for PCI Express to AMBA 3 AXI Connects Two High-Performance Domains

Bridge Delivers High-Throughput Connection to Multiple PCI Express Technology-Based Systems and Peripherals

Synopsys, Inc. (NASDAQ: SNPS), a world leader in semiconductor design software, today announced the availability of the DesignWare® Bridge Intellectual Property (IP) for PCI Express® to AMBA® 3 AXI™ protocol. The bridge to AMBA 3 AXI protocol is used in conjunction with Synopsys' complete portfolio of DesignWare IP for PCI Express version 1.1 and preliminary 2.0 (Gen II), including Endpoint, Root Complex, Switch, Bridge and Dual Mode. Designers who are using the high-performance serial PCI Express interface to interconnect their system-on-chip (SoC) designs in networking, embedded, storage and computer applications have begun migrating their standard on-chip bus to the AMBA 3 AXI protocol to preserve the full bus bandwidth. By providing a PCI Express to AMBA 3 AXI bridge, Synopsys is enabling designers who use the AMBA 3 AXI protocol to easily add PCI Express external connectivity to their SoCs. This results in higher throughput designs with a connection to a wealth of available PCI Express technology-based systems and peripherals. Synopsys will be showcasing the DesignWare Bridge for PCI Express to AMBA 3 AXI protocol at the PCI-SIG® Developers' Conference in San Jose, California, on June 8-9, 2006.

"PCI Express and AMBA are the leading off-chip and on-chip interconnect specifications, respectively, and bridging these two standards enables higher throughput devices for key application areas," said Keith Clarke, vice president of Technical Marketing, ARM. "Having used AMBA 3 Assured Verification IP to verify its Bridge for PCI Express to AMBA 3 AXI protocol, Synopsys is giving designers confidence that the bridge conforms to the AMBA 3 AXI protocol."

Creating a bridge between two bus protocols is always challenging, because not all aspects of the buses' protocol map directly from one to the other. The difficulty increases when developing a configurable bridge that supports multiple system performance objectives at both ends of the bridge. Synopsys is the first to map the complete PCI Express protocol across the bridge to the AMBA 3 AXI protocol, while providing multiple configuration options to enable designers to select an optimal solution for their specific applications.

"PCI-SIG is pleased with Synopsys' continued support for PCI Express by making its proven IP available for a wide range of applications," said Tony Pierce, chairman of the PCI-SIG. "By bridging PCI Express to AMBA 3 AXI, Synopsys is providing designers with the means of easily integrating high-performance standards into their designs while expanding the PCI Express market."

"As a leader in PCI Express IP and standards-based connectivity, we understand the importance of delivering our PCI Express IP with standards-based interfaces to provide designers with a predictable path to success," said Guri Stark, vice president of Marketing for the Solutions Group at Synopsys. "Working with key customers to develop our PCI Express to AMBA 3 AXI Bridge, with support for PCI Express 2.0, addresses the early support needed to develop AMBA 3 AXI protocol-based SoCs to meet their design needs and critical market windows."

Availability

The DesignWare Bridge for PCI Express to AMBA 3 AXI protocol is currently in use by early adopters and is scheduled for general availability in Q2 of calendar 2006. Customers interested in early access should contact their local Synopsys office. The bridge is part of the complete DesignWare IP solution for PCI Express, including digital cores, mixed-signal PHY IP and Verification IP.

The DesignWare Bridge for PCI Express to AMBA 3 AXI can be used in conjunction with the Synopsys DesignWare IP solutions for AMBA 3 AXI protocol, including synthesizable peripheral IP, AMBA 3 Assured Verification IP and the Synopsys coreAssembler tool for automated sub-system assembly. The DesignWare IP solutions for AMBA 3 AXI protocol are available today for no additional charge to DesignWare Library licensees.

About DesignWare Cores

Synopsys DesignWare Cores provide system designers with silicon-proven, digital, and mixed-signal 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 system-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 as part of one simple agreement. For more information on DesignWare IP, visit: <http://www.designware.com/>.

About Synopsys

Synopsys, Inc. is a world leader in 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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