Synopsys Releases Wireless USB WHCI Host and Dual-Role Device IP Based on the Certified Wireless USB Specification From USB-IF

DesignWare WiUSB IP Demonstrates Automated Configuration, Firmware Flexibility and Low Gate Count with Maximized Power Savings

MOUNTAIN VIEW, Calif., April 26 /PRNewswire-FirstCall/ -- Synopsys, Inc. (NASDAQ: SNPS), a world leader in semiconductor design software, today announced the release of its DesignWare® Wireless USB Host and Dual-Role Device (DRD) intellectual property (IP) based on the Certified Wireless USB Specification from USB-IF. Synopsys has been the leading provider of USB IP for five years in a row. Designed for applications like PC chipsets, set top boxes, personal video recorders, DVD Players and digital TVs, the DesignWare Wireless USB Host is based on the Wireless Host Controller Interface (WHCI) specification. Designing to the WHCI specification enables system makers to build applications on standard WHCI drivers to save months of software driver development. To enable broad driver compatibility, the DesignWare Wireless USB DRD uses the same host register set as the host. The DRD can be used in mobile phones, personal media players, digital cameras and printers, for example, to exchange videos or music wirelessly.

The DesignWare Host and DRD IP are built to suit portable electronics applications that demand a high level of power conservation and device interoperability. Dual power rails allow the designs to shut down power to sections that are not in use, resulting in additional power savings over clock gating. The IP's GUI enables designers to rapidly configure the IP to use the smallest area for the required features, minimizing silicon cost and power consumption.

Additionally, the DesignWare Host and DRD IP feature a flexible, firmware-programmable design that can be used for post-silicon feature additions and bug fixes. This reduces the likelihood of a chip re-spin and saves mask costs.

"Alereon is proud to team with Synopsys to offer a silicon solution that allows device manufacturers to add Wireless USB capability to their products -- giving consumers the increased mobility and ease-of-use they desire," said Eric Broockman, chief executive officer of Alereon. "Alereon's WiMedia PHY chipset, along with Synopsys' Wireless USB Host and Dual-role Device IP, will serve as key building blocks for developing Certified Wireless USB end-user products."

"Compatibility testing of IP cores with a proven physical layer solution is an essential component of Wireless USB IP designs," said Ran Yan, senior vice president, Wireless Communications Technologies at Realtek. "By demonstrating compatibility with Realtek's WiMedia PHY solution, Synopsys has enabled use of an ultra-compact all-CMOS single-chip PHY in conjunction with its Host and DRD IP."

The full-featured, synthesizable DesignWare Wireless USB Host and DRD are compatible with the WiMedia® Alliance Ultra-wideband (UWB) Common Radio Platform. The IP includes the digital controller logic required to integrate Certified Wireless USB IP into systems-on-chips (SoCs). The IP includes a standard WiMedia MAC-PHY interface for rapid integration with standard UWB

PHYs. Synopsys continuously tests the IP with UWB PHYs from Alereon and Realtek.

"The USB-IF is pleased to see Synopsys' continued support for the Certified Wireless USB technology," said Jeff Ravencraft, USB-IF president. "Solutions like the host and dual-role device IP, will provide support for adopters to integrate the Wireless USB technology into products and get them to market quickly."

"Synopsys is the recognized leader in USB IP, offering one of the industry's best USB digital and PHY cores. The addition of this Certified Wireless USB host and dual-role device strengthens our USB offering," said John Koeter, senior director, IP Marketing at Synopsys. "The Host and dual-role device provides customers with a quick and easy path to integrating the next USB standard."

Availability

The DesignWare Wireless USB Device, Host and Dual-Role Device IP are currently available and are sold separately. More information can be downloaded from https://www.synopsys.com/designware

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 a 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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