Synopsys Releases DesignWare SATA IP for New SATA 6Gbps Data Transfer Rate

DesignWare SATA Controllers Deliver High-Performance for Next Generation Solid State Drives and Enterprise Class Storage SoCs

MOUNTAIN VIEW, Calif., May 27 /PRNewswire-FirstCall/ -- Synopsys, Inc. (NASDAQ: SNPS), a world leader in software and IP for semiconductor design, verification and manufacturing, today announced the availability of DesignWare® SATA AHCI host and device digital controller IP for the latest SATA 6 Gigabit per second (Gbps) data transfer rate as defined in the Serial ATA (SATA) Revision 3.0 specification. This doubles the data rate of the previous (version 2.6) specification. DesignWare SATA IP significantly speeds the deployment of the 6Gbps interface into solid state drives and enterprise class storage system SoCs. Synopsys will be demonstrating its SATA 6Gbps capabilities in the SATA-IO booth at the upcoming Computex exhibition in Taiwan, June 2nd through June 6th.

The DesignWare SATA digital controllers for the SATA 6Gbps data transfer rate support numerous features available in the SATA Revision 3.0 Specification including new streaming Native Command Queuing (NCQ) and power management states. Streaming NCQ introduces isochrononous priority to help improve the quality of service for audio/video streaming. For more power efficient systems, the DesignWare SATA controllers implement power mode states that allow a direct transition from partial to full slumber mode, bypassing the active state. Furthermore, the inclusion of a well-defined embedded DMA engine enables designers to achieve optimal system performance while maintaining low latency and minimal CPU overhead. The included VMM-enabled DesignWare SATA Verification IP speeds the development of powerful SystemVerilog testbenches.

"As a leading fabless design integrator, GUC is committed to delivering high quality designs to our customers," said Percy Tan, product marketing director at Global Unichip. "Synopsys is an established IP provider and utilizing their silicon-proven DesignWare SATA IP solutions for our state-of-the-art solid state drive designs enables us and our customers to significantly reduce risk, cost and speed development time of our complex SoCs."

The SATA interface has evolved to address the growing demand for higher performance, greater storage capacity and longer battery life in mass storage devices such as solid state drives, hard disk drives and host storage controllers. As devices saturate the current SATA 3Gbps data transfer rate, the SATA 6Gbps interface, with 600 MB/s of read/write speed, addresses high bandwidth needs. Furthermore, the latest specification is backward compatible with the SATA 1.5Gbps and SATA 3Gbps interfaces, allowing designers to easily migrate to the faster data transfer rate while maintaining interoperability with existing SATA products.

"By providing IP that supports the SATA 3.0 specification, Synopsys is enabling the design community to quickly adopt the SATA interface and benefit from the fast 6Gbps data transfer rate," said Marc Noblitt, SATA-IO board representative. "We look forward to seeing our members continue to drive advancements that help make SATA the storage interface of choice."

"As a leading provider of SATA IP, Synopsys employs a comprehensive validation process to deliver DesignWare IP that is of high quality and functions to the SATA 3.0 specification," said Kevin Kearney, PSG director of Storage Protocol Products at LeCroy. "By utilizing LeCroy's protocol analyzer as an additional element in their verification process, Synopsys gives designers further confidence that the DesignWare SATA IP has met the full range of protocol requirements at the new higher 6Gbps speeds."

"Next generation SSD's and Enterprise Storage Controllers are driving significant advancements into the storage market such as higher bandwidth, enhanced power efficiency and increased reliability," said John Koeter, vice president of the Solutions Group at Synopsys. "As companies incorporate the new SATA 6Gbps interface in their high-performance SoCs, Synopsys is

there with a high-quality, silicon-proven IP solution that will help designers quickly implement the latest SATA functionality with less risk and improved time-to-market."

Synopsys provides designers with a complete DesignWare SATA IP solution consisting of the device and host digital controllers, PHY and verification IP, which are silicon-proven and shipping in volume production. The complete solution has passed the latest SATA-IO Building Block interoperability testing at the SATA 3Gbps data transfer rate. Synopsys will participate in the SATA 6Gbps interoperability testing as it becomes available. Synopsys will be attending the upcoming SATA-IO Plugfest and Interoperability Workshop in June 2009 with its DesignWare SATA IP solution.

Availability

The DesignWare SATA AHCI host and device digital controllers and verification IP for SATA 6Gbps are available now. For more information on Synopsys' complete DesignWare SATA IP solution consisting of the digital controllers, PHY and verification IP, please visit: https://www.synopsys.com/sata.

About DesignWare IP

Synopsys is the leading provider of high-quality, silicon-proven interface and analog IP solutions for system-on-chip designs. Synopsys' broad IP portfolio delivers complete connectivity IP solutions consisting of controllers, PHY and verification IP for widely used protocols such as USB, PCI Express, DDR, SATA, HDMI and Ethernet. The analog IP family includes Analog-to-Digital Converters, Digital-to-Analog Converters, Audio Codecs, Video Analog Front Ends, Power Management solutions and more. In addition, Synopsys offers SystemC transaction-level models to build virtual platforms for rapid, pre-silicon development of software. With a robust IP development methodology, extensive investment in quality and comprehensive technical support, Synopsys 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, software-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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