

Synopsys' DesignWare SATA 6Gb/s IP Solutions Receive SATA-IO Certification

Silicon-Proven DesignWare Controllers and PHY IP Lower Design Risk and Speed Adoption of SATA 6G Functionality and Data Transfer Rates

MOUNTAIN VIEW, Calif., May 12, 2011 /PRNewswire/ -- Synopsys, Inc. (Nasdaq: SNPS), a world leader in software and IP for semiconductor design, verification and manufacturing, today announced that its DesignWare® SATA IP solutions, including Host and Device Digital Controllers and mixed-signal PHY IP, have successfully passed the Serial ATA International Organization (SATA-IO) 6G certification. To achieve certification, the DesignWare SATA solutions maintained a 6 Gigabit per second (Gb/s) data transfer rate and passed more than 200 tests that span electrical, digital and system interoperability as defined in the SATA Revision 3.0 specification. Synopsys' fully certified DesignWare SATA IP solutions support SATA Host and Device applications that require 1.5, 3 and 6 Gb/s transfer rates, enabling system-on-chip (SoC) designers to significantly lower integration risk and speed the deployment of the 6 Gb/s interface into SoCs while maintaining interoperability with existing products.

The DesignWare SATA Digital Controllers support the new features documented in the SATA Revision 3.0 specification, including streaming Native Command Queuing (NCQ) and power management states. Streaming NCQ introduces isochronous 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. The DesignWare SATA IP solutions include an embedded DMA (direct memory access) engine in the controllers that enable designers to maximize their system performance while maintaining low latency and minimizing CPU overhead.

"As a provider of solid state storage devices (SSDs), we are committed to delivering very high-performance solutions to our customers," said Mitsuyoshi Ito, director at Siglead, a Japanese developer of signal processing-based products. "Using Synopsys' comprehensive DesignWare SATA Device Controller and PHY IP solution to implement the SATA 6G interface enabled us to achieve over 450 MBps data transfer rate and meet the low power consumption goal in our solid state devices. Using a certified DesignWare SATA 6G IP solution from Synopsys enabled us to reduce integration risk and speed our product development cycle."

"To receive SATA-IO building block interoperability and compliance to the specification, IP must undergo and pass stringent testing," said Robert Liu, Technical Operation/Hardware Manager of Allion, a global testing and verification firm conducting standards certification, interoperability, performance and compatibility testing services. "The certification of Synopsys' DesignWare SATA IP demonstrates Synopsys' thorough understanding of the SATA specification and provides designers with confidence that the IP will support the latest SATA functionality while maintaining backwards compatibility."

"The SATA Revision 3.0 specification enables 6 Gb/s link speeds between storage units, disk drives, optical and tape drives and protocol host bus adaptors," said Mladen Luksic, president of the Serial ATA International Organization (SATA-IO). "Products that achieve SATA-IO certification have undergone extensive testing to ensure they meet SATA-IO's interoperability standards and are compliant to the 6Gb/s requirements of the SATA Revision 3.0 specification. Having certified IP available from companies like Synopsys helps accelerate SATA 6Gb/s adoption."

"The SATA Revision 3.0 specification with support for 6 Gb/s is providing new levels of performance, power efficiency and increased reliability targeted at consumer demand for advanced storage solutions to support large video and audio files," said John Koeter, vice president of marketing for IP and Systems at Synopsys. "By passing SATA-IO certification, the DesignWare SATA 6 Gb/s IP enables designers to quickly take advantage of the latest storage interface capabilities while reducing integration risk and speeding time-to-market of their SoC design."

Availability

The DesignWare SATA 6G IP solutions are available now. For more information about DesignWare SATA IP solutions, please visit <https://www.synopsys.com/sata>.

About DesignWare IP

Synopsys is a leading provider of high-quality, silicon-proven IP solutions for SoC designs. The broad DesignWare IP portfolio includes complete [interface IP](#) solutions consisting of controllers, PHY and Verification IP for widely used protocols, [analog IP](#), [embedded memories](#), [logic libraries](#), embedded test & repair IP and [configurable processor cores](#). In addition, Synopsys offers [SystemC™ transaction-level models](#) to build virtual prototypes for rapid, pre-silicon development of software. With a robust IP development methodology, [reuse tools](#), 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>. Follow us on Twitter at http://twitter.com/designware_ip.

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, verification 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 approximately 70 offices located throughout North America, Europe, Japan, Asia and India. Visit Synopsys online at <https://www.synopsys.com/>.

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