Synopsys Achieves Certification from Multiple Standards Organizations for Portfolio of IP on TSMC 16-nm FinFET Plus Process

Certified and Compliant DesignWare USB, PCI Express, HDMI, MIPI and SATA IP Ensure Functional Correctness and Minimize Integration Risk

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Highlights:

- USB femtoPHY IP cuts area by 50 percent and incorporates power down and low-power features for extended battery life
- PCI Express 3.1 IP solution with chip-to-chip, backplane and port-side interfaces targets high-performance applications and supports low active and standby power
- HDMI 2.0 IP enables 4K resolution at a 60 Hz frame rate and supports the HDMI 2.0a specification for enhanced image quality
- MIPI D-PHY IP cuts area and power by 50 percent and increases performance to 2.5 Gbps per lane for display and camera applications
- SATA IP supports up to 6 Gbps data transfer speeds and delivers a cost-effective and low-power solution

Synopsys, Inc. (Nasdaq:SNPS), today announced that it has achieved certification and compliance from multiple standard organizations for a broad range of DesignWare® IP on the TSMC 16-nm FinFET Plus (16FF+) process including USB 2.0 and USB 3.0, PCI Express® 3.1, HDMI 2.0, MIPI® D-PHY℠ and Serial ATA (SATA™) IP solutions. The IP have passed all the required tests for certification and compliance through independent authorized test centers sponsored by USB-IF, PCI-SIG Interoperability Workshops, HDMI Licensing, LLC and SATA-IO standards organizations. By achieving certification of its DesignWare IP, Synopsys gives designers confidence that the IP is interoperable and functions as expected in the TSMC 16FF+ process.

"Synopsys' availability of Certified DesignWare IP on TSMC's 16FF+ process further demonstrates its commitment to providing high-quality IP solutions that help designers speed development of SoCs on TSMC's advanced FinFET processes," said Suk Lee, TSMC senior director, design infrastructure marketing division. "With silicon-proven DesignWare IP for TSMC's 16FF+ process technology, designers can benefit from the performance, power and area advantages of our process while reducing integration risk and delivering differentiated products to the market faster."

"As a member of USB-IF for close to 20 years, Synopsys continues to actively drive and promote the adoption of the USB interface," said Jeff Ravencraft, USB-IF president and chief operating offficer (COO). "The certification of the Synopsys DesignWare IP for USB demonstrates that it meets all interoperability tests and functions as expected, enabling designers to integrate the USB interface into their SoCs with confidence."

"We are pleased that Synopsys' DesignWare IP for PCIe 3.1 technology has passed compliance testing," said Al Yanes, PCI-SIG chairman and president. "Companies such as Synopsys that participate in PCIe compliance testing help ensure interoperability, contribute to the continued expansion of the PCIe ecosystem and ultimately increase I/O performance for the next-generation of devices."

"Synopsys' DesignWare HDMI IP solution passed the stringent requirements of the HDMI 2.0 Compliance Test Specification at the GRL-Philips Authorized Test Center," said Quintin Anderson, co-founder and chief operating officer at Granite River Labs. "Passing compliance gives designers confidence that the HDMI IP in the TSMC 16FF+ process is robust and interoperable, while supporting the latest functionalities of the HDMI 2.0 standard."

"Synopsys has been an active member of the MIPI Alliance working groups for over 10 years, contributing to the development and driving the adoption of MIPI specifications," said Joel Huloux, chairman of the board of MIPI Alliance. "Synopsys helps designers integrate IP that is compliant to the D-PHY v1.2 specification into their SoCs for high-end mobile, consumer and automotive image sensor and display applications with less risk."

"The DesignWare SATA IP has successfully passed the SATA-IO's extensive interoperability test program," said John Calvin, chairman, SATA-IO Interoperability Working Group. "Designers can confidently work with this product knowing that it adheres to the SATA specification and meets interoperability requirements for successful SoC integration."

"With more than 45 FinFET tapeouts to date, Synopsys makes significant investments in delivering certified and compliant IP to help designers reduce their integration risk," said John Koeter, vice president of marketing for IP and prototyping at

Synopsys. "The certification of DesignWare IP for USB, PCI Express technology, HDMI, MIPI and SATA on the TSMC 16FF+ process underscores our commitment to providing high quality, interoperable IP that enable designers to meet their schedule goals and achieve first-pass silicon success."

Availability

The DesignWare Controller, PHY and Verification IP for USB, PCI Express technology, HDMI, SATA and MIPI D-PHY IP on the TSMC 16FF+ process are available now.

About DesignWare IP

Synopsys is a leading provider of high-quality, silicon-proven IP solutions for SoC designs. The broad DesignWare IP portfolio includes logic libraries, embedded memories, embedded test, analog IP, wired and wireless interface IP, security IP, embedded processors and subsystems. To accelerate prototyping, software development and integration of IP into SoCs, Synopsys' IP Accelerated initiative offers IP prototyping kits, IP software development kits and IP subsystems. Synopsys' extensive investment in IP quality, comprehensive technical support and robust IP development methodology enables designers to reduce integration risk and accelerate time-to-market. For more information on DesignWare IP, visit https://www.synopsys.com/designware.

About Synopsys

Synopsys, Inc. (Nasdaq:SNPS) is the Silicon to Software™ partner for innovative companies developing the electronic products and software applications we rely on every day. As the world's 15th largest software company, Synopsys has a long history of being a global leader in electronic design automation (EDA) and semiconductor IP, and is also a leader in software quality and security testing with its Coverity® solutions. Whether you're a system-on-chip (SoC) designer creating advanced semiconductors, or a software developer writing applications that require the highest quality and security, Synopsys has the solutions needed to deliver innovative, high-quality, secure products. Learn more at www.synopsys.com.

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