Synopsys' Silicon-Proven DesignWare HDMI 1.4a Tx Controller and PHY IP Receive HDMI Certification

Support for 3D and HDMI Ethernet Audio Return Channel Formats Enable Designers to Incorporate Advanced Features into Multimedia SoCs

MOUNTAIN VIEW, Calif., Oct. 28 /PRNewswire/ -- Synopsys, Inc. (Nasdaq: SNPS), a world leader in software and IP for semiconductor design, verification and manufacturing, today announced that Synopsys' DesignWare® High-Definition Multimedia Interface™ (HDMI™) 1.4a Transmitter (Tx) digital controller and PHY IP solutions in the 40-nanometer (nm) process node have achieved certification from an HDMI Authorized Training Center (ATC). The DesignWare HDMI PHY IP achieved HDMI 1.4a compliance by passing all process, voltage and temperature variation tests, which are key certification requirements for environmental robustness. Synopsys' fully compliant HDMI 1.4a Tx solution is now available in more than 10 process technologies, ranging from 90-nm to 40-nm. With support for the latest HDMI 1.4a specification features such as all eight 3D formats, HDMI Ethernet and Audio Return Channel (HEAC) and real-time content signaling, the DesignWare HDMI 1.4a Tx controller and PHY IP enable system-on-chip (SoC) designers and device manufacturers to quickly incorporate advanced functionality into their multimedia source applications with less risk and improved time-to-market.

The DesignWare HDMI 1.4a Tx IP solution includes a comprehensive set of IP deliverables such as baseline software drivers for system development, which help designers quickly embed this complex interface into next-generation multimedia SoCs. It also includes many performance features designers need to create a state-of-the-art viewing experience, including:

- Support for all eight 3D formats, such as side-by-side (full and half) and frame/line/field alternative, providing extended flexibility for system designers.
- An integrated HEAC block simplifies the connectivity between internet-enabled digital home devices by enabling the transfer of Ethernet and audio frames through a single HDMI cable
- Real-time content signaling capability enables televisions to automatically optimize the picture setting with no user intervention
- Support for 4K x 2K resolution delivers up to four times the resolution of 1080p (Quad HD technology), providing the same resolution as state-of-the-art digital cinema

"We tested Synopsys' DesignWare HDMI 1.4 IP against the stringent physical layer requirements of the HDMI specification and found that it passes with outstanding margin. This demonstrates Synopsys' deep understanding of the HDMI specification," said Quintin Anderson, Chief Operating Officer of Granite River Labs. "Pre-compliance testing gives adopters confidence that their product will pass official compliance testing the first time, avoiding costly product delays and re-testing expenses. Passing compliance gives designers added confidence that the IP is robust and interoperable with existing HDMI products while providing support for the latest functionalities such as HEAC and 3D formatting."

"HDMI is enabled in more than 1.5 billion consumer devices and is now gaining significant traction in delivering 3D functionality in digital home theater systems, gaming consoles and other portable multimedia devices," said John Koeter, Vice President of Marketing for the Solutions Group at Synopsys. "Synopsys' high-quality, silicon-proven DesignWare HDMI 1.4a IP solution is optimized for small area, low power and high performance, enabling designers to quickly incorporate the latest functionality with less risk."

Availability

The DesignWare HDMI 1.4a Tx digital controller and PHY IP solution is available now for 90-nm to 40-nm process nodes. For more information please visit: https://www.synopsys.com/hdmi.

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 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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