Synopsys Delivers a Complete HDMI 2.1 IP Solution with HDCP 2.2 Content Protection

DesignWare IP Provides Secure, High-Quality Digital Video and Audio Link for 8K Resolution

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Highlights:

- Complete HDMI 2.1 IP solution with HDCP 2.2 content protection includes controllers, silicon-proven PHYs, verification IP, IP Prototyping Kit, and IP subsystem for fast integration into SoCs
- DesignWare HDMI 2.1 IP provides 48 Gbps aggregate bandwidth for uncompressed 8K resolution at 60 Hz refresh rate
- New dynamic HDR and eARC features deliver higher frame-by-frame video quality and support the most advanced audio formats
- Compliance with the HDCP 2.2 specification helps ensure the highest content protection between HDMI links

Synopsys, Inc. (Nasdaq:SNPS), today announced its complete DesignWare® HDMI 2.1 IP solution with High-Bandwidth Digital Content Protection (HDCP) 2.2 consisting of controllers, PHYs, verification IP, IP Prototyping Kit, and IP Subsystem as well as Linux software drivers. The IP supports advanced HDMI 2.1 features like fixed-rate link allowing uncompressed 8K resolution with 60 Hz refresh rate for a more immersive viewing experience in digital TVs, AR/VR devices, and computer displays. In addition, enhanced Audio Return Channel (eARC) enables the most advanced audio formats such as object-based audio. Support for dynamic HDR provides higher video quality with frame-by-frame color depth, brightness, and contrast. For secure data transmission across HDMI links, the IP incorporates DesignWare Embedded Security Modules compliant to the HDCP 2.2 specification.

The DesignWare HDMI 2.1 IP is backward compatible with the HDMI 2.0 and 1.4 specifications, ensuring interoperability with current HDMI devices. By providing a complete HDMI 2.1 IP solution, Synopsys provides designers with all the essential IP elements necessary to accelerate development of their advanced HDMI 2.1-based system-on-chip (SoC) designs.

"The adoption of HDMI, one of the most successful wired video interfaces in consumer electronics, is expected to grow at five-year annual growth rate of 4.7 percent from 2016 to 2021 and will grow exponentially with the introduction of HDMI 2.1," said Noman Akhtar, analyst at IHS Markit. "Companies such as Synopsys that are providing complete HDMI 2.1 IP solutions are enabling the next-generation of chips to be developed so that consumers can experience ultra-high-definition video and high-fidelity audio in their devices."

"The HDMI 2.1 specification is a gigantic leap forward in capabilities and performance with enhanced video features including faster refresh rates and higher resolutions such as 8K60, dynamic HDR, and with eARC support for the most advanced audio formats," said Rob Tobias, president of HDMI Licensing Administrator, Inc. "Synopsys is an important and early contributor to bringing these features to market, and its complete DesignWare HDMI 2.1 IP solution is key to establishing and supporting the HDMI 2.1 ecosystem."

"The HDMI specification continues to evolve to address the demand for more bandwidth in a wide range of HDMI applications including digital TVs and emerging AR/VR devices," said John Koeter, vice president of marketing for IP at Synopsys. "As the leading provider of interface IP, Synopsys continues to invest in developing complete IP solutions for the latest specification, enabling designers to quickly deliver differentiated products to the multimedia market."

Availability and More Resources

The complete DesignWare HDMI 2.1 RX IP solution is available now. The complete DesignWare HDMI 2.1 TX IP solution is planned to be available in 2018.

For more details, visit the DesignWare HDMI 2.1 IP web page.

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 enable designers to reduce integration risk and accelerate time-to-market. For more information on DesignWare IP, visit

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 growing its leadership in software security and quality solutions. Whether you're a system-on-chip (SoC) designer creating advanced semiconductors, or a software developer writing applications that require the highest security and quality, Synopsys has the solutions needed to deliver innovative, high-quality, secure products. Learn more at www.synopsys.com.

Forward-Looking Statements

This press release contains forward-looking statements within the meaning of Section 21E of the Securities Exchange Act of 1934, including statements regarding the expected release and benefits of the DesignWare HDMI 2.1 IP. Any statements that are not statements of historical fact may be deemed to be forward-looking statements. These statements involve known and unknown risks, uncertainties and other factors that could cause actual results, time frames or achievements to differ materially from those expressed or implied in the forward-looking statements. Other risks and uncertainties that may apply are set forth in the "Risk Factors" section of Synopsys' most recently filed Quarterly Report on Form 10-Q. Synopsys undertakes no obligation to update publicly any forward-looking statements, or to update the reasons actual results could differ materially from those anticipated in these forward-looking statements, even if new information becomes available in the future.

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