Synopsys Launches New VESA DSC IP for Visually Lossless Compression in Mobile, AR-VR, and Automotive SoCs

VESA DSC IP Interoperates with DesignWare HDMI 2.1, DisplayPort, and MIPI DSI IP to Minimize Integration Risk and Accelerate Time-to-Market

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Highlights:

- DesignWare VESA DSC IP is compliant with the VESA DSC 1.1 and 1.2a standards, delivering the required 120Hz refresh rate for up to 10K resolutions
- Configurable IP scales up to 16 parallel slices, providing high-performance data transmission for immersive viewing experiences
- New VESA DSC Encoder and Decoder IP solutions reduce video and image interface data rates, lowering power for extended battery life

Synopsys, Inc. (Nasdaq: SNPS) today announced its DesignWare® Video Electronics Standards Association (VESA®) Display Stream Compression (DSC) Encoder and Decoder IP for visually lossless compression across display interfaces targeting mobile, augmented/virtual reality, and automotive system-on-chips (SoCs). The new DesignWare VESA DSC IP interoperates with Synopsys' DesignWare HDMI 2.1, DisplayPort, and MIPI DSI IP to provide a complete display solution that is compliant with the latest VESA DSC 1.1 and 1.2a standards. The DesignWare VESA DSC IP enables embedded and external displays to deliver the required 120Hz refresh rate, high dynamic range, and wide color gamut for up to 10K, high-definition content.

"Today's device market is driven by new generations of products that offer more powerful visual capabilities and richer graphics experiences," said Bill Lempesis, executive director at VESA. "As an active member of the VESA standards body, Synopsys is helping to drive adoption and interoperability of the VESA DSC standard in the display ecosystem. By providing DSC IP solutions, Synopsys helps designers build more powerful, high-end display SoCs."

The DesignWare VESA DSC IP can be used to increase pixel throughput without needing to redesign existing SoC architectures. A single instance of the IP can be shared across HDMI, DisplayPort, and MIPI DSI interfaces to further reduce power and area. The configurable IP transmits compressed data, distributed across up to 16 parallel slices in real time, to meet the high-performance requirements of target applications. The IP lowers power consumption by reducing video and image interface data rates, as well as video buffer size for extended battery life.

"To meet today's demand for ultra-high-definition visual content, designers must deliver complex SoCs for new generations of displays with high refresh rates and broad color ranges," said John Koeter, vice president of marketing for IP at Synopsys. "The DesignWare VESA DSC IP, interoperating with our HDMI, DisplayPort, and MIPI DSI IP, provides a complete display solution that designers can integrate into their SoCs to deliver differentiated and feature-rich multimedia products with less risk."

Availability and Resources

The complete display solution, including DesignWare VESA DSC Encoder and Decoder, HDMI 2.1, DisplayPort, and MIPI DSI IP, is available now. VC Verification IP for DisplayPort with support for VESA DSC is also available now.

For more information about the DesignWare VESA DSC IP:

- Visit the web page
- Download the encoder and decoder datasheets

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 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 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.

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