Synopsys Delivers Industry's First USB4 Subsystem Verification Solution, VIP, and Test Suite for High-performance USB Architecture

Native SystemVerilog VIP for USB Features Built-in Coverage, Verification Plan, Protocol-Aware Debug, and Source Code Test Suites

MOUNTAIN VIEW, Calif., March 14, 2019 /PRNewswire/ -- Synopsys, Inc. (Nasdaq: SNPS) today announced the availability of the industry's first Subsystem Verification Solution, Verification IP (VIP), and UVM source code test suite to support the latest USB4 specification. USB4 includes two-lane operation using the existing USB Type-C™ connector that can carry up to 40Gbps data over new certified cables. USB4 also supports Thunderbolt™ 3 and expands USB functionality to include new display capabilities.

"USB4 represents a significant specification update that will require a robust certification program to ensure delivery of compliant and interoperable USB devices in the consumer market," said USB-IF president and chief operating officer Jeff Ravencraft. "Synopsys VIP for USB4 strengthens the USB ecosystem and facilitates early adoption and rapid development of the high-performance next-generation USB architecture."

Synopsys was also first in the industry to deliver VIP and source code test suite for USB 3.2 and USB power delivery 3.0. Synopsys VC VIP for USB is based on a native SystemVerilog/UVM architecture and features built-in comprehensive coverage, verification plan, extensive protocol checks, and integration with Synopsys' Verdi® protocol-aware debug for ease-of-use and increased productivity. Synopsys VIP includes an extensive and customizable set of frame generation, error injection capabilities, and comprehensive exception list to generate negative scenarios. In addition, UVM source code test suites are also available to verify features with minimal effort and jumpstart custom testing of USB designs.

"Collaborating with standards organizations and market-makers enables us to deliver another industry-first USB VIP solution," said Vikas Gautam, vice president of R&D for the Synopsys Verification Group. "We are engaged with early adopters of USB4, enabling them to accelerate verification closure and remain ahead in their markets."

Availability and Additional Resources

Synopsys VIP and source code test suite for USB4 are available today as standalone products. VIP and source code test suites for USB up to 3.2, Power Delivery up to 3.0, and Subsystem Verification Solution for Type-C™ are also available. Contact Synopsys for information regarding the DesignWare® USB4 controller and PHY IP solution.

For more information:

- Visit the VC Verification IP for USB website
- Download the VC VIP for USB datasheet

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.

USB Type-C is a trademark of USB Implementers Forum. Thunderbolt™ is a trademark of Intel Corporation or its subsidiaries in the U.S. and/or other countries.

Editorial Contact:
James Watts
Synopsys, Inc.
650-584-1625
jwatts@synopsys.com

SOURCE Synopsys, Inc.