

OKI Network LSI Achieves Multiple First-Pass Verification Successes Using Synopsys VMM Methodology

Standardization on SystemVerilog with Synopsys VCS, VCS Verification Library (VIP) and VMM Methodology Enabled 15 First-Pass Verification Successes in One Year

MOUNTAIN VIEW, Calif. and TOKYO, Oct. 5 [PRNewswire-FirstCall](#)/ -- Synopsys, Inc. (NASDAQ: SNPS), a world leader in semiconductor design software, and Oki Network LSI Co., Ltd., a leading system-on-chip (SoC) design and verification services company, today announced that OKI Network LSI achieved 15 first-pass verification successes of complex SoCs within the first year of adopting SystemVerilog and Synopsys' Discovery™ Verification Platform, including the VCS® functional verification solution, the VCS Verification Library (VIP) and the VMM. As a result, OKI Network LSI's customers were able to tape out high-quality designs and meet their stringent time-to-market requirements. OKI Network LSI's success on a wide variety of complex multi-million gate SoC and FPGA devices demonstrates the rapid and steady adoption of SystemVerilog using Discovery Verification Platform and the benefits of using the production-proven VMM as the foundation for a highly efficient verification environment.

"Many customers used our previous-generation functional verification solution over the past five years, but with the increasing complexity of large designs our customers now require more modern solutions based on SystemVerilog for higher verification productivity," said Takahiro Kobori, senior general manager for the Design Business Group at OKI Network LSI. "After a careful evaluation of available solutions, we adopted Synopsys' proven SystemVerilog solution, including VCS, VCS Verification Library and the VMM, to deploy our next-generation verification services. Customer demand for our new VMM-based service has been very strong from the beginning, and today our new customers are choosing SystemVerilog and the VMM for their projects."

OKI Network LSI identified several factors contributing to the rapid adoption of their advanced verification services. First, SystemVerilog with the VMM methodology accelerates productivity and reduces risk for customers who are getting started with advanced functional verification techniques. Second, the combination of SystemVerilog, the VMM and verification IP from the VCS Verification Library has enabled OKI Network LSI to offer new solutions for a broad range of customers and designs. Takahiro Kobori continued, "Now, we are seeing strong demand for our SystemVerilog and VMM-based services from both new and existing customers. Given its higher productivity and quality of results, we believe our SystemVerilog/VMM-based solution business will continue to grow further."

OKI Network LSI delivers VMM-based verification services for multi-million gate SoCs with multiple embedded CPUs and IP cores and advanced on-chip interconnect buses such as the ARM® AMBA3 AXI™ protocol and the Open Core Protocol (OCP). By offering VMM expertise, OKI Network LSI enables its customers to develop high-quality products and meet their stringent time-to-market requirements. The VMM, co-authored by verification experts from ARM and Synopsys, describes how to use SystemVerilog to create comprehensive verification environments using coverage-driven, constrained-random and assertion-based techniques, and specifies library building blocks for interoperable verification components. The VMM methodology is used by hundreds of SoC and silicon intellectual property (IP) verification teams around the world to speed development of powerful SystemVerilog-based verification environments and to help achieve measurable functional coverage goals in less time with less effort.

"As the industry standardizes on SystemVerilog, the VMM methodology will continue to deliver higher productivity to tackle the growing verification challenge," said Manoj Gandhi, senior vice president and general manager of the Verification Group at Synopsys. "OKI Network LSI's impressive success over the past year in verifying multiple complex designs demonstrates the robustness, maturity, and ease-of-deployment of the VMM methodology. Synopsys continues to increase its investments in developing innovative VMM applications."

About Oki Network LSI

OKI Network LSI is a company with a focus on offering design and verification services for SoC projects, providing IP cores and advanced verification solutions. The company combines its unique strengths of advanced network technology, LSI design and verification with customers' proprietary technology to deliver high quality SoC meeting time-to-market requirements. OKI Network LSI is headquartered in Tokyo, Japan and has design centers located in Tokyo and Fukuoka. Visit OKI Network LSI online at <http://www.okinetlsi.com/>.

About Synopsys

Synopsys, Inc. (NASDAQ: SNPS) is a world leader in electronic design automation (EDA) software for semiconductor design. The company delivers technology-leading system and semiconductor design and verification platforms, IC manufacturing and

yield optimization solutions, semiconductor intellectual property and design services to the global electronics market. These solutions enable the development and production of complex integrated circuits and electronic systems. Through its comprehensive solutions, Synopsys addresses the key challenges designers and manufacturers face today, including power management, accelerated time to yield and system-to-silicon verification. Synopsys is headquartered in Mountain View, California, and has more than 60 offices located throughout North America, Europe, Japan and Asia. Visit Synopsys online at <https://www.synopsys.com/>.

Synopsys, VCS and Discovery are registered trademarks or trademarks of Synopsys, Inc. ARM, and AMBA are registered trademarks of ARM Limited. AXI is a trademarks of ARM Limited. All other brands or product names are the property of their respective holders. "ARM" is used to represent ARM Holdings plc; its operating company ARM Limited; and the regional subsidiaries ARM INC.; ARM KK; ARM Korea Ltd.; ARM Taiwan; ARM France SAS; ARM Consulting (Shanghai) Co. Ltd.; ARM Belgium N.V.; AXYS Design Automation Inc.; AXYS GmbH; ARM Embedded Technologies Pvt. Ltd.; and ARM Physical IP, Inc. Any other trademarks mentioned in this release are the intellectual property of their respective owners.

Editorial Contacts:
Sheryl Gulizia
Synopsys, Inc.
650-584-8635
sgulizia@synopsys.com

Stephen Brennan
MCA, Inc.
650-968-8900 x114
sbrennan@mcapr.com

Yoshikazu Mori
Oki Network LSI Co., Ltd.
+81-3-5745-0860
mori805@oki.com

SOURCE: Synopsys, Inc.

CONTACT: Sheryl Gulizia of Synopsys, Inc., +1-650-584-8635, sgulizia@synopsys.com; or Stephen Brennan of MCA, Inc., +1-650-968-8900, ext. 114, sbrennan@mcapr.com; or Yoshikazu Mori of Oki Network LSI Co., Ltd., +81-3-5745-0860, mori805@oki.com

Web site: <https://www.synopsys.com/>
<http://www.okinetlsi.com/>
