Synopsys and Socionext Expand Collaboration to Deploy HBM2E IP for 5-Nanometer Process in AI and High-Performance Computing SoCs

Collaboration Builds on Successful Adoption of Broad DesignWare IP Portfolio in Socionext's High-Performance AI Engine and Accelerator Solution

MOUNTAIN VIEW, Calif. and YOKOHAMA, Japan, Jan. 12, 2021 /PRNewswire/ -- Synopsys, Inc. (Nasdaq: SNPS) and Socionext, Inc. today announced their collaboration to expand Socionext's use of Synopsys' broad DesignWare® IP to include Synopsys' HBM2E IP for maximum memory throughput in AI and high-performance computing (HPC) applications. Socionext selected Synopsys' HBM2E IP, operating at 3.6 Gbps, to meet the stringent capacity, power, and compute performance requirements of its innovative AI engine and accelerator system-on-chip (SoC). The Synopsys IP provides efficient heterogeneous integration with the shortest 2.5D interposer package routes.

"As a global leader in SoC solutions with differentiated functionalities, we face very tight delivery deadlines," said Yutaka Hayashi, vice president of Automotive & Industrial Business Group at Socionext. "By leveraging Synopsys' DesignWare HBM2E IP and integrated full-system multi-die design platform, Socionext can deliver world-class high-performance, high-capacity and power-efficient SoCs on the 5-nanometer FinFET process to the market. We are also collaborating with Synopsys on using their next-generation DesignWare IP solutions including HBM3."

With an aggregated bandwidth of 460 gigabytes per second, the DesignWare HBM2EPHY IP delivers the required massive compute performance of SoCs in advanced FinFET processes. The HBM2E IP is part of Synopsys' comprehensive memory interface IP solution that includes DDR5/4/3/2 and LPDDR5/4//4X/3/2 IP, which have been validated in hundreds of designs and shipped in millions of SoCs.

"As the leading memory interface IP provider, Synopsys provides innovative companies, like Socionext, with a highly competitive HBM2/2E IP solution that addresses the aggressive power and memory bandwidth requirements of advanced high-performance computing SoCs," said John Koeter, senior vice president of marketing and strategy for IP at Synopsys. "Synopsys' silicon-proven DesignWare HBM2/2E IP, with over 25 design wins and customers in volume production, enables designers to confidently integrate the IP into their SoCs with less risk and achieve a faster path to silicon success."

Availability and Resources

The Synopsys DesignWare HBM2/2E IP in a wide range of processes from 16-nm to 5-nm is available now. For more information, visit the DesignWare HBM2/2E IP and 3DIC Compiler: unified platform for end-to-end multi-die integration in a package web pages.

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 Socionext

Socionext is a global, innovative enterprise that designs, develops and delivers System-on-Chip solutions to customers worldwide. The company is focused on technologies that drive today’s leading-edge applications in consumer, automotive and industrial markets. Socionext combines world-class expertise, experience, and an extensive IP portfolio to provide exceptional solutions and ensure a better quality of experience for customers. Founded in 2015, Socionext Inc. is headquartered in Yokohama, and has offices in Japan, Asia, United States and Europe to lead its product development and sales activities. For more information, visit www.socionext.com.

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 an S&P 500 company, Synopsys has a long history of being a

global leader in electronic design automation (EDA) and semiconductor IP and offers the industry's broadest portfolio of application security testing tools and services. Whether you're a system-on-chip (SoC) designer creating advanced semiconductors, or a software developer writing more secure, high-quality code, Synopsys has the solutions needed to deliver innovative products. Learn more at www.synopsys.com.

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