Synopsys Accelerates Most Stringent Functional Safety Certification of NSITEXE RISC-V Parallel Processor IP

First ISO 26262 ASIL D Certified RISC-V Processor with Vector Extension Tapped into Speed and Capacity of Synopsys Z01X Fault Simulation Solution

MOUNTAIN VIEW, Calif., Sept. 14, 2021 /PRNewswire/ --

Highlights from this announcement:

- With Z01X functional safety verification solution plus Synopsys support, NSITEXE achieved ISO 26262 ASIL D certification two months ahead of schedule
- Z01X fault simulation delivers exhaustive functional safety verification and the most complete fault model set available, complementing Synopsys unified functional safety verification solution

Accelerating its leadership in functional safety verification, Synopsys, Inc. (Nasdaq: SNPS) today announced that NSITEXE Inc., which specializes in the development of advanced RISC-V-based processor IP, achieved ISO 26262 Automotive Safety Integrity Level (ASIL) D certification of its DR1000C parallel processor IP two months ahead of schedule by using the Synopsys Z01X™ fault simulation solution. With the speed and capacity of the Z01X, NSITEXE has delivered the industry's first RISC-V processor with vector extension certified for ISO 26262 ASIL D, meeting the highest functional safety standard for safety-critical applications such as automotive.

"By integrating our DR1000C processor IP into their safety-critical designs, our customers can be confident that their systems will operate reliably with higher performance, even in challenging environments," said Hideki Sugimoto, CTO at NSITEXE. "Working with Synopsys to ensure the functional safety compliance of the DR1000C marks the continuation of a strong collaboration, which includes shortening development time for custom automotive processors with Synopsys ASIP Designer Tool and validating data flow processor IP with Synopsys HAPS FPGA Prototyping."

Compliance to functional safety standards is critical for automotive electronics. NSITEXE's DR1000C processor IP, which achieved its ASIL D certification from SGS-TÜV, was designed with integrated hardware safety features that enable it to meet ASIL D safety requirements without any external safety mechanisms. The processor is ideal for offloading high-load arithmetic processing required by automotive microcontrollers for safety-critical systems, as well as for embedded applications like factory automation, radar and sensor processing.

The Z01X solution provides high-speed fault simulation and testability analysis for ISO 26262 and IEC 61508 compliance. It is part of the Synopsys unified functional safety solution to accelerate time to ISO 26262 certification for automotive IP and semiconductor companies targeting the highest ASIL D certification. NSITEXE also used Synopsys Verdi® automated debug system to enhance debug, coverage, and planning with Z01X simulation.

"Synopsys continues to build a robust portfolio of solutions to facilitate functional safety compliance, a critical element in today's electronics-driven automotive and industrial designs," said Vikas Gautam vice president of engineering in the Synopsys Verification Group at Synopsys. "With capabilities such as high-speed simulation, statistical sampling and extensive fault modeling, the Z01X solution positioned NSITEXE to meet ASIL D certification for the first RISC-V processor with vector extension."

Learn more about the Synopsys Z01X solution:https://www.synopsys.com/verification/simulation/z01x-functional-safety.html

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.

Editorial Contact:

Simone Souza
Synopsys, Inc.

650-584-6454
simone@synopsys.com

SOURCE Synopsys, Inc.