Synopsys TetraMAX II ATPG Certified for ISO 26262 Automotive Functional Safety

Independent Functional Safety Evaluation Provides Highest Level of Safety-Related Tool Confidence

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Highlights:

- Tool certification accelerates ISO 26262 functional safety qualification for automotive ICs up to the most stringent safety requirements for ASIL D
- Enables automotive IC design teams to accelerate their manufacturing test development process with 10X faster run time and lower test costs with 25 percent fewer patterns

Synopsys, Inc. (Nasdaq: SNPS) today announced that its new TetraMAX II® Automatic Test Pattern Generation (ATPG) tool delivering 10X faster run time and 25 percent fewer test patterns, is now certified for the ISO 26262 automotive functional safety standard. SGS-TÜV Saar GmbH, an independent accredited assessor, formally certified TetraMAX II, following an in-depth functional safety tool qualification. Certification provides designers the highest level of confidence in the use of TetraMAX II for safety-critical automotive applications and accelerates functional safety qualification for automotive ICs, up to the stringent requirements for automotive safety integrity level ASIL D.

On the path to delivering fully autonomous cars, automakers are rapidly deploying electronic advanced driver assistance systems (ADAS) to aid drivers and reduce accidents. Since failures in these systems may lead to unacceptable consequences, automakers work with their suppliers to increase IC quality, reliability and functional safety. TetraMAX II enables engineers to target higher levels of IC test quality, a key requirement for automotive products, by testing for multiple fault models while minimizing the impact on test costs and test pattern generation time. To ensure best engineering practices are used to minimize the risk of failures impacting the functional safety elements of automotive ICs, ISO 26262 defines the qualification requirements for software design tools used in their development. SGS-TÜV Saar GmbH certified TetraMAX II according to ASIL D requirements, the highest level of functional safety prescribed by ISO 26262.

"Tool qualification according to ISO 26262 is an important contribution to increased engineers' confidence in the EDA software tools they use to develop automotive ICs targeted at electronic safety systems," said Gudrun Neumann, product manager of Functional Safety Software at SGS-TÜV Saar GmbH. "Satisfying the ISO 26262 for the most stringent ASIL D applications enables IC design teams to accelerate the overall functional safety certification requirements for their products. Synopsys' TetraMAX II ATPG complies with the ASIL D safety requirements for software tools used in the development of safety-related electronic systems. SGS-TÜV Saar's certificate for TetraMAX II is based on a successful functional safety evaluation of validation processes against the requirements of ISO 26262."

"Synopsys' automotive IC customers worldwide have trusted TetraMAX ATPG to deliver the best test quality and lowest test cost for their most complex designs," said Bijan Kiani, vice president of marketing in Synopsys' Design Group. "Our new TetraMAX II ATPG solution reinforces our commitment to helping automotive IC design teams accelerate their manufacturing test development by reducing ATPG runtime from days to hours and lower test costs with 25 percent fewer patterns. For automotive IC applications, TetraMAX II provides the opportunity to increase test quality with multiple fault models, without significant impact to test costs and test generation time. In addition, certification for TetraMAX II contributes to meeting their functional safety requirements related to compliance of the ISO 26262 standard.

About TetraMAX II
TetraMAX II is built on new test generation, fault simulation and diagnosis engines that are extremely fast, exceedingly memory efficient, highly optimized for generating patterns and execute fine-grained multithreading of the ATPG and diagnosis processes. These innovations lead to significantly fewer test patterns and cut ATPG time from days to hours. The memory efficiency of TetraMAX II enables utilization of all server cores regardless of design size, surpassing previous solutions that are limited by high memory usage. The reuse of production-proven design modeling and rule checking infrastructure, as well as user and tool interfaces, ensure designers can quickly deploy TetraMAX II risk-free on their most challenging designs. Moreover, TetraMAX II utilizes established links with the Galaxy Design Platform tools, such as DFTMAX™ compression, PrimeTime® timing analysis and StarRC™ extraction, as well as other Synopsys tools, including Yield Explorer® design-centric yield analysis and Verdi® debug tools, to deliver the highest quality test and the fastest, most productive flows.

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 quality and security solutions. Whether you're a system-on-chip (SoC) designer creating advanced semiconductors, or a software developer writing applications that require the highest quality and security, Synopsys has the solutions needed to deliver innovative, high-quality, secure products. Learn more at www.synopsys.com.

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