Samsung Foundry and Synopsys Collaborate to Accelerate Time to ISO 26262 Compliance for Automotive SoCs

VC Functional Safety Manager Integration with Fault Campaign, Requirement Management, and Synthesis Solutions Enables Analysis Automation and Full Traceability

MOUNTAIN VIEW, Calif., July 19, 2021 /PRNewswire/ -- Synopsys, Inc. (Nasdaq: SNPS) today announced that Samsung Foundry collaborated with Synopsys on its VC Functional Safety Manager solution. VC Functional Safety Manager (VC FSM) provides the necessary automation for the functional safety Failure Mode Effects Analysis (FMEA) and Failure Modes Effects Diagnostic Analysis (FMEDA) for automotive SoCs.

Samsung collaborated with Synopsys to advance VC FSM as part of Synopsys unified functional safety solution because of its differentiated features covering safety analysis, verification and implementation, enabling designers to prove at the planning and implementation phases that their chip safety architecture can achieve the targeted Automotive Safety Integrity Levels (ASILs). Using VC FSM, customers can perform early analysis of the immediate effect of design changes on the ISO 26262 metrics, automate fault injection campaign for functional safety verification and synchronize the tracking and documentation of functional safety analysis with its requirement management, resulting in faster time to ISO 26262 compliance.

"To perform the detailed FMEA/FMEDA needed for ISO 26262 certification of automotive SoCs, our reference flow needs to integrate technology that enables early analysis, optimize flow automation and integrate with our requirement management tool," said Sangyun Kim, vice president of Foundry Design Technology Team at Samsung Electronics. "Through our deep collaboration on functional safety with Synopsys, VC Functional Safety Manager provides the necessary innovation and automation to accelerate designers' time to ISO 26262 compliance."

New innovations developed in collaboration with Samsung Foundry for VC FSM include productivity-oriented features that result in faster time-to-market and improved system level cost for Samsung, such as:

- Support for top-down flow and what-if analysis enabling early safety architecture exploration
- Quick synthesis for RTL design data extraction, enabling failure rate estimates before a synthesized gate-level netlist is ready
- Support for application lifecycle management tools for easier integration in customer flows
- Handling failure modes and fault injection in analog parts of the SoC

"The increasing complexity of automotive SoCs for powertrain, autonomous driving and advanced driver assistance systems is creating more demand for integrated and highly productive solutions to efficiently perform functional safety analysis," said Vikas Gautam, vice president of engineering in the Synopsys Verification Group. "Through our continuous innovation efforts and collaboration with Samsung, Synopsys is delivering the most advanced solution for automotive customers to accelerate its ISO 26262 functional safety deliverables."

Read more about VC Functional Safety Manager.

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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