Synopsys Advances Automotive Security with Industry's First IP Product to Achieve Third-Party Certification for ISO/SAE 21434 Cybersecurity Compliance

Synopsys ARC HS Functional Safety Processor IP Accelerates Qualification of Chips for Connected Vehicles

Highlights

- Synopsys ARC HS4xFS Processor IP and Synopsys IP development process both certified ISO/SAE 21434 compliant by accredited, independent auditor SGS-TÜV Saar
- Achieving ISO/SAE 21434 certification addresses evolving cybersecurity threats and helps provide long-term security and reliability of automotive systems throughout the lifecycle
- Certified Synopsys ARC HS4xFS Processor IP with the Security Risk Analysis (SRA) enables designers to integrate the IP into their system in a secure manner to meet ISO/SAE 21434 requirements
- Synopsys interface, security, and processor IP development processes are fully certified to the ISO/SAE 21434 cybersecurity standard, helping customers adhere to the mandated UN R155 regulation

SUNNYVALE, Calif., July 17, 2024 /PRNewswire/ -- Synopsys, Inc. (Nasdaq: SNPS) today announced that Synopsys ARC® HS4xFS Processor IP achieved ISO/SAE 21434 cybersecurity certification by SGS-TÜV Saar, meeting stringent automotive regulatory requirements designed to protect connected vehicles from malicious cyberattacks. The ISO/SAE 21434 standard defines the engineering requirements for cybersecurity risk management, helping to ensure that cyber risks are monitored, detected, and mitigated throughout the vehicle's lifecycle. The ARC HS4xFS Processors are also certified to the ISO 26262 standard, meeting ASIL D Random and ASIL D Systematic compliance for safety-critical systems, making it both cybersecurity and safety certified. In addition, Synopsys achieved certification of its IP development process to the ISO/SAE 21434 standard to help ensure its IP products are developed with a security-first mindset through every phase of the product development lifecycle. The company will continue to invest in certifying its broad IP portfolio, including specific interface, security, and processor IP products, to help ensure compliance to cybersecurity requirements, reducing design risk and accelerating time-to-market for safe and robust systems-on-chips (SoCs).

"As a leading IP provider, Synopsys recognizes the critical importance of cybersecurity in the automotive industry and the needs of automotive OEMs to safeguard their vehicles against evolving cyber threats," said John Koeter, senior vice president of product management and strategy for IP at Synopsys. "Achieving the industry's first third-party ISO/SAE 21434 certified IP product with ARC Processor IP demonstrates Synopsys' commitment to deliver high-quality and safe IP that helps our customers to meet the latest regulations for their safety- and security-critical devices."

What's Driving the Need for ISO/SAE 21434 Compliance?
Cars are becoming increasingly software-defined, enabling car manufacturers to add new features or functions remotely through over-the-air (OTA) software updates. However, OTA updates and other connected applications, such as vehicle telematics and smartphone connectivity, can create security gaps that open systems to unauthorized access, tampering, and the injection of malware and viruses. For this reason, to release new road vehicles, automotive OEMs are mandated by the United Nations Economic Commission for Europe's UN R155 regulation to adopt a cybersecurity management system like ISO/SAE 21434, making compliance a prerequisite for market success. By integrating products that adhere to the ISO/SAE 21434 cybersecurity standard, OEMs can more easily meet regulatory requirements to better protect their customers' data.

"As a supplier of highly reliable microcontrollers for use in automotive systems, it is critical that our products meet automotive cybersecurity standards to minimize the vulnerability to cyberattacks. At Infineon, we firmly believe that the robustness of ISO 21434 compliant solutions over the lifecycle relies heavily on strong collaboration among all stakeholders, including IP/hardware/software suppliers and customers," said Mr. Joerg Schepers, Vice President for Automotive Microcontrollers at Infineon. "The automotive industry has a complex supply chain, and vendors, like Synopsys, that provide ISO 21434 certified solutions help ensure that security best practices are followed throughout the entire development process from IP to final vehicle assembly."

"With the increase in hardware and software vulnerabilities in connected cars, automotive vendors across the supply chain are adhering to tougher cybersecurity regulations to help OEMs meet governmental standards," said Tobias Hörmann Product Manager, Cybersecurity at SGS-TÜV Saar. "By achieving ISO 21434 certification for its IP development process and for the ARC HS4xFS Processor IP, Synopsys is helping automotive engineers meet automotive cybersecurity requirements."

About Synopsys ARC HS4xFS Processor IP for Automotive Applications
The Synopsys ARC® HSxFS functional safety processors are optimized for high-performance embedded applications. They

feature a dual-issue, 32-bit superscalar architecture, with a small area footprint and low power consumption. The ASIL D certified processors come with comprehensive safety documentation including FMEDA reports, and programming support through the ARC MetaWare Toolkit for Safety. Synopsys ARC HS4xFS IP is part of Synopsys' broad portfolio of processor IP, including the new RISC-V based ARC-V™ Processor IP.

Availability and Resources
The ARC H4xFS Processor with ISO 26262 safety and ISO/SAE 21434 cybersecurity certifications is available now.

- Blog: Synopsys Secures Connected Vehicles with Industry's First IP Product to Achieve Third-Party Certification for ISO/SAE 21434 Cybersecurity Standard
- Web: Synopsys ARC® HS4xFS Processor IP

About Synopsys
Catalyzing the era of pervasive intelligence, Synopsys, Inc. (Nasdaq: SNPS) delivers trusted and comprehensive silicon to systems design solutions, from electronic design automation to silicon IP and system verification and validation. We partner closely with semiconductor and systems customers across a wide range of industries to maximize their R&D capability and productivity, powering innovation today that ignites the ingenuity of tomorrow. Learn more at www.synopsys.com.

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