

# Synopsys' New Model for Infineon's Next Generation TriCore Architecture Accelerates Early Automotive Software Development and Test

Synopsys VDKs with New TriCore 1.6.2 Fast-Timed Model Deliver Speed and Accuracy for Real-Time Control Application Development Based on Infineon AURIX Microcontrollers

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## Highlights:

- New TriCore model extensively validated by Synopsys for functional quality, timing accuracy and simulation speed
- Model integrated with Lauterbach TRACE32 debugger and PLS Universal Debug Engine
- Microcontroller virtual prototype combining new core model and Infineon peripheral models available for use with Synopsys VDKs
- Synopsys VDKs enable early software development, system integration and test for increased productivity, high reliability and reduced development cost

Synopsys, Inc. (Nasdaq: SNPS) today announced a new model for Infineon's latest TriCore™ architecture, TriCore 1.6.2, for use with [Synopsys Virtualizer™ Development Kits \(VDKs\)](#). VDKs are software development kits using a virtual prototype as the embedded target enabling automotive engineers to design Infineon TriCore-based electronic control units (ECUs). The new fast-timed model for TriCore 1.6.2 delivers the speed and accuracy required to accelerate software development and test of automotive real-time control applications. Synopsys has extensively validated the model for functional quality, timing accuracy and high speed. In addition, integration with Lauterbach TRACE32® debugger and PLS Universal Debug Engine (UDE) provides designers with a quick and efficient debugging environment. A microcontroller virtual prototype combining the new core model and Infineon peripheral models is available for use with Synopsys VDKs. The solution enables software developers to start development early, accelerate system integration, expand fault testing for safety evaluation and automate regression testing.

"Our longstanding collaboration with Synopsys on the development of VDKs for the AURIX™ microcontroller family enables our mutual customers to start early software development and testing," said Dr. Joerg Schepers, senior director, Powertrain Microcontrollers at Infineon. "The availability of the fast-timed TriCore 1.6.2 model, which has been extensively validated for functional quality, timing accuracy and high speed, helps accelerate the development of real-time embedded control applications and automotive systems using the AURIX product family of Infineon."

The Synopsys fast-timed model for Infineon's newest TriCore 1.6.2 architecture delivers unprecedented functional quality, timing accuracy and speed. Synopsys has extensively validated the model, passing 100 percent of the self-checking tests and reaching more than 90 percent timing accuracy, while delivering high simulation speed in the context of a single core and multicore microcontroller virtual prototypes.

"Synopsys VDKs integrate the latest Infineon TriCore architecture with our Lauterbach TRACE32 debugger," said Norbert Weiss, international sales and marketing manager at Lauterbach. "The availability of an integrated software development solution, consisting of a virtual prototype and software debugger, enables automotive software and system developers to efficiently perform concurrent debugging of multicore microcontroller designs well before hardware availability."

"With the increasing complexity of automotive systems and the requirement for functional safety, development teams must start software development and test earlier," said John Koeter, vice president of marketing for IP and prototyping at Synopsys. "Our continued work with Infineon to deliver models for their newest architecture with the highest level of quality and timing enables automotive tier 1 companies and OEMs to start software development independent of hardware availability."

## Availability & Resources

The TriCore 1.6.2 model for use with Synopsys VDKs is available now from Synopsys.

- For more information, visit <https://www.synopsys.com/verification/solutions/automotive.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 15<sup>th</sup> 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](http://www.synopsys.com).

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