

Synopsys Announces Virtualizer Development Kit (VDK) for Freescale's Qorivva MCU Family

New VDK Enables Automotive Suppliers and OEMs to Start Software Development Prior to ECU Board Availability

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Highlights:

- New VDK accelerates software development, system integration and test, fault and coverage testing
- Synopsys® VDK includes virtual prototype of the Freescale® Qorivva® MPC5643L MCU, extendable to support all Qorivva MCUs
- Seamless integration with tools such as Mathworks' Simulink, Synopsys' Saber and Vector's CANoe enable development of automotive systems supporting ISO 26262
- Plug-and-play integration with the most popular third-party software debuggers allows use of familiar development environments
- Multi-year agreement with Freescale enables automotive developers to access MCU models from Synopsys

Synopsys, Inc. (Nasdaq:SNPS), a global leader providing software, IP and services used to accelerate innovation in chips and electronic systems, today announced the availability of Synopsys' Virtualizer™ Development Kit (VDK) for Freescale Semiconductor's Qorivva microcontroller (MCU) family to accelerate the development of automotive control applications in powertrain/hybrid, chassis/safety and body electronic control units (ECUs). The VDK for Freescale's Qorivva MCU family is a software development kit that includes: virtual prototypes of the Qorivva MCU family; software development tools; built-in support for integration with Mathworks' Simulink, Synopsys' Saber and Vector's CANoe simulation tools; and sample code and scripts supporting a broad range of automotive software development use cases. By using the new VDK for Qorivva MCUs, automotive engineers can start software development, integration and test tasks prior to ECU availability, shaving months off development schedules and increasing the system reliability. Increased fault and coverage testing in support of the ISO 26262 safety standard is also achieved through earlier testing with VDKs. The VDK for Freescale's Qorivva MCU family seamlessly integrates with third-party debuggers and automotive development tools, allowing software developers to use their familiar development environment.

VDKs enable automotive developers to start software development before the physical ECU is available, accelerating the system integration and fault and coverage testing necessary to address the challenges created by the increasing software content, system complexity and safety certification requirements in automotive ECUs. Synopsys' VDK for Freescale's Qorivva MCU family gives designers full system visibility and control to accelerate the debug, analysis and testing of software running on Qorivva MCUs, resulting in higher product quality and containment of rising development costs.

"Our automotive customers are more focused than ever on quality, development schedules and costs. Virtual prototypes enable them to start their development earlier as well as improve quality through more and better testing," said Ray Cornyn, vice president of automotive microcontroller products at Freescale. "By working closely with Synopsys, we are making it easier for our Qorivva MCU users to realize the benefits of VDKs for accelerating their systems development."

The Synopsys VDK for Freescale's Qorivva MCU family includes a reference virtual prototype for the Qorivva MCU family. This reference virtual prototype represents a complete microcontroller that includes multiple CPU cores, timers, memories, communication blocks such as LIN or CAN, and analog and error control modules to enable immediate deployment. The collaboration between Synopsys and Freescale gives automotive designers a "one-stop shop" for virtual prototypes that represent their actual systems. In addition, designers can easily customize Synopsys' VDKs for device-specific requirements and to create additional VDKs for other MCUs in the Qorivva MCU family with the Virtualizer tool set.

"Synopsys' automotive VDKs empower OEMs and tier-one suppliers to enhance their embedded software development processes by starting earlier, improving productivity and enabling more and better testing in support of safety standards such as ISO 26262," said John Koeter, vice president of marketing for IP and systems at Synopsys. "The Synopsys VDK for Freescale's Qorivva MCU family was designed to address the unique needs of automotive software engineers, easily integrating with their existing development environments and providing all the necessary models and tools to accelerate the development and debug of embedded software targeted for automotive ECUs."

Availability & Resources

The VDK for Freescale Qorivva MCUs is available immediately from Synopsys. Learn more about the Freescale VDK:

- <https://www.synopsys.com/verification/virtual-prototyping/vdk/vdk-for-nxp-mpc.html>

About Synopsys

Synopsys, Inc. (Nasdaq:SNPS) accelerates innovation in the global electronics market. As a leader in electronic design automation (EDA) and semiconductor IP, its software, IP and services help engineers address their design, verification, system and manufacturing challenges. Since 1986, engineers around the world have been using Synopsys technology to design and create billions of chips and systems. Learn more at <http://www.synopsys.com>.

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