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Microchip Simplifies Automotive Designs with ISO 26262-Compliant, AUTOSAR-Ready Devices and Ecosystem

New dsPIC33C DSCs add support for AUTOSAR, OS, MCAL drivers and functional safety, enabling robust and secure automotive solutions

CHANDLER, Ariz., June 02, 2022 (GLOBE NEWSWIRE) -- OEMs are experiencing increasing application complexity and the need for AUTOSAR, ISO 26262 functional safety-compliant and secure solutions as the market for electric and autonomous vehicles grows. For automotive developers looking to design scalable applications for future technology while also meeting the latest automotive requirements, Microchip Technology Inc. **(Nasdaq: MCHP)** today announces a comprehensive ecosystem around **AUTOSAR-ready dsPIC33C Digital Signal Controllers** (DSCs) to enable accelerated development and a high level of system optimization while reducing total system cost.

Microchip is expanding its broad portfolio of dsPIC33C DSCs to cover the large memory segment with the new ISO 26262-compliant dsPIC33CK1024MP7xx family. This new family of dsPIC33C DSCs with 1 MB Flash enables applications running automotive software like AUTOSAR, OS, MCAL drivers, ISO 26262 functional safety diagnostics and security libraries. The family of dsPIC33 DSCs also includes a high-performance Central Processing Unit (CPU) with deterministic response and specialized peripherals for general automotive, advanced sensing and control, digital power and motor control applications.

“The AUTOSAR-ready dsPIC33C DSCs enable designers to achieve a high level of system optimization by implementing AUTOSAR-based applications, functional safety goals and security use cases in a single microcontroller (MCU) while meeting robust automotive application requirements,” said Joe Thomsen, vice president of the MCU16 business unit at Microchip Technology. “This opens up a world of opportunities for designers looking to work with Microchip while expanding into e-mobility and advanced sensing and control applications.”

The benefit of adopting AUTOSAR-ready devices like this one is that customers can improve their risk and complexity management while decreasing development time through reusability. Customers who have previously designed bare metal or non-AUTOSAR automotive applications and are now adopting AUTOSAR can scale up by staying within the dsPIC33C DSC ecosystem and continuing to take advantage of Microchip’s value-added solutions, customer support and product advantages with the new AUTOSAR-ready dsPIC33C DSCs. The AUTOSAR ecosystem for the dsPIC33C DSCs includes MICROSAR Classic from Vector, KSAR OS from KPIT Technologies Ltd. and ASPICE- and ASIL B-compliant MCAL drivers from Microchip.

“We have worked with our partners to offer an integrated solution to simplify development for automotive OEMs and Tier 1s,” said Matthias Kaestner, vice president of Microchip’s

automotive products business unit. “The integrated solution gives insights into the AUTOSAR-based development. It simplifies evaluation of an ECU project using AUTOSAR 4.3.x and enables customers to get familiar with the systems based on dsPIC33 AUTOSAR-ready DSCs quickly.”

Microchip has expanded its functional safety packages that include FMEDA reports, safety manuals and diagnostic libraries to cover the ISO 26262-compliant dsPIC33CK1024MP7xx DSCs. These AUTOSAR-ready dsPIC33C DSCs, used together with Microchip’s TA100 CryptoAutomotive™ security integrated circuits (ICs), enable the implementation of robust security in automotive designs.

Development Tools

Software and tools from Microchip Technology include certified MPLAB® XC16 compiler functional safety licenses, MPLAB X Integrated Development Environment (IDE), MPLAB Code Configurator (MCC), programming and debugging tools for dsPIC33C DSCs, ISO 26262- and ASPICE-compliant MCAL drivers for dsPIC33C DSCs, ISO 26262 functional safety packages for dsPIC33C DSCs and software libraries and reference code for security use cases. Third-party software includes MICROSAR Classic from Vector and KSAR OS from KPIT Technologies Ltd. Third-party hardware tools include **TRACE32®** debugger from Lauterbach.

Availability

For information about AUTOSAR BSW, OS and MCAL drivers supporting dsPIC33C DSCs, visit **www.microchip.com/dsPIC33-AUTOSAR-Ready**. For information about the dsPIC33CK1024MP708 DSCs that offer up to 100 MHz real-time performance, 1 MB Flash, dual CAN FD interfaces and dedicated peripherals for advanced sensing and control, digital power, motor control and high-performance general automotive applications, visit **www.microchip.com/dsPIC33CK1024MP708**. For information about the ISO 26262 functional safety packages, secure solutions and tools ecosystem for the AUTOSAR-ready dsPIC33C DSCs, visit **www.microchip.com/dsPIC33-Automotive** or contact a Microchip sales representative.

Resources

High-res images available through Flickr (feel free to publish):

- Application image: **www.flickr.com/photos/microchiptechnology/51999486842/sizes/l/**

About Microchip Technology

Microchip Technology Inc. is a leading provider of smart, connected and secure embedded control solutions. Its easy-to-use development tools and comprehensive product portfolio enable customers to create optimal designs which reduce risk while lowering total system cost and time to market. The company’s solutions serve more than 120,000 customers across the industrial, automotive, consumer, aerospace and defense, communications and computing markets. Headquartered in Chandler, Arizona, Microchip offers outstanding technical support along with dependable delivery and quality. For more information, visit the Microchip website at **www.microchip.com**.

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