

Autosar-ready controllers and ecosystem

The dsPIC33C DSCs from Microchip add support for Autosar, OS, MCAL drivers, and functional safety, enabling robust and secure automotive solutions.



Autosar-ready dsPIC33C digital signal controllers (Source: Microchip)

The solution should enable accelerated development of ISO-26262-compliant automotive designs and a high level of system optimization while reducing total system cost. The DSCs offer dual CAN FD interfaces and an up to 1-MiB Flash. The included central processing unit (CPU) provides deterministic response and specialized peripherals for general automotive, advanced sensing and control, digital power and motor control applications. The DSC family enables applications running automotive software such as Autosar, OS, MCAL drivers, ISO 26262 functional safety diagnostics, and security libraries.

Adopting Autosar-ready devices, customers can improve their risk and complexity management while decreasing development time through reusability. Developers previously designed bare-metal or non-Autosar applications 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, informs the company.

The ecosystem (software and tools) from Microchip includes certified MPLAB XC16 compiler functional safety licenses, MPLAB X integrated development environment (IDE), and MPLAB Code Configurator (MCC). Programming and debugging tools, ISO 26262- and Aspic-compliant MCAL drivers, and ISO 26262 functional safety packages for dsPIC33C DSCs as well as software libraries and reference code for security use cases are available. Third-party software includes Microsar Classic from Vector and KSAR OS from KPIT Technologies. Third-party hardware tools include Trace32 debugger from Lauterbach. Provider's expanded functional safety packages include Fmeda reports, safety manuals, and diagnostic libraries.

"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 DSCs quickly."

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