



IAR Elevates Motor Control Capabilities, Unveiling Comprehensive Support for NXP's S32M2 Motor Control Solution

IAR Embedded Workbench for Arm delivers instantaneous support for NXP's latest addition to its S32 platform, speeding up the development of body and comfort applications for the software-defined car.

Uppsala, Sweden, November 21, 2023 – IAR, the world leader in software and services for embedded development, delivers full support for the recently introduced S32M2 motor control solution from NXP® Semiconductors. This latest addition to NXP's S32 vehicle computing platform allows high motor efficiency for software-defined electric vehicles, resulting in reduced in-cabin noise, enhanced occupant comfort, and other benefits across body and control applications. The complete IAR Embedded Workbench® for Arm®, with its powerful compiler and debugging solutions, is now available for automotive software developers working on the new S32M2 devices.

The S32M2 is a highly integrated system-in-package solution based on Arm® Cortex®-M microcontroller cores. While fully software compatible with NXP's S32K MCU products, the new series adds high voltage analog features and high efficiency for vehicle applications such as pumps, fans, sunroof and seat position, seat belt pretensioners, or trunk openers. S32M2's system-in-package integrates automotive-qualified and application-focused capabilities such as voltage regulators operating directly from a 12V car battery supply, physical communications interfaces (LIN or CAN FD), MOSFET gate pre-drivers for motor control, and non-volatile memory (from 128KB to 1MB) to reduce overall component count. This allows OEMs to reduce the printed circuit board (PCB) footprint, minimize design risks, cut bill-of-material costs, and accelerate time-to-market.

The complete development environment IAR Embedded Workbench for Arm has been providing support for NXP's widely adopted S32K microcontrollers since their introduction and now consequently also supports the new S32M2 series, which allows for an efficient software re-use. The comprehensive C/C++ suite includes a highly optimized compiler and advanced debugging and analysis functionalities, including integrated power consumption monitoring. Complementing the highly optimized building tools, user-friendly code analysis add-ons such as IAR C-STAT, IAR C-RUN, and the C-SPY Debugger help developers catch potential code issues and bugs early in the development process to optimize overall code quality. IAR Embedded Workbench for Arm is also available in a functional safety version certified according to ISO 26262. This aligns with the S32K's development processes, which are also certified to meet ISO 26262 ASIL B standards.

"NXP's S32M2 delivers OEMs a solution for efficient motor performance while offering headroom for higher integration and adding new functions and capabilities in the future that address the requirements of software-defined electric vehicles," said Thomas Ensergueix, Senior Director, Integrated Solutions Automotive Processing at NXP. "The close collaboration with IAR helps us provide a comprehensive software enablement for carmakers to fully optimize their product development and accelerate the transition to SDVs".

"We are happy to offer prompt and robust support for NXP's cutting-edge S32M2 motor control solution," says Anders Holmberg, CTO at IAR. "The IAR Embedded Workbench for Arm empowers automotive software developers to design efficient, simplified, and resilient motor control applications. Furthermore, it enables seamless code re-use across the S32 platform implementations,



leading to accelerated development cycles and cost reductions.”

Support for the S32M2 series has been implemented in the latest versions of the IAR Embedded Workbench for Arm. More information on IAR Embedded Workbench for Arm, which supports 8,800+ Arm devices, is available at <https://www.iar.com/products/architectures/arm/iar-embedded-workbench-for-arm/>.

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About IAR

At IAR, we provide world-leading software and services for embedded development, empowering companies globally to bring secure products that shape the future. Since its founding in 1983, our solutions have been instrumental in ensuring quality, security, reliability, and efficiency in the development of over one million embedded applications for a wide range of industries, including Automotive, Industrial Automation, IoT, MedTech, Military, and Public Safety sectors. With support for 15,000 devices from over 70 semiconductor partners, we are dedicated to fostering innovation and enabling our customers' success.

The company is headquartered in Uppsala, Sweden, with a global presence of sales and support offices strategically located across the world. IAR is an I.A.R. Systems Group AB subsidiary, listed on NASDAQ OMX Stockholm, Mid Cap (ticker symbol: IAR B). To learn more, visit us at www.iar.com.

Image Attachments

[IAR NXP November 2023](#)

Attachments

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