



# S32M2 Integrated Solution for 12V Motor Control

## S32M2

Last Updated: Nov 5, 2025

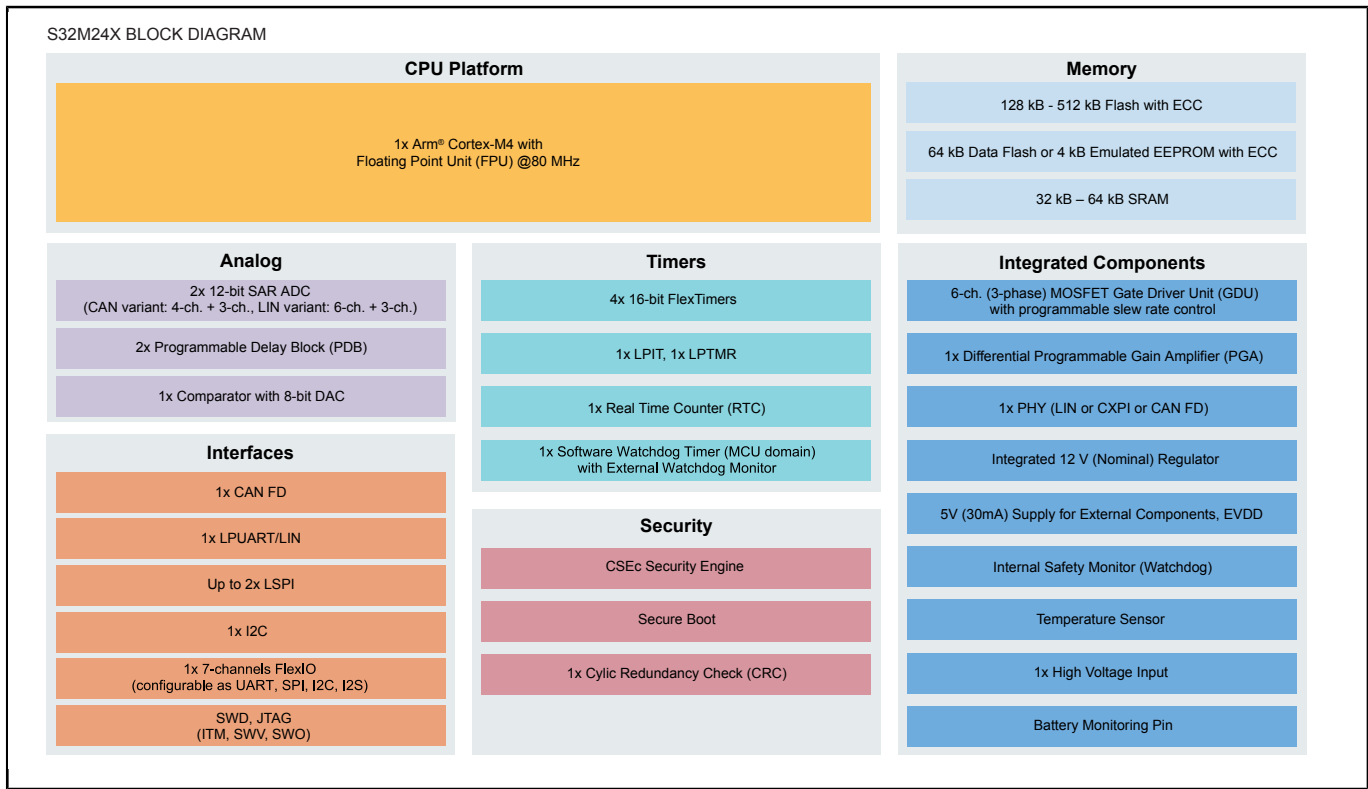
Designed for 12V motor control applications, the S32M2 family, based on system-in-package (SiP) design, integrates high-voltage analog functionalities (MOSFET gate pre-drivers, physical communication interfaces - LIN/CAN FD, and voltage regulators) with a robust embedded MCU Core ([S32K Arm® Cortex®-M4/M7 series core](#)), ensuring high-performance and functional safety compliance with ISO 26262 up to ASIL B.

Key features include platform-based design of motor control edge nodes enabling faster time to market, advanced data analysis capabilities, inverter and motor diagnostic capabilities and advanced algorithms to minimize in-cabin noise.

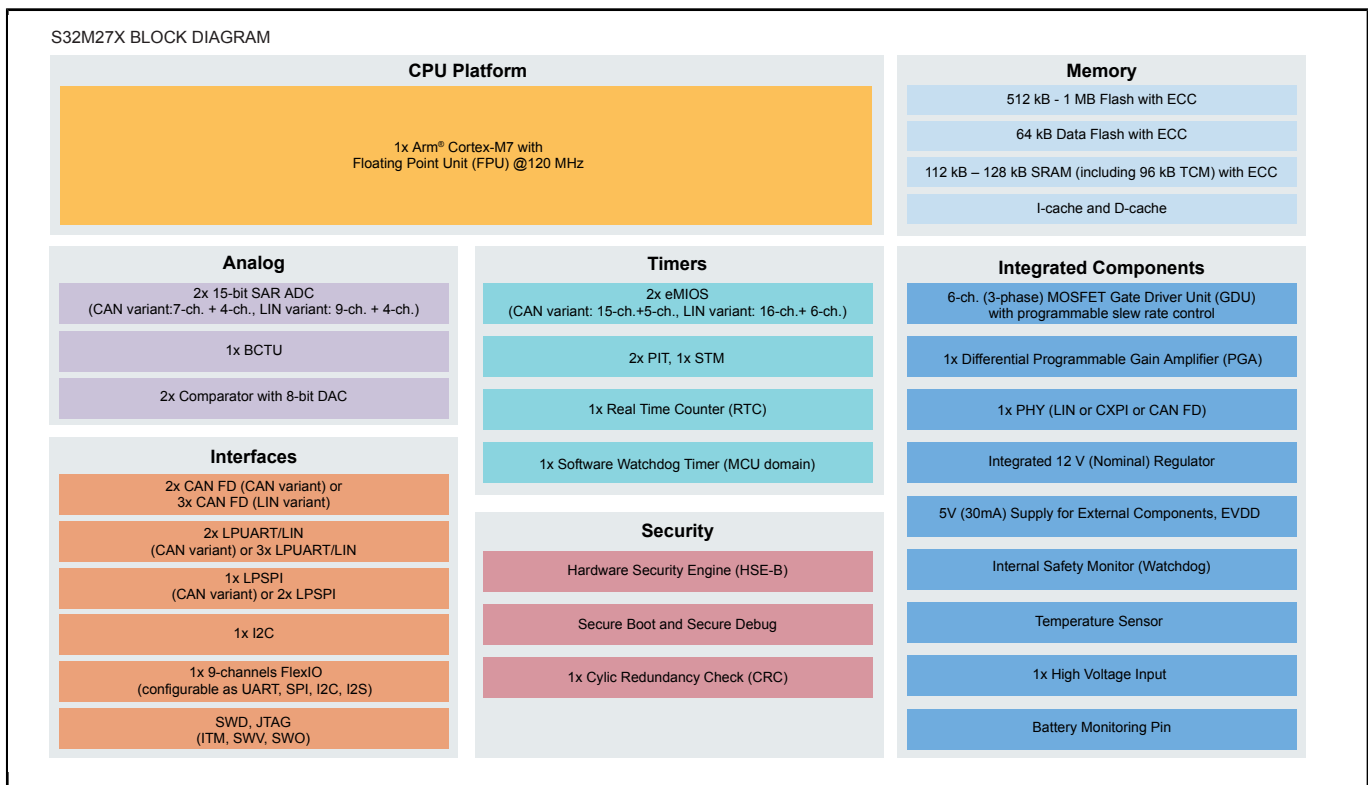
Through compatibility with the [NXP S32 Automotive Platform](#), the S32M2 Family enables seamless firmware over-the-air (FOTA) updates, software reuse and flexibility.

With attention to cost at the system level, S32M2 integrates voltage regulators, pulse-width modulators, analog to digital converters, timers and non-volatile memory to reduce overall component count and reduce board space in a 64-pin LQFP-EP package.

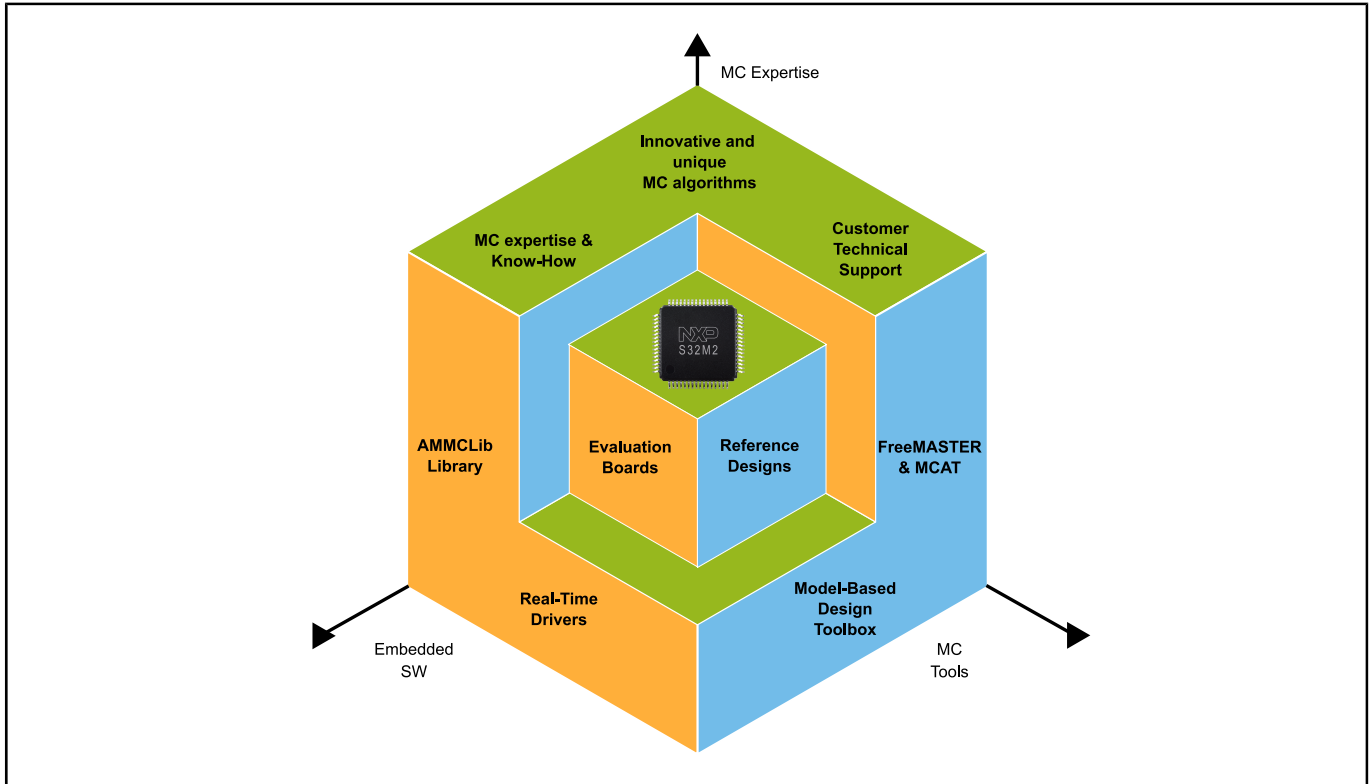
## S32M24x Family Specs Block Diagram



## S32M27x Family Specs Block Diagram



# S32M2 Motor Control Solution Diagram Block Diagram



View additional information for [S32M2 Integrated Solution for 12V Motor Control](#).

**Note:** The information on this document is subject to change without notice.

[www.nxp.com](http://www.nxp.com)

NXP and the NXP logo are trademarks of NXP B.V. All other product or service names are the property of their respective owners. The related technology may be protected by any or all of patents, copyrights, designs and trade secrets. All rights reserved. © 2026 NXP B.V.