S32K3 Microcontrollers for Automotive General Purpose

S32K3

Last Updated: Apr 25, 2024

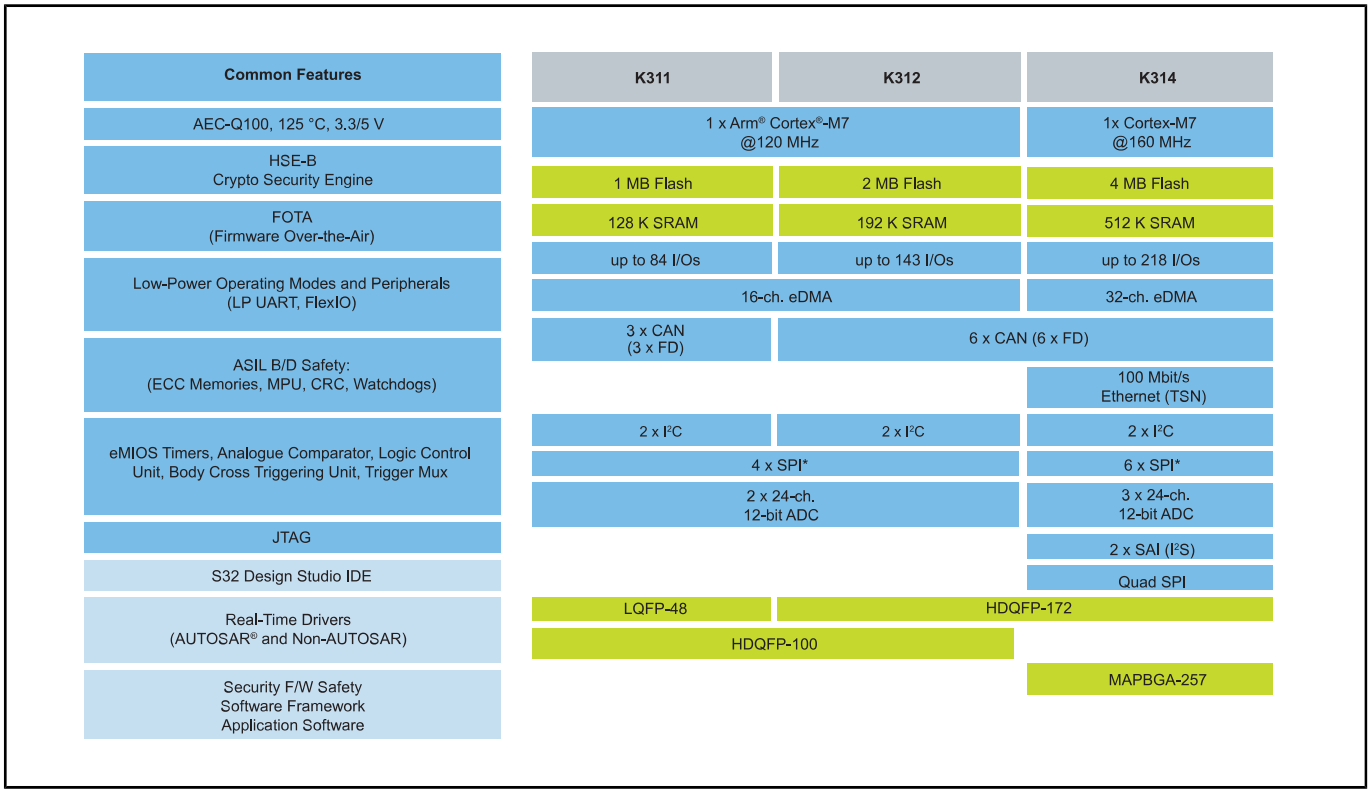
The S32K3 Family of 32-bit microcontrollers (MCUs) offers Arm® Cortex®-M7-based MCUs in single, dual and lockstep core configurations. S32K3 Family offers scalability in number of cores, memory and peripherals, ensuring high-performance and functional safety compliant with ISO 26262 up to ASIL D.

S32K3 Family provides a comprehensive end-to-end solution for development and production. S32K3 MCUs feature a hardware security engine (HSE) with NXP firmware, enable firmware over-the-air (FOTA) updates and include ISO 26262 compliant Real-Time Drivers (RTD) suitable for both AUTOSAR® and non-AUTOSAR applications.

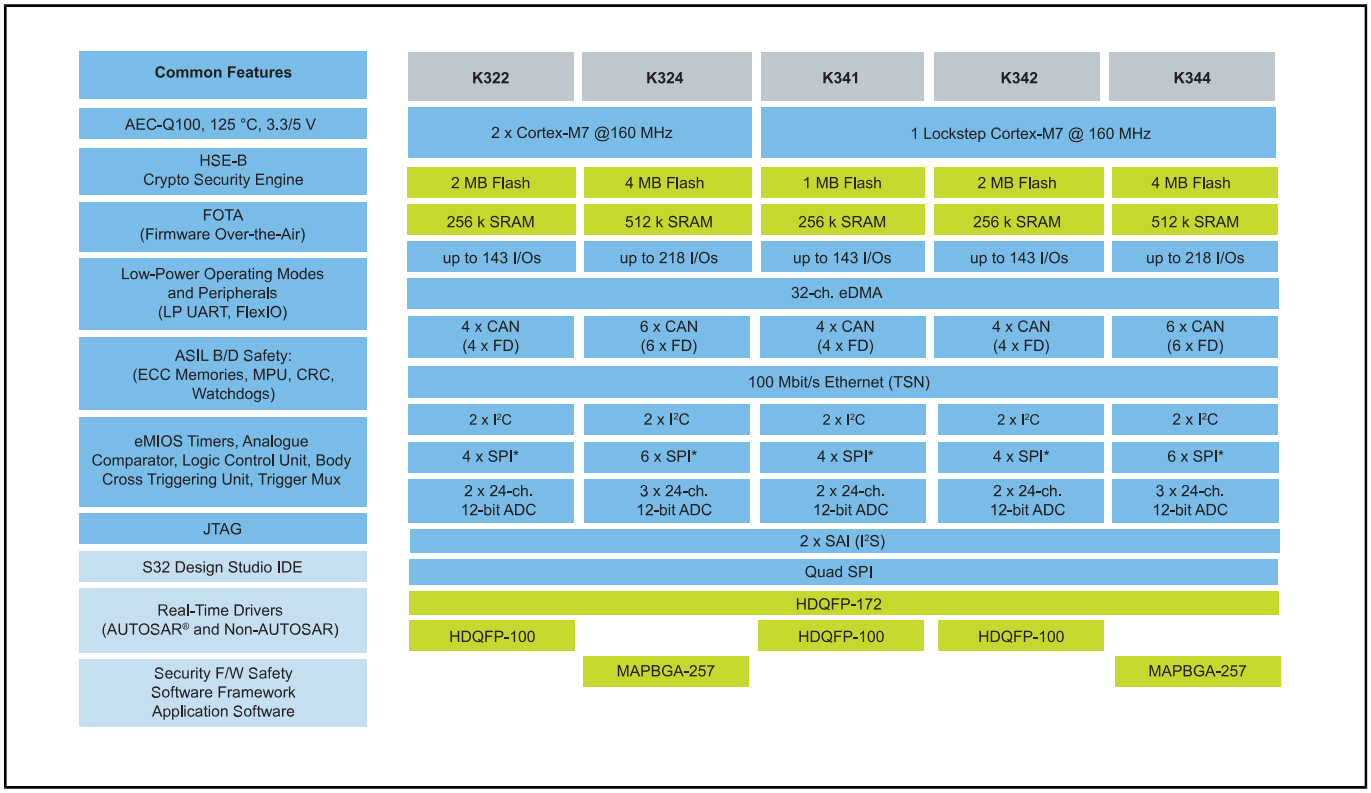
Through compatibility with the NXP S32 Automotive Platform, S32K3 Family enables seamless software reuse and flexibility across applications in body, zone control and electrification.

S32K3 MCUs are available in various package types, including MAPBGA, LQFP and HDQFP, providing flexibility in integration and design. Also, the NXP HDQFP package reduces the package footprint by up to 55 % compared to a standard QFP package.

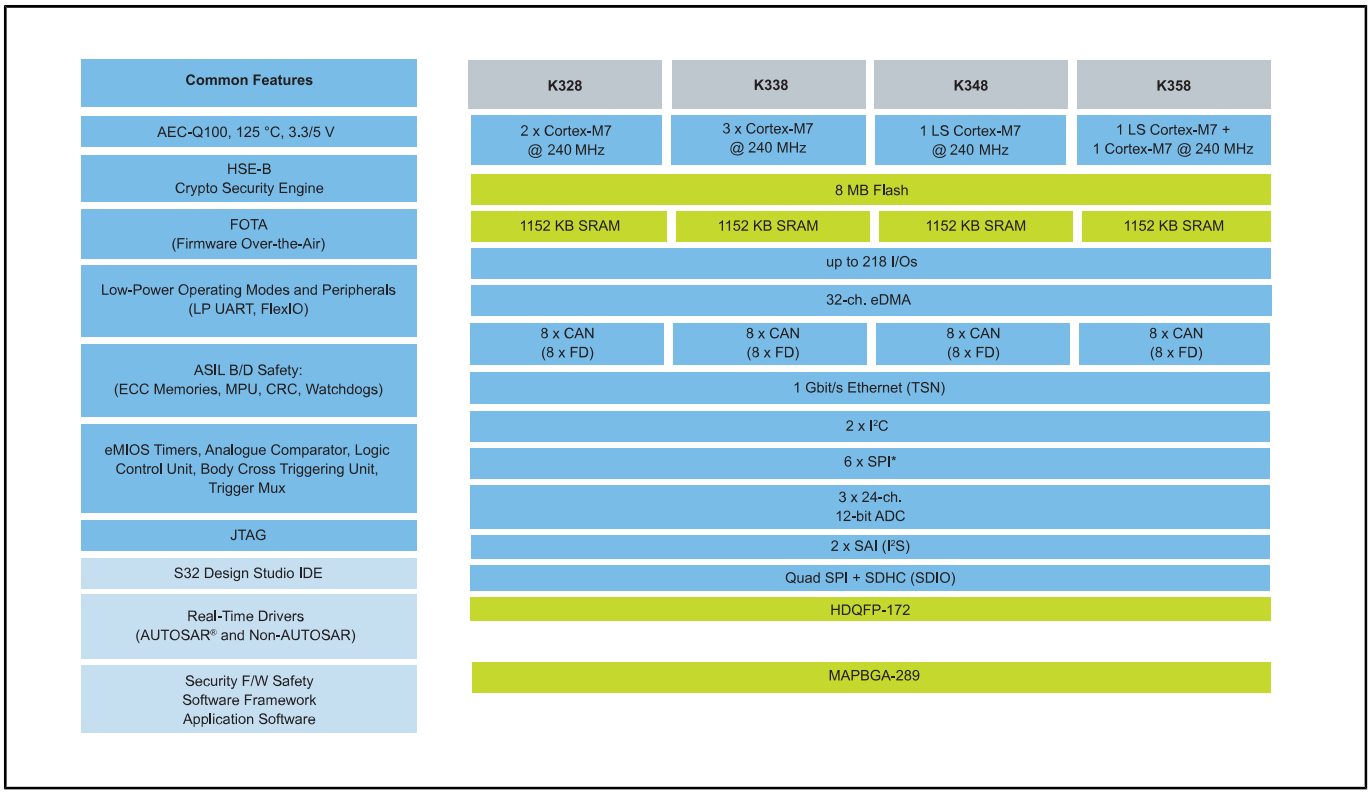
S32K3 Family Features Part 1 Block Diagram



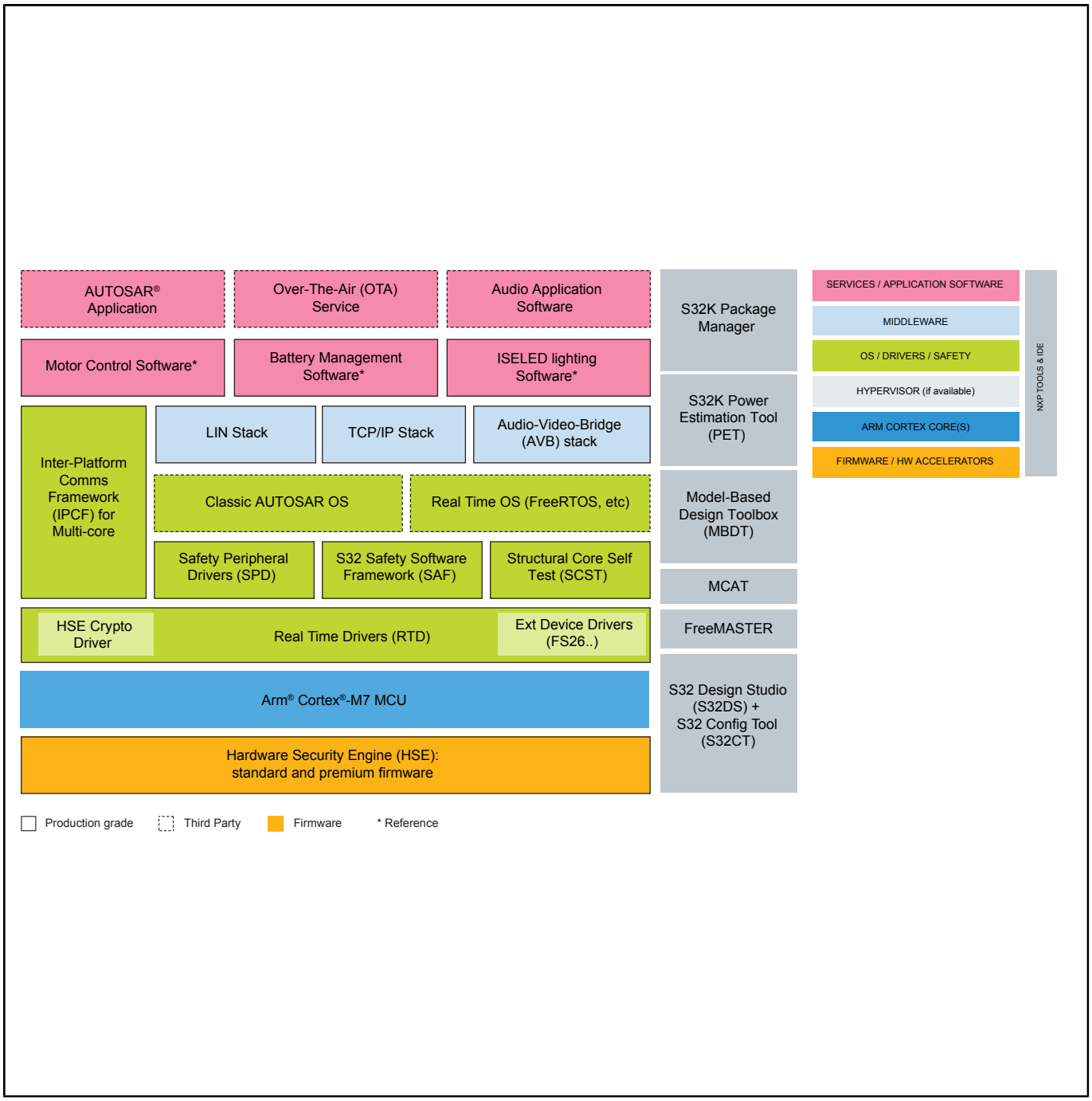
S32K3 Family Features Part 2 Block Diagram



S32K3 Family Features Part 3 Block Diagram



S32K3 Software Ecosystem Block Diagram



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