



面向电气化应用的**S32K39/37/36**微控制器

S32K39-37-36

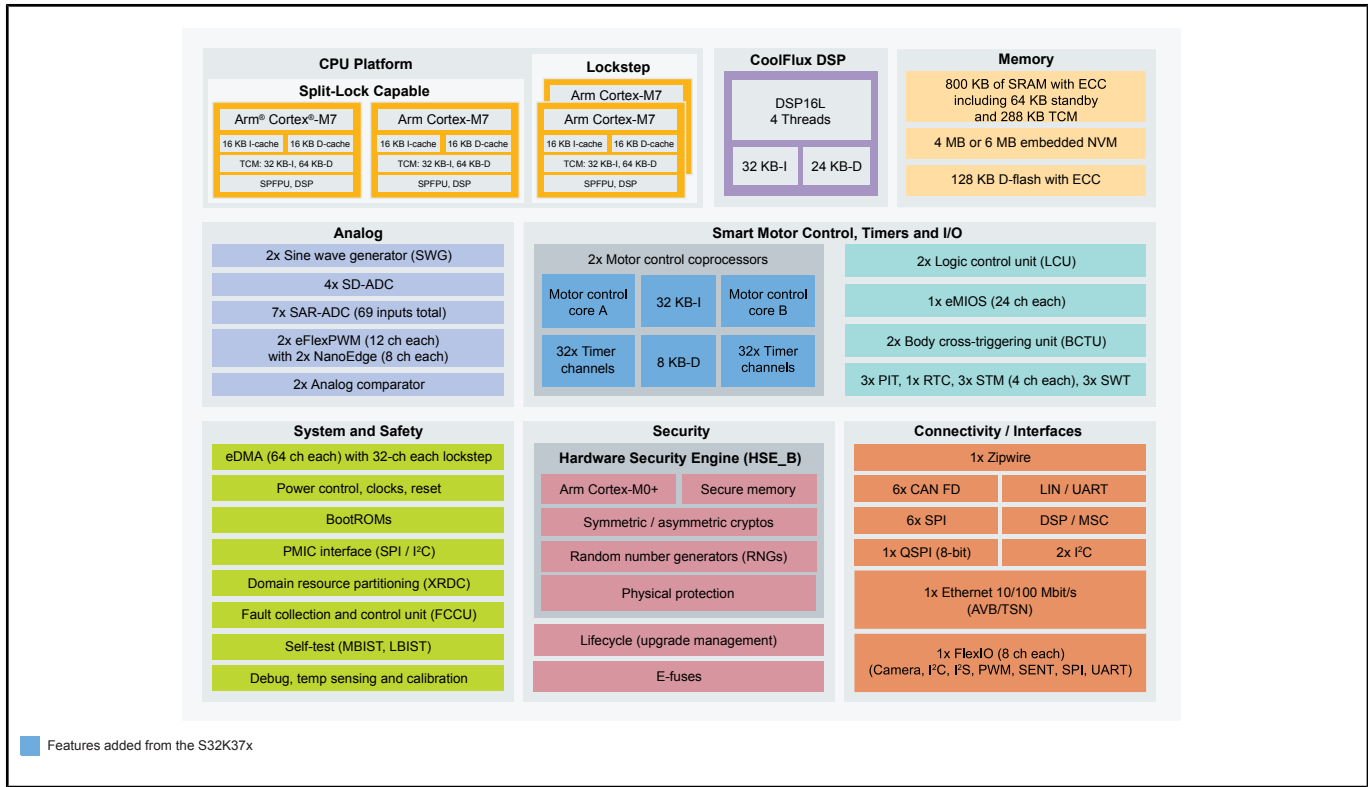
Last Updated: Jun 25, 2024

S32K39-37-36是一款集性能、集成、组网、信息安全及功能安全功能于一体的新型电动汽车(EV)器件。

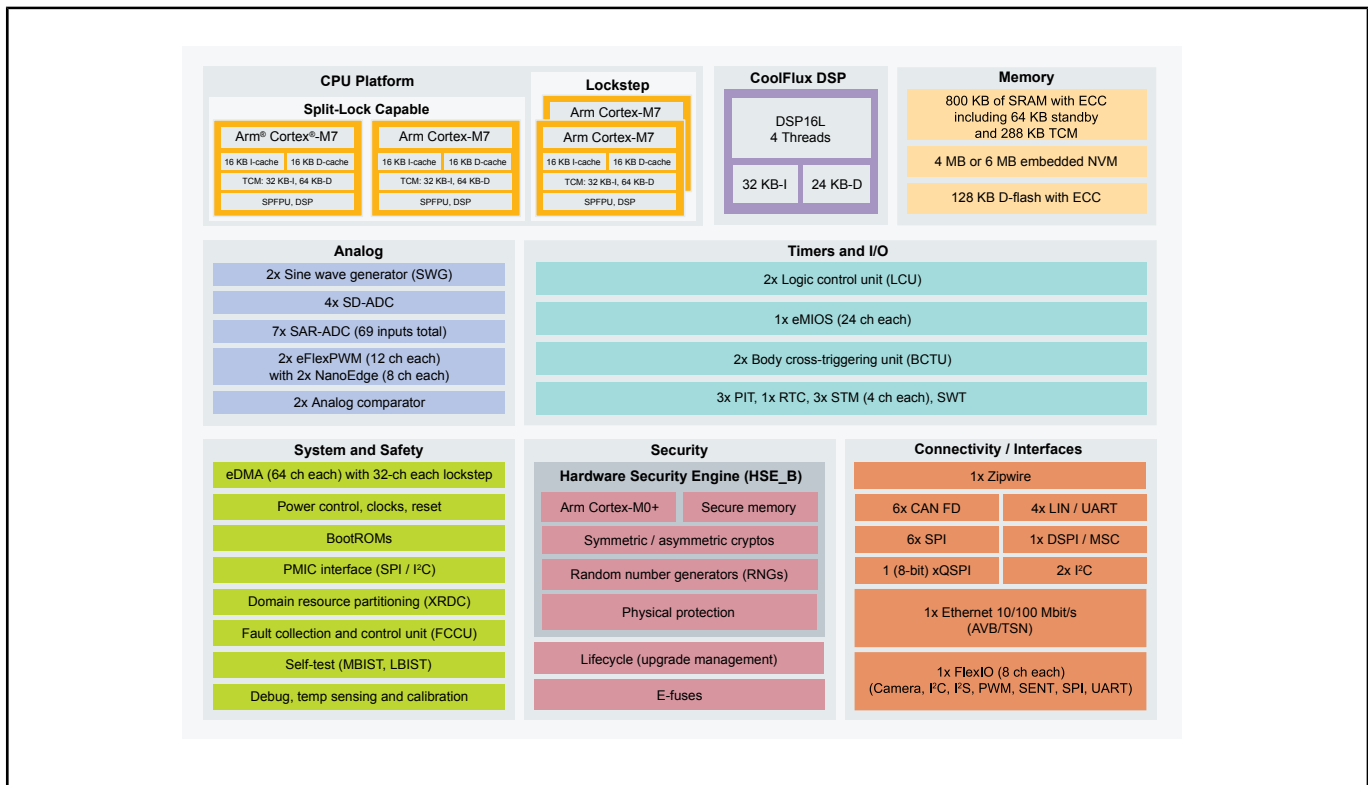
它有足够的计算能力，支持由超过**200kHz**控制环路控制的一个六相电机或两个三相电机，同时托管AI/ML算法或其他监测应用。它支持使用时间敏感网络(TSN)以太网的远程智能启动应用，用于新的区域车辆架构。它还搭载**ASIL D**解码软件和模拟外设集成，以降低系统成本。

S32K37的高计算能力是高端电池管理系统(BMS)应用的理想之选。

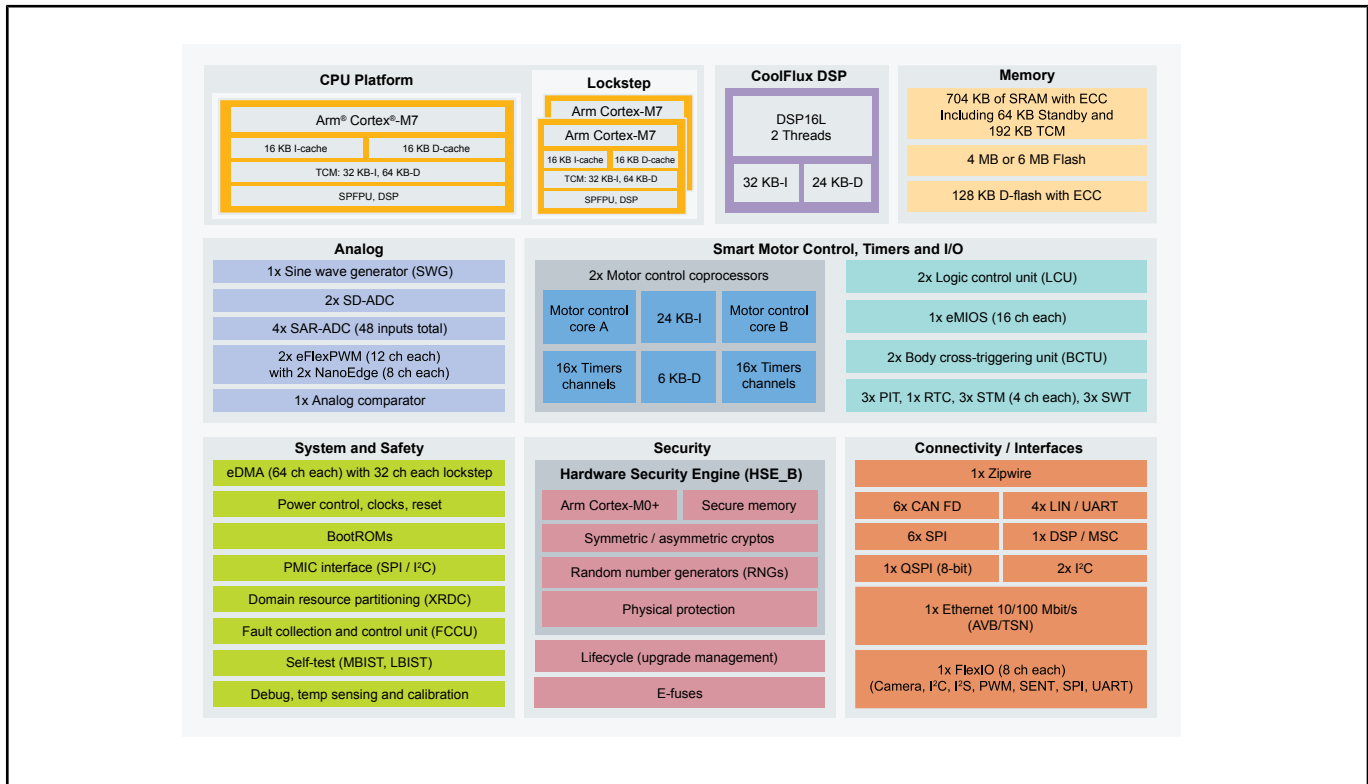
S32K39 微控制器 Block Diagram



S32K37 微控制器 Block Diagram



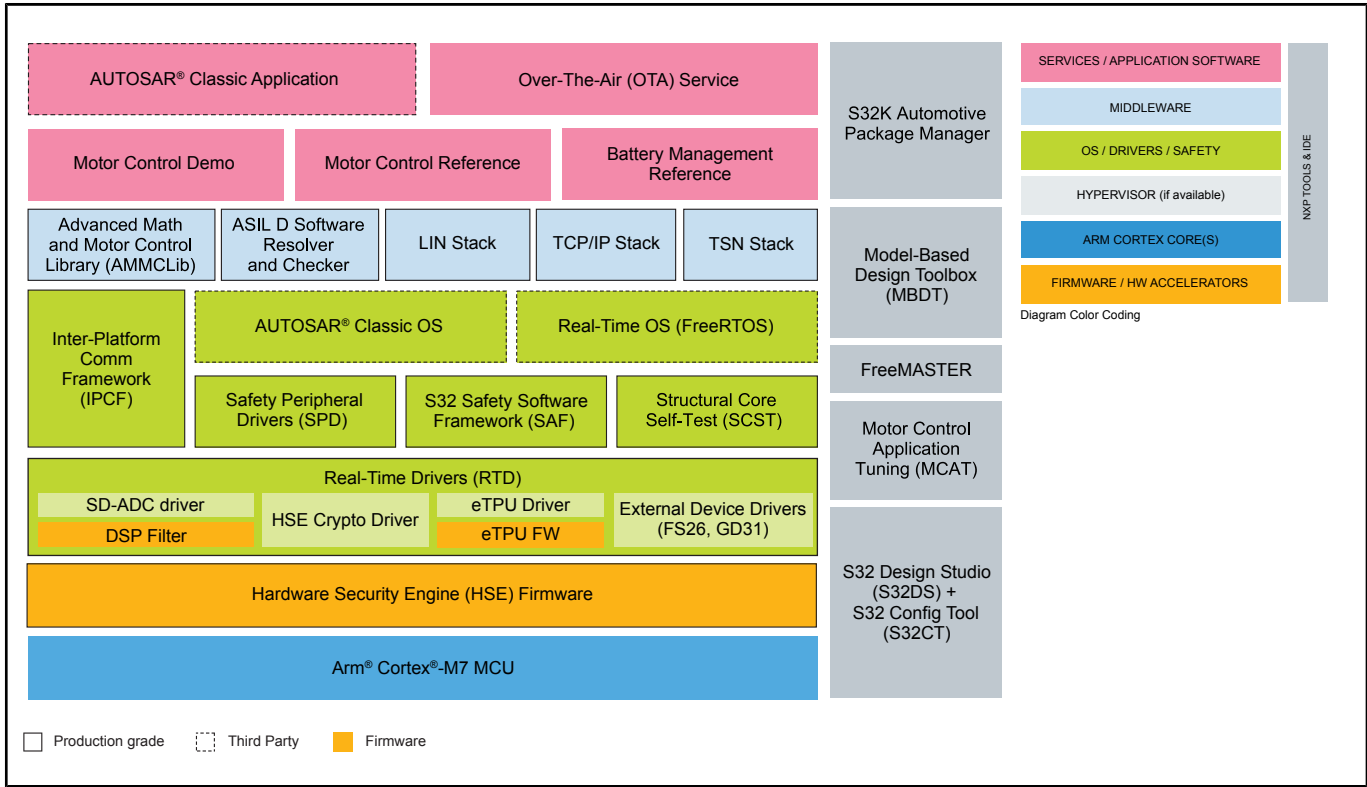
S32K36微控制器 Block Diagram



S32K39/37微控制器特性 Block Diagram

Common Features	K396	K394	K376	K374
AEC-Q100, 125°C, 3.3/5 V	1 lockstep Cortex-M7 + 2 split-lock Cortex-M7 @ 320 MHz			
HSE_B Hardware Security Engine	4x sigma-delta ADC with programmable DSP			
FOTA Firmware Over-the-Air	2x motor control coprocessors			
Low-Power Operating Modes and Peripherals LPUART, FlexIO	6 MB Flash	4 MB Flash	6 MB Flash	4 MB Flash
ASIL D Safety (ECC Memories, Lockstep Cores, CRC, Watchdog)	800 KB SRAM (512 KB System RAM + 288 KB TCM)			
eMIOS Timer, Analog Comparators, Logic Control Units, Trigger Mux (es)	Up to 211 IOs			
JTAG	64-ch DMA with 32-ch lockstep			
S32 Design Studio IDE	2x eFlexPWM with 12-ch each (8-ch each high-resolution PWM)			
Real-Time Drivers (AUTOSAR® and non-AUTOSAR)	7x SAR-ADC 12-bit, 1 Msps (69 analog inputs) 2x SWG (Sine Wave Generator)			
Security Firmware S32 Safety Software Framework Application Software	QuadSPI			
	MAPBGA-289			
	176LQFP-EP			

S32K39/37/36软件使能工具 Block Diagram



View additional information for [面向电气化应用的S32K39/37/36微控制器](#).

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

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. © 2024 NXP B.V.