面向电气化应用的S32K39/37/36微控制器

S32K39-37-36

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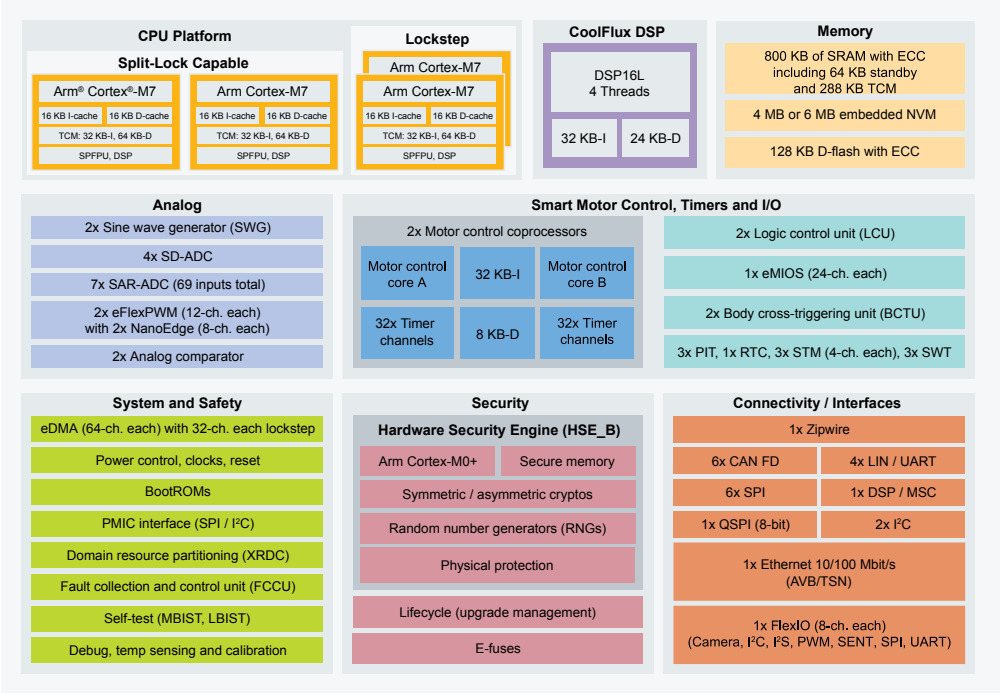
S32K39-37-36是一款集性能、集成、组网、信息安全及功能安全功能于一体的新型电动汽车(EV)器件。

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软件解析器和模拟外设集成，以降低系统成本。

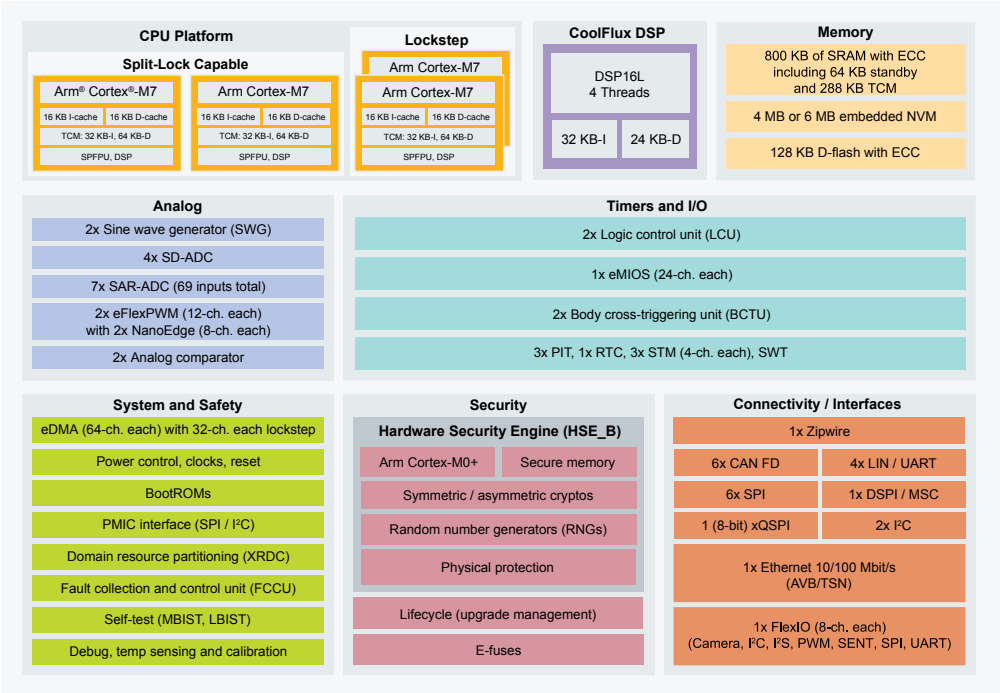
S32K37的高计算能力是高端电池管理系统(BMS)应用的理想之选。

S32K39微控制器 Block Diagram

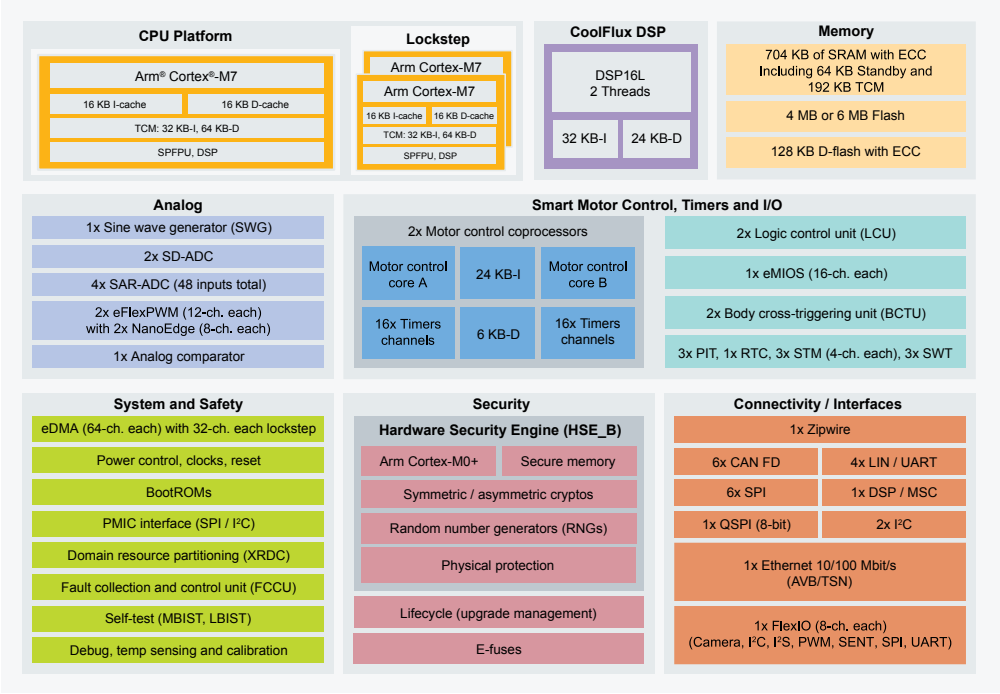


Features added from the S32K37x

S32K37微控制器 Block Diagram



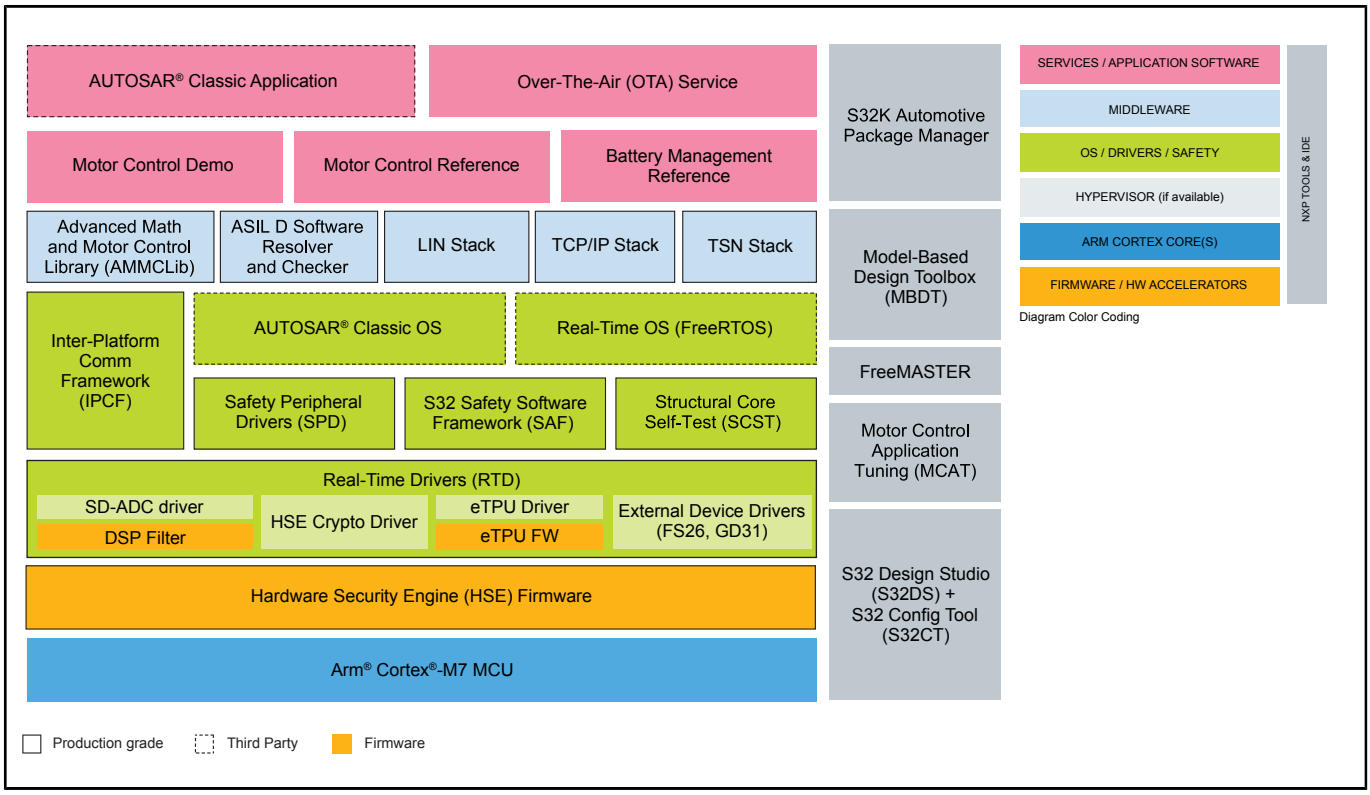
S32K36微控制器 Block Diagram



S32K39系列的特性 Block Diagram

Common Features	K396	K394	K376	K374	K366	K364
AEC-Q100, 125°C, 3.3/5 V	1 lockstep Cortex-M7 + 2 split-lock Cortex-M7 @ 320 MHz				1 lockstep Cortex-M7 + 1 Single Cortex-M7 @320 MHz	
HSE_B Hardware Security Engine	4x sigma-delta ADC with programmable DSP				2x sigma-delta ADC with programmable DSP	
AEC-Q100, 125°C, 3.3/5 V	2x motor control coprocessors (2x 32-ch.)				2x motor control coprocessors (2x 16-ch.)	
HSE_B Hardware Security Engine	6 MB Flash	4 MB Flash	6 MB Flash	4 MB Flash	6 MB Flash	4 MB Flash
FOTA Firmware Over-the-Air	800 KB SRAM (512 KB System RAM + 288 KB TCM)				704 KB SRAM (512 KB System RAM + 192 kB TCM)	
Low-Power Operating Modes and Peripherals LPUART, FlexIO	Up to 211 IOs				Up to 211 IOs	
ASIL D Safety (ECC Memories, Lockstep Cores, CRC, Watchdog)	64-ch DMA with 32-ch. lockstep					
eMIOS Timer, Analog Comparators, Logic Control Units, Trigger Mux(es)	6x CAN (FD), 4x LPUART (LIN)					
JTAG	100 Mbit/s Ethernet (AVB/TSN)					
S32 Design Studio IDE	Zipwire					
Real-Time Drivers (AUTOSAR® and non-AUTOSAR)	2 x FC, 6x SPI					
Security Firmware S32 Safety Software Framework Application Software	2x eFlexPWM with 12-ch. each (8-ch each high-resolution PWM)					
	7x SAR-ADC 12-bit, 1Msps (69 analog inputs) 2x SWG (Sine Wave Generator)				4x SAR-ADC 12-bit, 1Msps (48 analog inputs) 1x SWG (Sign Wave Generator)	
	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.

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