



S32K1汽车通用微控制器

S32K1

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S32K1系列32位微控制器(MCU)提供基于Arm® Cortex®-M的MCU，以及基本的加密安全引擎。S32K1系列在内核、内存和外设数量方面可扩展，能够实现高性能和功能安全，符合ISO26262标准，达到ASIL B安全等级。

S32K1系列具有完整的量产级软件生态合作体系。S32K1 MCU具有超低功耗工作模式，并由一套全面的量产级工具和软件支持，包括适用于AUTOSAR®和非AutoSAR应用的车规级软件开发套件(SDK)。

S32K1 MCU提供多种封装类型，包括QFN、LQFP和MAPBGA，在集成和设计方面提供了灵活性。

S32K1系列功能 Block Diagram

S32K116	S32K118	Common Features	S32K142	S32K144	S32K146	S32K148	S32K142W	S32K144W
Arm® Cortex®-M0+ @ 48 MHz		AEC-Q100, 5 V	Arm Cortex-M4F @ up to 112 MHz				Arm Cortex-M4F @ up to 80 MHz	
128 KB Flash	256 KB Flash	CSEc Security Module	256 KB Flash	512 KB Flash	1 MB Flash	2 MB Flash	256 KB Flash	512 KB Flash
16 KB SRAM	24 KB SRAM	Low Power Operating Modes and Peripherals	32 KB SRAM	64 KB SRAM	128 KB SRAM	256 KB SRAM	32 KB SRAM	64 KB SRAM
up to 42 I/Os	up to 58 I/Os	ASIL-B Capable: (ECC, MPU, CRC, W'DOGs)	up to 89 I/Os		up to 128 I/Os	up to 156 I/Os	up to 58 I/Os	
4 channel eDMA		LPUART, LPSPi, LPIIC, FlexIO	16 channel eDMA					
1x FlexCAN with 1x FD		FlexTimers, LP Timers, Prog. Delay Block	2x FlexCAN with 1x FD	3x FlexCAN with 1x FD	3x FlexCAN with 2x FD	3x FlexCAN with 3x FD	2x FlexCAN with 2x FD	
1x 13-ch., 12-bit ADC	1x 16-ch., 12-bit ADC	8-40 MHz Ext. Osc, 8/48 MHz Osc., 128 KHz LPO	2x 16-ch., 12-bit ADC		2x 24-ch., 12-bit ADC	2x 32-ch., 12-bit ADC	2x 16-ch., 12-bit ADC	
		*JTAG					IEEE® 158 ENE T	
		S32DS IDE, SDK					Quad SPI	
		AUTOSAR MCAL/OS					ETM Trace	
		Application SW					2x SAI	

 S32K14x only

View additional information for [S32K1汽车通用微控制器](#).

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