Product Brief

XC2300B - Series

16/32-bit µC for Automotive Safety

The XC2300B series, with the XC2336B (LQFP-64) and XC236xB (LQFP-100) derivatives, is the low-end extension of the XC2300 microcontroller family focussing on Safety applications. With a total memory size of up to 320kB Flash and up to 34kB RAM running at up to 80MHz, the microcontrollers of this series are well suited for low-end cost-sensitive safety applicationss like Airbag, low-end Braking or Belt Pretensioner applications.

Targeting Automotive Safety Applications

- Airbag
- Belt-Pretensioner
- Low-end Braking

Highlights:

- High performance 16-/32-bit C166SV2 CPU with 5-stage pipeline
- Single cycle execution with 10ns instruction time
- Up to 80 MIPS peak performance @ 80MHz CPU clock
- Up to 320kB Flash with EEPROM emulation
- Single voltage supply (core supply over embedded voltage regulator)
- 64pin and 100pin packages

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Features:

- High-performance CPU with five-stage pipeline and MPU
- 16 priority levels providing 96 interrupt nodes
- 8-channel interrupt-driven data transfer facilities via peripheral event controller (PEC)
- Hardware CRC-Checker with programmable polynomial to supervise on-chip memory areas
- Up to 320kB Flash (incl. up to 64kB data Flash for EEPROM emulation), up to 34kB SRAM
- Memory content protection through Error Correction Code (ECC)
- Up to 16-channel dual A/D converter, optional data preprocessing (data reduction, range check), open wire detection, conversion time ~0.675µs
- One 16-channel general purpose capture/compare units (CCU2)
- Up to two capture/compare units (CCU6) for flexible PWM signal generation for any kind of motor control
- Multi-functional general purpose timer unit with 5 timers
- Up to 6 serial interface channels to be used as UART, LIN, SPI, I2C, I2S
- On-chip MultiCAN interface (Rev. 2.0B active) with 64 message objects, up to 3 CAN nodes
- On-chip system timer and on-chip real time clock
- Programmable watchdog timer and oscillator watchdog
- Up to 76 general purpose I/O lines with flexible pin assignment
- On-chip bootstrap loader
- On-chip debug support via Device Access Port (DAP) or JTAG interface
- Single voltage supply of 3.3 to 5V
- 64/100-pin green LQFP package, 0.5mm (19.7mil) pitch
- Temperature range: -40 to +125°C
- Supported by a large range of development tools

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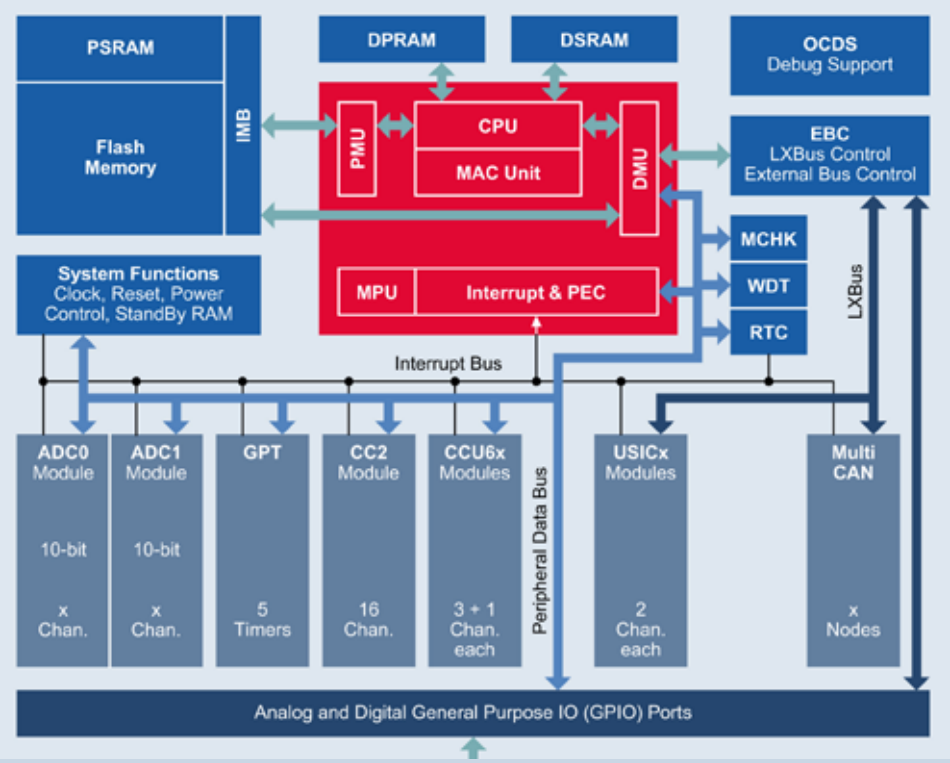

Type	Frequency [MHz]	eFlash [KByte]	RAM [KByte]	USIC* Channels	CAN Nodes	CCU** Modules	ADC Channels	FlexRay Channels	Package
SAK-XC2336B-24F80L	80	192	18	4	2	3	9	-	LQFP-64
SAK-XC2336B-40F20L	20	320	34	4	2	3	9	-	LQFP-64
SAK-XC2336B-40F66L	66	320	34	4	2	3	9	-	LQFP-64
SAK-XC2336B-40F80L	80	320	34	4	2	3	9	-	LQFP-64
SAH-XC2361B-40F80L	80	320	34	6	2	3	16	-	LQFP-100
SAK-XC2363B-24F80L	80	192	18	2	2	3	8	-	LQFP-100
SAK-XC2363B-40F80L	80	320	34	2	2	3	8	-	LQFP-100
SAK-XC2364B-24F80L	80	192	18	4	2	3	16	-	LQFP-100
SAK-XC2364B-40F80L	80	320	34	4	2	3	16	-	LQFP-100
SAK-XC2365B-24F80L	80	192	18	6	3	3	16	-	LQFP-100
SAK-XC2365B-40F80L	80	320	34	6	3	3	16	-	LQFP-100

*Configurable Module: LIN, UART, SSC/SPI, I²C, I²S
**Capture Compare Units: CCU6/CCU2

How to reach us:
http://www.infineon.com

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