

PRELIMINARY



XC2200H - Series

16/32-bit μ C for Automotive Body Application

The XC228xH (LQFP-144) and XC229xH (LQFP-176) microcontroller series is the high-end extension of the XC2200 family focussing on Body applications. With an extended memory size of up to 1.6 MB Flash and up to 138kB RAM running at up to 100MHz, the micro controllers are well suited for high end BCM and gateway applications.

This high-end extension of the XC2200 family as well as new low-end and high performance products launching in 2010 will complete the rich portfolio of scalable products.

Targeting Automotive Body Applications

- high-end BCM
- Gateway

Highlights:

- High performance 16-/32-bit C166SV2 CPU with 5-stage pipeline
- Single clock cycle instruction execution with 10ns instruction time
- Up to 100 MIPS peak performance @ 100MHz CPU clock
- Up to 1.6MB Flash and EEPROM emulation
- Up to 40 ADC channels
- Up to 6 CAN with gateway functionality
- Up to 2 channels of FlexRay
- Single voltage supply (core supply over embedded voltage regulator)

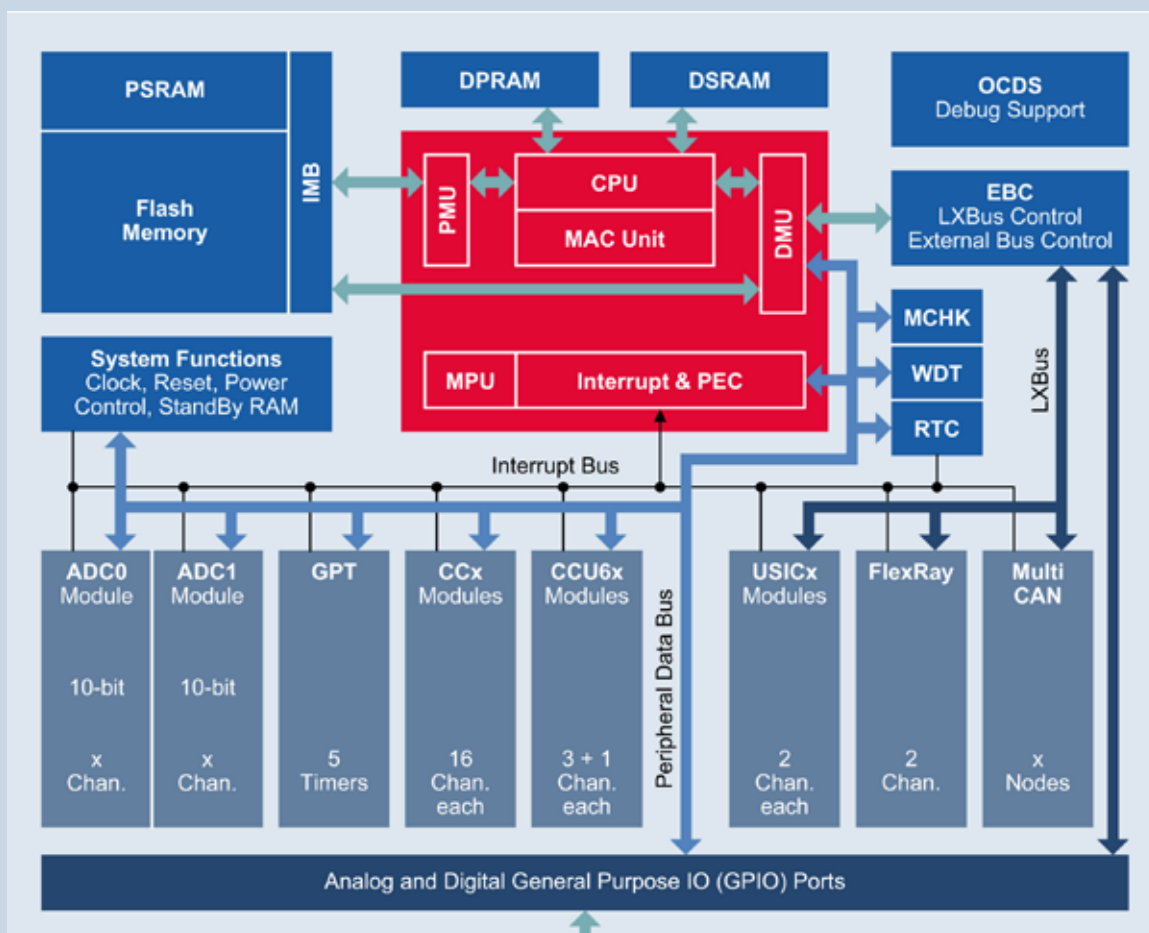
www.infineon.com/XC2000

Features:

- 10ns multiplication (16 x 16-bit), background division (32/16bit) and multiply-and-accumulate (MAC) instructions
- 8-channel interrupt-driven data transfer facilities via peripheral event controller (PEC)
- Up to 1.6MB Flash, up to 138kB SRAM
- Up to 40-channel dual A/D converter with optional concurrent sampling, conversion time $\sim 0.675\mu$ s
- Two 16-channel general purpose capture/compare units (CC1/CC2)
- Up to 4 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 10 serial interface channels to be used as UART, LIN, SPI, I2C, I2S
- On-chip MultiCAN interface (Rev. 2.0B active) with 256 message objects, up to 6 CAN nodes and gateway functionality
- Up to 2 channels of FlexRay
- 16 priority levels providing 112 interrupt nodes
- On-chip real time clock
- Programmable watchdog timer and oscillator watchdog
- Up to 150 general purpose I/O lines with flexible pin assignment
- On-chip bootstrap loader
- On-chip debug support via 2-wire DAP interface
- Single voltage supply of 3.3 to 5V
- 144/176-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 Channel | Package |
|----------------------|-----------------|----------------|-------------|----------------|-----------|--------------|--------------|-----------------|----------|
| SAK-XC2288H-200F100L | 100 | 1.600 | 138 | 10 | 6 | 5 | 24 | - | LQFP-144 |
| SAK-XC2289H-200F100L | 100 | 1.600 | 138 | 10 | 6 | 5 | 24 | 2 | LQFP-144 |
| SAK-XC2298H-200F100L | 100 | 1.600 | 138 | 10 | 6 | 5 | 30 | - | LQFP-176 |
| SAK-XC2299H-200F100L | 100 | 1.600 | 138 | 10 | 6 | 5 | 30 | 2 | LQFP-176 |

*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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