



XC886 @150°C

High Performance 8-bit Microcontroller Grade 0

A set of strong peripheral features along with high quality standards has already positioned the XC886, 8-bit microcontroller ahead of the competition in demanding applications such as automotive. This high standard of performance and quality is now further enhanced with the introduction of the XC886 150°C @Grade. The on chip can module reduces the CPU load by performing most of the functions required by the networking protocol (masking, filtering and buffering of CAN frames). Additional key features include up to 32KByte of embedded Flash memory, an intelligent PWM unit, a highly accurate 10-bit ADC with fast conversion speed, a CORDIC and a Multiplication Division Unit (MDU) for fast mathematical computations.

THE XC886 150°C OFFERS AN optimized fit to a wide range of CAN networking applications in a Grade 0 environment.

Targeted Automotive Applications

- Turbo charger
- Throttle control
- Valve control
- Engine cooling fan
- Fuel/Oil sensor
- Water/Oil/Fuel pump
- Failsafe EPS

Highlights

- $T_a = -40^{\circ}\text{C}$ to 150°C^*
- AECQ-100 – Grade 0
- Up to 32kb Flash
- Cordic/MDU for field oriented control
- Up to 2CAN nodes

* Check data sheet for details

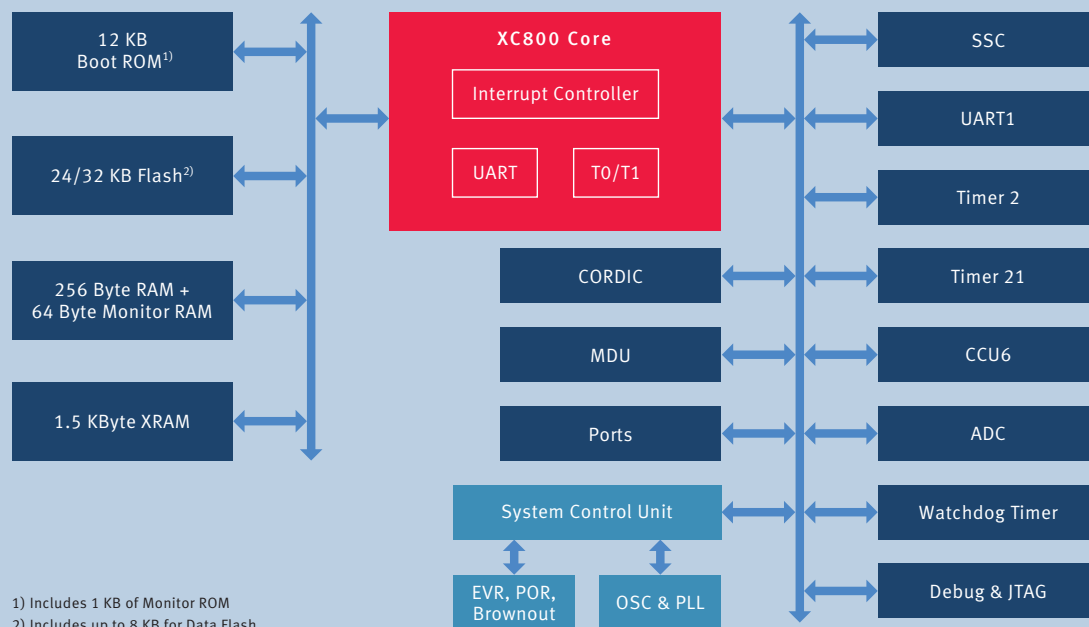
Main Features

- 83–166ns instruction cycle time @ 20MHz CPU clock
- 24KByte or 32KByte of Flash memory (ECC)
- Ideal for data Flash and EEPROM emulation
- 256Byte RAM, 1536Byte XRAM
- MultiCAN with 2 nodes
- 2 UART (one for LIN support)
- High speed SPI compatible synchronous serial interface (SSC)
- Capture/Compare Unit (CCU6) with two independent 16-bit timers dedicated for PWM generation for AC and DC motor control
- LIN bootstrap loader (BSL) support (Flash programming through LIN possible)
- 10-bit ADC with high accuracy (8 channels)
 - Fast conversion time of less than $1.5\mu\text{s}$
 - TUE less than ± 2 LSB
- Multiplication/Division Unit (MDU)
- CORDIC (COordinate Rotation DIgital Computer)
- Brown-out detection for core logic supply
- On-chip OSC (9.6MHz) and PLL for clock generation
- 4 general purpose 16-bit timers
- Programmable 16-bit watchdog timer (WDT)
- Interrupts
- On-chip debug support (JTAG)
- Port- and core-voltage watchdog circuit with RESET generation
- Power saving modes
- Flexible single voltage supply of 3.3V or 5.0V
- 34 general purpose I/O ports
- Package: PG-TQFP-48 (green)
- T_a : SAL (-40°C to 150°C)

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Block Diagram



XC800 150°C-Series

	TSSOP-38	QFP-48
32KB		XC886
24KB		XC886
16KB	XC866	
8KB	XC866	
4KB	XC866	

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