Product Brief

XC27x3X Series

16/32 bit Powertrain Microcontroller

The XC27x3X series expands the family towards low end powertrain applications. With a memory size of 160kB Flash, 12kB RAM and two package variants (LQFP-64 and VQFN-48) these microcontrollers are perfectly suited for managing small engines and advanced auxilliary drives.

Target Applications

Small engines (Motorcycles)
- 1-2 cylinders
- MPI
- latest EURO emission standards and their international equivalents

Advanced Machinery
- Pumps
- Ventilation
- Power operated systems

Highlights:
- High performance 16-/32-bit C166SV2 CPU with 5-stage pipeline
- Single clock cycle instruction execution with 10ns instruction time
- Up to 60 MIPS peak performance @ 66MHz CPU clock
- 160kB Flash with EEPROM emulation
- Single voltage supply (core supply over embedded voltage regulator)
- 48 pin and 64 pin 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)
- 160kB Flash (incl. up to 32kB data Flash for EEPROM emulation), 12kB SRAM
- Memory content protection through Error Correction Code (ECC or PARITY)
- Up to 19-channel 12-bit 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 (CC2)
- Four capture/compare units (CCU6) for flexible PWM signal generation for any kind of motor control
- Multi-functional general purpose timer unit with 5 timers
- Four serial interface channels to be used as UART, LIN, SPI, I2C, I2S
- On-chip CAN interface (Rev. 2.0B active), 2 nodes with 32 message objects
- On-chip system timer and on-chip real time clock
- Programmable watchdog timer and oscillator watchdog
- Up to 48 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
- 48-pin green VQFN, 64-pin green LQFP package
- Temperature range: -40 to +125°C
- Supported by a large range of development tools

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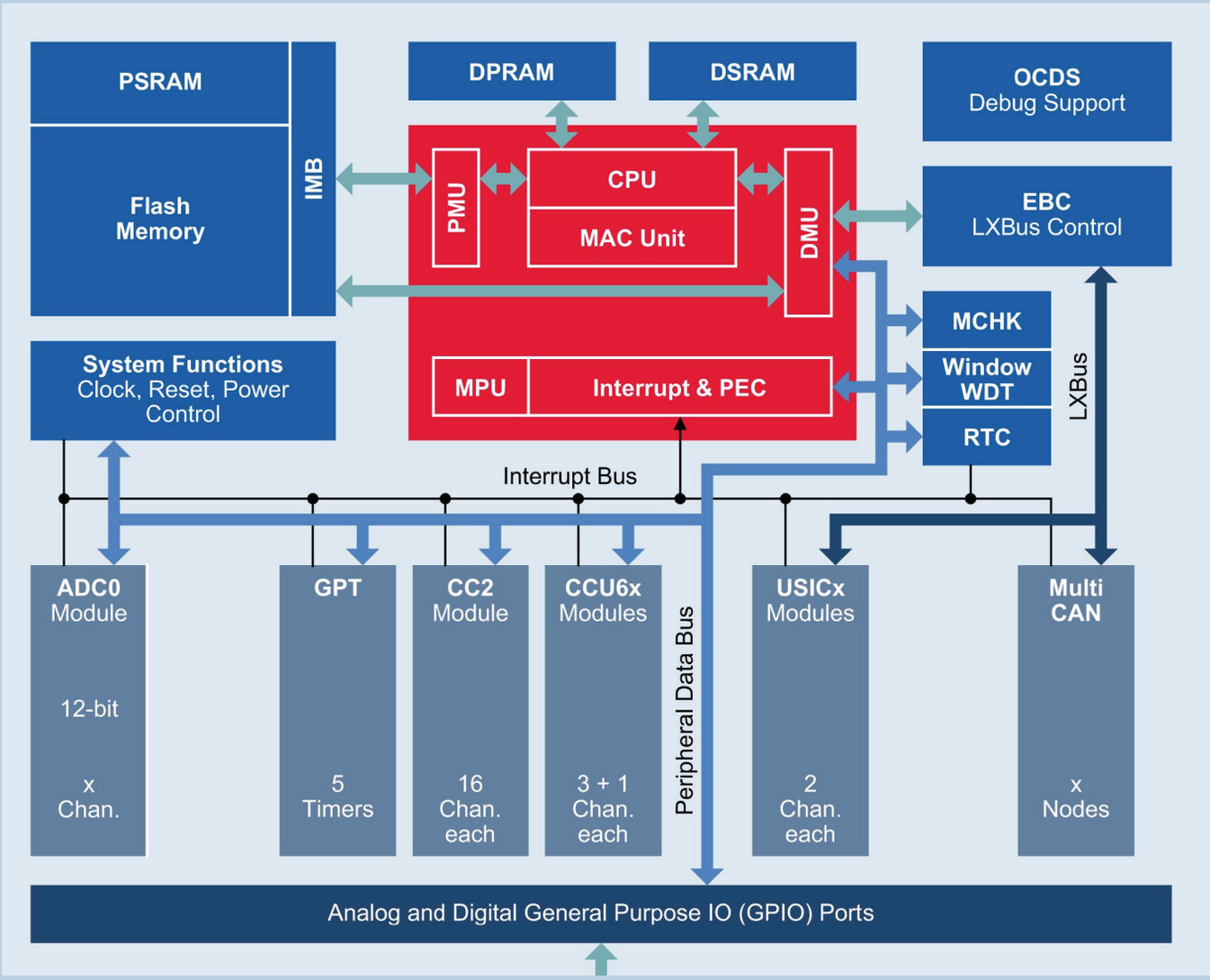

Type	Frequency [MHz]	eFlash [kByte]	RAM [kByte]	USIC* Channels	CAN Nodes	CCU* Modules	ADC Channels	Package
XC2723X-20F66V	66	160	12	4	2	3	10	VQFN-48
XC2733X-20F66L	66	160	12	4	2	3	19	LQFP-64

* Configurable Module: LIN, UART, SSC/SPI, I2C, I2S
**Capture Compare Units: CCU6/CC2

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