

XC866

High Performance 8-Bit Microcontroller with On-Chip Flash Memory and Powerful Peripheral Set



THE XC866 is the first product of a new and advanced 8-bit μ C family (XC800 family), combining a high performance 8051 core with on-chip Flash memory and powerful peripheral set. In addition, further performance and cost-saving enhancements to the XC800 family include features such as an on-chip oscillator and embedded voltage regulator (EVR), supporting single voltage supply of 3.3 V or 5.0 V.

THE FLEXIBILITY offered by the XC866 embedded Flash products is also expanded to include a family of compatible ROM versions for further cost saving potential in high volume production. Both embedded Flash as well as ROM based products include data Flash for flexible storage and in-system-update of specific data.

ADDITIONAL KEY FEATURES of the XC866 family of products include support for LIN (Local Interconnect Network), an enhanced capture compare unit (CCU6E) for flexible PWM generation and a new 10-bit ADC with extended functionality (e.g. comparator mode).

THE XC866 with its rich peripheral set offers an optimized fit to a wide range of different applications such as industrial motor control, automotive body and consumer drive.

Key Features

- High performance XC800 core, based on industry standard 8051 architecture
- 75 – 150 ns instruction cycle time @ 26.67 MHz CPU clock (one waitstate for flash access, no waitstate for ROM or XRAM access)
- 2 data pointers
- 12 KByte of advanced program flash (with ECC)
- 4 KByte of advanced data flash (emulated EEPROM), also usable as program flash
- 256 Byte RAM, 512 Byte XRAM
- Brown-out detection for core logic supply
- On-chip OSC (10 MHz) and PLL for clock generation
- High performance capture compare unit for PWM signal generation (CCU6E) with special modes for motor control
- 10-bit ADC, 8 channels
- Three 16-bit timers
- Interrupts
 - 14 interrupt vectors with 4 priority levels
 - Non-maskable interrupt (NMI)
- UART (for LIN emulation) and SSC (SPI)
- On-chip debug support (JTAG)
- Port- and core-voltage watchdog circuit with RESET generation
- Power saving modes
 - Slow-down mode
 - Idle mode
 - Power-down mode with wake-up capability via RxD (LIN) or EXINT0
 - Clock gating control to each peripheral
- Programmable 16-bit Watchdog Timer (WDT)
- 27 general purpose I/O Ports
- Flexible single voltage supply of 3.3 V or 5.0 V; core logic supply at 2.5 V (generated by embedded voltage regulator)
- Package: PG-TSSOP-38 (green)
- Temperature range
 - SAF (-40°C to 85°C)
 - SAK (-40°C to 125°C)

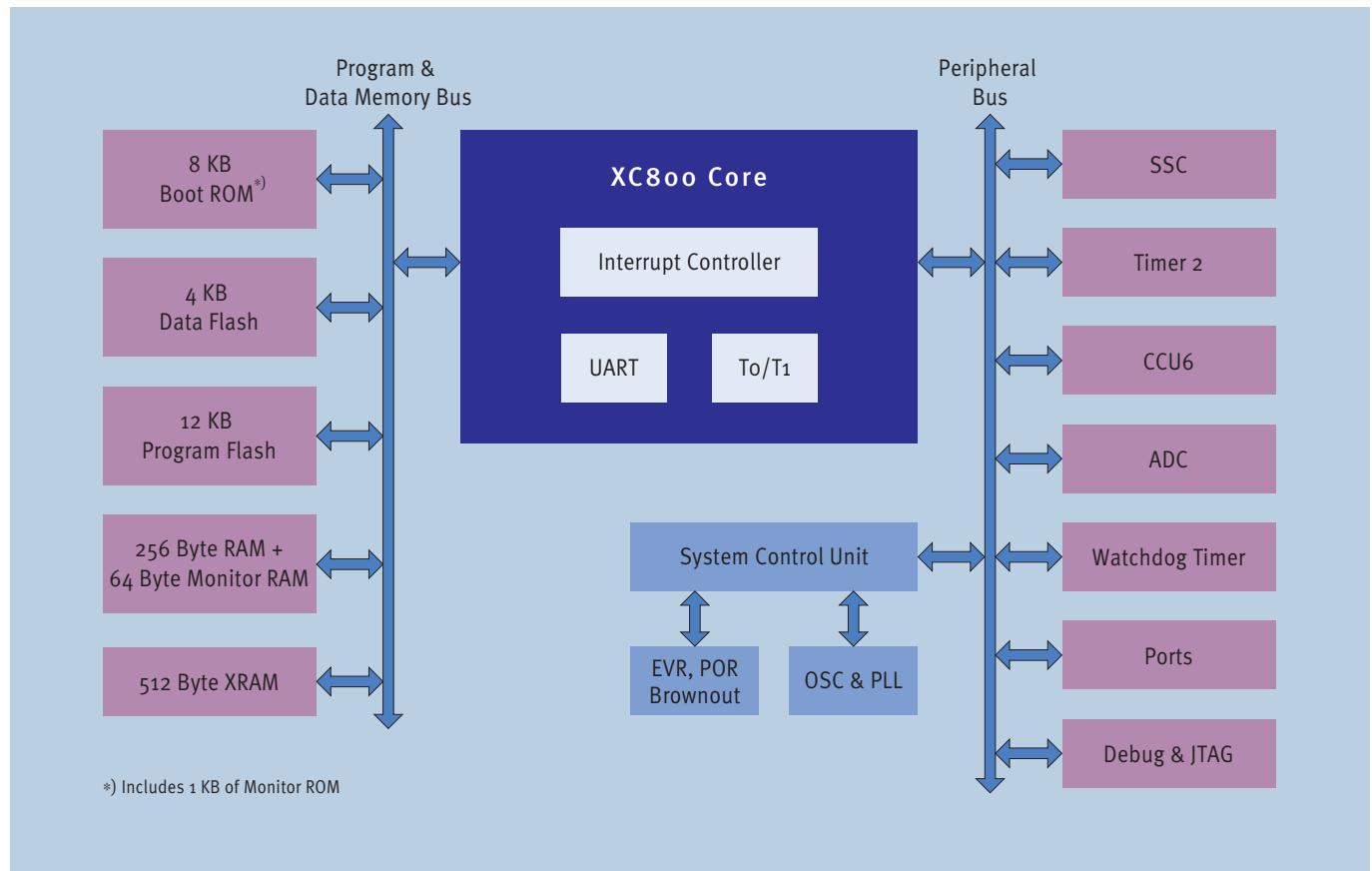
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Microcontrollers



Never stop thinking.

XC866 Block Diagram



Today's Available Derivatives

Type	Package	Comments
SAF-XC866-4FR	PG-TSSOP-38	16 KB Flash, -40°C to +85°C
SAK-XC866-4FR	PG-TSSOP-38	16 KB Flash, -40°C to +125°C

Further variants of XC866 planned for 2005!!

Please check www.infineon.com/XC866 for latest updates!!

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

Published by
Infineon Technologies AG
 St.-Martin-Strasse 53
 81669 München

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Template: pb_w_tmplt.fm/2

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Ordering No. B158-H8554-X-X-7600
 Printed in Germany
 PS 02052. nb