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What is "Embedded - Microcontrollers"?

"Embedded - Microcontrollers" refer to small, integrated circuits designed to perform specific tasks within larger systems. These microcontrollers are essentially compact computers on a single chip, containing a processor core, memory, and programmable input/output peripherals. They are called "embedded" because they are embedded within electronic devices to control various functions, rather than serving as standalone computers. Microcontrollers are crucial in modern electronics, providing the intelligence and control needed for a wide range of applications.

Applications of "<u>Embedded -</u> <u>Microcontrollers</u>"

Details

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Product Status	Not For New Designs
Core Processor	C166SV2
Core Size	16/32-Bit
Speed	66MHz
Connectivity	CANbus, I ² C, LINbus, SPI, SSC, UART/USART, USI
Peripherals	I ² S, POR, PWM, WDT
Number of I/O	33
Program Memory Size	160KB (160K x 8)
Program Memory Type	FLASH
EEPROM Size	-
RAM Size	10K x 8
Voltage - Supply (Vcc/Vdd)	3V ~ 5.5V
Data Converters	A/D 10x12b
Oscillator Type	Internal
Operating Temperature	-40°C ~ 125°C (TA)
Mounting Type	Surface Mount
Package / Case	48-VFQFN Exposed Pad
Supplier Device Package	PG-VQFN-48-54
Purchase URL	https://www.e-xfl.com/product-detail/infineon-technologies/xc2224l20f66vaakxuma1

Email: info@E-XFL.COM

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XC2200L - Series 16/32 bit µC for Automotive Body Applications

(i) Infineon XC2224L

The XC2200L series, with the XC223xL (LQFP-64) and XC222xL (VQFN-48) derivatives, further enlarges the XC2200 microcontroller family in the low-end.

With a maximum memory size of 160kB Flash and up to 12kB RAM, the microcontrollers of this series are well suited for low-end cost-sensitive body applications.

Targeted Automotive Body Applications

- Low-end BCM
- Low-end HVAC
- Low-end Door
- Roof module
- Seat module

Highlights:

- High performance 16-/32-bit C166SV2 CPU with 5-stage pipeline
- Up to 60 MIPS peak performance @ 66MHz CPU clock
- 64KB to 160kB Flash with EEPROM emulation
- Single voltage supply (core supply over embedded voltage regulator)
- On-chip window watchdog
- High speed 12-bit ADC with upto 19 channles
- Small packages for space critical application/saving of PCB space
- Low power consumption
- DAP Device Access Port (2 wire JTAG, replaces 5 wire JTAG)

Features:

- High-performance CPU with five-stage pipeline and MPU
- 16 priority levels providing 96 interrupt nodes
- 64 to 160kB Flash (incl. up to 32kB data Flash for EEPROM emulation), up to 12kB SRAM
- Memory content protection through Error Correction Code (ECC)
- 12bit AD-converter with upto 19-channels, 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
- 4 serial flexible interface channels (UART, LIN, SPI, I2C, I2S)
- On-chip CAN interface (Rev. 2.0B active), upto 2 nodes with 32 message objects
- On-chip system timer and on-chip real time clock
- Programmable watchdog timer and oscillator watchdog
- On-chip window watch dog with clock source separate from fsys
- Up to 49 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 5V64pin green LQFP, 48 pin green VQFN package for space critical applications
- Temperature range: -40 to +125°C
- Supported by a large range of development tools
- Free of charge low level driver CAN, LIN, UART(USIC)

www.infineon.com/XC2000

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Туре	Frequency [MHz]	eFlash [kByte]	RAM [kByte]	USIC Channels*	CAN nodes	CCU** modules	ADC channels	Package
SAK-XC2224L-12F66V AA	66	96	12	4	2	3	10	PG-VQFN-48
SAK-XC2224L-20F66V AA	66	160	12	4	2	3	10	PG-VQFN-48
SAK-XC2230L-12F66L AA	66	96	12	4	0	3	19	PG-LQFP-64
SAK-XC2230L-20F66L AA	66	160	12	4	0	3	19	PG-LQFP-64
SAK-XC2234L-12F66L AA	66	96	12	4	2	3	19	PG-LQFP-64
SAK-XC2234L-20F66L AA	66	160	12	4	2	3	19	PG-LQFP-64

Published by Infineon Technologies AG 85579 Neubiberg, Germany

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Order Number: B158-H9606-X-X-7600 Date: 02 / 2011

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