



The C167CR* is a new derivative of the Infineon C166 family of full featured single-chip CMOS microcontrollers. It combines high CPU performance with high peripheral functionality and enhanced IO-capabilities.

The C167CR features a CAN module which meets version 2.0 B active of the Controller Area Network specification and was designed to fulfill the requirements of coming generations of automotive and industrial control applications.

Device	ROM
C167CR-LM*	-
C167CR-4RM	32 KB
C167CR-16RM	128 KB

*25 MHz = standard
*33 MHz = optional

KEY FEATURES

- High Performance 16-bit CPU with 4-Stage Pipeline
- Versions with 25 MHz available
- 80 ns Instruction Cycle Time at 25 MHz CPU Clock
- 400ns Multiplication (16x16bit), 800ns Division (32/16 bit) at 25 MHz CPU Clock
- Enhanced Boolean Bit Manipulation Facilities
- Additional Instructions to Support HLL and Operating Systems
- Register-Based Design with Multiple Variable Register Banks
- Single-Cycle Context Switching Support
- Clock Generation via on-chip PLL or via direct clock-input
- Up to 16 MBytes Linear Address Space for Code and Data
- 4 KBytes On-Chip SRAM (2 KB Internal RAM, 2 KBytes Extension RAM)
- Programmable External Bus Characteristics for Different Address Ranges
- 8-bit or 16-bit External Data Bus
- Multiplexed or Demultiplexed External Address/Data Buses
- Five Programmable Chip-Select Signals
- Hold- and Hold-Acknowledge Bus Arbitration Support
- 1024 Bytes On-Chip Special Function Register Area
- Idle and Power Down Modes
- 8-Channel Interrupt-Driven Single-Cycle Data Transfer Facilities via Peripheral Event Controller (PEC)
- 16-Priority-Level Interrupt System with 56 Sources, Sample-Rate down to 40 ns
- 16-Channel 10-bit A/D Converter with 9.7 µs Conversion Time
- Two 16-Channel Capture/Compare Units
- 4-Channel PWM Unit
- Two Multi-Functional General Purpose Timer Units with five 16-bit Timers
- Two Serial Channels (Synchronous/Asynchronous and High-Speed-Synchronous, 6 MBit/s at 25 MHz)
- On-Chip CAN Interface 2.0 B active with 15 Message Objects (Full-CAN/Basic-CAN)
- Programmable Watchdog Timer
- Up to 111 General Purpose IO Lines, partly with Selectable Input Thresholds and Hysteresis
- Supported by a Wealth of Development Tools like C-Compilers, Macro-Assembler Packages, Realtime Operating Systems, Emulators, Evaluation Boards, HLL-Debuggers, Simulators, Logic Analyzer Disassemblers, Programming Boards
- On-Chip Bootstrap Loader
- 144-Pin MQFP Package
- Full Automotive Temperature Range -40°C to 125°C

Controller Area Network (CAN): License of Robert Bosch GmbH

* For complete device designations (corresponding to PRO ELECTRO please refer to the data sheet..

www.infineon.com

C167CR

Highly Integrated
Microcontroller with On-chip
CAN-Module



