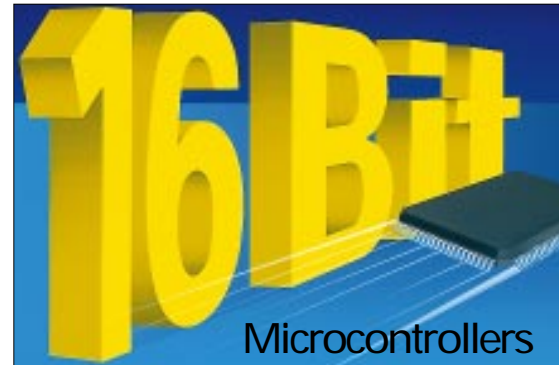


C167 Highly Integrated High-Performance Microcontrollers

The C167CR, C167SR and C167* are high-end members of the Siemens C166-family of 16-bit microcontrollers. They combine high CPU performance with a wide variety of on-chip features

like large memories, application-specific peripherals (e.g. CAN), and more. These devices fulfill the requirements of sophisticated automotive and industrial control applications.



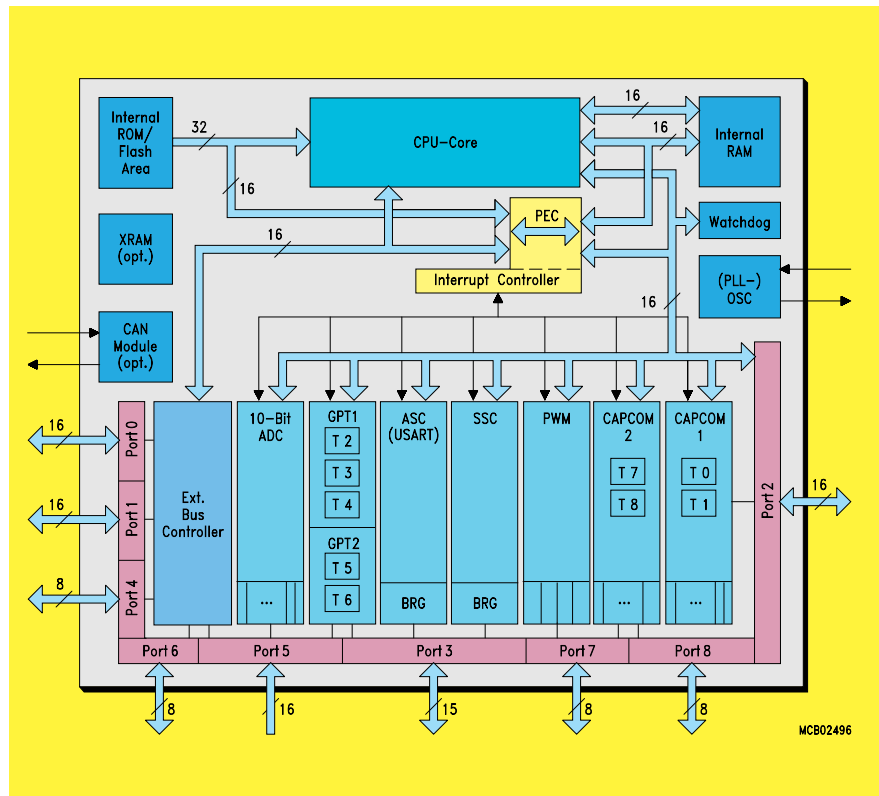
The C167-versions at a glance:

Device	Internal RAM	ROM	Flash	CAN	PLL
C167CR-LM	4 KB	-	-	✓	✓
C167SR-LM	4 KB	-	-	-	✓
C167-LM	2 KB	-	-	-	-
C167S-4RM	2 KB	32 KB	-	-	✓
C167CR-4RM**	4 KB	32 KB	-	✓	✓
C167CR-16RM**	4 KB	128 KB	-	✓	✓
C167CR-16FM**	4 KB	-	128 KB	✓	✓

** Availability planned in first half of 1996

- High Performance 16-bit CPU with 4-stage pipeline
- 100 ns Instruction Cycle Time at 20 MHz CPU Clock
- 500 ns Multiplikation (16x16 bit) 1 µs Division (32 / 16 bit)
- 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
- Versions with On-Chip CAN Interface (Version 2.0B) available
- Large On-Chip memories
- 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 50 ns
- 16-channel 10-bit A/D Converter
- 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)
- Programmable Watchdog Timer
- Up to 111 General Purpose I/O Lines
- Supported by a large Range of Development Tools
- On-Chip Bootstrap Loader
- 144-Pin MQFP-Package (EIAJ)

C167 Block Diagram



C167 Pin Configuration

