

The XC161CJ is a new derivative of the popular C166 microcontroller family.

Based on the enhanced C166S V2 architecture it outperforms existing 16-bit solutions. The XC161CJ is an improved and new-generation representative of the Infineon family of the full featured 16-bit single-chip CMOS microcontroller. It combines the extended functionality and performance of the C166S V2 Core with powerful on-chip peripheral subsystems and on-chip Flash memory.

The architecture of XC161CJ has been optimized for high instruction throughput and minimum response time to external interrupts. Intelligent peripheral systems have been integrated to reduce the need for CPU intervention. The high flexibility of this architecture allows to serve the diverse and varying needs of different application areas such as automotive, industrial control, or data communications.

All this combined in a P-TQFP-144 package serves the requirements for highest system integration.



Applications

- Automotive Dashboard
- Robotic Control
- Automotive Body Control Modules
- Car Radio
- Central Gateway

Features

- High performance 16-bit C166S V2 CPU with 5-Stage Pipeline
- Single clock cycle instruction execution with 25 ns instruction time at 40 MHz CPU clock
- 25 ns multiplication (16x16 bit) time at 40 MHz CPU clock
- DSP support with Built-in advanced MAC unit
- 16 MByte total linear address space for code and data

- Flexible Synchronous External Bus Interface
- 16-Priority-Level Interrupt System on 8 group levels
- On-chip debug controller and related interface to JTAG controller
- Gated clock concept (function related) for reduced power consumption and improved EMC
- 8 KByte on Chip RAM
- 128 KByte advanced Program FlashMemory
- Flexible System Control and Power Management
- Real Time Clock with alarm interrupt
- 12-Channel 10-bit A/D Converter, conversion time < 3 μs
- Two 16-channel Capture/Compare Units with 2 independent time bases each

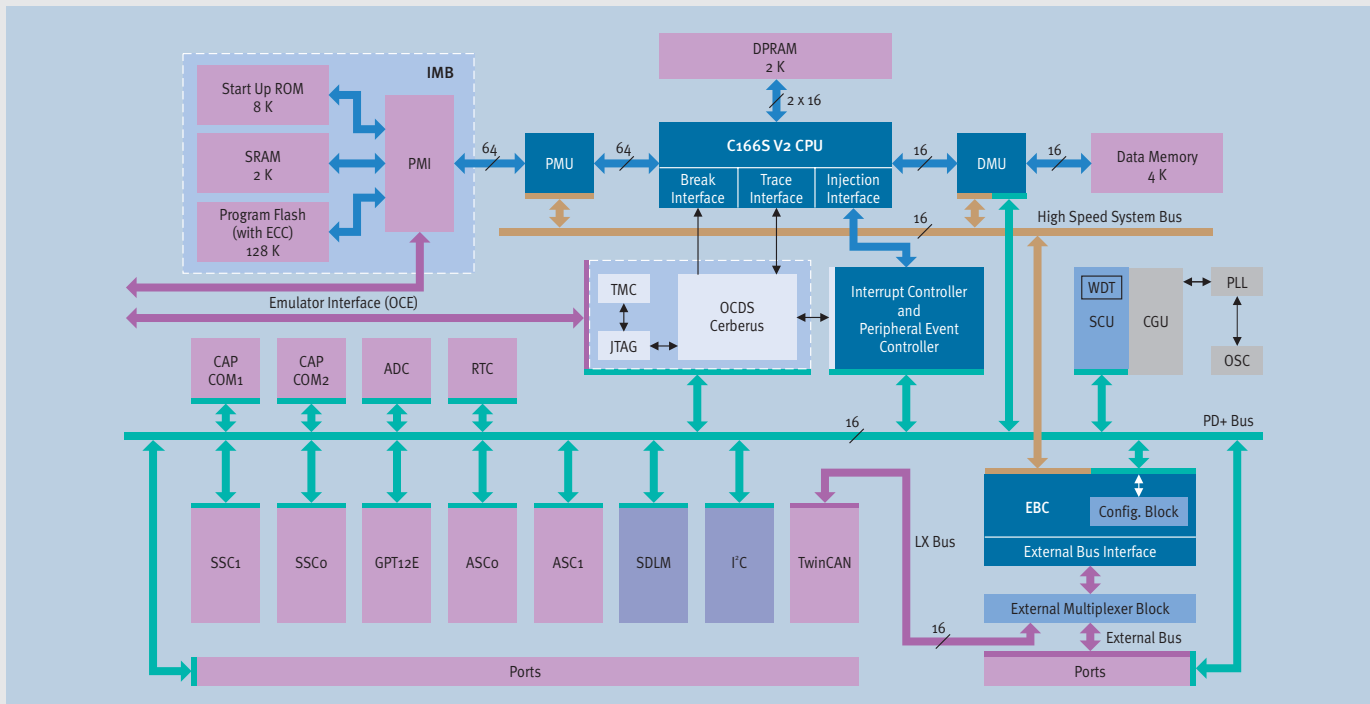
- I²C Bus module with 10-bit addressing and 400 Kbit/s
- Serial Data Link Module (SDLM), compliant with J1850
- Two Multifunctional General Purpose Timer units
- Two Asynchronous/Synchronous Serial Channels (USART)
- Two High Speed Synchronous Serial Channels (SPI)
- TwinCAN module, two Full-CAN nodes with 32 message buffers and gateway function
- Up to 103 I/O Lines with individual bit addressability
- Package: P-TQFP-144 Plastic Thin Quad Flat Package
- Temperature Range: -40°C to +125°C
- Supply Voltage:
 - Core Supply: 2.5 V
 - Ports: 5.0 V

XC161CJ

High End Performance



XC161CJ Block Diagram



Type	Order Code	Package
SAF-XC161CJ-16FF	Q67127-C2357	P-TQFP-144
SAK-XC161CJ-16FF	Q67127-C2296	P-TQFP-144



XC161CJ
The best solution for automotive body and dashboard application

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XC161CJ-16FF Block Diagram

