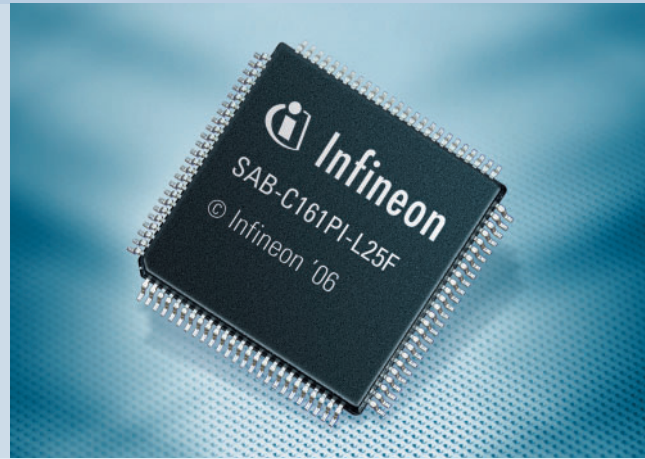


C161PI

Consumer Class 16-bit Microcontroller



THE C161PI is a new 16-bit entry-level microcontroller particularly well suited for low cost, low power and high performance Consumer or Telecom applications.

BASED ON our C166 core, this flexible microcontroller comes with a host of useful peripherals, such as on-chip Real Time Clock, fast 10-bit ADC, as well as various clock generation schemes. It also incorporates serial interfaces, such as I2C and USART, making communications easy with other devices in target applications.

THIS COMBINATION of carefully selected features together with flexible power management provides designers with the required flexibility and an excellent price-performance ratio-improving system performance while lowering system costs.

Key Features

- High Performance 16-bit CPU with 4-stage Pipeline
- 80 ns Instruction Cycle Time at 25 MHz CPU Clock
- 400 ns Multiplication (16 x 16 bit) 800 ns Division (32/16 bit)
- Enhanced Boolean Bit Manipulation Facilities
- Additional Instructions to Support HLL and Operating Systems
- Clock Generation via on-chip Phase Locked Loop (PLL), via Prescaler or via Direct Drive
- Register-Based Design with Multiple Variable Register Banks
- Single Cycle Context Switching Support
- 3 KByte On-Chip RAM
- 8 MByte Total Linear Address Space for Code and Data
- Programmable External Bus Characteristics for Different Address Ranges
- 8-bit or 16-bit External Data Bus
- Multiplexed or Demultiplexed External Address/Data Bus
- 5 Programmable Chip Select Signals
- 1024 Byte On-Chip Special Function Register Area
- Idle and Power-Down Modes with Flexible Power Management
- Programmable Watchdog and Oscillator Watchdog
- On-Chip Real Time Clock
- I²C Bus Interface (10-bit Addressing, 400 kHz) with 2 Channels (Multiplexed)
- 2 Multi-Functional General Purpose Timer Units with 5 Timers
- Two Serial Channels (Synchronous/ Asynchronous and High Speed Synchronous)
- 4-Channel 10-bit A/D Converter
- 16 Priority-Level Interrupts System with 27 Sources
- 8-Channel Interrupt-Driven Single-Cycle Data Transfer Facilities via Peripheral Event Controller (PEC)
- Up to 76 General Purpose I/O Lines
- 3 V Operation (max. CPU Clock of 20 MHz)
- On-Chip Bootstrap Loader
- Supported by a Large Range of Development Tools
- 100-Pin MQFP/TQFP Green Package
- Temperature ranges:
Standard: 0°C to +70°C
Extended: -40°C to +85°C

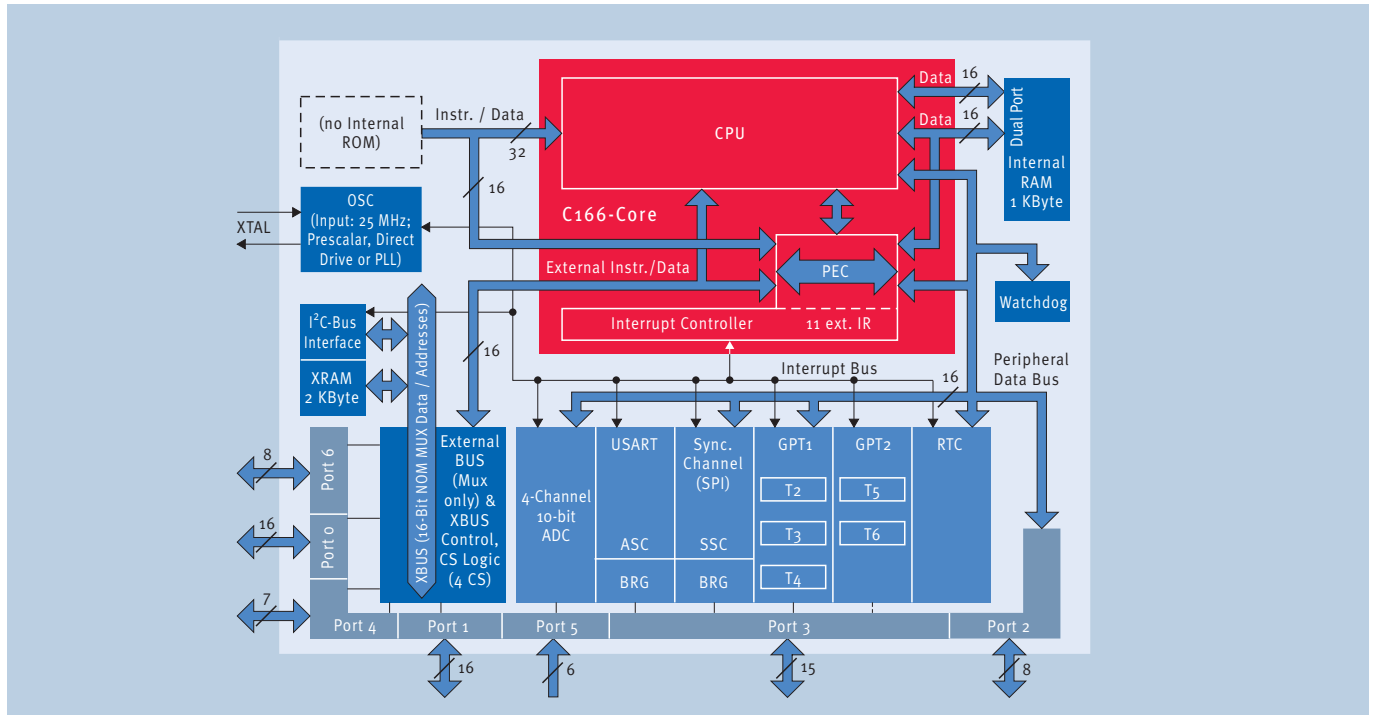
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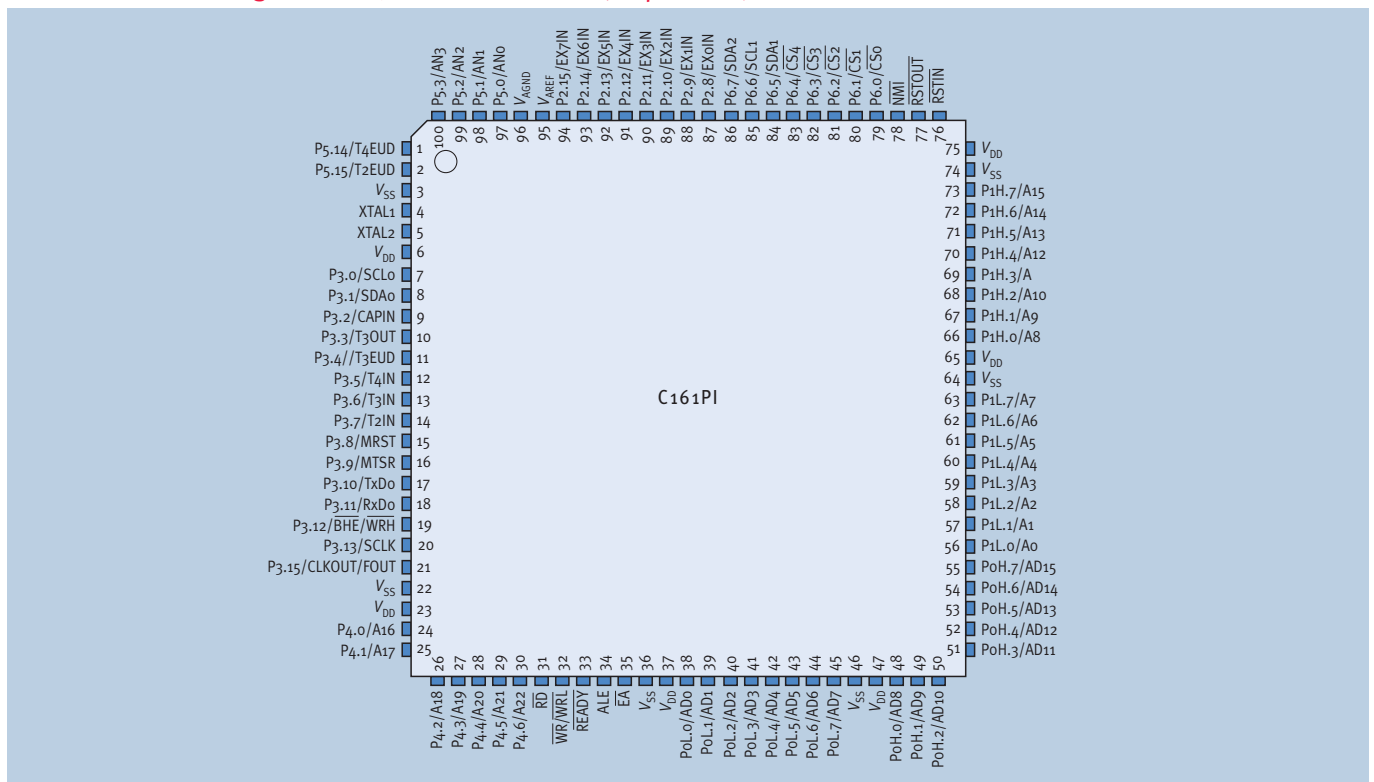


Never stop thinking

C161PI Block Diagram



C161PI Pin Configuration, PG-TQFP-100 (Top View)



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