C8051T633

25 MIPS, 4 kB EPROM, Mixed-Signal MCU

Analog Peripherals

Comparator

- Programmable hysteresis and response time
- Configurable as interrupt or reset source
- Low current (< 0.5 µA)

Memory

- 768 bytes data RAM
- 4 kB EPROM OTP code memory (byte programmable)

On-Chip Debug

- On-chip debug circuitry facilitates full speed, non-intrusive in-system debug (no emulator required)
- C8051F336 can be used as in-system code development platform; complete development kit available

Supply Voltage 1.8 to 3.6 V

- On-chip LDO regulator for core supply
- On-chip voltage supply monitor

Temperature Range: –40 to +85 °C

Development Kit: C8051T630DK

High-Speed 8051 µC Core

- Pipelined instruction architecture; executes 70% of instructions in 1 or 2 system clocks
- Up to 25 MIPS throughput with 25 MHz clock
- Expanded interrupt handler

Digital Peripherals

- 17 port I/O; All 5 V tolerant with high sink current
- Hardware enhanced UART, SPI™, and SMBus™ serial ports
- Four general purpose 16-bit counter/timers
- Timer with Real-time clock capability
- 16-Bit programmable counter array (PCA) with five capture/compare modules
  - PWM
  - Rising / falling edge capture
  - Frequency output
- Software timer

-Clock Sources

- Two internal oscillators:
  - -24.5 MHz with ±2% accuracy supports crystal-less UART operation
  - -Low-power suspend mode with fast wake time
  - -80 kHz low frequency, low-power
- External oscillator: RC, C, or Clock
- Can switch between clock sources on-the-fly

Package

- 20-pin QFN
- Pin Compatibile with C8051F33x Family of Devices