8-bit Microcontroller with 2K Bytes Flash

AT89C2051

Features

- **Compatible with MCS-51™ Products**
- **2K Bytes of Reprogrammable Flash Memory**
  - **Endurance: 1,000 Write/Erase Cycles**
- **2.7V to 6V Operating Range**
- **Fully Static Operation: 0 Hz to 24 MHz**
- **Two-level Program Memory Lock**
- **128 x 8-bit Internal RAM**
- **15 Programmable I/O Lines**
- **Two 16-bit Timer/Counters**
- **Six Interrupt Sources**
- **Programmable Serial UART Channel**
- **Direct LED Drive Outputs**
- **On-chip Analog Comparator**
- **Low-power Idle and Power-down Modes**

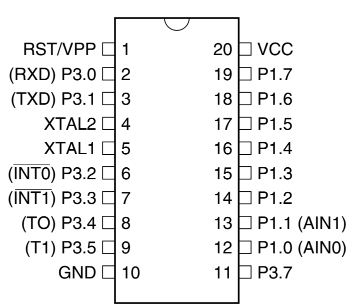
Description

The AT89C2051 is a low-voltage, high-performance CMOS 8-bit microcomputer with 2K bytes of Flash programmable and erasable read only memory (PEROM). The device is manufactured using Atmel's high-density nonvolatile memory technology and is compatible with the industry-standard MCS-51 instruction set. By combining a versatile 8-bit CPU with Flash on a monolithic chip, the Atmel AT89C2051 is a powerful microcomputer which provides a highly-flexible and cost-effective solution to many embedded control applications.

The AT89C2051 provides the following standard features: 2K bytes of Flash, 128 bytes of RAM, 15 I/O lines, two 16-bit timer/counters, a five vector two-level interrupt architecture, a full duplex serial port, a precision analog comparator, on-chip oscillator and clock circuitry. In addition, the AT89C2051 is designed with static logic for operation down to zero frequency and supports two software selectable power saving modes. The Idle Mode stops the CPU while allowing the RAM, timer/counters, serial port and interrupt system to continue functioning. The power-down mode saves the RAM contents but freezes the oscillator disabling all other chip functions until the next hardware reset.

Pin Configuration

PDIP/SOIC



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