Microcontroller theory

Microcontroller unit (MCU) is a small size, special purpose computer. It is small enough in order to be integrated on a small circuit in which will do specified tasks or applications. MCU itself comes with memory, input, output peripherals and processor. Program to run the MCU is stored in Read-only memory (ROM) and usually not change in production. A microcontroller is usually designed to run in small size and at low cost, which is compatible to be embedded in other system in order to control actions of the system automatically.

Types

- Intel 8051

- STMicroelectronics STM8S (8-bit), ST10 (16-bit) và STM32 (32-bit)

- Atmel AVR (8-bit), AVR32 (32-bit), và AT91SAM (32-bit)

- Freescale ColdFire (32-bit) và S08 (8-bit)

- PIC (8-bit PIC16, PIC18, 16-bit dsPIC33 / PIC24)

- Renesas Electronics: RL78 16-bit MCU; RX 32-bit MCU; SuperH; V850 32-

bit MCU; H8; R8C 16-bit MCU

- PSoC (Programmable System-on-Chip)

- Texas Instruments Microcontrollers MSP430 (16-bit), C2000 (32-bit), và

Stellaris (32-bit)