

CSE

Microcontroller Application



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32-BIT MICROCONTROLLER

- ❖ ALU performs arithmetic and logical operations on a double word (32-bits) at an instruction.
- ❖ Internal bus width of 32-bit.
- ❖ Much more enhanced performance, computing capability with greater precision as compared to 16-bit microcontrollers.
- ❖ Examples: Intel 80960 family, Motorola M683xx and Intel/Atmel 251 family.

2 - ACCORDING TO MEMORY/DEVICES

EMBEDDED MICROCONTROLLERS

- An embedded system has a microcontroller unit that has all the functional blocks (including program as well as data memory) available on a the same chip.
- Example: 8051 having Program & Data Memory, I/O Ports, Serial Communication, Counters and Timers and Interrupt Control logic on the chip.

EXTERNAL MEMORY MICROCONTROLLERS

- An external system has a microcontroller unit that does not have all the functional blocks available on a chip.
- All or part of the memory units are externally interfaced using an interfacing circuit called the glue circuit.
- Example: 8031 has no program memory on the chip.

Thank You