

Microprocessors

Introduction - A microprocessor is a programmable electronic silicon chip that has decision-making and controlling abilities, which can perform arithmetic & logical operations.

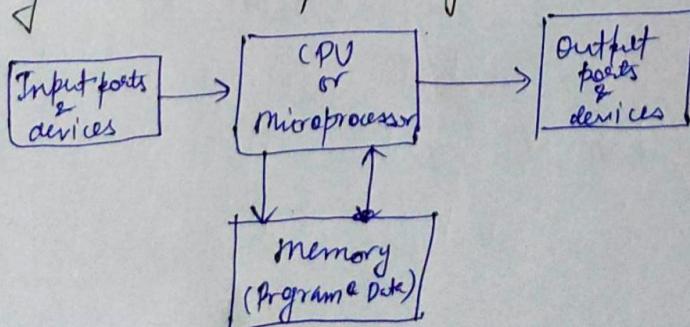
- It is a CPU on a single silicon chip, which contains latches and thousands of transistors, diode of very small size (nano-meters).
- It is the brain of a microcomputer, which handles almost every operation of a microcomputer.

Microcomputers - A small version of a computer, which is normally designed to be used by a single person.

A personal computer (PC), smartphone, laptops etc are examples of microcomputers.

- Basically a microcomputer is a device which uses ^{one or} a microprocessor as its CPU.
- Altair-8800 is one of world's first microcomputer designed by MITS, ~~was~~ using Intel 8080 microprocessor.

Organization of a microcomputer system.



Microcomputer Organization

i)- Input ports/devices → devices through which a user gives instruction to the microcomputer to perform any task.

→ All data and instruction are given to the microprocessors through input ports/devices.

Eg - keyboards, mouse, compact disc (CD), Joystick etc.

ii)- Output devices & ports → Devices through which a ~~user~~ microcomputer gives result to the user.

→ Eg - ~~user~~ monitor, printer, speaker etc.

iii)- Memory - It is a storage device, which is used to store the data, programs and the instructions in binary forms.