

Unit 1.2

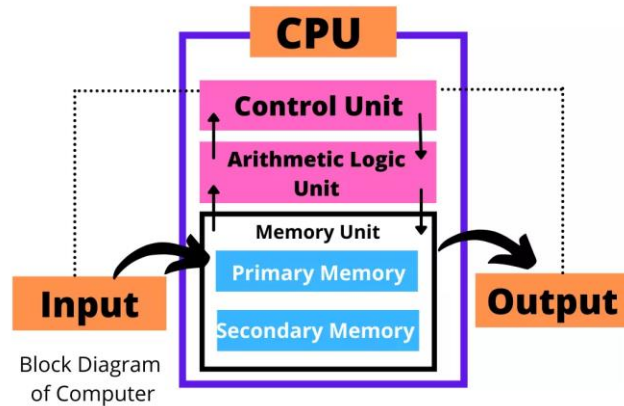


Fig: Basic architecture of computer system

Every computer is constructed by combining various components which works in an organized manner to perform several operations. The design and arrangements of different components of a computer system is referred to as computer architecture. Computer system architecture consist of various components such as;

1. I/O unit
2. CPU
3. Memory Unit

I/O Unit

I/O unit aids in taking input from the user and make it available to the computer for processing and then finally provide output to the user in understandable form. I/O unit performs following basic operations;

1. It accepts the list of instructions (Input from user),
2. It converts these instructions and data into a form i.e. understand by computer and passes for further processing,
3. It accepts output produced as a result of processing

CPU

It is the main unit of computer. CPU is responsible for controlling internal and external devices and for processing the data. It has two units

- a. ALU: It is responsible for actual execution of the instructions. All calculations and comparisons are made by this unit. It makes the logical decisions as well. ALU can fetch or write data from or into primary memory directly.
- b. CU: This unit is responsible for the generations of control signals that looks after the action for each and every component of the CPU and peripherals. It directs and controls the activities of all internal and external devices

Memory Unit

The unit is responsible for storage and data whether it be temporary or permanent. There are basically two type of memory;

- a. Primary Memory: Primary memory is generally used for temporary storage of data during processing. They are quite fast as compared to secondary memory and hence they directly interact with the processor. Example: RAM, Cache memory etc.
- b. Secondary Memory: Secondary Memory is generally used for storing data permanently or for further use. They interact with primary memory and are comparatively slower. So, they do not get the privilege of interacting with processor directly. Example: ROM, CD Drive etc.

Chapter: 2

Architecture Details Assembly Language Programming (v.v.i)

An assembly language is a type of programming language that translates high level languages into machine level language. It is necessary bridge between software programs and their underlined hardware platforms.

8085 Microprocessor Computer Architecture

1. 8-bit general purpose microprocessor,
2. Capable of addressing 64K of memory (with 16 address line),
3. Has 40 pins,
4. Requires +5V power supply,
5. Can operate with maximum 3MegaHertz single phase clock and minimum 500KHz,
6. 8085 is upward compatible (its instructions and features are available in 8086)
7. It provides 74 instructions with 5 addressing modes.

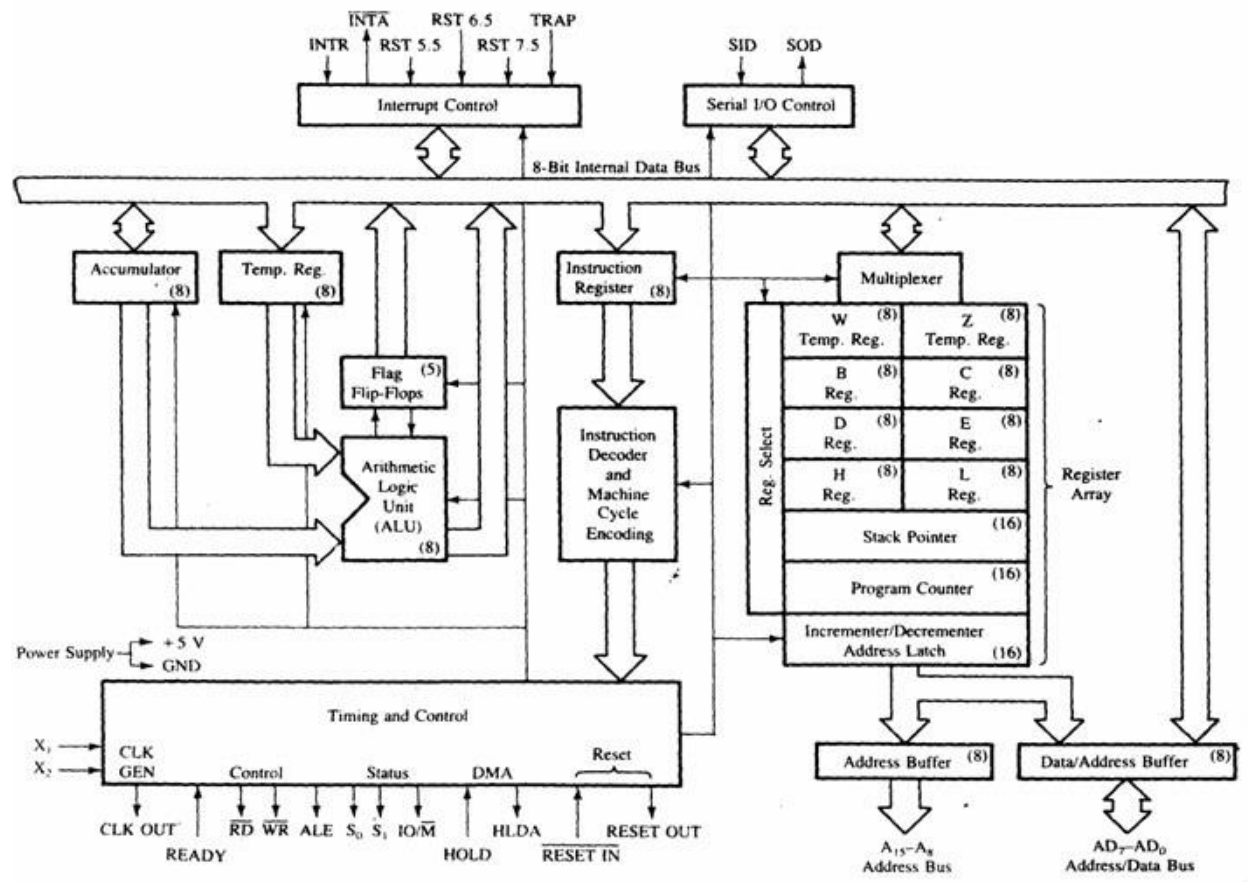


Fig. Internal architecture of 8085 Microprocessor

