

KOMPONEN KOMPUTER

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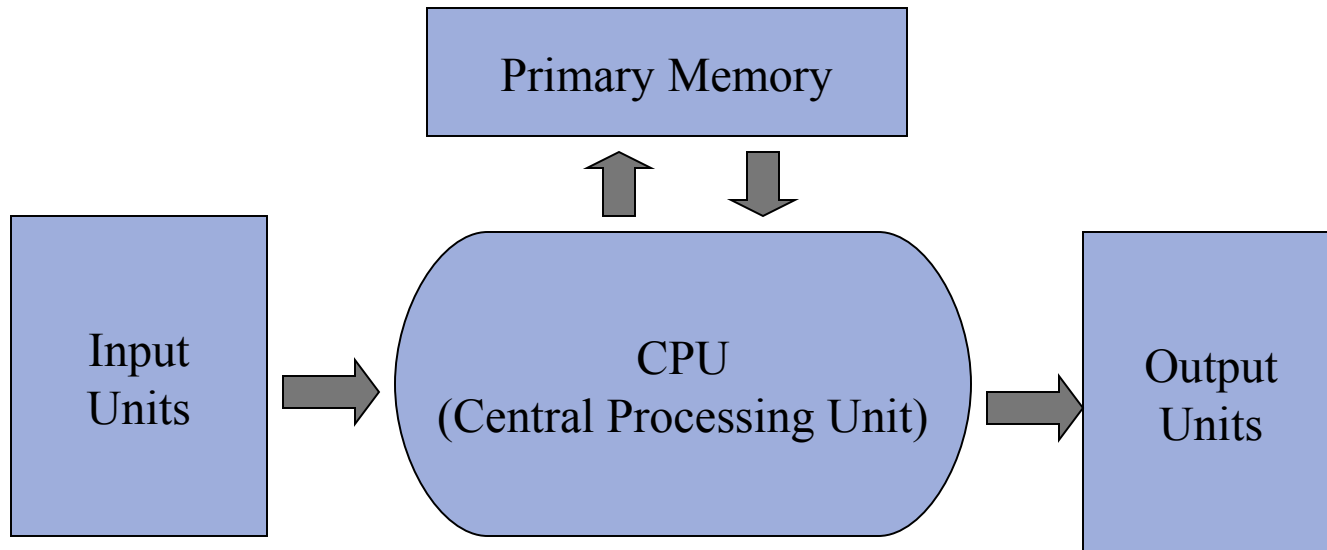
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Hardware

- Physical parts of the computer, including processor and memory chips, input/output devices, tapes, disks, modems, cable, etc.



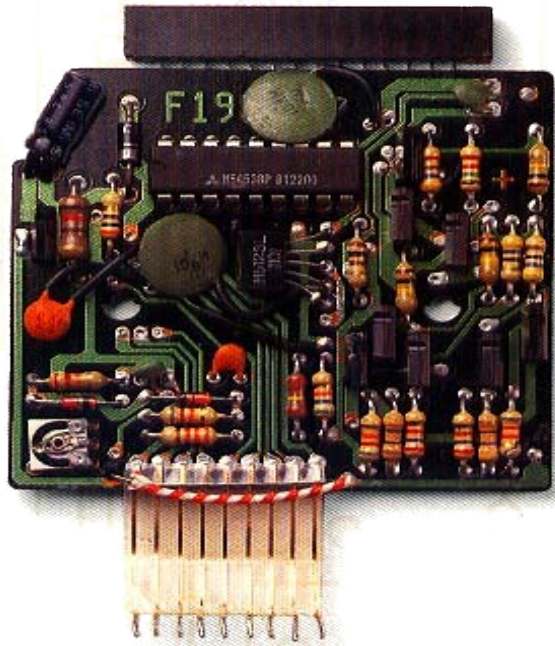
Basic Concepts of Computer Hardware



- This model of the typical digital computer is often called the **von Neumann** computer.
 - Programs and data are stored in the same memory: **primary memory**.
 - The computer can only perform one instruction at a time.

CPU

- The Central Processing Unit

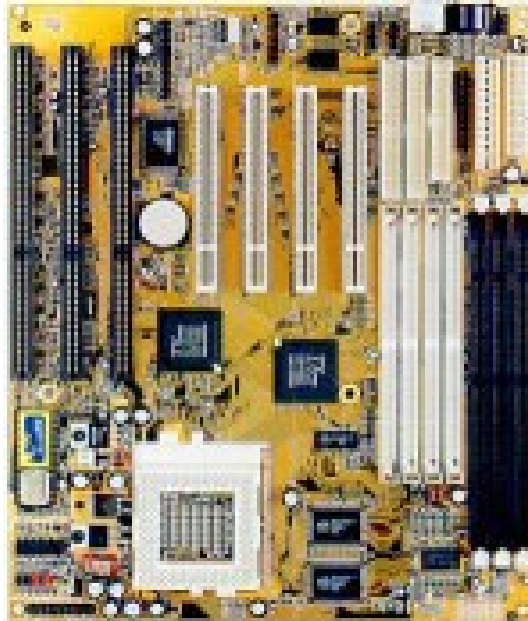


Processor

- The CPU – The chip or chips that interpret and execute program instructions and manage the functions of input, output, and storage devices.



MOTHER BOARD



Computer Case

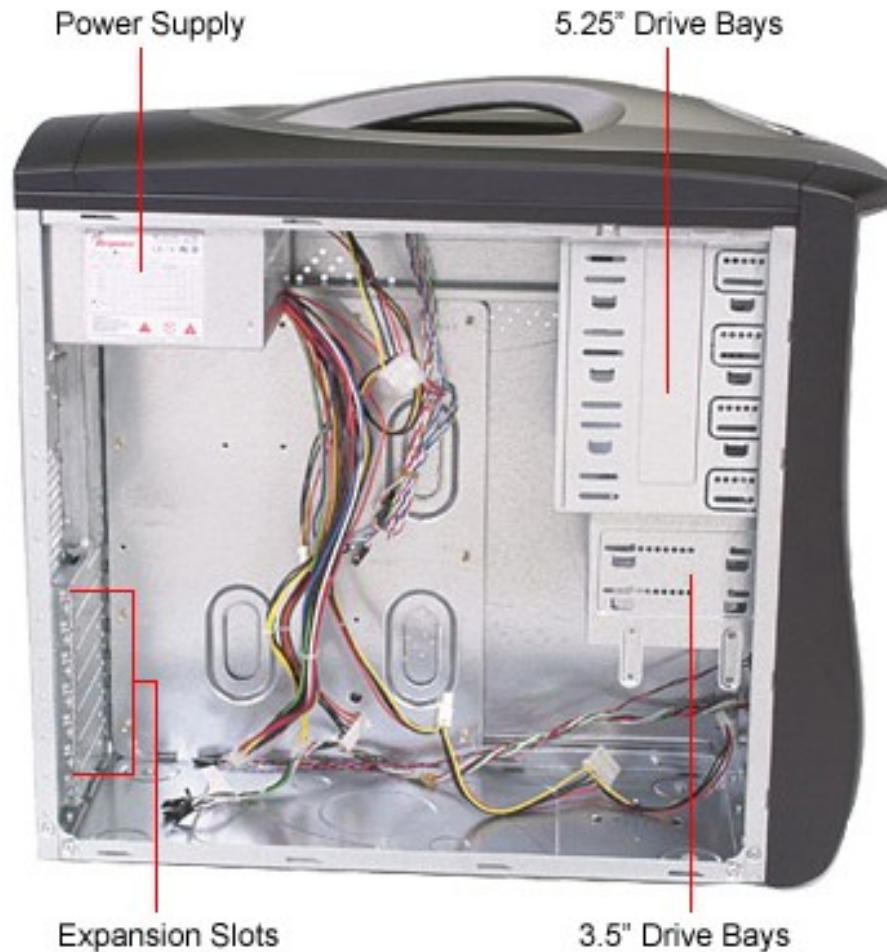
- Contains the major components of the computer. It helps protect them.



Front of the Computer Case



Inside the Computer Case



Monitor

- A display screen to provide “output” to the user. It is where you view the information your are working on.



Video Card

- Connects the computer to the monitor. It is a circuit board attached to the motherboard that contains the memory and other circuitry necessary to send information to the monitor for display on screen.



Keyboard

- Used to enter information into the computer and for giving commands.



Mouse

- An input device operated by rolling its ball across a flat surface. The mouse is used to control the on-screen pointer by pointing and clicking, double-clicking, or dragging objects on the screen.



Touchpad

- A pressure-sensitive and motion sensitive device used in place of a mouse.



CD Rom Drive

- The drive that plays CDs and reads data that has been stored on the CD.



CD

- Compact Disk – A type of optical storage device.



Floppy Disk Drive

- A device that holds a removable floppy disk when in use; read/write heads read and write data to the diskette.



Hard Disk

- Magnetic storage device in the computer.



RAM

- Random Access Memory
RAM is a computer's temporary memory, which exists as chips on the motherboard near the CPU. It stores data or programs while they are being used and requires power.



Storage Technology

- Electronic devices that store, retrieve, and save instructions and data.
- Today's microcomputers or PCs include several types of **storage devices**.
- **Capacity** and **speed** are important considerations when selecting a new storage device for a PC.



Storage Technology

- **Magnetic storage devices** store data by magnetizing particles on a disk or tape. They have a limited life-span of 1 to 5 years, depending on the device.
- **Optical storage devices** store data as light and dark spots on the disk surface. They have an unlimited life-span.



Storage Devices

Hard Disk Drives

- Capacity is measured in gigabytes (GB or billions of bytes).
- Typically permanently installed.
- Used to store operating system, application software, utilities and data.
- Magnetic storage device.

Learn more about how a hard disk drive works from [How Stuff Works](#) website.

Storage Devices

Floppy Disk Drives

- Capacity is 1.44 to 2.0 megabytes (MB or millions of bytes).
 - Storage device with the smallest capacity
 - Most portable storage media
- Magnetic storage device.



Storage Devices

CD-ROM Drives

- Typically installed on all new computer systems. (Were add-on device until the mid 1990's).
- Capacity is 600 to 750 megabytes (MB or millions of bytes).
- Most mass-produced commercial software is packaged on a CD.

Storage Devices

CD-ROM Drives

- Used more often now for backup storage as CD-RW (read/write) technology has become less expensive.
- Data is read from CD by a laser.
- Optical storage device.

Learn how to write data, images, and audio to a CD from [Kodak's website](#).

Storage Devices

Other Types of Drives

- **Zip Drives** – Several different capacities are available.
- **Tape Drives** – Generally used for system backups, becoming less common.
- **DVD drives** – Can also read CDs, now more common as a standard device on new computer systems.

Learn more about specific hardware components and their functions from [Tom's Hardware](#).

Printer

- An output device that produces a hard copy on paper. It gives information to the user in printed form.



Barcode Reader

- An input device that converts a pattern of printed bars into a number that a computer can read. They are often used by businesses to quickly input price and product information.



Scanner

- A device that allows pictures to be placed into a computer.



Microphone

- Allows the user to record sounds as input to their computer.



Speakers

- Used to generate or reproduce voice, music, and other sounds.



Sound Card

- Connects the speakers and microphone to the computer.



Modem

- The place where the computer is connected to the phone line.



Network Card

- A circuit board that connects the computer to the rest of the network usually using special cables.



Software

- Programs that tell the computer what to do. It provides instructions that the CPU will need to carry out.



DOS

- Disk Operating System

This software connects the hardware with the programs you want to run.

MS-DOS:

Microsoft DOS (Disk Operating System) is a command line user interface. MS-DOS 1.0 was released in 1981 for IBM computers.

Example of MS-DOS

```
C:\WINDOWS>dir h:

Volume in drive H is USERS
Directory of H:\TLC FILES

.                <DIR>
..               <DIR>
HUMANRES SHW     317,952  09-14-01  8:12a  Human resources Activity 2.shw
HUMANRE0 SHW     196,608  09-17-01  2:08p  Human Resources Activity 5.shw
HUMANRE1 SHW     135,680  09-18-01  1:46p  Human Resources Job Application.shw
CASHIER1 SHW     126,976  09-20-01  9:00a  Cashiering Lesson 1.shw
THELORAX WPD       3,862  08-29-01  2:56p  The Lorax.wpd
TLCDISCL SHW     167,424  09-19-01 10:57a  TLC Disclosure.shw
KASH       SHW     105,472  09-19-01  1:32p  KASH.shw
ETHICS     SHW       94,208  09-19-01  1:44p  Ethics.shw
CASHIER0 SHW     200,192  09-20-01  3:26p  Cashiering Lesson 2.shw
COMPUTER SHW     140,800  09-21-01 11:05a  computer basics.shw
          10 file(s)      1,489,174 bytes
           2 dir(s)      12,395.44 MB free

C:\WINDOWS>_
```