

Mother Board And Its Components

By :-

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Mother Board

Conte

- Components of mother board.
- Central Processing Unit.
- Bios function
- Capacitors.
- External Device.
- Internal Device.

Mother Board

- ✿ Definition of Mother Board
 - ✿ Mother Board is chip of Computer that have the all peripherals are connected to this CHIP.
 - ✿ So this chip is known as Mother board.
- ✿ Parts of Mother board:-
 - ✿ PCI Slots
 - ✿ SATA Slots
 - ✿ IDE Slots

Parts of Mother Board

- ✿ Printer Slot
- ✿ CPU Socket
- ✿ USB Port
- ✿ Memory Slots
- ✿ VGA Port
- ✿ AGP Port
- ✿ BIOS

Parts of Mother Board

- ❁ PS/2 Ports
- ❁ ROM Chip
- ❁ Network Chip
- ❁ Power Slot
- ❁ Floppy Slot
- ❁ Battery for Real Time

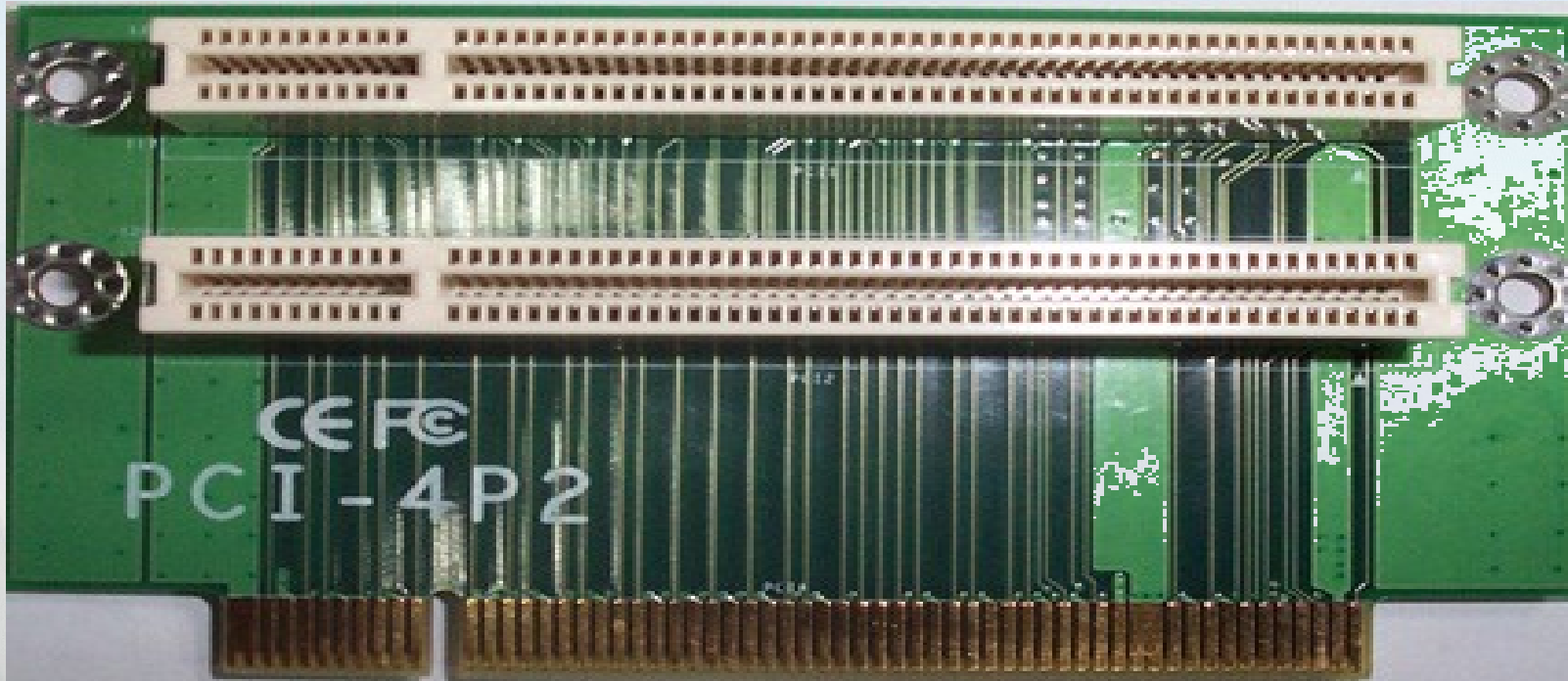
Parts of Mother Board



Parts of Mother Board

PCI SLOT

Peripheral Interconnect Component(PCI):- Used to connect external devices like Network card, Sound card etc.

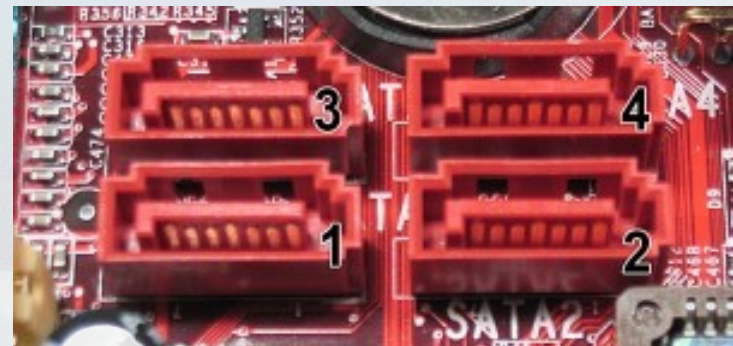


Parts of Mother Board

SATA SLOTS

Used to connect SATA Hard Disk.

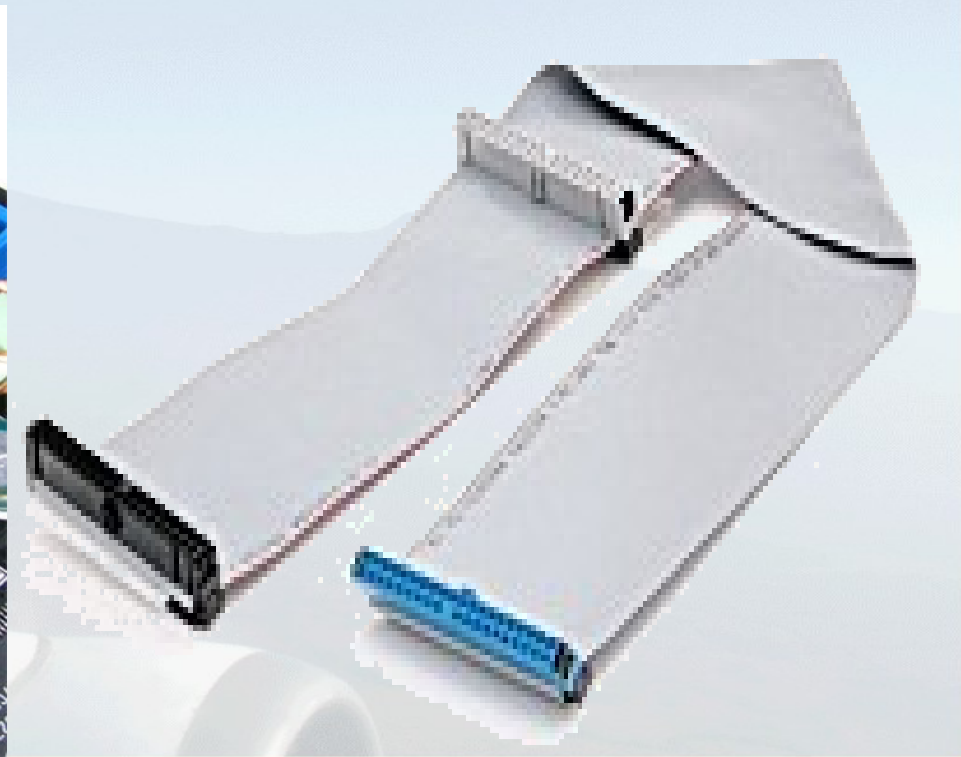
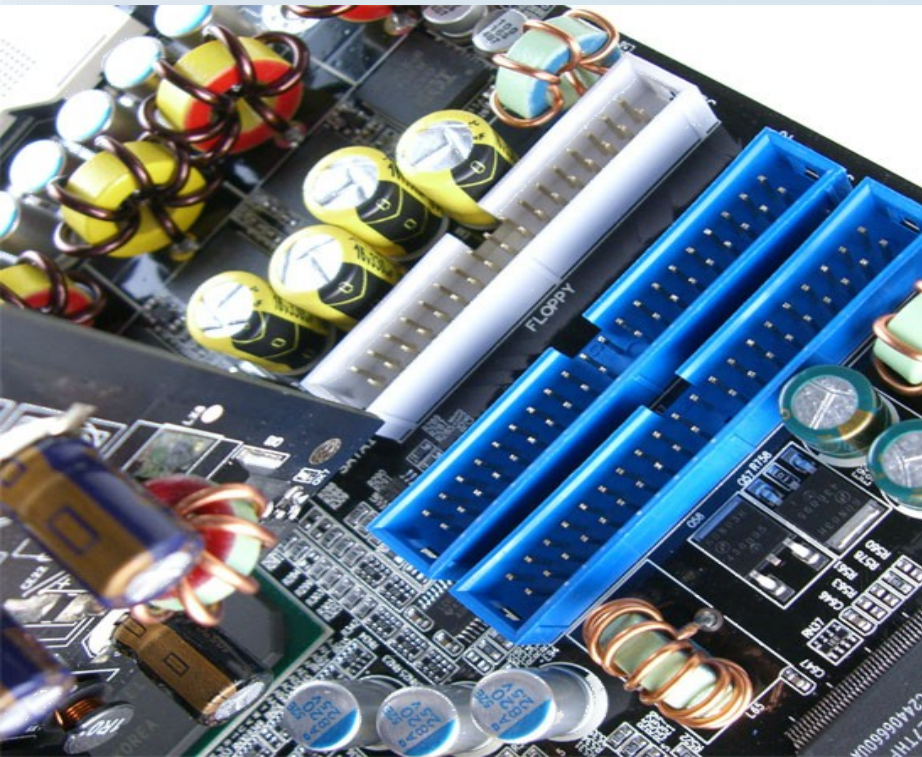
The SATA Type HDD can be connected only to SATA SLOT.



Parts of Mother Board

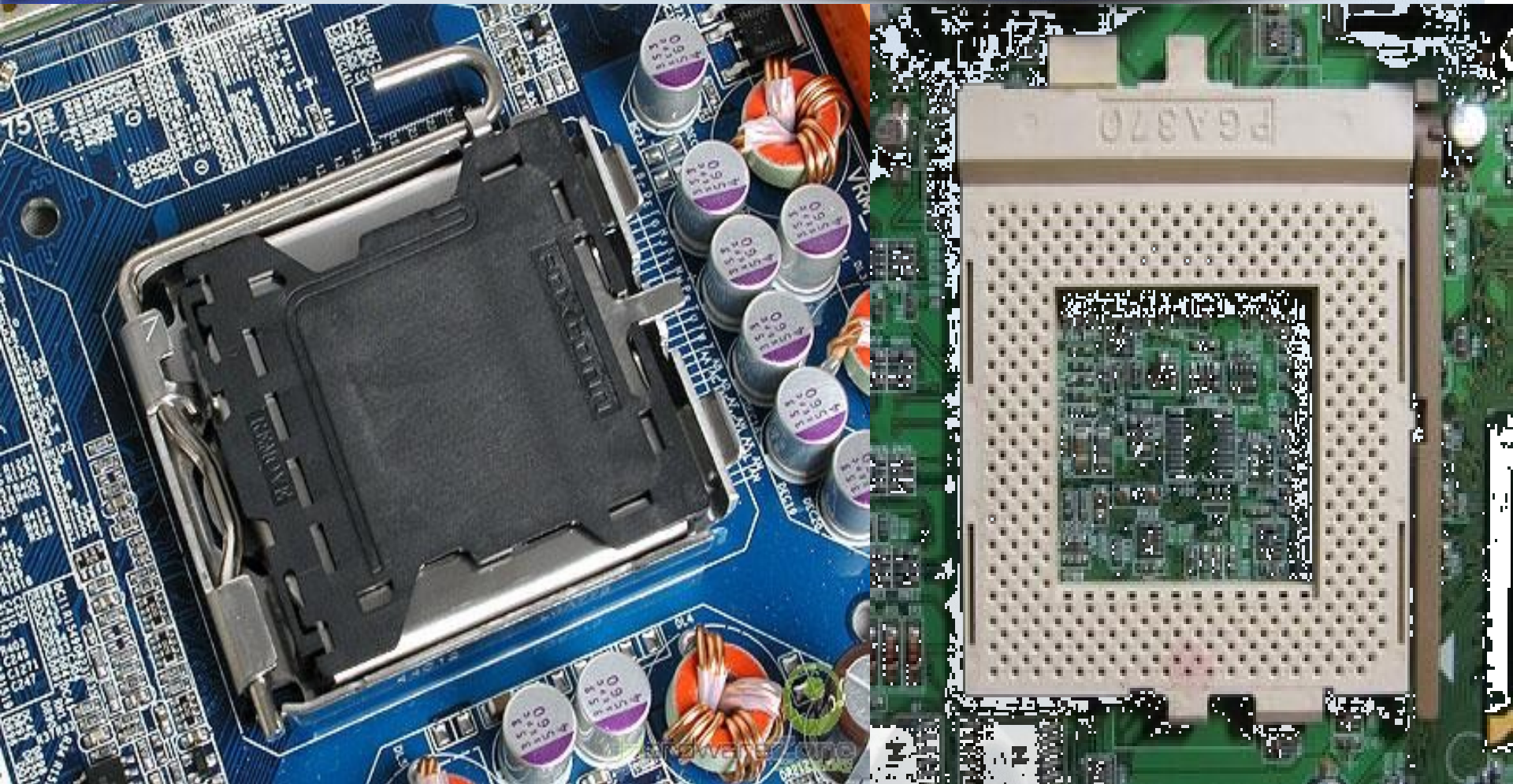
IDE SLOTS

Integrated Drive Electronics(IDE):- used to connect PATA HDD and DVD or CD Drives. IDE Bus is used to connect DVD or CD Drives and PATA HDD.



Parts of Mother Board

Central Processing Unit(Slot)



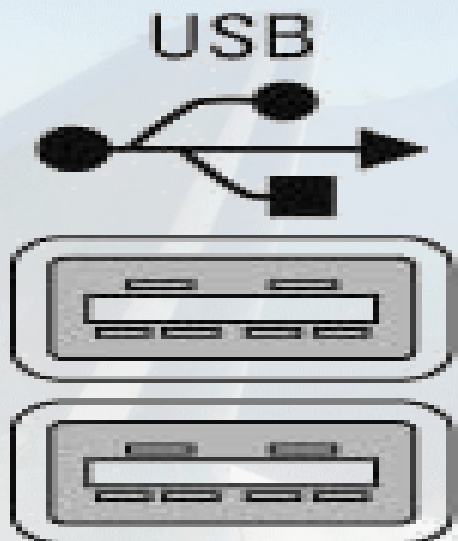
Central Processing Unit



HardwareZone

USB Ports

Universal Serial Bus(USB):- Used to connect Plug and Play Devices Like Pen Drives, Keyboards, Cameras, Mouse etc.



Memory Slots

Used to connect Primary memory like RAM, the no. of Memory Slots varies from Mother Board to Mother Board.



Types of Memory

- ❖ Memory means storage of information for a long time.
- ❖ In Computer System memory means some storage devices used to store information for a long time.
- ❖ Mainly two types of Memory in Computers.
 - ❖ Primary Memory
 - ❖ Secondary Memory

Types of Memory

✿ Primary Memory:-

- ✿ RAM

- ✿ ROM

✿ Secondary Memory:-

- ✿ Hard Disk

- ✿ Magnetic Tap

- ✿ Floppy, CD, DVD, BRD etc.

Types of RAM

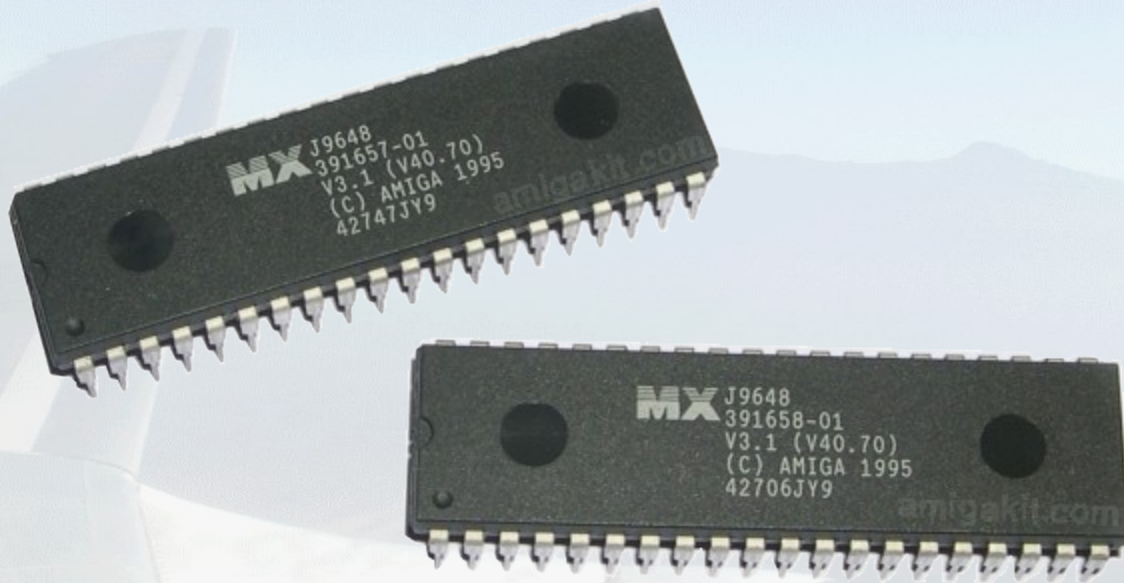
- ✿ RAM is of different types:-
 - ✿ SDRAM(Static Random Access Memory) is made up of Flip Flop that store the binary information.
 - ✿ It has constant power supply to retain the information in it.
 - ✿ It need not to be refreshed by external Assistance.

Types of RAM

- ❖ DRAM(Dynamic Random Access Memory):- it is made of capacitors and transistors.
- ❖ Transistors act as switch and capacitor stores an electric charge.
- ❖ There is need of refreshing capacitors after some time.
- ❖ It uses less charge than SDRAM.

ROM Chip

Read Only Memory(ROM):- Contains the information about the Mother Board like components of the Mother Board and components to be present to Start a Computer System.



Types of ROM

- ✿ There are different types of ROM:-
 - ✿ General ROM
 - ✿ PROM
 - ✿ EPROM
 - ✿ EEPROM

Types of ROM

✿ General ROM:-

- ✿ It is designed to perform specific functions and cannot be changed .
- ✿ The chip consists of instructions which help in booting of the system.

Types of ROM

❖ PROM(Programmable ROM):-

- ❖ This type of Rom is in the form of Integrated circuit(chip).

- ❖ This chip can be programmed after manufacture to store information permanently according to the user requirement.

Types of ROM

❖ EPROM(Erasable PROM):-

- ❖ It is same as PROM except that it can be erased after writing once the chip.
- ❖ To erase the chip a special device that uses ultra violet rays to erase old data and write new data.

Types of ROM

✿ EEPROM(Electrically Erasable PROM):-

✿ The chip can be erased or reprogrammed using electric signals.

Types of Memory

- ❖ Secondary Memory:- Like HDD is secondary memory used to store information for life time it is nonvolatile in nature.
- ❖ To store the information for future use we store our data into secondary memory such as HDD, CD, DVD etc.

Visual Graphic Adapter

Used to connect Monitor this port sends output to monitor.

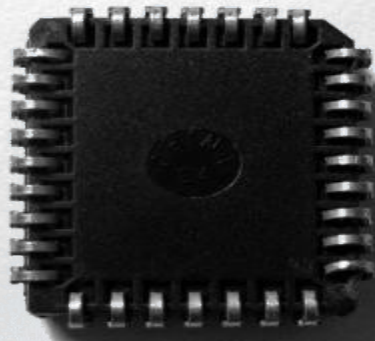


BIOS

Basic Input Output System.

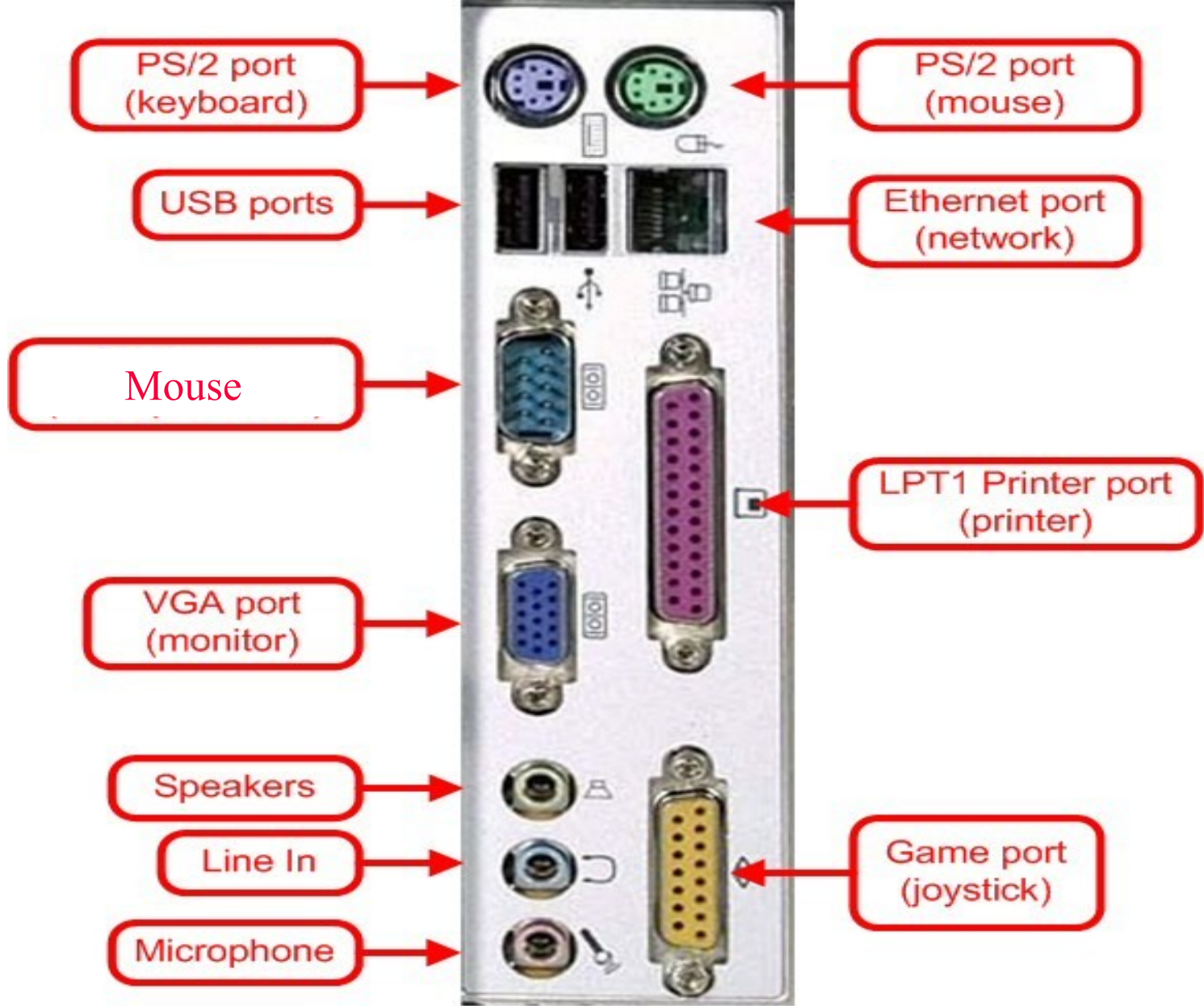
It contains the information about the input output devices of the computer system.

It displays an error message if any Device is missing.



Network Card





Functions of BIOS

- ❖ **BIOS** is software that contains hundreds of programs that allow for communication between the **CPU** and devices.
- ❖ **BIOS** is stored on **BIOS CHIP**, which is a permanent chip on the motherboard.
- ❖ The main work is to load the OS into memory.

Functions of BIOS

- ✿ To run the POST utility.
- ✿ To provide Interface to OS for different Hardware devices.
- ✿ Manages Hard disk and System Clock.
- ✿ Initializes the Registers and Power management.
- ✿ Determines the Bootable Device.
- ✿ Loads the Boot Strap.

Functions of CMOS

- ❖ Complementary Metal Oxide Semiconductor.
- ❖ CMOS is a small Lithium Battery which can store the information for a long time.
- ❖ Prevents the BIOS settings when power is OFF.
- ❖ Updates the System Clock.

Parts of CPU

- ✿ Arithmetic Logic Unit
- ✿ Control Unit
- ✿ Control Memory

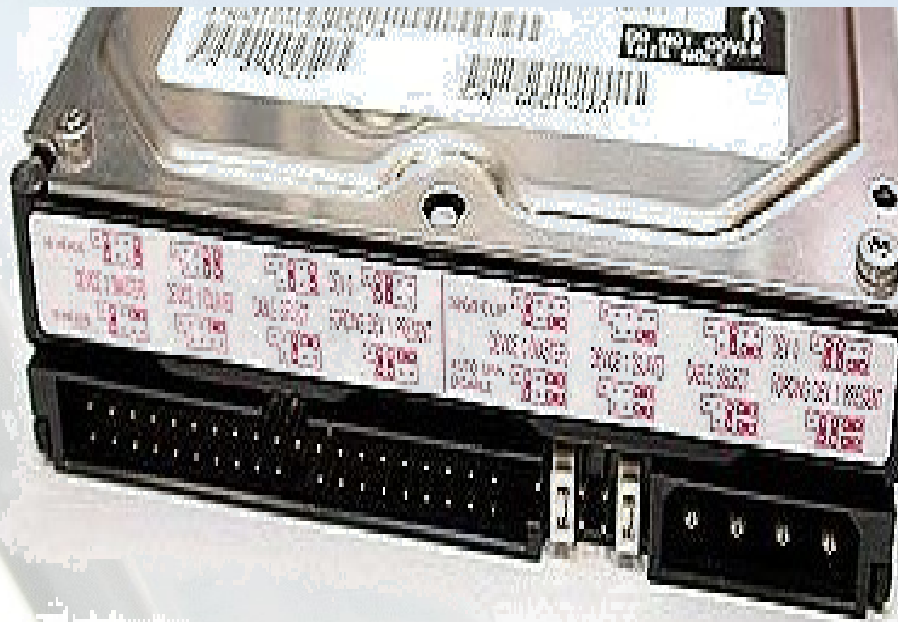
Functions of CPU

- ✿ Performs Arithmetic and logic functions.
- ✿ These operations are performed by the ALU.
- ✿ The Control Unit Part of the CPU controls the flow of data and instruction.
- ✿ Control Memory consists of registers that stores temporarily data.
- ✿ CPU is the Brain of the Computer System.

Functions of the CPU

- ❖ The speed of the Computer depends on the speed of CPU.
- ❖ The speed of the CPU is measured in Hertz(Hz) like 400 MHz,733 MHz, 2.0 GHz, 2.2,2.4,2.6,3.0 GHz.
- ❖ CPU is provided by many venders such as Intel, Celeron, ADM Athlon.
- ❖ For all different type of CPU is compatible with different types of Mother Boards.

PATA



SATA





THANKS