

## Computer skill

### Internal Computer Hardware

#### Motherboard

##### Definition

It is the central circuit board by which the other components of the system communicate or , through which all other components interface.

##### Alternatively referred to as

the mb, mainboard, mboard, backplane board, base board, main circuit board, planar board, system board

##### Where is the motherboard located?

A computer motherboard is located inside the computer case.

##### What are the 3 main parts of motherboard?

Motherboard contains many parts but three most important parts: processor, memory, and expansion slots.

## What are the main functions of motherboard in computer?

The main function of motherboard is to provide the best logical layout, because the most important processing components of computer (Central Processing Unit (CPU), system memory (RAM)) are embedded on motherboard, and motherboard create interface between them.

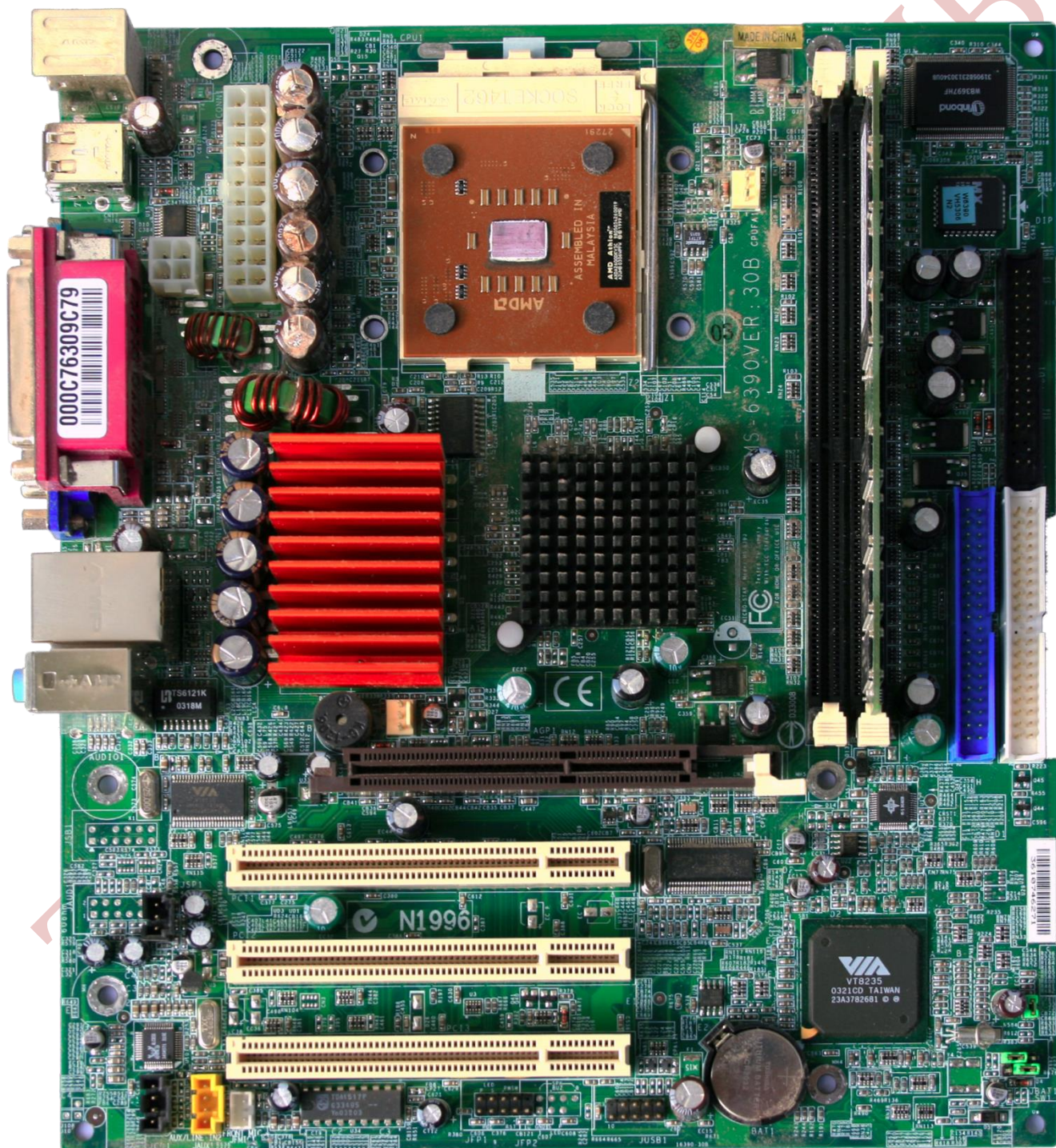
It known as Components' Hub.

## Computer Motherboard Components

- The processor (CPU)
- CPU socket
- Main Memory (RAM)
- Memory slot
- BIOS
- CMOS Battery
- Expansion slots
- Cache memory
- CPU Clock
- I/O ports
- Hard disk controllers

م.م. زبيدة عبدالحكيم مجيد

كلية علوم الحاسوب وتكنولوجيا المعلومات  
قسم علوم الحاسوب  
المرحلة الاولى





## CMOS battery

### CMOS "Complementary Metal Oxide Semiconductor."

#### Definition

CMOS Battery: This is the motherboard's battery, which used to power the south bridge and the BIOS to save the setting, data and time.

#### How long does the CMOS battery last?

The standard lifetime of a CMOS battery is around 10 Years. this can vary depending on the use and environment where the computer resides.

#### Note:

\*A battery that maintains the time, date, hard disk and other configuration settings in the CMOS memory.

\*CMOS batteries are small and attached directly to the motherboard.



## Will a motherboard work without a battery?

The battery helps the motherboard to remember any bios changes and date/time, but the PC should still work without it.

## Can PC work without CMOS battery?

The CMOS battery is not there to provide power to the computer when it is in operation, it is there to maintain a small amount of power to the CMOS when the computer powered off and unplugged. ... Without the CMOS battery, you would need to reset the clock every time you turned on the computer.

## Replace a computer's CMOS battery

If you find your computer keeps losing the correct time, then it is likely that the CMOS battery has failed

## How do I know my CMOS battery failed?

- The PC has difficult booting up.
- There is a constant beeping noise from the motherboard.
- The date and time have reset
- Peripherals are not responsive or they do not respond correctly.
- You can't connect to the internet

- \* **Note:** A peripheral device is an internal or external device that connects directly to a computer.

## Power supply

### Definition

A **power supply** is the hardware component that provides electricity to power computers and other devices.

**\*Note:** Most desktop computers have internal power supplies that connect directly to the motherboard.

### Power supply advantage

- 1- Without the power supply, the computer stops working completely.
- 2- The power supply is important like the processor, motherboard and hard disk.
- 3- Converts mains AC to low-voltage regulated DC power for the internal components of a computer.



\* **Power supply age:** for five to ten years but still depends on the usage of system.

### The Power Supply Failing?

- 1- Strange noises appear.
- 2- When the computer turned on, nothing happens. Sometimes with a flashing light on the desktop.
- 3- The system turns on for a while, and suddenly turns off. This generally occurs from the issue of power supply and motherboard failures.
- 4- The computer is on turns off without warning. It might also display a blue screen.
- 5- High temperature inside the power supply.