

Practical : 01

Aim: - Introduction to different hardware components of PC and assembling of PC.

Hardware components

What is a Motherboard?

A motherboard can also be known as logic board or main board which is a printed circuit board that houses most of the components of a computer and also provides interconnection between them as well as power them up properly. It is a printed circuit board, usually multi-layered but it is not called just a printed circuit board as you might know that would be really confusing because there are so many other device that has printed circuit board inside of them.

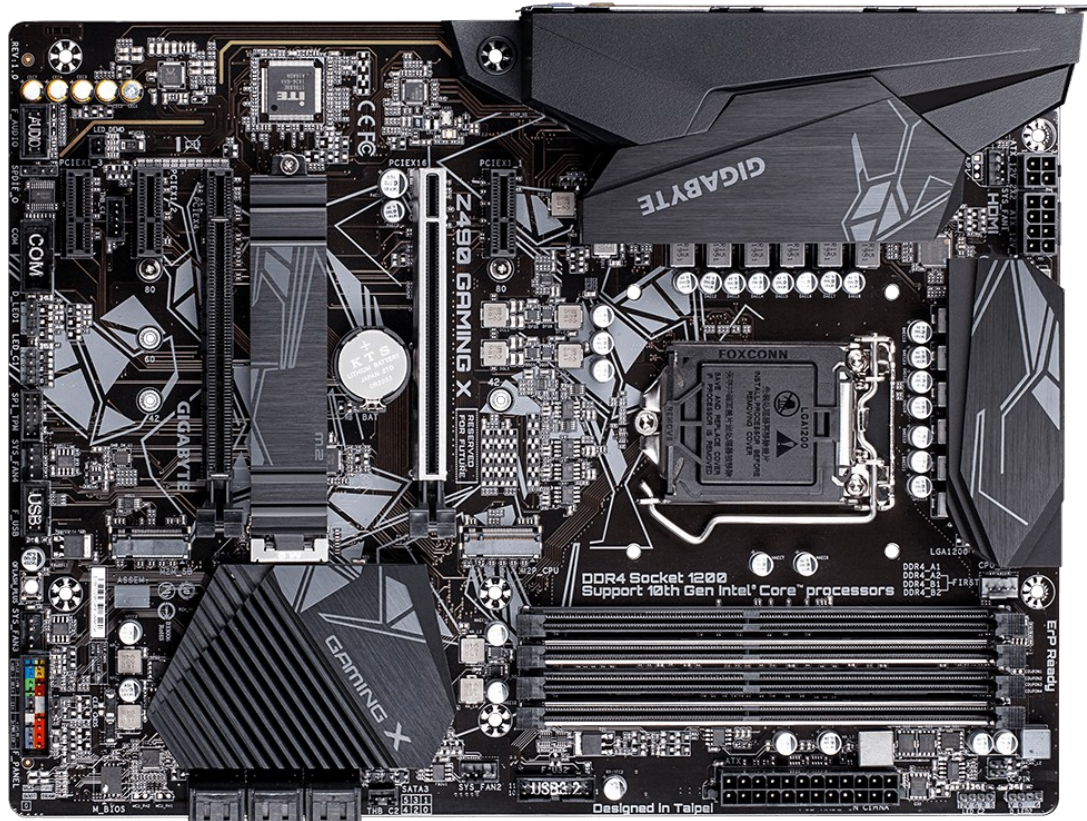
Types of Motherboard

- ATX (Advanced Technology Extended)
- Micro ATX
- Mini-ITX (Information Technology eXtended)
- Nano-ITX
- Etc.

Old Motherboard have assemblies such as I/O port connectors hard drive connector Joysticks.

This motherboard is relatively cheap to produce but because of cost of manufacturing cost increases.

Any thing go wrong we can repair the problem by replacing the card with minimum cost.



Integrated Motherboard:-

All in one Motherboard.

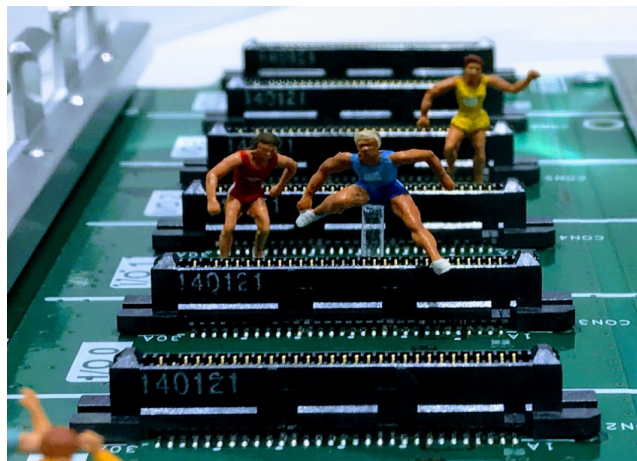
All component are directly connected to motherboard.

Less material is involved, less installation and testing can be done at same time.

More expensive to repair.

RAM (Random Access Memory)

- RAM is used to hold programs while they are being executed, and data while it is being processed.
- RAM is *volatile*, meaning that information written to RAM will disappear when the computer is turned off.
- RAM access speeds can be as fast as 8 nanoseconds (8 billionth of a second). The right amount of RAM depends on the software you are using.
- You can install extra RAM.



Types of RAM

1. SRAM (Static RAM)
 - DDR
 - DDR2
 - DDR3
 - DDR4(Latest)
2. DRAM (Dynamic RAM)

ROM (Read only Memory)

- Read-Only Memory can be read but *not changed*.
- It is *non-volatile* storage: it remembers its contents even when the power is turned off.
- ROM chips are used to store the instructions a computer needs during start-up, called *firmware*.

Kinds of ROM

- PROM,
- EPROM,
- EEPROM,
- CD-ROM.

