

What are chips, chipsets, and processors? What role do they play in the computer system?

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On a computer motherboard is the appearance of a lot of different components and components. The main job of a motherboard on a computer system is to connect the components together and help them have a stable operating environment. The motherboard takes on a very large and very important task, the operation of a apparatus depends very much on the motherboard. But the motherboard can't decide all the work that connects the components, but requires the help of chips, chipsets, and processors to handle different data. In this article, Software tips will explain what are chips, chipsets, and processors? What role do they play in the computer system?



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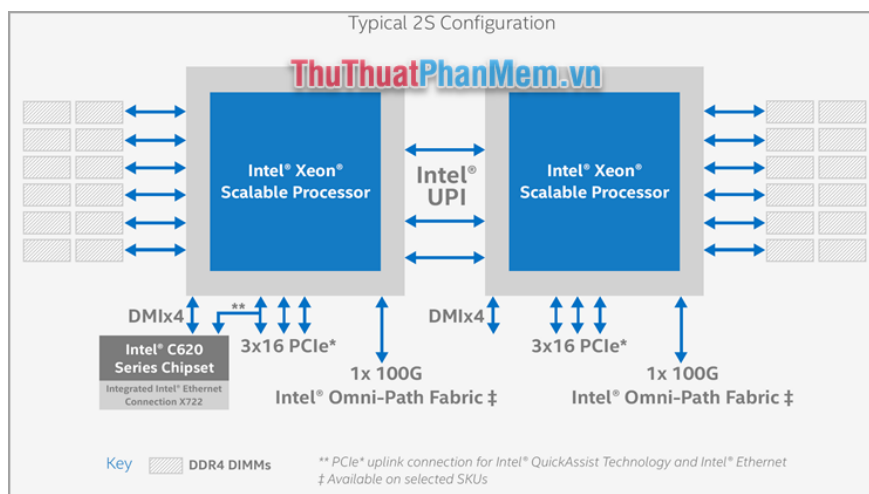
With the early days of computers when they were first developed, the technologies were too new and primitive. The use of a motherboard to link, connect components together to form a combination of activities to handle the internal data information. To be able to exchange, transfer data and connect components together, separate chips are needed to decode and read the signal because each device has a different code and uses. So on a motherboard with the appearance of many different chips such as: Mouse, keys, sound, images, .



But having so many separate chips on such a motherboard is a very difficult problem for manufacturers because the chips take up too much space on the motherboard as well as processing and testing time. much longer product. So manufacturers, developers need to find a more appropriate direction and synchronization with each other.

With the arrival of the PCI bus (Peripheral Component Interconnect), a microprocessor is designed to be a southbridge - a northbridge that works in parallel and supports each other. With the south - south bridge chip, all chips will be replaced as before. The individual processing chips are now aggregated and gathered into two main chips, the south-south bridge.

North Bridge Chip - Located at the top, north of the motherboard. The northbridge is directly linked to the central processor, the CPU, and acts as an intermediary environment to make the devices interoperable. The Northbridge is much more responsible and burdened than the Southbridge because it has to manage components such as RAM, PCI-e, AGP.

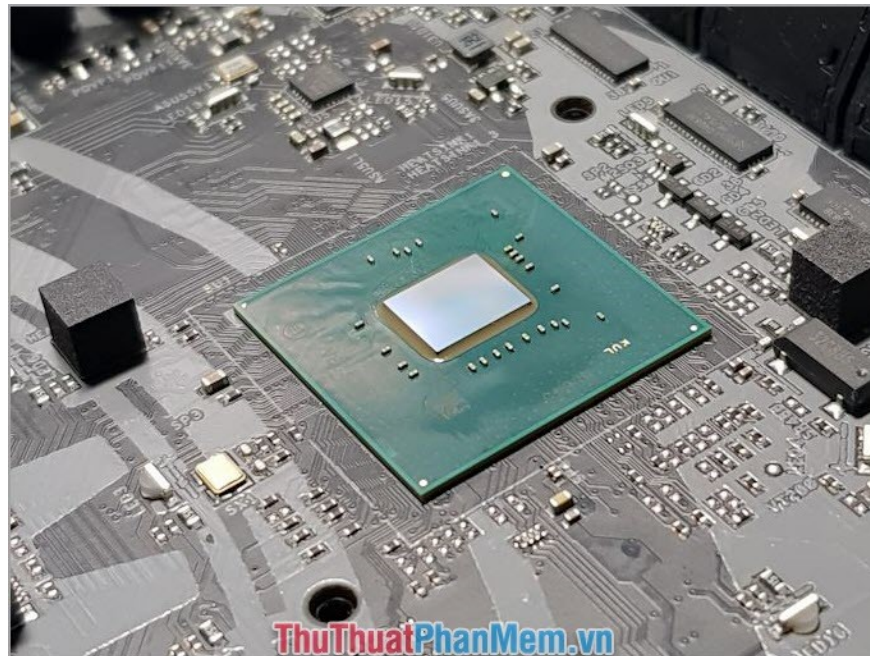


South Bridge Chip - Located at the bottom of the motherboard, south of the motherboard. Southbridge chip is responsible for processing signals of components such as: PCI slot, Sata port, IDE, USB, audio, LAN, .

The order of operation of the components when connected to the CPU must go through the Southbridge, then the Northbridge, and finally to the CPU to process the data.

The design using the North-South Bridge Chipset has helped the motherboard tidy and arrange the components more appropriately, especially the stable performance of the system. But technology has never "stopped in place", until today, the North-South Bridge Chip has been combined into one to facilitate the management and construction of the motherboard.

A new Intel system combined with the Platform Controller HUB (PCH) combines the North and South bridge chips into a single chipset on the motherboard and takes care of all the tasks of the previous two chipsets.



The role of the Chipset system

The chipset system in the computer is responsible for managing the components connected to the motherboard and controlling peripheral devices together. A chipset system will be tasked with adjusting the bus speed of the RAM to match the CPU accordingly.

A chipset system will be responsible for hardware compatibility, such as: Supporting the amount of RAM that can be mounted on the motherboard, expansion options (PCI slots), the ability to overclock RAM and CPU, etc. When building a computer system, the first concern is the CPU and the chipset. For high-end CPUs that use low-end chipsets, it will not be possible to optimize the performance and features of the CPU. As simple as if you use an OC-enabled CPU but the chipset does not support the OC feature, that is unreasonable.



The chipset determines which hardware is compatible with each other, but also the expansion options. The chipset determines the hardware options to expand through the bus. Hardware and peripherals connected to the motherboard via a bus. Each motherboard supports different types of buses and each bus has different speeds and bandwidth.

For those who prefer OC, the chipset is also a very important factor. Overclocking simply means pushing the clock of the components higher than the factory default, but they can still work normally. With a Chipset, the task in OC process is to control the voltage, multiplier, clock speed as appropriate or most accurate according to the settings of the user.

Thus Chip, chipset, processor are very important tasks on the motherboard. They are responsible for connecting and connecting components on the static machine as well as adjusting the parameters to best suit.

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