

What is Core? Detailed concepts about Core i that you need to know

What is Core? Learn the concept of Core i3, core i5, core i7 and core i9. Parameters you need to know on core. What is the difference between core types and what is the price difference?

Today's computers use many different types of core CPU processors. If you are the one buying the computer, you will have to be quite confused about which one to choose. When studying the parameters of a computer, you will see the term core, chip types such as core i5, core i7, etc. So what is a core and how does it function in the performance of the computer? count. To better understand CPU cores, let's learn through the article below with TipsMake.

What is Core?

Core is a CPU parameter used by Intel for personal computer and desktop processors. As you know, the CPU is the central processor that allows the computer to perform tasks. Core CPU is the paths formed by billions of transistors that help the CPU operate.

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For users who need high multitasking, the computer must have at least 2 cores to ensure performance. On the market today there are many different types of CPU cores, the first generation cores from Intel include core Duo, core 2 Duo commonly used on desktop computers and laptops from 2006 to 2008.

With the increasing demand for computers today, core products are increasingly upgraded. The latest versions commonly used today are core i3, core i5, core i7 and core i9.

How many cores does a computer need?

The core is the decisive factor in the user's ability to handle software, programs and tasks. Tasks running at the same time require high multitasking of the computer, and they also take up different resources on the computer, so the CPU needs many cores to support. The increased number of cores comes with the higher cost required.

If the user's needs are just surfing the web, editing documents, and running basic applications, 2-core computer CPUs can meet the needs. For more clarity, learn more about the cores below.

1 Core core

Single-core computers only appeared when CPUs were first introduced, at a time when computers were created to handle only one task at a time. Nowadays, with the need for multitasking and software operations becoming increasingly demanding, the 1-core CPU has been completely replaced.

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2 Cores

Dual-core CPUs or dual-core CPUs are a popular multiplier of computers being used today. It both ensures the ability to handle user tasks and is suitable for the budget they can spend. With dual core CPU, users can use mail, Office, and basic tasks smoothly.

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4 Cores

4-core CPUs or Quad-core CPUs are a type of CPU suitable for groups of users with high demands for computers, who need to use them for playing games, processing graphics, videos, multitasking office tasks, etc. For these high-configuration computers, in addition to a 4-core CPU, you need to equip an additional GPU to support the CPU during image processing.

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6 Cores

6-core computer CPUs or Hexa-core CPUs can ensure the strength of computers to handle heavy tasks that require large processing capabilities. With this type of computer, users can run programs, applications, and 3D games smoothly.

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8 Cores or more

8-core CPUs (Octa-core CPUs) are the perfect choice for gamers, professional graphic designers, filmmakers who need to edit high-quality videos, etc. With 8-core processors, the 4K quality images, 3D games will be processed to the highest quality.

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Details about Core i3

Core i3 is a microprocessor that has been around for a long time, belongs to the low segment and is used for low-cost computers. This processor has 2 cores, 4 threads, chip size is 32nm.

The configuration of the Core i3 processor is not highly rated, but it still meets the user's needs for basic tasks such as surfing the web, editing, running simple software, etc. This chip is not high quality but with a reasonable price, it is still a favorite choice of office workers.

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Details about Core i5

The Core i5 chip also has a size of 32nm similar to the Core i3. Core i5 processors have three types: 2 cores 4 threads, 4 cores 4 threads and 8th generation Core i5 with up to 4 cores 6 threads. Thanks to the use of Turbo Boost technology, the Core i5 chip can automatically overclock, helping to increase processing speed significantly.

Core i5 processors are used for mid-range computers and can handle many tasks at the same time smoothly. The Core i5 chip will process data more efficiently than the Core i3 while the cost difference is not too high.

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Details about Core i7

Intel core i7 processor is 22nm in size, equipped with 4 cores and 8 threads. The Core i7 chip is used for high-end computers because it belongs to the group with the most powerful processors currently. The Core i7 chip also integrates Turbo Boost technology to help data processing be performed quickly.

The Core i7 processor line supports hyper-threading technology, helping computers process multiple data streams at the same time. Therefore, the Core i7 chip is often equipped with high-configuration computers, suitable for game enthusiasts, IT people, graphics people, etc.

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Details about Core i9

Core i9 is the most powerful processor to date, announced by Intel in May 2017. This chip has up to 6 cores and 12 threads, with other improvements it can be up to 8 or 10 cores and 16 threads.

Core i9 processor uses new generation Intel Turbo Boost Max Technology 3.0 technology and Skylake-X platform. Thanks to that, the Core i9 chip has extremely fast information processing speed and almost perfect multi-tasking ability.

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Parameters you need to know on Core

For each type of CPU core, there will be certain technical specifications. When choosing core lines, you need to rely on these parameters to choose appropriately.

Core

The Core core will represent the processing speed of the CPU operating system. The more cores a computer has, the stronger its processing speed. Most computers today use 2 cores, some higher-end models will run 4 or 8 cores.

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Number of threads (Hyper Threading)

The number of threads is simply understood as the number of data transmission lines that the core is equipped with to lead to the processor and vice versa. This technology will divide the workload into small tasks that need to be processed. Streams processed in parallel will help data circulate quickly, reducing waiting time.

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Heartbeat

The core clock is the speed at which the CPU processes data. The higher the core clock, the higher the ability to process calculations and the faster the computer runs. That means the amount of heat the computer radiates is higher.

In the CPU technical sheet, we often see the measurement unit of clock speed as Hz. For example, the parameters of a chip with a clock speed of 4.4 GHz means that every second the CPU can perform 4.4 billion calculations.

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Turbo Boost technology

Turbo Boost technology is equipped for Core i5 and Core i7 chips to help them automatically adjust the clock to suit the tasks running on the machine. The manufacturer's specifications say that it helps increase processing power by up to 20%, effectively saves power and dissipates heat better.

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Cache

Buffer memory or Cache has the function of temporarily storing commands and data that the CPU is processing while the machine is operating. Commands will queue and wait to be processed in the cache. The larger the cache memory a computer CPU has, the better performance it will support, shortening waiting time.

Frequently asked questions about Core CPU

What is the difference between Core i?

The biggest difference between the Core i3, Core i5, Core i7, Core i9 lines is the processing speed. Compared to Core i3, Core i5 and Core i7 have significantly improved processing speed thanks to the use of Turbo Boost technology. As for Core i9, it uses the new technology Turbo Boost Max Technology 3.0, becoming the current pinnacle of Intel's processor chip.

The difference between Core i5 and Core i7 lies in the number of cores and processing threads. The more cores, the more powerful the computer; the more threads, the faster data is processed. Core i5 usually has two types: 2 cores 4 threads or 4 cores 4 threads. Core i7 has up to 4 cores that support hyper-threading. Therefore core i7 is considered stronger than core i5.

Is there a big difference in price between Core i models?

Corresponding to the ability to handle tasks, Core i3 computers are currently in the low price range, Core i5 computers are in the mid-range segment. However, the price difference between these two types of computers is not significant.

In the higher segment are Core i7 computers with strong performance. The price of Core i7 computers will be quite different from Core i5 models. As for Core i9 models, the price will be very high, suitable for professional workers who require powerful features.

Epilogue

Above is the basic knowledge to clarify the concept of what a core is and how to distinguish the different types of CPU cores today. Hopefully the above information will help you in distinguishing and using chip lines on computers. If you have any comments, please leave a comment below for TipsMake.

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