

How to safely overclock your CPU.

Overclocking a CPU is simply the process of increasing the CPU clock speed, which improves computer performance. Refer to the article below from TipsMake to learn the steps.

By overclocking your CPU, you can improve your computer's performance, allowing you to perform tasks, play games, edit videos, and more more smoothly without needing to upgrade your hardware.



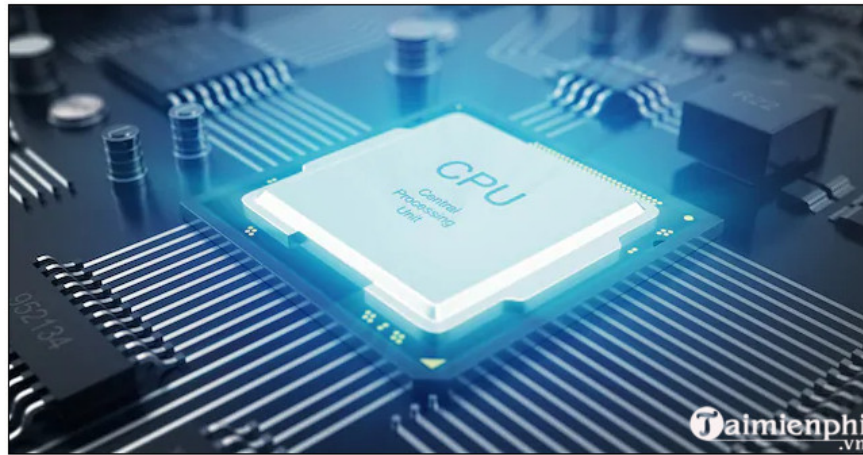
Effective CPU overclocking

How to safely overclock your CPU.

Overclocking any PC component always comes with unnecessary risks, and CPU overclocking is no exception. During the overclocking process, we will have to increase the clock speed and voltage, which can lead to the CPU overheating. If this happens continuously, the worst-case scenario could be CPU failure.

Furthermore, overclocking the CPU can shorten the lifespan of PC hardware, even with CPUs designed to support overclocking.

If you're looking for a solution to increase frame rates while gaming, overclocking your graphics card is the ideal option.



To properly perform CPU benchmarks or stress tests, the ideal solution is to download specialized tools and software such as CPU-Z, etc. These tools will check CPU performance and display the information in real time for the user.

2.1. CPU-Z:

This tool allows users to monitor CPU clock speed and voltage. By downloading and installing the tool, you can track how your CPU is performing and see what impact changes might have.

Download and install CPU-Z from [here](#).

2.2. Prime95:

Use Prime95 to perform CPU stress tests for a specific duration.

Download and install Prime95 [here](#).

2.3. HWiNFO :

HWiNFO is designed to allow users to monitor hardware components and CPU temperature (one of the important features when overclocking).

Download and install HWiNFO [here](#).

To monitor the performance or benchmark scores of an overclocked system, you can use the original benchmark scores to compare with the results.

3.1. Increasing the Base Clock Speed

To do this, the first step is to get the computer into BIOS mode. Restart the device, and while the computer is restarting, hold down and press **the Delete key** to access the BIOS.

Different computer models have different ways to access the BIOS; you can find out more by [clicking here](#).

Next, open the Frequency settings page, also known as Frequency Control, Voltage Control, or Overclocking. Here you can adjust the CPU clock speed and voltage.

Find and reduce the Bus Speed ??setting because memory errors can occur during overclocking. Increase the **Base Clock** by 10% and open a stress test application to check how the CPU is performing.

Continue increasing the Base Clock until the system becomes unstable. Note that you should only increase it by about 5-10MHz at a time until the optimal clock speed for the system is reached.



3.2. Increasing the Multiplier

First, adjust the Base Clock value downwards. This will create more stable and accurate results when increasing the multiplier. Basically, the lower the base clock and the higher the multiplier, the more stable the system; conversely, the higher the base clock and the lower the multiplier, the better the system performance.

Next, increase the multiplier by 0.5. The multiplier, sometimes also called the CPU Clock Ratio, varies depending on the motherboard and is set to Auto.

Run the benchmark program and check if the system is running stably. If so, repeat the steps above. A small note: pay attention to the CPU temperature each time you perform the test.

3.3. Increase CPU voltage

Increase the CPU voltage by approximately 0.025 to avoid the risk of CPU damage due to high voltage. Run the stress test application you have installed on your computer to check if the system is stable or running. Assuming everything is stable, check the CPU temperature. If the system is still unstable, try reducing the base clock speed or multiplier.

Repeat the above steps until the CPU voltage and temperature reach their maximum levels.

Above, TipsMake has just guided you on how to safely overclock your CPU.

Besides overclocking your computer's CPU, you can also consider overclocking your computer's GPU to upgrade your graphics card and provide a better user experience.

You finished reading the article "**How to safely overclock your CPU.**" edited by the [TipsMake](#) team. We hope this article has provided you with many useful tech tips and tricks. You can search for similar articles on tips and guides. Thank you for reading and for following us regularly.
