6 reasons you don't need to upgrade to an Intel Core i9 CPU

Do you really need to use Intel's most powerful processor? Here are 6 reasons why the Intel Core i9 is an unnecessary investment.

If you're planning to build a powerful desktop PC, you're probably considering choosing the 13th Gen Intel Core i9 as the heart of your rig. After all, if money (and space) isn't an issue, this chip is what everyone should have.

But we have to face reality - although the Intel Core i9 CPU is extremely powerful, it is also extremely expensive. So do you really need to use Intel's most powerful processor? Here are 6 reasons why the Intel Core i9 is an unnecessary investment.

1. 13th generation Intel Core i7 and i5 powerful enough

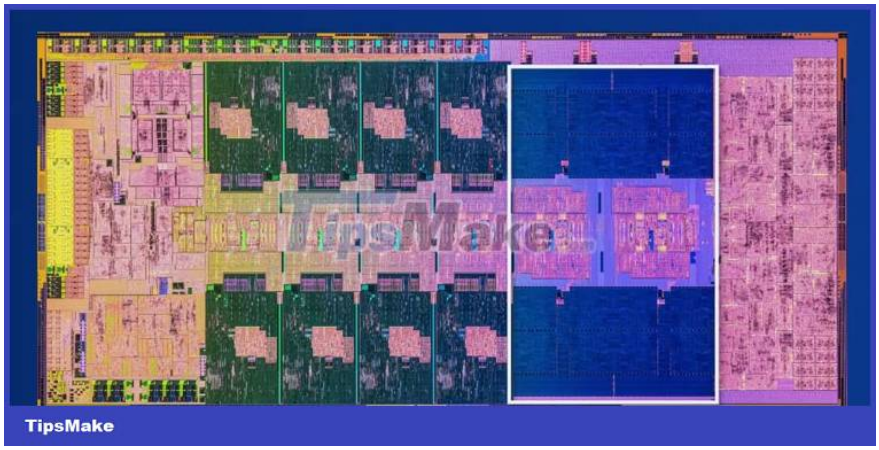
Most users will find the Intel Core i3 sufficient for their needs, but you'll want a more powerful chip if you're a creative person or a gamer. However, that doesn't mean you should burn your money on an Intel Core i9.

The latest 13th Gen Intel processors are powerful enough that even the mid-range Core i5 should be sufficient for most workloads. And if you want something that can handle heavier workloads, like gaming and streaming simultaneously, then the Intel Core i7 will do the job.

The top-end Intel Core i9 is usually for professionals with extremely heavy workloads. So if you are simulating the individual effects of millions of wind particles on your aircraft design or rendering 3 hours long 8K video, you will find the Intel Core i9 to be the perfect tool for your needs. .

But if you don't need to handle such "heavy" things, then you won't be using the full potential of this chip. So, if you are wondering which processor to buy, check out this Intel Core processor comparison for the right choice.

2. Do you really need that many cores?



The Intel Core i9 boasts 24 cores - 8 efficiency cores (P) and 16 efficiency cores (E). Intel Core i7 has only 8 P cores and 8 E cores, while i5 starts with only 6 P cores and 4 E cores. So Intel Core i9 is definitely the superior processor.

But do you really need that many cores? If you are a gamer, you may have heard that games don't use multiple cores. While this may have been true for older titles from the early 2000s, this is no longer the case. However, most developers maximize their games for the most popular hardware.

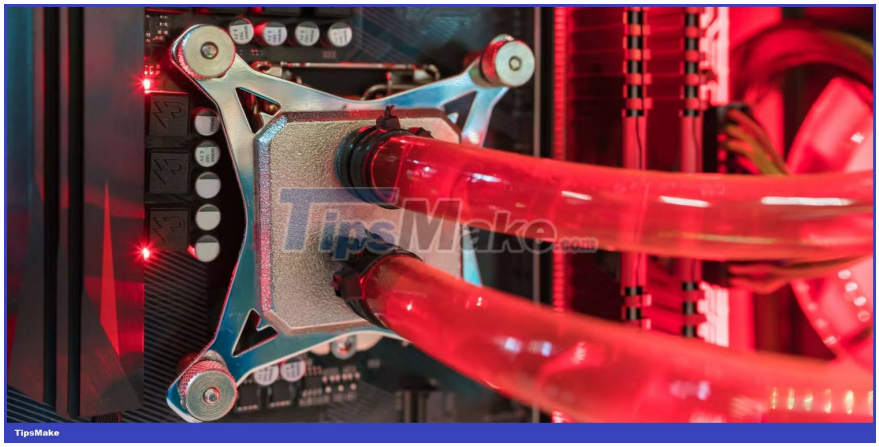
The 5 most popular games on Steam were reviewed at the time of writing to check their recommended processor requirements:

1. Counter-Strike: Global Offensive : Intel Core 2 Duo E6600 or AMD Phenom X3 8750
2. Apex Legends : Ryzen 5 CPU or equivalent
3. The Elder Scrolls Online : Intel Core i5 2300 or AMD FX4350
4. Resident Evil 4 : AMD Ryzen 5 3600 or Intel Core i7 8700
5. Destiny 2 : Intel Core i5 2400 or AMD Ryzen 5 1600X

When studying the specifications of these processors, the highest core counts recorded were those of the Intel Core i7 8700 and Ryzen 5 3600, each with 6 cores. So even with a 13th Gen Intel Core i5, you'll get at least 10 cores - more than enough for most games.

And even if you're buying a new computer for other tasks, such as photo and video editing, the Intel Core i7's 16 cores should be more than enough for your needs.

3. 13th Gen Intel Core i9 gets extremely hot and hard to cool



Almost all processors have a thermal throttling feature to avoid damaging the CPU if it overheats. However, when thermal throttling the CPU, it also means that it is not running at its best speed and you are not getting peak performance.

The 13th Gen Intel Core i9 is incredibly powerful. Although its base power consumption is only 150 watts, it can increase to more than 250 watts when running at full capacity. Unfortunately, this will overload any type of air cooler, to the point where Intel doesn't include a standard air cooler for this processor.

To get the most out of the chip, you'll want to use water cooling instead of air cooling. However, even experienced PC builders, like Linus Tech Tips, say that it's nearly impossible to cool a 13th-gen Core i9 unless you use weird solutions that are sure to make your kids sick. Your expensive chip is no longer under warranty.

4. Don't want a giant CPU on your desk?

Due to the space requirements for cooling the 13th Gen Intel Core i9, you'll likely have a giant tower on or under your desk. Unless you have a spacious workstation, this will take up a lot of precious space on your desk.

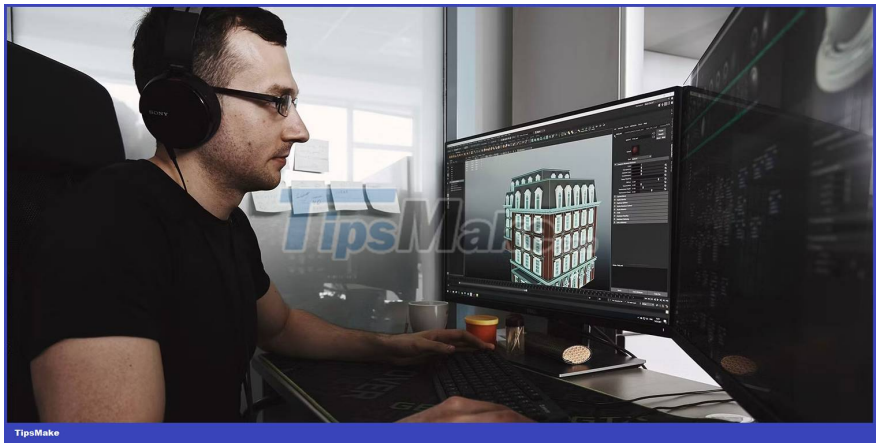
So if you want a mobile CPU that can fit in the corner (or below) of your desk, the Intel Core i9 chip might not be the ideal choice.

5. Powerful CPU is not just a "terrible" processor

When building a computer, you shouldn't just look at one component. Instead, you should consider your entire PC. For example, if you are installing the most powerful NVIDIA GeForce RTX 4090, you cannot combine it with the Intel Core i3 chip from 10 years ago. You also can't plug in the latest DDR5-6000 RAM without checking if your motherboard supports it.

This works the same with microprocessors. If you are using a 13th Gen Intel Core i9, check if your cooling solution supports it. You also have to consider whether your RAM and SSD are fast enough to meet its needs. If you don't figure these out, you could run into performance bottlenecks that keep you from getting the most out of your investment.

6. What do you need a computer for?



While having the best is not a bad thing, it is often not cost effective. After all, why spend more than $5000 on an incredibly powerful machine when a $1500 desktop will deliver the same experience? You can then use the $3500 savings to buy a better gaming chair, a nicer monitor, or even renovate an entire room for a better overall experience.

So unless you're going to use the computer for processor-intensive tasks, like compiling tons of code, the i9's power will be wasted.