

What is the Intel Core i3? When was it released? Is it any good?

Find out when the Intel Core i3 CPU was released? Is it any good? Comparing Intel Core i3 and Core i5 chips: Is there a significant difference in performance?

When considering a new processor for your PC, you'll likely compare Intel and AMD processors. In fact, Intel processors are arguably the most popular in the computer world, particularly the Core i3, i5, and i7 series. Of these, the Core i3 is the most affordable and basic entry-level processor, meeting the learning and work needs of most users.

So, is the Intel Core i3 as weak as the hype suggests? Read on to find out the truth about this small but powerful chip.

When was the Core i3 released?

Developed and manufactured by Intel, and first introduced and released in 2010, the Core i3 is a dual-core computer processor available for use in both desktop and laptop computers. It is one of three processor types in the '*Core i*' series (also known as the Intel Core processor family).

The introduction of the Core i3 in particular, and the Core i5, i7 (and later the i9) in general, revolutionized the architecture of microprocessors. Intel also aimed to redefine its microprocessor lines for different market segments of laptops and desktops, instead of the previous ambiguous naming conventions like Core Duo, Dual-Core, Core 2 Duo, Pentium D, etc.

What is a Core i3?

These are multi-core processors designed to be affordable while still retaining the power of the Intel Core line. Therefore, they are commonly found in mainstream laptops and desktops.

As of 2021, the Intel Core i3 chip has gone through 11 generations with different names, including:

1. **Generation 1:** Westmere microarchitecture, 32nm
2. **Second generation :** Sandy Bridge microarchitecture, 32nm
3. **3rd generation :** Ivy Bridge microarchitecture, 22nm
4. **4th generation :** Haswell microarchitecture, 22nm
5. **5th generation :** Broadwell microarchitecture, 14nm (this generation does not have chips for desktop computers)
6. **6th generation :** Skylake microarchitecture, 14nm
7. **7th generation :** Kaby Lake microarchitecture, 14nm

8. **8th/9th Generation** : Coffee Lake microarchitecture, 14nm; and Canon Lake (for laptops), 10nm
9. **10th generation** : Comet Lake microarchitecture, 14nm; and Sunny Cove (for laptops), 10nm
10. **11th generation** : Tiger Lake microarchitecture, 14nm; and Willow Cove (for laptops) 10nm.

We recommend that you carefully check the processor's features and specifications on Intel's store listings and Ark platform .

Is the Intel Core i3 any good?

Intel's Core i3 is ideal for those who don't require a lot of power. These processors are more affordable and they have hyperthreading to improve performance under heavy load, but they aren't powerful enough for advanced gaming or intensive applications. This CPU line is best suited for computers that will be used for emailing, word processing, light gaming, communication, and web browsing.

Compared to other processor lines like the ultra-cheap **Pentium** or **Celeron** found in low-end devices such as netbooks and tablets , the Core i3 is arguably superior due to its larger **L3 cache** . This ensures that the processor cores have more capacity to store more instruction sets, resulting in higher processing speeds. Furthermore, Hyper-Threading technology further enhances the Core i3's capabilities by doubling the processor's physical cores from two to four.

Comparing Core i3 and i5

Compared to lower-end processors like **Pentium** and **Celeron** , there are many small differences in processor components, especially in the microarchitecture, which makes the differences quite significant. However, if we compare the **Core i** series with each other (specifically Core i5), although there are few differences, these "few" differences represent a vast gap, specifically:

1. **Core i3** : Each processor has 2 cores (Dual-core) but supports Hyper-Threading technology.
2. **Core i5** : Each processor has 4 cores (Quad-core). Although it doesn't support Hyper-Threading, it does feature Turbo Boost technology, which automatically overlocks the processor when applications require more processing power.

Although Hyper-Threading technology allows the Core i3 to double its core count to four **logical cores** , and these logical cores function like **physical cores** , the actual power of logical cores is significantly different from that of physical cores.

Furthermore, **Turbo Boost** technology makes the Core i3 slower than the Core i5 because it cannot further increase processing power when applications require higher loads. However, in the 10th generation, Intel added Turbo Boost to improve the Core i3's capabilities. At the same time, the Core i5 added Hyper-Threading, further widening the gap.

Additionally, the Core i3 has 50% less cache memory than the Core i5. Cache memory is a crucial specification that helps the processor perform specific tasks more efficiently. Think of it as the CPU's own super RAM.

Core i3 processors are commonly used in laptops due to their lower heat generation and battery efficiency. Some laptops can last up to five or six hours on a single charge when running a Core i3 processor.

In conclusion, regarding Intel Core i3

Depending on your requirements or if you need a faster and more capable CPU, you might want to go with an i5 or i7. If you're on a budget, a Core i3 might be your best option.

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