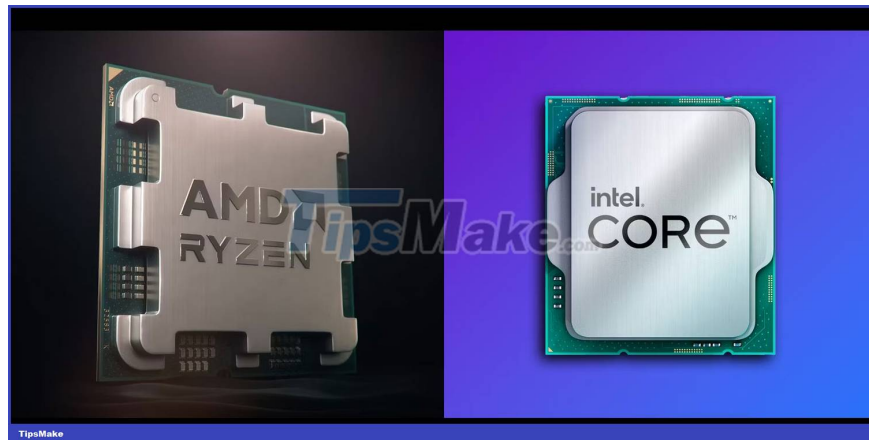


# Is AMD or Intel the best gaming CPU?

When building a gaming PC, the first thing you might choose is the CPU brand - are you going for a traditional Intel processor or are you going for the newer AMD with Ryzen chips?

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## Intel 14th Gen Processors vs AMD Ryzen 7000 Series



The article compared the latest generation chips at the same or similar prices to ensure fairness. However, because the AMD Ryzen 9 7950 has its own price, the article added it to the top-end processors to see how it compares to Intel's best processors.

The article will also not list the processing node of each Intel and AMD chip because they are fixed on this generation of processors. Intel adopts the Intel 7 process, using a 10nm Enhanced SuperFin process, while AMD uses TSMC's 5nm process.

Additionally, you should also note that Intel 14th generation processors use P and E cores, and AMD chips also use similar cores.

## High-end gaming CPU: Intel Core i9-14900K, AMD Ryzen 9 7950X3D vs. AMD Ryzen 9 7900X3D



High-end gaming PCs are the most expensive systems you can buy. These computers typically start at \$2,000 and have no ceiling. So if that's what you're after, let's compare the top processors from Intel and AMD.

Processor	Core (Thread)		Base clock speed (GHz)		Turbo clock speed (GHz)		L3 Cache (MB)	Maximum TDP (W)	Price
	P core	E core	P core	E core	P core	E core			
Intel Core i9-14900K	8 (16)	8 (16)	3.2	2.4	5.8	4.4	36	253	\$589
AMD Ryzen 9 7950X3D	16 (32)		4.2		5.7		32+96	120	\$699
AMD Ryzen 9 7900X3D	12 (24)		4.4		5.6		32+96	120	\$599

When you look at the numbers on paper, the 14900K rivals the 7950X3D based on core count. Both AMD chips have higher base clock speeds than Intel's offering, but Intel beats them with turbo clock speeds. Even so, X3D's massive L3 Cache is known to give AMD an edge when it comes to gaming.

However, these numbers mean nothing in the real world. Unfortunately, no benchmark results including all three processors could be found, so let's first see how the 7950X3D compares to the 14900K from Gamer Nexus testing.

<b>Average FPS</b>	<b>Intel Core i9-14900K</b>	<b>AMD Ryzen 9 7950X3D</b>
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Rainbow Six Siege (1440p / Very High)	511.2	520
F1 23 (1440p / High)	392.8	400.1
Baldur's Gate 3 (1440p / Medium)	107.6	121.7
Final Fantasy XIV (1440p / Maximum)	269	212.6
Starfield (1080p / High)	123	102.5

As you can see, there are many different results between the 14900K and the 7950X3D. While the 7950X3D generally performed better, the 14900K had a big advantage on some titles.

Now let's see how the 7900X3D performs against its more powerful version. Again, the article is using the results of Gamer Nexus, with the same PC configuration as the previous test.

<b>Average FPS</b>	<b>AMD Ryzen 9 7950X3D</b>	<b>AMD Ryzen 9 7900X3D</b>
Rainbow Six Siege (1080p / Very High)	840.9	808.6
Final Fantasy XIV (1080p / Maximum)	255.9	250.5
Shadow of the Tomb Raider (1080p / Medium)	382.6	334.7
CSGO (1440p / Very High)	383.9	386.9
Cyberpunk 2077 (1080p / Medium)	267.6	255.7
Far Cry 6 (1080p / High)	198.2	194.7

The 7950X3D is the faster and more expensive model, but that just means it will perform better than the 7900X3D. But how will the 7900X3D perform compared to the 14900K? This time, let's look at Mark PC's results.

Average FPS	Intel Core i9-14900K	AMD Ryzen 9 7900X3D
God of War (4K / Ultra)	113	110
Cyberpunk 2077 (4K / Ultra)	83	82
Assassin's Creed Valhalla (4K / Ultra)	123	104
Watch Dogs Legion (4K / Ultra)	114	99
Red Dead Redemption II (4K / Favor Quality)	133	119

According to the test results, the 7950X3D is the best performer, but slightly worse than the 14900K. On the other hand, the 14900K easily surpasses the 7900X3D.

This means AMD is the better choice for high-end gaming thanks to its raw horsepower. However, if you consider the price of these chips, you might want to choose Intel's processor as it is the cheapest of the bunch. But does cost really matter at this price point?

## Mid-range gaming CPU: Intel Core i7-14700K vs. AMD Ryzen 7 7800X3D



Mid-range builds start at \$750 to \$2,000 and typically use the Intel Core i7-14700K or AMD Ryzen 7 7800X3D.

Processor	Core (Thread)		Base clock speed (GHz)		Turbo clock speed (GHz)		L3 Cache (MB)	Maximum TDP (W)	Price
	P core	E core	P core	E core	P core	E core			
Intel Core i7-14700K	8 (16)	12 (12)	3.4	2.5	5.6	4.3	33	253	\$409
AMD Ryzen 7 7800X3D	8 (16)		4.2		5.0		96	120	\$449

If we look at their specs, we can expect the 14700K to beat the 7800X3D easily with its large core count and higher turbo clock speeds. But does that really happen when playing games? Check out eTeknix's gaming benchmark results to see what they say.

Average FPS	Intel Core i7-14700K	AMD Ryzen 7 7800X3D
Far Cry 6 (4K / High)	122	135
Baldur's Gate 3 (4K / Ultra)	138	145
Call of Duty: Modern Warfare II (4K / Ultra)	141	142
Cyberpunk 77 (4K / Ultra)	66	68
Marvel's Spider-Man Remastered (4K / Very High)	131	140

While the 14700K looks better on paper than the 7800X3D, the 7800X3D outperformed it in all games tested. That's why you can't judge a processor based on its specs and whatever the presenter says on stage.

## Entry-level gaming CPU: Intel Core i5-14600K vs. AMD Ryzen 5 7600X



Even if you don't have a big budget, both Intel and AMD offer processor options for gamers on a budget. These chips are affordable but still deliver the performance most games need. Although you can still buy cheaper processors, the article does not recommend buying them, as they may have difficulty playing games.

Processor	Core (Thread)		Base clock speed (GHz)		Turbo clock speed (GHz)		L3 Cache (MB)	Maximum TDP (W)	Price
	P core	E core	P core	E core	P core	E core			
Intel Core i5-14600K	6 (12)	8 (8)	3.5	2.6	5.3	4.0	24	181	\$319
AMD Ryzen 5 7600X	6 (12)		4.7		5.3		32	105	\$299

Once again, we will look at gaming benchmarks. This time will check the results of the Testing Games and see how the two processors compare to each other.

Average FPS	Intel Core i5-14600K	AMD Ryzen 5 7600X
Cyberpunk 2077 (1080p / Ultra)	108	93
Starfield (1080p / Ultra)	108	95
Red Dead Redemption II (1080p / Ultra)	169	170

The Witcher III (1080p / Ultra)	90	81
Forza Horizon 5 (1080p / Ultra)	185	180

Các th? nghi?m ch?i game cho th?y 14600K ho?t ??ng t?t h?n 7600X m?c dù có t?c ?? xung nh?p c? b?n th?p h?n và cùng t?c ?? xung nh?p turbo. ?i?u này có th? là 14600K có 8 lõi E, cho phép nó gi?m t?i các tác v? n?n cho nh?ng lõi kém m?nh h?n này, ??m b?o r?ng b?t k? game nào b?n ?ang ch?i ??u không ph?i c?nh tranh ?? giành tài nguyên máy tính.

## V?y b?n nên mua AMD hay Intel?

Chúng ta có th? th?y trong các benchmark ch?i game ? trên r?ng k?t qu? FPS trung bình không ph?n ánh các thông s? k? thu?t lý thuy?t. D?a trên k?t qu?, không có tùy ch?n chi?n th?ng rõ ràng gi?a c? hai nhà s?n xu?t CPU. Trong khi AMD và Intel ?ang c?nh tranh nhau ? v? trí d?n ??u trên th? tr?ng, thì AMD và Intel l?i ?ánh b?i Intel trong l?nh v?c ch?i game t?m trung - ??n m?c m?t s? PC ch?i game cao c?p s? d?ng 7800X3D thay th?. Nh?ng khi nói ??n b? vi x? lý giá r?, Intel v?n gi? v?ng ngòi v??ng.

N?u b?n ?ang th?c hi?n s? m?nh không gi?i h?n là build m?t chi?c PC ch?i game m?nh m? nh?t thì ?úng v?y, AMD là CPU ch?i game t?t nh?t. Nh?ng n?u b?n ?ang tìm ki?m s? cân b?ng gi?a giá c? và s?c m?nh, ranh gi?i s? tr? nên m? nh?t h?n m?t chút vì b?n ph?i xem xét các khía c?nh khác nh? h? th?ng hi?n t?i c?a mình và kh? n?ng t??ng thích c?a nh?ng b? ph?n giá c? ph?i ch?ng h?n nh? RAM DDR4.

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