

CPU Benchmarks

Over 1,000,000 CPUs Benchmarked

Single Thread Performance

This chart comparing the single thread performance of CPUs is made using thousands of [PerformanceTest](#) benchmark results and is updated daily. This chart compares Desktop CPUs, from high end CPUs (such as Intel Core i9, Intel Core i7 and AMD Phenom Ryzen processors) to mid-range and lower end CPUs (such as Intel Pentium 4 and AMD Athlon processors) and also Server CPUs.

CPUS	Top CPUs:	CPU Mark	Price Performance
High End	Desktop:	CPU Mark	Price Performance
High Mid Range	Laptop:	CPU Mark	Price Performance
Low Mid Range	Server:	CPU Mark	Price Performance
Low End	Mobile/Embedded:	CPU Mark	Price Performance

- Best Value (On Market)**
- Best Value XY Scatter**
- Best Value (All time)**

- New Desktop**
- New Laptop**

- Single Thread**
- Systems with Multiple CPUs**
- Overclocked**
- Power Performance**
- CPU Mark by Socket Type**
- Cross-Platform CPU Performance**
- Top Gaming CPUs**

- CPU Mega List**
- Search Model**

- Compare ²**

- Common**
- Most Benchmarked**

PassMark - CPU Mark

Single Thread Performance
Updated 22nd of March 2024

CPU	CPU Mark	Price (USD)
Apple M3 Max 16 Core	4,794	NA
Apple M3 Pro 12 Core	4,794	NA
Apple M3 8 Core	4,792	NA
Apple M3 Max 14 Core	4,774	NA
Intel Core i9-14900K	4,772	\$589.00*
Intel Core i9-13900KS	4,762	\$999.99
Intel Core i9-14900KF	4,720	NA
Apple M3 Pro 11 Core	4,714	NA
Intel Core i9-14900	4,659	\$549.00*
Intel Core i9-14900F	4,644	\$524.00*
Intel Core i9-13900K	4,639	\$569.97
Intel Core i9-13900KF	4,627	\$546.49
Apple A17 Pro	4,522	NA
Intel Core i7-14700KF	4,491	\$384.00*
Intel Core i7-14700K	4,486	\$409.00*
Intel Core i9-13900F	4,448	\$526.03
Intel Core i9-14900T	4,412	\$549.00*
Intel Core i9-14900HX	4,384	\$679.00*
Intel Core i7-13700K	4,369	\$407.99
Intel Core i7-13700KF	4,363	\$390.98
Intel Core i7-14700F	4,358	\$359.00*
Intel Core i9-12900KS	4,354	\$399.99
Intel Core i9-13900	4,343	\$549.99
Intel Core i9-13980HX	4,322	\$668.00*

 **AMD vs Intel Market Share**

CPU Benchmarks	Video Card Benchmarks	Hard Drive Benchmarks	Memory Benchmarks	PC Benchmarks	Software Marketshare	Database Benchmarks	Android Benchmarks	iOS Benchmarks
Intel Core i5-14600KF						4,310		\$294.00*
Intel Core i5-14600K						4,295		\$319.00*
AMD Ryzen 9 7900X						4,276		\$409.00
Intel Core i9-13900T						4,247		\$549.00*
AMD Ryzen 7 7700X						4,221		\$315.75
Intel Xeon E-2456						4,209		\$375.00*
AMD Ryzen 9 PRO 7945						4,184		NA
Intel Core i9-12900K						4,175		\$352.99
Intel Core i7-13790F						4,171		NA
AMD Ryzen 9 7945HX3D						4,170		NA
Intel Core i9-12900KF						4,168		\$398.99
AMD Ryzen 5 7600X						4,162		\$218.00
Intel Core i5-13600K						4,159		\$309.99
AMD Ryzen 9 7900						4,158		\$419.99
Intel Core i9-13900HX						4,158		\$668.00*
AMD Ryzen 9 7950X3D						4,152		\$661.08
Apple M2 Max 12 Core 3680 MHz						4,150		NA
Intel Core i5-13600KF						4,147		\$292.99
Intel Core i7-13700F						4,146		\$360.99
AMD Ryzen Threadripper PRO 7955WX						4,144		NA
Intel Core i7-13700						4,143		\$349.99
Apple M2 Ultra 24 Core						4,134		NA
AMD Ryzen Threadripper PRO 7945WX						4,134		NA
AMD Ryzen 9 7900X3D						4,123		\$561.05
Apple M2 Pro 12 Core 3480 MHz						4,120		NA
Intel Core i7-14700						4,118		\$384.00*
AMD Ryzen Threadripper 7970X						4,108		NA
AMD Ryzen Threadripper PRO 7965WX						4,107		NA
Apple M2 Pro 10 Core 3480 MHz						4,106		NA
AMD Ryzen 7 PRO 7745						4,101		NA
Apple A16 Bionic						4,095		NA
AMD Ryzen 9 7945HX						4,073		NA
Intel Core i9-12900F						4,072		\$425.00
AMD Ryzen 7 7700						4,066		\$319.79
AMD Ryzen 9 7940HX						4,064		NA
AMD Ryzen Threadripper PRO 7975WX						4,064		NA
Intel Core i9-13950HX						4,061		\$590.00*
Intel Core i5-13600						4,057		\$255.00*
Intel Core i9-12900						4,050		\$449.99
AMD Ryzen Threadripper 7960X						4,047		NA
AMD Ryzen Threadripper 7980X						4,045		NA
Intel Core i7-12700K						4,038		\$409.00*
Intel Core i7-12700KF						4,022		\$276.00
AMD Ryzen Threadripper PRO 7985WX						4,019		NA
AMD Ryzen 9 8945H						4,017		NA
Intel Core 7 150U						4,014		NA
AMD Ryzen 9 7940H						4,013		NA
Intel Core i5-14500						4,004		\$232.00*
AMD Ryzen 9 7845HX						3,992		NA
Intel Core i5-14500T						3,980		\$232.00*

CPU Benchmarks	Video Card Benchmarks	Hard Drive Benchmarks	Memory Benchmarks	PC Benchmarks	Software Marketshare	Database Benchmarks	Android Benchmarks	iOS Benchmarks
AMD Ryzen 9 8945HS						3,970		NA
Intel Core i9-13900HK						3,969		\$697.00*
AMD Ryzen Threadripper PRO 7995WX						3,943		\$9,999.00*
Intel Core i5-12600KF						3,936		\$219.94
Apple M2 8 Core 3500 MHz						3,931		NA
AMD Ryzen 5 7600						3,927		\$219.99
Intel Core i9-12900TE						3,926		\$544.00*
AMD Ryzen 7 8700G						3,925		NA
Intel Core i5-13490F						3,925		\$263.66
Intel Core i7-12700						3,919		\$325.49
AMD Ryzen 5 PRO 7645						3,919		NA
AMD Ryzen 5 8500G						3,917		NA
AMD Ryzen 5 7645HX						3,915		NA
Intel Core Ultra 7 165H						3,909		NA
AMD Ryzen 9 7940HS						3,909		NA
AMD Ryzen 7 8845HS						3,907		NA
Intel Core i5-13500						3,892		\$247.98
Intel Core i7-13700HX						3,886		\$485.00*
Intel Core i7-13700T						3,884		\$384.00*
Intel Core i7-12700F						3,880		\$284.99
AMD Ryzen 7 8845H						3,873		NA
Intel Core i9-12900HX						3,873		\$606.00*
Apple M1 Ultra 20 Core						3,869		NA
Intel Core i9-13900H						3,867		\$617.00*
Intel Core i5-13500E						3,858		\$235.00*
Intel Core i7-13850HX						3,856		\$428.00*
Intel Core i7-13650HX						3,847		\$485.00*
AMD Ryzen 5 7500F						3,840		NA
Apple M1 Max 10 Core 3200 MHz						3,840		NA
Intel Core i5-13600T						3,833		\$255.00*
Intel Core i5-13600HX						3,831		\$284.00*
Intel Core i9-12950HX						3,829		\$590.00*
Intel Core i5-12600						3,827		\$260.00
Intel Core i5-14400						3,825		\$221.00*
AMD Ryzen 5 8600G						3,823		NA
Intel Core i9-12900T						3,818		\$489.00*
Intel Core i3-14100F						3,812		\$109.00*
Apple M1 Pro 10 Core 3200 MHz						3,812		NA
Intel Core i9-12900H						3,809		\$617.00*
Intel Core i7-14650HX						3,800		\$495.00*
AMD Ryzen 7 7840HS						3,798		NA
AMD Ryzen 7 7840H						3,785		NA
Apple M1 Pro 8 Core 3200 MHz						3,777		NA
Intel Core i7-12700E						3,777		\$344.00*
Intel Core i3-14100						3,776		NA
Intel Core i5-12600HE						3,772		\$315.00*
Intel Core i7-12800HX						3,772		\$457.00*
AMD Ryzen Z1						3,767		NA
AMD Ryzen 7 7800X3D						3,758		\$439.00
Intel Core i5-12490F						3,745		\$181.99
Intel Core i5-12500E						3,735		\$225.00*

CPU Benchmarks	Video Card Benchmarks	Hard Drive Benchmarks	Memory Benchmarks	PC Benchmarks	Software Marketshare	Database Benchmarks	Android Benchmarks	iOS Benchmarks
Intel Xeon E E-2414						3,732		\$213.00*
Intel Core Ultra 9 185H						3,731		NA
Intel Core i7-12850HX						3,717		\$428.00*
Intel Core i7-1270PE						3,715		\$441.00*
Intel Core i5-13600H						3,712		\$311.00*
Intel Core i5-13500TE						3,711		\$235.00*
AMD Ryzen 9 PRO 7940HS						3,709		NA
Intel Core i7-13620H						3,705		\$502.00*
Apple M1 8 Core 3200 MHz						3,705		NA
Intel Core i5-12500						3,698		\$202.00*
AMD Ryzen 7 PRO 7840U						3,697		NA
Intel Core i5-13400						3,696		\$228.26
AMD Ryzen 5 PRO 7640HS						3,696		NA
Intel Core i5-1340PE						3,690		\$315.00*
AMD Ryzen 7 7840S						3,688		NA
Intel Core i5-12600HX						3,680		\$284.00*
Intel Core i9-12900HK						3,679		\$635.00*
Intel Core Ultra 5 135H						3,665		NA
Intel Core i7-13700H						3,664		\$502.00*
Intel Core i5-13400F						3,661		\$164.99
Intel Xeon E E-2434						3,660		\$281.00*
Intel Core i9-13905H						3,658		\$697.00*
Intel Core i3-13100						3,658		\$128.67
Intel Core i5-13500T						3,654		\$232.00*
Intel Xeon w7-2475X						3,650		\$1,789.00*
Intel Core i7-12700T						3,649		\$339.00*
Intel Core i7-12650H						3,634		\$457.00*
AMD Ryzen 5 7640HS						3,633		NA
Intel Core i3-12300						3,630		\$143.00*
AMD Ryzen Z1 Extreme						3,626		NA
Apple A15 Bionic						3,611		NA
Intel Core i3-13100F						3,611		\$110.99
Intel Core Ultra 7 165U						3,610		NA
Intel Core i7-13705H						3,607		\$502.00*
Intel Xeon w7-2495X						3,605		\$2,603.96*
Intel Core i7-12700H						3,598		\$457.00*
Intel Core i7-1355U						3,596		\$469.00*
Intel Core i7-1370P						3,595		NA
Intel Core i7-13800H						3,594		\$457.00*
AMD Ryzen 7 7840U						3,593		NA
Intel Core i9-13900E						3,592		\$554.00*
Intel Xeon W-1390P @ 3.50GHz						3,591		NA
Intel Core i5-13500HX						3,580		\$326.00*
Intel Core i5-12600H						3,572		\$311.00*
Intel Core i5-1350P						3,571		\$320.00*
Intel Core i5-1340P						3,570		\$353.00*
Intel Core i7-1360P						3,568		\$480.00*
Intel Core i3-1315U						3,562		\$309.00*
Intel Core i5-13450HX						3,562		\$326.00*
Intel Core i5-13500H						3,560		NA
Intel Core i7-1365U						3,558		\$426.00*
Intel Core i9-11900KF @ 3.50GHz						3,557		\$415.99

CPU Benchmarks	Video Card Benchmarks	Hard Drive Benchmarks	Memory Benchmarks	PC Benchmarks	Software Marketshare	Database Benchmarks	Android Benchmarks	iOS Benchmarks
Intel Core Ultra 5 135U						3,556		NA
Intel Core i5-1335U						3,554		\$340.00*
Intel Core Ultra 5 125H						3,548		NA
Intel U300E						3,544		\$196.00*
Intel Core i5-1250P						3,539		NA
Intel Xeon W-1350P @ 4.00GHz						3,539		\$372.23
AMD Ryzen 5 7640U						3,536		NA
Intel Core i5-1345U						3,533		\$309.00*
Intel Core i5-1334U						3,533		\$340.00*
Intel Xeon E-2378G @ 2.80GHz						3,532		\$659.53*
Intel Core i5-12400						3,531		\$192.00*
Intel Core i5-12500T						3,529		\$202.00*
Intel Xeon W-1370P @ 3.60GHz						3,527		\$508.99
Intel Xeon w7-3465X						3,523		\$2,889.00*
Intel Core i9-11900K @ 3.50GHz						3,521		\$318.90
Intel Core i7-12800H						3,513		\$457.00*
Intel Core i5-12400F						3,512		\$149.99
Intel Core i5-12450HX						3,508		NA
AMD Ryzen 9 PRO 5945						3,501		NA
Intel Xeon w9-3495X						3,499		\$5,889.00*
Intel Core Ultra 5 125U						3,499		\$363.00*
Intel Core i5-12500H						3,497		\$311.00*
Intel Core i5-13400T						3,495		\$221.00*
Intel Xeon W-1350 @ 3.30GHz						3,494		\$335.99
Intel Core i5-13420H						3,490		\$342.00*
Intel Core i3-12100E						3,481		\$138.00*
Intel Xeon W-1370 @ 2.90GHz						3,475		\$468.99
Intel Core i3-1220PE						3,474		\$295.00*
Intel Xeon w9-3475X						3,472		\$3,739.00*
Intel Core i5-12600T						3,471		NA
AMD Ryzen 9 5900X						3,471		\$299.99
Intel Xeon w3-2435						3,469		\$669.00*
Intel Core i3-12100F						3,469		\$136.99
AMD Ryzen 9 5950X						3,468		\$441.71
Intel Xeon w5-3435X						3,462		\$1,589.00*
Intel Xeon E-2388G @ 3.20GHz						3,459		\$539.00*
Intel Core i9-12900E						3,455		NA
Intel Xeon w5-2465X						3,454		\$1,389.00*
AMD Ryzen 9 5900						3,448		NA
AMD Ryzen 7 5800X						3,446		\$225.03
Intel Core i3-13100T						3,444		\$134.00*
AMD Ryzen 9 6900HX						3,444		NA
AMD Ryzen 5 PRO 5645						3,441		NA
AMD Ryzen 7 PRO 5845						3,439		NA
Intel Core i9-11900 @ 2.50GHz						3,436		\$419.99
Intel Core i3-12100						3,431		\$122.00*
Intel Core i7-14700HX						3,424		NA
AMD Ryzen 7 PRO 7840HS						3,421		NA
Intel Core i9-11900F @ 2.50GHz						3,421		\$418.99
Intel Xeon Gold 5420+						3,418		\$1,848.00*
Intel Core i3-1210U						3,417		NA
Intel Xeon E-2374G @ 3.70GHz						3,416		\$399.99

Intel Xeon W-1390 @ 2.80GHz	3,414	\$573.99
Intel Core i5-12450H	3,413	\$311.00*

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Intel Core i3-1305U	3,411	\$309.00*
Intel Xeon w5-2445	3,409	\$839.00*
AMD Ryzen 9 PRO 6950HS	3,407	NA
Intel Core i3-12300T	3,399	\$157.00*

Software

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