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.

Top CPUs:	CPU Mark	Price Performance
Desktop:	CPU Mark	Price Performance
Laptop:	CPU Mark	Price Performance
Server:	CPU Mark	Price Performance
Mobile/Embedded:	CPU Mark	Price Performance

PassMark - CPU Mark
Single Thread Performance
Updated 23rd of August 2023

CPU	CPU Mark		Price (USD)
Intel Core i9-13900KS		4,785	$999.99
Intel Core i9-13900KF		4,674	$546.49
Intel Core i9-13900K		4,673	$569.97
Intel Core i9-13900F		4,512	$526.03
Intel Core i9-13900		4,409	$549.99
Intel Core i9-13980HX		4,398	$668.00*
Intel Core i7-13700K		4,395	$407.99
Intel Core i7-13700KF		4,387	$390.98
Intel Core i9-12900KS		4,363	$399.99
Intel Core i9-13900T		4,327	$549.00*
AMD Ryzen 9 7950X		4,321	$540.99
AMD Ryzen 9 7900X		4,316	$409.00
AMD Ryzen 7 7700X		4,267	$315.75
Intel Core i9-13900HX		4,238	$668.00*
Intel Core i7-13700F		4,230	$360.99
AMD Ryzen 5 7600X		4,215	$218.00
AMD Ryzen 9 7900		4,203	$419.99
Intel Core i9-12900K		4,202	$352.99
Intel Core i9-12900KF		4,185	$398.99
Intel Core i7-13700		4,182	$349.99
Intel Core i5-13600K		4,181	$309.99
Intel Core i5-13600KF		4,179	$292.99
AMD Ryzen 9 7950X3D		4,163	$661.08
Apple M2 Max 12 Core 3680 MHz		4,154	NA

CPU	Score	Price
Apple M2 Pro 12 Core 3480 MHz	4,149	NA
AMD Ryzen 9 7945HX	4,136	NA
Intel Core i9-13950HX	4,136	$590.00*
Apple M2 Pro 10 Core 3480 MHz	4,135	NA
AMD Ryzen 7 7700	4,130	$319.79
AMD Ryzen 9 7900X3D	4,123	$561.05
Intel Core i9-13900HK	4,112	$697.00*
Intel Core i9-12900F	4,098	$425.00
AMD Ryzen 9 7940H	4,080	NA
Intel Core i9-12900	4,078	$449.99
Intel Core i5-13600	4,058	$255.00*
Apple M2 Ultra 24 Core	4,057	NA
Intel Core i7-12700K	4,054	$409.00*
Intel Core i9-13905H	4,054	$697.00*
Intel Core i7-12700KF	4,044	$276.00
AMD Ryzen 9 7845HX	4,030	NA
Intel Core i9-13900H	4,005	$617.00*
AMD Ryzen 5 7600	3,984	$219.99
Apple M2 8 Core 3500 MHz	3,981	NA
Intel Core i5-12600K	3,973	$199.99
Intel Core i7-13700HX	3,972	$485.00*
AMD Ryzen 7 7840H	3,960	NA
Intel Core i5-12600KF	3,950	$219.94
Intel Core i9-12900T	3,947	$489.00*
Intel Core i7-12700	3,936	$325.49
Intel Core i5-13500	3,935	$247.98
AMD Ryzen 9 7940HS	3,930	NA
Intel Core i7-12700F	3,927	$284.99
Intel Core i9-12900E	3,926	NA
Intel Core i5-13600T	3,923	$255.00*
Intel Core i9-12900HX	3,921	$606.00*
Intel Core i7-13700T	3,918	$384.00*
Intel Core i5-13600HX	3,913	$284.00*
Intel Xeon w5-2465X	3,896	$1,389.00*
Intel Core i7-13850HX	3,895	$428.00*
AMD Ryzen Z1 Extreme	3,894	NA
AMD Ryzen 7 7745HX	3,889	NA
AMD Ryzen 7 7840HS	3,888	NA
Intel Core i9-12950HX	3,878	$590.00*
Apple M1 Ultra 20 Core	3,871	NA
Intel Core i9-12900H	3,865	$617.00*
Intel Core i7-13620H	3,864	$502.00*
Intel Core i5-1350P	3,853	$320.00*
Intel Core i7-12700E	3,852	$344.00*
AMD Ryzen 5 7540U	3,846	NA
Intel Core i7-12800HX	3,846	$457.00*
Apple M1 Max 10 Core 3200 MHz	3,844	NA
Intel Core i5-12600	3,834	$260.00
Intel Xeon w5-2445	3,830	$839.00*
Intel Xeon w5-2455X	3,827	$1,039.00*
AMD Ryzen 7 PRO 7840HS	3,819	NA
Apple M1 Pro 10 Core 3200 MHz	3,819	NA
Intel Core i7-13650HX	3,812	$485.00*
Intel Core i5-13500HX	3,797	$326.00*
Intel Core i7-1370P	3,793	NA

Processor	Score	Price
Apple M1 Pro 8 Core 3200 MHz	3,782	NA
AMD Ryzen 7 7800X3D	3,776	$439.00
Intel Core i5-12490F	3,761	$181.99
AMD Ryzen 5 PRO 7540U	3,759	NA
Intel Core i5-13450HX	3,752	$326.00*
Intel Core i5-12600HX	3,742	$284.00*
Intel Core i3-13100	3,740	$128.67
Intel Core i5-12500E	3,735	$225.00*
Intel Core i5-12500	3,733	$202.00*
Intel Xeon w9-3475X	3,725	$3,739.00*
Intel Core i7-12850HX	3,720	$428.00*
Intel Xeon w9-3495X	3,719	$5,889.00*
Intel Core i9-12900HK	3,719	$635.00*
Intel Core i7-12650H	3,715	$457.00*
Intel Core i3-1305U	3,711	$309.00*
Intel Core i5-13400	3,710	$228.26
Apple M1 8 Core 3200 MHz	3,709	NA
Intel Core i5-13600H	3,705	$311.00*
Intel Core i7-13700H	3,694	$502.00*
Intel Core i3-13100F	3,691	$110.99
Intel Core i7-1360P	3,688	$480.00*
Intel Core i5-13400T	3,679	$221.00*
Intel Core i5-13400F	3,673	$164.99
Intel Core i5-1335U	3,669	$340.00*
Intel Core i7-1270PE	3,666	$441.00*
Intel Xeon w7-2495X	3,657	$2,603.96*
Intel Core i5-13500T	3,645	$232.00*
Intel Core i7-12700H	3,638	$457.00*
Intel Core i3-12300	3,637	$143.00*
Intel Core i7-12700T	3,629	$339.00*
Intel Core i5-1345U	3,615	$309.00*
Intel Core i5-1340P	3,610	$353.00*
Intel Xeon W-1390P @ 3.50GHz	3,591	NA
Intel Core i7-1355U	3,589	$469.00*
Intel Core i3-1315U	3,573	$309.00*
Intel Core i5-12600H	3,569	$311.00*
Intel Core i5-12500T	3,564	$202.00*
Intel Core i9-11900KF @ 3.50GHz	3,561	$415.99
Intel Xeon W-1350P @ 4.00GHz	3,557	$372.23
Intel Core i3-1210U	3,554	NA
Intel Core i7-1365U	3,548	$426.00*
Intel Core i5-12400	3,545	$192.00*
Intel Core i5-12400F	3,539	$149.99
Intel Xeon W-1370 @ 2.90GHz	3,538	$468.99
Intel Xeon W-1370P @ 3.60GHz	3,533	$508.99
Intel Core i9-11900K @ 3.50GHz	3,528	$318.90
Apple A15 Bionic	3,522	NA
Intel Core i7-13800H	3,522	$457.00*
Intel Core i5-12450H	3,516	$311.00*
Intel Core i5-12500H	3,513	$311.00*
Intel Xeon w3-2435	3,513	$669.00*
Intel Xeon E-2378G @ 2.80GHz	3,510	$659.53*
Intel Core i5-1250P	3,504	NA
Intel Xeon w7-3465X	3,502	$2,889.00*
Intel Core i7-12800H	3,496	$457.00*

AMD Ryzen 9 PRO 5945	3,496	NA
Intel Core i5-13500H	3,494	NA
Intel Xeon W-1350 @ 3.30GHz	3,494	$335.99
Intel Xeon w5-3425	3,494	$1,189.00*
Intel Core i3-12100F	3,491	$136.99
Intel Core i3-12100	3,490	$122.00*
Intel Xeon E-2388G @ 3.20GHz	3,479	$539.00*
Intel Core i3-13100T	3,470	$134.00*
AMD Ryzen 9 5900X	3,470	$299.99
AMD Ryzen 9 5950X	3,470	$441.71
AMD Ryzen 7 7736U	3,467	NA
AMD Ryzen 9 PRO 7940HS	3,457	NA
AMD Ryzen 7 PRO 5845	3,453	NA
Intel Core i9-11900 @ 2.50GHz	3,453	$419.99
AMD Ryzen 9 5900	3,451	NA
AMD Ryzen 7 5800X	3,447	$225.03
AMD Ryzen 9 6900HX	3,445	NA
AMD Ryzen 9 PRO 6950HS	3,444	NA
AMD Ryzen 5 PRO 5645	3,441	NA
Intel Xeon w7-3445	3,437	$1,989.00*
Intel Core i9-11900F @ 2.50GHz	3,426	$418.99
AMD Ryzen 7 7735H	3,426	NA
Intel Core i7-11700K @ 3.60GHz	3,421	$276.10
Intel Xeon Gold 5420+	3,418	$1,848.00*
Intel Core i5-12400T	3,416	$149.99
Intel Xeon W-1390 @ 2.80GHz	3,414	$573.99
Intel Core i5-12600T	3,403	NA
AMD Ryzen 7 5800	3,401	NA
Intel Core i7-11700KF @ 3.60GHz	3,401	$262.99
Apple A14 Bionic	3,400	NA
Intel Xeon E-2386G @ 3.50GHz	3,399	$482.00*
Intel Core i3-1215U	3,398	NA
Intel Core i3-12300T	3,395	$157.00*
AMD Ryzen 7 7735HS	3,394	NA
Intel Core i7-1270P	3,390	NA
Intel Core i3-1220P	3,388	$281.00*
Intel Core i5-12500TE	3,385	$205.00*
AMD Ryzen 7 5700X	3,384	$184.99
Intel Core i7-11700B @ 3.20GHz	3,374	NA
AMD Ryzen 9 5980HX	3,369	NA
AMD EPYC 9274F	3,366	NA
Intel Core i5-11600K @ 3.90GHz	3,364	$178.48
AMD Ryzen 9 6900HS Creator Edition	3,362	NA
AMD Ryzen Threadripper PRO 5965WX	3,360	$1,999.99
AMD Ryzen 5 5600X	3,359	$156.41
Intel Xeon W-11955M @ 2.60GHz	3,354	$623.00*
Intel Core i7-1260P	3,352	NA
Intel Core i7-1255U	3,352	$426.00*
Intel Core i5-11600KF @ 3.90GHz	3,349	$214.82
Intel Core i9-11900KB @ 3.30GHz	3,348	$539.00*
Intel Xeon E-2374G @ 3.70GHz	3,347	$399.99
AMD Ryzen 7 5700GE	3,346	NA
AMD Ryzen Threadripper PRO 5945WX	3,346	NA
Intel Core i3-12100T	3,339	$122.00*

AMD Ryzen 9 6900HS	3,337	NA
Intel Core i7-1265U	3,336	$426.00*
Intel Core i3-12100TE	3,334	$125.00*
Intel Core i5-13420H	3,332	$342.00*
Intel Xeon E-2356G @ 3.20GHz	3,331	$333.00*
Intel Xeon w5-3435X	3,328	$1,589.00*
AMD Ryzen 7 PRO 5750G	3,324	NA
Intel Core i7-1280P	3,320	$482.00*
AMD Ryzen 5 PRO 6650H	3,318	NA
Intel Core i9-11980HK @ 2.60GHz	3,315	$583.00*
Intel Core i9-11900T @ 1.50GHz	3,314	$439.00*
Intel Core i7-12800HE	3,313	$506.00*
AMD Ryzen 9 5900H	3,312	NA
Intel Xeon W-11865MRE @ 2.60GHz	3,310	$480.00*
Intel Xeon Gold 5415+	3,310	$1,066.00*
Intel Core i7-11700F @ 2.50GHz	3,309	$225.99
AMD Ryzen Threadripper PRO 5975WX	3,307	$2,699.99
Intel Core i5-1240P	3,307	NA
AMD Ryzen Threadripper PRO 5995WX	3,307	$5,699.99
Intel Core i5-1235U	3,306	$309.00*
AMD Ryzen 5 7535HS	3,305	NA
AMD Ryzen 7 PRO 5750GE	3,302	NA
Intel Core i5-11600 @ 2.80GHz	3,299	$247.99
Intel Pentium Gold 8505	3,298	NA
AMD Ryzen 7 6800HS Creator Edition	3,294	NA
AMD Ryzen Threadripper PRO 5955WX	3,292	$1,099.99
AMD Ryzen 7 7735U	3,289	NA
AMD Ryzen 7 5700G	3,286	$167.86
AMD Ryzen 7 6800H	3,281	NA
Intel Xeon E-2378 @ 2.60GHz	3,278	$468.81
Intel Xeon W-11855M @ 3.20GHz	3,278	$450.00*
AMD Ryzen 9 5900HS Creator Edition	3,275	NA
AMD Ryzen 7 PRO 6850HS	3,274	NA
AMD Ryzen 5 5600	3,260	$119.99
AMD Ryzen 5 6600H	3,248	NA
Intel Xeon E-2334 @ 3.40GHz	3,244	$304.99
AMD EPYC 9254	3,241	NA
AMD Ryzen 7 PRO 6850H	3,239	NA
AMD Ryzen 5 5600GE	3,235	NA
Intel Core i5-11500B @ 3.30GHz	3,231	NA
AMD Ryzen 7 5700	3,230	NA
AMD Ryzen 7 PRO 6850U	3,228	NA
AMD Ryzen 7 6800U	3,228	NA
AMD Ryzen 5 5600X3D	3,226	NA
Intel Core i5-1240U	3,224	NA
Intel Xeon E-2324G @ 3.10GHz	3,223	$269.99
AMD Ryzen 7 7730U	3,223	NA
AMD Ryzen 9 PRO 6950H	3,215	NA
AMD Ryzen 7 5800X3D	3,213	$289.55
Intel Core i9-11950H @ 2.60GHz	3,210	$556.00*
Intel Xeon E-2336 @ 2.90GHz	3,209	$347.99
AMD Ryzen 9 5900HX	3,208	NA
AMD Ryzen 7 6800HS	3,201	NA

Intel Xeon W-11555MRE @ 2.60GHz	**3,201**	$326.00*
AMD Ryzen 5 6600U	**3,198**	NA
AMD Ryzen 7 PRO 6860Z	**3,195**	NA
AMD Ryzen 3 PRO 7330U	**3,194**	NA
AMD Ryzen 5 7535U	**3,192**	NA
Intel Xeon W-1290P @ 3.70GHz	**3,192**	$649.40*
AMD Ryzen 5 5600G	**3,189**	$121.80
AMD Ryzen 9 5900HS	**3,184**	NA
AMD Ryzen 5 PRO 5650GE	**3,179**	NA