

# CPU Benchmarks

Over 1,000,000 CPUs benchmarked

## High End CPUs - Intel vs AMD

This chart comparing high end CPUs is made using thousands of [PerformanceTest](#) benchmark results and is updated daily. These are the high end AMD and Intel CPUs are typically those found in newer computers. The chart below compares the performance of Intel Xeon CPUs, Intel Core i7/i9 CPUs, AMD Ryzen/Threadripper CPUs and AMD Epyc with multiple cores. Intel processors vs AMD chips - find out which CPUs performance is best for your new gaming rig or server!

CPU Mark

Price Performance

### PassMark - CPU Mark

High End CPUs  
Updated 2nd of July 2024

CPU	CPU Mark	Price (USD)
AMD Ryzen Threadripper PRO 7995WX	154,671	\$9,999.00*
AMD Ryzen Threadripper PRO 7985WX	135,597	\$7,349.00
AMD Ryzen Threadripper 7980X	135,107	\$4,992.16
AMD EPYC 9654	122,164	\$4,695.00
AMD EPYC 9684X	120,780	\$7,987.00*
AMD EPYC 9R14	116,475	NA
AMD EPYC 9654P	113,949	\$5,987.00*
AMD EPYC 9554	111,635	\$2,600.00
AMD EPYC 9554P	109,858	\$4,450.00
AMD EPYC 9634	107,944	\$3,950.00
AMD EPYC 9474F	105,003	\$3,950.00
AMD EPYC 9754	97,836	\$7,450.00
AMD Ryzen Threadripper 7970X	97,354	\$2,399.00
AMD EPYC 9454P	96,124	\$3,250.00
AMD Ryzen Threadripper PRO 7975WX	94,612	\$3,899.00
AMD Ryzen Threadripper PRO 5995WX	93,192	\$4,799.99
AMD EPYC 7773X	91,491	\$1,950.00
Intel Xeon w9-3495X	91,358	\$5,889.00*
Intel Xeon Platinum 8470 @2.00GHz	89,850	\$9,359.00*



## CPU Benchmarks



Intel Xeon Platinum 8380 @ 2.30GHz	62,318	\$8,978.00*
AMD EPYC 4564P	62 058	NA
Intel Core i9-14900K	60,724	\$548.00
AMD EPYC 74F3	60,666	\$2,989.95
Intel Xeon Gold 6448Y	60,449	\$3,583.00*
AMD Ryzen Threadripper PRO 7955WX	60,249	NA
Intel Xeon Gold 5512U	60,187	\$1,230.00*
Intel Core i9-14900KF	60,054	\$861.21*
AMD EPYC 7513	59,285	\$1,633.64
AMD EPYC 7473X	59,280	NA
Intel Core i9-13900K	59,274	\$439.99
Intel Xeon W-3375 @ 2.50GHz	59,069	\$4,499.00*
Intel Xeon W-3365 @ 2.70GHz	59,038	\$3,851.00*
Intel Xeon w7-2495X	58,833	\$2,603.96*
Intel Xeon Gold 6421N	58,797	\$2,368.00*
Intel Core i9-13900KF	58,619	\$487.00
AMD EPYC 7642	58,248	\$946.50
AMD Ryzen 9 7945HX3D	57,796	NA
Intel Xeon Gold 5420+	57,593	\$1,848.00*
Ampere ARM - 192 Core 3200 MHz	57,444	NA
Intel Xeon Gold 6423N	57,434	\$2,161.00*
ARM Neoverse-V2 72 Core 3519 MHz	57,240	NA
AMD EPYC 7443P	57,215	\$1,385.03
Intel Xeon Gold 6414U	57,200	\$2,296.00*
Intel Xeon w7-3455	57,164	\$2,489.00*
AMD EPYC 7443	56,601	\$2,230.99*
AMD EPYC 8324P	56,482	NA
Intel Xeon Platinum 8375C @ 2.90GHz	56,202	NA
AMD EPYC 7K62	56,169	NA
AMD EPYC 9174F	55,485	\$2,950.00
AMD Ryzen Threadripper 3960X	54,878	\$1,120.00
AMD Ryzen 9 7945HX	54,719	NA
Intel Xeon Platinum 8358 @ 2.60GHz	54,416	\$5,097.75*
Intel Xeon w7-2475X	54,375	\$1,789.00*
Intel Xeon Platinum 8360Y @ 2.40GHz	54,078	\$5,383.00*
AMD Ryzen 9 7940HX	53,704	NA
Intel Core i7-14700K	53,495	\$399.99
Intel Core i7-14700KF	53,399	\$392.99
AMD EPYC 7532	53,051	\$800.00
Intel Xeon Gold 6438N	52,789	\$3,351.00*
Intel Xeon Gold 5412U	52,742	\$1,113.00*
AMD EPYC 7F72	52,597	\$941.45
Intel Xeon Gold 6348 @ 2.60GHz	52,276	\$1,899.95
AMD Ryzen 9 7900X	51,836	\$365.55
Intel Core i9-13900F	51,193	\$505.67
AMD EPYC 4484PX	51,115	NA
AMD EPYC 7552	51,104	\$1,746.96
AMD EPYC 4464P	50,814	NA
AMD EPYC 7453	50,575	\$1,521.48

ARM Neoverse-N1 128 Core 3000 MHz

43,229

NA

ARM Neoverse-N1 128 Core 2800 MHz

43,111

NA



## CPU Benchmarks



AMD EPYC 7D12

42,762

NA

Intel Xeon Gold 6312U @ 2.40GHz

42,124

\$1,809.59\*

Intel Xeon Gold 6338N @ 2.20GHz

42,086

\$4,671.69\*

AMD EPYC 7313P

42,032

\$1,204.21

Intel Xeon Gold 6426Y

41,625

\$1,517.00\*

Intel Xeon W-3275 @ 2.50GHz

41,554

\$4,894.00\*

Intel Xeon Gold 6354 @ 3.00GHz

41,445

\$2,100.00

Intel Core i9-12900K

41,430

\$297.95

Intel Core i9-12900KF

41,130

\$294.99

Apple M1 Ultra 20 Core

41,104

NA

Intel Core i7-14700T

41,029

\$384.00\*

Intel Xeon Platinum 8275CL @ 3.00GHz

40,794

NA

Apple M3 Max 16 Core

40,703

NA

Intel Xeon Gold 6416H

40,606

\$1,444.00\*

AMD Ryzen Threadripper PRO 5945WX

40,540

NA

AMD Ryzen Threadripper PRO 3955WX

40,348

\$1,450.00

AMD EPYC 7352

40,096

\$255.54

AMD EPYC 7F52

39,923

\$1,705.52

Intel Xeon W-3275M @ 2.50GHz

39,834

\$7,453.00\*

Intel Core i5-14600KF

39,484

\$292.99

Intel Xeon W-3335 @ 3.40GHz

39,293

\$1,299.00\*

Intel Core i5-14600K

39,273

\$339.99

AMD Ryzen 9 5900X

39,165

\$273.95

AMD EPYC 7313

39,091

\$968.50

Intel Core i7-13700F

38,969

\$379.99

AMD Ryzen 9 3950X

38,776

\$485.95

Intel Xeon Platinum 8180 @ 2.50GHz

38,259

\$1,750.00

AMD EPYC 7551P

38,117

\$238.00

Intel Core i7-13850HX

38,095

\$428.00\*

Intel Core i5-13600K

38,083

\$269.99

Intel Core i7-14650HX

38,075

\$495.00\*

Intel Xeon w5-2455X

37,874

\$1,127.80

Intel Core i5-13600KF

37,863

\$244.99

Intel Core i7-14700HX

37,845

\$495.00\*

Intel Xeon Gold 6346 @ 3.10GHz

37,665

\$1,964.16

Intel Xeon Gold 5320 @ 2.20GHz

37,558

\$1,545.00

Intel Xeon Gold 6238R @ 2.20GHz

37,511

\$1,635.00

Intel Core i7-13700

37,193

\$371.98

Intel Xeon W-3175X @ 3.10GHz

37,167

\$3,039.28\*

Intel Core i9-12900F

36,864

\$348.72

Intel Xeon w5-3425

36,590

\$1,189.00\*

Intel Xeon Gold 5416S

36,400

\$944.00\*

Apple M3 Max 14 Core

36,380

NA

Intel Xeon Gold 6330N @ 2.20GHz

36,360

\$2,227.27\*

Intel Xeon Gold 6248R @ 3.00GHz

36,186

\$2,288.30

AMD EPYC 8124P

36,176

NA

AMD Ryzen 7 7700X

35,940

\$269.48

Intel Core i9-9980XE @ 3.00GHz	31,988	\$1,042.00
Intel Xeon Platinum 8173M @ 2.00GHz	31,837	NA



## CPU Benchmarks ▼

Intel Core i9-13900HK	31,690	\$697.00*
AMD Ryzen 7 8700G	31,690	\$299.00
Intel Core i7-13650HX	31,667	\$485.00*
AMD Ryzen 9 PRO 3900	31,609	NA
Intel Xeon Silver 4316 @ 2.30GHz	31,341	\$995.00
AMD Ryzen 7 8700F	31,170	\$269.00
Intel Xeon Platinum 8259CL @ 2.50GHz	31,142	NA
AMD EPYC 7371	31,094	\$609.99*
Intel Xeon Gold 6254 @ 3.10GHz	31,034	\$2,160.35
Intel Core i7-12850HX	30,868	\$428.00*
Intel Xeon W-3245 @ 3.20GHz	30,824	\$2,683.99*
AMD Ryzen 9 3900	30,823	\$504.05*
Intel Core i7-12700	30,790	\$264.99
Intel Xeon W-2295 @ 3.00GHz	30,746	\$1,574.67
Intel Core i7-12700F	30,642	\$249.99
Intel Xeon Platinum 8171M @ 2.60GHz	30,632	NA
AMD Ryzen 7 PRO 8700GE	30,588	NA
AMD EPYC Embedded 7292P	30,542	NA
Intel Xeon Gold 6246R @ 3.40GHz	30,468	\$1,980.50
AMD Ryzen 9 7940HS	30,451	NA
Intel Core i9-9960X @ 3.10GHz	30,360	\$499.00
Intel Xeon Platinum 8260 @ 2.40GHz	30,347	\$2,050.00
Intel Core i9-13905H	30,252	\$697.00*
Intel Core i9-9990XE @ 4.00GHz	30,162	\$2,163.00*
Intel Core i9-7980XE @ 2.60GHz	30,130	\$979.95
Intel Xeon W-3265 @ 2.70GHz	30,105	\$4,551.37*
Intel Core i9-12900T	30,093	\$489.00*
AMD Ryzen Threadripper 2970WX	30,009	\$999.99*
Intel Xeon Platinum 8270 @ 2.70GHz	29,986	\$4,119.86
AMD EPYC 7282	29,983	\$188.00
Intel Core i7-12800HE	29,805	\$506.00*
Intel Xeon E-2488	29,795	\$606.00*
Intel Core i5-13500HX	29,739	\$326.00*
Intel Xeon Gold 6248 @ 2.50GHz	29,504	\$980.00
Intel Core i5-14600T	29,449	\$255.00*
AMD Ryzen Threadripper 2950X	29,449	\$769.19
Intel Core i7-12700E	29,384	\$344.00*
AMD Ryzen 9 8945HS	29,343	NA
Intel Xeon Silver 4314 @ 2.40GHz	29,248	\$799.99
Intel Core i9-13900H	29,055	\$617.00*
Intel Xeon w5-3423	29,024	\$1,189.00*
Intel Xeon Gold 6148 @ 2.40GHz	28,999	\$290.00
AMD Ryzen 7 7840HS	28,969	NA
Intel Core Ultra 9 185H	28,968	NA
Intel Core i5-13600HX	28,921	\$284.00*
Intel Xeon Gold 6210U @ 2.50GHz	28,915	\$1,555.12*
Intel Xeon Silver 4410T	28,859	\$624.00*

Intel Xeon Gold 6230 @ 2.10GHz	27,069	\$729.00
Intel Core i5-13600T	27,062	\$255.00*
AMD Ryzen 5 7645HX	26,868	NA
Intel Xeon W-3245M @ 3.20GHz	26,814	\$5,002.00*
AMD Ryzen 7 5700X	26,690	\$159.99
Intel Core i9-12900E	26,666	NA
Intel Xeon Platinum 8175M @ 2.50GHz	26,659	NA
AMD Ryzen 7 PRO 7840HS	26,515	NA
Apple M2 Max 12 Core 3680 MHz	26,453	NA
Apple M2 Pro 12 Core 3480 MHz	26,384	NA
Intel Xeon D-2796TE @ 2.00GHz	26,342	\$2,184.00*
AMD Ryzen 7 5700X3D	26,327	\$192.98
Intel Xeon w3-2435	26,306	\$669.00*
Intel Xeon Gold 6226R @ 2.90GHz	26,297	\$950.60
Intel Xeon Gold 6242 @ 2.80GHz	26,288	\$783.02
Intel Core i9-10920X @ 3.50GHz	26,251	\$739.00
Intel Core i7-12700H	26,229	\$457.00*
Intel Xeon W-2265 @ 3.50GHz	26,115	\$650.00
Intel Core Ultra 7 165H	26,112	NA
Intel Core i5-14400	26,098	\$239.00
Intel Core i9-7940X @ 3.10GHz	26,020	\$384.00
AMD Ryzen 7 PRO 5845	25,961	NA
Intel Xeon W-3323 @ 3.50GHz	25,875	\$949.00*
AMD EPYC 7451	25,863	\$1,787.00*
Intel Core i5-14400F	25,792	\$199.98
AMD Ryzen 7 5800	25,783	NA
AMD Ryzen 5 PRO 8600GE	25,776	NA
Intel Core i5-14400T	25,774	\$221.00*
AMD EPYC 7351P	25,657	\$300.00
Intel Xeon E5-2698R v4 @ 2.20GHz	25,605	NA



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Intel Xeon E-2468	25,579	\$426.00*
AMD EPYC 7272	25,568	\$179.95
Intel Xeon W-3235 @ 3.30GHz	25,520	\$1,998.95*
Intel Core i5-13450HX	25,502	\$326.00*
AMD Ryzen Threadripper 2920X	25,462	\$682.10
Intel Core i7-13620H	25,450	\$502.00*
Intel Xeon Gold 6152 @ 2.10GHz	25,441	\$351.31
Intel Xeon E5-2699 v4 @ 2.20GHz	25,437	\$799.99
Intel Xeon W-1390P @ 3.50GHz	25,419	NA
Intel Xeon Platinum 8167M @ 2.00GHz	25,396	NA



Intel Xeon W-1390 @ 2.80GHz	23,902	\$573.99*
Intel Xeon Gold 6122 @ 1.80GHz	23,781	\$2,002.00*



## CPU Benchmarks ▼

Intel Xeon W-11865MRE @ 2.60GHz	23,702	\$480.00*
Intel Core i9-7920X @ 2.90GHz	23,649	\$299.00
AMD Ryzen 9 6900HS	23,640	NA
AMD Ryzen 7 3800XT	23,622	\$274.99
Intel Xeon E5-2698 v4 @ 2.20GHz	23,616	\$908.70*
Intel Xeon E-2388G @ 3.20GHz	23,616	\$539.00*
AMD EPYC 7351	23,566	\$649.00*
AMD Ryzen 9 5980HX	23,564	NA
Intel Core i7-13705H	23,518	\$502.00*
AMD Ryzen 7 6800H	23,488	NA
AMD EPYC 7F32	23,453	\$2,465.51*
Qualcomm Snapdragon X Elite - X1E-84-100	23,405	NA
Intel Xeon W-2175 @ 2.50GHz	23,345	\$800.00*
Intel Xeon E-2456	23,330	\$375.00*
Intel Core i5-13500T	23,329	\$232.00*
Intel Xeon Gold 6146 @ 3.20GHz	23,296	\$883.00
Intel Xeon Platinum 8176 @ 2.10GHz	23,179	\$2,793.70*
AMD Ryzen 7 3800X	23,166	\$249.99
Intel Xeon W-1370 @ 2.90GHz	23,125	\$468.99*
AMD Ryzen Threadripper 1920X	23,100	\$209.99
Intel Core i7-13700TE	23,074	\$390.00*
AMD Ryzen 5 8645HS	23,039	NA
Intel Core i9-11900 @ 2.50GHz	22,940	\$280.20
AMD Ryzen 7 PRO 3700	22,920	\$329.99*
AMD Ryzen 7 PRO 6850H	22,908	NA
AMD Ryzen 7 6800HS	22,893	NA
Intel Core i9-11900KB @ 3.30GHz	22,890	\$539.00*
Intel Core i9-10900K @ 3.70GHz	22,885	\$430.00
Intel Core i5-13500H	22,878	NA
Intel Core i9-11980HK @ 2.60GHz	22,854	\$583.00*
Intel Core i5-12600H	22,839	\$311.00*
Qualcomm Snapdragon X Plus X1P-64-100	22,814	NA
AMD Ryzen 5 PRO 7640HS	22,778	NA
Intel Xeon E-2436	22,775	\$319.00*
Intel Core i7-11700B @ 3.20GHz	22,767	NA
Intel Core i7-12650H	22,764	\$457.00*
Qualcomm Snapdragon X Elite - X1E-78-100	22,741	NA
Qualcomm Snapdragon X Elite - X1E-80-100	22,737	NA
AMD Ryzen 5 7640HS	22,706	NA
AMD Ryzen 9 PRO 6950HS	22,697	NA
Intel Xeon Platinum P-8124 @ 3.00GHz	22,674	NA
Intel Xeon Silver 4310 @ 2.10GHz	22,642	\$406.20
Intel Core Ultra 5 125H	22,628	NA
Intel Xeon W-11955M @ 2.60GHz	22,610	\$623.00*
Intel Core i9-10900KF @ 3.70GHz	22,581	\$255.00
AMD Ryzen 9 5900HX	22,568	NA
AMD Ryzen 7 3700X	22,564	\$95.00

AMD Ryzen 7 5800HS Creator Edition

21,166

NA

Intel Xeon E-2378G @ 2.80GHz

21,153

\$599.00



## CPU Benchmarks ▼

Intel Core i9-7900X @ 3.30GHz

21,107

\$392.83

Intel Xeon E5-2697 v4 @ 2.30GHz

21,085

\$1,277.90

Intel Xeon W-2155 @ 3.30GHz

21,085

\$1,530.39\*

AMD Ryzen 7 5800H

21,060

NA

Intel Core i7-11700F @ 2.50GHz

21,041

\$257.00

Intel Core i7-7900X @ 3.30GHz

21,008

NA

Intel Xeon Silver 4310T @ 2.30GHz

20,973

\$714.36

Intel Xeon Gold 6250 @ 3.90GHz

20,915

\$3,041.48

AMD Ryzen 7 PRO 6860Z

20,863

NA

AMD Ryzen 7 PRO 6850U

20,853

NA

Intel Xeon E5-2697R v4 @ 2.30GHz

20,843

NA

Intel Xeon Gold 5315Y @ 3.20GHz

20,820

\$1,140.00

AMD Ryzen 5 PRO 5650G

20,796

NA

Intel Xeon Gold 6136 @ 3.00GHz

20,796

\$1,029.95

AMD EPYC 7262

20,795

\$433.80

Intel Xeon E5-2673 v4 @ 2.30GHz

20,709

\$95.00\*

Intel Core i5-12500E

20,699

\$225.00\*

Intel Core i9-11900H @ 2.50GHz

20,666

\$546.00\*

Intel Xeon Gold 6138T @ 2.00GHz

20,649

\$3,345.78\*

Intel Xeon D-2753NT @ 2.00GHz

20,626

NA

Intel Xeon Silver 4216 @ 2.10GHz

20,613

\$840.00

Intel Xeon W-2150B @ 3.00GHz

20,587

NA

AMD Ryzen 7 6800U

20,581

NA

Intel Core i7-11850H @ 2.50GHz

20,568

\$395.00\*

AMD Ryzen 9 5900H

20,557

NA

AMD EPYC 8024P

20,556

NA

Intel Core i7-11800H @ 2.30GHz

20,544

\$395.00\*

AMD Ryzen 7 Pro 7735U

20,516

NA

AMD Ryzen 7 PRO 4750G

20,482

\$345.85\*

Intel Core i5-12490F

20,458

\$179.00

Intel Core i7-1280P

20,450

\$482.00\*

Intel Xeon Gold 6226 @ 2.70GHz

20,429

\$1,009.34

Intel Xeon E5-2686 v4 @ 2.30GHz

20,428

NA

Intel Xeon Gold 6130 @ 2.10GHz

20,411

\$69.00

AMD Ryzen 5 5500GT

20,411

\$125.00

Intel Xeon E5-2699 v3 @ 2.30GHz

20,320

\$529.95

Intel Xeon E5-4667 v4 @ 2.20GHz

20,319

\$5,729.00\*

Intel Xeon D-1747NTE @ 2.50GHz

20,279

\$1,201.00\*

Intel Core i7-1370P

20,270

NA

ARM Neoverse-N1 64 Core 2200 MHz

20,250

NA

AMD Ryzen Embedded V3C48

20,203

NA

Intel Core i5-1250P

20,185

NA

AMD Ryzen 7 5800HS

20,139

NA

AMD Ryzen 7 4700G

20,138

\$235.12\*

Intel Core i9-9820X @ 3.30GHz

20,114

\$450.00

Intel CoreT i5-1350P

20,087

NA

Intel Xeon W-1290 @ 3.20GHz

20,071

\$588.67\*