

CPU Benchmarks

Over 1,000,000 CPUs Benchmarked

New Desktop CPU Performance

This chart comparing performance of CPUs designed for desktop machines is made using thousands of [PerformanceTest](#) benchmark results and is updated daily.

Notes:

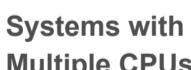
- While we try to keep this chart mainly server and laptop CPU free, there might be some rogue processors in the list.
- The chart shows only CPUs that had their benchmark first submitted within the last 36 months. Older desktop CPUs may not appear.

 CPUS
CPU Mark
Price Performance
Sorted by Date

 High End
 High Mid Range
 Low Mid Range
 Low End

 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

PassMark - CPU Mark

Desktop CPU Performance
Updated 8th of December 2022

| CPU | CPU Mark | Price (USD) |
|---|------------------------|----------------------------|
| AMD Ryzen Threadripper PRO 5995WX | 99,644 | \$6,499.00 |
| AMD Ryzen Threadripper PRO 3995WX | 83,044 | \$6,705.87 |
| AMD Ryzen Threadripper 3990X | 81,306 | \$7,282.68 |
| AMD Ryzen Threadripper PRO 5975WX | 76,501 | \$3,100.00 |
| AMD Ryzen Threadripper PRO 5965WX | 67,509 | \$2,399.00 |
| AMD Ryzen 9 7950X | 63,423 | \$573.98 |
| AMD Ryzen Threadripper PRO 3975WX | 62,916 | \$3,161.15 |
| Intel Core i9-13900KF | 60,121 | \$574.99 |
| Intel Core i9-13900K | 59,600 | \$627.42 |
| AMD Ryzen 9 7900X | 52,080 | \$439.99 |
| AMD Ryzen Threadripper PRO 5955WX | 49,780 | \$1,299.99 |
| Intel Core i7-13700K | 47,118 | \$429.99 |
| Intel Core i7-13700KF | 46,775 | \$397.98 |
| AMD Ryzen 9 5950X | 45,828 | \$498.00 |
| Intel Core i9-12900KS | 44,639 | \$502.99 |
| Intel Core i9-12900K | 41,548 | \$438.99 |
| Intel Core i9-12900KF | 41,490 | \$414.99 |
| Apple M1 Ultra 20 Core | 41,035 | NA |
| AMD Ryzen Threadripper PRO 5945WX | 40,784 | NA |
| AMD Ryzen Threadripper PRO 3955WX | 40,277 | \$1,180.00 |



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CPU Benchmarks


[Most
Benchmarked](#)

[AMD vs Intel
Market Share](#)
[Year on Year](#)
[Performance](#)

| | | |
|---|------------------------|-----------------------------|
| Intel Xeon W-3265M @ 2.70GHz | 39,618 | \$6,353.00* |
| AMD Ryzen 9 5900X | 39,290 | \$340.00 |
| Intel Core i5-13600KF | 38,072 | \$309.79 |
| Intel Core i9-12900F | 36,980 | \$488.98 |
| AMD Ryzen 7 7700X | 36,465 | \$348.99 |
| Intel Core i9-12900 | 35,373 | \$519.99 |
| Intel Core i7-12700K | 34,693 | \$409.00* |
| AMD Ryzen 9 5900 | 34,609 | NA |
| Intel Core i7-12700KE | 34,545 | \$296.98 |
| Intel Core i7-13700 | 34,431 | NA |
| AMD Ryzen 9 PRO 5945 | 34,271 | NA |
| AMD Ryzen Threadripper PRO 3945WX | 33,395 | NA |
| Intel Core i9-10980XE @ 3.00GHz | 33,080 | \$959.50 |
| AMD Ryzen 9 3900XT | 32,882 | \$399.99 |
| Intel Core i9-12900T | 31,661 | \$489.00* |
| Intel Core i7-12700F | 31,328 | \$269.99 |
| Intel Core i7-12700 | 31,179 | \$328.97 |
| Intel Core i5-13500 | 30,650 | NA |
| Intel Core i9-9990XE @ 4.00GHz | 30,162 | \$2,163.00* |
| AMD Ryzen 5 7600X | 28,690 | \$249.00 |
| Intel Core i9-10940X @ 3.30GHz | 28,297 | \$699.99 |
| Intel Core i7-12700E | 28,292 | \$344.00* |
| AMD Ryzen 7 5800X | 28,117 | \$238.00 |
| Intel Xeon W-2275 @ 3.30GHz | 27,969 | \$1,112.00* |
| Intel Core i5-12600K | 27,763 | \$258.00 |
| AMD Ryzen 7 5800X3D | 27,727 | \$329.00 |
| Intel Core i5-12600KF | 27,435 | \$228.99 |
| AMD Ryzen 7 PRO 5845 | 26,807 | NA |
| AMD Ryzen 7 5700X | 26,684 | \$199.99 |
| Intel Core i9-10920X @ 3.50GHz | 26,433 | \$612.99 |
| Intel Core i5-13400 | 26,355 | NA |
| Intel Xeon W-3323 @ 3.50GHz | 25,875 | \$949.00* |
| AMD Ryzen 7 5800 | 25,816 | NA |
| Intel Core i9-11900K @ 3.50GHz | 25,552 | \$349.99 |
| Intel Xeon W-1390P @ 3.50GHz | 25,451 | NA |
| Intel Core i9-11900KF @ 3.50GHz | 25,363 | \$319.99 |
| Intel Xeon W-1370P @ 3.60GHz | 24,961 | \$497.99 |
| Intel Core i7-11700K @ 3.60GHz | 24,658 | \$289.00 |
| AMD Ryzen 7 PRO 5750G | 24,637 | NA |
| AMD Ryzen 7 5700G | 24,581 | \$178.61 |
| AMD Ryzen 7 5700 | 24,435 | NA |
| Intel Core i7-11700KF @ 3.60GHz | 24,106 | \$259.99 |
| Intel Xeon W-1370 @ 2.90GHz | 23,908 | \$419.99 |
| AMD Ryzen 7 3800XT | 23,748 | \$289.97 |
| Intel Core i9-10900K @ 3.70GHz | 23,488 | \$339.99 |
| Intel Core i9-10900KF @ 3.70GHz | 23,136 | \$388.38 |
| Intel Core i9-11900KB @ 3.30GHz | 23,115 | \$539.00* |
| Intel Core i9-11900F @ 2.50GHz | 23,009 | \$429.98 |
| Intel Core i9-11900 @ 2.50GHz | 22,998 | \$399.99 |

 CPU Benchmarks ▼

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|---|---------------|-----------|
| Intel Core i9-10850K @ 3.60GHz | 22,837 | \$349.99 |
| Intel Core i7-11700R @ 3.20GHz | 22,636 | NA |
| AMD Ryzen 7 5700GE | 22,484 | NA |
| Intel Xeon W-2255 @ 3.70GHz | 22,301 | \$778.00* |
| Apple M1 Max 10 Core 3200 MHz | 22,212 | NA |
| AMD Ryzen 7 PRO 5750GE | 22,212 | NA |
| Intel Core i7-12700T | 22,103 | \$339.00* |
| AMD Ryzen Threadripper 1920 | 22,066 | NA |
| Apple M1 Pro 10 Core 3200 MHz | 21,996 | NA |
| AMD Ryzen 5 5600X | 21,946 | \$159.00 |
| Intel Core i9-10910 @ 3.60GHz | 21,815 | NA |
| AMD Ryzen 5 PRO 5645 | 21,762 | NA |
| AMD Ryzen 5 5600 | 21,560 | \$153.50 |
| Intel Core i5-12600 | 21,327 | \$260.00 |
| Intel Core i7-11700F @ 2.50GHz | 21,185 | \$269.99 |
| AMD Ryzen 7 PRO 4700G | 20,848 | NA |
| Intel Core i5-12490F | 20,811 | \$209.87 |
| Intel Core i9-10900E @ 2.80GHz | 20,658 | \$444.00* |
| AMD Ryzen 7 PRO 4750G | 20,596 | \$259.99 |
| Intel Core i9-10900F @ 2.80GHz | 20,588 | \$402.99 |
| Intel Core i5-12500 | 20,342 | \$202.00* |
| Intel Core i9-10900 @ 2.80GHz | 20,253 | \$451.21 |
| AMD Ryzen 7 4700GE | 20,218 | NA |
| AMD Ryzen 7 4700G | 20,216 | \$237.26 |
| AMD Ryzen 5 PRO 5650G | 20,089 | NA |
| Intel Core i7-11700 @ 2.50GHz | 20,021 | \$299.99 |
| AMD Ryzen 5 5600G | 19,851 | \$127.97 |
| Intel Core i5-11600K @ 3.90GHz | 19,759 | \$214.99 |
| Intel Core i5-12400F | 19,727 | \$166.98 |
| Intel Core i5-11600KF @ 3.90GHz | 19,712 | \$179.99 |
| Intel Core i5-12400 | 19,531 | \$192.00* |
| AMD Ryzen 5 5500 | 19,461 | \$94.96 |
| Intel Core i7-10700K @ 3.80GHz | 19,158 | \$269.98 |
| Intel Core i7-10700KF @ 3.80GHz | 19,011 | \$281.99 |
| AMD Ryzen 5 5600GE | 18,879 | NA |
| AMD Ryzen 5 3600XT | 18,724 | \$349.00 |
| AMD Ryzen 5 PRO 5650GE | 18,576 | NA |
| AMD Ryzen 7 PRO 4750GE | 18,494 | NA |
| Intel Core i9-11900T @ 1.50GHz | 18,293 | \$439.00* |
| Intel Core i5-11600 @ 2.80GHz | 18,182 | \$247.98 |
| AMD 4700S | 18,016 | NA |
| Intel Core i5-11500B @ 3.30GHz | 17,801 | NA |
| Intel Core i5-11500 @ 2.70GHz | 17,493 | \$208.00 |
| Intel Core i5-12500T | 17,294 | \$202.00* |
| Apple M1 Pro 8 Core 3200 MHz | 17,242 | NA |
| Intel Core i5-11400F @ 2.60GHz | 17,190 | \$130.00 |
| Intel Core i5-11400 @ 2.60GHz | 17,091 | \$144.83 |
| Intel Core i5-12600T | 17,074 | NA |
| Intel Core i7-10700F @ 2.90GHz | 16,972 | \$216.99 |

 CPU Benchmarks ▼

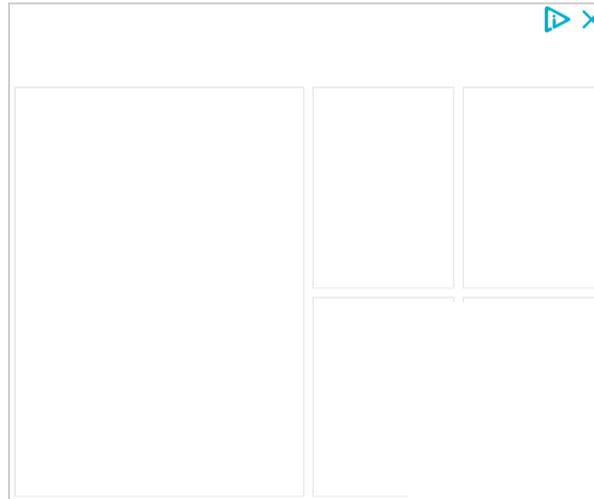
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|---|---------------|-----------|
| Intel Core i5-12400T | 16,867 | \$169.99 |
| Intel Core i7-10700 @ 2.90GHz | 16,790 | \$276.47 |
| AMD Ryzen 5 4500 | 16,087 | \$79.00 |
| Intel Core i7-11700T @ 1.40GHz | 15,646 | \$323.00* |
| AMD Ryzen 5 4600G | 15,646 | \$104.00 |
| AMD Ryzen 5 4600GE | 15,641 | NA |
| AMD Ryzen 5 PRO 4650GE | 15,608 | NA |
| Apple M2 8 Core 3500 MHz | 15,328 | NA |
| Intel Core i9-10900T @ 1.90GHz | 15,146 | \$339.99 |
| Intel Core i3-12300 | 14,924 | \$143.00* |
| Intel Core i5-11600T @ 1.70GHz | 14,713 | \$213.00* |
| Intel Core i5-10600KF @ 4.10GHz | 14,501 | \$169.99 |
| Intel Core i5-10600K @ 4.10GHz | 14,479 | \$177.53 |
| Intel Xeon W-1250P @ 4.10GHz | 14,476 | \$321.50* |
| Intel Core i3-12100F | 14,346 | \$105.99 |
| Apple M1 8 Core 3200 MHz | 14,341 | NA |
| Intel Core i3-12300T | 13,898 | \$157.00* |
| AMD Ryzen 3 PRO 5350G | 13,898 | NA |
| Intel Core i5-10600 @ 3.30GHz | 13,794 | \$209.00 |
| Intel Core i3-12100 | 13,784 | \$122.00* |
| AMD Ryzen 3 PRO 5350GE | 13,685 | NA |
| AMD Ryzen 3 5300GE | 13,636 | NA |
| Intel Core i5-11400T @ 1.30GHz | 13,262 | \$182.00* |
| Intel Core i5-11500T @ 1.50GHz | 13,160 | \$192.00* |
| AMD Ryzen 3 5300G | 13,046 | NA |
| Intel Core i7-10700T @ 2.00GHz | 13,013 | \$413.99* |
| Intel Core i5-10500 @ 3.10GHz | 12,933 | \$234.88 |
| Intel Core i3-12100T | 12,788 | \$122.00* |
| Intel Core i7-9700E @ 2.60GHz | 12,751 | \$323.00* |
| AMD Ryzen 3 3300X | 12,680 | \$235.00 |
| Intel Core i5-10400F @ 2.90GHz | 12,366 | \$128.11 |
| Intel Core i5-10505 @ 3.20GHz | 12,299 | NA |
| Intel Core i5-10400 @ 2.90GHz | 12,294 | \$134.00 |
| AMD Ryzen 3 3100 | 11,649 | \$134.99 |
| Intel Core i3-11100B @ 3.60GHz | 11,357 | NA |
| AMD Ryzen 3 PRO 4200G | 11,315 | NA |
| AMD Ryzen 3 4300GE | 11,298 | NA |
| Intel Core i5-10600T @ 2.40GHz | 11,210 | \$213.00* |
| AMD Ryzen 3 4100 | 11,105 | \$111.00 |
| AMD Ryzen 3 PRO 4350GE | 11,091 | NA |
| AMD Ryzen 3 PRO 4350G | 10,910 | NA |
| AMD Ryzen 3 4300G | 10,764 | \$148.47 |
| Intel Core i3-10325 @ 3.90GHz | 10,362 | \$190.10* |
| Intel Core i5-10500T @ 2.30GHz | 10,233 | \$192.00* |
| Intel Core i3-10320 @ 3.80GHz | 10,063 | \$139.99 |
| Intel Core i5-10400T @ 2.00GHz | 9,979 | \$182.00* |
| AMD Ryzen 5 PRO 3350GE | 9,643 | NA |
| AMD Ryzen 5 PRO 3350G | 9,363 | NA |

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|---|--------------|----------|
| AMD Ryzen 5 3350GE | 9,343 | NA |
| Intel Core i3-10300 @ 3.70GHz | 9,292 | \$169.99 |

CPU Benchmarks

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| AMD Ryzen 5 3350G | 9,102 | NA |
| AMD Ryzen 5 3400GE | 8,922 | NA |
| Intel Core i3-10100F @ 3.60GHz | 8,837 | \$75.97 |
| Intel Core i3-10100 @ 3.60GHz | 8,751 | \$102.00 |
| Intel Core i3-10105 @ 3.70GHz | 8,705 | \$111.99 |
| Intel Core i5-10300H @ 2.50GHz | 8,629 | \$250.00* |
| Intel Core i3-10100E @ 3.20GHz | 8,229 | \$125.00* |
| Intel Core i3-10300T @ 3.00GHz | 8,205 | \$193.97 |
| Intel Core i3-10305T @ 3.00GHz | 8,136 | \$143.00* |
| Intel Core i3-10105T @ 3.00GHz | 7,956 | \$122.00* |
| Intel Core i3-9350K @ 4.00GHz | 7,722 | \$293.22* |
| AMD Athlon Gold PRO 3150G | 7,702 | NA |
| AMD Ryzen 3 3200GE | 7,312 | NA |
| AMD Athlon Gold 3150G | 7,093 | NA |
| AMD Athlon Gold PRO 3150GE | 7,068 | NA |
| Intel Pentium Gold G7400 | 6,763 | \$79.99 |
| AMD Ryzen Embedded V1404I | 6,241 | NA |
| Intel Pentium Gold G7400T | 5,883 | \$64.00* |
| Intel Core i5-4470S @ 3.00GHz | 4,742 | NA |
| AMD Athlon Silver PRO 3125GE | 4,633 | NA |
| Intel Pentium Gold G6605 @ 4.30GHz | 4,526 | \$164.99 |
| Intel Celeron G6900 | 4,444 | \$84.99 |
| Intel Core i3-7101E @ 3.90GHz | 4,430 | \$117.00* |
| Intel Pentium Gold G6600 @ 4.20GHz | 4,396 | \$130.42 |
| Intel Pentium Gold G6505 @ 4.20GHz | 4,378 | \$75.00* |
| AMD Athlon 300GE | 4,301 | NA |
| Intel Celeron N5095A @ 2.00GHz | 4,290 | NA |
| AMD Athlon 320GE | 4,285 | NA |
| Intel Pentium Gold G6405 @ 4.10GHz | 4,269 | \$59.00 |
| AMD Ryzen Embedded R1606G | 4,186 | NA |
| Intel Pentium Gold G6500 @ 4.10GHz | 4,147 | \$89.99 |
| Intel Pentium Gold G6400 @ 4.00GHz | 4,132 | \$68.99 |
| Intel Pentium Gold G5620 @ 4.00GHz | 4,102 | \$120.00 |
| Intel Celeron N5095 @ 2.00GHz | 4,028 | NA |
| Intel Celeron G6900T | 4,024 | \$42.00* |
| Intel Pentium Gold G6500T @ 3.50GHz | 4,005 | \$75.00* |
| Intel Pentium Gold G6405T @ 3.50GHz | 3,746 | \$64.00* |
| Intel Pentium Gold G5600T @ 3.30GHz | 3,601 | NA |
| Intel Pentium Gold G6400T @ 3.40GHz | 3,586 | \$64.00* |
| Intel Pentium Silver J5040 @ 2.00GHz | 3,453 | NA |
| Intel Celeron J4125 @ 2.00GHz | 2,986 | NA |
| Intel Celeron G5905 @ 3.50GHz | 2,842 | \$36.99 |

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|--|--------------|-----------|
| Intel Celeron G5925 @ 3.60GHz | 2,721 | \$64.99 |
| Intel Celeron G4950 @ 3.30GHz | 2,714 | \$119.99* |
| Intel Celeron G5900T @ 3.20GHz | 2,620 | \$42.00* |
| AMD Athlon II X4 557 | 2,567 | NA |
| Intel Celeron G5920 @ 3.50GHz | 2,482 | \$53.00 |
| Intel Celeron G4930T @ 3.00GHz | 2,284 | \$42.00* |
| Intel Celeron J3455E @ 1.50GHz | 2,157 | NA |
| AMD Athlon X4 730 | 2,113 | NA |
| Intel Celeron G5905T @ 3.30GHz | 2,070 | \$42.00* |
| AMD Athlon X4 530 | 1,786 | NA |
| Intel Celeron J4025 @ 2.00GHz | 1,695 | NA |
| Intel Pentium G2120T @ 2.70GHz | 1,613 | NA |
| AMD Athlon X2 450 | 1,295 | NA |
| Intel Core i5-4470 @ 3.30GHz | 1,180 | NA |



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