

# Intel Core i9-12900

Price and performance details for the Intel Core i9-12900 can be found below. This is made using thousands of [PerformanceTest](#) benchmark results and is updated daily.

- The first graph shows the relative performance of the CPU compared to the 10 other common (single) CPUs in terms of PassMark CPU Mark.
- The 2nd graph shows the value for money, in terms of the CPUMark per dollar.
- The pricing history data shows the price for a single Processor. For multiple Processors, multiply the price shown by the number of CPUs.

🏠 CPUS

📈 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

🔍 CPU Mega List

Search Model

📄 Compare

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Intel Core i9-12900

Description: Intel UHD Graphics 770

Class: Desktop

Socket: FCLGA1700

Total Cores: 16 Cores, 24 Threads

Performance Cores: 8 Cores, 16 Threads, 2.4 GHZ Base, 5.1 GHZ Turbo

Efficient Cores: 8 Cores, 8 Threads, 1.8 GHZ Base, 3.8 GHZ Turbo

Typical TDP: 65 W

TDP Up : 202 W

Other names: 12th Gen Intel(R) Core(TM) i9-12900


CPU First Seen on Charts: Q1 2022

CPUmark/\$Price: 72.70

Overall Rank: 80

Last Price Change: [\\$503.99 USD](#) (2022-07-13)

Average CPU Mark



36639

Single Thread Rating: 4119  
Samples: 60\*  
\*[Margin for error](#): Low

+ COMPARE

CPU Test Suite Average Results for Intel Core i9-12900

Integer Math

132,347 MOps/Sec

Floating Point Math

97,032 MOps/Sec

☆

Common

Find Prime Numbers

135 Million Primes/Sec

🏠

CPU Benchmarks

▼

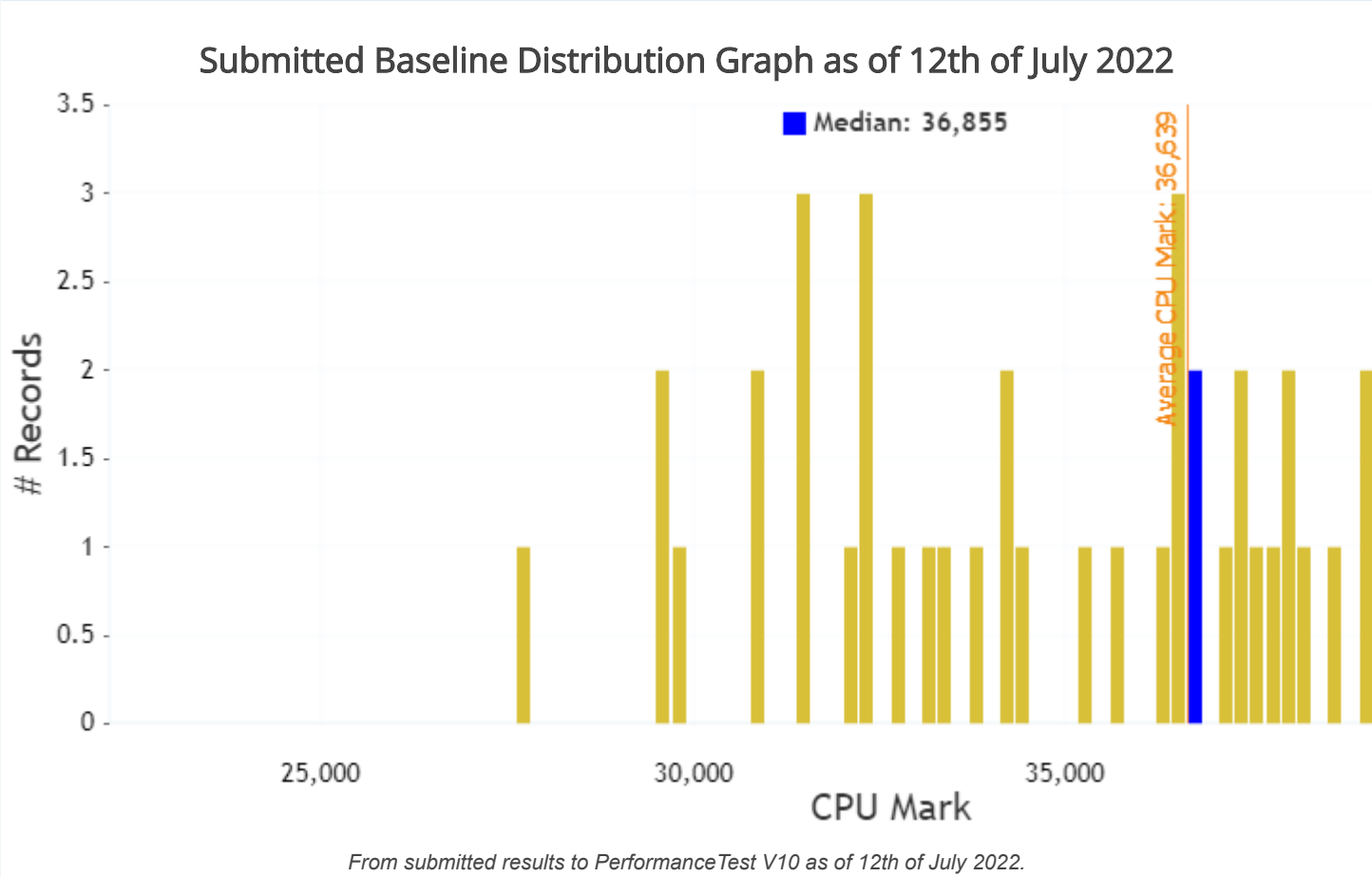
- 📈

AMD vs Intel Market Share
- 📅

Year on Year Performance

Data Encryption	25,402 MBytes/Sec
Data Compression	441.8 MBytes/Sec
Physics	1,979 Frames/Sec
Extended Instructions	27,565 Million Matrices/Sec
Single Thread	4,119 MOps/Sec
From submitted results to PerformanceTest V10 as of 14th of July 2022.	

CPU Mark Distribution for Intel Core i9-12900



Merchant	Price	Purchase
	\$503.99 USD	<a href="#">BUY NOW!</a>
	\$508.99 USD	<a href="#">BUY NOW!</a>

Note: PassMark Software may earn compensation for sales from links on this site through affiliate programs.

Pricing History

Machines with this CPU (or similar)

	<a href="#">Continuum Micro Gamer PC (Intel UHD Graphics 770, Intel 16-Core i9-12900 Processor (&gt; Ryzen 9 5950X at Gaming), 32GB RAM, 512GB NVMe + 2TB HDD, AC WiFi, Windows 11 Pro) Desktop Computer</a>	\$1299.99 <small>(www.amazon.com)</small>
	<a href="#">Empowered PC Sentinel Business PC (16 Core Intel Core i9-12900, 32GB DDR4 RAM, 512GB NVMe SSD + 2TB HDD, 500W PSU, AC WiFi, Windows 11 Pro) Tower Professional Desktop Computer</a>	\$1299.99 <small>(www.amazon.com)</small>
	<a href="#">CYBERPOWERPC Gamer Xtreme VR Gaming PC, Intel Core i9-12900KF 3.2GHz, GeForce RTX 3090 24GB, 16GB DDR4, 1TB NVMe PCIe SSD, 1TB HDD, WiFi &amp; Win 11 Home (GXIVR8080A29), Black</a>	\$4199.99 <small>(www.amazon.com)</small>
	<a href="#">Velzform Aciex 12th Gen CTO Gaming Desktop (Intel i9-12900K(Alder Lake) 16-Core, RTX 3060 12GB,360 mm AIO, 1000W PSU, 32GB DDR5 4800MHz RAM, 512GB PCIe SSD +1TB HDD, WiFi6,BT 5.2, Win11P)</a>	\$2799.00 <small>(www.amazon.com)</small>
	<a href="#">CUK MPG Velox by MSI Gaming Desktop (NVIDIA GeForce RTX 3060, Intel 16-Core i9-12900F Processor (&gt; Ryzen 9 5950X at Gaming), 32GB DDR4 RAM, 512GB NVMe SSD + 2TB HDD, W11 Home) PC Computer</a>	\$1999.99 <small>(www.amazon.com)</small>

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CPU Mark Relative to Top 10 Common Desktop CPUs

As of 15th of July 2022 - Higher results represent better performance

Processor	Average CPU Mark	
Intel Core i9-12900	<div></div>	36,639
<a href="#">AMD Ryzen 7 3700X</a>	<div></div>	<a href="#">22,726</a>
<a href="#">Apple M1 Max 10 Core 3200 MHz</a>	<div></div>	<a href="#">22,392</a>
<a href="#">Apple M1 Pro 10 Core 3200 MHz</a>	<div></div>	<a href="#">22,151</a>
<a href="#">AMD Ryzen 5 5600X</a>	<div></div>	<a href="#">22,013</a>
<a href="#">Intel Core i7-10700K @ 3.80GHz</a>	<div></div>	<a href="#">19,238</a>
<a href="#">Intel Core i9-9900K @ 3.60GHz</a>	<div></div>	<a href="#">18,662</a>
<a href="#">AMD Ryzen 5 3600</a>	<div></div>	<a href="#">17,828</a>
<a href="#">Apple M1 8 Core 3200 MHz</a>	<div></div>	<a href="#">14,575</a>
<a href="#">Intel Core i7-9700K @ 3.60GHz</a>	<div></div>	<a href="#">14,553</a>

CPU Value (CPU Mark / \$Price )

As of 15th of July 2022 - Higher results represent better value

Processor	CPU Mark / \$Price	
<a href="#">AMD Ryzen 5 3600</a>	<div></div>	<a href="#">142.63</a>
<a href="#">AMD Ryzen 5 5600X</a>	<div></div>	<a href="#">125.80</a>
<a href="#">AMD Ryzen 7 3700X</a>	<div></div>	<a href="#">73.34</a>
Intel Core i9-12900	<div></div>	72.70
<a href="#">Intel Core i7-10700K @ 3.80GHz</a>	<div></div>	<a href="#">58.48</a>
<a href="#">Intel Core i7-9700K @ 3.60GHz</a>	<div></div>	<a href="#">45.48</a>
<a href="#">Intel Core i7-8700K @ 3.70GHz</a>	<div></div>	<a href="#">44.07</a>
<a href="#">Intel Core i9-9900K @ 3.60GHz</a>	<div></div>	<a href="#">31.21</a>
<a href="#">Apple M1 8 Core 3200 MHz</a>	<div></div>	<a href="#">NA</a>
<a href="#">Apple M1 Max 10 Core 3200 MHz</a>	<div></div>	<a href="#">NA</a>
<a href="#">Apple M1 Pro 10 Core 3200 MHz</a>	<div></div>	<a href="#">NA</a>

Single Thread Rating

As of 15th of July 2022 - Higher results represent better performance

Processor	Average Thread Rating	
Intel Core i9-12900	<div></div>	4,119
<a href="#">Apple M1 Max 10 Core 3200 MHz</a>	<div></div>	<a href="#">3,848</a>
<a href="#">Apple M1 Pro 10 Core 3200 MHz</a>	<div></div>	<a href="#">3,835</a>
<a href="#">Apple M1 8 Core 3200 MHz</a>	<div></div>	<a href="#">3,755</a>
<a href="#">AMD Ryzen 5 5600X</a>	<div></div>	<a href="#">3,359</a>
<a href="#">Intel Core i7-10700K @ 3.80GHz</a>	<div></div>	<a href="#">3,072</a>
<a href="#">Intel Core i9-9900K @ 3.60GHz</a>	<div></div>	<a href="#">2,955</a>
<a href="#">Intel Core i7-9700K @ 3.60GHz</a>	<div></div>	<a href="#">2,898</a>
<a href="#">Intel Core i7-8700K @ 3.70GHz</a>	<div></div>	<a href="#">2,762</a>

	<a href="#">AMD Ryzen 7 3700X</a>	<div></div>	<a href="#">2,667</a>	
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Last 5 Baselines for Intel Core i9-12900



Most recent listed first

Baseline	CPU Mark	
<a href="#">BL1595605 - Jul 14 2022</a>	<div></div>	<a href="#">32116</a>
<a href="#">BL1595087 - Jul 13 2022</a>	<div></div>	<a href="#">31710</a>
<a href="#">BL1594874 - Jul 13 2022</a>	<div></div>	<a href="#">42423</a>
<a href="#">BL1594367 - Jul 12 2022</a>	<div></div>	<a href="#">42228</a>
<a href="#">BL1594350 - Jul 12 2022</a>	<div></div>	<a href="#">42548</a>

Popular comparisons for Intel Core i9-12900

As of 15th of July 2022 - Higher results represent better performance

Processor	Average CPU Mark	
Intel Core i9-12900	<div></div>	36,639
<a href="#">Intel Core i9-12900K</a>	<div></div>	<a href="#">41,309</a>
<a href="#">Intel Core i7-12700K</a>	<div></div>	<a href="#">34,448</a>
<a href="#">Intel Core i9-12900KF</a>	<div></div>	<a href="#">41,216</a>
<a href="#">Intel Core i9-12900F</a>	<div></div>	<a href="#">36,292</a>
<a href="#">Intel Core i9-12900T</a>	<div></div>	<a href="#">33,728</a>
<a href="#">AMD Ryzen 9 3900X</a>	<div></div>	<a href="#">32,784</a>
<a href="#">AMD Ryzen 7 5800X3D</a>	<div></div>	<a href="#">27,404</a>
<a href="#">AMD Ryzen 9 3900XT</a>	<div></div>	<a href="#">32,968</a>
<a href="#">AMD Ryzen 7 5800X</a>	<div></div>	<a href="#">28,174</a>
<a href="#">Intel Core i5-12600K</a>	<div></div>	<a href="#">27,548</a>
<a href="#">Intel Core i9-12900KS</a>	<div></div>	<a href="#">44,639</a>
<a href="#">Intel Core i7-12700KF</a>	<div></div>	<a href="#">34,260</a>

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<a href="#">MemTest86</a>	<a href="#">USB Power Delivery Tester</a>	<a href="#">RAM Benchmarks</a>			<a href="#">Social</a>
<a href="#">WirelessMon</a>	<a href="#">Serial and Parallel Loopback Plugs</a>	<a href="#">PC Systems Benchmarks</a>			 
<a href="#">Zoom Search Engine</a>	<a href="#">USB Short Circuit Testers</a>	<a href="#">Android Benchmarks</a>			
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		<a href="#">Software Marketshare</a>			
		<a href="#">Internet Bandwidth</a>			