



## Big Comparison Core i9 10900K vs. Ryzen 9 3950X Linux Benchmarks

Tests for a future article on Phoronix by Michael Larabel.

### Automated Executive Summary

*Core i9 10900K had the most wins, coming in first place for 55% of the tests.*

*Based on the geometric mean of all complete results, the fastest (Ryzen 9 3950X) was 1.014x the speed of the slowest (Core i9 10900K).*

*The results with the greatest spread from best to worst included:*

*ebizzy at 2.769x*

*CP2K Molecular Dynamics (Fayalite-FIST Data) at 2.639x*

*ParaView (Test: Wavelet Volume - Resolution: 3840 x 2160) at 2.487x*

*ParaView (Test: Wavelet Volume - Resolution: 3840 x 2160) at 2.486x*

*Cpuminer-Opt (Algorithm: m7m) at 2.057x*

*Parboil (Test: OpenMP CUTCP) at 2.052x*

*Mlpack Benchmark (Benchmark: scikit\_linearridgeregression) at 1.985x*

*GraphicsMagick (Operation: Swirl) at 1.904x*

*BLAKE2 at 1.896x*

*Facebook RocksDB (Test: Random Fill Sync) at 1.791x.*

## Test Systems:

### Core i9 10900K

Processor: Intel Core i9-10900K @ 5.30GHz (10 Cores / 20 Threads), Motherboard: Gigabyte Z490 AORUS MASTER (F3 BIOS), Chipset: Intel Comet Lake PCH, Memory: 16GB, Disk: Samsung SSD 970 EVO 250GB, Graphics: AMD Radeon RX 5600 OEM/5600 XT / 5700/5700 8GB (2060/875MHz), Audio: Realtek ALC1220, Network: Intel Device 15f3 + Intel Wi-Fi 6 AX201

OS: Ubuntu 20.04, Kernel: 5.7.0-999-generic (x86\_64) 20200519, Desktop: GNOME Shell 3.36.1, Display Server: X Server 1.20.8, Display Driver: amdgpu 19.1.0, OpenGL: 4.6 Mesa 20.0.4 (LLVM 9.0.1), Compiler: GCC 9.3.0, File-System: ext4, Screen Resolution: 3840x2160

Compiler Notes: --build=x86\_64-linux-gnu --disable-vtable-verify --disable-werror --enable-checking=release --enable-clocale=gnu --enable-default-pie --enable-gnu-unique-object --enable-languages=c,ada,c++,go,brig,d,fortran,objc,obj-c++,gm2 --enable-libstdcxx-debug --enable-libstdcxx-time=yes --enable-multiarch --enable-multilib --enable-nls --enable-objc-gc=auto --enable-offload-targets=nvptx-none,hsa --enable-plugin --enable-shared --enable-threads=posix --host=x86\_64-linux-gnu --program-prefix=x86\_64-linux-gnu- --target=x86\_64-linux-gnu --with-abi=m64 --with-arch-32=i686 --with-default-libstdcxx-abi=new --with-gcc-major-version-only --with-multilib-list=m32,m64,mx32 --with-target-system-zlib=auto --with-tune=generic --without-cuda-driver -v  
 Disk Notes: NONE / errors=remount-ro,relatime,rw  
 Processor Notes: Scaling Governor: intel\_pstate powersave - CPU Microcode: 0xc8  
 Java Notes: OpenJDK Runtime Environment (build 11.0.7+10-post-Ubuntu-3ubuntu1)  
 Python Notes: Python 2.7.18rc1 + Python 3.8.2  
 Security Notes: itlb\_multihit: KVM: Mitigation of Split huge pages + 11tf: Not affected + mds: Not affected + meltdown: Not affected + spec\_store\_bypass: Mitigation of SSB disabled via prctl and seccomp + spectre\_v1: Mitigation of usercopy/swaps barriers and \_\_user pointer sanitization + spectre\_v2: Mitigation of Enhanced IBRS IBPB: conditional RSB filling + tsx\_async\_abort: Not affected

### Ryzen 9 3950X

Processor: AMD Ryzen 9 3950X 16-Core @ 3.50GHz (16 Cores / 32 Threads), Motherboard: ASUS ROG CROSSHAIR VIII HERO (WI-FI) (1201 BIOS), Chipset: AMD Starship/Matisse, Memory: 16GB, Disk: Samsung SSD 970 EVO 250GB, Graphics: AMD Radeon RX 5600 OEM/5600 XT / 5700/5700 8GB (2060/875MHz), Audio: AMD Navi 10 HDMI Audio, Network: Realtek RTL8125 2.5GbE + Intel I211 + Intel Wi-Fi 6 AX200

OS: Ubuntu 20.04, Kernel: 5.7.0-999-generic (x86\_64) 20200519, Desktop: GNOME Shell 3.36.1, Display Server: X Server 1.20.8, Display Driver: amdgpu 19.1.0, OpenGL: 4.6 Mesa 20.0.4 (LLVM 9.0.1), Compiler: GCC 9.3.0, File-System: ext4, Screen Resolution: 3840x2160

Compiler Notes: --build=x86\_64-linux-gnu --disable-vtable-verify --disable-werror --enable-checking=release --enable-clocale=gnu --enable-default-pie --enable-gnu-unique-object --enable-languages=c,ada,c++,go,brig,d,fortran,objc,obj-c++,gm2 --enable-libstdcxx-debug --enable-libstdcxx-time=yes --enable-multiarch --enable-multilib --enable-nls --enable-objc-gc=auto --enable-offload-targets=nvptx-none,hsa --enable-plugin --enable-shared --enable-threads=posix --host=x86\_64-linux-gnu --program-prefix=x86\_64-linux-gnu- --target=x86\_64-linux-gnu --with-abi=m64 --with-arch-32=i686 --with-default-libstdcxx-abi=new --with-gcc-major-version-only --with-multilib-list=m32,m64,mx32 --with-target-system-zlib=auto --with-tune=generic --without-cuda-driver -v  
 Disk Notes: NONE / errors=remount-ro,relatime,rw  
 Processor Notes: Scaling Governor: acpi-cpufreq ondemand - CPU Microcode: 0x8701013  
 Graphics Notes: GLAMOR  
 Java Notes: OpenJDK Runtime Environment (build 11.0.7+10-post-Ubuntu-3ubuntu1)  
 Python Notes: Python 2.7.18rc1 + Python 3.8.2  
 Security Notes: itlb\_multihit: Not affected + 11tf: Not affected + mds: Not affected + meltdown: Not affected + spec\_store\_bypass: Mitigation of SSB disabled via prctl and seccomp + spectre\_v1: Mitigation of usercopy/swaps barriers and \_\_user pointer sanitization + spectre\_v2: Mitigation of Full AMD retpoline IBPB: conditional STIBP: conditional RSB filling + tsx\_async\_abort: Not affected

	Core i9 10900K	Ryzen 9 3950X
<b>IOR - Write Test (MB/s)</b>	<b>249.66</b>	<b>279.04</b>
Normalized	89.47%	100%
Standard Deviation	0.2%	1%

<b>IOR - Read Test (MB/s)</b>	<b>867.37</b>	<b>1083</b>
Normalized	80.06%	100%
Standard Deviation	4.7%	0.1%
<b>ET: Legacy - Renderer2 - 3840 x 2160 (FPS)</b>	<b>288.5</b>	<b>255.8</b>
Normalized	100%	88.67%
Standard Deviation	6.5%	1.8%
<b>Tesseract - 3840 x 2160 (FPS)</b>	<b>431.0337</b>	<b>364.8969</b>
Normalized	100%	84.66%
Standard Deviation	2.8%	1.1%
<b>Unigine Heaven - 1920 x 1080 - Windowed - OpenGL (FPS)</b>	<b>160.184</b>	<b>158.578</b>
Normalized	100%	99%
Standard Deviation	0.1%	0.2%
<b>Unigine Superposition - 1920 x 1080 - Windowed - Low - OpenGL (FPS)</b>	<b>229.3</b>	<b>176.2</b>
Normalized	100%	76.84%
Standard Deviation	0.5%	0.1%
<b>Unigine Superposition - 1920 x 1080 - Windowed - High - OpenGL (FPS)</b>	<b>77.7</b>	<b>82.2</b>
Normalized	94.53%	100%
Standard Deviation	0.3%	0.1%
<b>Unigine Superposition - 1920 x 1080 - Windowed - Ultra - OpenGL (FPS)</b>	<b>34.3</b>	<b>34.3</b>
Standard Deviation	0.2%	0.2%
<b>Unigine Superposition - 1920 x 1080 - Windowed - Medium - OpenGL (FPS)</b>	<b>113.6</b>	<b>118.2</b>
Normalized	96.11%	100%
Standard Deviation	0.8%	0%
<b>Unigine Valley - 1920 x 1080 - Windowed - OpenGL (FPS)</b>	<b>176.703</b>	<b>160.954</b>
Normalized	100%	91.09%
Standard Deviation	0.4%	0.3%
<b>Xonotic - 3840 x 2160 - Low (FPS)</b>	<b>532.2734013</b>	<b>544.3905119</b>
Normalized	97.77%	100%
Standard Deviation	0.7%	0.5%
<b>Xonotic - 3840 x 2160 - High (FPS)</b>	<b>438.9449334</b>	<b>442.1980742</b>
Normalized	99.26%	100%
Standard Deviation	0.5%	0.5%
<b>Xonotic - 3840 x 2160 - Ultra (FPS)</b>	<b>398.0959725</b>	<b>393.3117643</b>
Normalized	100%	98.8%
Standard Deviation	0.5%	0.4%
<b>Xonotic - 3840 x 2160 - Ultimate (FPS)</b>	<b>318.7844013</b>	<b>308.6831229</b>
Normalized	100%	96.83%
Standard Deviation	0.5%	0.1%
<b>ParaView - Many Spheres - 3840 x 2160 (Frames / Sec)</b>	<b>63.28</b>	<b>65.30</b>
Normalized	96.91%	100%
Standard Deviation	4.6%	0.4%
<b>ParaView - Many Spheres - 3840 x 2160 (MiPolys / Sec)</b>	<b>6344</b>	<b>6547</b>
Normalized	96.91%	100%
Standard Deviation	4.6%	0.4%
<b>ParaView - Wavelet Volume - 3840 x 2160 (Frames / Sec)</b>	<b>81.60</b>	<b>202.90</b>
Normalized	40.22%	100%
Standard Deviation	2.2%	4.1%

<b>ParaView - Wavelet Volume - 3840 x 2160 (MiVoxels / Sec)</b>	<b>1306</b>	<b>3246</b>
Normalized	40.22%	100%
Standard Deviation	2.2%	4.1%
<b>ParaView - Wavelet Contour - 3840 x 2160 (Frames / Sec)</b>	<b>188.23</b>	<b>189.67</b>
Normalized	99.24%	100%
Standard Deviation	1.9%	1.3%
<b>ParaView - Wavelet Contour - 3840 x 2160 (MiPolys / Sec)</b>	<b>1962</b>	<b>1977</b>
Normalized	99.24%	100%
Standard Deviation	1.9%	1.3%
<b>Socketperf - Throughput (Messages/sec)</b>	<b>639629</b>	<b>590729</b>
Normalized	100%	92.35%
Standard Deviation	1.6%	3.5%
<b>Socketperf - Latency Ping Pong (usec)</b>	<b>3.222</b>	<b>3.835</b>
Normalized	100%	84.02%
Standard Deviation	1.3%	2.4%
<b>Socketperf - Latency Under Load (usec)</b>	<b>17.423</b>	<b>14.949</b>
Normalized	85.8%	100%
Standard Deviation	20.1%	27.8%
<b>C-Blosc - blosclz (MB/s)</b>	<b>10910</b>	<b>11288</b>
Normalized	96.65%	100%
Standard Deviation	0.3%	0.2%
<b>IPC_benchmark - TCP Socket - 4096 (Messages/sec)</b>	<b>1575932</b>	<b>1445302</b>
Normalized	100%	91.71%
Standard Deviation	0.5%	0.8%
<b>IPC_benchmark - Unnamed Pipe - 4096</b>	<b>1460097</b>	<b>2268105</b>
Normalized	64.38%	100%
Standard Deviation	0.8%	0.6%
<b>IPC_benchmark - FIFO Named Pipe - 4096 (Messages/sec)</b>	<b>1462821</b>	<b>2260588</b>
Normalized	64.71%	100%
Standard Deviation	0.4%	1.3%
<b>IPC_benchmark - U.U.D.S - 4096 (Messages/sec)</b>	<b>1260891</b>	<b>1088654</b>
Normalized	100%	86.34%
Standard Deviation	0.6%	1.1%
<b>Crypto++ - All Algorithms (MiB/s)</b>	<b>1962</b>	<b>1784</b>
Normalized	100%	90.95%
Standard Deviation	0%	0.1%
<b>Crypto++ - Keyed Algorithms (MiB/s)</b>	<b>789.168824</b>	<b>697.187580</b>
Normalized	100%	88.34%
Standard Deviation	0%	0.3%
<b>Crypto++ - Unkeyed Algorithms (MiB/s)</b>	<b>407.907548</b>	<b>389.039005</b>
Normalized	100%	95.37%
Standard Deviation	0%	0.2%
<b>Crypto++ - I.E.C.P.K.A (MiB/s)</b>	<b>6378</b>	<b>5494</b>
Normalized	100%	86.15%
Standard Deviation	0.1%	2.5%
<b>High Performance Conjugate Gradient (GFLOP/s)</b>	<b>4.36353</b>	<b>4.58602</b>
Normalized	95.15%	100%
Standard Deviation	0.3%	0%
<b>NAS Parallel Benchmarks - BT.C (Mop/s)</b>	<b>26329</b>	<b>22727</b>
Normalized	100%	86.32%
Standard Deviation	0.1%	0.2%

NAS Parallel Benchmarks - EP.C (Mop/s)	<b>1829</b>	<b>1077</b>
Normalized	100%	58.91%
Standard Deviation	0.4%	0.1%
NAS Parallel Benchmarks - EP.D (Mop/s)	<b>1792</b>	<b>1071</b>
Normalized	100%	59.75%
Standard Deviation	2.8%	0.2%
NAS Parallel Benchmarks - FT.C (Mop/s)	<b>11106</b>	<b>11558</b>
Normalized	96.09%	100%
Standard Deviation	0.1%	0%
NAS Parallel Benchmarks - MG.C (Mop/s)	<b>11256</b>	<b>10836</b>
Normalized	100%	96.27%
Standard Deviation	0.4%	0.1%
NAS Parallel Benchmarks - SP.B (Mop/s)	<b>5284</b>	<b>8390</b>
Normalized	62.97%	100%
Standard Deviation	0.2%	0.1%
LeelaChessZero - BLAS (Nodes/s)	<b>378</b>	<b>380</b>
Normalized	99.47%	100%
Standard Deviation	0.7%	2.9%
LeelaChessZero - Eigen (Nodes/s)	<b>607</b>	<b>400</b>
Normalized	100%	65.9%
Standard Deviation	2.6%	1.8%
LeelaChessZero - Rand (Nodes/s)	<b>231501</b>	<b>185500</b>
Normalized	100%	80.13%
Standard Deviation	0.4%	0%
Parboil - OpenMP LBM (sec)	<b>165.151103</b>	<b>160.964244</b>
Normalized	97.46%	100%
Standard Deviation	0%	0.1%
Parboil - OpenMP CUTCP (sec)	<b>2.718560</b>	<b>1.324664</b>
Normalized	48.73%	100%
Standard Deviation	0.1%	0.5%
Parboil - OpenMP Stencil (sec)	<b>16.403124</b>	<b>15.106023</b>
Normalized	92.09%	100%
Standard Deviation	1.1%	0.8%
Parboil - O.M.G (sec)	<b>54.937194</b>	<b>31.274319</b>
Normalized	56.93%	100%
Standard Deviation	6.5%	0.7%
CP2K Molecular Dynamics - Fayalite-FIST Data (sec)	<b>855.403</b>	<b>324.193</b>
Normalized	37.9%	100%
Rodinia - OpenMP LavaMD (sec)	<b>21.053</b>	<b>14.967</b>
Normalized	71.09%	100%
Standard Deviation	0.8%	0.2%
Rodinia - OpenMP CFD Solver (sec)	<b>18.283</b>	<b>10.914</b>
Normalized	59.69%	100%
Standard Deviation	0.2%	0.3%
Rodinia - O.S (sec)	<b>17.306</b>	<b>25.517</b>
Normalized	100%	67.82%
Standard Deviation	0.1%	0.3%
NAMD - ATPase Simulation - 327,506 Atoms (days/ns)	<b>1.20434</b>	<b>1.11719</b>
Normalized	92.76%	100%
Standard Deviation	0.4%	0.3%
Nebular Empirical Analysis Tool (sec)	<b>13.970</b>	<b>12.957</b>
Normalized	92.75%	100%
Standard Deviation	0.1%	0.9%
Polyhedron Fortran Benchmarks - ac (sec)	<b>4.34</b>	<b>5.89</b>
Normalized	100%	73.68%

<b>Polyhedron Fortran Benchmarks - air (sec)</b>	<b>1.95</b>	<b>1.62</b>
Normalized	83.08%	100%
<b>Polyhedron Fortran Benchmarks - mdbx (sec)</b>	<b>3.87</b>	<b>4.27</b>
Normalized	100%	90.63%
<b>Polyhedron Fortran Benchmarks - doduc (sec)</b>	<b>6.13</b>	<b>6.56</b>
Normalized	100%	93.45%
<b>Polyhedron Fortran Benchmarks - linpk (sec)</b>	<b>2.31</b>	<b>3.05</b>
Normalized	100%	75.74%
<b>Polyhedron Fortran Benchmarks - aermod (sec)</b>	<b>4.57</b>	<b>5.49</b>
Normalized	100%	83.24%
<b>Polyhedron Fortran Benchmarks - rnflow (sec)</b>	<b>12.58</b>	<b>15</b>
Normalized	100%	83.87%
<b>Polyhedron Fortran Benchmarks - induct2 (sec)</b>	<b>14.45</b>	<b>21.35</b>
Normalized	100%	67.68%
<b>Polyhedron Fortran Benchmarks - protein (sec)</b>	<b>11.62</b>	<b>12.37</b>
Normalized	100%	93.94%
<b>Polyhedron Fortran Benchmarks - channel2 (sec)</b>	<b>43.45</b>	<b>42.71</b>
Normalized	98.3%	100%
<b>Polyhedron Fortran Benchmarks - fatigue2 (sec)</b>	<b>36.69</b>	<b>46.89</b>
Normalized	100%	78.25%
<b>Polyhedron Fortran Benchmarks - gas_dyn2 (sec)</b>	<b>39.99</b>	<b>41.78</b>
Normalized	100%	95.72%
<b>Polyhedron Fortran Benchmarks - test_fpu2 (sec)</b>	<b>28.67</b>	<b>26.44</b>
Normalized	92.22%	100%
<b>Polyhedron Fortran Benchmarks - mp_prop_design</b>	<b>49.13</b>	<b>53.27</b>
Normalized	100%	92.23%
<b>toyBrot Fractal Generator - TBB (ms)</b>	<b>79924</b>	<b>46547</b>
Normalized	58.24%	100%
Standard Deviation	1.5%	1.1%
<b>toyBrot Fractal Generator - OpenMP (ms)</b>	<b>80088</b>	<b>47670</b>
Normalized	59.52%	100%
Standard Deviation	0%	0.7%
<b>toyBrot Fractal Generator - C++ Tasks (ms)</b>	<b>79172</b>	<b>46370</b>
Normalized	58.57%	100%
Standard Deviation	0.1%	0.3%
<b>toyBrot Fractal Generator - C++ Threads (ms)</b>	<b>79413</b>	<b>46331</b>
Normalized	58.34%	100%
Standard Deviation	0.1%	0.3%
<b>Izbench - XZ 0 - Compression (MB/s)</b>	<b>51</b>	<b>43</b>
Normalized	100%	84.31%
Standard Deviation		2.7%
<b>Izbench - XZ 0 - Decompression (MB/s)</b>	<b>138</b>	<b>136</b>
Normalized	100%	98.55%
<b>Izbench - Zstd 1 - Compression (MB/s)</b>	<b>615</b>	<b>568</b>
Normalized	100%	92.36%
Standard Deviation		1.3%
<b>Izbench - Zstd 1 - Decompression (MB/s)</b>	<b>1776</b>	<b>1563</b>
Normalized	100%	88.01%
Standard Deviation	0.3%	1%
<b>Izbench - Zstd 8 - Compression (MB/s)</b>	<b>104</b>	<b>111</b>
Normalized	93.69%	100%
Standard Deviation		0.9%
<b>Izbench - Zstd 8 - Decompression (MB/s)</b>	<b>1884</b>	<b>1714</b>
Normalized	100%	90.98%

	Standard Deviation	0.2%	0.5%
Izbench - Crush 0 - Compression (MB/s)		<b>131</b>	<b>114</b>
	Normalized	100%	87.02%
	Standard Deviation		1%
Izbench - Crush 0 - Decompression (MB/s)		<b>612</b>	<b>529</b>
	Normalized	100%	86.44%
	Standard Deviation	0.2%	0.3%
Izbench - Brotli 0 - Compression (MB/s)		<b>543</b>	<b>555</b>
	Normalized	97.84%	100%
	Standard Deviation	0.2%	0.4%
Izbench - Brotli 0 - Decompression (MB/s)		<b>783</b>	<b>661</b>
	Normalized	100%	84.42%
	Standard Deviation	0.1%	
Izbench - Brotli 2 - Compression (MB/s)		<b>233</b>	<b>222</b>
	Normalized	100%	95.28%
Izbench - Brotli 2 - Decompression (MB/s)		<b>908</b>	<b>780</b>
	Normalized	100%	85.9%
	Standard Deviation	0.1%	0.5%
Izbench - Libdeflate 1 - Compression (MB/s)		<b>290</b>	<b>271</b>
	Normalized	100%	93.45%
	Standard Deviation	0.4%	
Izbench - Libdeflate 1 - Decompression (MB/s)		<b>1482</b>	<b>1298</b>
	Normalized	100%	87.58%
SMHasher - wyhash (MiB/sec)		18893	
	Standard Deviation	1.7%	
SMHasher - wyhash (cycles/hash)		24.548	
	Standard Deviation	0%	
SMHasher - MeowHash (MiB/sec)		40765	
	Standard Deviation	0.3%	
SMHasher - MeowHash (cycles/hash)		51.813	
	Standard Deviation	0.2%	
SMHasher - Spooky32 (MiB/sec)		15361	
	Standard Deviation	1.8%	
SMHasher - Spooky32 (cycles/hash)		41.073	
	Standard Deviation	0%	
SMHasher - fasthash32 (MiB/sec)		7843	
	Standard Deviation	0.1%	
SMHasher - fasthash32 (cycles/hash)		31.994	
	Standard Deviation	0%	
SMHasher - t1ha2_atonce (MiB/sec)		17288	
	Standard Deviation	0.8%	
SMHasher - t1ha2_atonce (cycles/hash)		32.065	
	Standard Deviation	0%	
SMHasher - t1ha0_aes_avx2 (MiB/sec)		46159	
	Standard Deviation	2.9%	
SMHasher - t1ha0_aes_avx2 (cycles/hash)		32.315	
	Standard Deviation	0.1%	
Algebraic Multi-Grid Benchmark (Figure Of Merit)		<b>23127</b>	<b>26110</b>
	Normalized	88.57%	100%
	Standard Deviation	1.4%	0%
FFTW - Stock - 2D FFT Size 4096 (Mflops)		<b>6969</b>	<b>6458</b>
	Normalized	100%	92.66%
	Standard Deviation	0.6%	0.5%
FFTW - Float + SSE - 2D FFT Size 4096 (Mflops)		<b>27489</b>	<b>21239</b>

	Normalized	100%	77.26%
	Standard Deviation	1.6%	
<b>Pennant - sedovbig (Hydro Cycle Time - sec)</b>		<b>4228</b>	<b>4298</b>
	Normalized	100%	98.38%
	Standard Deviation	0.1%	0%
<b>Pennant - leblancbig (Hydro Cycle Time - sec)</b>		<b>3918</b>	<b>4113</b>
	Normalized	100%	95.26%
	Standard Deviation	0.3%	0%
<b>Timed MrBayes Analysis - P.P.A (sec)</b>		<b>63.719</b>	<b>70.989</b>
	Normalized	100%	89.76%
	Standard Deviation	0.1%	0.6%
<b>NWChem - C240 Buckyball (sec)</b>		<b>12612</b>	<b>9795</b>
	Normalized	77.66%	100%
<b>Timed HMMer Search - P.D.S (sec)</b>		<b>4.281</b>	<b>5.086</b>
	Normalized	100%	84.17%
	Standard Deviation	0.4%	1.6%
<b>LULESH (z/s)</b>		<b>11.960647</b>	<b>9.8209433</b>
	Normalized	100%	82.11%
	Standard Deviation	1.6%	0.1%
<b>BLAKE2 (Cycles/Byte)</b>		<b>4.03</b>	<b>7.64</b>
	Normalized	100%	52.75%
	Standard Deviation	0%	0.6%
<b>libgav1 - Chimera 1080p (FPS)</b>		<b>83.73</b>	<b>51.13</b>
	Normalized	100%	61.07%
	Standard Deviation	8.7%	0%
<b>libgav1 - Summer Nature 4K (FPS)</b>		<b>34.85</b>	<b>24.18</b>
	Normalized	100%	69.38%
	Standard Deviation	1.3%	0.2%
<b>libgav1 - S.N.1 (FPS)</b>		<b>135.37</b>	<b>78.41</b>
	Normalized	100%	57.92%
	Standard Deviation	0.6%	0.1%
<b>libgav1 - C.1.1.b (FPS)</b>		<b>31.25</b>	<b>21.19</b>
	Normalized	100%	67.81%
	Standard Deviation	0.3%	0.3%
<b>Go Benchmarks - json (ns/op)</b>		<b>3100011</b>	<b>2321631</b>
	Normalized	74.89%	100%
	Standard Deviation	0.6%	0.1%
<b>Go Benchmarks - garbage (ns/op)</b>		<b>788879</b>	<b>750702</b>
	Normalized	95.16%	100%
	Standard Deviation	0.4%	0.7%
<b>Java SciMark - Composite (Mflops)</b>		<b>3053</b>	<b>3116</b>
	Normalized	97.98%	100%
	Standard Deviation	0.5%	2%
<b>Java SciMark - Monte Carlo (Mflops)</b>		<b>1259</b>	<b>1753</b>
	Normalized	71.8%	100%
	Standard Deviation	0%	1.7%
<b>Java SciMark - F.F.T (Mflops)</b>		<b>1930</b>	<b>2134</b>
	Normalized	90.45%	100%
	Standard Deviation	0.9%	2.1%
<b>Java SciMark - S.M.M (Mflops)</b>		<b>2780</b>	<b>2784</b>
	Normalized	99.85%	100%
	Standard Deviation	0.3%	1.8%
<b>Java SciMark - D.L.M.F (Mflops)</b>		<b>7302</b>	<b>6835</b>
	Normalized	100%	93.6%
	Standard Deviation	1%	2.9%

<b>Java SciMark - J.S.O.R (Mflops)</b>	<b>1994</b>	<b>2074</b>
Normalized	96.15%	100%
Standard Deviation	0.1%	1.4%
<b>Bork File Encrypter - F.E.T (sec)</b>	<b>5.124</b>	<b>8.578</b>
Normalized	100%	59.73%
Standard Deviation	1.5%	2.9%
<b>Java Gradle Build - Reactor (sec)</b>	<b>188.102</b>	<b>251.425</b>
Normalized	100%	74.81%
Standard Deviation	2.8%	4%
<b>DaCapo Benchmark - H2 (msec)</b>	<b>2615</b>	<b>3293</b>
Normalized	100%	79.41%
Standard Deviation	8.2%	1.7%
<b>DaCapo Benchmark - Jython (msec)</b>	<b>3319</b>	<b>4010</b>
Normalized	100%	82.77%
Standard Deviation	0.8%	
<b>DaCapo Benchmark - Tradesoap (msec)</b>	<b>2889</b>	<b>3442</b>
Normalized	100%	83.93%
Standard Deviation	1.4%	1.5%
<b>DaCapo Benchmark - Tradebeans (msec)</b>	<b>2478</b>	<b>4064</b>
Normalized	100%	60.97%
Standard Deviation	3.4%	0.9%
<b>Renaissance - Scala Dotty (ms)</b>	<b>1339</b>	<b>1368</b>
Normalized	100%	97.93%
Standard Deviation	2.3%	2.3%
<b>Renaissance - Rand Forest (ms)</b>	<b>1465</b>	<b>1816</b>
Normalized	100%	80.72%
Standard Deviation	1.8%	4.1%
<b>Renaissance - Apache Spark ALS (ms)</b>	<b>1654</b>	<b>1950</b>
Normalized	100%	84.84%
Standard Deviation	1.4%	0.8%
<b>Renaissance - Apache Spark Bayes (ms)</b>	<b>1704</b>	<b>2728</b>
Normalized	100%	62.47%
Standard Deviation	3%	19.6%
<b>Renaissance - Savina Reactors.IO (ms)</b>	<b>15777</b>	<b>10636</b>
Normalized	67.41%	100%
Standard Deviation	2%	6.1%
<b>Renaissance - A.S.P (ms)</b>	<b>2895</b>	<b>3302</b>
Normalized	100%	87.68%
Standard Deviation	2%	6.7%
<b>Renaissance - T.H.R (ms)</b>	<b>2004</b>	<b>2094</b>
Normalized	100%	95.69%
Standard Deviation	1.3%	0.9%
<b>Renaissance - I.M.D.S (ms)</b>	<b>2968</b>	<b>3622</b>
Normalized	100%	81.95%
Standard Deviation	12.2%	1.3%
<b>Renaissance - A.U.C.T (ms)</b>	<b>9185</b>	<b>11097</b>
Normalized	100%	82.77%
Standard Deviation	3.8%	1.8%
<b>Renaissance - G.A.U.J.F (ms)</b>	<b>1249</b>	<b>1725</b>
Normalized	100%	72.43%
Standard Deviation	4%	1.8%
<b>Fhourstones - C.C.4.S (Kpos / sec)</b>	<b>17312</b>	<b>14987</b>
Normalized	100%	86.57%
Standard Deviation	0.1%	0.2%
<b>CacheBench - Read (MB/s)</b>	<b>4322</b>	<b>3052</b>

	Normalized	100%	70.62%
	Standard Deviation	0%	2.9%
<b>CacheBench - Write (MB/s)</b>		<b>36212</b>	<b>31703</b>
	Normalized	100%	87.55%
	Standard Deviation	0%	0.3%
<b>CacheBench - R.M.W (MB/s)</b>		<b>55906</b>	<b>61492</b>
	Normalized	90.92%	100%
	Standard Deviation	0%	0.6%
<b>Nettle - aes256 (Mbyte/s)</b>		<b>8094</b>	<b>6114</b>
	Normalized	100%	75.54%
	Standard Deviation	0%	0.1%
<b>Nettle - chacha (Mbyte/s)</b>		<b>1360</b>	<b>992.023</b>
	Normalized	100%	72.96%
	Standard Deviation	0%	0.1%
<b>Nettle - sha512 (Mbyte/s)</b>		<b>639.74</b>	<b>640.16</b>
	Normalized	99.93%	100%
	Standard Deviation	0.4%	2.9%
<b>Nettle - poly1305-aes (Mbyte/s)</b>		<b>3726</b>	<b>2711</b>
	Normalized	100%	72.77%
	Standard Deviation	0.3%	0.2%
<b>Botan - KASUMI (MiB/s)</b>		<b>115.381</b>	<b>101.025</b>
	Normalized	100%	87.56%
	Standard Deviation	0.3%	0.3%
<b>Botan - AES-256 (MiB/s)</b>		<b>4925</b>	<b>5865</b>
	Normalized	83.98%	100%
	Standard Deviation	0%	0.1%
<b>Botan - Twofish (MiB/s)</b>		<b>446.240</b>	<b>393.003</b>
	Normalized	100%	88.07%
	Standard Deviation	0.3%	0.1%
<b>Botan - Blowfish (MiB/s)</b>		<b>556.522</b>	<b>479.252</b>
	Normalized	100%	86.12%
	Standard Deviation	0.1%	0.1%
<b>Botan - CAST-256 (MiB/s)</b>		<b>175.908</b>	<b>156.180</b>
	Normalized	100%	88.79%
	Standard Deviation	0.1%	0.2%
<b>TSCP - A.C.P (Nodes/s)</b>		<b>1623785</b>	<b>1320223</b>
	Normalized	100%	81.31%
	Standard Deviation	0.5%	0.7%
<b>John The Ripper - Blowfish (Real C/S)</b>		<b>23257</b>	<b>27740</b>
	Normalized	83.84%	100%
	Standard Deviation	0%	0.4%
<b>John The Ripper - MD5 (Real C/S)</b>		<b>1383667</b>	<b>1771667</b>
	Normalized	78.1%	100%
	Standard Deviation	0%	0.2%
<b>GraphicsMagick - Swirl (Iterations/min)</b>		<b>529</b>	<b>1007</b>
	Normalized	52.53%	100%
	Standard Deviation	0.2%	0.1%
<b>GraphicsMagick - Rotate (Iterations/min)</b>		<b>888</b>	<b>730</b>
	Normalized	100%	82.21%
	Standard Deviation		2.9%
<b>GraphicsMagick - Sharpen (Iterations/min)</b>		<b>175</b>	<b>248</b>
	Normalized	70.56%	100%
	Standard Deviation		0.2%
<b>GraphicsMagick - Enhanced (Iterations/min)</b>		<b>269</b>	<b>400</b>
	Normalized	67.25%	100%

GraphicsMagick - Resizing (Iterations/min)	<b>1266</b>	<b>1774</b>
Normalized	71.36%	100%
Standard Deviation	0.2%	0.2%
GraphicsMagick - Noise-Gaussian (Iterations/min)	<b>317</b>	<b>455</b>
Normalized	69.67%	100%
Standard Deviation	0.2%	
GraphicsMagick - HWB Color Space (Iterations/min)	<b>1219</b>	<b>1507</b>
Normalized	80.89%	100%
Standard Deviation	0.2%	0.3%
oneDNN MKL-DNN - IP Batch 1D - f32 (ms)	<b>3.30905</b>	<b>4.58909</b>
Normalized	100%	72.11%
Standard Deviation	0.6%	0.1%
oneDNN MKL-DNN - IP Batch All - f32 (ms)	<b>56.9110</b>	<b>50.1698</b>
Normalized	88.15%	100%
Standard Deviation	0.2%	0.3%
oneDNN MKL-DNN - IP Batch 1D - u8s8f32 (ms)	<b>1.17466</b>	<b>1.34228</b>
Normalized	100%	87.51%
Standard Deviation	0%	0.2%
oneDNN MKL-DNN - IP Batch All - u8s8f32 (ms)	<b>19.0225</b>	<b>19.8851</b>
Normalized	100%	95.66%
Standard Deviation	0.1%	0.2%
oneDNN MKL-DNN - D.B.d - f32 (ms)	<b>3.03768</b>	<b>2.55517</b>
Normalized	84.12%	100%
Standard Deviation	0.2%	0.4%
oneDNN MKL-DNN - D.B.d - f32 (ms)	<b>4.76923</b>	<b>4.37431</b>
Normalized	91.72%	100%
Standard Deviation	0.3%	0.3%
oneDNN MKL-DNN - D.B.d - u8s8f32 (ms)	<b>121.267</b>	<b>69.5926</b>
Normalized	57.39%	100%
Standard Deviation	9.8%	0.1%
oneDNN MKL-DNN - D.B.d - u8s8f32 (ms)	<b>2.23525</b>	<b>2.63474</b>
Normalized	100%	84.84%
Standard Deviation	0.4%	0.2%
oneDNN MKL-DNN - R.N.N.T - f32 (ms)	<b>169.855</b>	<b>190.560</b>
Normalized	100%	89.13%
Standard Deviation	0.9%	0.3%
oneDNN MKL-DNN - R.N.N.I - f32 (ms)	<b>28.0154</b>	<b>26.6223</b>
Normalized	95.03%	100%
Standard Deviation	0.1%	0.2%
dav1d - Chimera 1080p (FPS)	<b>700.92</b>	<b>519.76</b>
Normalized	100%	74.15%
Standard Deviation	0.1%	0.5%
dav1d - Summer Nature 4K (FPS)	<b>177.43</b>	<b>187.35</b>
Normalized	94.71%	100%
Standard Deviation	0.1%	0.5%
dav1d - S.N.1 (FPS)	<b>671.39</b>	<b>547.69</b>
Normalized	100%	81.58%
Standard Deviation	0.2%	0.3%
dav1d - C.1.1.b (FPS)	<b>131.44</b>	<b>113.65</b>
Normalized	100%	86.47%
Standard Deviation	0.1%	0.4%
TTSIOD 3D Renderer - P.R.W.S.S.M (FPS)	<b>706.616</b>	<b>834.379</b>
Normalized	84.69%	100%
Standard Deviation	0.2%	0.2%
AOM AV1 - Speed 0 Two-Pass (FPS)	<b>0.35</b>	<b>0.34</b>

	Normalized	100%	97.14%
	Standard Deviation	1.6%	0%
<b>AOM AV1 - Speed 4 Two-Pass (FPS)</b>		<b>2.93</b>	<b>2.71</b>
	Normalized	100%	92.49%
	Standard Deviation	0.4%	0.2%
<b>AOM AV1 - Speed 6 Realtime (FPS)</b>		<b>25.31</b>	<b>19.22</b>
	Normalized	100%	75.94%
	Standard Deviation	0.8%	0.7%
<b>AOM AV1 - Speed 6 Two-Pass (FPS)</b>		<b>4.66</b>	<b>4.16</b>
	Normalized	100%	89.27%
	Standard Deviation	0.3%	0.8%
<b>AOM AV1 - Speed 8 Realtime (FPS)</b>		<b>49.01</b>	<b>38.24</b>
	Normalized	100%	78.02%
	Standard Deviation	0.5%	1.6%
<b>Embree - Pathtracer - Crown (FPS)</b>		<b>15.4524</b>	<b>20.8580</b>
	Normalized	74.08%	100%
	Standard Deviation	0.2%	0.3%
<b>Embree - Pathtracer ISPC - Crown (FPS)</b>		<b>17.7342</b>	<b>20.0572</b>
	Normalized	88.42%	100%
	Standard Deviation	0.2%	0.8%
<b>Embree - Pathtracer - Asian Dragon (FPS)</b>		<b>17.5550</b>	<b>21.4302</b>
	Normalized	81.92%	100%
	Standard Deviation	0.7%	0.2%
<b>Embree - Pathtracer - Asian Dragon Obj (FPS)</b>		<b>16.1775</b>	<b>19.6503</b>
	Normalized	82.33%	100%
	Standard Deviation	0.2%	0.3%
<b>Embree - Pathtracer ISPC - Asian Dragon (FPS)</b>		<b>20.5126</b>	<b>21.3600</b>
	Normalized	96.03%	100%
	Standard Deviation	0.7%	0.2%
<b>Embree - Pathtracer ISPC - Asian Dragon Obj (FPS)</b>		<b>18.2419</b>	<b>19.0858</b>
	Normalized	95.58%	100%
	Standard Deviation	0.2%	0.2%
<b>rav1e - 1 (FPS)</b>		<b>0.205</b>	<b>0.193</b>
	Normalized	100%	94.15%
	Standard Deviation	0%	0.3%
<b>rav1e - 5 (FPS)</b>		<b>0.670</b>	<b>0.626</b>
	Normalized	100%	93.43%
	Standard Deviation	0.1%	0.1%
<b>rav1e - 6 (FPS)</b>		<b>1.622</b>	<b>1.497</b>
	Normalized	100%	92.29%
	Standard Deviation	0.1%	0.1%
<b>rav1e - 10 (FPS)</b>		<b>3.460</b>	<b>3.241</b>
	Normalized	100%	93.67%
	Standard Deviation	0.2%	0.2%
<b>VP9 libvpx Encoding - Speed 0 (FPS)</b>		<b>8.20</b>	<b>7.79</b>
	Normalized	100%	95%
	Standard Deviation	0.6%	0.1%
<b>VP9 libvpx Encoding - Speed 5 (FPS)</b>		<b>30.43</b>	<b>25.53</b>
	Normalized	100%	83.9%
	Standard Deviation	0.3%	0.4%
<b>x264 - H.2.V.E (FPS)</b>		<b>126.49</b>	<b>159.92</b>
	Normalized	79.1%	100%
	Standard Deviation	2.9%	2.9%
<b>x265 - H.2.1.V.E (FPS)</b>		<b>72.38</b>	<b>62.85</b>
	Normalized	100%	86.83%

	Standard Deviation	1%	0.8%
ACES DGEMM - S.F.P.R (GFLOP/s)		<b>5.351115</b>	<b>5.537606</b>
	Normalized	96.63%	100%
	Standard Deviation	1%	5.3%
Intel Open Image Denoise - Memorial (Images / Sec)		<b>11.12</b>	<b>12.73</b>
	Normalized	87.35%	100%
	Standard Deviation	0%	0.3%
OpenVKL - vkIBenchmark (Items / Sec)		<b>192.83</b>	<b>234.25</b>
	Normalized	82.32%	100%
	Standard Deviation	0.4%	0.2%
Coremark - CoreMark Size 666 - I.P.S (Iterations/Sec)		<b>517909</b>	<b>711755</b>
	Normalized	72.77%	100%
	Standard Deviation	0.4%	0.2%
LuxCoreRender - DLSC (M samples/sec)		<b>2.19</b>	<b>3.29</b>
	Normalized	66.57%	100%
	Standard Deviation	2%	1.3%
LuxCoreRender - R.C.a.P (M samples/sec)		<b>2.47</b>	<b>3.56</b>
	Normalized	69.38%	100%
	Standard Deviation	0.4%	0.1%
Himeno Benchmark - P.P.S (MFLOPS)		<b>4395</b>	<b>4966</b>
	Normalized	88.49%	100%
	Standard Deviation	0.1%	2.8%
7-Zip Compression - C.S.T (MIPS)		<b>65002</b>	<b>90026</b>
	Normalized	72.2%	100%
	Standard Deviation	0.6%	0.7%
Stockfish - Total Time (Nodes/s)		<b>35260191</b>	<b>50373394</b>
	Normalized	70%	100%
	Standard Deviation	1.7%	0.5%
asmFish - 1.H.M.2.D (Nodes/s)		<b>39969419</b>	<b>51867171</b>
	Normalized	77.06%	100%
	Standard Deviation	3%	0.6%
Swet - Average (Operations/sec)		<b>972233554</b>	<b>816912713</b>
	Normalized	100%	84.02%
	Standard Deviation	0.3%	1.9%
ebizzy (Records/s)		<b>495906</b>	<b>1373026</b>
	Normalized	36.12%	100%
	Standard Deviation	2.9%	0.8%
Timed Apache Compilation - Time To Compile (sec)		<b>17.907</b>	<b>20.240</b>
	Normalized	100%	88.47%
	Standard Deviation	0.2%	0.4%
Timed FFmpeg Compilation - Time To Compile (sec)		<b>46.059</b>	<b>35.442</b>
	Normalized	76.95%	100%
	Standard Deviation	1.1%	1%
Timed GCC Compilation - Time To Compile (sec)		<b>716.255</b>	<b>731.029</b>
	Normalized	100%	97.98%
	Standard Deviation	0.2%	0.3%
Timed GDB GNU Debugger Compilation - Time To Compile (sec)		<b>77.059</b>	<b>88.759</b>
	Normalized	100%	86.82%
	Standard Deviation	0.2%	0.1%
Timed ImageMagick Compilation - Time To Compile		<b>25.033</b>	<b>20.860</b>
	Normalized	83.33%	100%
	Standard Deviation	0.8%	0.1%
Timed Linux Kernel Compilation - Time To Compile		<b>61.708</b>	<b>45.114</b>
	Normalized	73.11%	100%

	Standard Deviation	0.9%	2.9%
<b>Timed LLVM Compilation - Time To Compile (sec)</b>		<b>505.431</b>	<b>365.636</b>
	Normalized	72.34%	100%
	Standard Deviation	1.1%	0.4%
<b>Timed MPlayer Compilation - Time To Compile (sec)</b>		<b>29.273</b>	<b>20.967</b>
	Normalized	71.63%	100%
	Standard Deviation	0.2%	0.3%
<b>Timed PHP Compilation - Time To Compile (sec)</b>		<b>47.704</b>	<b>42.697</b>
	Normalized	89.5%	100%
	Standard Deviation	0.8%	0.9%
<b>Build2 - Time To Compile (sec)</b>		<b>84.939</b>	<b>70.665</b>
	Normalized	83.19%	100%
	Standard Deviation	1.6%	1.8%
<b>C-Ray - Total Time - 4.1.R.P.P (sec)</b>		<b>52.130</b>	<b>31.594</b>
	Normalized	60.61%	100%
	Standard Deviation	0%	0.1%
<b>Parallel BZIP2 Compression - 2.F.C (sec)</b>		<b>3.118</b>	
	Standard Deviation	2.5%	
<b>Primesieve - 1.P.N.G (sec)</b>		<b>17.181</b>	<b>11.821</b>
	Normalized	68.8%	100%
	Standard Deviation	0.6%	0.6%
<b>Smallpt - G.I.R.1.S (sec)</b>		<b>7.852</b>	<b>5.237</b>
	Normalized	66.7%	100%
	Standard Deviation	0.1%	0.1%
<b>Tungsten Renderer - Hair (sec)</b>		<b>20.2258</b>	<b>13.6067</b>
	Normalized	67.27%	100%
	Standard Deviation	0.4%	0.2%
<b>Tungsten Renderer - Water Caustic (sec)</b>		<b>23.6946</b>	<b>21.3900</b>
	Normalized	90.27%	100%
	Standard Deviation	0.6%	0.5%
<b>Tungsten Renderer - Non-Exponential (sec)</b>		<b>5.14902</b>	<b>4.40751</b>
	Normalized	85.6%	100%
	Standard Deviation	0.2%	0.4%
<b>Tungsten Renderer - Volumetric Caustic (sec)</b>		<b>6.98866</b>	<b>5.53479</b>
	Normalized	79.2%	100%
	Standard Deviation	0.3%	1.6%
<b>YafaRay - T.T.F.S.S (sec)</b>		<b>108.878</b>	<b>81.477</b>
	Normalized	74.83%	100%
	Standard Deviation	0.1%	0.9%
<b>rays1bench - Large Scene (mrays/s)</b>		<b>81.82</b>	<b>108.20</b>
	Normalized	75.62%	100%
	Standard Deviation	0%	0.1%
<b>Numpy Benchmark (Score)</b>		<b>444.12</b>	<b>414.61</b>
	Normalized	100%	93.36%
	Standard Deviation	1.3%	1.4%
<b>AOBench - 2048 x 2048 - Total Time (sec)</b>		<b>27.170</b>	<b>31.131</b>
	Normalized	100%	87.28%
	Standard Deviation	0.2%	0.6%
<b>Bullet Physics Engine - Raytests (sec)</b>		<b>2.043963</b>	<b>2.084161</b>
	Normalized	100%	98.07%
	Standard Deviation	0.4%	0.4%
<b>Bullet Physics Engine - 3000 Fall (sec)</b>		<b>3.359547</b>	<b>3.367286</b>
	Normalized	100%	99.77%
	Standard Deviation	1.1%	0.4%
<b>Bullet Physics Engine - 1000 Stack (sec)</b>		<b>3.810223</b>	<b>4.047731</b>

	Normalized	100%	94.13%
	Standard Deviation	0.4%	0.5%
<b>Bullet Physics Engine - 1000 Convex (sec)</b>		<b>3.584657</b>	<b>3.745295</b>
	Normalized	100%	95.71%
	Standard Deviation	0.1%	0.4%
<b>Bullet Physics Engine - 136 Ragdolls (sec)</b>		<b>2.233182</b>	<b>2.150808</b>
	Normalized	96.31%	100%
	Standard Deviation	0.8%	0.4%
<b>Bullet Physics Engine - Prim Trimesh (sec)</b>		<b>0.782503</b>	<b>0.788758</b>
	Normalized	100%	99.21%
	Standard Deviation	0.9%	0.4%
<b>Bullet Physics Engine - Convex Trimesh (sec)</b>		<b>0.937118</b>	<b>0.943135</b>
	Normalized	100%	99.36%
	Standard Deviation	0.8%	0.5%
<b>Gzip Compression - L.S.T.A.T.t.g (sec)</b>		<b>28.833</b>	<b>33.392</b>
	Normalized	100%	86.35%
	Standard Deviation	2.7%	3.3%
<b>XZ Compression - C.u.1.0.3.s.i.i.C.L.9 (sec)</b>		<b>22.326</b>	<b>24.112</b>
	Normalized	100%	92.59%
	Standard Deviation	0.5%	0.3%
<b>Zstd Compression - C.u.1.0.3.s.i.i.C.L.1 (sec)</b>		<b>21.925</b>	<b>15.514</b>
	Normalized	70.76%	100%
	Standard Deviation	0.2%	0.7%
<b>Cython benchmark (sec)</b>		<b>35.064</b>	<b>38.658</b>
	Normalized	100%	90.7%
	Standard Deviation	0.6%	1.2%
<b>DeepSpeech - CPU (sec)</b>		<b>78.36647</b>	<b>64.61712</b>
	Normalized	82.46%	100%
	Standard Deviation	1.9%	0.8%
<b>FLAC Audio Encoding - WAV To FLAC (sec)</b>		<b>7.699</b>	<b>8.250</b>
	Normalized	100%	93.32%
	Standard Deviation	2.6%	3.4%
<b>LAME MP3 Encoding - WAV To MP3 (sec)</b>		<b>6.974</b>	<b>6.954</b>
	Normalized	99.71%	100%
	Standard Deviation	0.2%	2.3%
<b>FFmpeg - H.2.H.T.N.D (sec)</b>		<b>4.562</b>	<b>7.197</b>
	Normalized	100%	63.39%
	Standard Deviation	2.1%	1.5%
<b>GnuPG - 2.F.E (sec)</b>		<b>7.949</b>	<b>11.194</b>
	Normalized	100%	71.01%
	Standard Deviation	0.4%	1.9%
<b>Hackbench - 1 - Thread (sec)</b>		<b>2.245</b>	<b>3.016</b>
	Normalized	100%	74.44%
	Standard Deviation	0.5%	1.1%
<b>Hackbench - 1 - Process (sec)</b>		<b>2.029</b>	<b>2.711</b>
	Normalized	100%	74.84%
	Standard Deviation	0.2%	1.8%
<b>Hackbench - 32 - Process (sec)</b>		<b>49.161</b>	<b>54.263</b>
	Normalized	100%	90.6%
	Standard Deviation	0.2%	2.7%
<b>m-queens - Time To Solve (sec)</b>		<b>59.649</b>	<b>34.304</b>
	Normalized	57.51%	100%
	Standard Deviation	0%	0.1%
<b>Minion - Graceful (sec)</b>		<b>41.961286</b>	<b>39.558481</b>
	Normalized	94.27%	100%

	Standard Deviation	0.1%	0.5%
<b>Minion - Solitaire (sec)</b>		<b>55.284448</b>	<b>57.688167</b>
	Normalized	100%	95.83%
	Standard Deviation	0.2%	0.1%
<b>Minion - Quasigroup (sec)</b>		<b>93.440554</b>	<b>101.658951</b>
	Normalized	100%	91.92%
	Standard Deviation	0.2%	0.6%
<b>N-Queens - Elapsed Time (sec)</b>		<b>10.350</b>	<b>6.760</b>
	Normalized	65.31%	100%
	Standard Deviation	0%	0.2%
<b>Perl Benchmarks - Pod2html (sec)</b>		<b>0.09327881</b>	<b>0.11237626</b>
	Normalized	100%	83.01%
	Standard Deviation	0.4%	0.9%
<b>Perl Benchmarks - Interpreter (sec)</b>		<b>0.00066725</b>	<b>0.00069115</b>
	Normalized	100%	96.54%
	Standard Deviation	1.4%	1.9%
<b>Radiance Benchmark - Serial (sec)</b>		<b>577.884</b>	<b>538.599</b>
	Normalized	93.2%	100%
<b>Radiance Benchmark - SMP Parallel (sec)</b>		<b>182.363</b>	<b>170.288</b>
	Normalized	93.38%	100%
<b>Tachyon - Total Time (sec)</b>		<b>65.7816</b>	<b>46.0091</b>
	Normalized	69.94%	100%
	Standard Deviation	0.1%	0.3%
<b>OpenSSL - R.4.b.P (Signs/sec)</b>		<b>3756</b>	<b>4707</b>
	Normalized	79.79%	100%
	Standard Deviation	0.1%	0.1%
<b>Aircrack-ng (k/s)</b>		<b>45912</b>	<b>58218</b>
	Normalized	78.86%	100%
	Standard Deviation	0%	0.1%
<b>Cpuminer-Opt - m7m (kH/s - Hash Speed)</b>		<b>407.75</b>	<b>838.57</b>
	Normalized	48.62%	100%
	Standard Deviation	0.1%	0.3%
<b>Cpuminer-Opt - deep (kH/s - Hash Speed)</b>		<b>12397</b>	<b>15150</b>
	Normalized	81.83%	100%
	Standard Deviation	0%	0.1%
<b>Cpuminer-Opt - lbry (kH/s - Hash Speed)</b>		<b>38917</b>	<b>46910</b>
	Normalized	82.96%	100%
	Standard Deviation	0.1%	0.7%
<b>Cpuminer-Opt - skein (kH/s - Hash Speed)</b>		<b>45343</b>	<b>54471</b>
	Normalized	83.24%	100%
	Standard Deviation	0.5%	2.9%
<b>Cpuminer-Opt - myr-gr (kH/s - Hash Speed)</b>		<b>17627</b>	<b>9899</b>
	Normalized	100%	56.16%
	Standard Deviation	0.1%	10.6%
<b>Cpuminer-Opt - sha256t (kH/s - Hash Speed)</b>		<b>102523</b>	<b>119460</b>
	Normalized	85.82%	100%
	Standard Deviation	1.8%	2.6%
<b>Core-Latency - A.L.B.C.C (ns)</b>		<b>97.21</b>	<b>152.54</b>
	Normalized	100%	63.73%
<b>Multichase Pointer Chaser - 4.A.6.B.S (ns)</b>		<b>5.206</b>	<b>4.720</b>
	Normalized	90.66%	100%
	Standard Deviation	0.1%	0.3%
<b>Multichase Pointer Chaser - 1.A.2.B.S (ns)</b>		<b>44.604</b>	<b>67.366</b>
	Normalized	100%	66.21%
	Standard Deviation	0.2%	0.1%

<b>Multichase Pointer Chaser - 2.A.2.B.S (ns)</b>	<b>41.813</b>	<b>67.194</b>
Normalized	100%	62.23%
Standard Deviation	0.1%	0.3%
<b>Multichase Pointer Chaser - 1.A.2.B.S.2.T (ns)</b>	<b>46.168</b>	<b>67.811</b>
Normalized	100%	68.08%
Standard Deviation	0.2%	0%
<b>Multichase Pointer Chaser - 1.A.2.B.S.4.T (ns)</b>	<b>50.128</b>	<b>70.200</b>
Normalized	100%	71.41%
Standard Deviation	0%	0.1%
<b>ASKAP - tConvolve MT - Gridding (Million Grid Points/sec)</b>	<b>1142</b>	<b>874.050</b>
Normalized	100%	76.52%
Standard Deviation	0%	0.3%
<b>ASKAP - tConvolve MT - Degriding (Million Grid Points/sec)</b>	<b>1946</b>	<b>1618</b>
Normalized	100%	83.12%
Standard Deviation	0.1%	0.2%
<b>ASKAP - tConvolve MPI - Gridding (Million Grid Points/sec)</b>	<b>1161</b>	<b>892.666</b>
Normalized	100%	76.88%
Standard Deviation	0.2%	0%
<b>ASKAP - tConvolve MPI - Degriding (Million Grid Points/sec)</b>	<b>1953</b>	<b>1657</b>
Normalized	100%	84.84%
Standard Deviation	0.1%	0.1%
<b>ASKAP - tConvolve OpenMP - Gridding (Million Grid Points/sec)</b>	<b>1307</b>	<b>1165</b>
Normalized	100%	89.09%
Standard Deviation	0.8%	2%
<b>ASKAP - tConvolve OpenMP - Degriding (Million Grid Points/sec)</b>	<b>2165</b>	<b>1925</b>
Normalized	100%	88.91%
Standard Deviation	0.8%	0.4%
<b>libjpeg-turbo tjbench - D.T (Megapixels/sec)</b>	<b>237.108141</b>	<b>221.087385</b>
Normalized	100%	93.24%
Standard Deviation	0.2%	0.2%
<b>GROMACS - Water Benchmark (Ns/Day)</b>	<b>0.978</b>	<b>1.236</b>
Normalized	79.13%	100%
Standard Deviation	0.1%	0.2%
<b>G'MIC - P.I.O.A.3.V.1.T (sec)</b>	<b>16.006</b>	<b>18.735</b>
Normalized	100%	85.43%
Standard Deviation	1.3%	3%
<b>Basis Universal - ETC1S (sec)</b>	<b>42.177</b>	<b>42.788</b>
Normalized	100%	98.57%
Standard Deviation	0.5%	0.7%
<b>Basis Universal - UASTC Level 0 (sec)</b>	<b>6.514</b>	<b>7.197</b>
Normalized	100%	90.51%
Standard Deviation	1.1%	1%
<b>Basis Universal - UASTC Level 2 (sec)</b>	<b>25.170</b>	<b>19.048</b>
Normalized	75.68%	100%
Standard Deviation	0.4%	0.4%
<b>Basis Universal - UASTC Level 3 (sec)</b>	<b>46.509</b>	<b>32.607</b>
Normalized	70.11%	100%
Standard Deviation	0%	0.3%

<b>Basis Universal - U.L.2.R.P.P (sec)</b>	<b>573.950</b>	<b>587.383</b>
Normalized	100%	97.71%
Standard Deviation	0.1%	0.2%
<b>SQLite Speedtest - Timed Time - Size 1,000 (sec)</b>	<b>44.924</b>	<b>58.132</b>
Normalized	100%	77.28%
Standard Deviation	0.1%	1.1%
<b>GEGL - Crop (sec)</b>	<b>6.764</b>	<b>7.538</b>
Normalized	100%	89.73%
Standard Deviation	1.4%	1.7%
<b>GEGL - Scale (sec)</b>	<b>4.822</b>	<b>5.042</b>
Normalized	100%	95.64%
Standard Deviation	2%	0.5%
<b>GEGL - Cartoon (sec)</b>	<b>78.938</b>	<b>89.855</b>
Normalized	100%	87.85%
Standard Deviation	1.1%	1.1%
<b>GEGL - Reflect (sec)</b>	<b>25.416</b>	<b>29.718</b>
Normalized	100%	85.52%
Standard Deviation	0.2%	1.8%
<b>GEGL - Antialias (sec)</b>	<b>32.111</b>	<b>37.298</b>
Normalized	100%	86.09%
Standard Deviation	0.8%	0.6%
<b>GEGL - Tile Glass (sec)</b>	<b>24.658</b>	<b>29.061</b>
Normalized	100%	84.85%
Standard Deviation	0.1%	0.5%
<b>GEGL - Wavelet Blur (sec)</b>	<b>52.123</b>	<b>61.585</b>
Normalized	100%	84.64%
Standard Deviation	0.3%	1.2%
<b>GEGL - Color Enhance (sec)</b>	<b>50.055</b>	<b>54.906</b>
Normalized	100%	91.16%
Standard Deviation	1.2%	0.4%
<b>GEGL - Rotate 90 Degrees (sec)</b>	<b>32.369</b>	<b>37.640</b>
Normalized	100%	86%
Standard Deviation	1.2%	0.6%
<b>GIMP - resize (sec)</b>	<b>6.135</b>	<b>6.689</b>
Normalized	100%	91.72%
Standard Deviation	1%	1.7%
<b>GIMP - rotate (sec)</b>	<b>9.573</b>	<b>10.542</b>
Normalized	100%	90.81%
Standard Deviation	0.5%	0.7%
<b>GIMP - auto-levels (sec)</b>	<b>9.693</b>	<b>11.692</b>
Normalized	100%	82.9%
Standard Deviation	0.3%	0.4%
<b>GIMP - unsharp-mask (sec)</b>	<b>11.946</b>	<b>14.776</b>
Normalized	100%	80.85%
Standard Deviation	0.1%	0.5%
<b>LibreOffice - 2.D.T.P (sec)</b>	<b>6.403</b>	<b>6.605</b>
Normalized	100%	96.94%
Standard Deviation	2.7%	2.7%
<b>RawTherapee - T.B.T (sec)</b>	<b>53.309</b>	<b>52.809</b>
Normalized	99.06%	100%
Standard Deviation	0.2%	0.1%
<b>Redis - LPOP (Reqs/sec)</b>	<b>3942561</b>	<b>2716045</b>
Normalized	100%	68.89%
Standard Deviation	1.2%	2.5%
<b>Redis - SADD (Reqs/sec)</b>	<b>3071108</b>	<b>2357410</b>

	Normalized	100%	76.76%
	Standard Deviation	6.3%	2.2%
<b>Redis - LPUSH (Reqs/sec)</b>		<b>2289561</b>	<b>1666745</b>
	Normalized	100%	72.8%
	Standard Deviation	2.8%	4.5%
<b>Redis - GET (Reqs/sec)</b>		<b>3788205</b>	<b>2609128</b>
	Normalized	100%	68.88%
	Standard Deviation	1.1%	2.8%
<b>Redis - SET (Reqs/sec)</b>		<b>2770463</b>	<b>1992291</b>
	Normalized	100%	71.91%
	Standard Deviation	1.4%	5.4%
<b>Stress-NG - Atomic (Bogo Ops/s)</b>		<b>230445</b>	<b>747139</b>
	Normalized	30.84%	100%
	Standard Deviation	13.5%	0.3%
<b>Stress-NG - Crypto (Bogo Ops/s)</b>		<b>2678</b>	<b>4744</b>
	Normalized	56.45%	100%
	Standard Deviation	0.1%	0.3%
<b>Stress-NG - CPU Cache (Bogo Ops/s)</b>		<b>22.76</b>	<b>37.15</b>
	Normalized	61.27%	100%
	Standard Deviation	0.6%	4.7%
<b>Stress-NG - CPU Stress (Bogo Ops/s)</b>		<b>4731</b>	<b>6621</b>
	Normalized	71.46%	100%
	Standard Deviation	0.3%	0.2%
<b>Stress-NG - Matrix Math (Bogo Ops/s)</b>		<b>62671</b>	<b>77934</b>
	Normalized	80.42%	100%
	Standard Deviation	2.8%	0.8%
<b>Stress-NG - Vector Math (Bogo Ops/s)</b>		<b>94531</b>	<b>148737</b>
	Normalized	63.56%	100%
	Standard Deviation	0%	0.1%
<b>Stress-NG - Socket Activity (Bogo Ops/s)</b>		<b>8782</b>	<b>11945</b>
	Normalized	73.52%	100%
	Standard Deviation	1.5%	0.8%
<b>Stress-NG - Context Switching (Bogo Ops/s)</b>		<b>5661608</b>	<b>7734524</b>
	Normalized	73.2%	100%
	Standard Deviation	0.8%	2.7%
<b>PlaidML - No - Inference - VGG16 - CPU (FPS)</b>		<b>19.28</b>	<b>23.31</b>
	Normalized	82.71%	100%
	Standard Deviation	0.9%	1.4%
<b>PlaidML - No - Inference - VGG19 - CPU (FPS)</b>		<b>16.09</b>	<b>19.19</b>
	Normalized	83.85%	100%
	Standard Deviation	0.7%	1%
<b>PlaidML - No - Inference - Mobilenet - CPU (FPS)</b>		<b>17.18</b>	<b>17.28</b>
	Normalized	99.42%	100%
	Standard Deviation	1.1%	1%
<b>PlaidML - No - Inference - ResNet 50 - CPU (FPS)</b>		<b>7.38</b>	<b>7.34</b>
	Normalized	100%	99.46%
	Standard Deviation	0.6%	1.1%
<b>PlaidML - No - Inference - DenseNet 201 - CPU (FPS)</b>		<b>3.35</b>	<b>3.87</b>
	Normalized	86.56%	100%
	Standard Deviation	0.5%	1.1%
<b>PlaidML - No - Inference - Inception V3 - CPU (FPS)</b>		<b>9.23</b>	<b>11.21</b>
	Normalized	82.34%	100%
	Standard Deviation	0.4%	0.4%
<b>ctx_clock - C.S.T (Clocks)</b>		<b>144</b>	<b>140</b>
	Normalized	97.22%	100%

Sysbench - CPU (Events/sec)	<b>27066</b>	<b>34951</b>
Normalized	77.44%	100%
Standard Deviation	0%	0.1%
Basemark GPU - OpenGL - 3840 x 2160 - High (FPS)	<b>59.64</b>	<b>73.68</b>
Normalized	80.94%	100%
Standard Deviation	0.9%	0.4%
Basemark GPU - Vulkan - 3840 x 2160 - High (FPS)	<b>81.93</b>	<b>80.95</b>
Normalized	100%	98.8%
Standard Deviation	0.2%	0.1%
Basemark GPU - OpenGL - 3840 x 2160 - Medium	<b>304.94</b>	<b>187.04</b>
Normalized	100%	61.34%
Standard Deviation	1.4%	2.6%
Basemark GPU - Vulkan - 3840 x 2160 - Medium (FPS)	<b>404.07</b>	<b>415.32</b>
Normalized	97.29%	100%
Standard Deviation	0.1%	0.3%
Optcarrot - O.B (FPS)	<b>180.40</b>	<b>141.62</b>
Normalized	100%	78.5%
Standard Deviation	0.3%	1.3%
IndigoBench - Bedroom (M samples/s)	<b>1.894</b>	<b>2.669</b>
Normalized	70.96%	100%
Standard Deviation	0.2%	0.3%
IndigoBench - Supercar (M samples/s)	<b>4.435</b>	<b>5.660</b>
Normalized	78.36%	100%
Standard Deviation	0.1%	0.1%
Facebook RocksDB - Rand Fill (Op/s)	<b>656303</b>	<b>680458</b>
Normalized	96.45%	100%
Standard Deviation	16.3%	15.2%
Facebook RocksDB - Rand Read (Op/s)	<b>68514144</b>	<b>95962407</b>
Normalized	71.4%	100%
Standard Deviation	0.2%	1.1%
Facebook RocksDB - Seq Fill (Op/s)	<b>1431900</b>	<b>1292441</b>
Normalized	100%	90.26%
Standard Deviation	0.4%	0.5%
Facebook RocksDB - Rand Fill Sync (Op/s)	<b>2875</b>	<b>5148</b>
Normalized	55.85%	100%
Standard Deviation	1.5%	3.4%
Facebook RocksDB - Read While Writing (Op/s)	<b>2911882</b>	<b>3615702</b>
Normalized	80.53%	100%
Standard Deviation	3.1%	2.1%
Blender - BMW27 - CPU-Only (sec)	<b>114.39</b>	<b>84.77</b>
Normalized	74.11%	100%
Standard Deviation	0.3%	0.2%
Blender - Classroom - CPU-Only (sec)	<b>338.66</b>	<b>226.13</b>
Normalized	66.77%	100%
Standard Deviation	0.2%	0.1%
Blender - Fishy Cat - CPU-Only (sec)	<b>179.55</b>	<b>123.52</b>
Normalized	68.79%	100%
Standard Deviation	0.2%	0.1%
Blender - Barbershop - CPU-Only (sec)	<b>473.60</b>	<b>342.25</b>
Normalized	72.27%	100%
Standard Deviation	0.1%	0.1%
Blender - Pabellon Barcelona - CPU-Only (sec)	<b>426.20</b>	<b>285.86</b>
Normalized	67.07%	100%
Standard Deviation	0.2%	0.1%
Xsbench (Lookups/s)	<b>2639580</b>	<b>2653413</b>

	Normalized	99.48%	100%
	Standard Deviation	0%	0.1%
<b>PyBench - T.F.A.T.T (Milliseconds)</b>		<b>760</b>	<b>894</b>
	Normalized	100%	85.01%
	Standard Deviation	0.5%	2.1%
<b>PyPerformance - go (Milliseconds)</b>		<b>187</b>	<b>228</b>
	Normalized	100%	82.02%
<b>PyPerformance - 2to3 (Milliseconds)</b>		<b>241</b>	<b>283</b>
	Normalized	100%	85.16%
	Standard Deviation		0.2%
<b>PyPerformance - chaos (Milliseconds)</b>		<b>79.8</b>	<b>100</b>
	Normalized	100%	79.8%
	Standard Deviation	1.2%	
<b>PyPerformance - float (Milliseconds)</b>		<b>82.5</b>	<b>102</b>
	Normalized	100%	80.88%
	Standard Deviation	0.2%	
<b>PyPerformance - nbody (Milliseconds)</b>		<b>89.9</b>	<b>101</b>
	Normalized	100%	89.01%
	Standard Deviation	0.2%	0.6%
<b>PyPerformance - pathlib (Milliseconds)</b>		<b>14.4</b>	<b>15.5</b>
	Normalized	100%	92.9%
	Standard Deviation	0.4%	0.4%
<b>PyPerformance - raytrace (Milliseconds)</b>		<b>352</b>	<b>427</b>
	Normalized	100%	82.44%
	Standard Deviation	0.3%	
<b>PyPerformance - json_loads (Milliseconds)</b>		<b>18.3</b>	<b>22.0</b>
	Normalized	100%	83.18%
	Standard Deviation	0%	0.3%
<b>PyPerformance - crypto_pyaes (Milliseconds)</b>		<b>83.2</b>	<b>97.2</b>
	Normalized	100%	85.6%
	Standard Deviation	0%	0.3%
<b>PyPerformance - regex_compile (Milliseconds)</b>		<b>133</b>	<b>155</b>
	Normalized	100%	85.81%
	Standard Deviation	2.6%	
<b>PyPerformance - python_startup (Milliseconds)</b>		<b>6.04</b>	<b>6.46</b>
	Normalized	100%	93.5%
	Standard Deviation	0.1%	2.4%
<b>PyPerformance - django_template (Milliseconds)</b>		<b>38.3</b>	<b>45.5</b>
	Normalized	100%	84.18%
	Standard Deviation	0.5%	0.4%
<b>PyPerformance - pickle_pure_python (Milliseconds)</b>		<b>331</b>	<b>424</b>
	Normalized	100%	78.07%
	Standard Deviation	0.3%	
<b>Numenta Anomaly Benchmark - EXPoSE (sec)</b>		<b>624.538</b>	<b>644.836</b>
	Normalized	100%	96.85%
	Standard Deviation	0.4%	1%
<b>Numenta Anomaly Benchmark - Relative Entropy</b>		<b>16.561</b>	<b>14.391</b>
	Normalized	86.9%	100%
	Standard Deviation	1.5%	1%
<b>Numenta Anomaly Benchmark - Windowed Gaussian (sec)</b>		<b>7.665</b>	<b>6.695</b>
	Normalized	87.35%	100%
	Standard Deviation	0.7%	0.5%
<b>Numenta Anomaly Benchmark - Earthgecko Skyline</b>		<b>90.165</b>	<b>77.869</b>
	Normalized	86.36%	100%

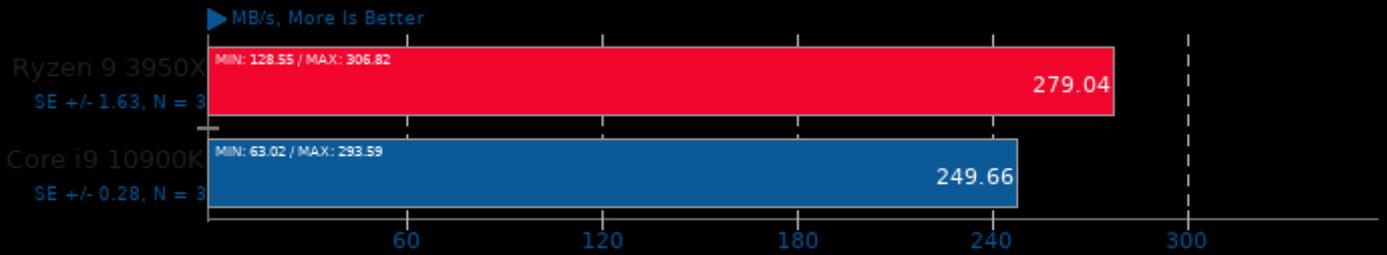
	Standard Deviation	2.9%	0.4%
<b>Numenta Anomaly Benchmark - B.C (sec)</b>		<b>36.066</b>	<b>26.176</b>
	Normalized	72.58%	100%
	Standard Deviation	0.7%	2.9%
<b>Hierarchical INTegration - FLOAT (QUIPs)</b>		<b>510613895</b>	<b>380487205</b>
	Normalized	100%	74.52%
	Standard Deviation	0.3%	0.3%
<b>NeatBench - CPU (FPS)</b>		<b>18.3</b>	<b>26.2</b>
	Normalized	69.85%	100%
	Standard Deviation	0.3%	2.4%
<b>Appleseed - Emily (sec)</b>		<b>299.753452</b>	<b>213.491346</b>
	Normalized	71.22%	100%
<b>Appleseed - Disney Material (sec)</b>		<b>174.867928</b>	<b>121.874074</b>
	Normalized	69.69%	100%
<b>Appleseed - Material Tester (sec)</b>		<b>164.002915</b>	<b>128.457773</b>
	Normalized	78.33%	100%
<b>Selenium - ARES-6 - Firefox (ms)</b>		<b>36.73</b>	<b>42.85</b>
	Normalized	100%	85.72%
	Standard Deviation	0.9%	0.1%
<b>Selenium - Kraken - Firefox (ms)</b>		<b>715.7</b>	<b>725.2</b>
	Normalized	100%	98.69%
	Standard Deviation	2.3%	0.4%
<b>Selenium - Octane - Firefox (Geometric Mean)</b>		<b>38776</b>	<b>34528</b>
	Normalized	100%	89.04%
	Standard Deviation	1.1%	1.3%
<b>Selenium - WebXPRT - Firefox (Score)</b>		<b>294</b>	<b>252</b>
	Normalized	100%	85.71%
	Standard Deviation		0.8%
<b>Selenium - Basemark - Firefox (Overall Score)</b>		<b>759.91</b>	<b>757.95</b>
	Normalized	100%	99.74%
	Standard Deviation	7.3%	4.8%
<b>Selenium - Jetstream - Firefox (Score)</b>		<b>237.52</b>	<b>218.55</b>
	Normalized	100%	92.01%
	Standard Deviation	0.3%	0.1%
<b>Selenium - CanvasMark - Firefox (Score)</b>		<b>14181</b>	<b>13796</b>
	Normalized	100%	97.29%
	Standard Deviation	1.7%	4.2%
<b>Selenium - MotionMark - Firefox (Score)</b>		<b>231.54</b>	<b>161.79</b>
	Normalized	100%	69.88%
	Standard Deviation	28.2%	24.1%
<b>Selenium - StyleBench - Firefox (Runs / Minute)</b>		<b>104</b>	<b>84.4</b>
	Normalized	100%	81.15%
	Standard Deviation		0.2%
<b>Selenium - Jetstream 2 - Firefox (Score)</b>		<b>102.083</b>	<b>95.645</b>
	Normalized	100%	93.69%
	Standard Deviation	0.6%	0.8%
<b>Selenium - Maze Solver - Firefox (sec)</b>		<b>5.4</b>	<b>4.5</b>
	Normalized	83.33%	100%
	Standard Deviation	1.1%	1.3%
<b>Selenium - Speedometer - Firefox (Runs/min)</b>		<b>104</b>	<b>99.34</b>
	Normalized	100%	95.52%
	Standard Deviation	0.6%	0.4%
<b>Selenium - ARES-6 - Google Chrome (ms)</b>		<b>17.47</b>	<b>20.20</b>
	Normalized	100%	86.49%
	Standard Deviation	0.5%	1.1%

<b>Selenium - Kraken - Google Chrome (ms)</b>	<b>779.3</b>	<b>743.1</b>
Normalized	95.35%	100%
Standard Deviation	2.7%	1%
<b>Selenium - Octane - Google Chrome (Geometric)</b>	<b>54153</b>	<b>49230</b>
Normalized	100%	90.91%
Standard Deviation	0.2%	0.7%
<b>Selenium - PSPDFKit WASM - Firefox (Score)</b>	<b>1148</b>	<b>1304</b>
Normalized	100%	88.04%
Standard Deviation	0.6%	0.1%
<b>Selenium - WebXPRT - Google Chrome (Score)</b>	<b>264</b>	<b>258</b>
Normalized	100%	97.73%
Standard Deviation	0.8%	
<b>Selenium - Basemark - Google Chrome (Overall)</b>	<b>1075</b>	<b>1387</b>
Normalized	77.47%	100%
Standard Deviation	9.4%	7.8%
<b>Selenium - Jetstream - Google Chrome (Score)</b>	<b>258.92</b>	<b>227.80</b>
Normalized	100%	87.98%
Standard Deviation	0.3%	0%
<b>Selenium - CanvasMark - Google Chrome (Score)</b>	<b>5033</b>	<b>5050</b>
Normalized	99.66%	100%
Standard Deviation	0.5%	0.3%
<b>Selenium - MotionMark - Google Chrome (Score)</b>	<b>1</b>	<b>1</b>
<b>Selenium - StyleBench - Google Chrome (Runs / min)</b>	<b>37.6</b>	<b>37.7</b>
Normalized	99.73%	100%
Standard Deviation	0.7%	0.7%
<b>Selenium - Jetstream 2 - Google Chrome (Score)</b>	<b>149.132</b>	<b>138.227</b>
Normalized	100%	92.69%
Standard Deviation	2.1%	1.1%
<b>Selenium - Maze Solver - Google Chrome (sec)</b>	<b>5.4</b>	<b>4.1</b>
Normalized	75.93%	100%
Standard Deviation	0%	1.4%
<b>Selenium - Speedometer - Google Chrome (Runs/min)</b>	<b>130</b>	<b>133</b>
Normalized	97.74%	100%
Standard Deviation	0.4%	
<b>Selenium - PSPDFKit WASM - Google Chrome (Score)</b>	<b>1387</b>	<b>1509</b>
Normalized	100%	91.92%
Standard Deviation	0.7%	1.1%
<b>Selenium - W.i - Firefox (ms)</b>	<b>27.1</b>	<b>26.2</b>
Normalized	96.68%	100%
Standard Deviation	0.7%	2.3%
<b>Selenium - W.c - Firefox (ms)</b>	<b>414.4</b>	<b>351.9</b>
Normalized	84.92%	100%
Standard Deviation	0.3%	0.7%
<b>Selenium - W.i - Google Chrome (ms)</b>	<b>35.7272</b>	<b>35.8952</b>
Normalized	100%	99.53%
Standard Deviation	0.5%	0.9%
<b>Selenium - W.c - Google Chrome (ms)</b>	<b>343.4547</b>	<b>278.3210</b>
Normalized	81.04%	100%
Standard Deviation	1.7%	1.8%
<b>Git - T.T.C.C.G.C (sec)</b>	<b>41.515</b>	<b>45.230</b>
Normalized	100%	91.79%
Standard Deviation	0.1%	2.8%
<b>Mlpack Benchmark - scikit_ica (sec)</b>	<b>53.21</b>	<b>53.76</b>
Normalized	100%	98.98%
Standard Deviation	1.7%	0.9%

<b>Mlpack Benchmark - scikit_qda (sec)</b>	<b>62.50</b>	<b>68.93</b>
Normalized	100%	90.67%
Standard Deviation	0.4%	1.3%
<b>Mlpack Benchmark - scikit_svm (sec)</b>	<b>20.91</b>	<b>19.21</b>
Normalized	91.87%	100%
Standard Deviation	0.1%	0.6%
<b>Mlpack Benchmark - scikit_linearridgeregression</b>	<b>4.05</b>	<b>2.04</b>
Normalized	50.37%	100%
Standard Deviation	0.7%	0.5%
<b>Scikit-Learn (sec)</b>	<b>8.782</b>	<b>8.273</b>
Normalized	94.2%	100%
Standard Deviation	2.5%	2.4%
<b>BRL-CAD - V.P.M (VGR Performance Metric)</b>	<b>192500</b>	<b>251130</b>
Normalized	76.65%	100%
<b>OSBench - Create Files (us/Event)</b>	<b>10.474451</b>	<b>11.633563</b>
Normalized	100%	90.04%
Standard Deviation	0.8%	0.4%
<b>OSBench - Create Threads (us/Event)</b>	<b>8.883476</b>	<b>12.243907</b>
Normalized	100%	72.55%
Standard Deviation	0.6%	11.5%
<b>OSBench - Launch Programs (us/Event)</b>	<b>26.023388</b>	<b>35.923322</b>
Normalized	100%	72.44%
Standard Deviation	0.3%	1.2%
<b>OSBench - Create Processes (us/Event)</b>	<b>16.390483</b>	<b>27.797222</b>
Normalized	100%	58.96%
Standard Deviation	1.7%	2.4%
<b>OSBench - Memory Allocations (Ns/Event)</b>	<b>56.163311</b>	<b>69.227616</b>
Normalized	100%	81.13%
Standard Deviation	0.2%	0.3%
<b>Zstd Compression - 3 (MB/s)</b>	<b>2867</b>	<b>4014</b>
Normalized	71.42%	100%
Standard Deviation	0.5%	1.6%
<b>Zstd Compression - 19 (MB/s)</b>	<b>30.3</b>	<b>39.6</b>
Normalized	76.52%	100%
Standard Deviation	0.3%	0.1%
<b>dav1d - Chimera 1080p (FPS)</b>	<b>782.60</b>	<b>626.95</b>
Normalized	100%	80.11%
Standard Deviation	0.3%	0.3%
<b>dav1d - Summer Nature 4K (FPS)</b>	<b>185.20</b>	<b>204.01</b>
Normalized	90.78%	100%
Standard Deviation	0.1%	0.1%
<b>dav1d - S.N.1 (FPS)</b>	<b>735.61</b>	<b>587.62</b>
Normalized	100%	79.88%
Standard Deviation	0.2%	0.3%
<b>dav1d - C.1.1.b (FPS)</b>	<b>132.44</b>	<b>114.24</b>
Normalized	100%	86.26%
Standard Deviation	0.1%	0.2%

### IOR 3.2.1

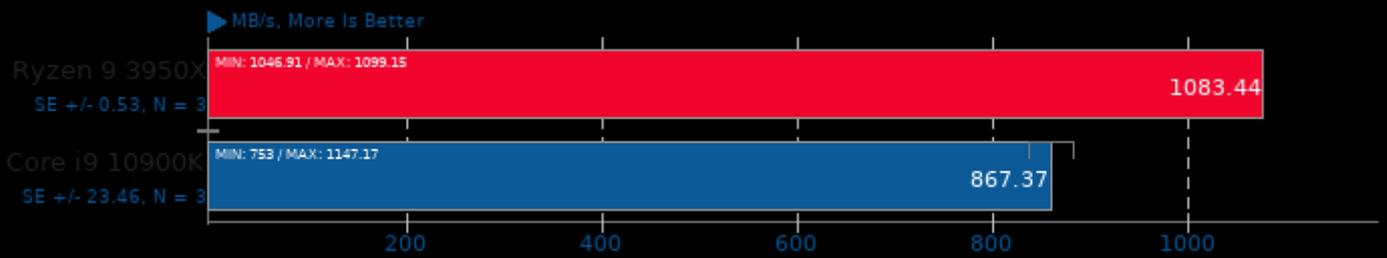
Write Test



1. (CC) gcc options: -O2 -lm -pthread -lmpi

### IOR 3.2.1

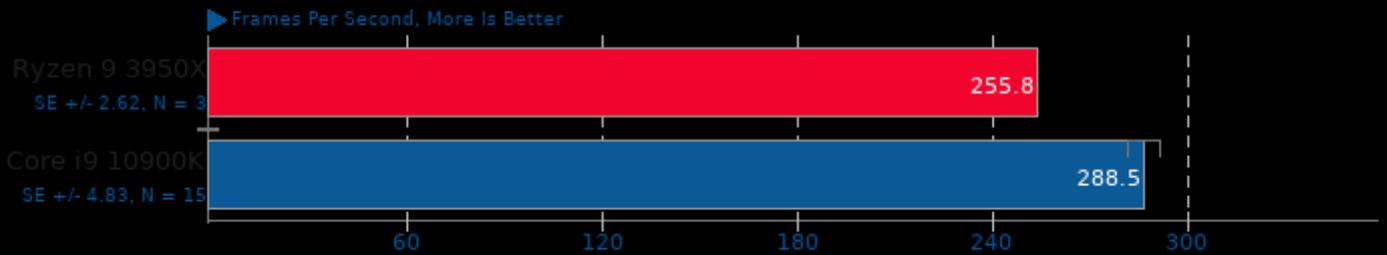
Read Test



1. (CC) gcc options: -O2 -lm -pthread -lmpi

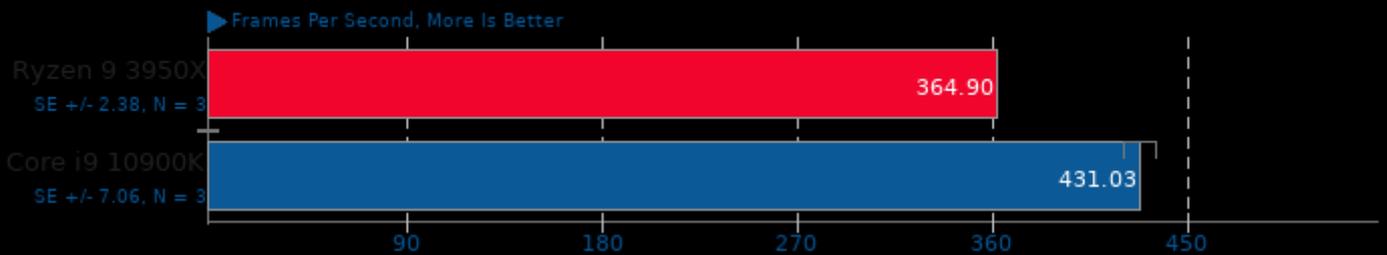
### ET: Legacy 2.75

Renderer: Renderer2 - Resolution: 3840 x 2160



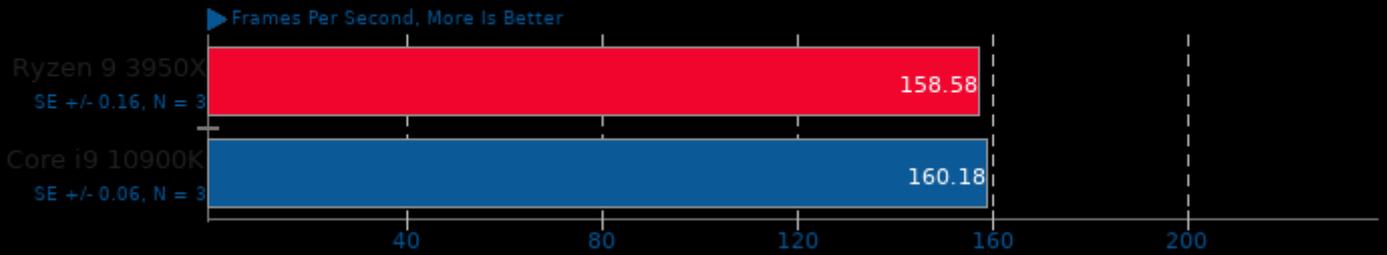
### Tesseract 2014-05-12

Resolution: 3840 x 2160



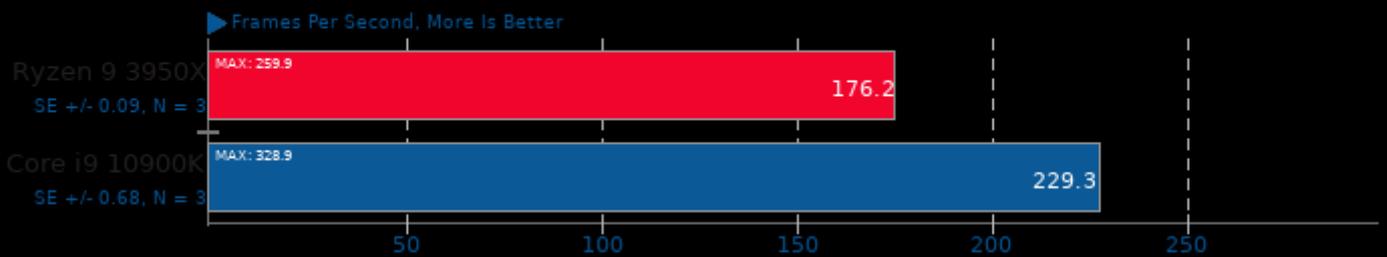
### Unigine Heaven 4.0

Resolution: 1920 x 1080 - Mode: Windowed - Renderer: OpenGL



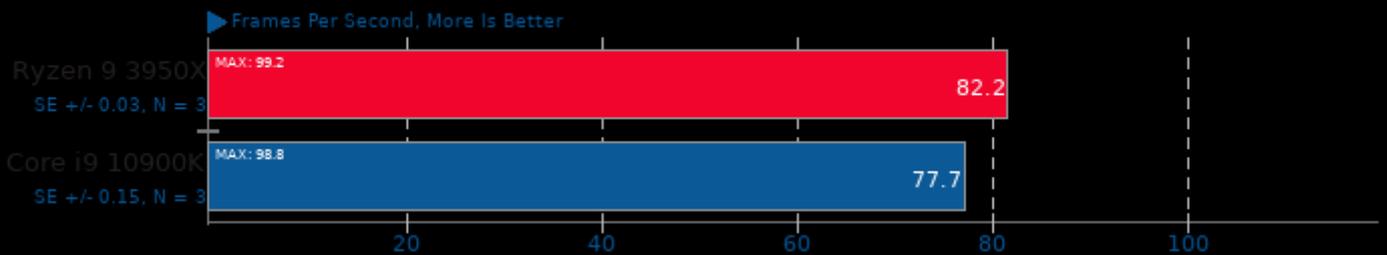
### Unigine Superposition 1.0

Resolution: 1920 x 1080 - Mode: Windowed - Quality: Low - Renderer: OpenGL



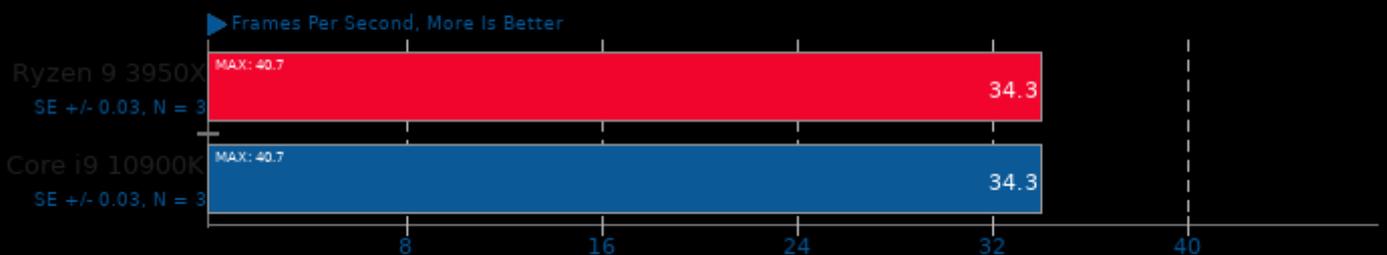
### Unigine Superposition 1.0

Resolution: 1920 x 1080 - Mode: Windowed - Quality: High - Renderer: OpenGL



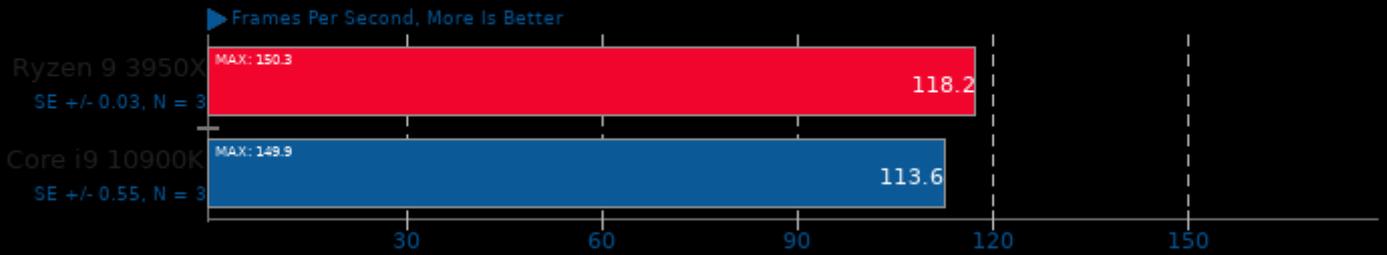
### Unigine Superposition 1.0

Resolution: 1920 x 1080 - Mode: Windowed - Quality: Ultra - Renderer: OpenGL



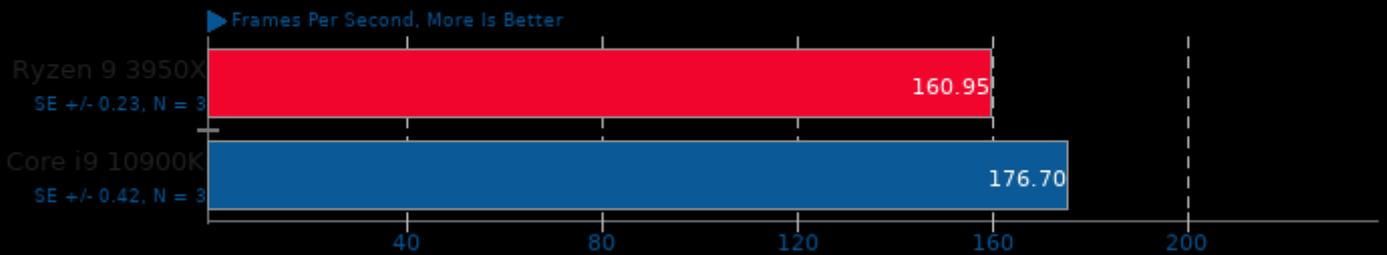
### Unigine Superposition 1.0

Resolution: 1920 x 1080 - Mode: Windowed - Quality: Medium - Renderer: OpenGL



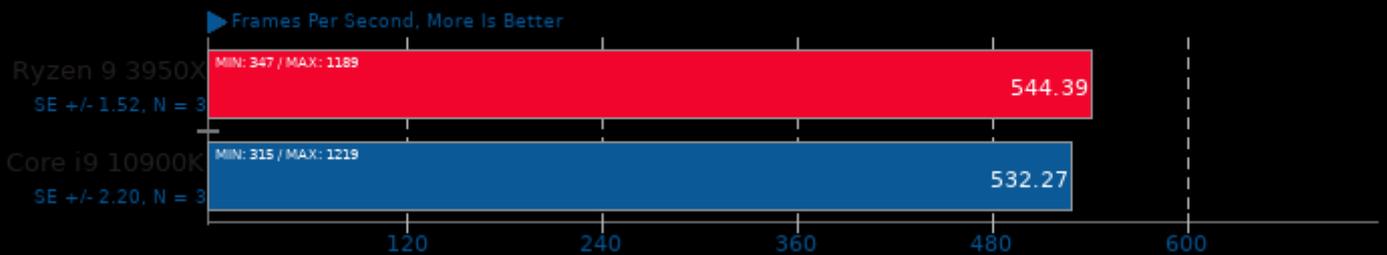
### Unigine Valley 1.0

Resolution: 1920 x 1080 - Mode: Windowed - Renderer: OpenGL



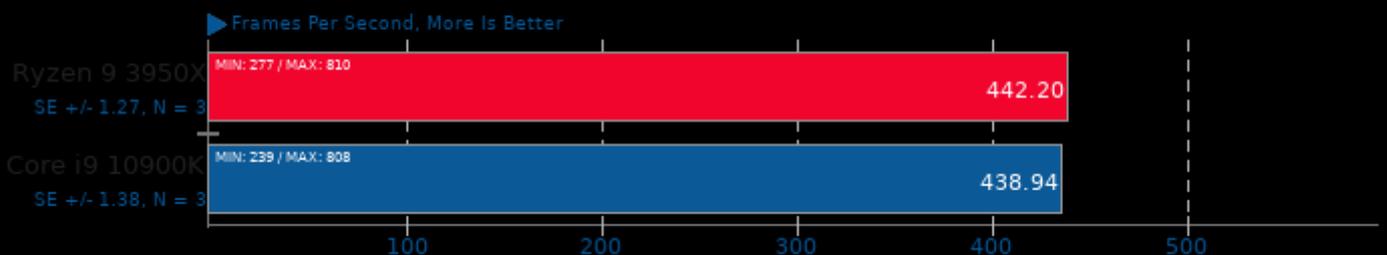
### Xonotic 0.8.2

Resolution: 3840 x 2160 - Effects Quality: Low



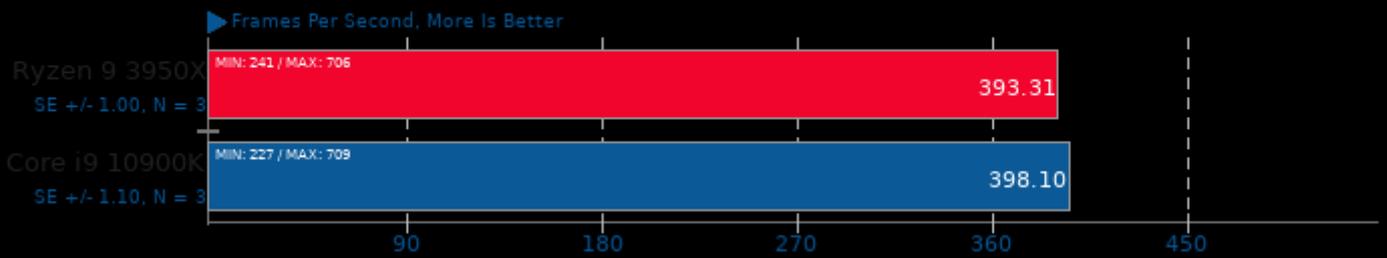
### Xonotic 0.8.2

Resolution: 3840 x 2160 - Effects Quality: High



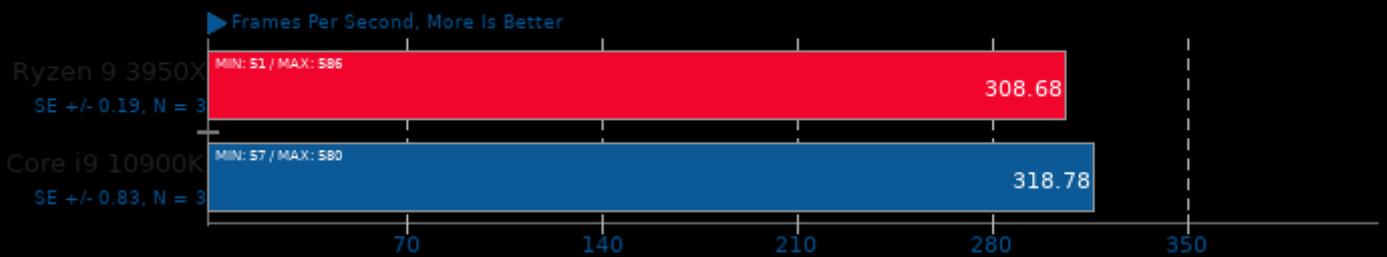
### Xonotic 0.8.2

Resolution: 3840 x 2160 - Effects Quality: Ultra



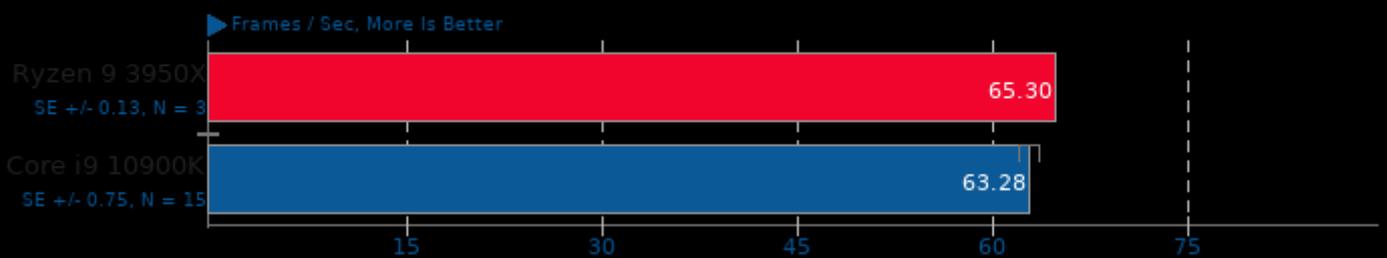
### Xonotic 0.8.2

Resolution: 3840 x 2160 - Effects Quality: Ultimate



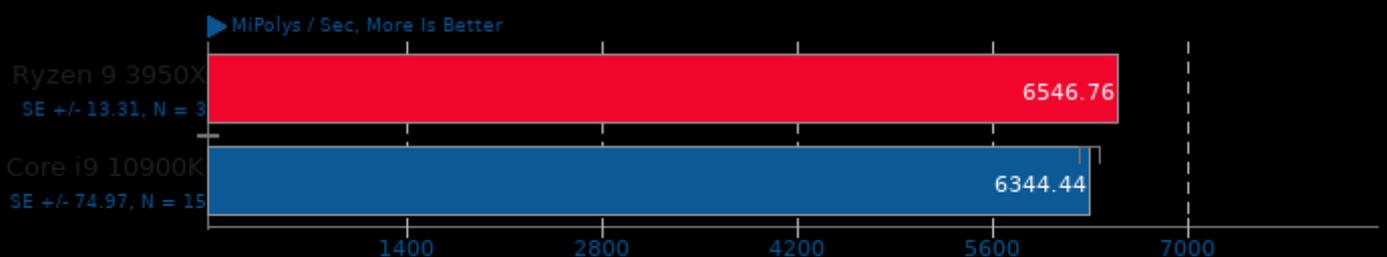
### ParaView 5.4.1

Test: Many Spheres - Resolution: 3840 x 2160



### ParaView 5.4.1

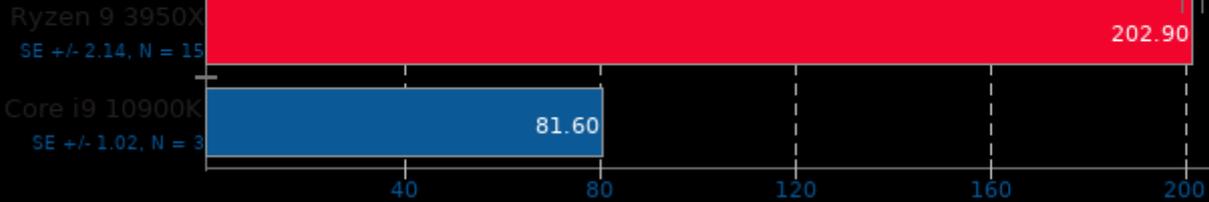
Test: Many Spheres - Resolution: 3840 x 2160



### ParaView 5.4.1

Test: Wavelet Volume - Resolution: 3840 x 2160

▶ Frames / Sec, More Is Better



### ParaView 5.4.1

Test: Wavelet Volume - Resolution: 3840 x 2160

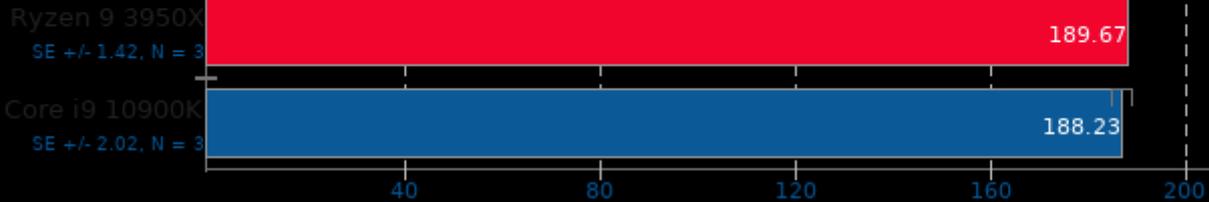
▶ MiVoxels / Sec, More Is Better



### ParaView 5.4.1

Test: Wavelet Contour - Resolution: 3840 x 2160

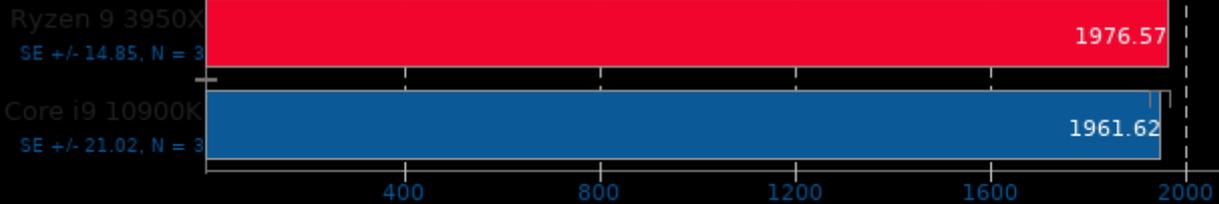
▶ Frames / Sec, More Is Better



### ParaView 5.4.1

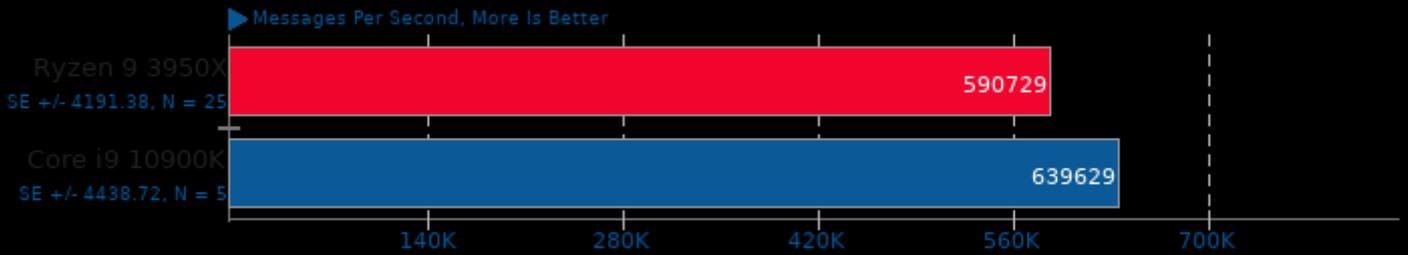
Test: Wavelet Contour - Resolution: 3840 x 2160

▶ MiPolys / Sec, More Is Better



### Sockperf 3.4

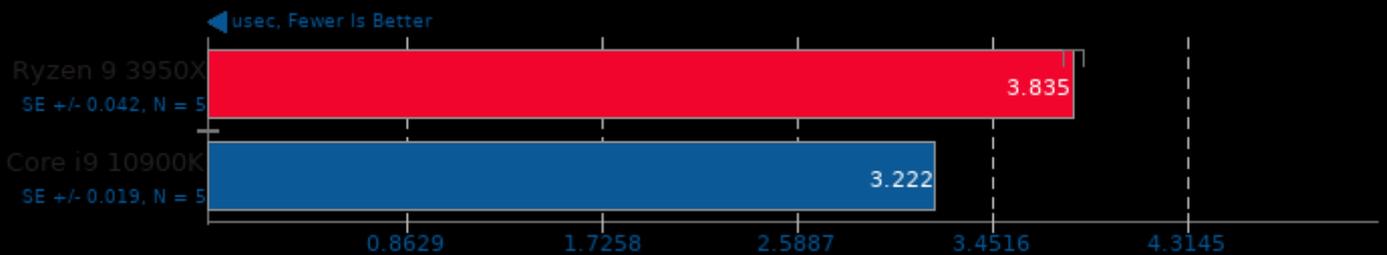
Test: Throughput



1. (CXX) g++ options: -param -O3 -rdynamic -ldl -lpthread

### Sockperf 3.4

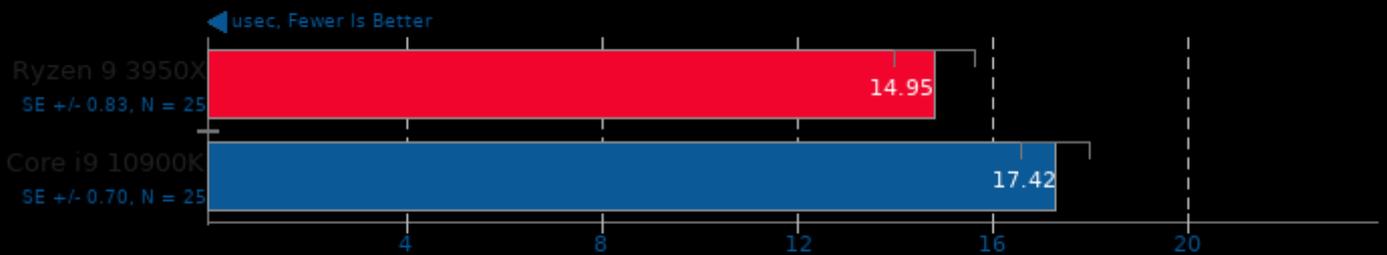
Test: Latency Ping Pong



1. (CXX) g++ options: -param -O3 -rdynamic -ldl -lpthread

### Sockperf 3.4

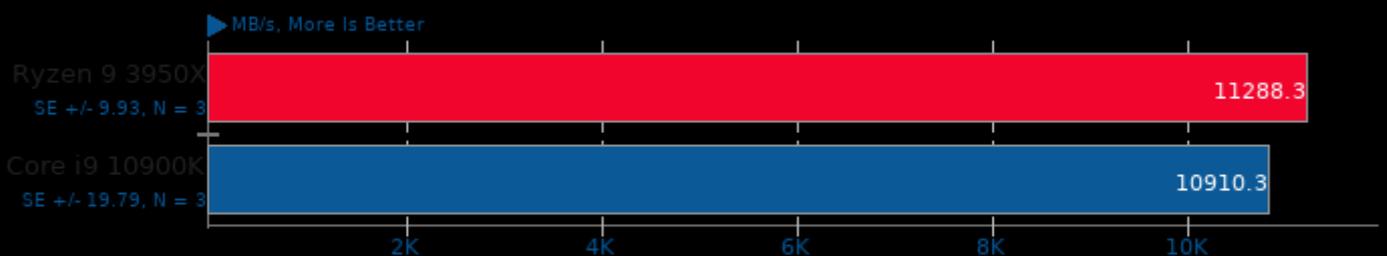
Test: Latency Under Load



1. (CXX) g++ options: -param -O3 -rdynamic -ldl -lpthread

### C-Blosc 2.0 Beta 5

Compressor: blosclz

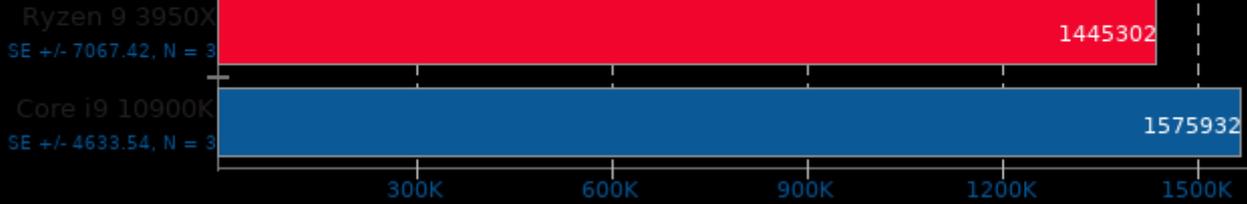


1. (CXX) g++ options: -rdynamic

### IPC\_benchmark

Type: TCP Socket - Message Bytes: 4096

Messages Per Second, More Is Better



### IPC\_benchmark

Type: Unnamed Pipe - Message Bytes: 4096

Messages Per Second, More Is Better



### IPC\_benchmark

Type: FIFO Named Pipe - Message Bytes: 4096

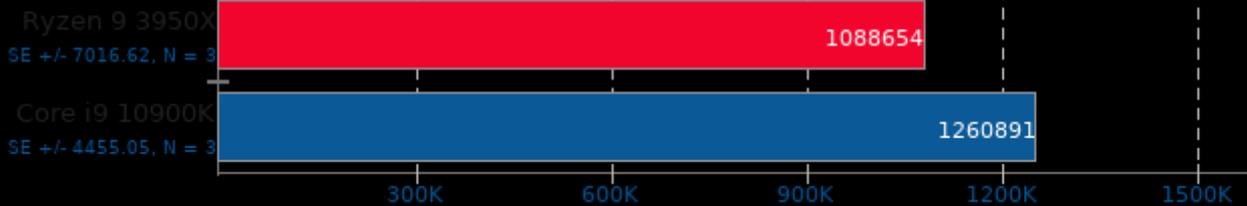
Messages Per Second, More Is Better



### IPC\_benchmark

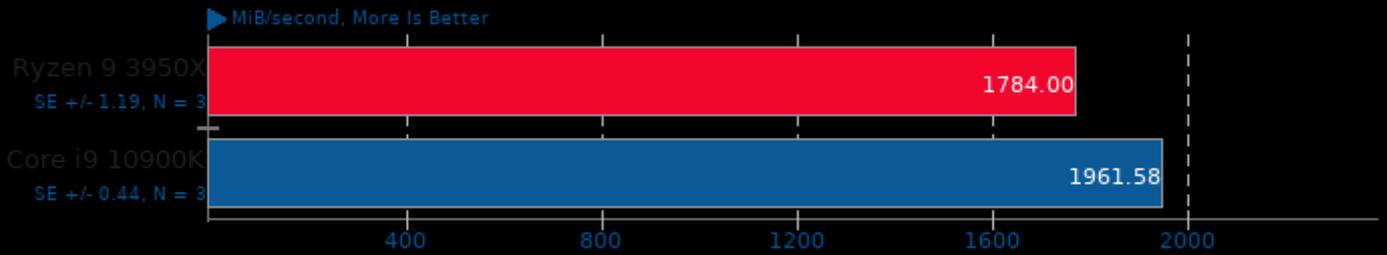
Type: Unnamed Unix Domain Socket - Message Bytes: 4096

Messages Per Second, More Is Better



### Crypto++ 8.2

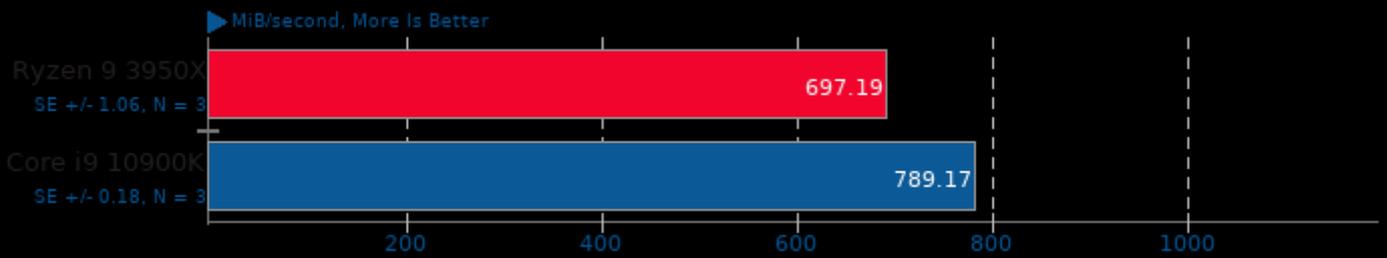
Test: All Algorithms



1. (CXX) g++ options: -g2 -O3 -fPIC -pthread -pipe

### Crypto++ 8.2

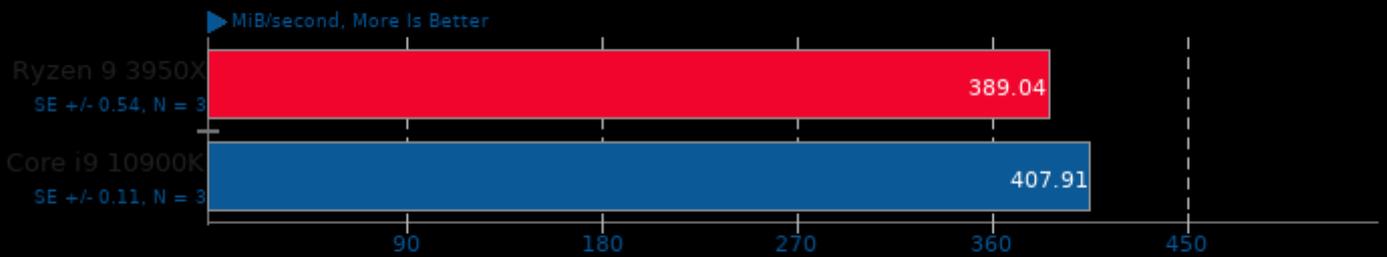
Test: Keyed Algorithms



1. (CXX) g++ options: -g2 -O3 -fPIC -pthread -pipe

### Crypto++ 8.2

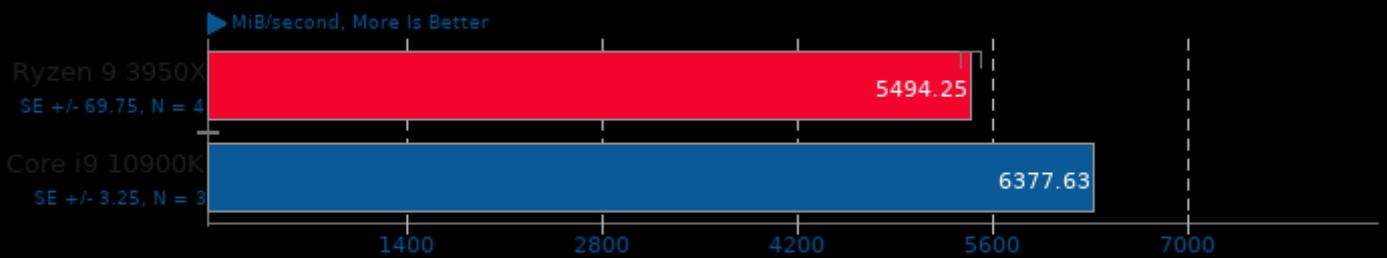
Test: Unkeyed Algorithms



1. (CXX) g++ options: -g2 -O3 -fPIC -pthread -pipe

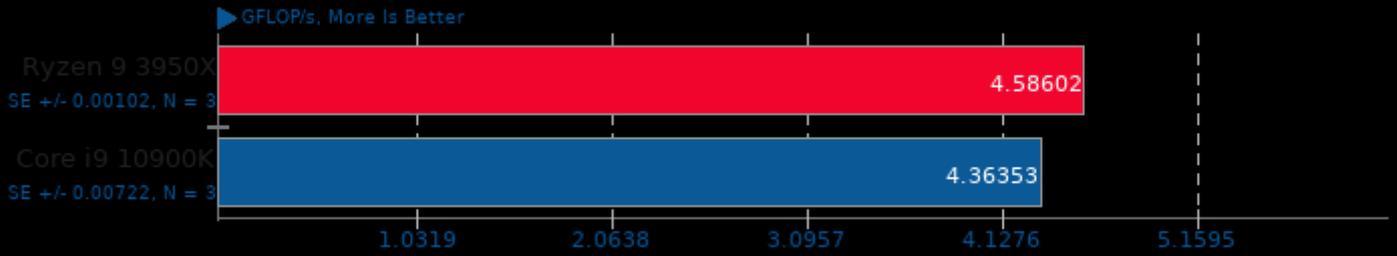
### Crypto++ 8.2

Test: Integer + Elliptic Curve Public Key Algorithms



1. (CXX) g++ options: -g2 -O3 -fPIC -pthread -pipe

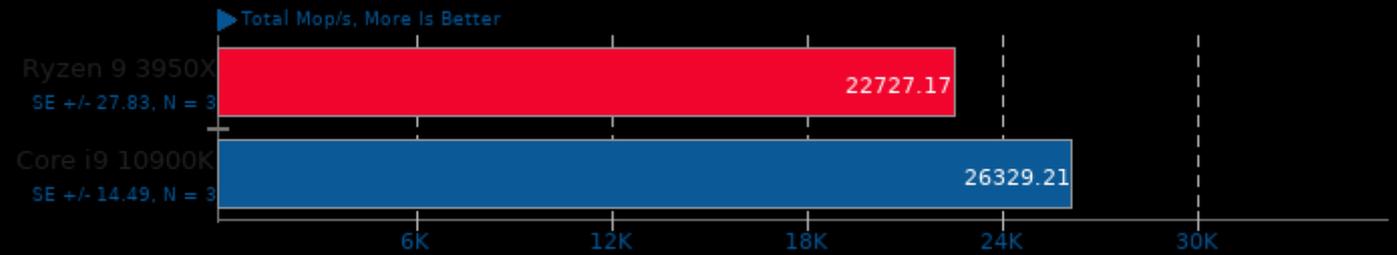
### High Performance Conjugate Gradient 3.1



1. (CXX) g++ options: -O3 -ffast-math -ftriple-underscore -pthread -lmpi\_cxx -lmpi

### NAS Parallel Benchmarks 3.4

Test / Class: BT.C



1. (F9X) gfortran options: -O3 -march=native -pthread -lmpi\_usempif08 -lmpi\_mpih -lmpi  
2. Open MPI 4.0.3

### NAS Parallel Benchmarks 3.4

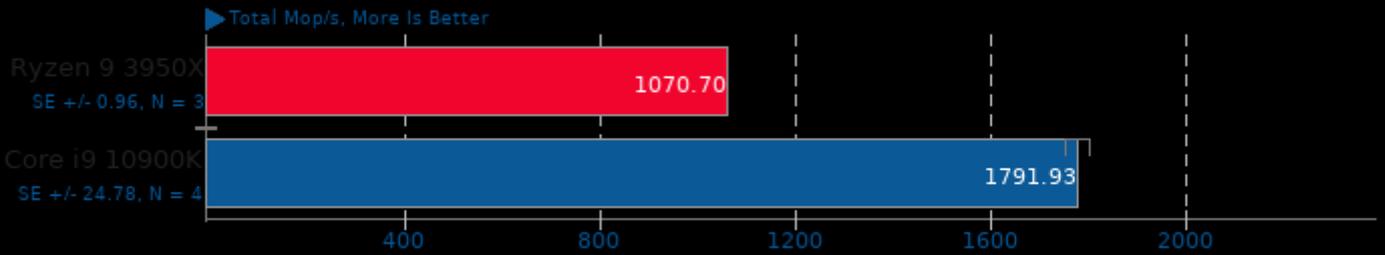
Test / Class: EP.C



1. (F9X) gfortran options: -O3 -march=native -pthread -lmpi\_usempif08 -lmpi\_mpih -lmpi  
2. Open MPI 4.0.3

### NAS Parallel Benchmarks 3.4

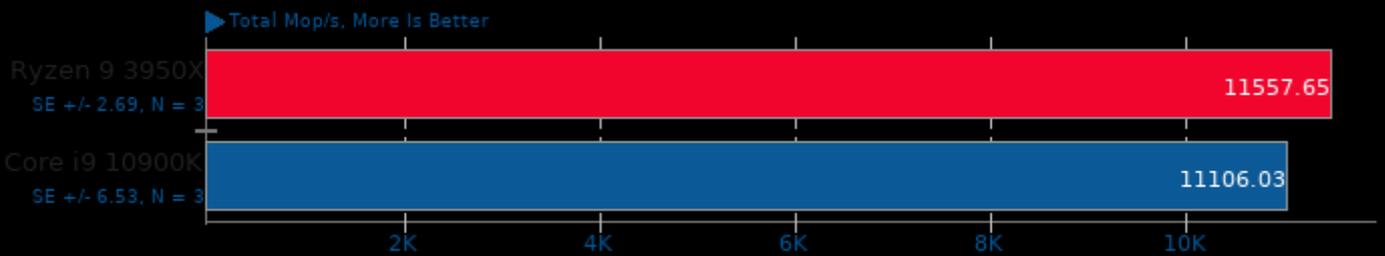
Test / Class: EP.D



1. (F9X) gfortran options: -O3 -march=native -pthread -lmpi\_usempif08 -lmpi\_mpifh -lmpi  
2. Open MPI 4.0.3

### NAS Parallel Benchmarks 3.4

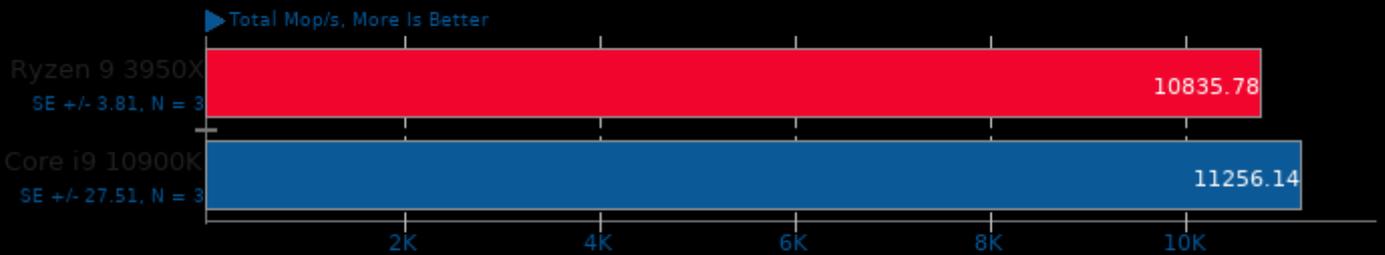
Test / Class: FT.C



1. (F9X) gfortran options: -O3 -march=native -pthread -lmpi\_usempif08 -lmpi\_mpifh -lmpi  
2. Open MPI 4.0.3

### NAS Parallel Benchmarks 3.4

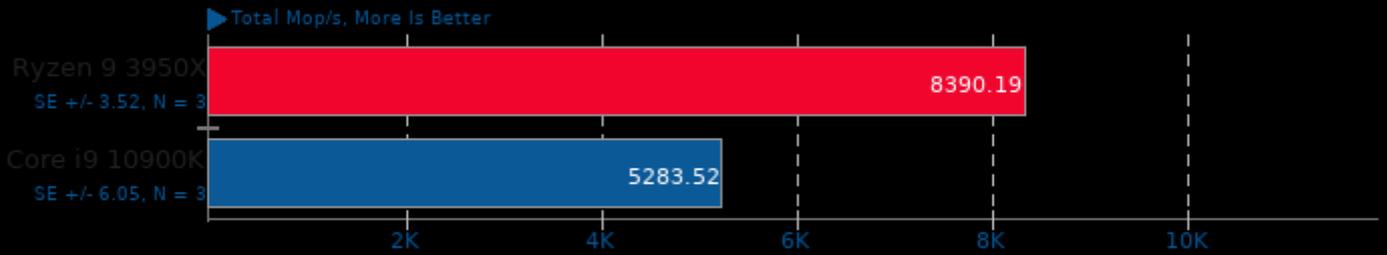
Test / Class: MG.C



1. (F9X) gfortran options: -O3 -march=native -pthread -lmpi\_usempif08 -lmpi\_mpifh -lmpi  
2. Open MPI 4.0.3

### NAS Parallel Benchmarks 3.4

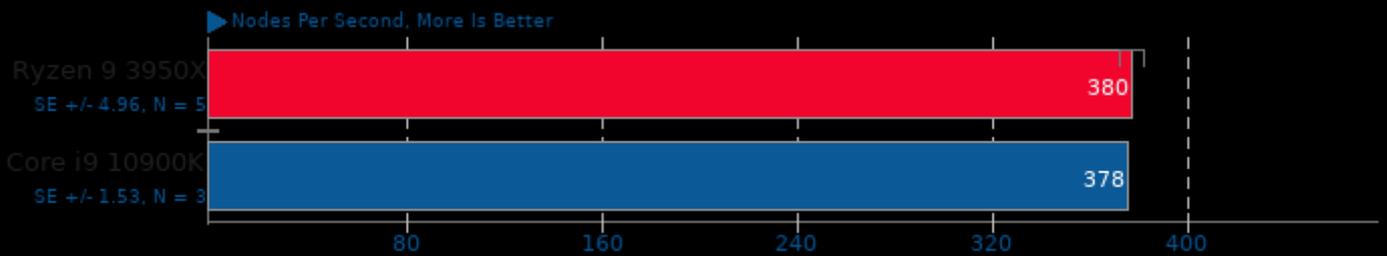
Test / Class: SP.B



1. (F9X) gfortran options: -O3 -march=native -pthread -lmpi\_usempif08 -lmpi\_mpi fh -lmpi  
2. Open MPI 4.0.3

### LeelaChessZero 0.25

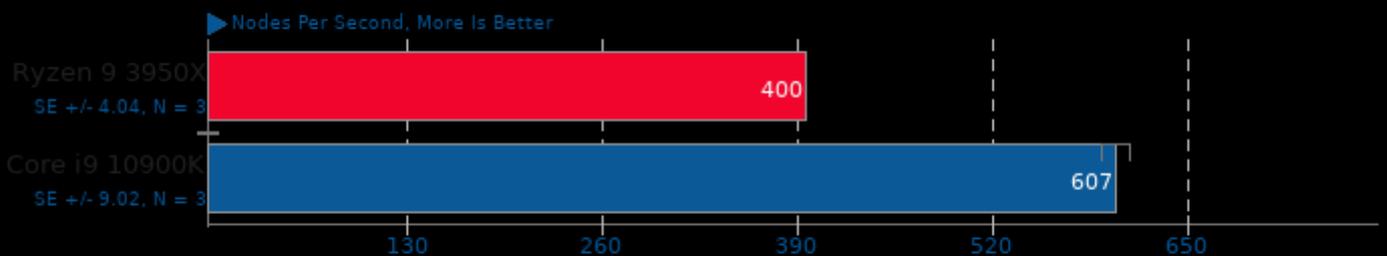
Backend: BLAS



1. (CXX) g++ options: -pthread

### LeelaChessZero 0.25

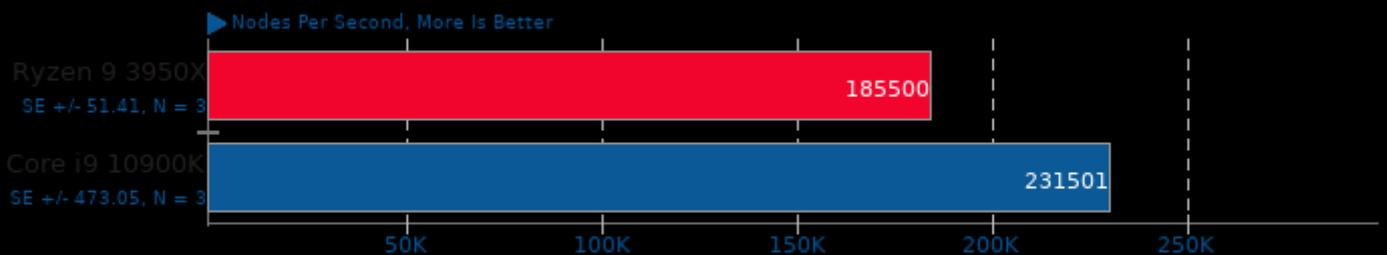
Backend: Eigen



1. (CXX) g++ options: -pthread

### LeelaChessZero 0.25

Backend: Random

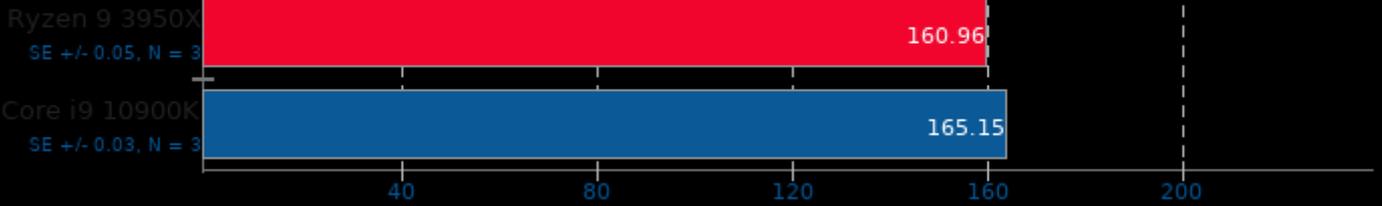


1. (CXX) g++ options: -pthread

### Parboil 2.5

Test: OpenMP LBM

Seconds, Fewer Is Better

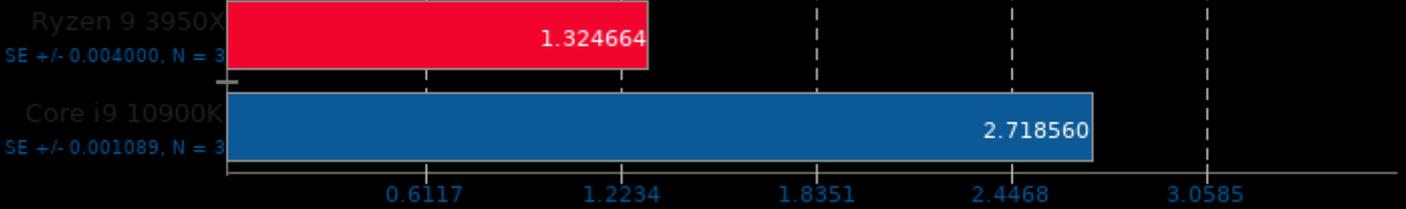


1. (CXX) g++ options: -lm -lpthread -lgomp -O3 -ffast-math -fopenmp

### Parboil 2.5

Test: OpenMP CUTCP

Seconds, Fewer Is Better

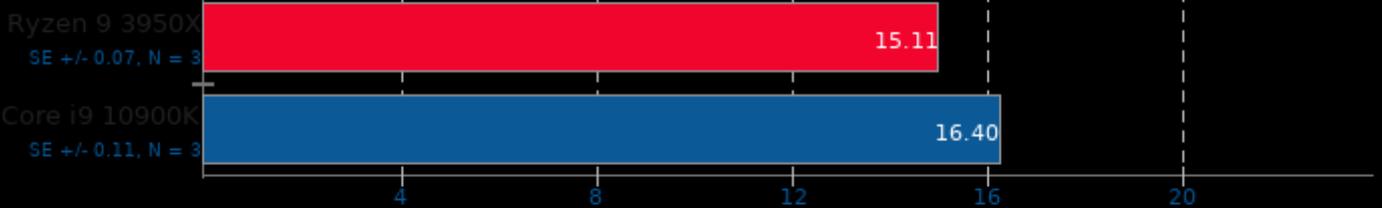


1. (CXX) g++ options: -lm -lpthread -lgomp -O3 -ffast-math -fopenmp

### Parboil 2.5

Test: OpenMP Stencil

Seconds, Fewer Is Better

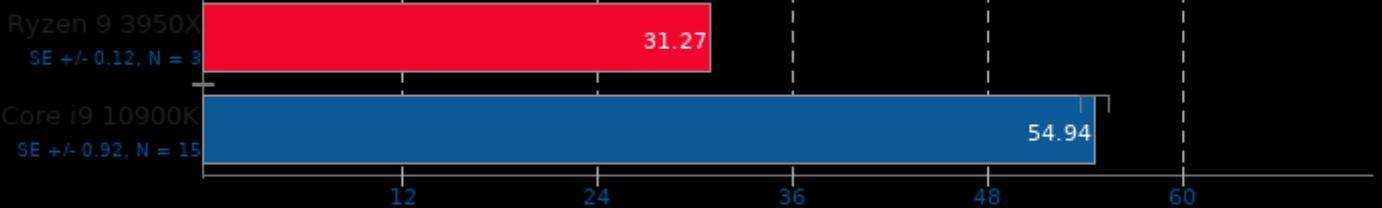


1. (CXX) g++ options: -lm -lpthread -lgomp -O3 -ffast-math -fopenmp

### Parboil 2.5

Test: OpenMP MRI Gridding

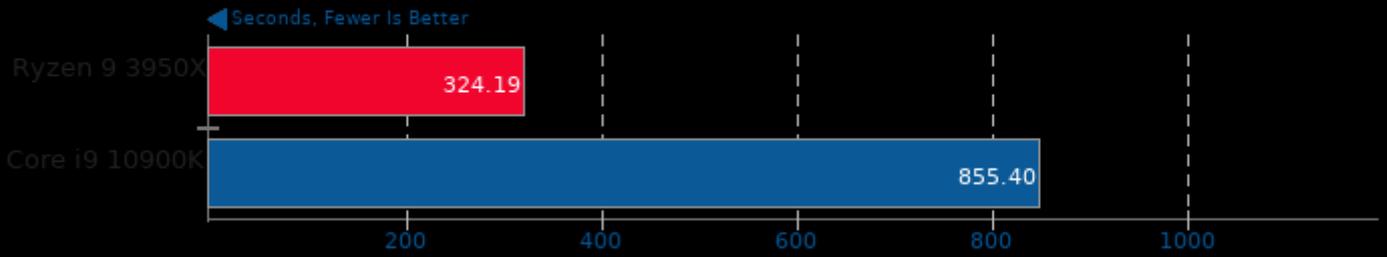
Seconds, Fewer Is Better



1. (CXX) g++ options: -lm -lpthread -lgomp -O3 -ffast-math -fopenmp

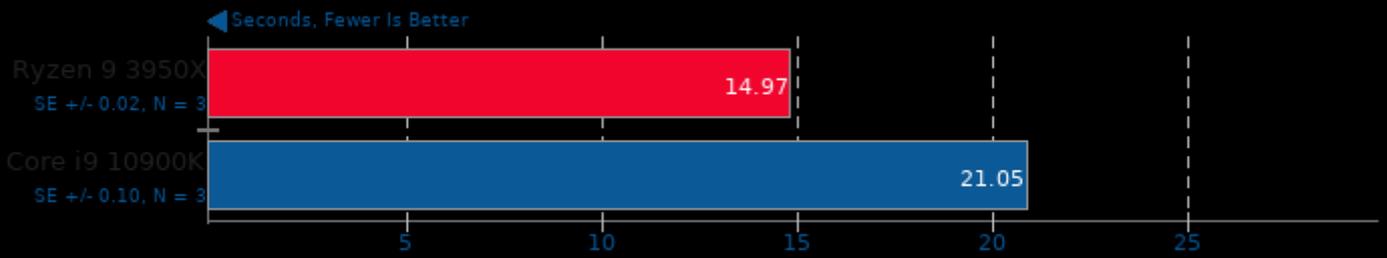
### CP2K Molecular Dynamics 6.1

Fayalite-FIST Data



### Rodinia 2.4

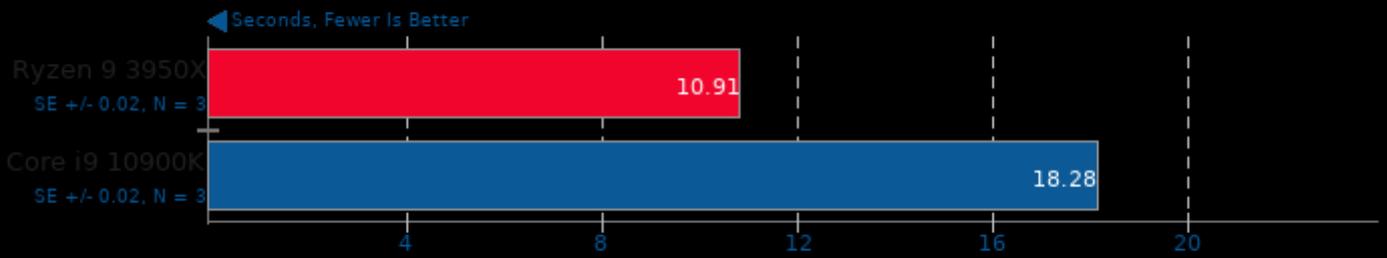
Test: OpenMP LavaMD



1. (CXX) g++ options: -O2 -fOpenCL

### Rodinia 2.4

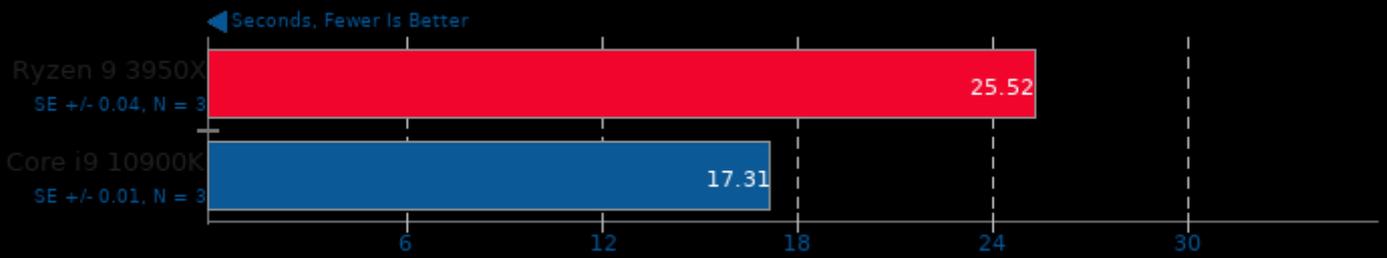
Test: OpenMP CFD Solver



1. (CXX) g++ options: -O2 -fOpenCL

### Rodinia 2.4

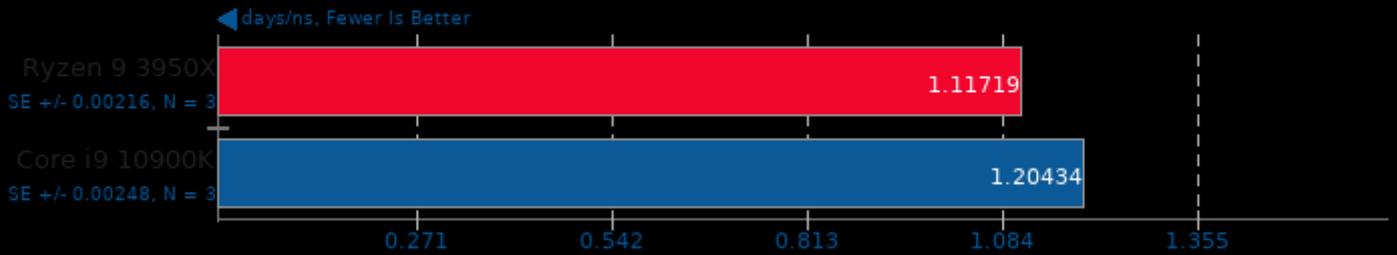
Test: OpenMP Streamcluster



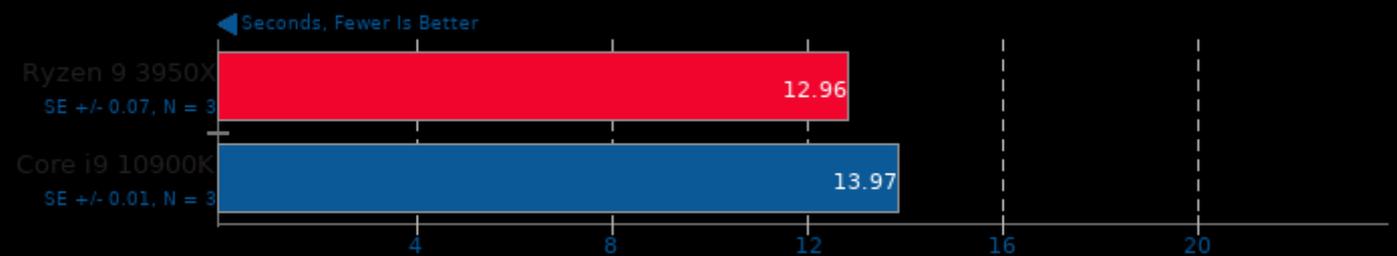
1. (CXX) g++ options: -O2 -fOpenCL

### NAMD 2.13

ATPase Simulation - 327,506 Atoms



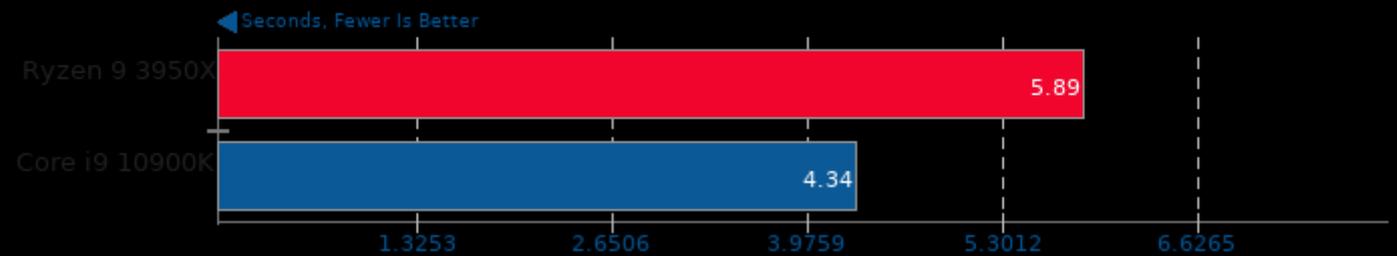
### Nebular Empirical Analysis Tool 2020-02-29



1. (F9X) gfortran options: -cpp -fline-length=0 -jsource/ -fopenmp -O3 -fno-backtrace

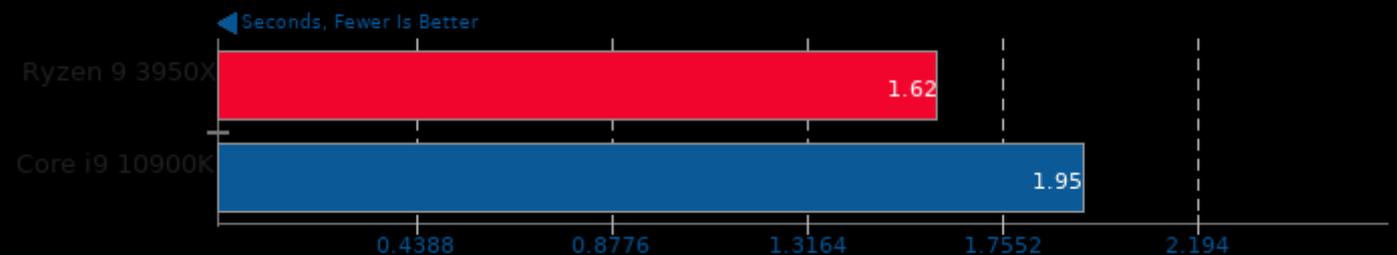
### Polyhedron Fortran Benchmarks

Benchmark: ac



### Polyhedron Fortran Benchmarks

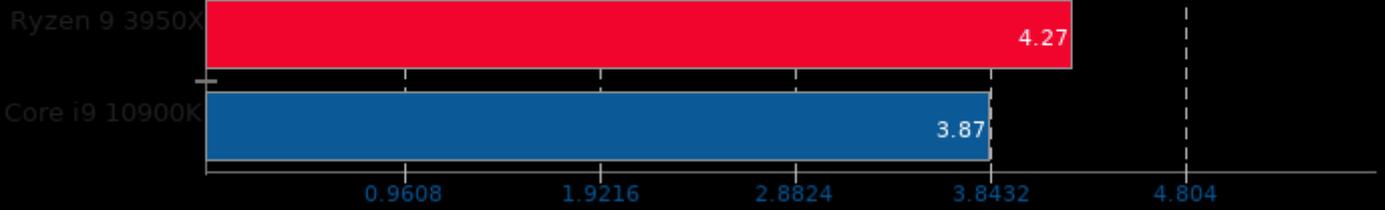
Benchmark: air



### Polyhedron Fortran Benchmarks

Benchmark: mdbx

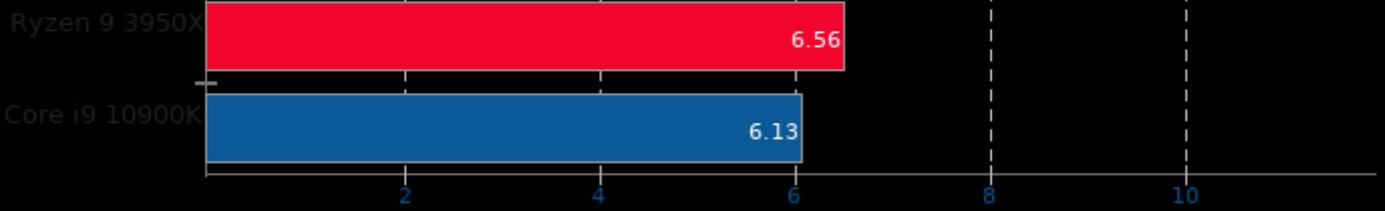
← Seconds, Fewer Is Better



### Polyhedron Fortran Benchmarks

Benchmark: doduc

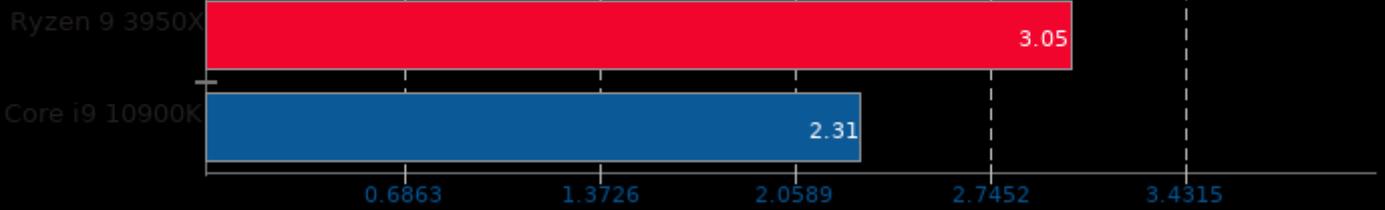
← Seconds, Fewer Is Better



### Polyhedron Fortran Benchmarks

Benchmark: linpk

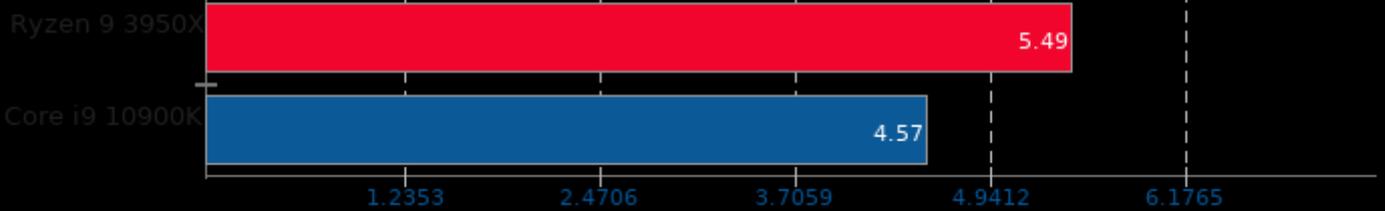
← Seconds, Fewer Is Better



### Polyhedron Fortran Benchmarks

Benchmark: aermod

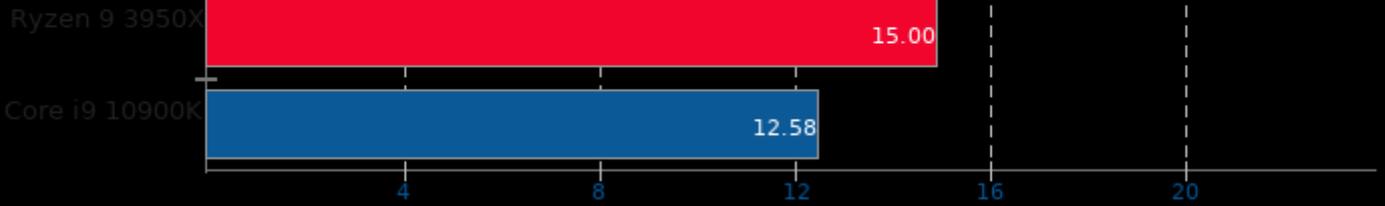
← Seconds, Fewer Is Better



### Polyhedron Fortran Benchmarks

Benchmark: rnflo

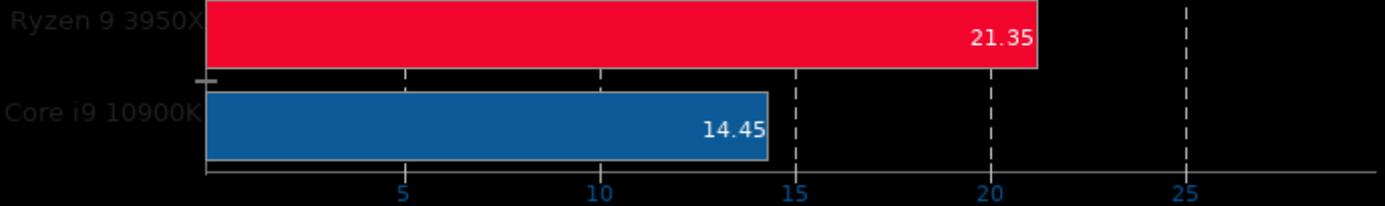
Seconds, Fewer Is Better



### Polyhedron Fortran Benchmarks

Benchmark: induct2

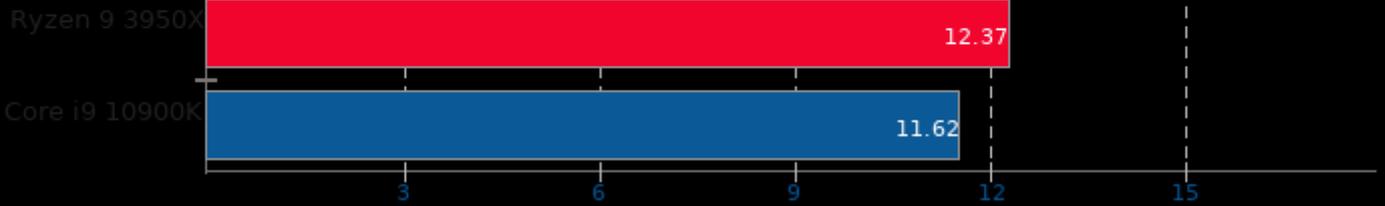
Seconds, Fewer Is Better



### Polyhedron Fortran Benchmarks

Benchmark: protein

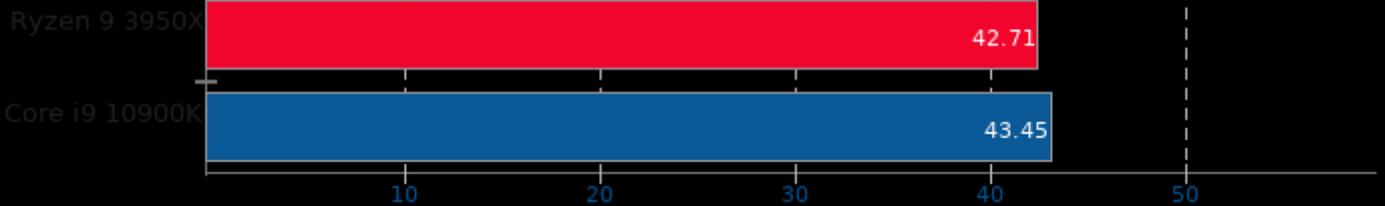
Seconds, Fewer Is Better



### Polyhedron Fortran Benchmarks

Benchmark: channel2

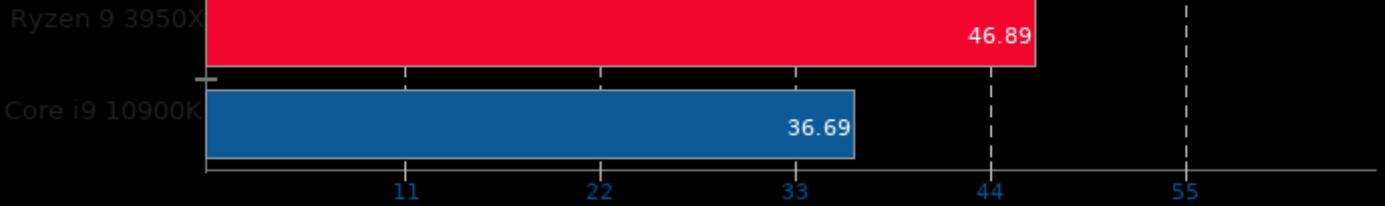
Seconds, Fewer Is Better



### Polyhedron Fortran Benchmarks

Benchmark: fatigue2

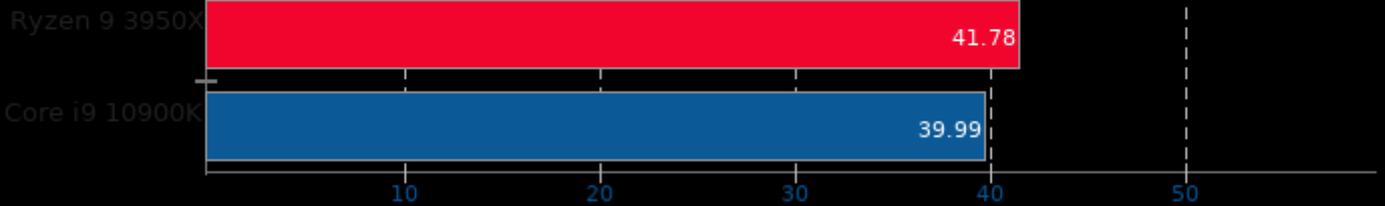
← Seconds, Fewer Is Better



### Polyhedron Fortran Benchmarks

Benchmark: gas\_dyn2

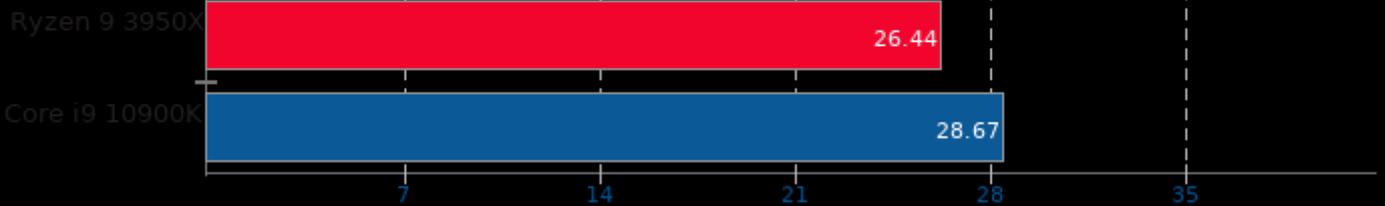
← Seconds, Fewer Is Better



### Polyhedron Fortran Benchmarks

Benchmark: test\_fpu2

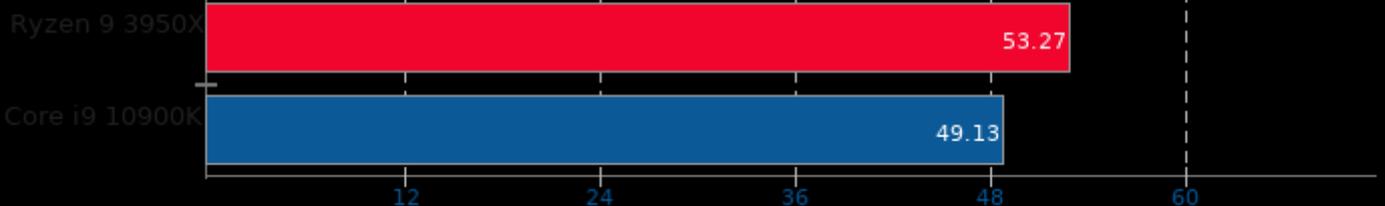
← Seconds, Fewer Is Better



### Polyhedron Fortran Benchmarks

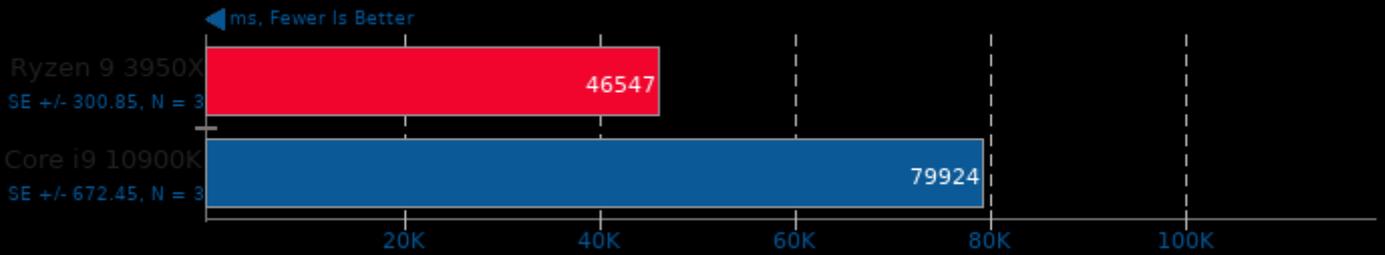
Benchmark: mp\_prop\_design

← Seconds, Fewer Is Better



### toyBrot Fractal Generator

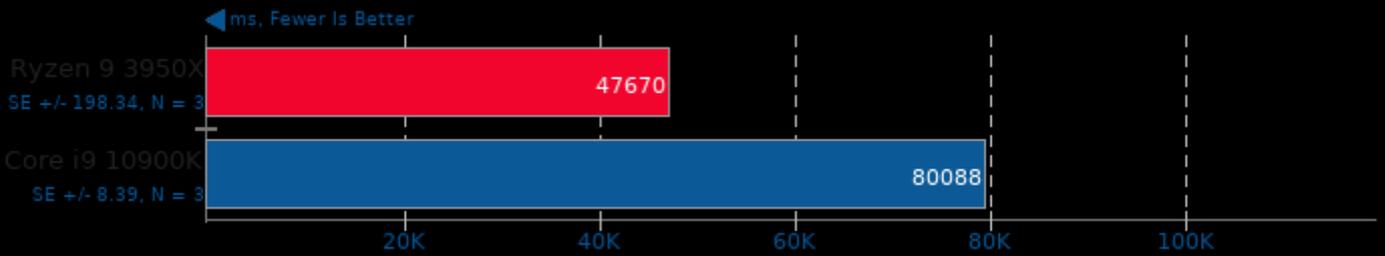
Implementation: TBB



1. (CXX) g++ options: -lpthread -isystem -fopenmp -std=c++14

### toyBrot Fractal Generator

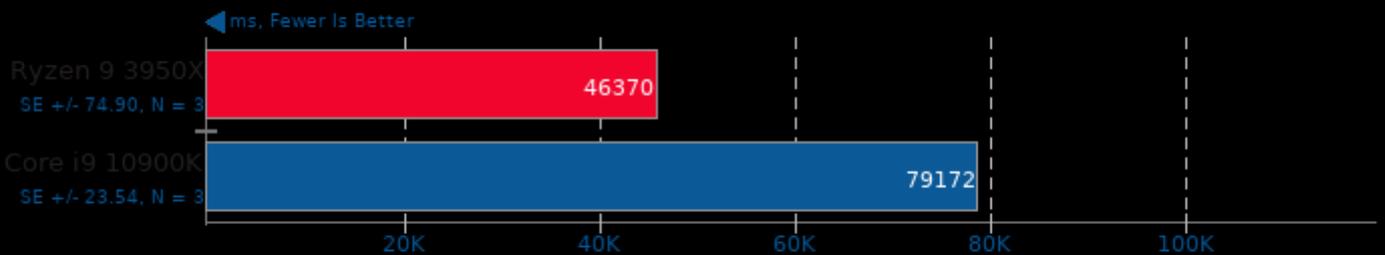
Implementation: OpenMP



1. (CXX) g++ options: -lpthread -isystem -fopenmp -std=c++14

### toyBrot Fractal Generator

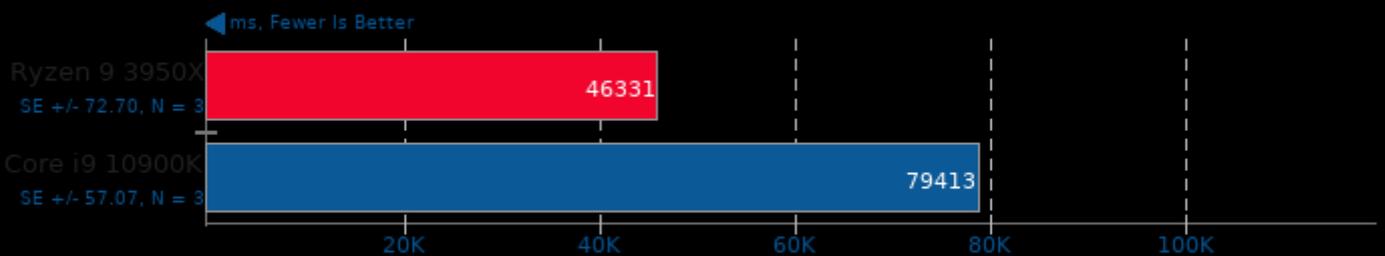
Implementation: C++ Tasks



1. (CXX) g++ options: -lpthread -isystem -fopenmp -std=c++14

### toyBrot Fractal Generator

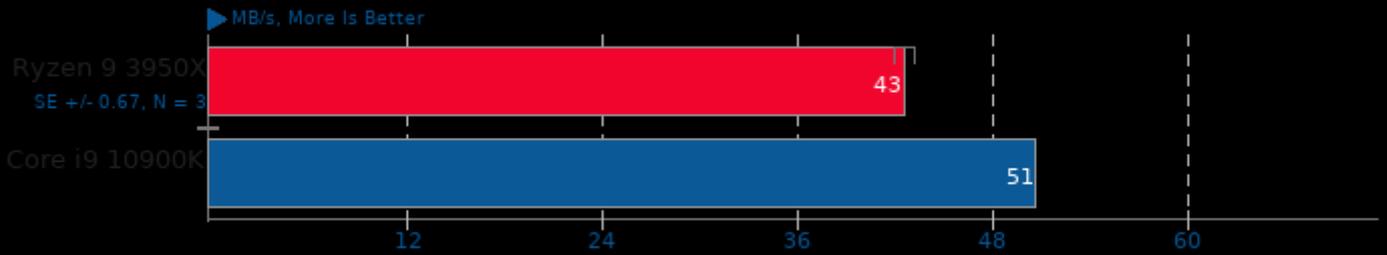
Implementation: C++ Threads



1. (CXX) g++ options: -lpthread -isystem -fopenmp -std=c++14

### Izbench 1.8

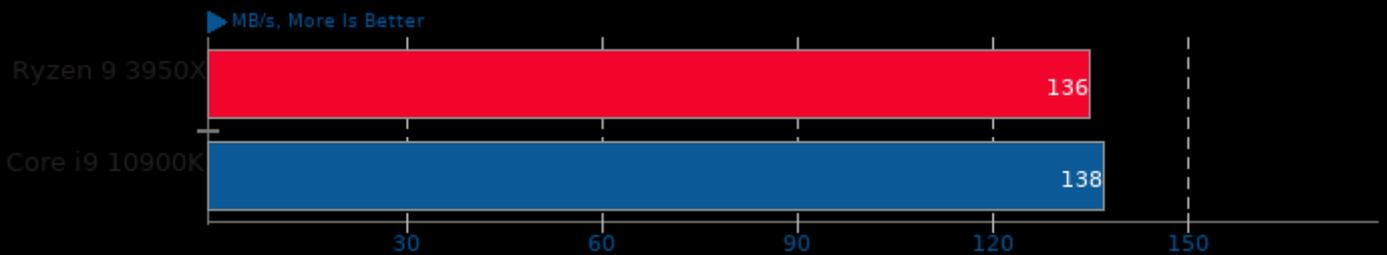
Test: XZ 0 - Process: Compression



1. (CXX) g++ options: -pthread -fomit-frame-pointer -fstrict-aliasing -ffast-math -O3

### Izbench 1.8

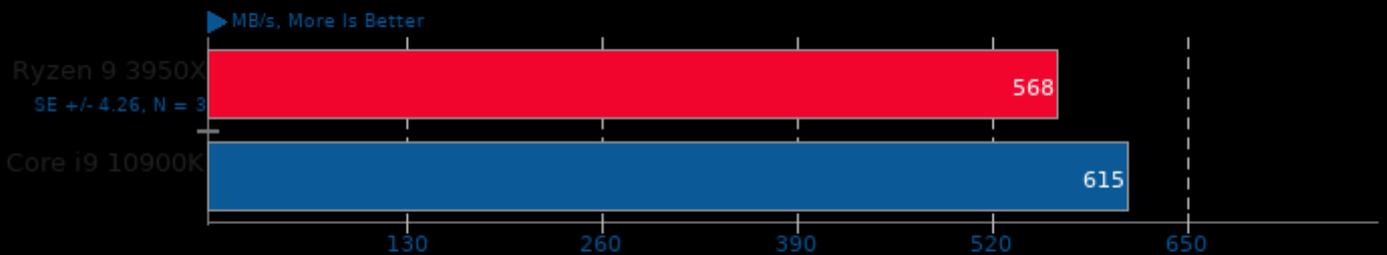
Test: XZ 0 - Process: Decompression



1. (CXX) g++ options: -pthread -fomit-frame-pointer -fstrict-aliasing -ffast-math -O3

### Izbench 1.8

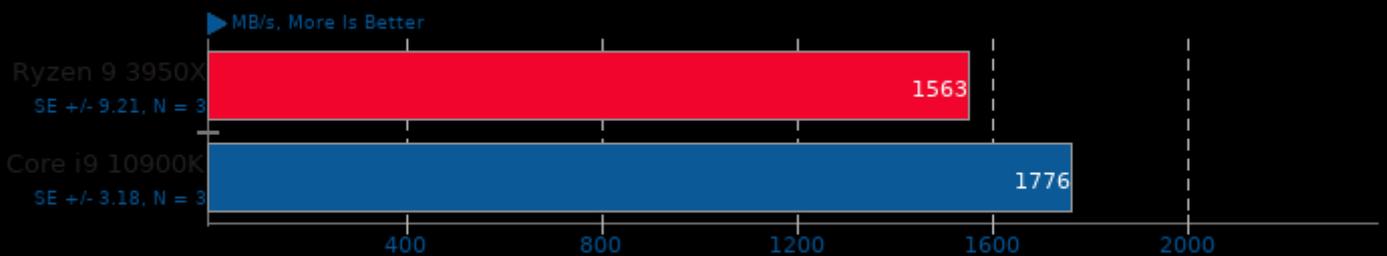
Test: Zstd 1 - Process: Compression



1. (CXX) g++ options: -pthread -fomit-frame-pointer -fstrict-aliasing -ffast-math -O3

### Izbench 1.8

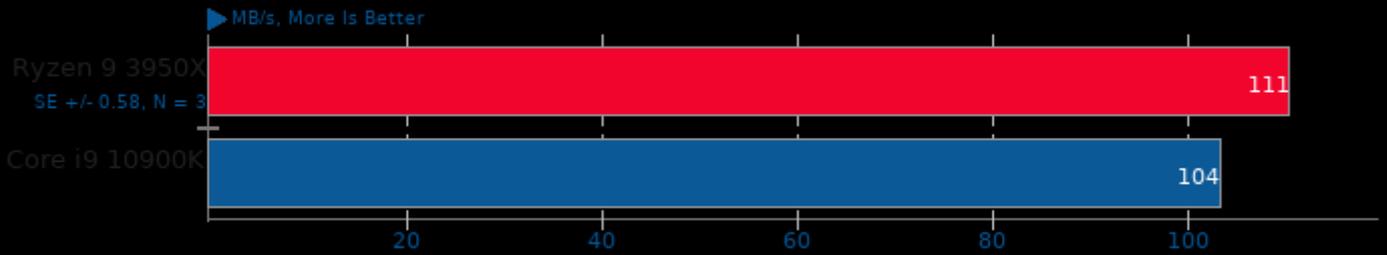
Test: Zstd 1 - Process: Decompression



1. (CXX) g++ options: -pthread -fomit-frame-pointer -fstrict-aliasing -ffast-math -O3

### Izbench 1.8

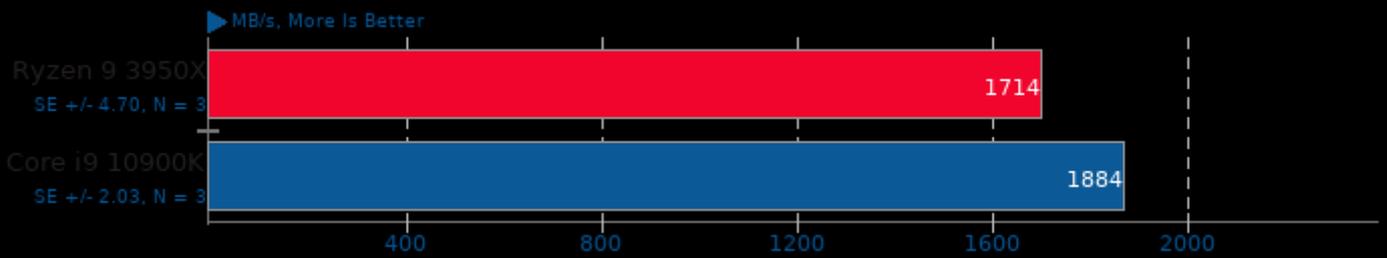
Test: Zstd 8 - Process: Compression



1. (CXX) g++ options: -pthread -fomit-frame-pointer -fstrict-aliasing -ffast-math -O3

### Izbench 1.8

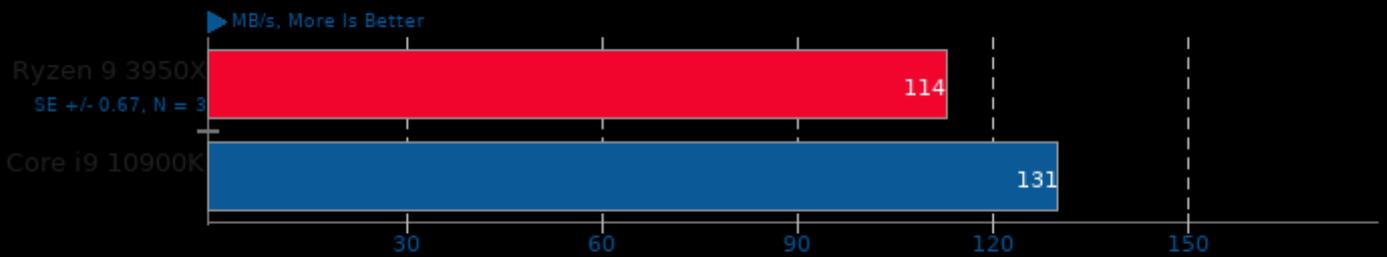
Test: Zstd 8 - Process: Decompression



1. (CXX) g++ options: -pthread -fomit-frame-pointer -fstrict-aliasing -ffast-math -O3

### Izbench 1.8

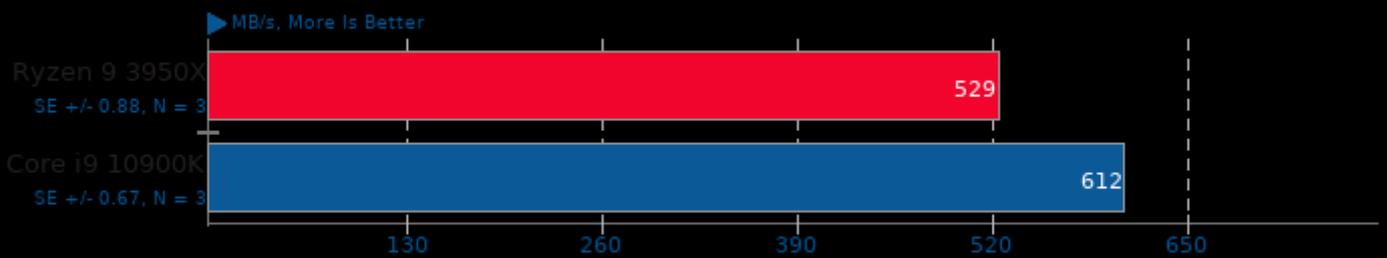
Test: Crush 0 - Process: Compression



1. (CXX) g++ options: -pthread -fomit-frame-pointer -fstrict-aliasing -ffast-math -O3

### Izbench 1.8

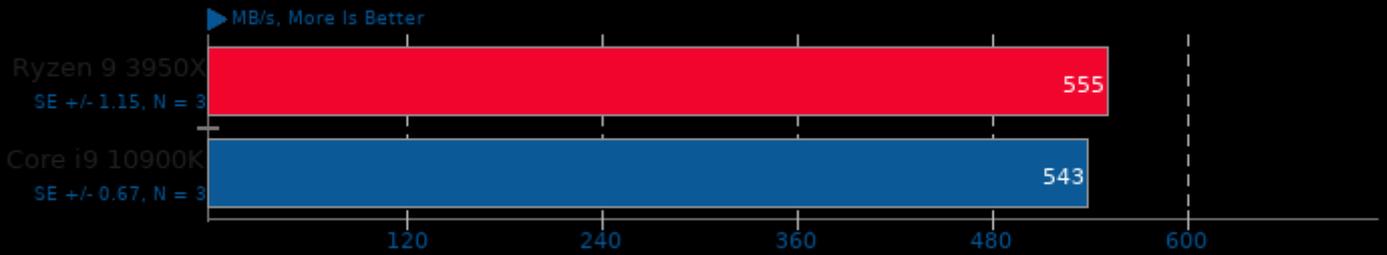
Test: Crush 0 - Process: Decompression



1. (CXX) g++ options: -pthread -fomit-frame-pointer -fstrict-aliasing -ffast-math -O3

### Izbench 1.8

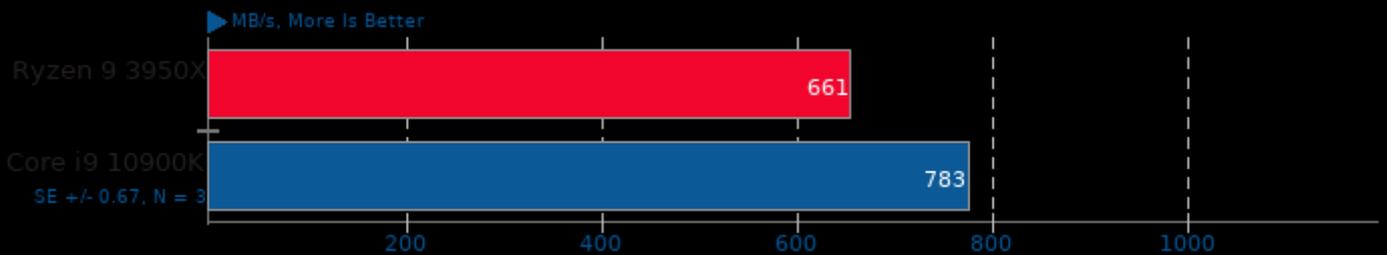
Test: Brotli 0 - Process: Compression



1. (CXX) g++ options: -pthread -fomit-frame-pointer -fstrict-aliasing -ffast-math -O3

### Izbench 1.8

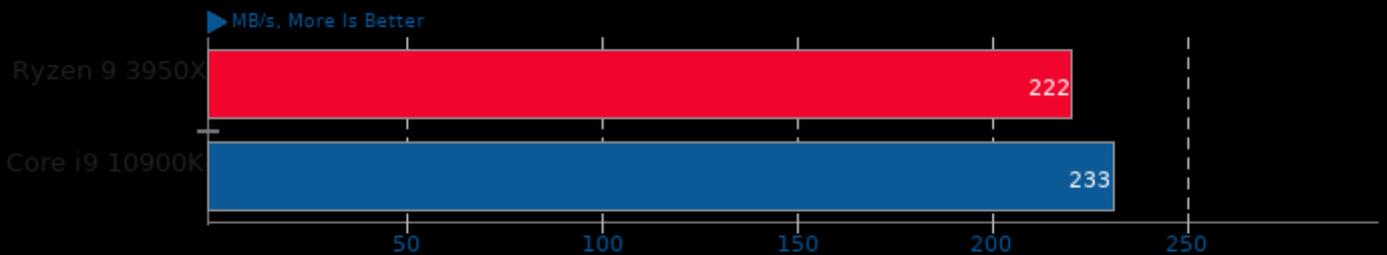
Test: Brotli 0 - Process: Decompression



1. (CXX) g++ options: -pthread -fomit-frame-pointer -fstrict-aliasing -ffast-math -O3

### Izbench 1.8

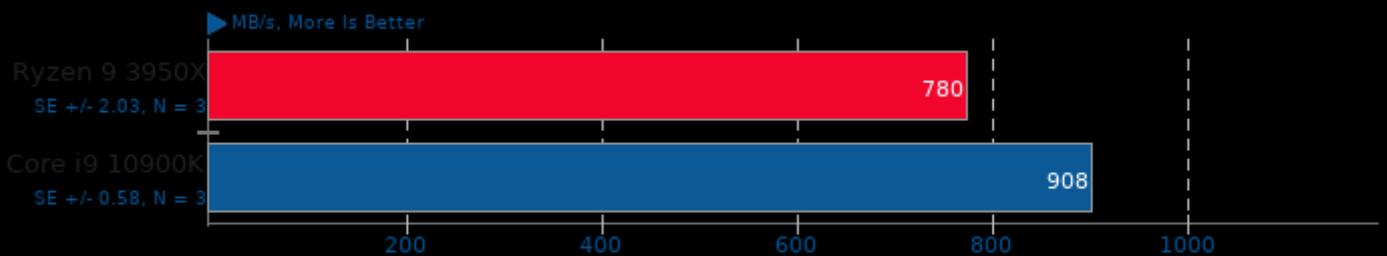
Test: Brotli 2 - Process: Compression



1. (CXX) g++ options: -pthread -fomit-frame-pointer -fstrict-aliasing -ffast-math -O3

### Izbench 1.8

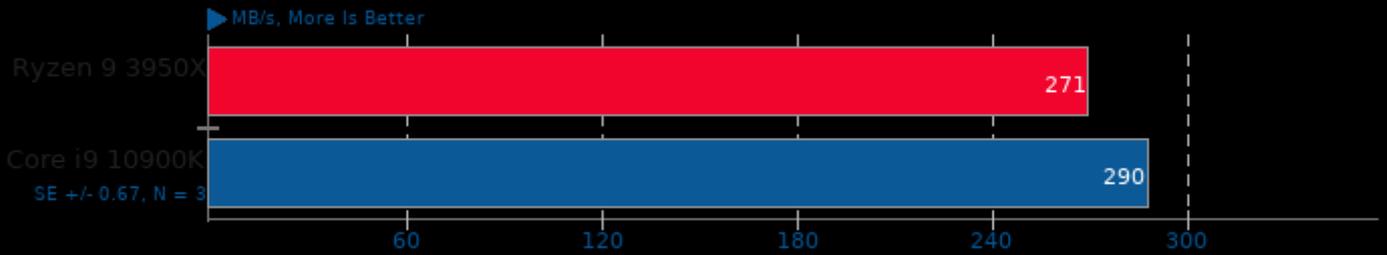
Test: Brotli 2 - Process: Decompression



1. (CXX) g++ options: -pthread -fomit-frame-pointer -fstrict-aliasing -ffast-math -O3

### Izbench 1.8

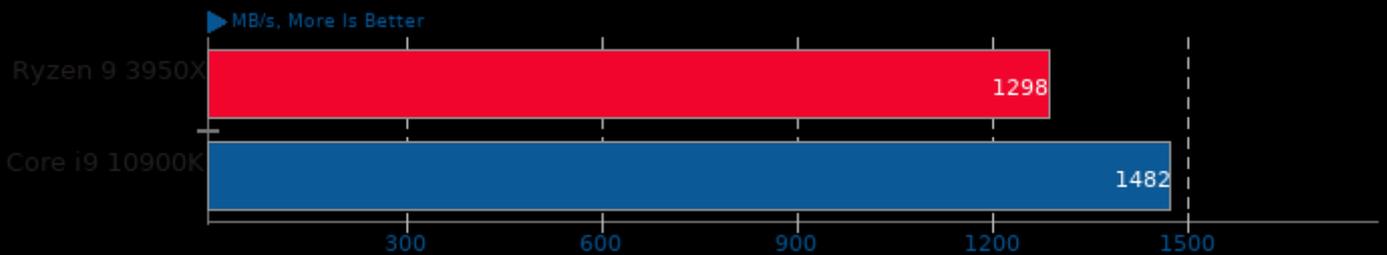
Test: Libdeflate 1 - Process: Compression



1. (CXX) g++ options: -pthread -fomit-frame-pointer -fstrict-aliasing -ffast-math -O3

### Izbench 1.8

Test: Libdeflate 1 - Process: Decompression



1. (CXX) g++ options: -pthread -fomit-frame-pointer -fstrict-aliasing -ffast-math -O3

### SMHasher 2020-02-29

Hash: wyhash



1. (CXX) g++ options: -march=native -O3 -lpthread

### SMHasher 2020-02-29

Hash: wyhash



1. (CXX) g++ options: -march=native -O3 -lpthread

### SMHasher 2020-02-29

Hash: MeowHash



1. (CXX) g++ options: -march=native -O3 -lpthread

### SMHasher 2020-02-29

Hash: MeowHash



1. (CXX) g++ options: -march=native -O3 -lpthread

### SMHasher 2020-02-29

Hash: Spooky32



1. (CXX) g++ options: -march=native -O3 -lpthread

### SMHasher 2020-02-29

Hash: Spooky32



1. (CXX) g++ options: -march=native -O3 -lpthread

### SMHasher 2020-02-29

Hash: fasthash32



1. (CXX) g++ options: -march=native -O3 -lpthread

### SMHasher 2020-02-29

Hash: fasthash32



### SMHasher 2020-02-29

Hash: tlha2\_atonce



### SMHasher 2020-02-29

Hash: tlha2\_atonce



### SMHasher 2020-02-29

Hash: tlha0\_aes\_avx2



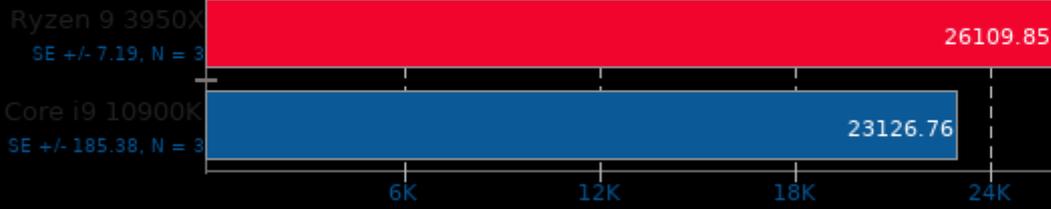
### SMHasher 2020-02-29

Hash: tlha0\_aes\_avx2



### Algebraic Multi-Grid Benchmark

▶ Figure Of Merit, More Is Better

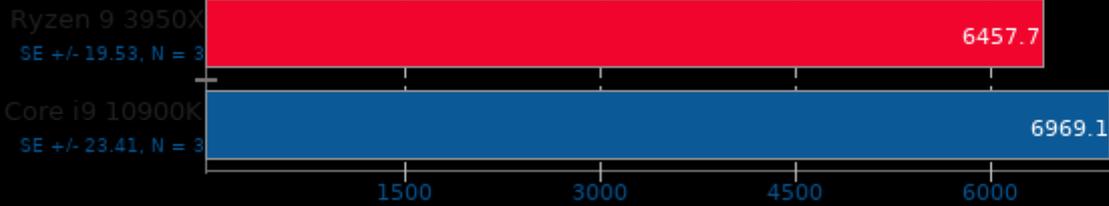


1. (CC) gcc options: -lparcsr\_ls -lparcsr\_mv -lseq\_mv -llj\_mv -lkrylov -lHYPRE\_utilities -lm -fopenmp -pthread -lmpi

### FFTW 3.3.6

Build: Stock - Size: 2D FFT Size 4096

▶ Mflops, More Is Better

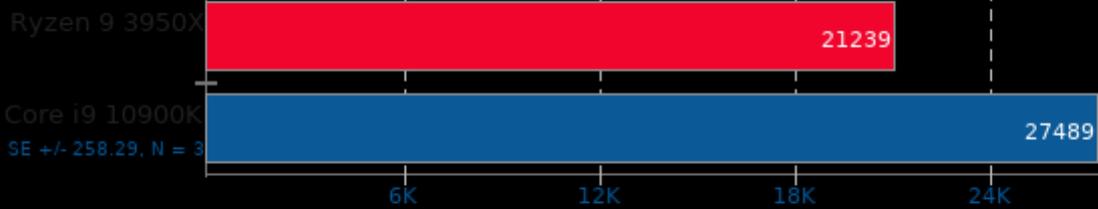


1. (CC) gcc options: -pthread -O3 -fomit-frame-pointer -mtune=native -malign-double -fstrict-aliasing -fno-schedule-insns -ffast-math -lm

### FFTW 3.3.6

Build: Float + SSE - Size: 2D FFT Size 4096

▶ Mflops, More Is Better



1. (CC) gcc options: -pthread -O3 -fomit-frame-pointer -mtune=native -malign-double -fstrict-aliasing -fno-schedule-insns -ffast-math -lm

### Pennant 1.0.1

Test: sedovbig

◀ Hydro Cycle Time - Seconds, Fewer Is Better

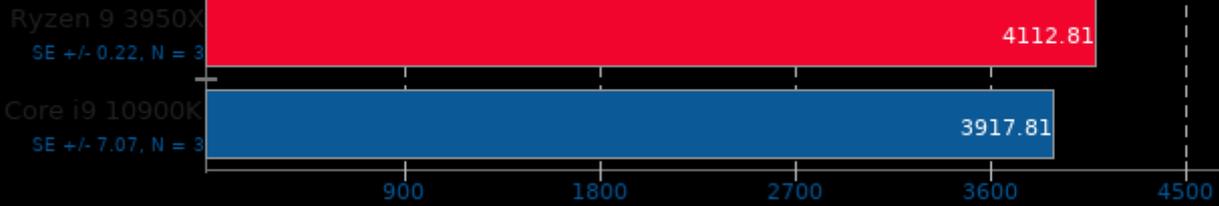


1. (CXX) g++ options: -fopenmp -pthread -lmpi\_cxx -lmpi

### Pennant 1.0.1

Test: leblanbig

Hydro Cycle Time - Seconds, Fewer Is Better

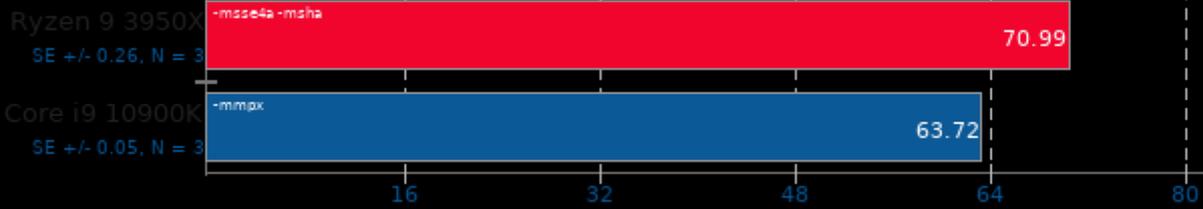


1. (CXX) g++ options: -fopenmp -pthread -lmpi\_cxx -lmpi

### Timed MrBayes Analysis 3.2.7

Primate Phylogeny Analysis

Seconds, Fewer Is Better

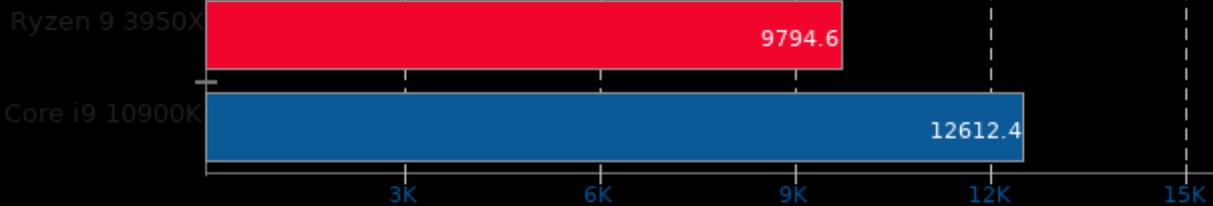


1. (CC) gcc options: -mssse4a -msha -mmpx

### NWChem 7.0

Input: C240 Buckyball

Seconds, Fewer Is Better

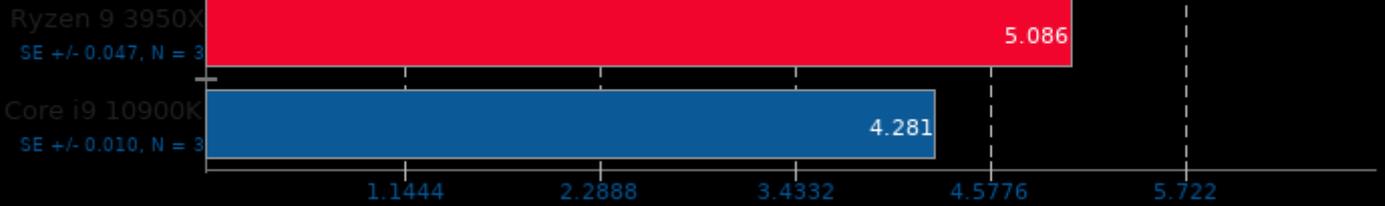


1. (F9X) gfortran options: -lnwctask -lccsd -lmcscf -lseici -lmp2 -lmoints -lstepper -ldriver -loptim -lnwdfc -lgradients -lcpbf -lesp -laddscf -ldangchang -lgue

### Timed HMMer Search 2.3.2

Pfam Database Search

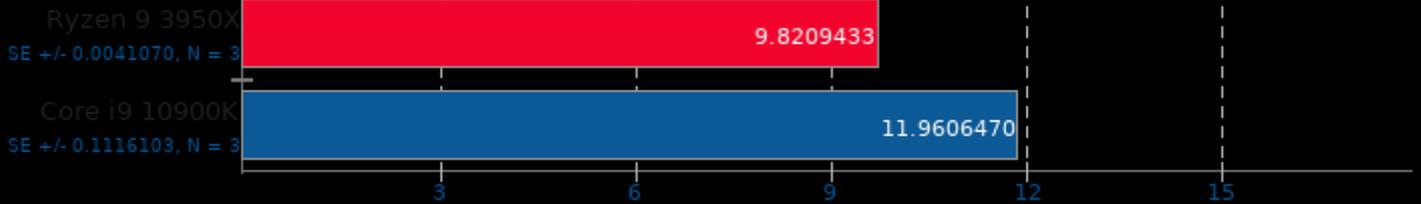
← Seconds, Fewer Is Better



1. (CC) gcc options: -O2 -pthread -lhmmmer -lsquid -lm

### LULESH 2.0.3

▶ z/s, More Is Better



1. (CXX) g++ options: -O3 -fopenmp -lm -pthread -lmpi\_cxx -lmpi

### BLAKE2 20170307

← Cycles Per Byte, Fewer Is Better

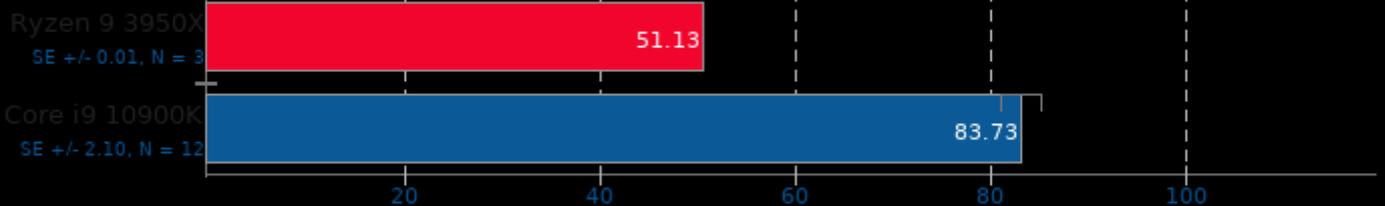


1. (CC) gcc options: -O3 -march=native -lcrypto -lz

### libgav1 2019-10-05

Video Input: Chimera 1080p

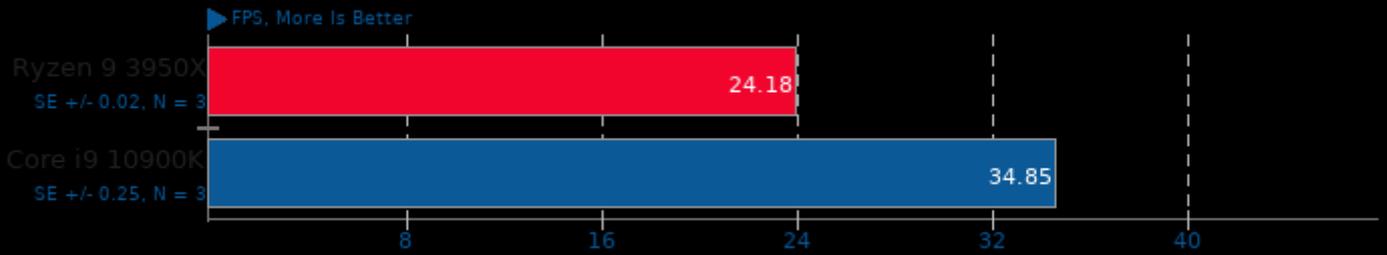
▶ FPS, More Is Better



1. (CXX) g++ options: -O3 -pthread

### libgav1 2019-10-05

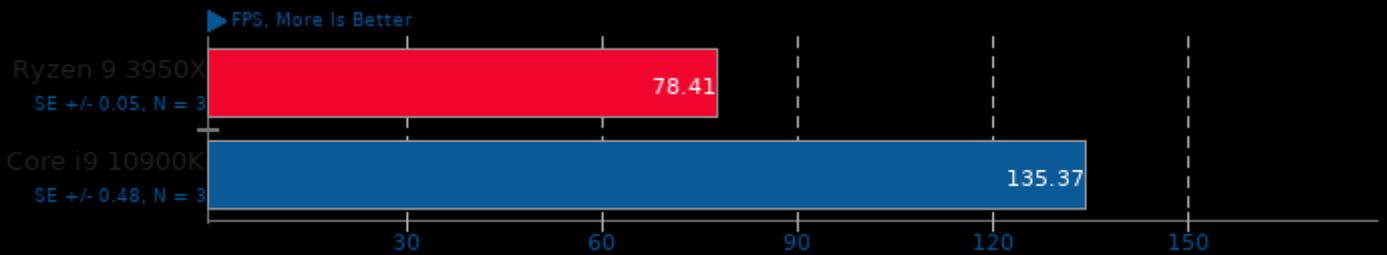
Video Input: Summer Nature 4K



1. (CXX) g++ options: -O3 -lpthread

### libgav1 2019-10-05

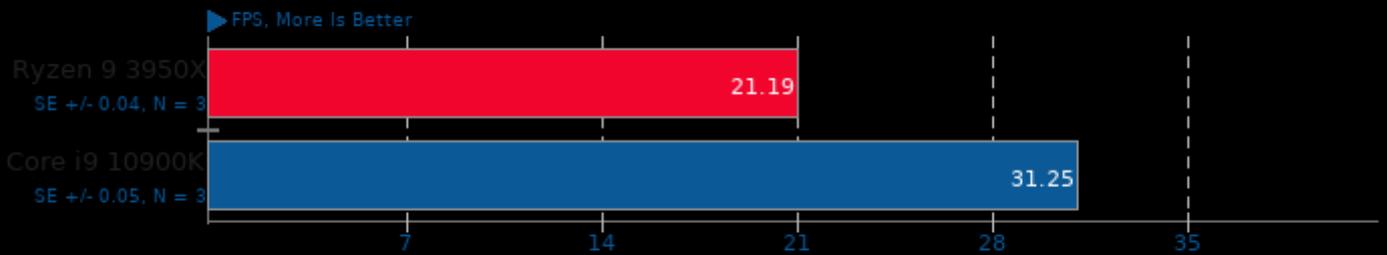
Video Input: Summer Nature 1080p



1. (CXX) g++ options: -O3 -lpthread

### libgav1 2019-10-05

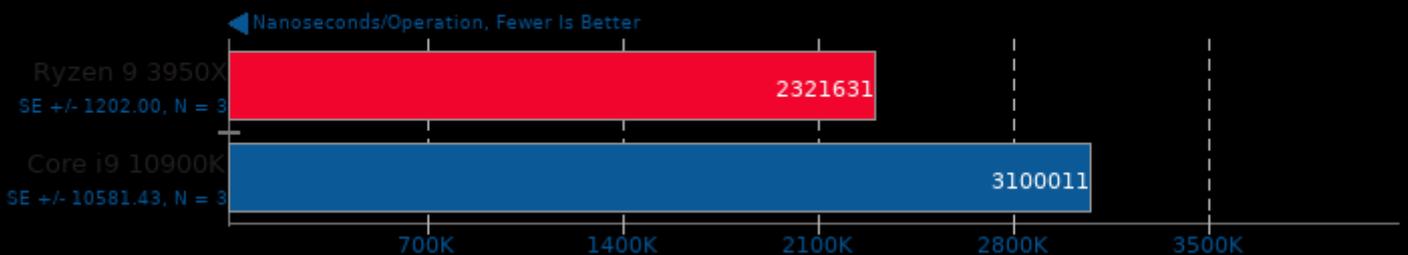
Video Input: Chimera 1080p 10-bit



1. (CXX) g++ options: -O3 -lpthread

### Go Benchmarks

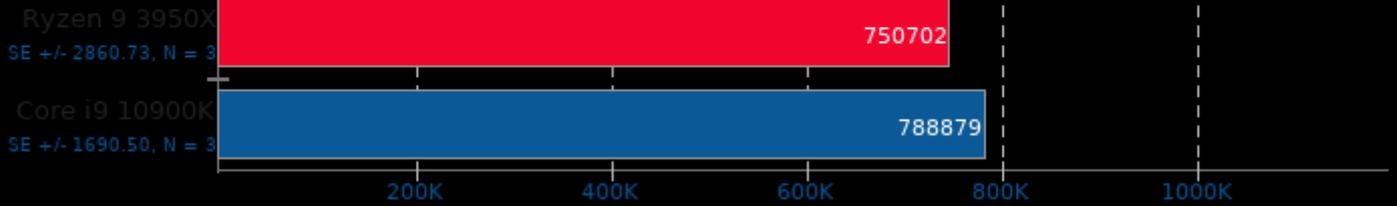
Test: json



### Go Benchmarks

Test: garbage

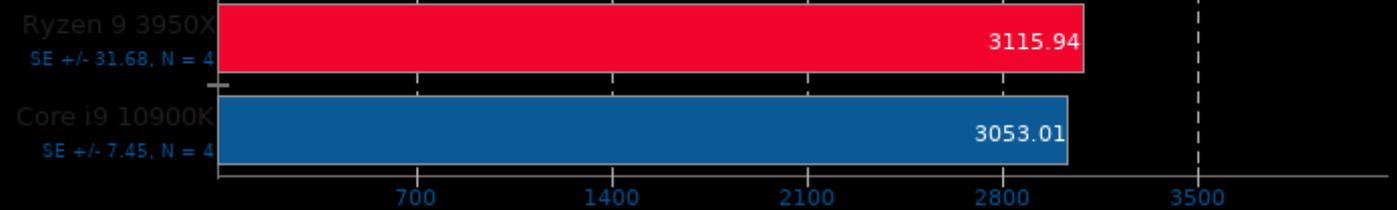
◀ Nanoseconds/Operation, Fewer Is Better



### Java SciMark 2.0

Computational Test: Composite

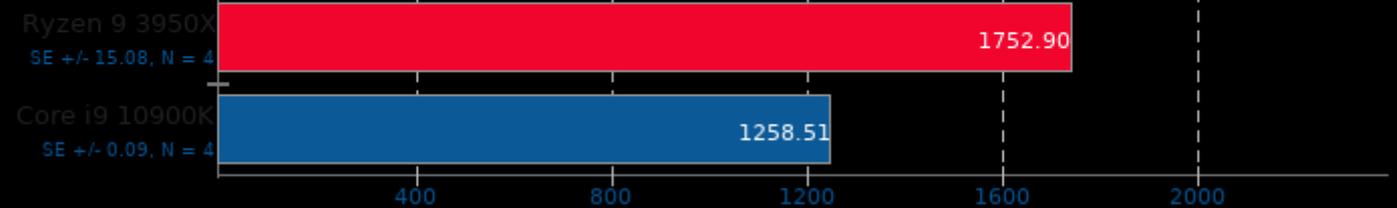
▶ Mflops, More Is Better



### Java SciMark 2.0

Computational Test: Monte Carlo

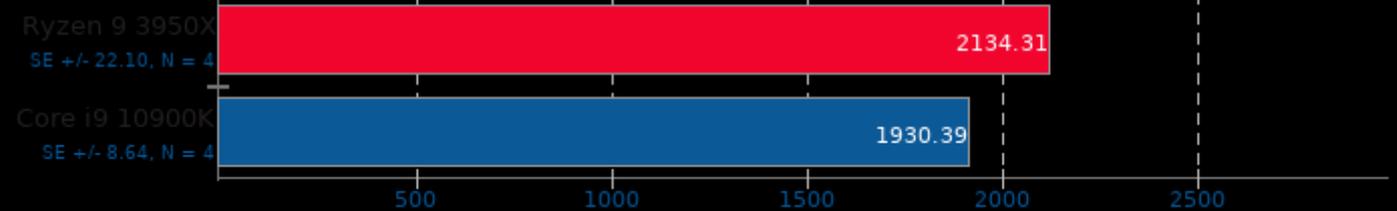
▶ Mflops, More Is Better



### Java SciMark 2.0

Computational Test: Fast Fourier Transform

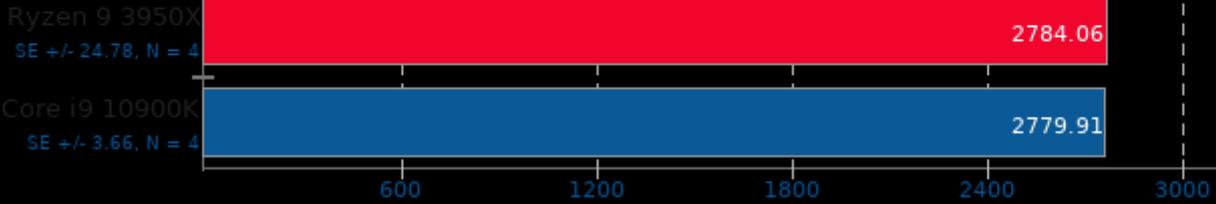
▶ Mflops, More Is Better



### Java SciMark 2.0

Computational Test: Sparse Matrix Multiply

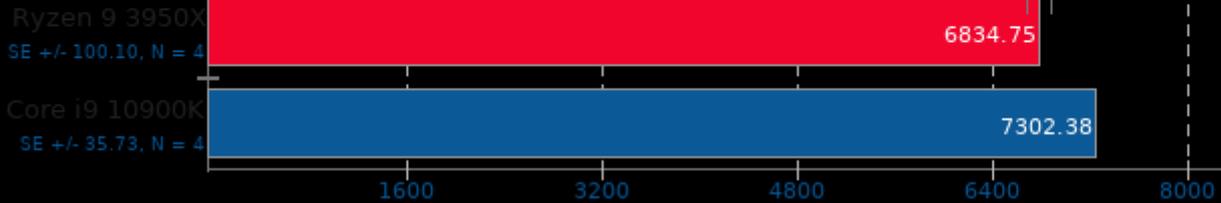
Mflops, More Is Better



### Java SciMark 2.0

Computational Test: Dense LU Matrix Factorization

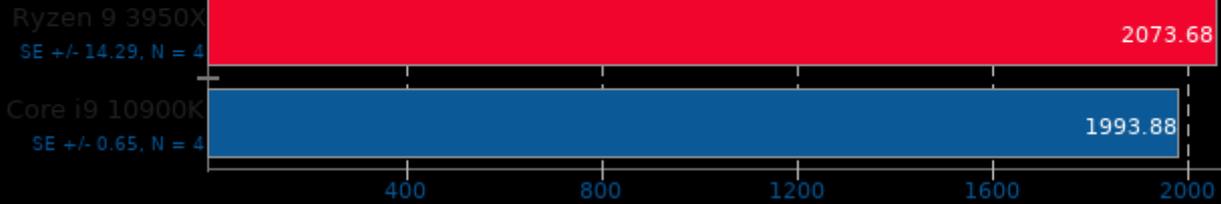
Mflops, More Is Better



### Java SciMark 2.0

Computational Test: Jacobi Successive Over-Relaxation

Mflops, More Is Better



### Bork File Encrypter 1.4

File Encryption Time

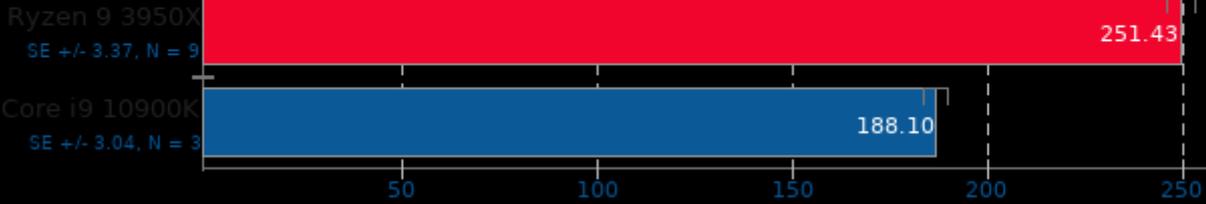
Seconds, Fewer Is Better



### Java Gradle Build

Gradle Build: Reactor

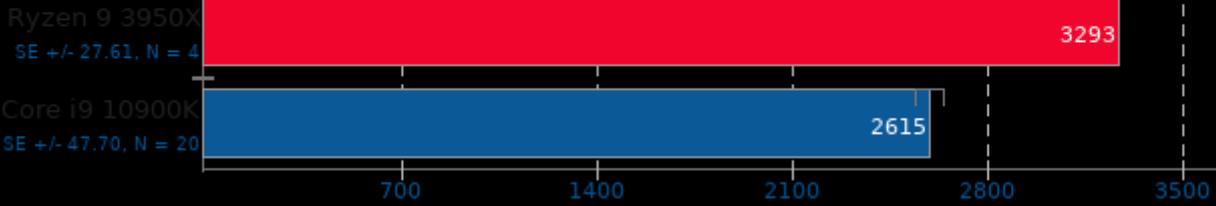
← Seconds, Fewer Is Better



### DaCapo Benchmark 9.12-MR1

Java Test: H2

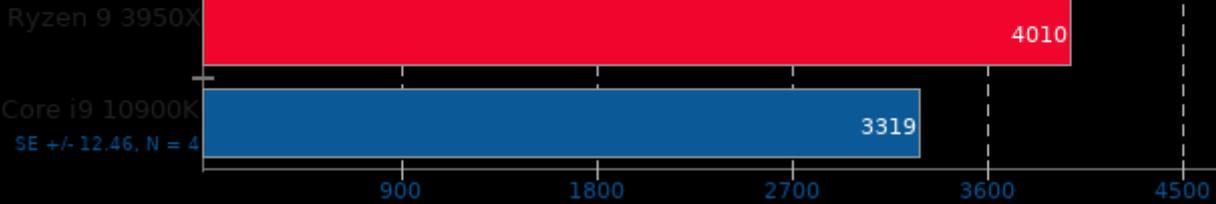
← msec, Fewer Is Better



### DaCapo Benchmark 9.12-MR1

Java Test: Jython

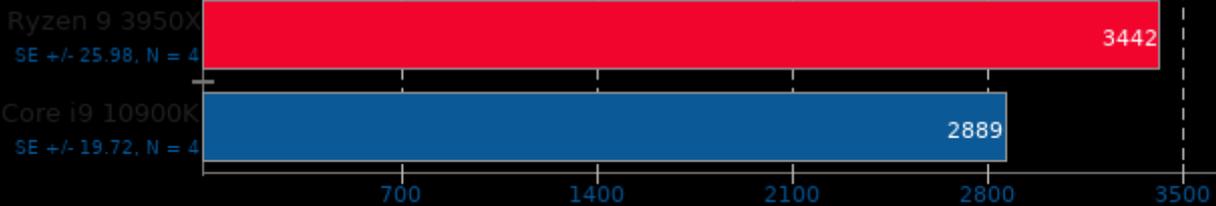
← msec, Fewer Is Better



### DaCapo Benchmark 9.12-MR1

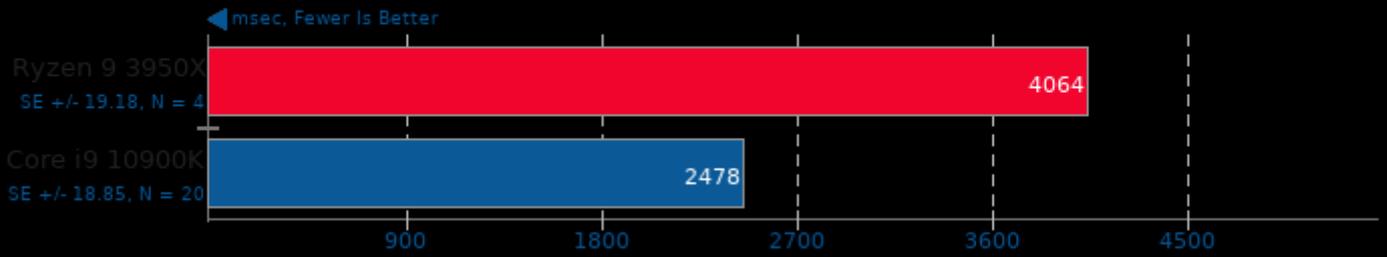
Java Test: Tradesoap

← msec, Fewer Is Better



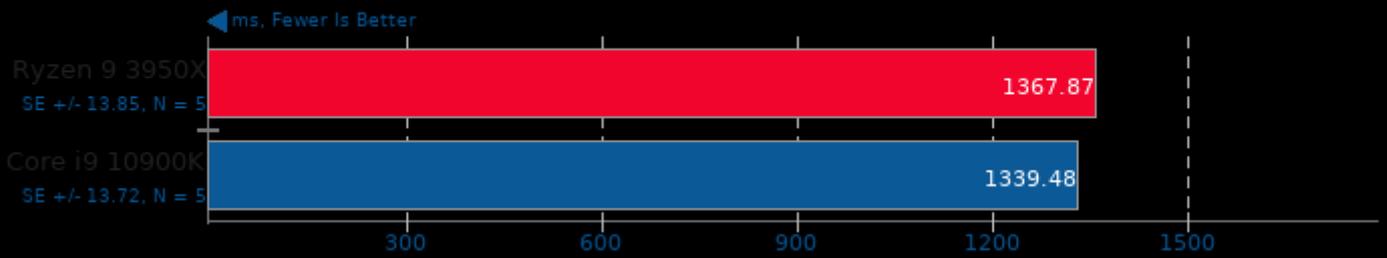
### DaCapo Benchmark 9.12-MR1

Java Test: Tradebeans



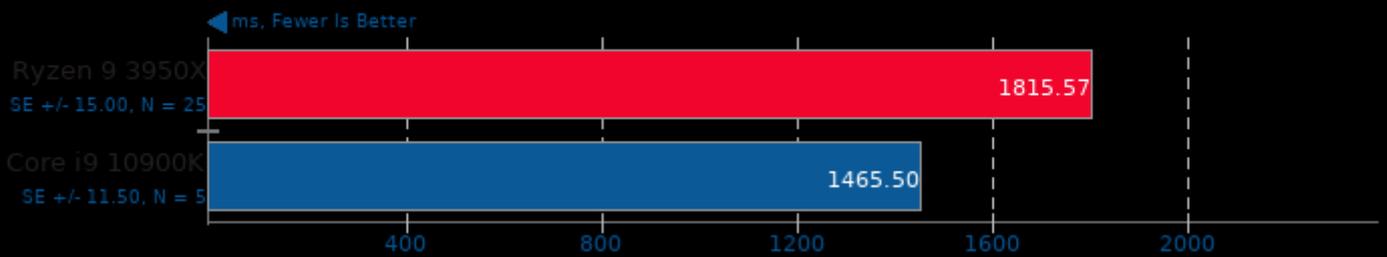
### Renaissance 0.10.0

Test: Scala Dotty



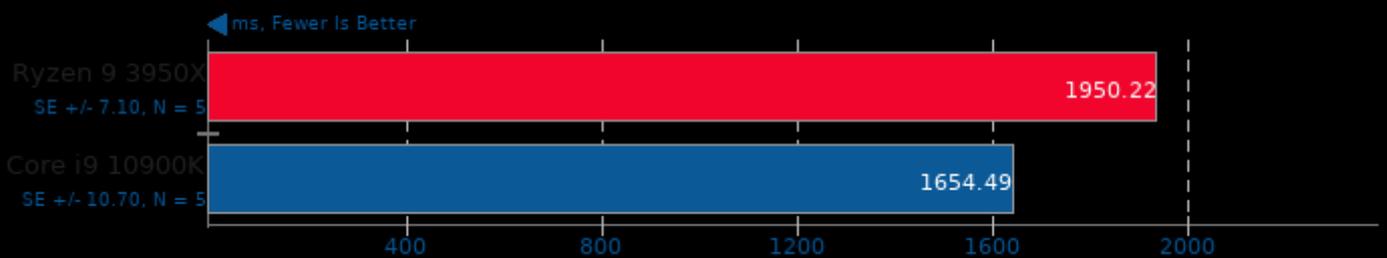
### Renaissance 0.10.0

Test: Random Forest



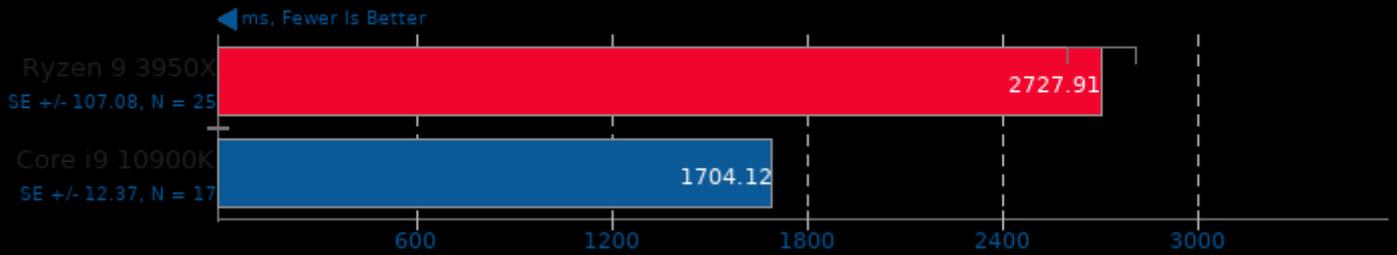
### Renaissance 0.10.0

Test: Apache Spark ALS



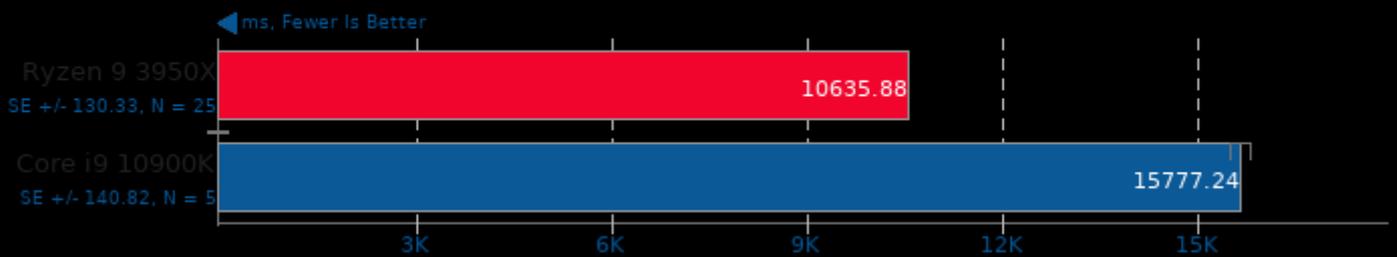
### Renaissance 0.10.0

Test: Apache Spark Bayes



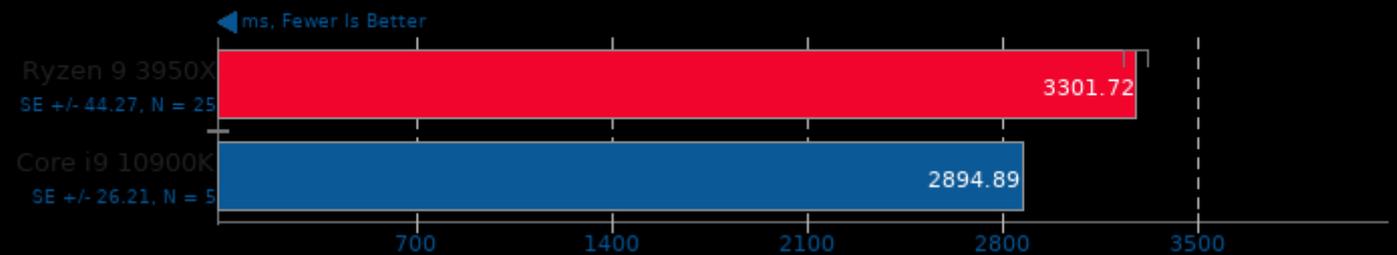
### Renaissance 0.10.0

Test: Savina Reactors.IO



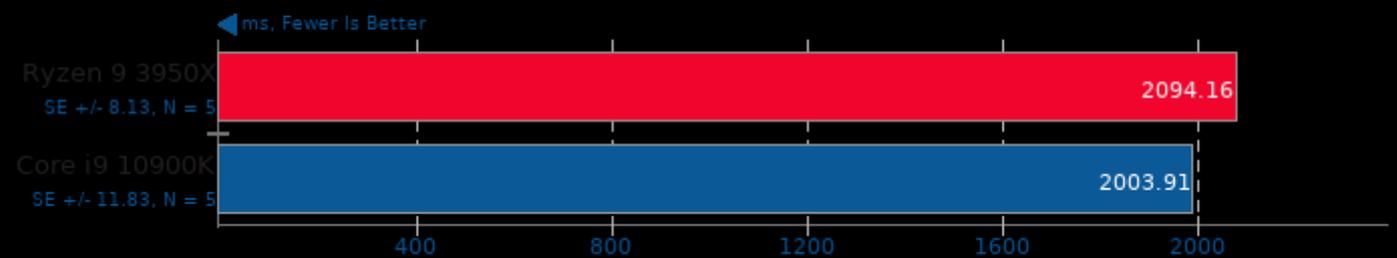
### Renaissance 0.10.0

Test: Apache Spark PageRank



### Renaissance 0.10.0

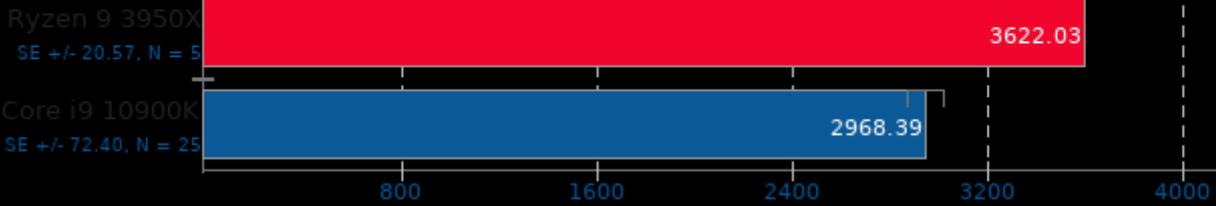
Test: Twitter HTTP Requests



### Renaissance 0.10.0

Test: In-Memory Database Shootout

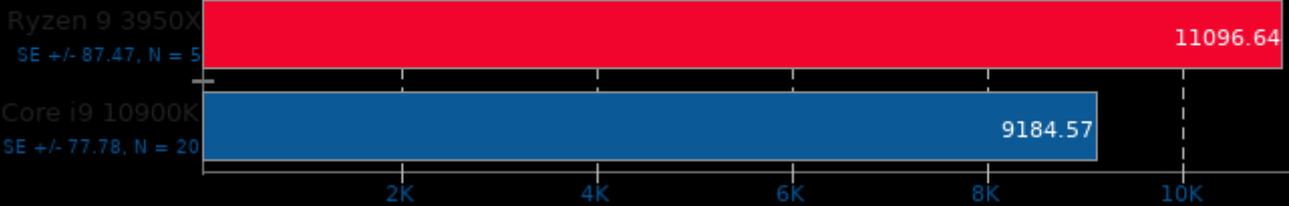
ms, Fewer Is Better



### Renaissance 0.10.0

Test: Akka Unbalanced Cobwebbed Tree

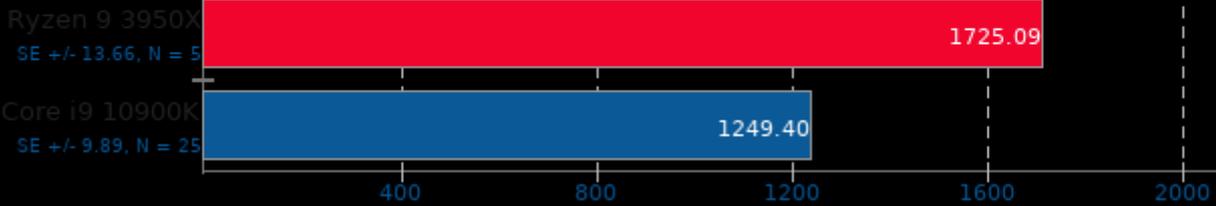
ms, Fewer Is Better



### Renaissance 0.10.0

Test: Genetic Algorithm Using Jenetics + Futures

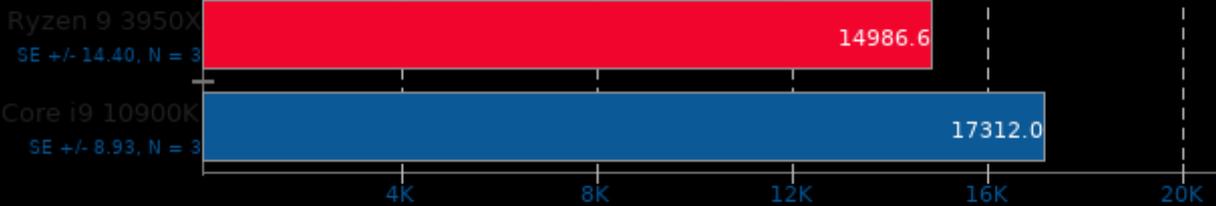
ms, Fewer Is Better



### Fhourstones 3.1

Complex Connect-4 Solving

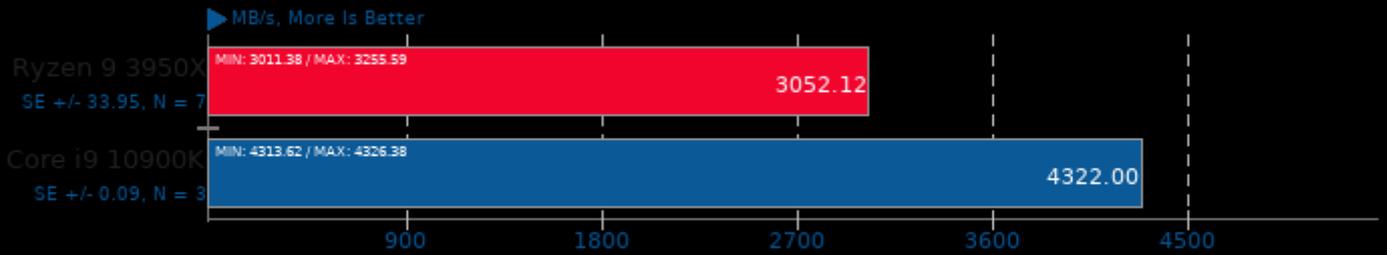
Kpos / sec, More Is Better



1. (CC) gcc options: -O3

### CacheBench

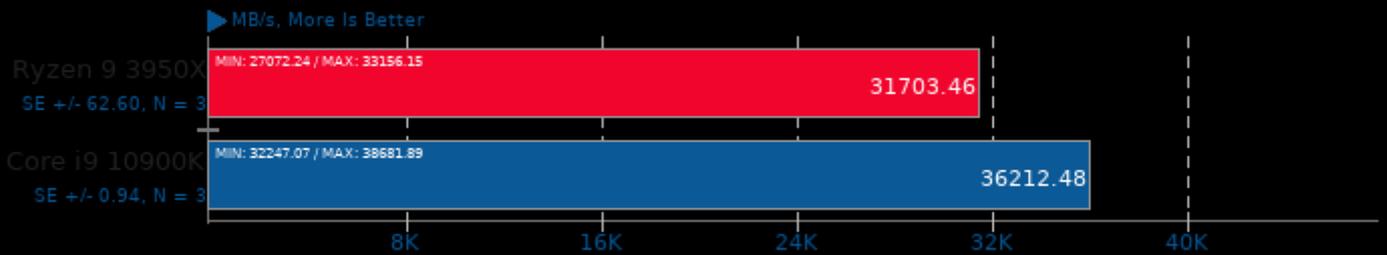
Test: Read



1. (CC) gcc options: -lrt

### CacheBench

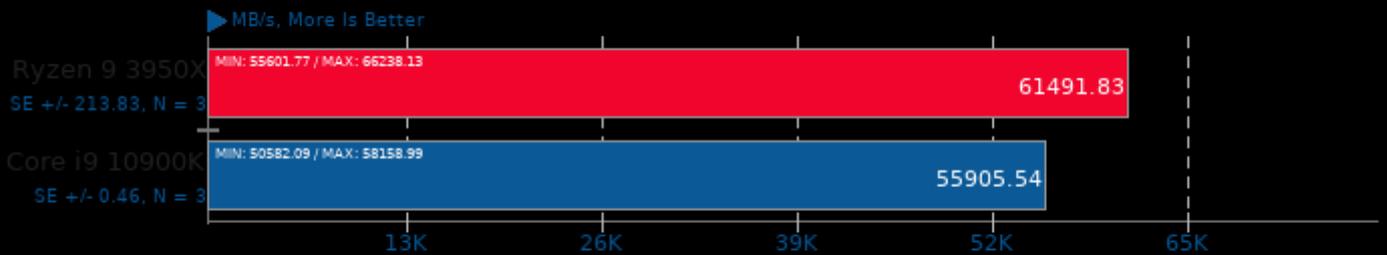
Test: Write



1. (CC) gcc options: -lrt

### CacheBench

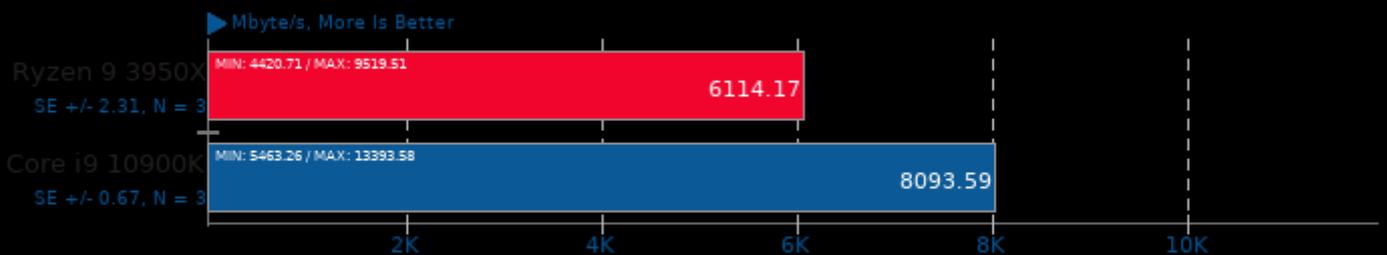
Test: Read / Modify / Write



1. (CC) gcc options: -lrt

### Nettle 3.5.1

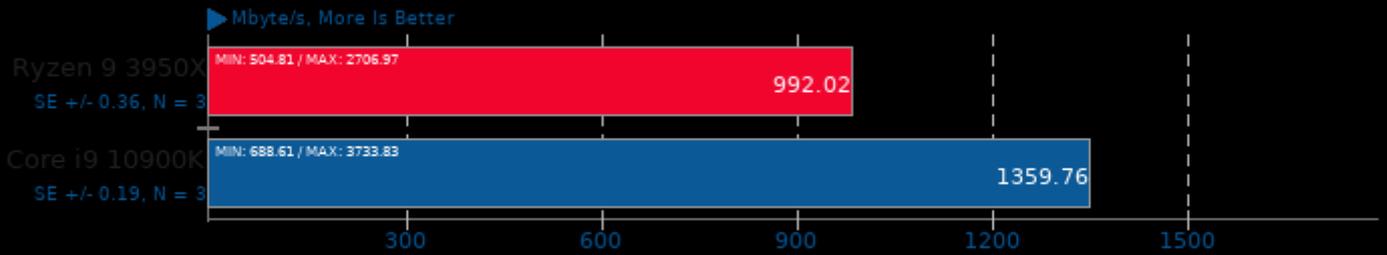
Test: aes256



1. (CC) gcc options: -O2 -ggdb3 -lnettle -lgmp -lm -lcrypto

### Nettle 3.5.1

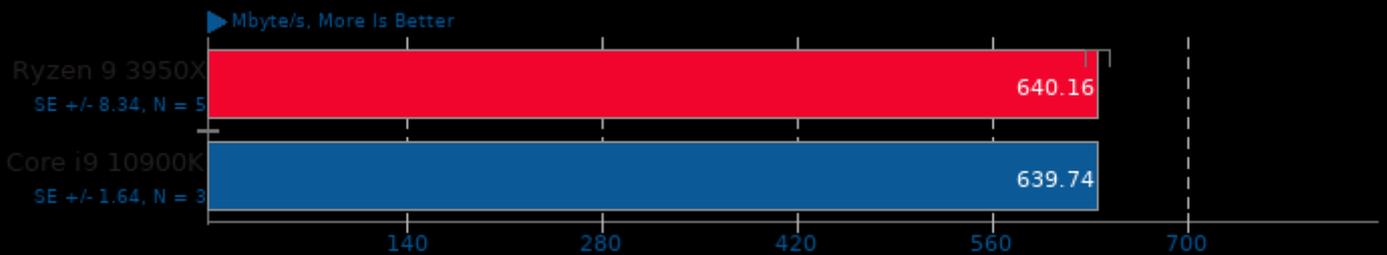
Test: chacha



1. (CC) gcc options: -O2 -ggdb3 -lnettle -lgmp -lm -lcrypto

### Nettle 3.5.1

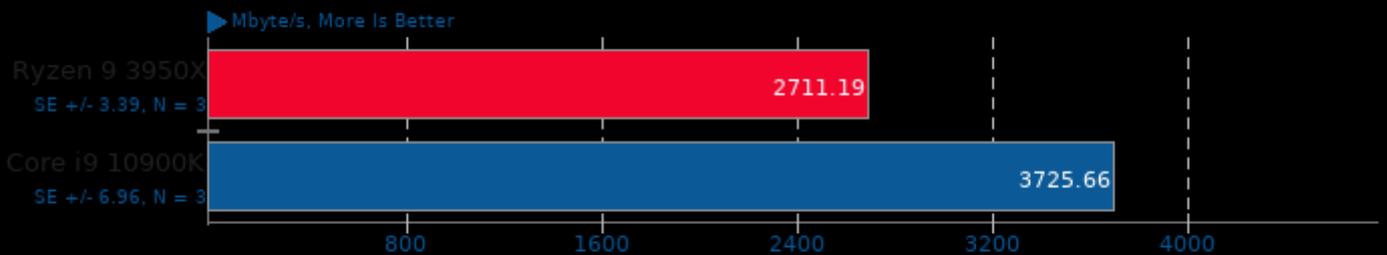
Test: sha512



1. (CC) gcc options: -O2 -ggdb3 -lnettle -lgmp -lm -lcrypto

### Nettle 3.5.1

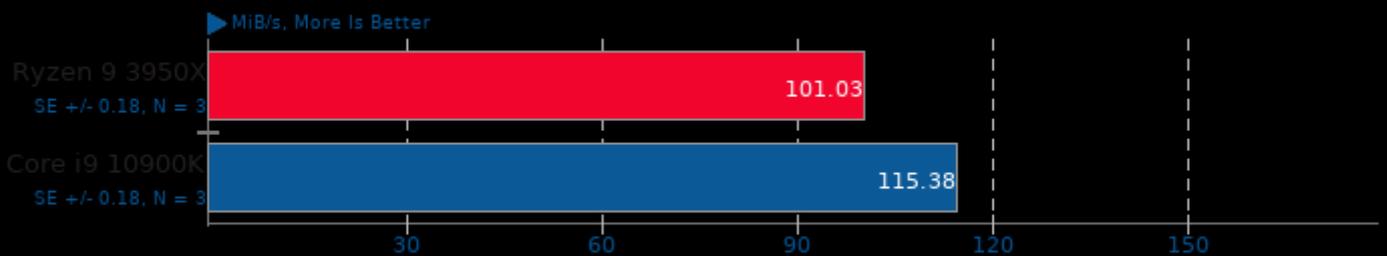
Test: poly1305-aes



1. (CC) gcc options: -O2 -ggdb3 -lnettle -lgmp -lm -lcrypto

### Botan 2.13.0

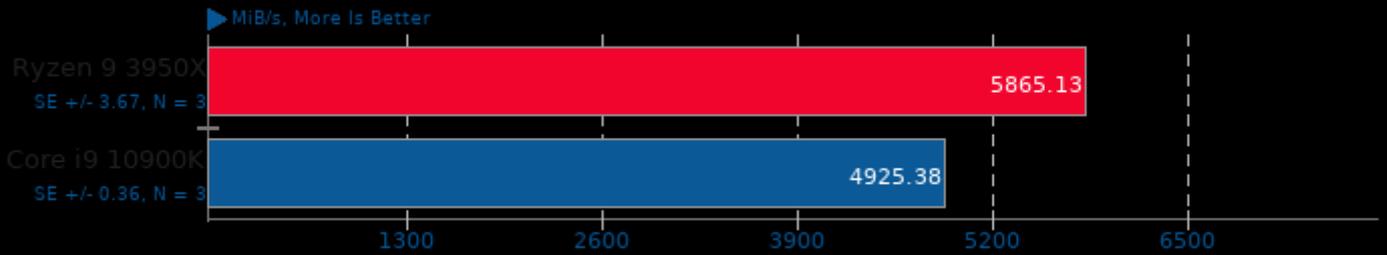
Test: KASUMI



1. (CXX) g++ options: -fstack-protector -m64 -pthread -lbotan-2 -ldl -lrt

### Botan 2.13.0

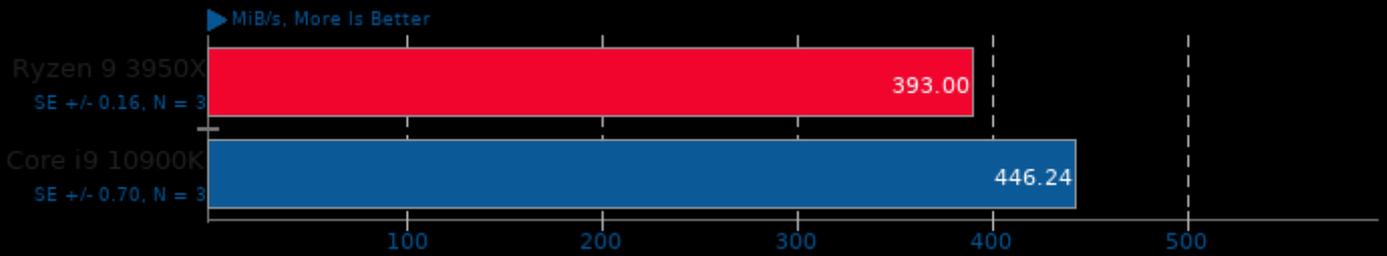
Test: AES-256



1. (CXX) g++ options: -fstack-protector -m64 -pthread -lbotan-2 -ldl -lrt

### Botan 2.13.0

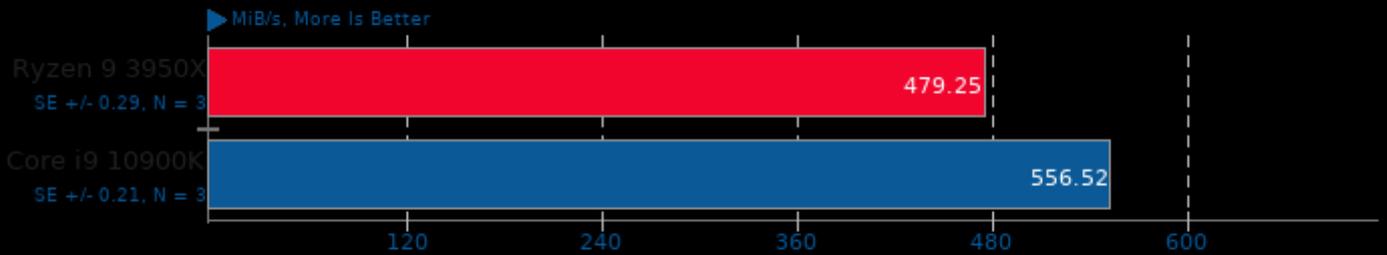
Test: Twofish



1. (CXX) g++ options: -fstack-protector -m64 -pthread -lbotan-2 -ldl -lrt

### Botan 2.13.0

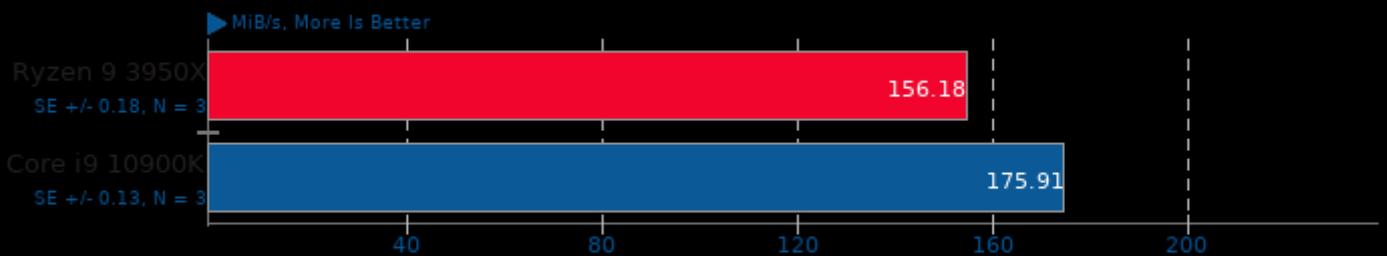
Test: Blowfish



1. (CXX) g++ options: -fstack-protector -m64 -pthread -lbotan-2 -ldl -lrt

### Botan 2.13.0

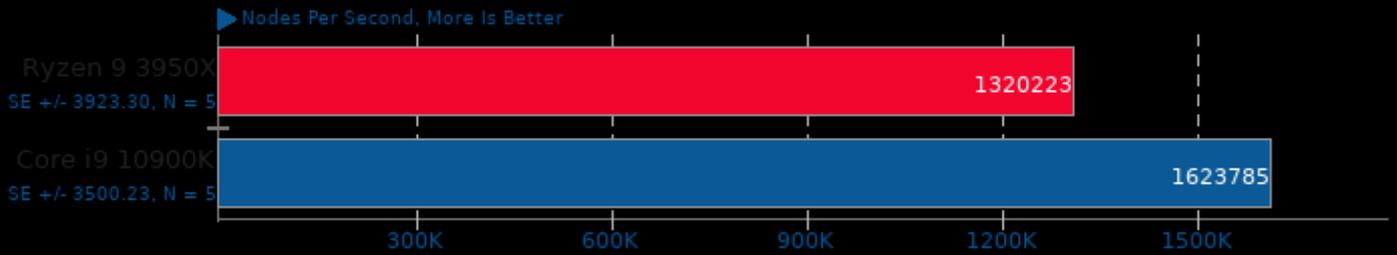
Test: CAST-256



1. (CXX) g++ options: -fstack-protector -m64 -pthread -lbotan-2 -ldl -lrt

### TSCP 1.81

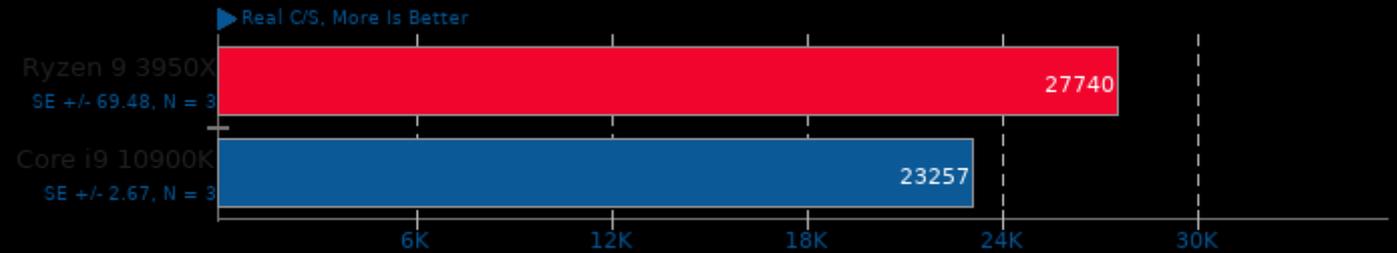
AI Chess Performance



1. (CC) gcc options: -O3 -march=native

### John The Ripper 1.9.0-jumbo-1

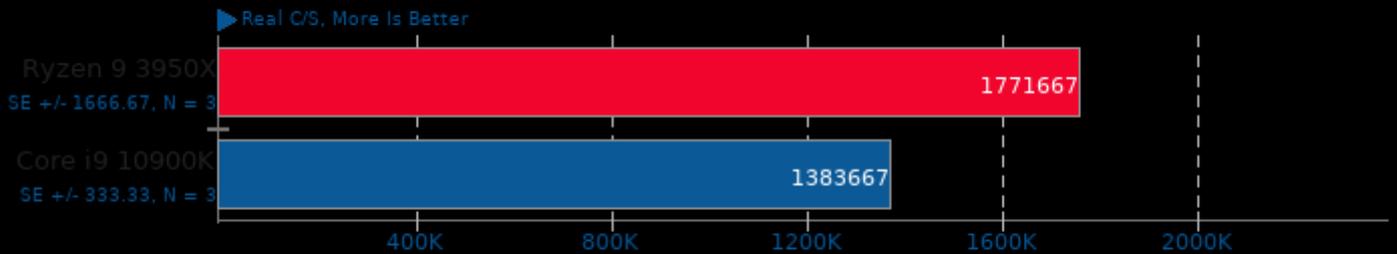
Test: Blowfish



1. (CC) gcc options: -m64 -lssl -lcrypto -fopenmp -lgmp -pthread -lm -lz -ldl -lcrypt -lbz2

### John The Ripper 1.9.0-jumbo-1

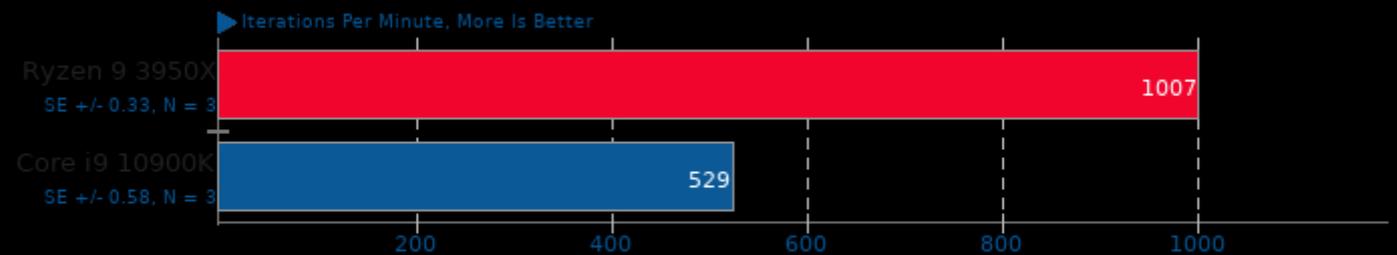
Test: MD5



1. (CC) gcc options: -m64 -lssl -lcrypto -fopenmp -lgmp -pthread -lm -lz -ldl -lcrypt -lbz2

### GraphicsMagick 1.3.33

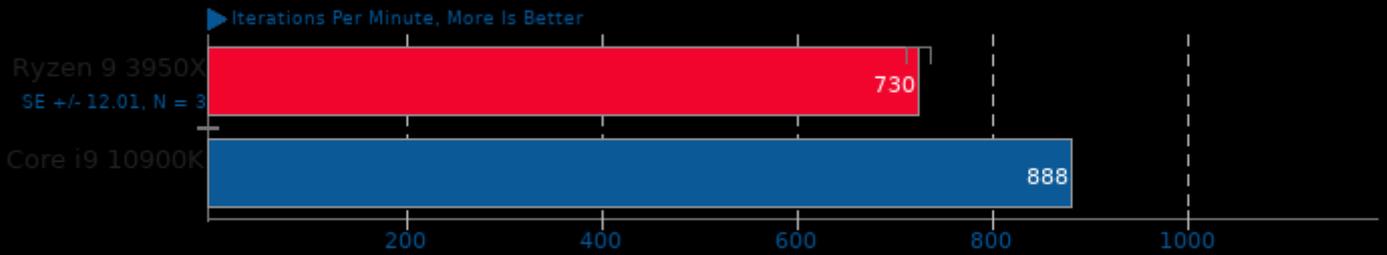
Operation: Swirl



1. (CC) gcc options: -fopenmp -O2 -pthread -ljpeg -lwebp -lwebpmux -ltiff -lfreetype -ljpeg -lXext -lSM -lICE -lX11 -llzma -lbz2 -lxml2 -lz -lm -lpthread

### GraphicsMagick 1.3.33

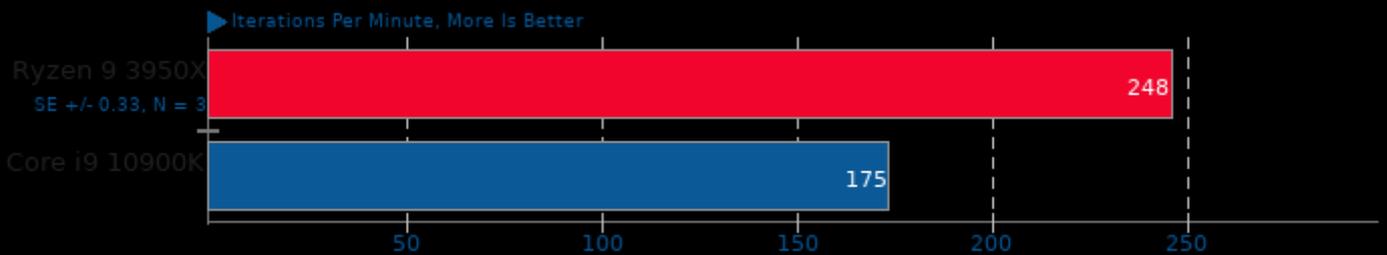
Operation: Rotate



1. (CC) gcc options: -fopenmp -O2 -pthread -ljpeg -lwebp -lwebpmux -ltiff -lfreetype -ljpeg -lXext -lSM -lICE -lX11 -llzma -lbz2 -lxml2 -lz -lm -lpthread

### GraphicsMagick 1.3.33

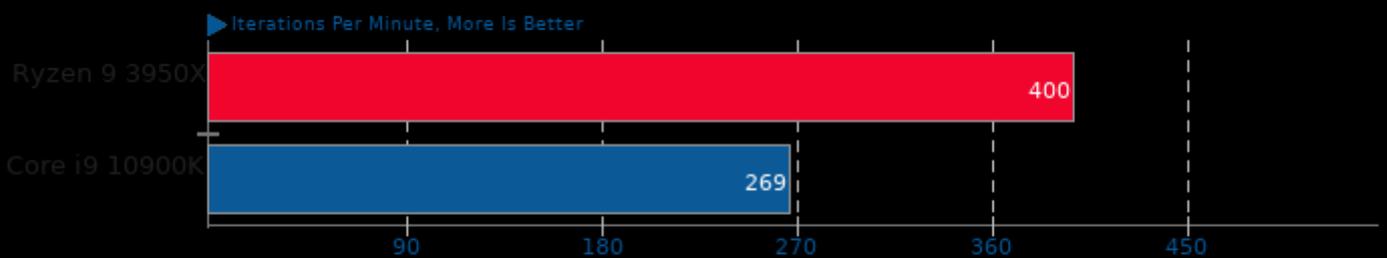
Operation: Sharpen



1. (CC) gcc options: -fopenmp -O2 -pthread -ljpeg -lwebp -lwebpmux -ltiff -lfreetype -ljpeg -lXext -lSM -lICE -lX11 -llzma -lbz2 -lxml2 -lz -lm -lpthread

### GraphicsMagick 1.3.33

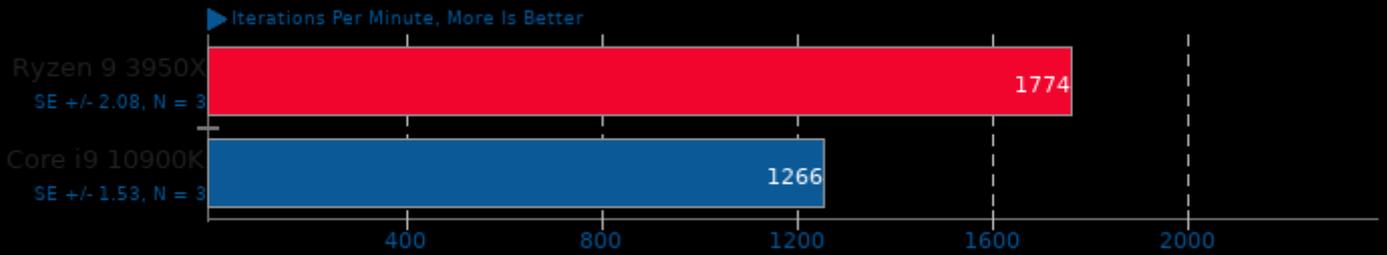
Operation: Enhanced



1. (CC) gcc options: -fopenmp -O2 -pthread -ljpeg -lwebp -lwebpmux -ltiff -lfreetype -ljpeg -lXext -lSM -lICE -lX11 -llzma -lbz2 -lxml2 -lz -lm -lpthread

### GraphicsMagick 1.3.33

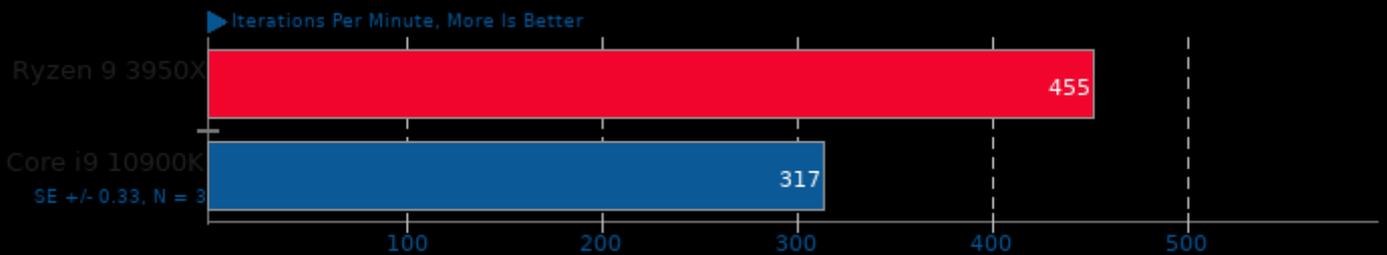
Operation: Resizing



1. (CC) gcc options: -fopenmp -O2 -pthread -ljpeg -lwebp -lwebpmux -ltiff -lfreetype -ljpeg -lXext -lSM -lICE -lX11 -llzma -lbz2 -lxml2 -lz -lm -lpthread

### GraphicsMagick 1.3.33

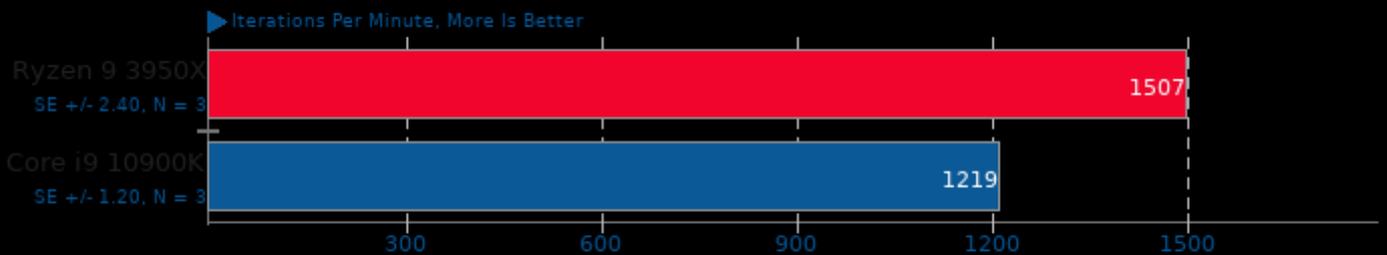
Operation: Noise-Gaussian



1. (CC) gcc options: -fopenmp -O2 -pthread -ljpeg -lwebp -lwebpmux -ltiff -lfreetype -ljpeg -lXext -lSM -lICE -lX11 -llzma -lbz2 -lxml2 -lz -lm -lpthread

### GraphicsMagick 1.3.33

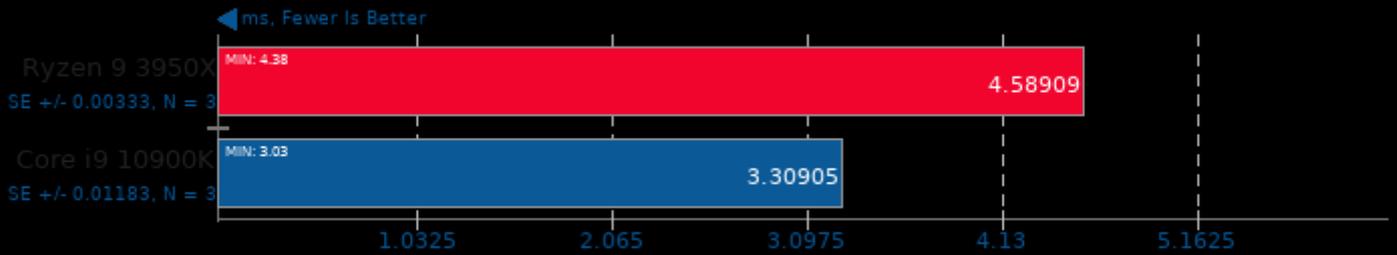
Operation: HWB Color Space



1. (CC) gcc options: -fopenmp -O2 -pthread -ljpeg -lwebp -lwebpmux -ltiff -lfreetype -ljpeg -lXext -lSM -lICE -lX11 -llzma -lbz2 -lxml2 -lz -lm -lpthread

### oneDNN MKL-DNN 1.3

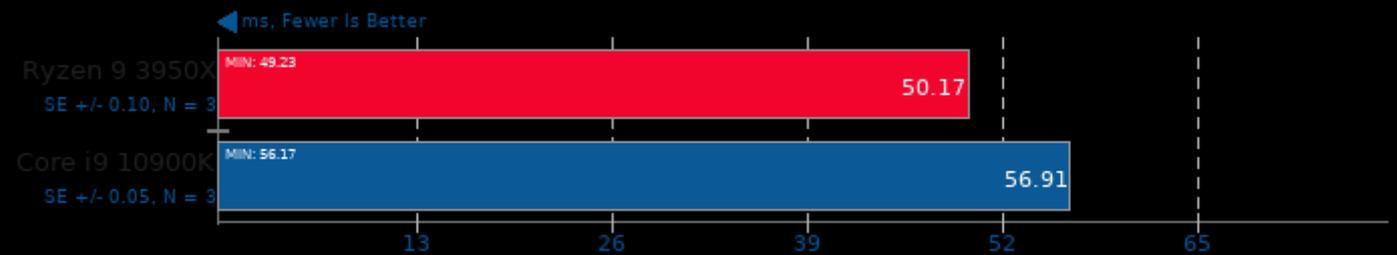
Harness: IP Batch 1D - Data Type: f32



1. (CXX) g++ options: -O3 -march=native -std=c++11 -msse4.1 -fpic -fopenmp -pie -lpthread -ldl

### oneDNN MKL-DNN 1.3

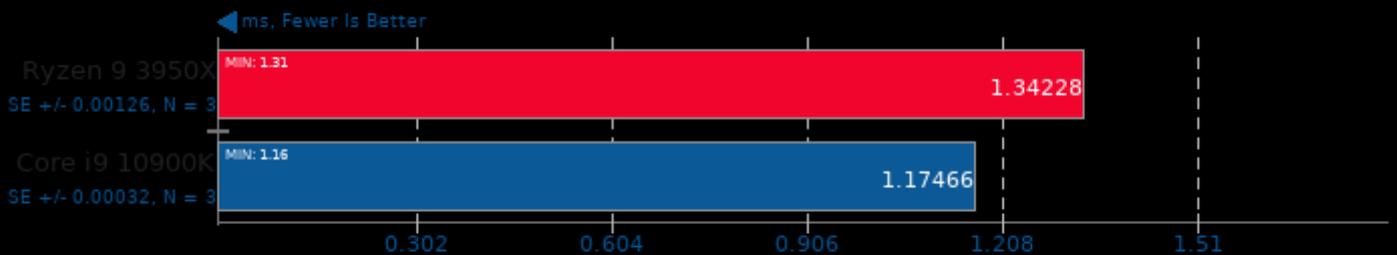
Harness: IP Batch All - Data Type: f32



1. (CXX) g++ options: -O3 -march=native -std=c++11 -msse4.1 -fpic -fopenmp -pie -lpthread -ldl

### oneDNN MKL-DNN 1.3

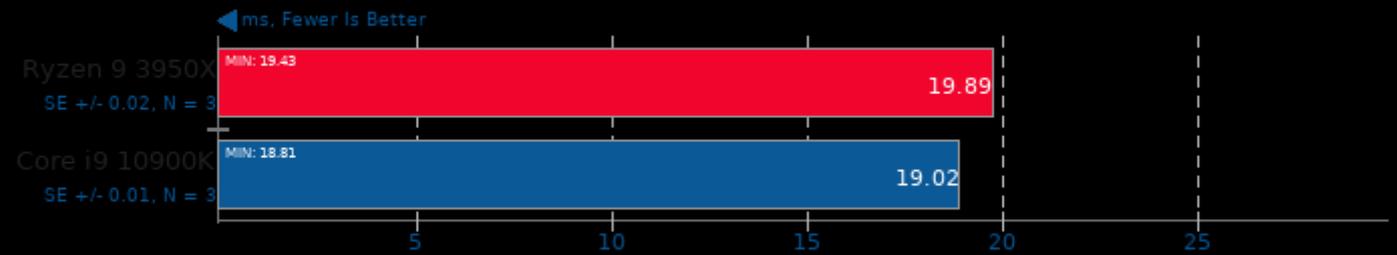
Harness: IP Batch 1D - Data Type: u8s8f32



1. (CXX) g++ options: -O3 -march=native -std=c++11 -msse4.1 -fpic -fopenmp -pie -lpthread -ldl

### oneDNN MKL-DNN 1.3

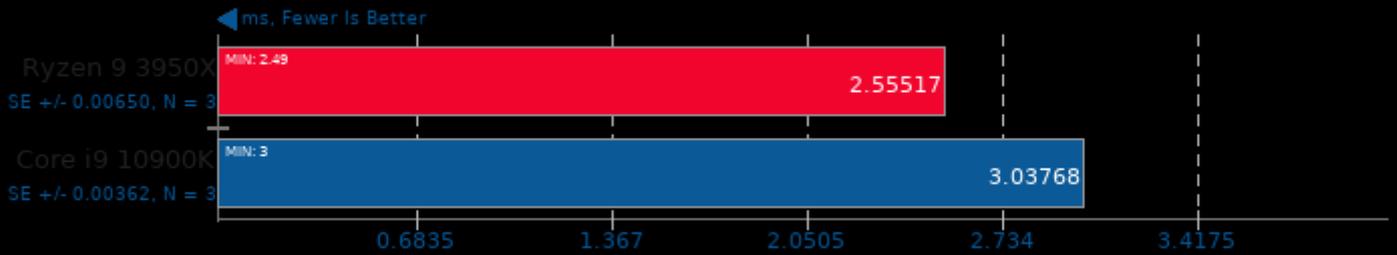
Harness: IP Batch All - Data Type: u8s8f32



1. (CXX) g++ options: -O3 -march=native -std=c++11 -msse4.1 -fpic -fopenmp -pie -lpthread -ldl

### oneDNN MKL-DNN 1.3

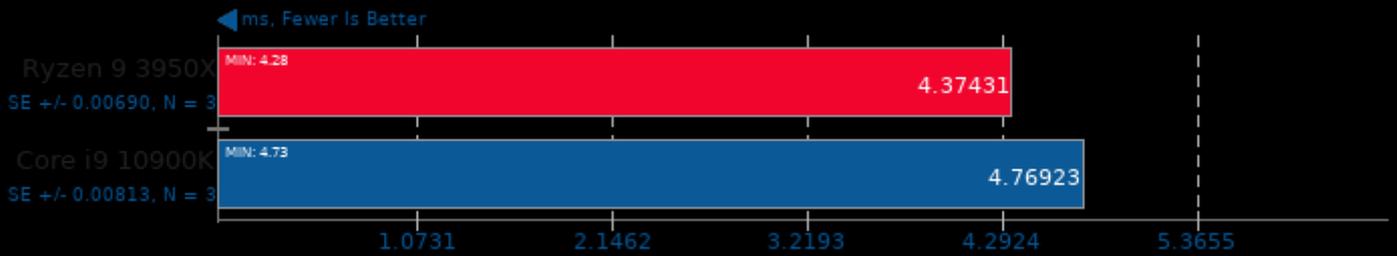
Harness: Deconvolution Batch deconv\_1d - Data Type: f32



1. (CXX) g++ options: -O3 -march=native -std=c++11 -msse4.1 -fpic -fopenmp -pie -lpthread -ldl

### oneDNN MKL-DNN 1.3

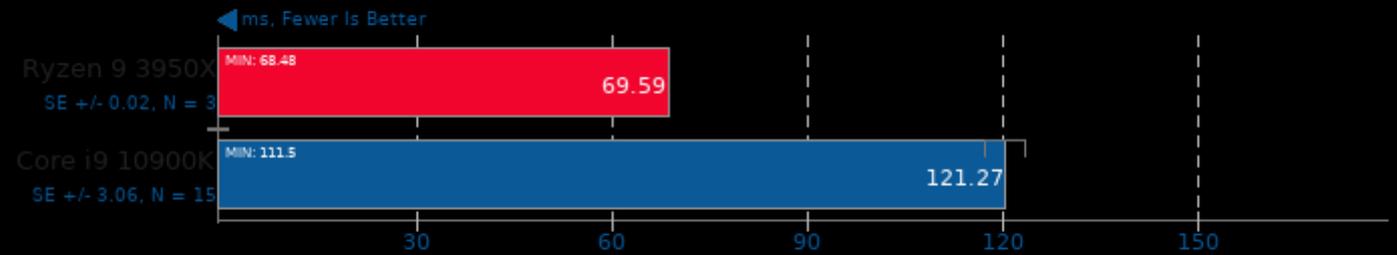
Harness: Deconvolution Batch deconv\_3d - Data Type: f32



1. (CXX) g++ options: -O3 -march=native -std=c++11 -msse4.1 -fpic -fopenmp -pie -lpthread -ldl

### oneDNN MKL-DNN 1.3

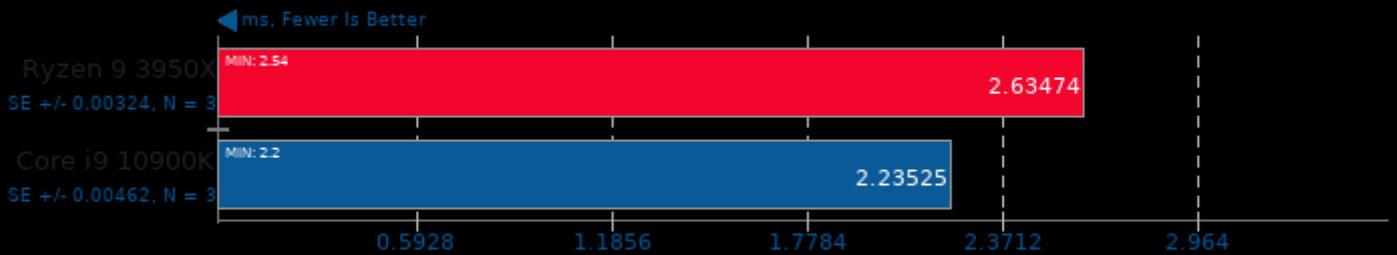
Harness: Deconvolution Batch deconv\_1d - Data Type: u8s8f32



1. (CXX) g++ options: -O3 -march=native -std=c++11 -msse4.1 -fpic -fopenmp -pie -lpthread -ldl

### oneDNN MKL-DNN 1.3

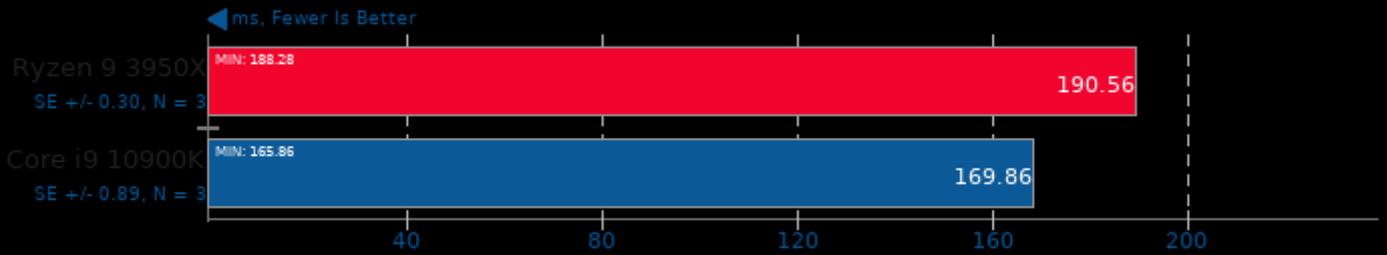
Harness: Deconvolution Batch deconv\_3d - Data Type: u8s8f32



1. (CXX) g++ options: -O3 -march=native -std=c++11 -msse4.1 -fpic -fopenmp -pie -lpthread -ldl

### oneDNN MKL-DNN 1.3

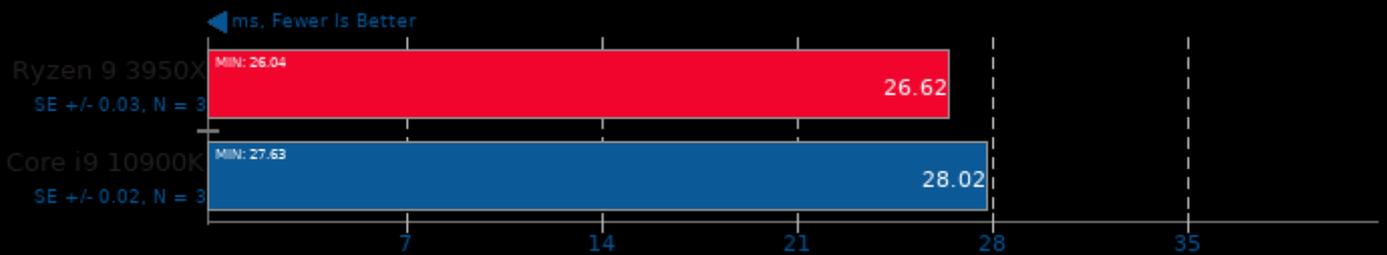
Harness: Recurrent Neural Network Training - Data Type: f32



1. (CXX) g++ options: -O3 -march=native -std=c++11 -msse4.1 -fPIC -fopenmp -pie -lpthread -ldl

### oneDNN MKL-DNN 1.3

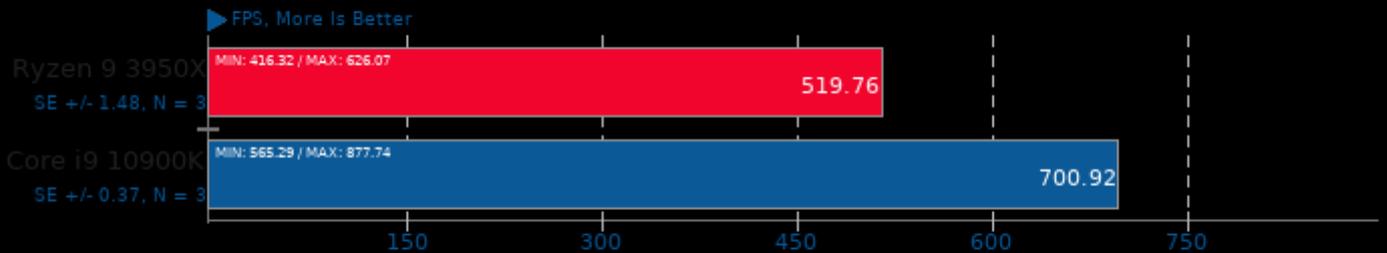
Harness: Recurrent Neural Network Inference - Data Type: f32



1. (CXX) g++ options: -O3 -march=native -std=c++11 -msse4.1 -fPIC -fopenmp -pie -lpthread -ldl

### dav1d 0.6.0

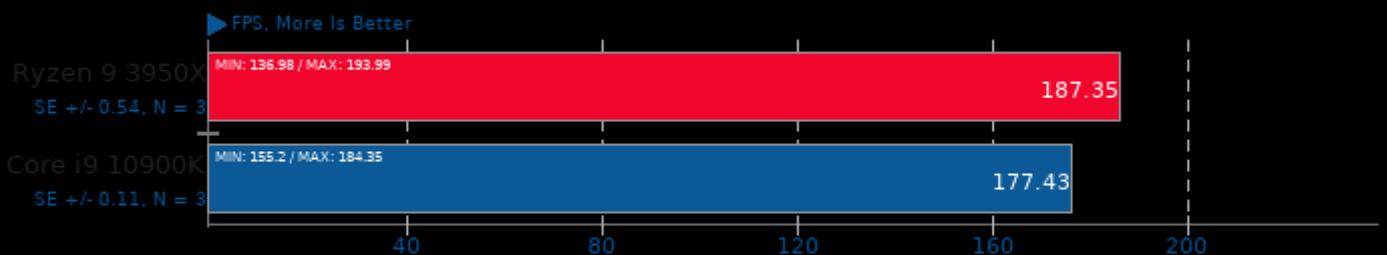
Video Input: Chimera 1080p



1. (CC) gcc options: -pthread

### dav1d 0.6.0

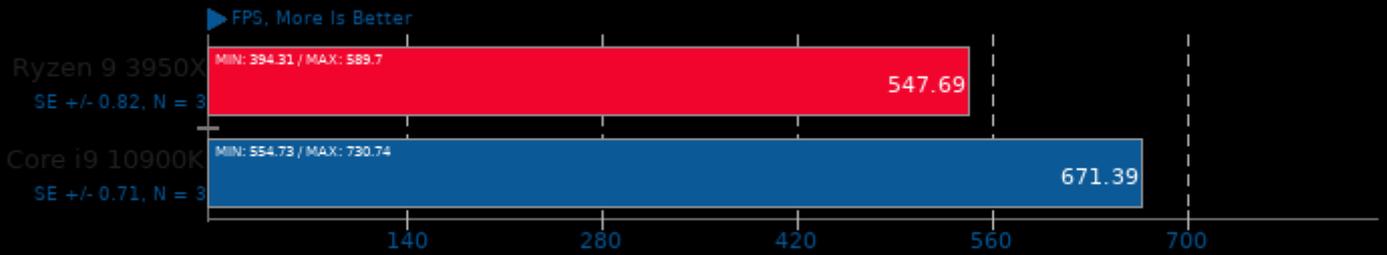
Video Input: Summer Nature 4K



1. (CC) gcc options: -pthread

### dav1d 0.6.0

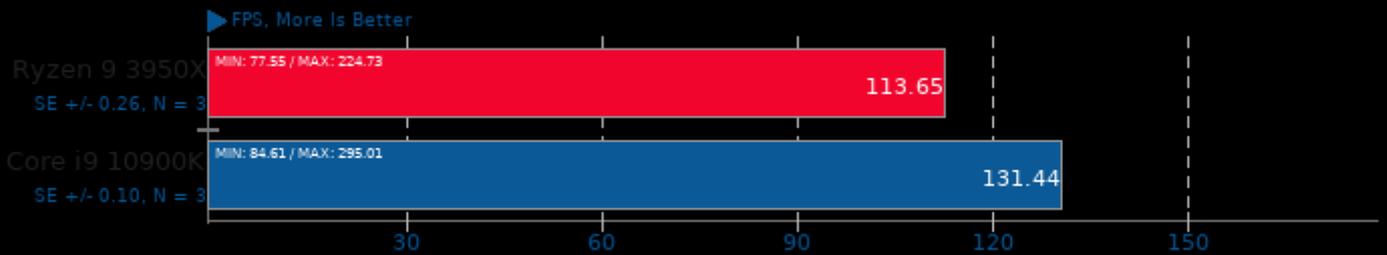
Video Input: Summer Nature 1080p



1. (CC) gcc options: -pthread

### dav1d 0.6.0

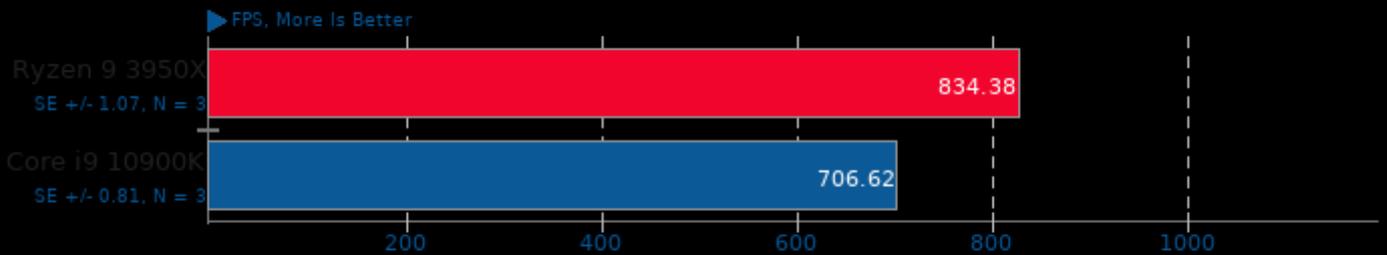
Video Input: Chimera 1080p 10-bit



1. (CC) gcc options: -pthread

### TTSIOD 3D Renderer 2.3b

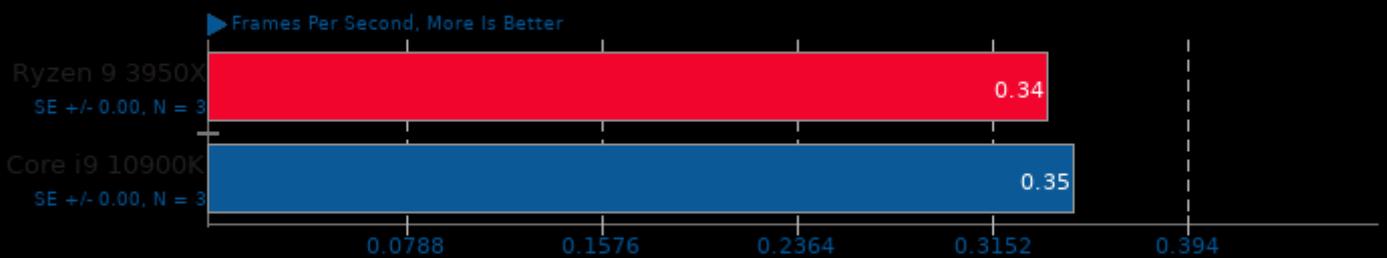
Phong Rendering With Soft-Shadow Mapping



1. (CXX) g++ options: -O3 -fomit-frame-pointer -ffast-math -mtune=native -fno-mse -mrecip -mfpmath=sse -msse2 -mssse3 -lSDL -fopenmp -fwhole-pr

### AOM AV1 2.0

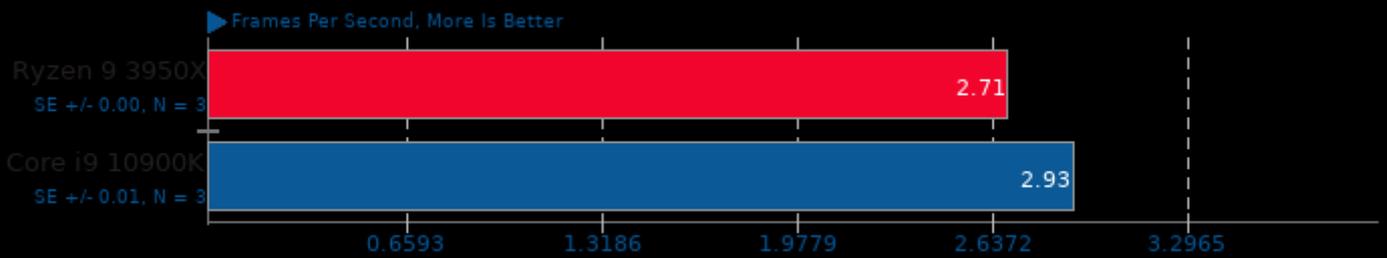
Encoder Mode: Speed 0 Two-Pass



1. (CXX) g++ options: -O3 -std=c++11 -U\_FORTIFY\_SOURCE -lm -pthread

### AOM AV1 2.0

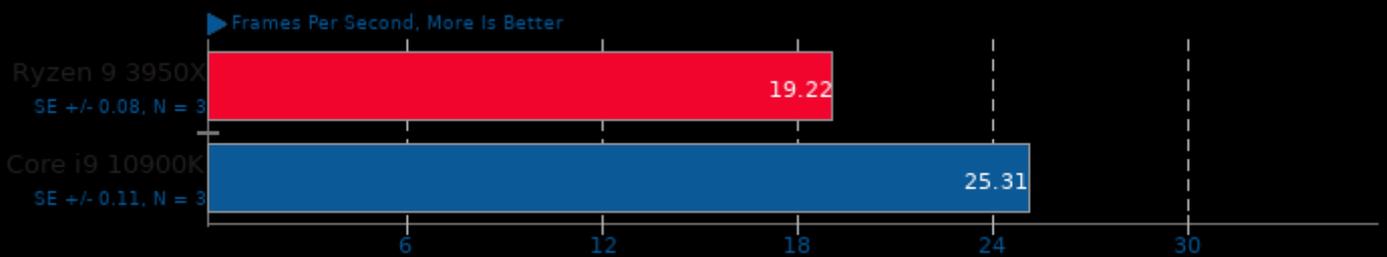
Encoder Mode: Speed 4 Two-Pass



1. (CXX) g++ options: -O3 -std=c++11 -U\_FORTIFY\_SOURCE -lm -pthread

### AOM AV1 2.0

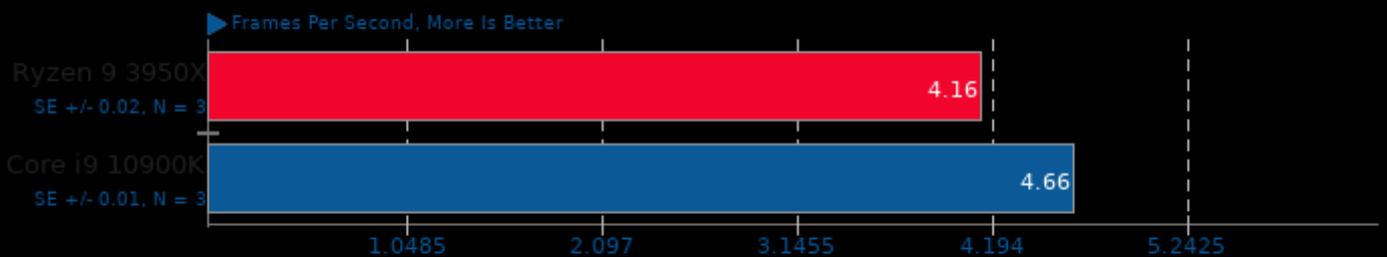
Encoder Mode: Speed 6 Realtime



1. (CXX) g++ options: -O3 -std=c++11 -U\_FORTIFY\_SOURCE -lm -pthread

### AOM AV1 2.0

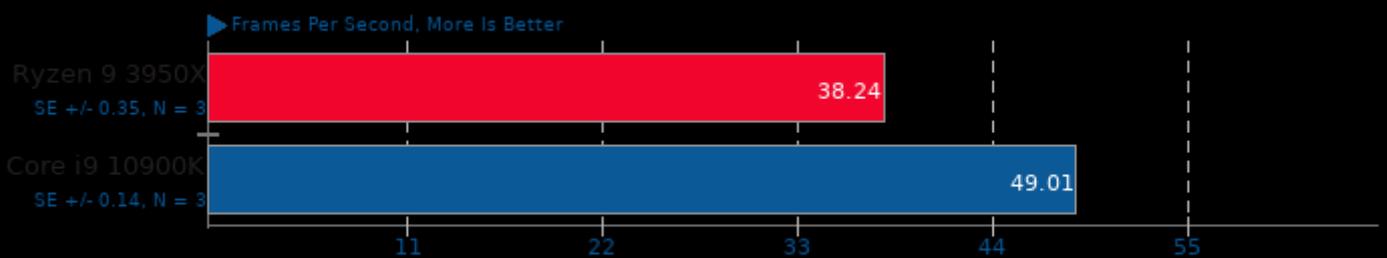
Encoder Mode: Speed 6 Two-Pass



1. (CXX) g++ options: -O3 -std=c++11 -U\_FORTIFY\_SOURCE -lm -pthread

### AOM AV1 2.0

Encoder Mode: Speed 8 Realtime

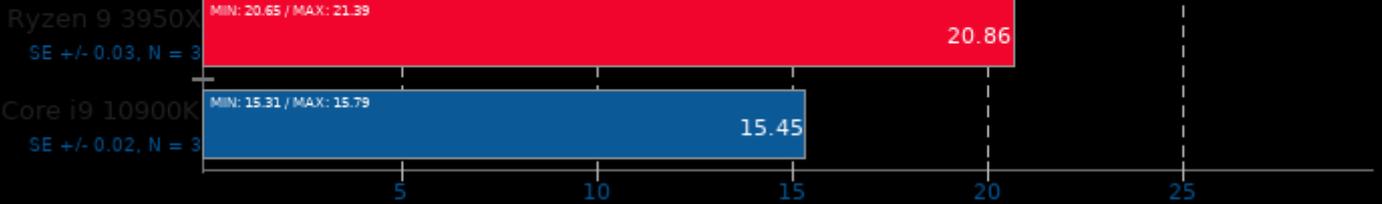


1. (CXX) g++ options: -O3 -std=c++11 -U\_FORTIFY\_SOURCE -lm -pthread

### Embree 3.9.0

Binary: Pathtracer - Model: Crown

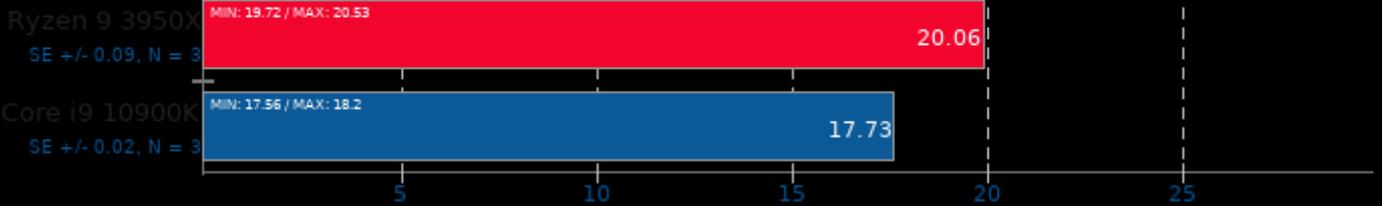
▶ Frames Per Second, More Is Better



### Embree 3.9.0

Binary: Pathtracer ISPC - Model: Crown

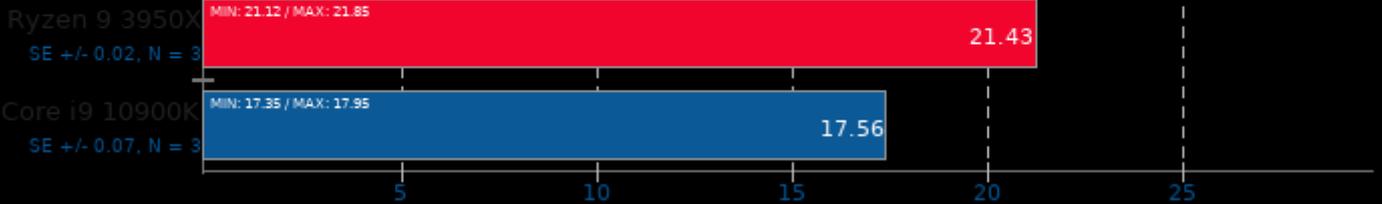
▶ Frames Per Second, More Is Better



### Embree 3.9.0

Binary: Pathtracer - Model: Asian Dragon

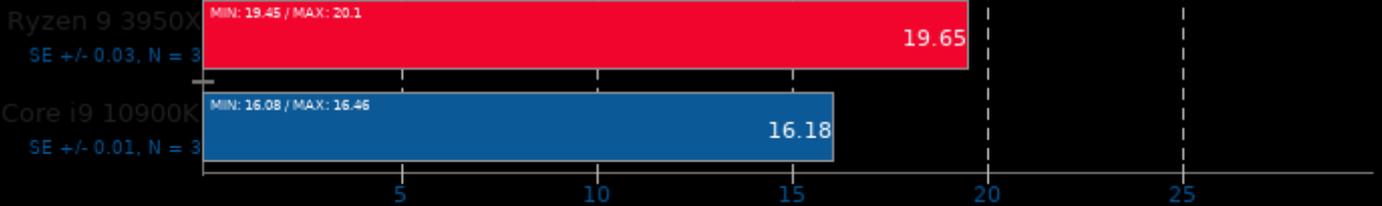
▶ Frames Per Second, More Is Better



### Embree 3.9.0

Binary: Pathtracer - Model: Asian Dragon Obj

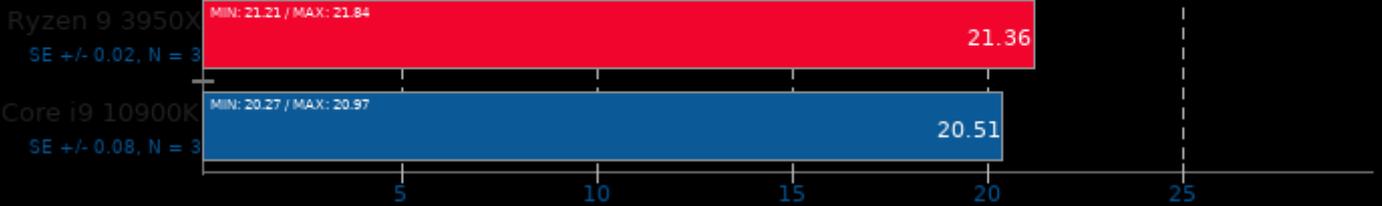
▶ Frames Per Second, More Is Better



### Embree 3.9.0

Binary: Pathtracer ISPC - Model: Asian Dragon

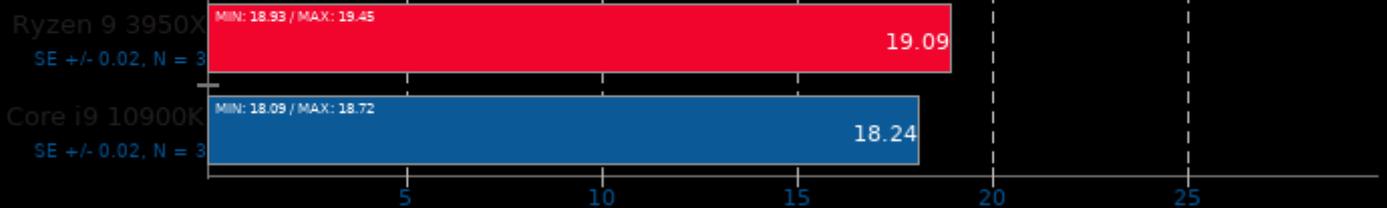
▶ Frames Per Second, More Is Better



### Embree 3.9.0

Binary: Pathtracer ISPC - Model: Asian Dragon Obj

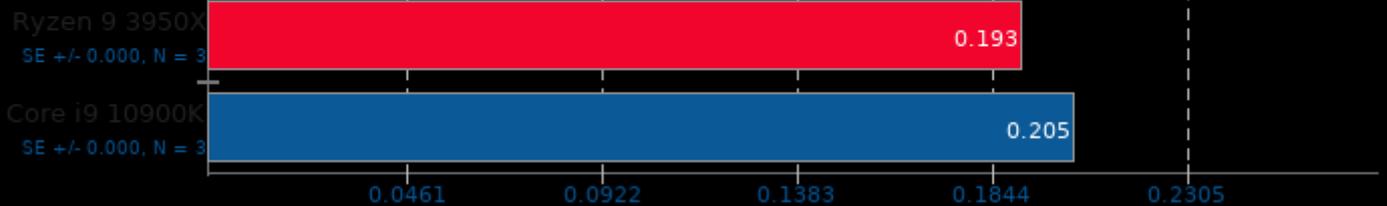
▶ Frames Per Second, More Is Better



### rav1e 0.3.0

Speed: 1

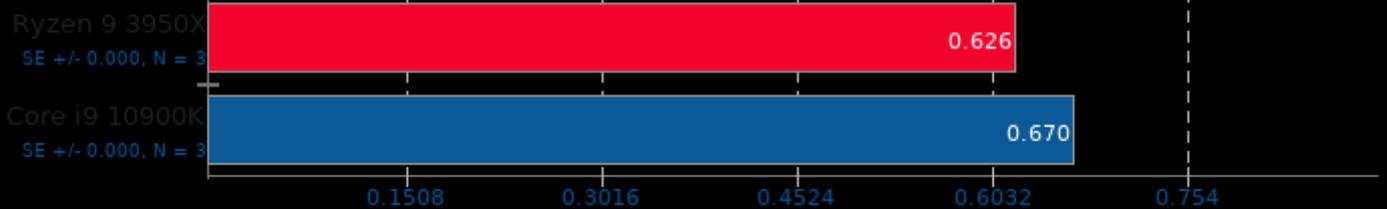
▶ Frames Per Second, More Is Better



### rav1e 0.3.0

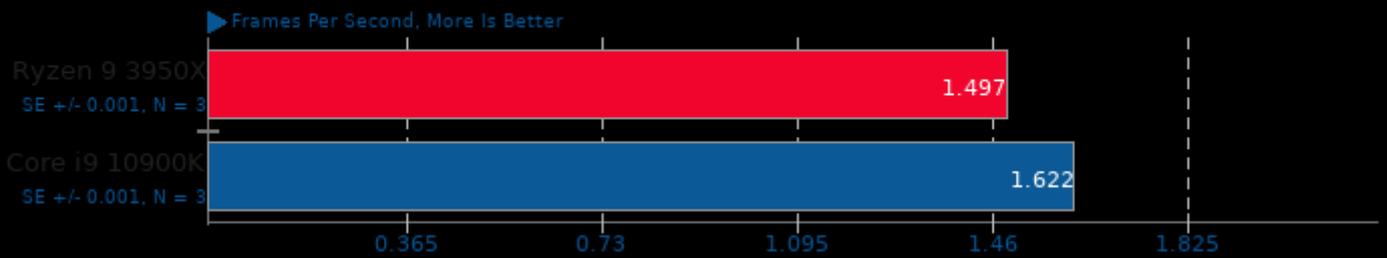
Speed: 5

▶ Frames Per Second, More Is Better



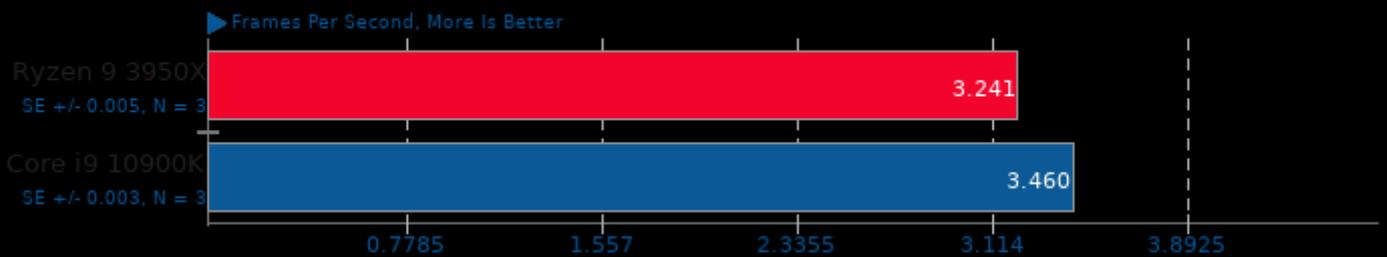
### rav1e 0.3.0

Speed: 6



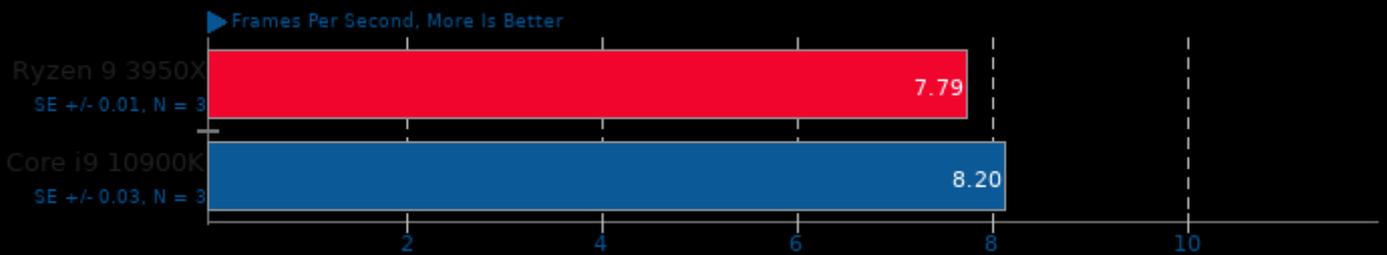
### rav1e 0.3.0

Speed: 10



### VP9 libvpx Encoding 1.8.2

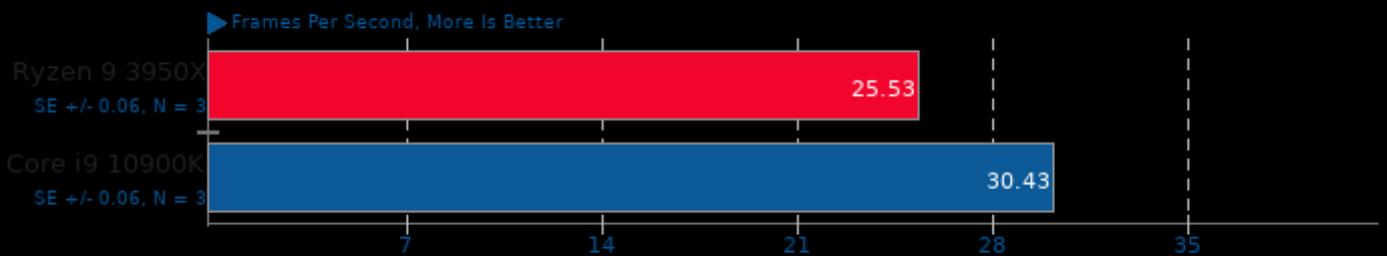
Speed: Speed 0



1. (CXX) g++ options: -m64 -lm -lpthread -O3 -fPIC -U\_FORTIFY\_SOURCE -std=c++11

### VP9 libvpx Encoding 1.8.2

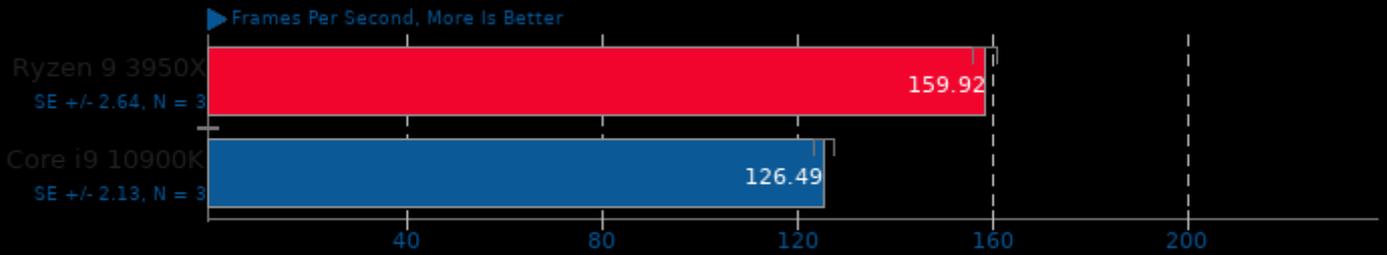
Speed: Speed 5



1. (CXX) g++ options: -m64 -lm -lpthread -O3 -fPIC -U\_FORTIFY\_SOURCE -std=c++11

### x264 2019-12-17

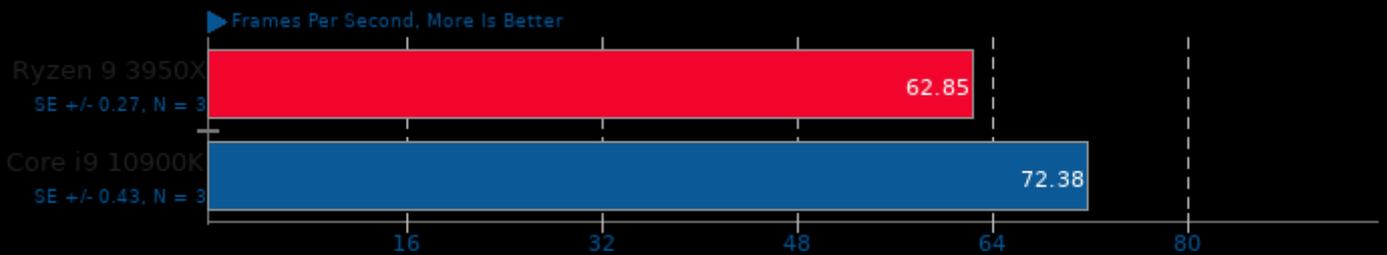
H.264 Video Encoding



1. (CC) gcc options: -ldl -lavformat -lavcodec -lavutil -lswscale -m64 -lm -lpthread -O3 -ffast-math -std=gnu99 -fpic -fomit-frame-pointer -fno-tree-vectorize

### x265 3.1.2

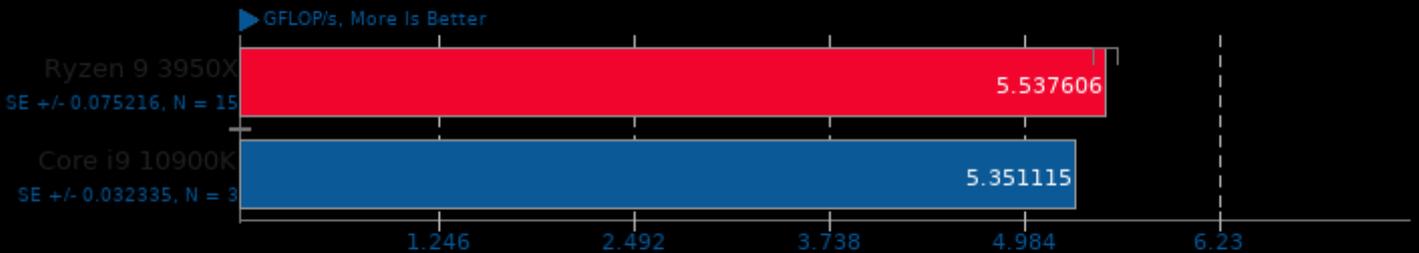
H.265 1080p Video Encoding



1. (CXX) g++ options: -O3 -rdynamic -lpthread -lrt -ldl -lnuma

### ACES DGEMM 1.0

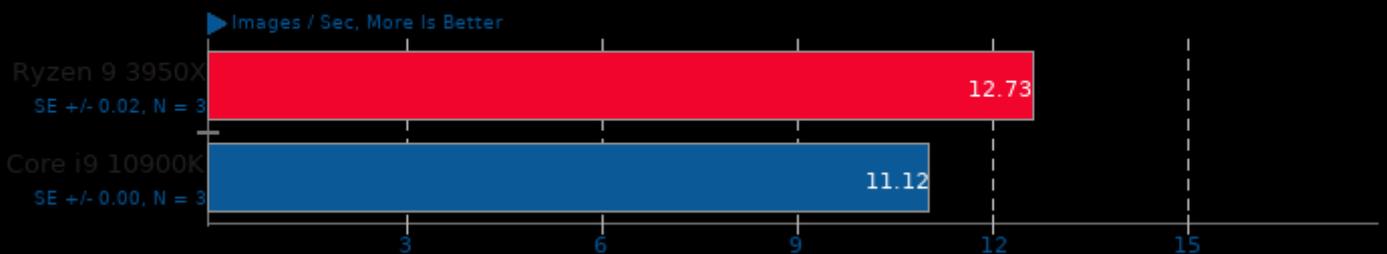
Sustained Floating-Point Rate



1. (CC) gcc options: -O3 -march=native -fopenmp

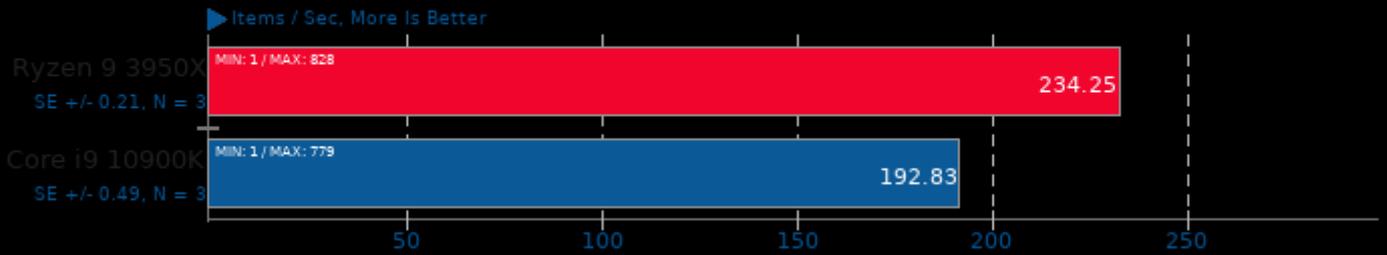
### Intel Open Image Denoise 1.2.0

Scene: Memorial



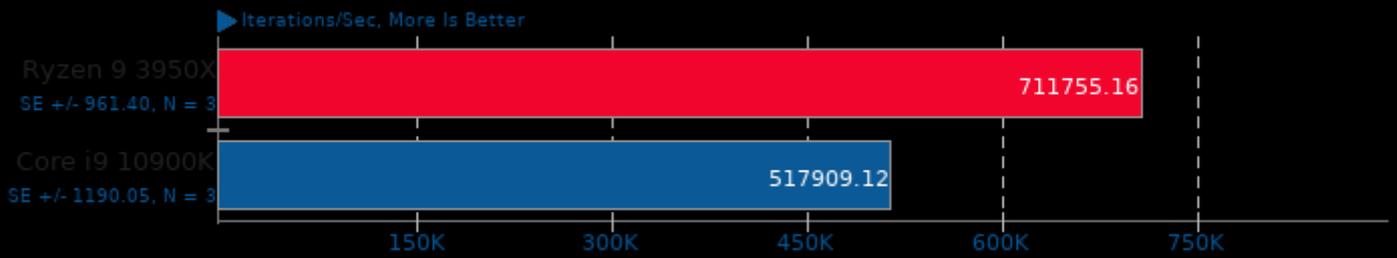
### OpenVKL 0.9

Benchmark: vklBenchmark



### Coremark 1.0

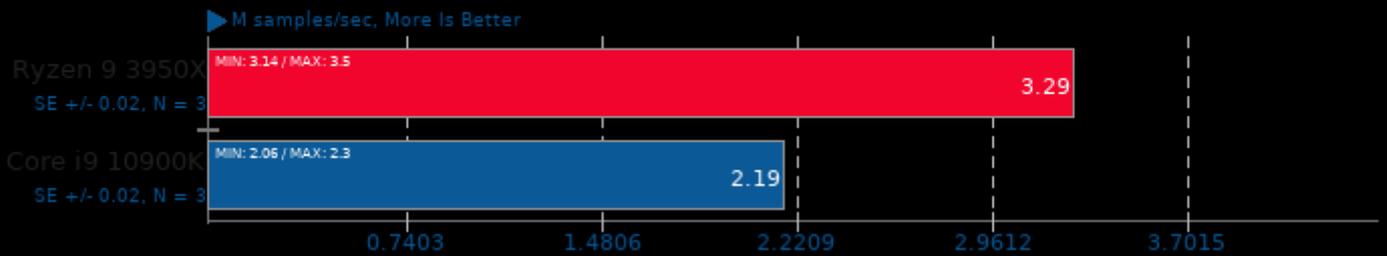
CoreMark Size 666 - Iterations Per Second



1, (CC) gcc options: -O2 -lrt -lrt

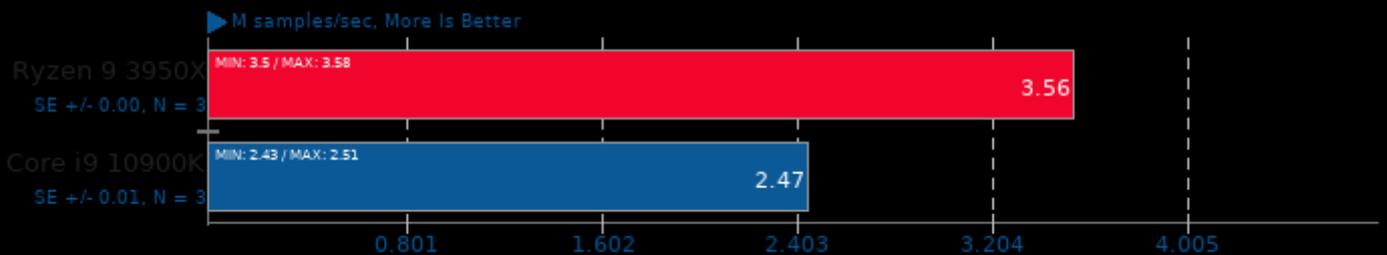
### LuxCoreRender 2.3

Scene: DLSC



### LuxCoreRender 2.3

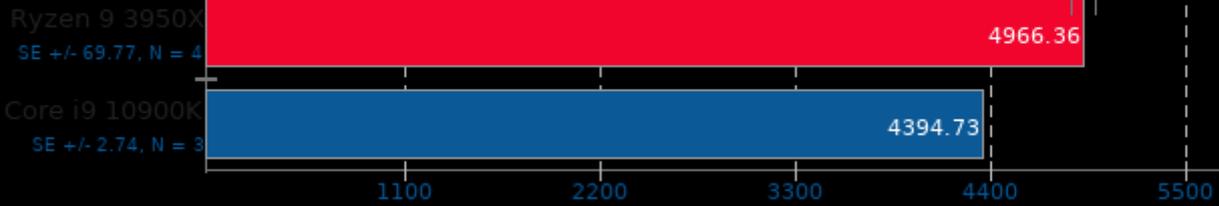
Scene: Rainbow Colors and Prism



### Himeno Benchmark 3.0

Poisson Pressure Solver

MFLOPS, More Is Better

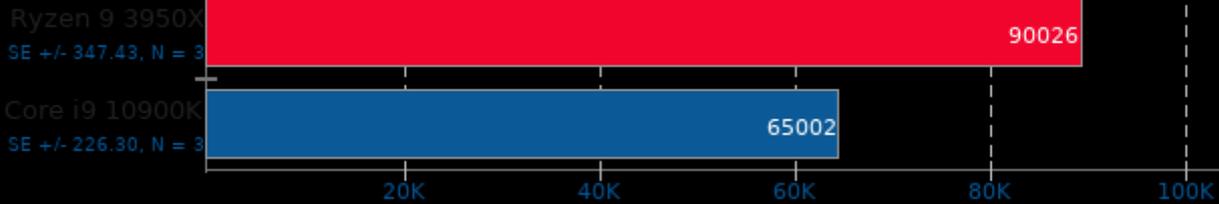


1. (CC) gcc options: -O3 -mavx2

### 7-Zip Compression 16.02

Compress Speed Test

MIPS, More Is Better

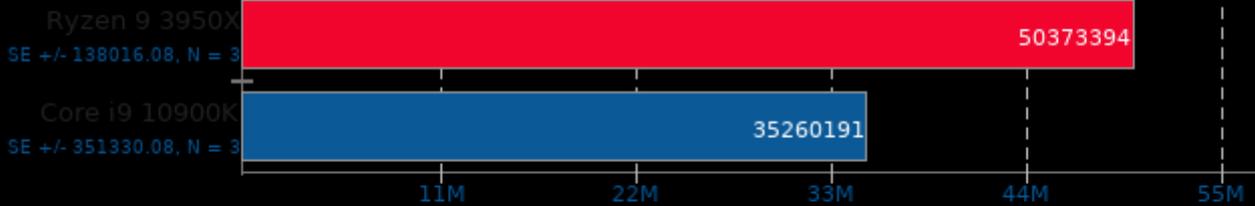


1. (CXX) g++ options: -pipe -pthread

### Stockfish 9

Total Time

Nodes Per Second, More Is Better

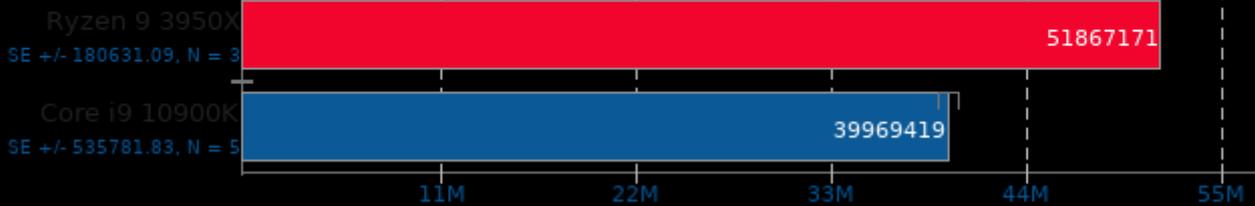


1. (CXX) g++ options: -m64 -pthread -fno-exceptions -std=c++11 -pedantic -O3 -msse -msse3 -mpopcnt -fno

### asmFish 2018-07-23

1024 Hash Memory, 26 Depth

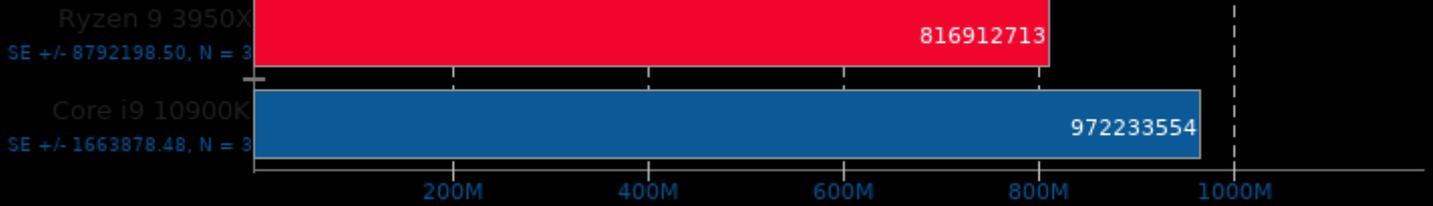
Nodes/second, More Is Better



### Swet 1.5.16

Average

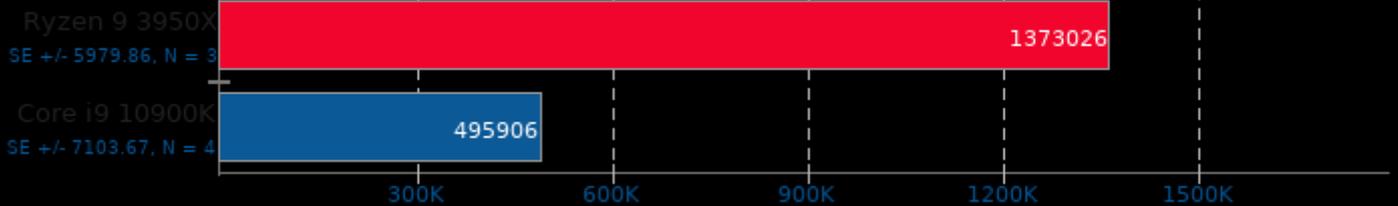
Operations Per Second, More Is Better



1. (CC) gcc options: -lm -lpthread -lcurses -lrt

### ebizzy 0.3

Records/s, More Is Better

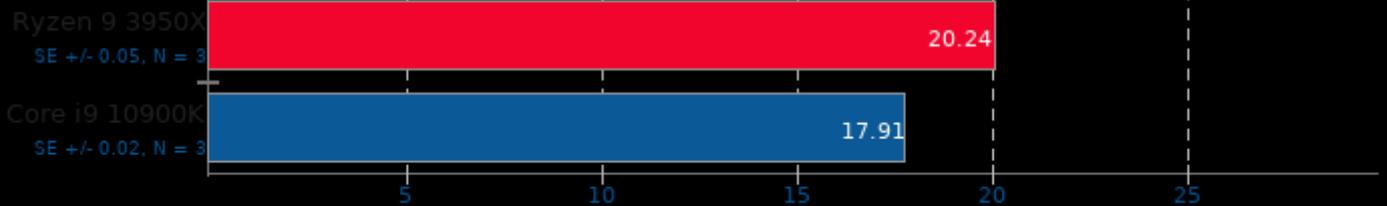


1. (CC) gcc options: -pthread -lpthread -O3 -march=native

### Timed Apache Compilation 2.4.41

Time To Compile

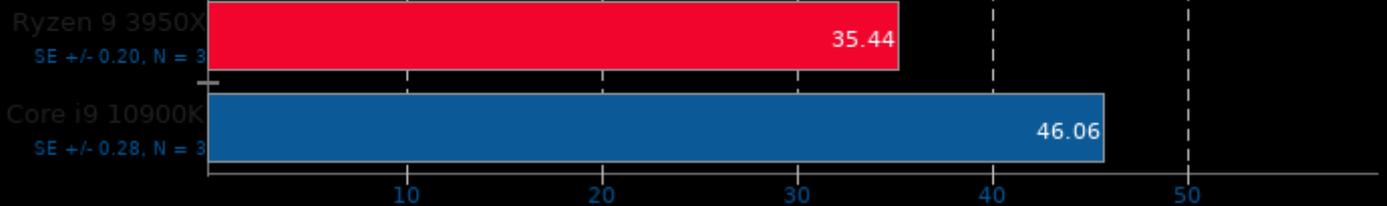
Seconds, Fewer Is Better

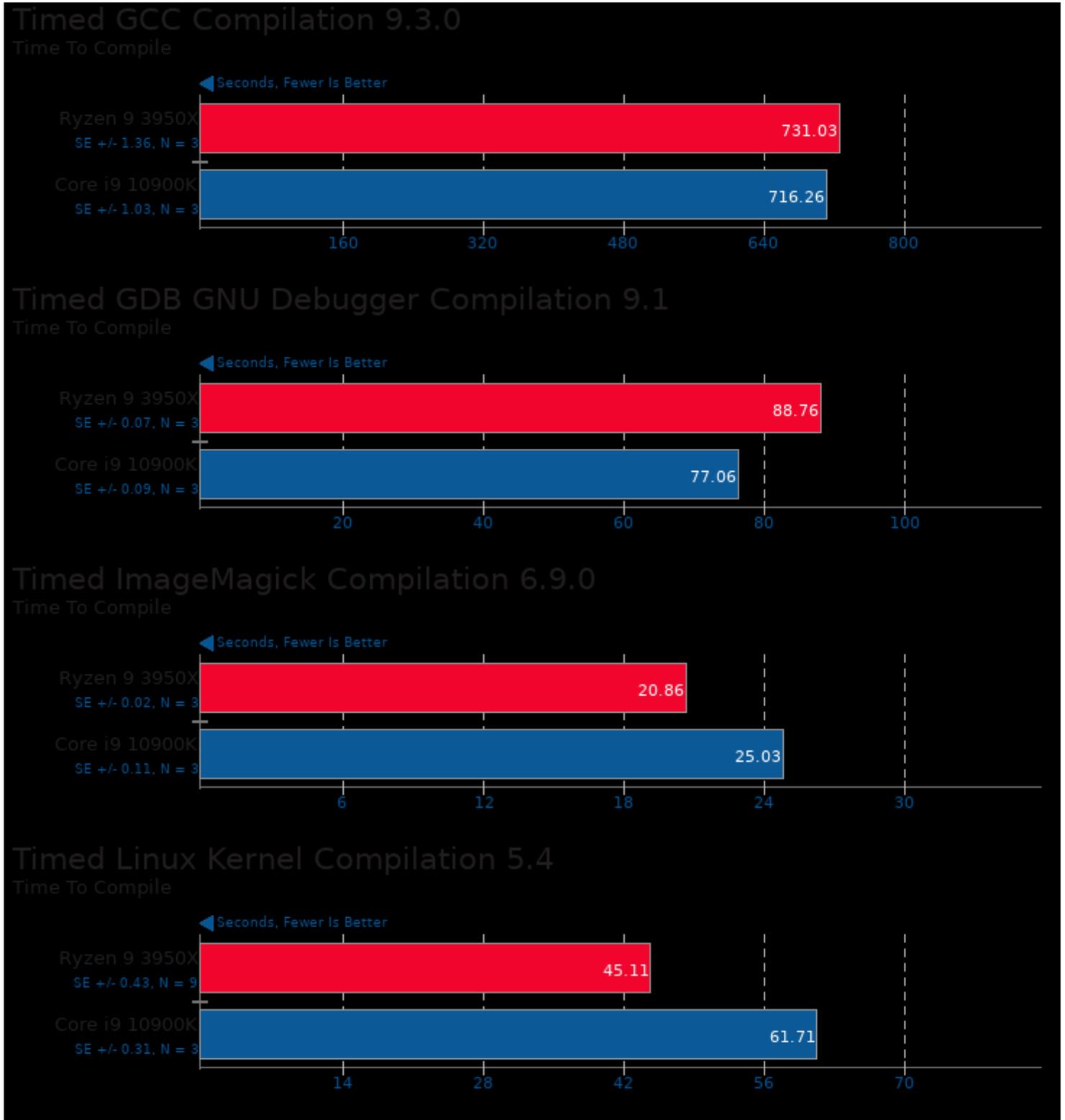


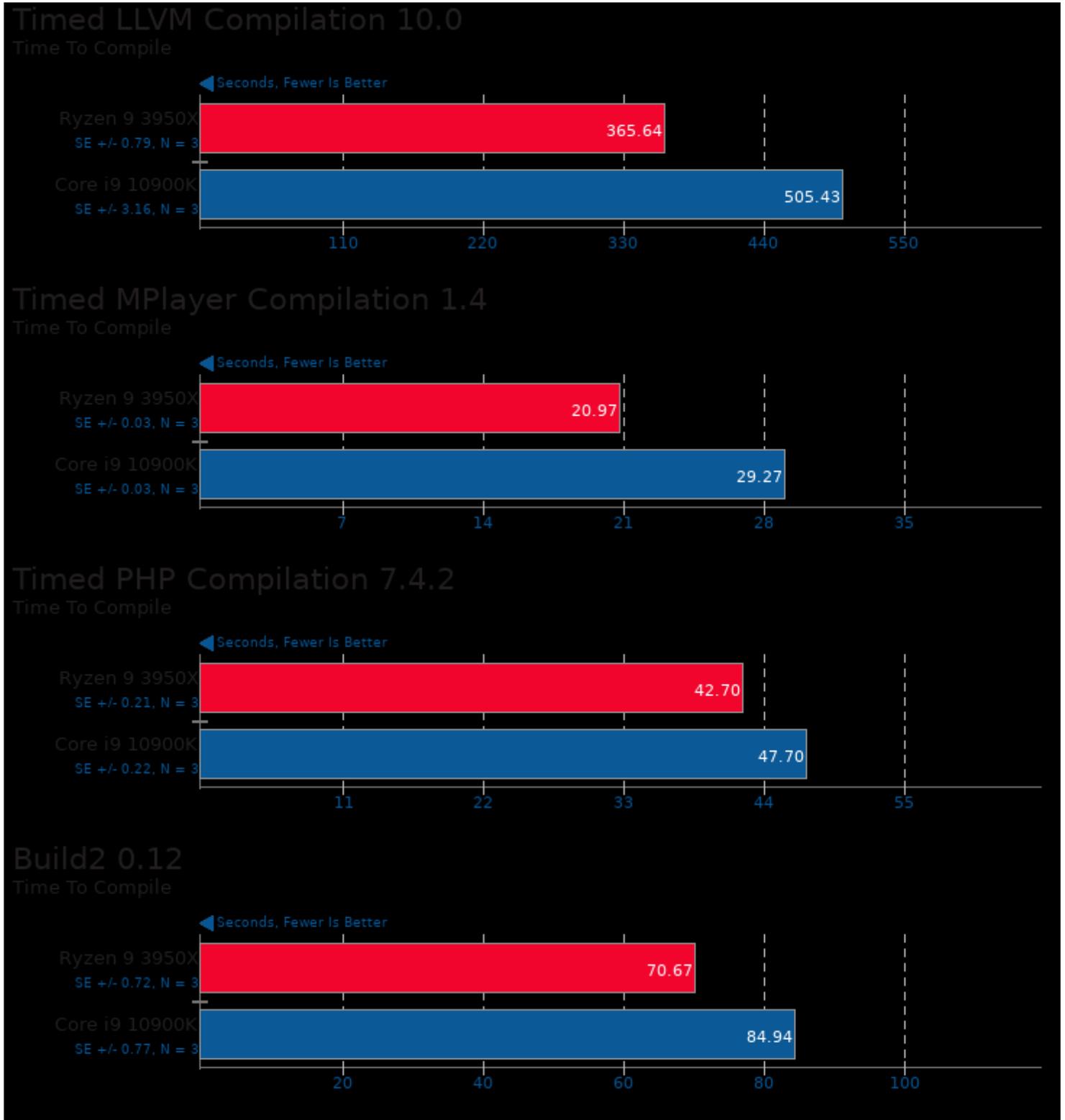
### Timed FFmpeg Compilation 4.2.2

Time To Compile

Seconds, Fewer Is Better

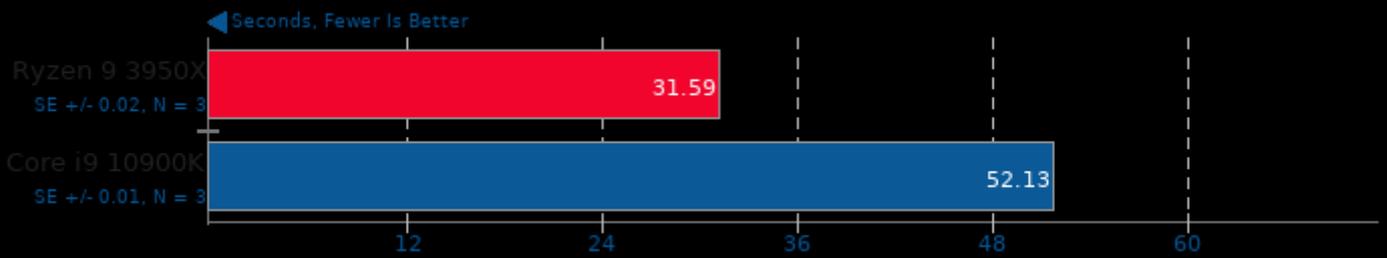






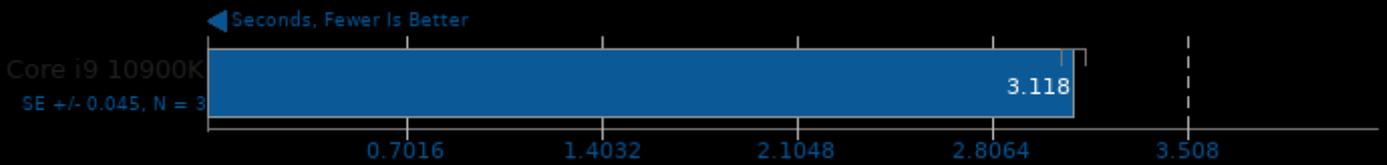
### C-Ray 1.1

Total Time - 4K, 16 Rays Per Pixel



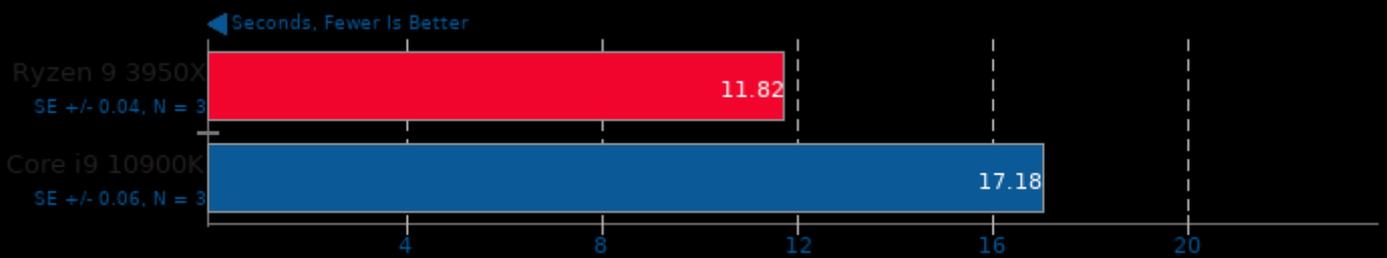
### Parallel BZIP2 Compression 1.1.12

256MB File Compression



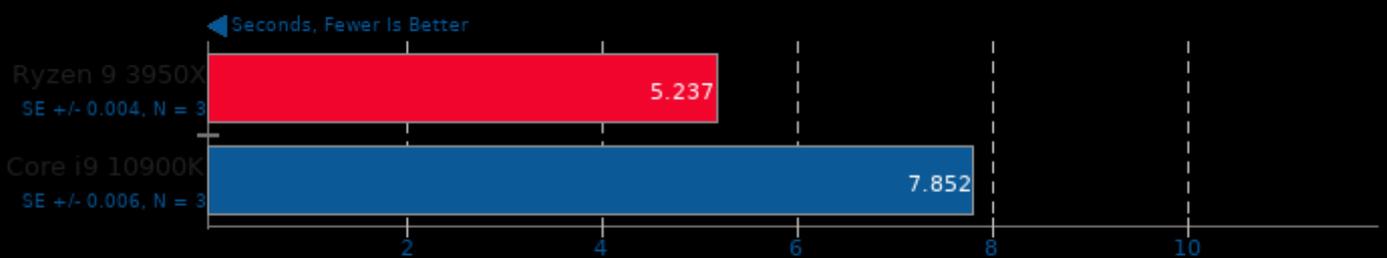
### Primesieve 7.4

1e12 Prime Number Generation



### Smallpt 1.0

Global Illumination Renderer; 128 Samples



### Tungsten Renderer 0.2.2

Scene: Hair

← Seconds, Fewer Is Better

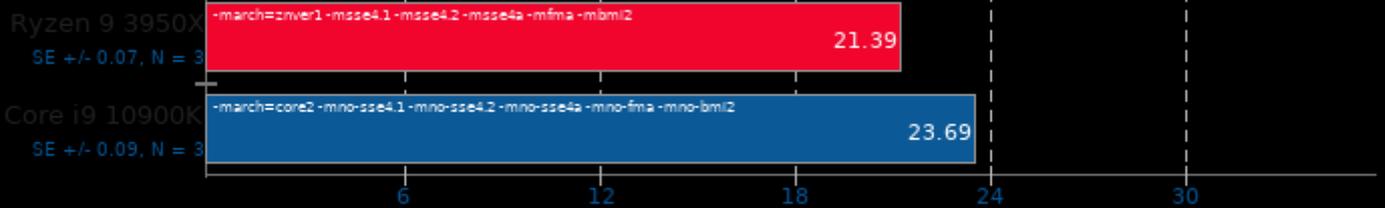


1. (CXX) g++ options: -std=c++0x -msse2 -msse3 -mssse3 -mno-avx -mno-avx2 -mno-xop -mno-fma4 -mno-avx512f -mno-avx512vl -mno-avx512pf -mno-

### Tungsten Renderer 0.2.2

Scene: Water Caustic

← Seconds, Fewer Is Better

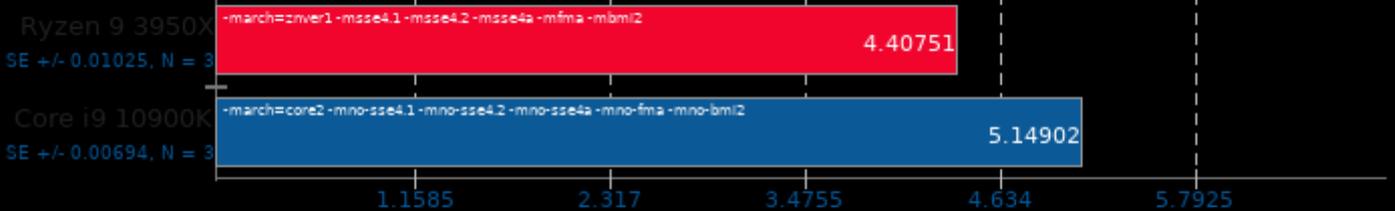


1. (CXX) g++ options: -std=c++0x -msse2 -msse3 -mssse3 -mno-avx -mno-avx2 -mno-xop -mno-fma4 -mno-avx512f -mno-avx512vl -mno-avx512pf -mno-

### Tungsten Renderer 0.2.2

Scene: Non-Exponential

← Seconds, Fewer Is Better



1. (CXX) g++ options: -std=c++0x -msse2 -msse3 -mssse3 -mno-avx -mno-avx2 -mno-xop -mno-fma4 -mno-avx512f -mno-avx512vl -mno-avx512pf -mno-

### Tungsten Renderer 0.2.2

Scene: Volumetric Caustic

← Seconds, Fewer Is Better

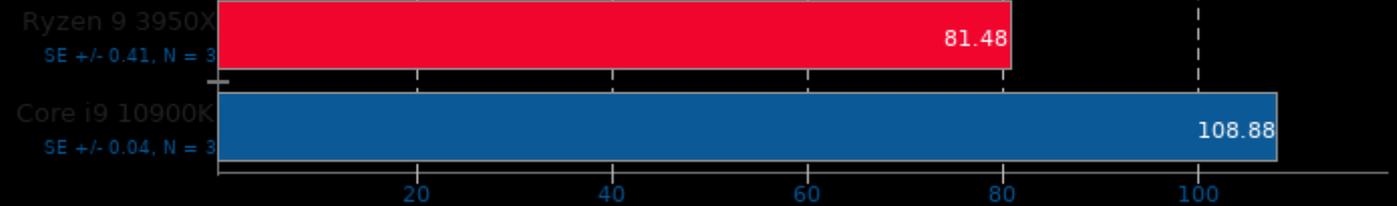


1. (CXX) g++ options: -std=c++0x -msse2 -msse3 -mssse3 -mno-avx -mno-avx2 -mno-xop -mno-fma4 -mno-avx512f -mno-avx512vl -mno-avx512pf -mno-

### YafaRay 3.4.1

Total Time For Sample Scene

← Seconds, Fewer Is Better

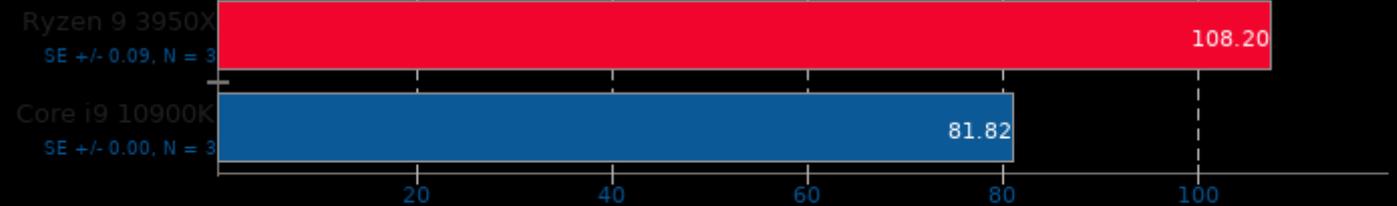


1. (CXX) g++ options: -std=c++11 -O3 -ffast-math -rdynamic -ldl -lmath -llmimf -llex -lHalf -lz -llmThread -lxml2 -lfreetype -lpthread

### rays1bench 2020-01-09

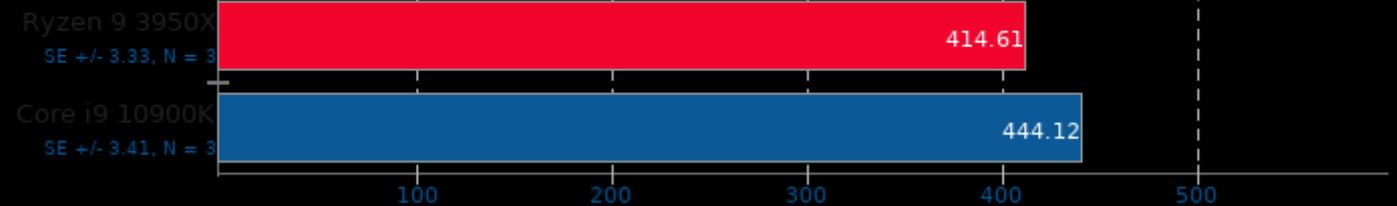
Large Scene

► mrays/s, More Is Better



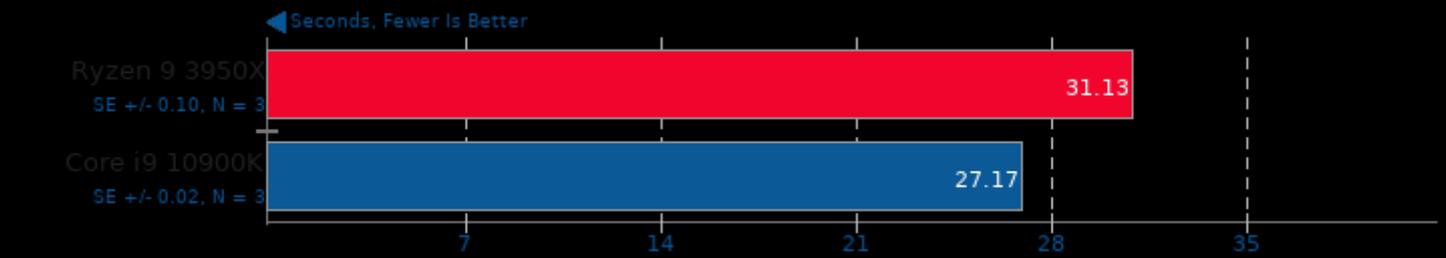
### Numpy Benchmark

► Score, More Is Better



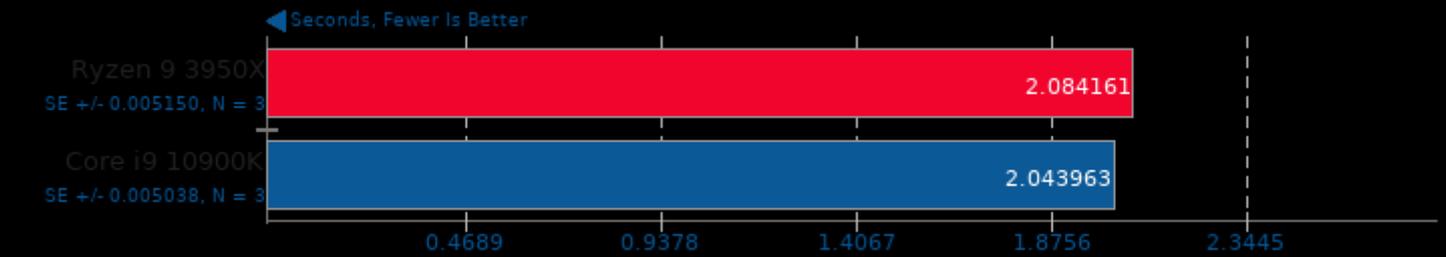
### AOBench

Size: 2048 x 2048 - Total Time



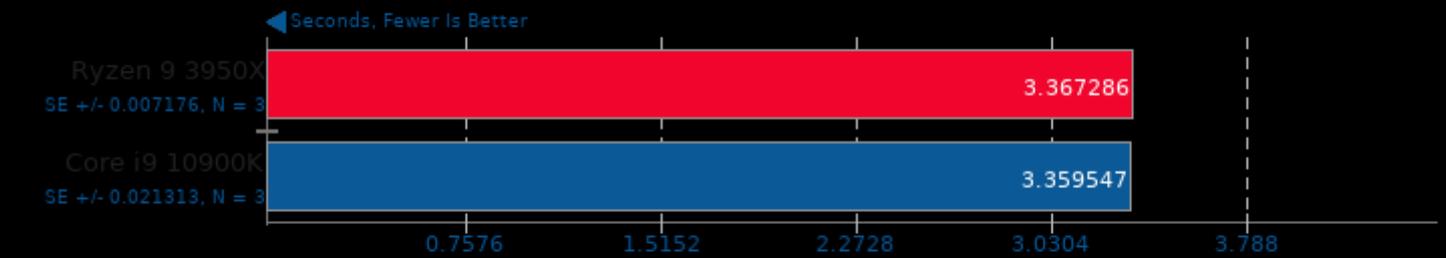
### Bullet Physics Engine 2.81

Test: Raytests



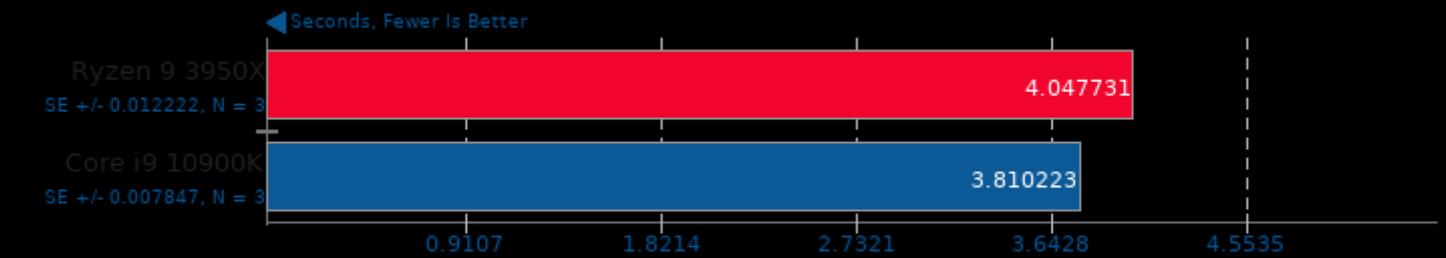
### Bullet Physics Engine 2.81

Test: 3000 Fall



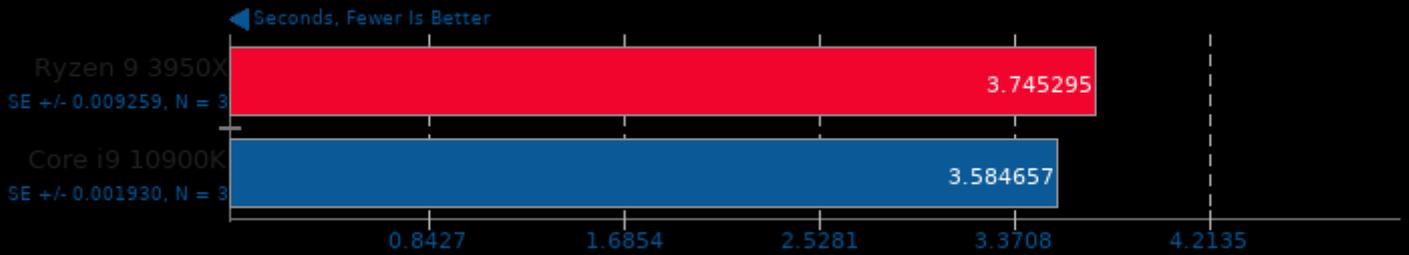
### Bullet Physics Engine 2.81

Test: 1000 Stack



### Bullet Physics Engine 2.81

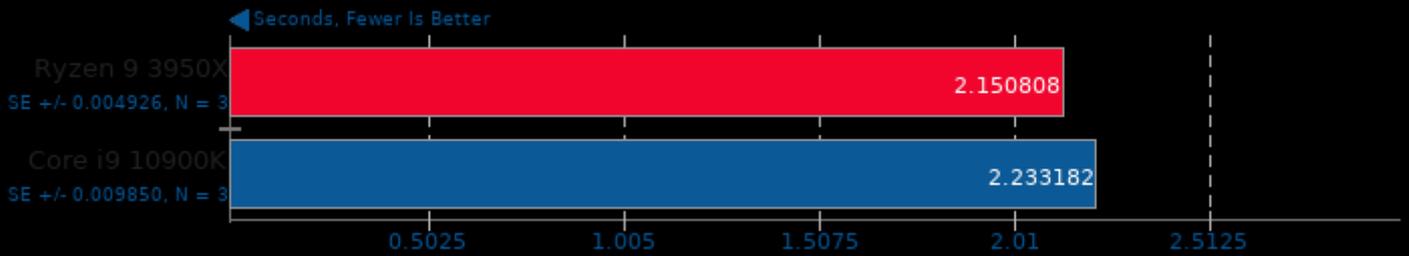
Test: 1000 Convex



1. (CXX) g++ options: -O3 -rdynamic -lglut -lGL -lGLU

### Bullet Physics Engine 2.81

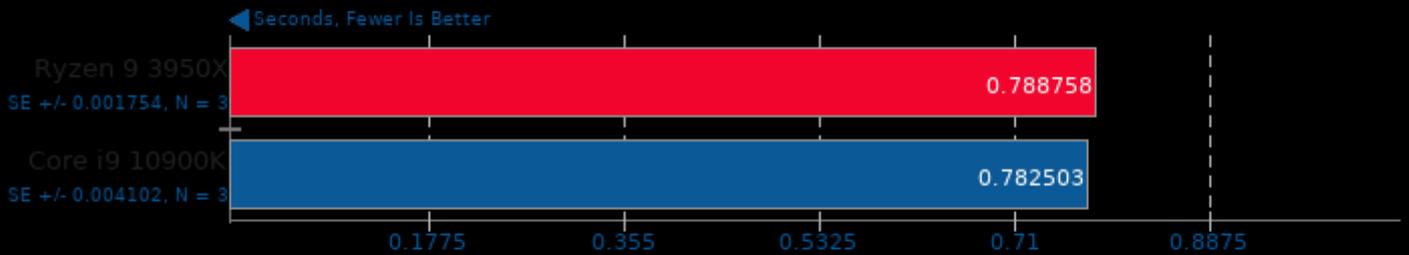
Test: 136 Ragdolls



1. (CXX) g++ options: -O3 -rdynamic -lglut -lGL -lGLU

### Bullet Physics Engine 2.81

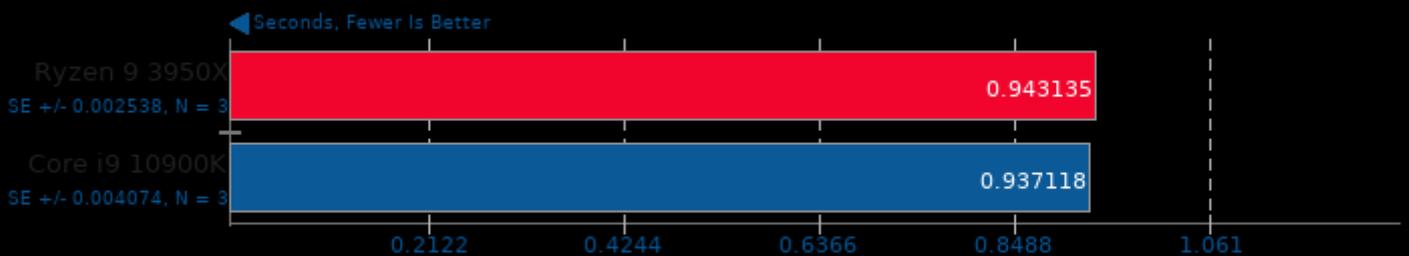
Test: Prim Trimesh



1. (CXX) g++ options: -O3 -rdynamic -lglut -lGL -lGLU

### Bullet Physics Engine 2.81

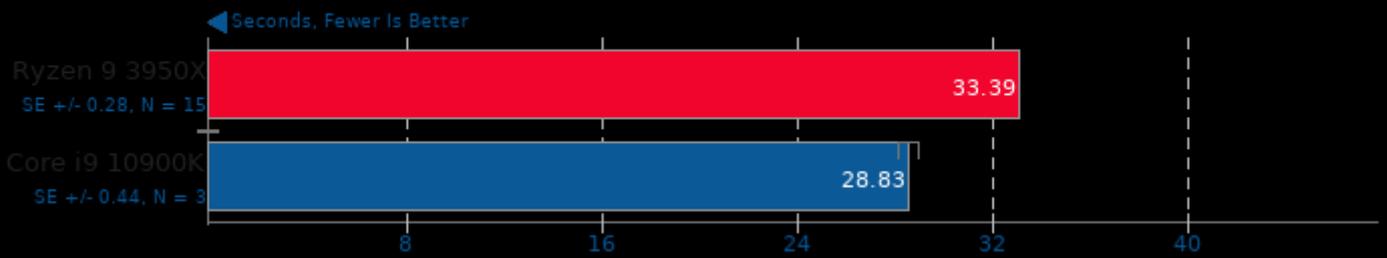
Test: Convex Trimesh



1. (CXX) g++ options: -O3 -rdynamic -lglut -lGL -lGLU

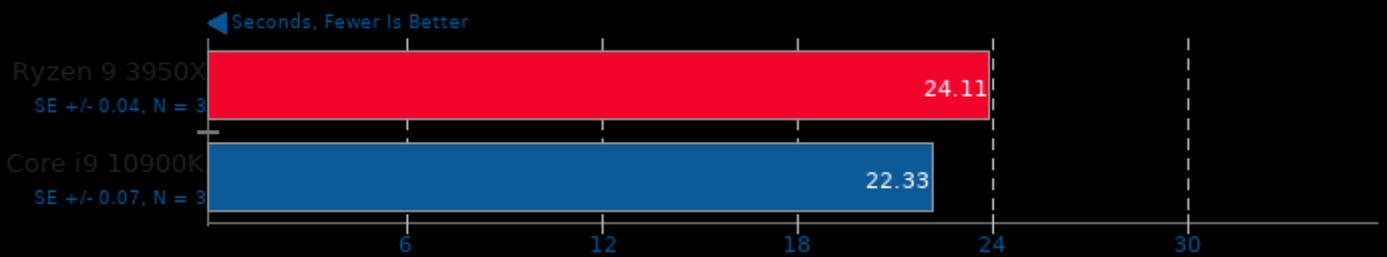
### Gzip Compression

Linux Source Tree Archiving To .tar.gz



### XZ Compression 5.2.4

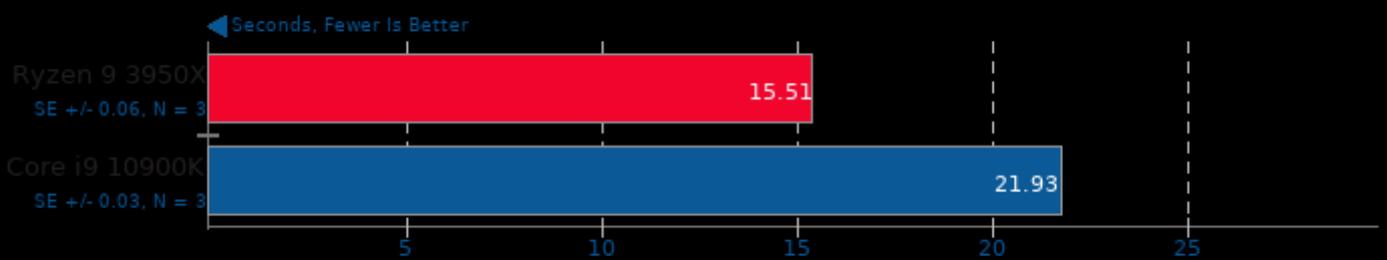
Compressing ubuntu-16.04.3-server-i386.img, Compression Level 9



1. (CC) gcc options: -pthread -fvisibility=hidden -O2

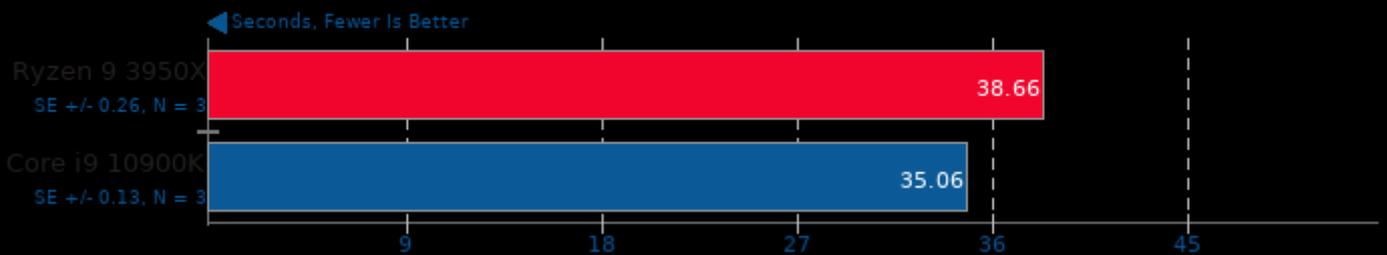
### Zstd Compression 1.3.4

Compressing ubuntu-16.04.3-server-i386.img, Compression Level 19



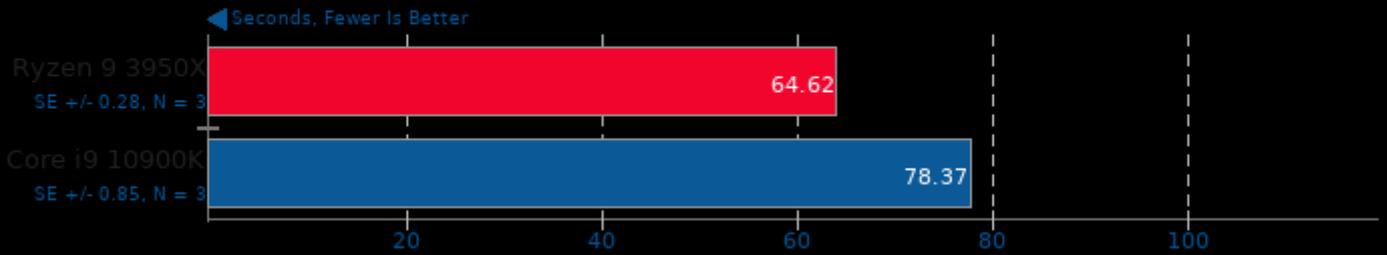
1. (CC) gcc options: -O3 -pthread -lz -lzma

### Cython benchmark 0.27



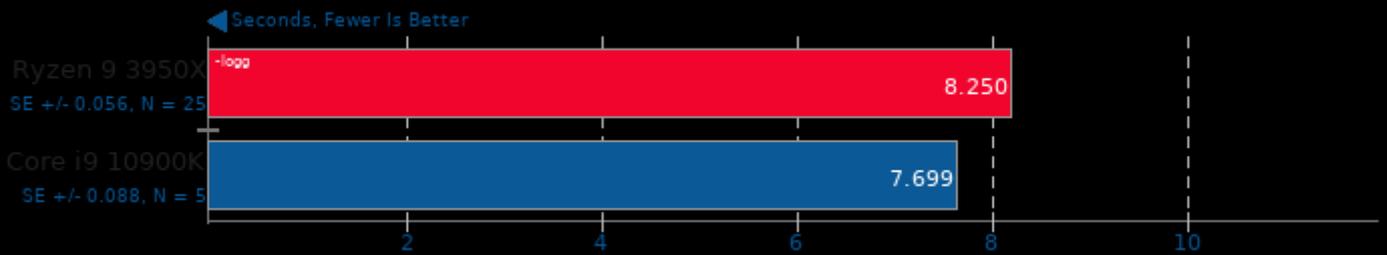
### DeepSpeech 0.6

Acceleration: CPU



### FLAC Audio Encoding 1.3.2

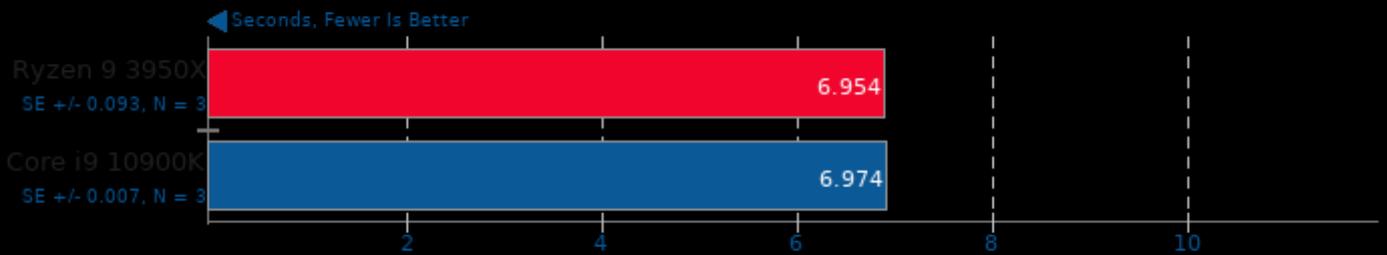
WAV To FLAC



1. (CXX) g++ options: -O2 -fvisibility=hidden -lm

### LAME MP3 Encoding 3.100

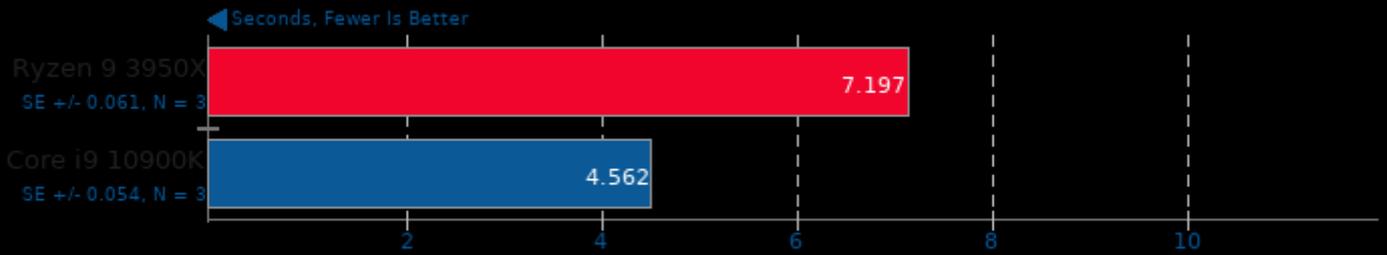
WAV To MP3



1. (CC) gcc options: -O3 -ffast-math -funroll-loops -fschedule-insns2 -fbranch-count-reg -fforce-addr -pipe -Incurse -lm

### FFmpeg 4.0.2

H.264 HD To NTSC DV



1. (CC) gcc options: -lavdevice -lavfilter -lavformat -lavcodec -lswresample -lswscale -lavutil -lXv -lX11 -lXext -lm -lxcb -lxcb-shm -lasound -lSDL2 -lndio -

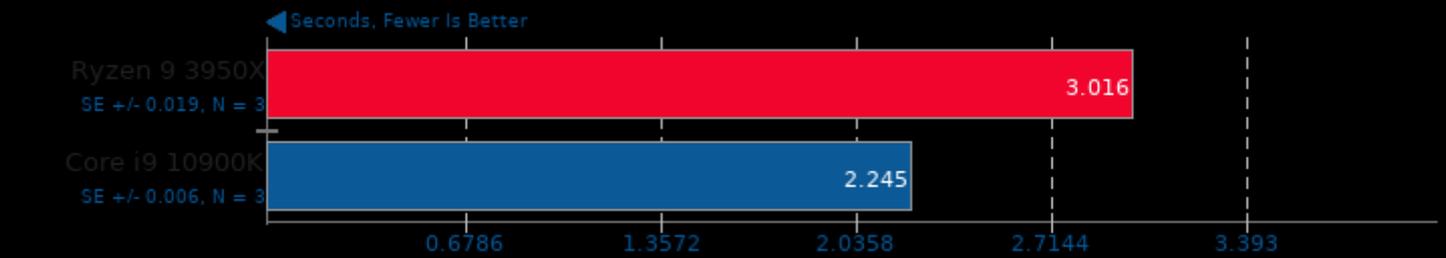
### GnuPG 1.4.22 2GB File Encryption



1. (CC) gcc options: -O2 -MT -MD -MP -MF

### Hackbench

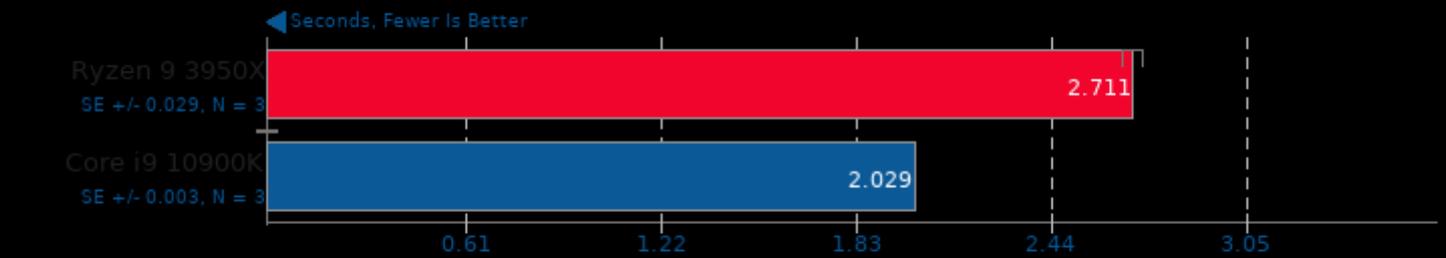
Count: 1 - Type: Thread



1. (CC) gcc options: -pthread

### Hackbench

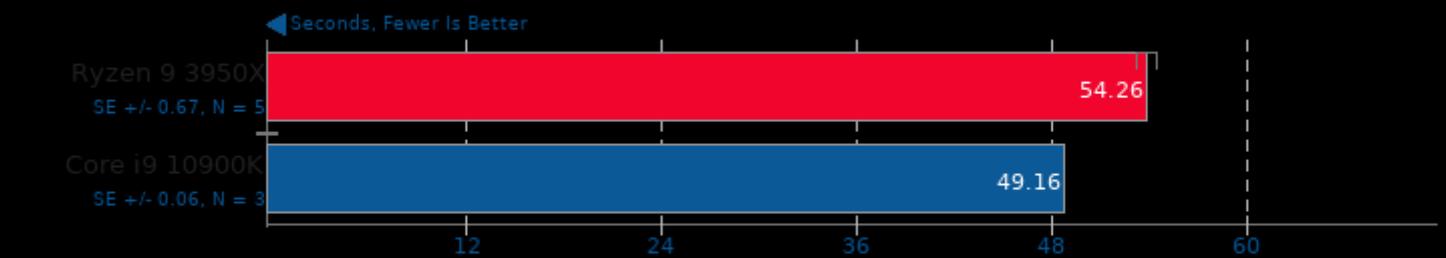
Count: 1 - Type: Process



1. (CC) gcc options: -pthread

### Hackbench

Count: 32 - Type: Process

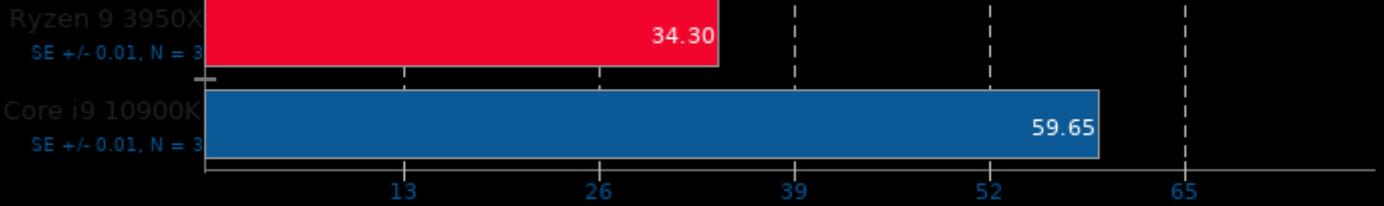


1. (CC) gcc options: -pthread

### m-queens 1.2

Time To Solve

← Seconds, Fewer Is Better

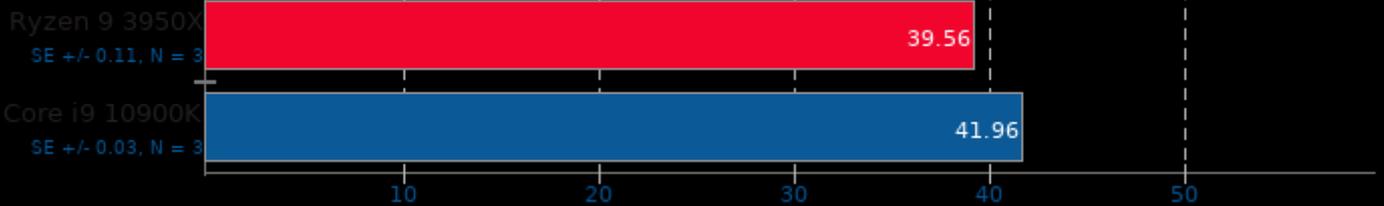


1. (CXX) g++ options: -fopenmp -O2 -march=native

### Minion 1.8

Benchmark: Graceful

← Seconds, Fewer Is Better

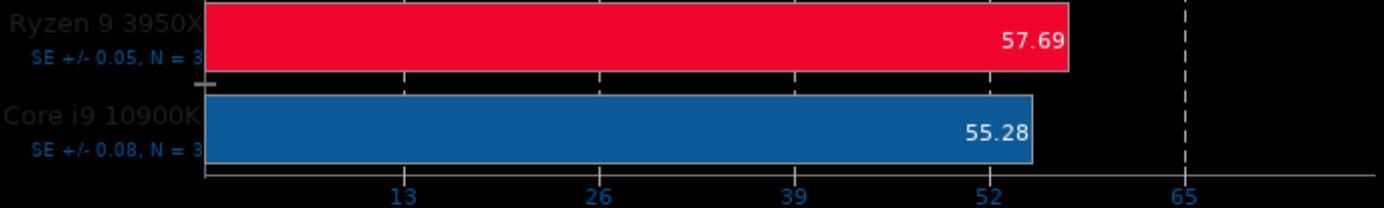


1. (CXX) g++ options: -std=gnu++11 -O3 -fomit-frame-pointer -rdynamic

### Minion 1.8

Benchmark: Solitaire

← Seconds, Fewer Is Better

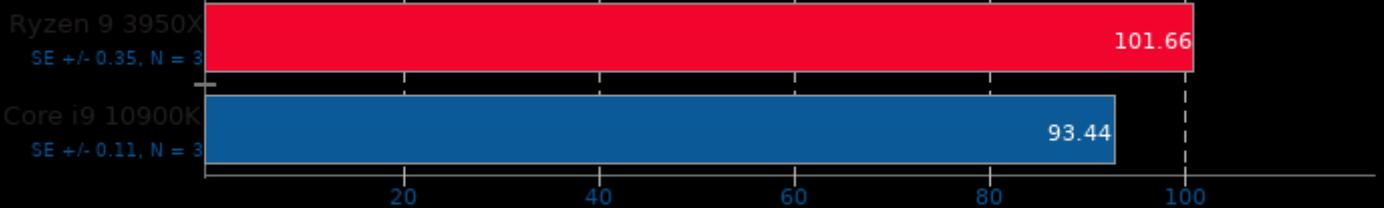


1. (CXX) g++ options: -std=gnu++11 -O3 -fomit-frame-pointer -rdynamic

### Minion 1.8

Benchmark: Quasigroup

← Seconds, Fewer Is Better

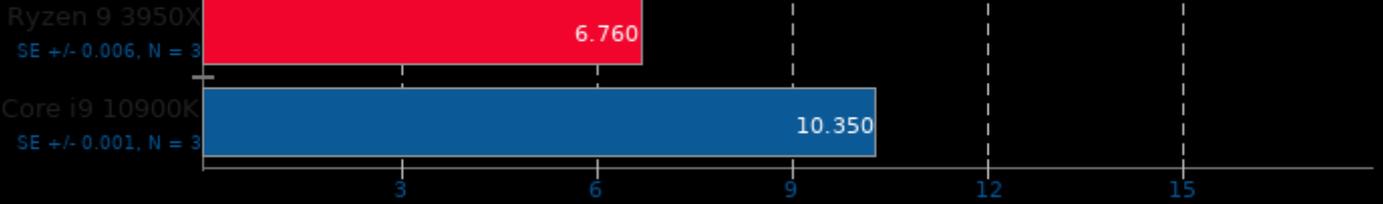


1. (CXX) g++ options: -std=gnu++11 -O3 -fomit-frame-pointer -rdynamic

### N-Queens 1.0

Elapsed Time

← Seconds, Fewer Is Better

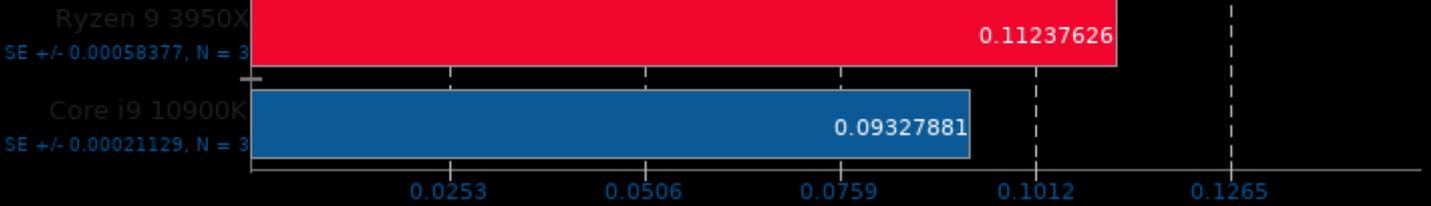


1. (CC) gcc options: -static -fopenmp -O3 -march=native

### Perl Benchmarks

Test: Pod2html

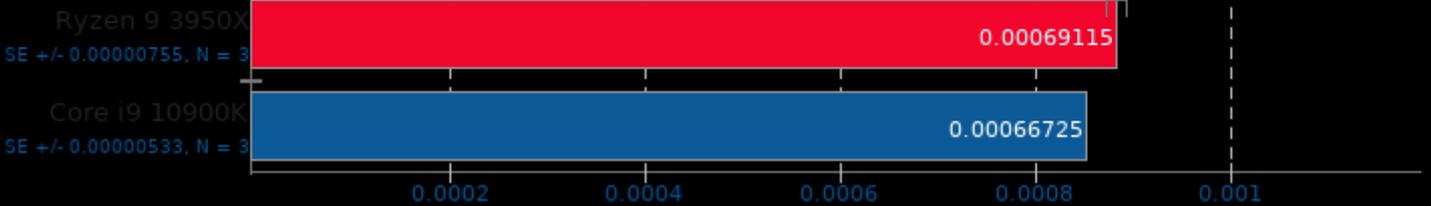
← Seconds, Fewer Is Better



### Perl Benchmarks

Test: Interpreter

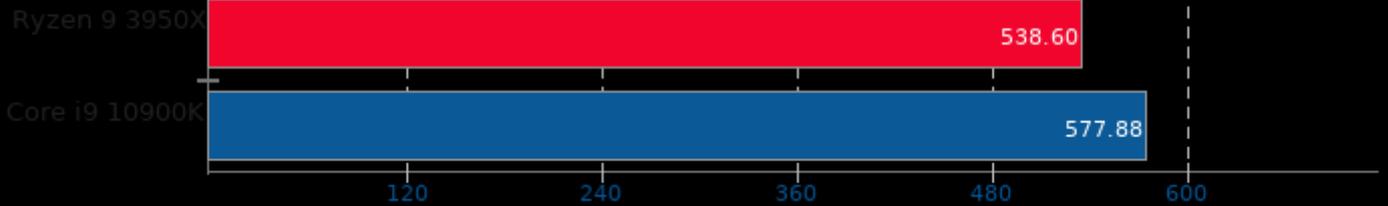
← Seconds, Fewer Is Better



### Radiance Benchmark 5.0

Test: Serial

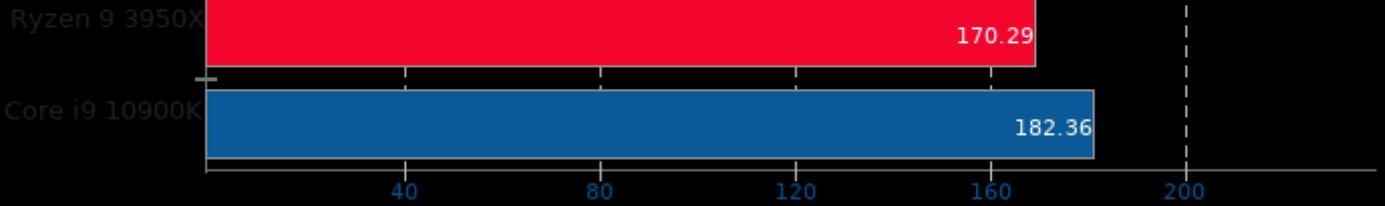
← Seconds, Fewer Is Better



### Radiance Benchmark 5.0

Test: SMP Parallel

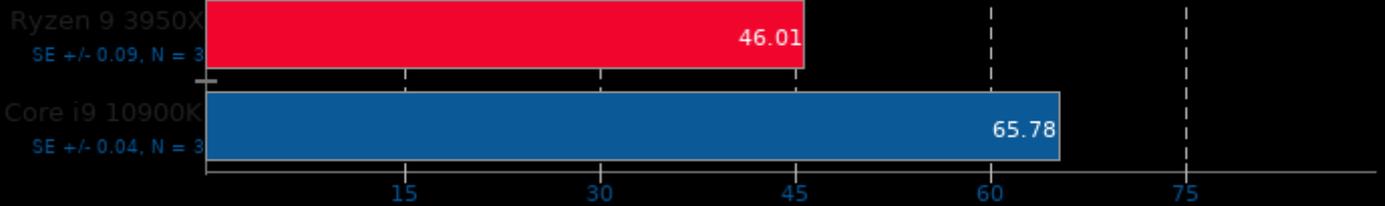
← Seconds, Fewer Is Better



### Tachyon 0.99b6

Total Time

← Seconds, Fewer Is Better

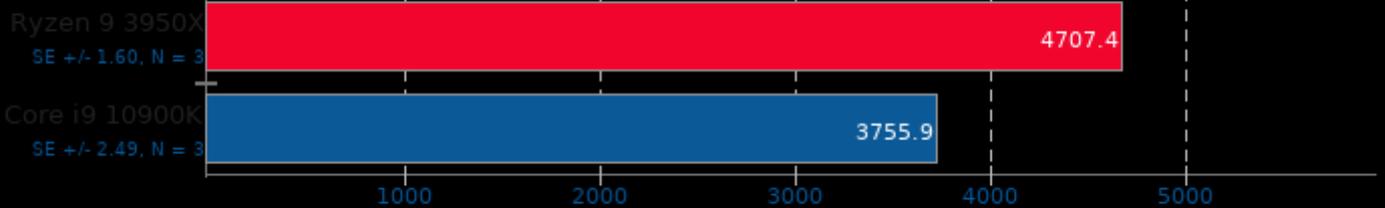


1. (CC) gcc options: -m64 -O3 -fomit-frame-pointer -ffast-math -ltachyon -lm -lpthread

### OpenSSL 1.1.1

RSA 4096-bit Performance

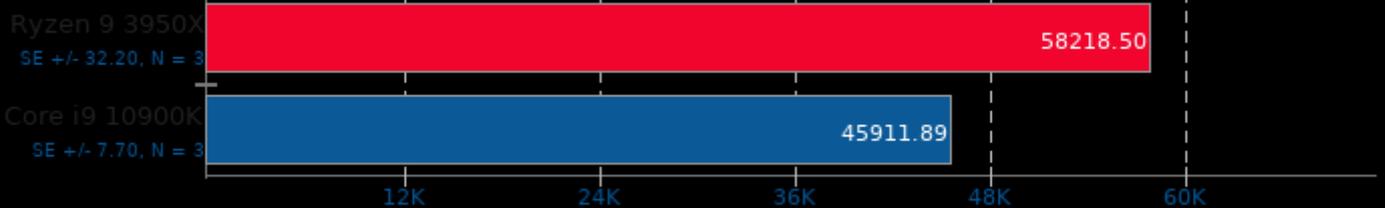
▶ Signs Per Second, More Is Better



1. (CC) gcc options: -pthread -m64 -O3 -lssl -lcrypto -ldl

### Aircrack-ng 1.5.2

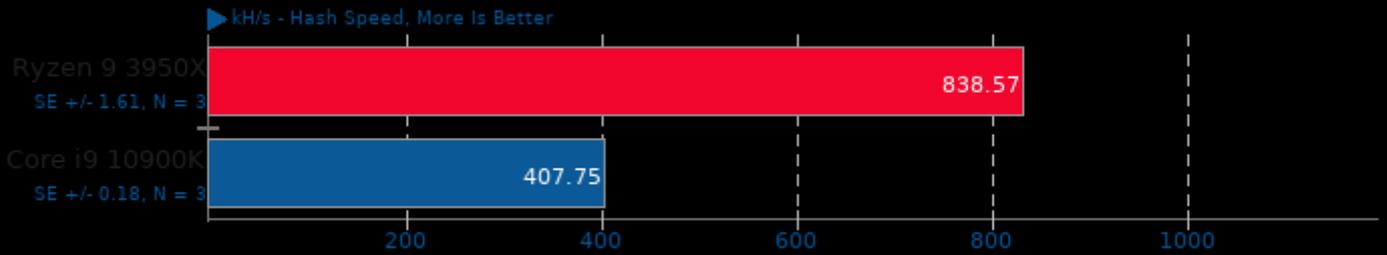
▶ k/s, More Is Better



1. (CXX) g++ options: -O3 -fvvisibility=hidden -masm=intel -fcommon -rdynamic -lpthread -lz -lcrypto -lhwloc -ldl -lm -pthread

### Cpuminer-Opt 3.8.8.1

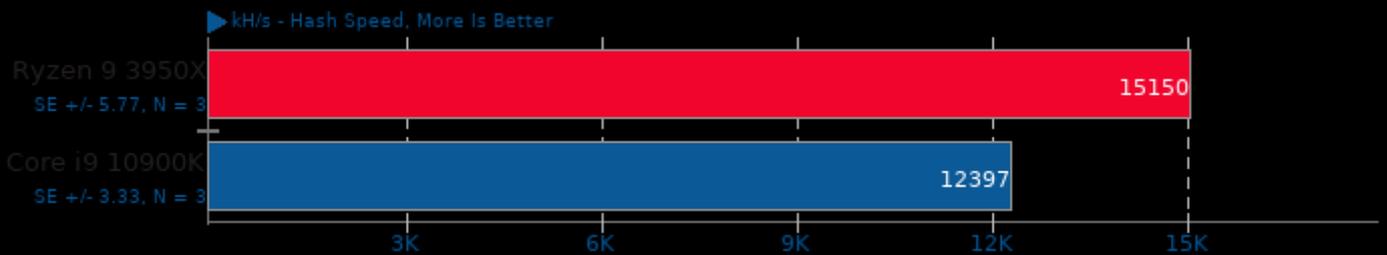
Algorithm: m7m



1. (CXX) g++ options: -O2 -lcurl -lz -lpthread -lssl -lcrypto -lgmp

### Cpuminer-Opt 3.8.8.1

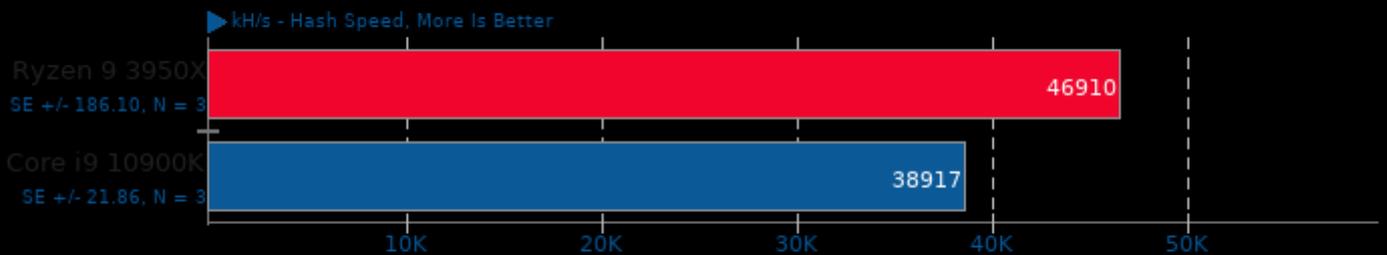
Algorithm: deep



1. (CXX) g++ options: -O2 -lcurl -lz -lpthread -lssl -lcrypto -lgmp

### Cpuminer-Opt 3.8.8.1

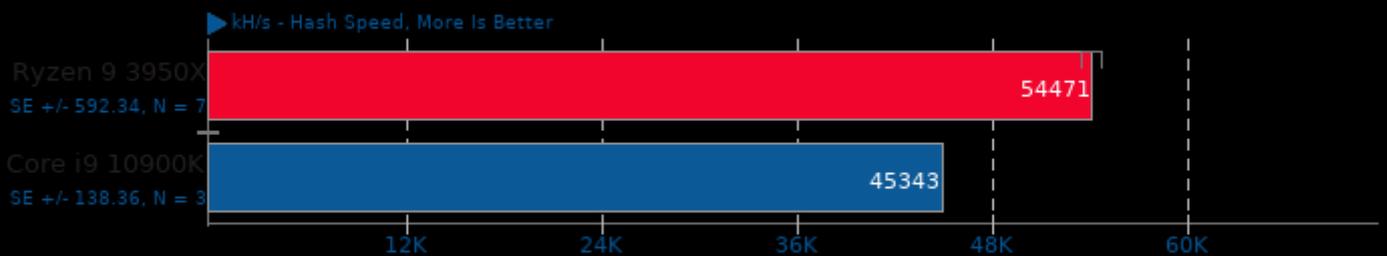
Algorithm: lbry



1. (CXX) g++ options: -O2 -lcurl -lz -lpthread -lssl -lcrypto -lgmp

### Cpuminer-Opt 3.8.8.1

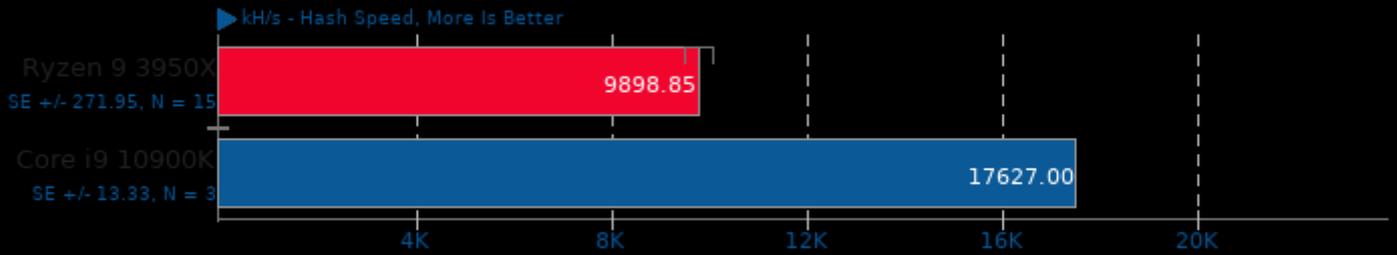
Algorithm: skein



1. (CXX) g++ options: -O2 -lcurl -lz -lpthread -lssl -lcrypto -lgmp

### Cpuminer-Opt 3.8.8.1

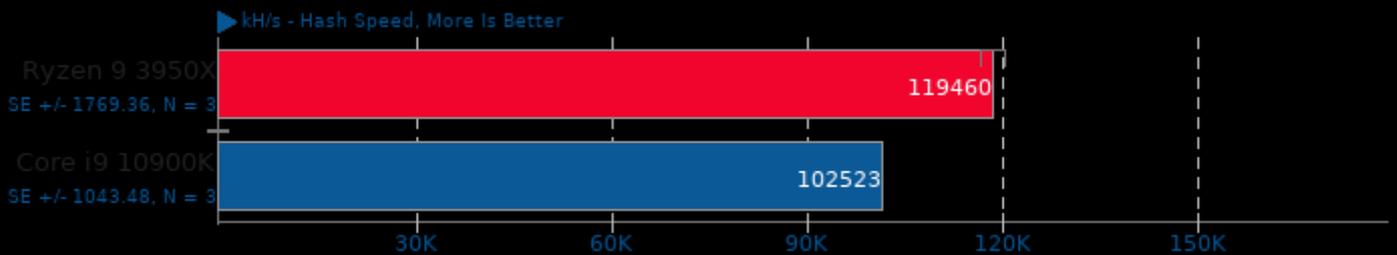
Algorithm: myr-gr



1. (CXX) g++ options: -O2 -lcurl -lz -lpthread -lssl -lcrypto -lgmp

### Cpuminer-Opt 3.8.8.1

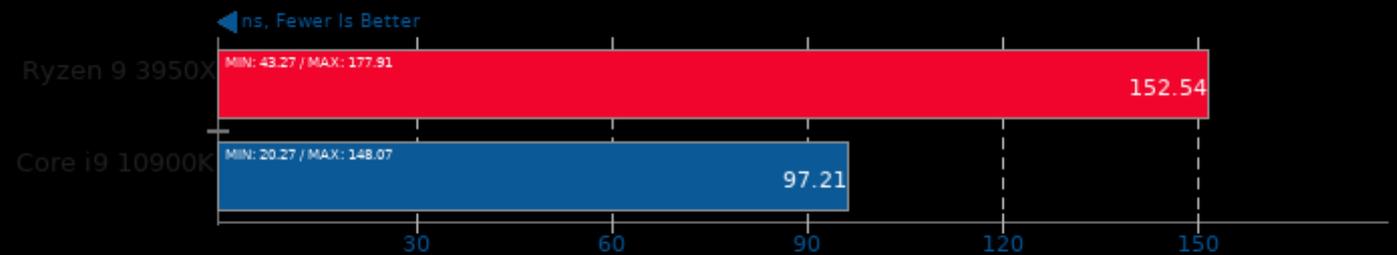
Algorithm: sha256t



1. (CXX) g++ options: -O2 -lcurl -lz -lpthread -lssl -lcrypto -lgmp

### Core-Latency

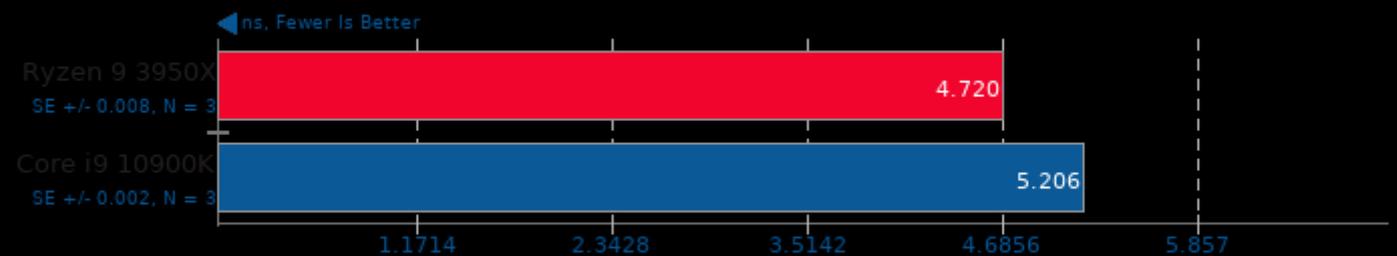
Average Latency Between CPU Cores



1. (CXX) g++ options: -std=c++11 -pthread -O3

### Multichase Pointer Chaser

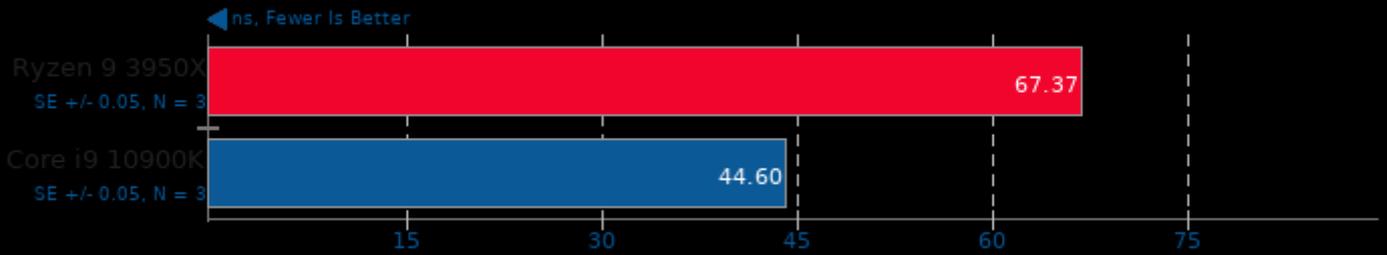
Test: 4MB Array, 64 Byte Stride



1. (CC) gcc options: -O2 -static -pthread -lrt

### Multichase Pointer Chaser

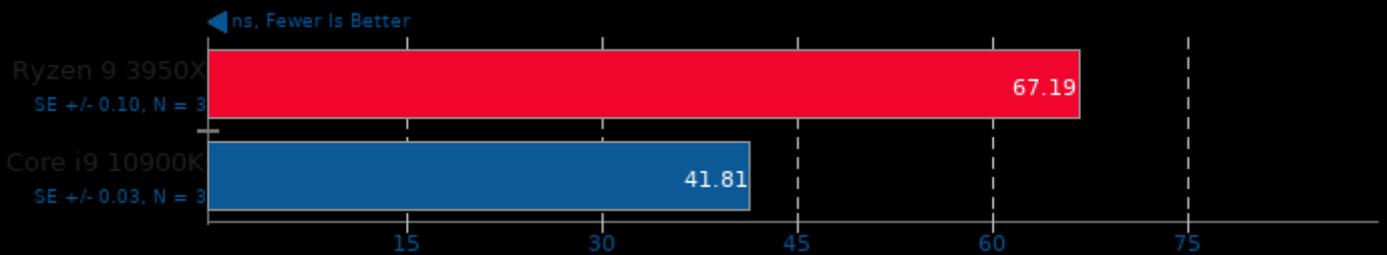
Test: 1GB Array, 256 Byte Stride



1. (CC) gcc options: -O2 -static -pthread -lrt

### Multichase Pointer Chaser

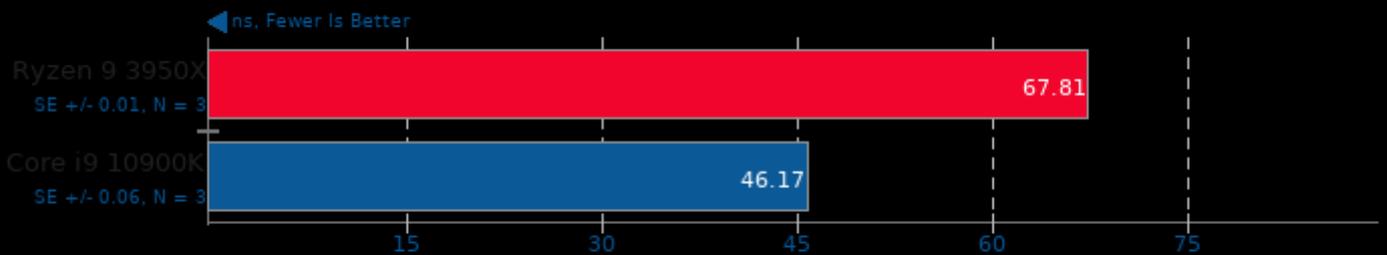
Test: 256MB Array, 256 Byte Stride



1. (CC) gcc options: -O2 -static -pthread -lrt

### Multichase Pointer Chaser

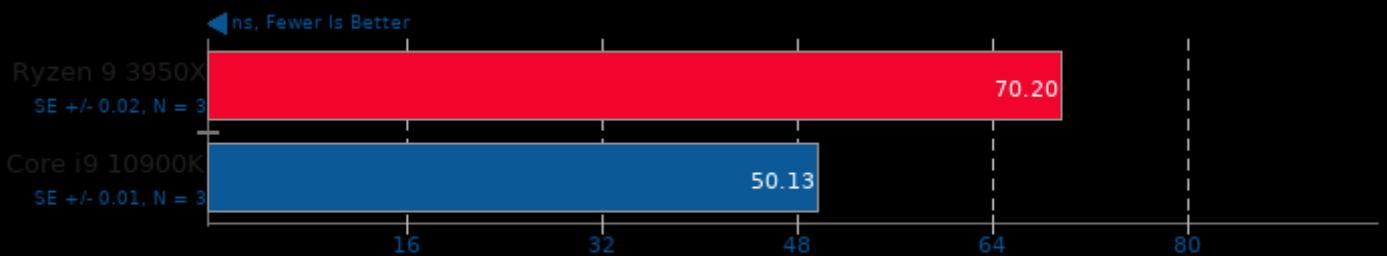
Test: 1GB Array, 256 Byte Stride, 2 Threads



1. (CC) gcc options: -O2 -static -pthread -lrt

### Multichase Pointer Chaser

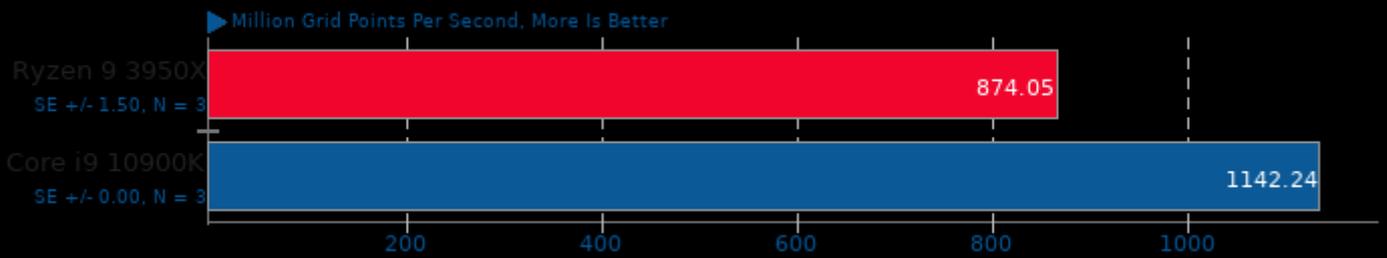
Test: 1GB Array, 256 Byte Stride, 4 Threads



1. (CC) gcc options: -O2 -static -pthread -lrt

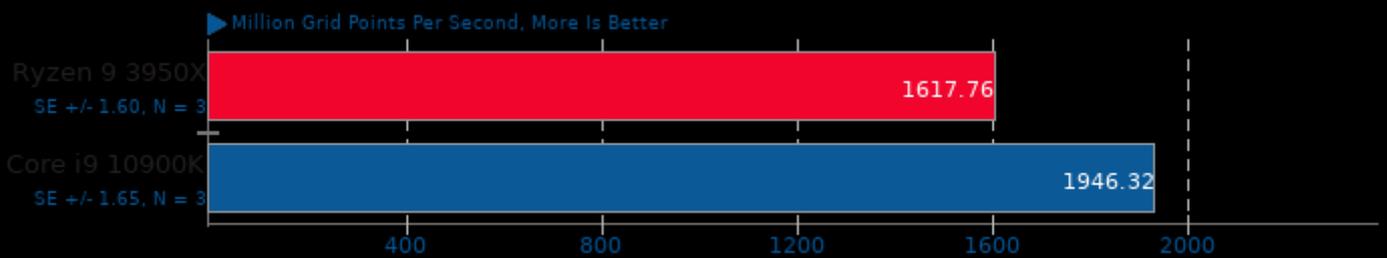
### ASKAP 2018-11-10

Test: tConvolve MT - Gridding



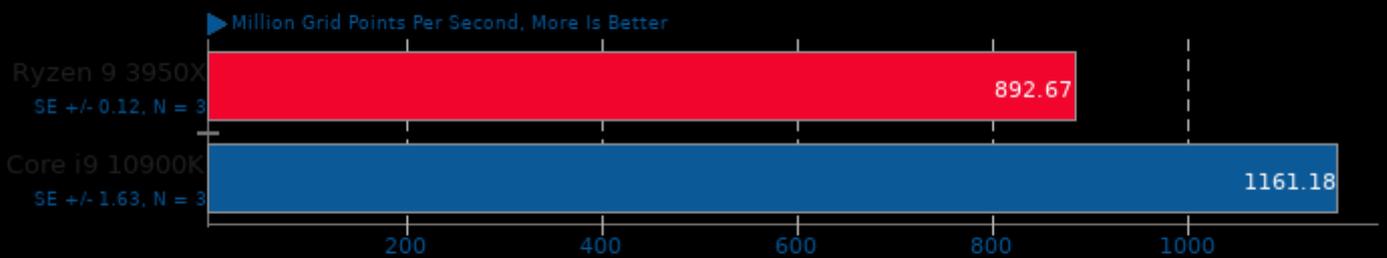
### ASKAP 2018-11-10

Test: tConvolve MT - Degridding



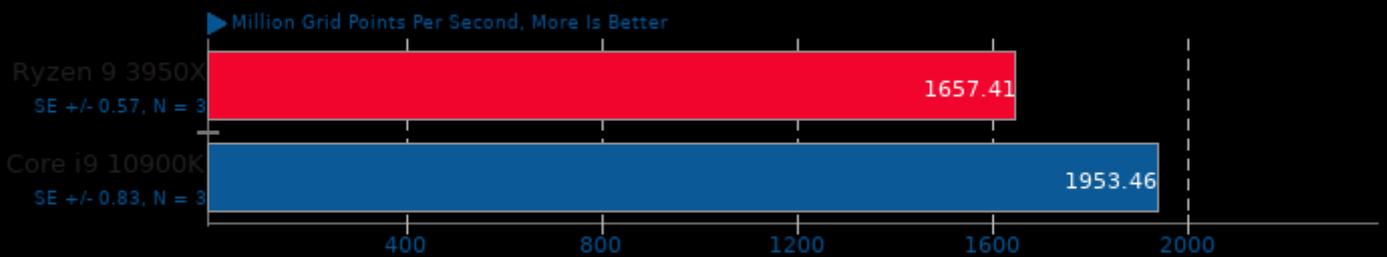
### ASKAP 2018-11-10

Test: tConvolve MPI - Gridding



### ASKAP 2018-11-10

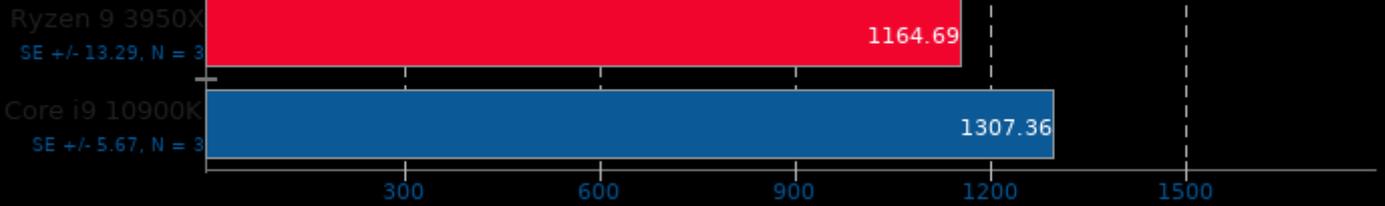
Test: tConvolve MPI - Degridding



### ASKAP 2018-11-10

Test: tConvolve OpenMP - Gridding

▶ Million Grid Points Per Second, More Is Better

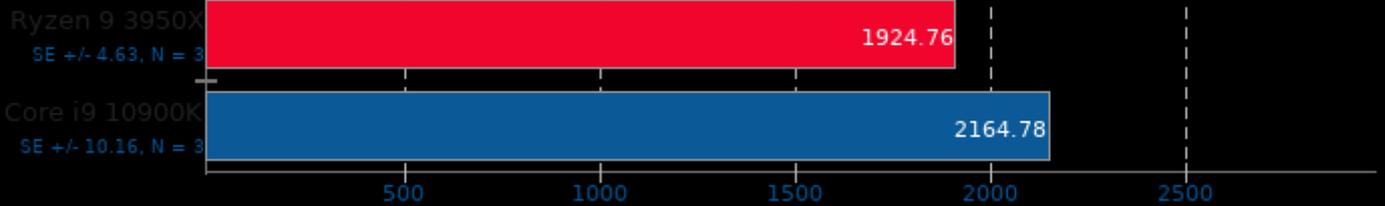


1. (CXX) g++ options: -lpthread

### ASKAP 2018-11-10

Test: tConvolve OpenMP - Degridding

▶ Million Grid Points Per Second, More Is Better

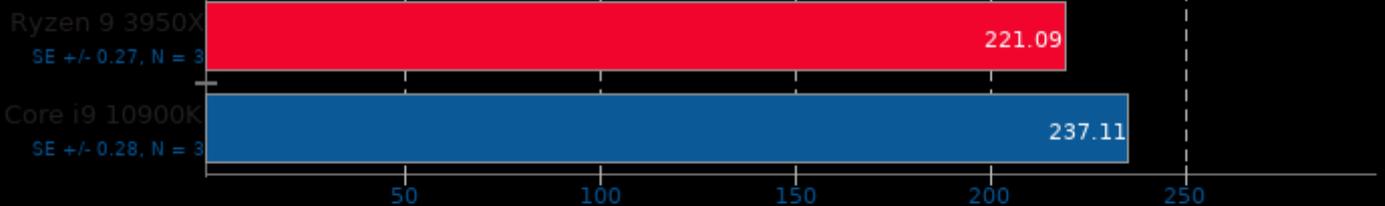


1. (CXX) g++ options: -lpthread

### libjpeg-turbo tjbench 2.0.2

Test: Decompression Throughput

▶ Megapixels/sec, More Is Better

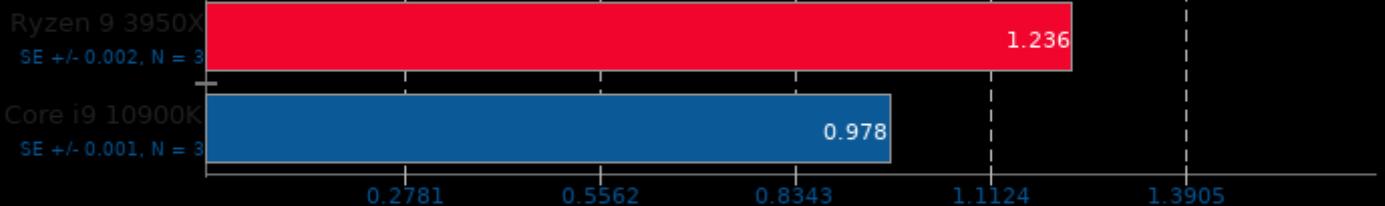


1. (CC) gcc options: -O3 -rdynamic

### GROMACS 2020.1

Water Benchmark

▶ Ns Per Day, More Is Better

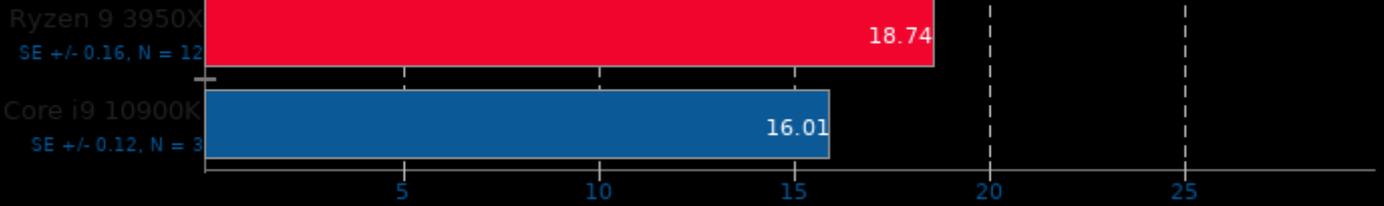


1. (CXX) g++ options: -O3 -pthread -lrt -lpthread -lm

### G'MIC

Test: Plotting Isosurface Of A 3D Volume, 1000 Times

← Seconds, Fewer Is Better

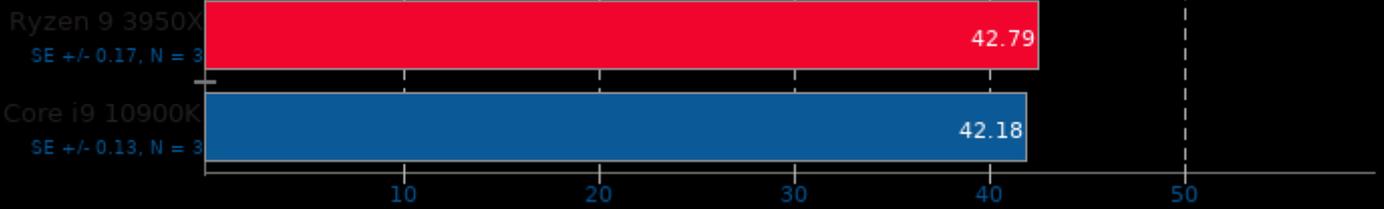


1. Version 2.4.5, Copyright (c) 2008-2019, David Tschumperle.

### Basis Universal 1.12

Settings: ETC15

← Seconds, Fewer Is Better



1. (CXX) g++ options: -std=c++11 -fvisibility=hidden -fPIC -fno-strict-aliasing -O3 -rdynamic -lm -lpthread

### Basis Universal 1.12

Settings: UASTC Level 0

← Seconds, Fewer Is Better

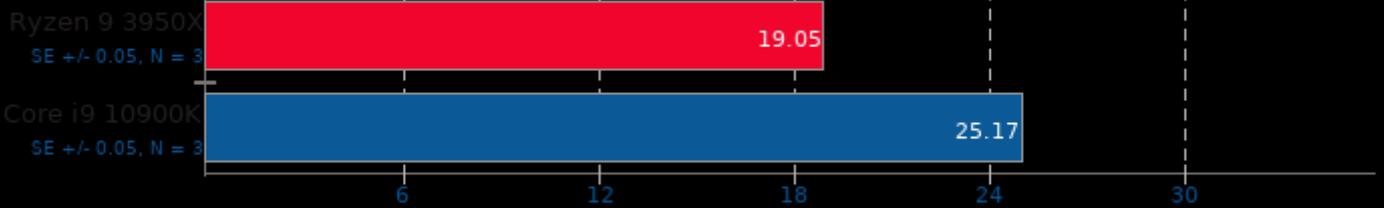


1. (CXX) g++ options: -std=c++11 -fvisibility=hidden -fPIC -fno-strict-aliasing -O3 -rdynamic -lm -lpthread

### Basis Universal 1.12

Settings: UASTC Level 2

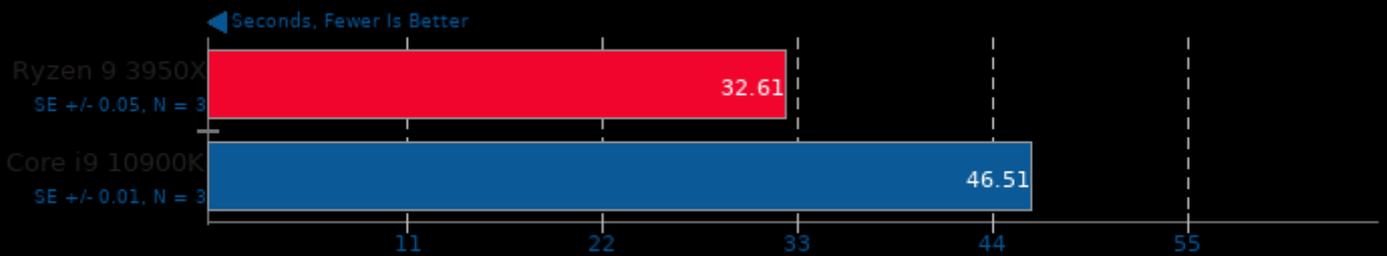
← Seconds, Fewer Is Better



1. (CXX) g++ options: -std=c++11 -fvisibility=hidden -fPIC -fno-strict-aliasing -O3 -rdynamic -lm -lpthread

### Basis Universal 1.12

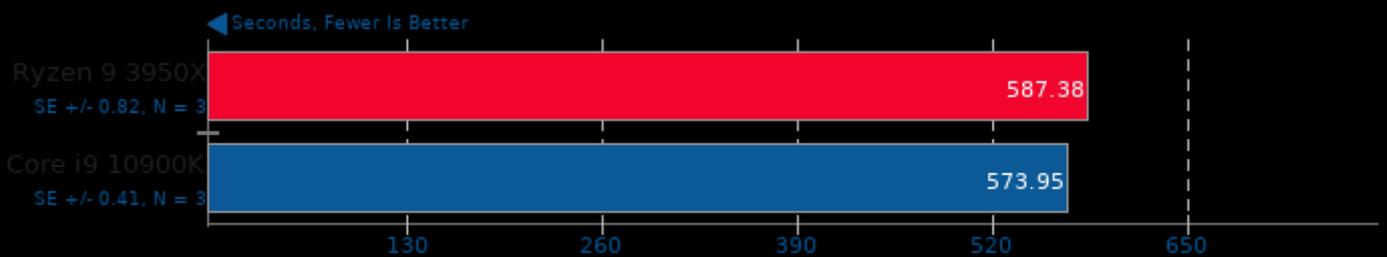
Settings: UASTC Level 3



1. (CXX) g++ options: -std=c++11 -fvisibility=hidden -fPIC -fno-strict-aliasing -O3 -rdynamic -lm -lpthread

### Basis Universal 1.12

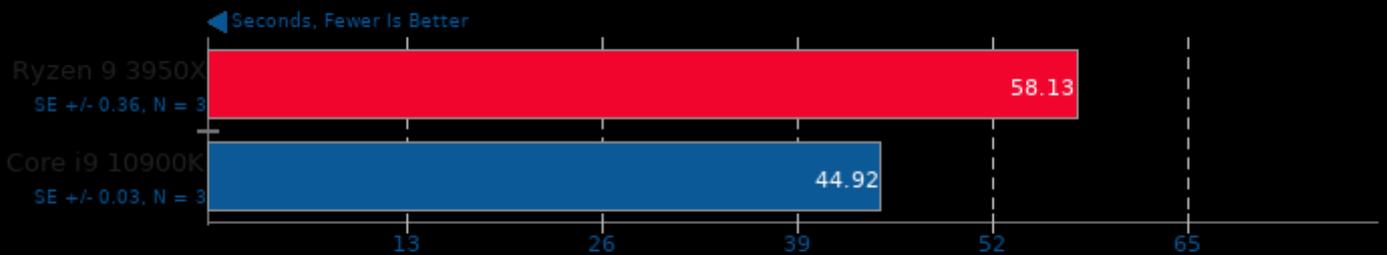
Settings: UASTC Level 2 + RDO Post-Processing



1. (CXX) g++ options: -std=c++11 -fvisibility=hidden -fPIC -fno-strict-aliasing -O3 -rdynamic -lm -lpthread

### SQLite Speedtest 3.30

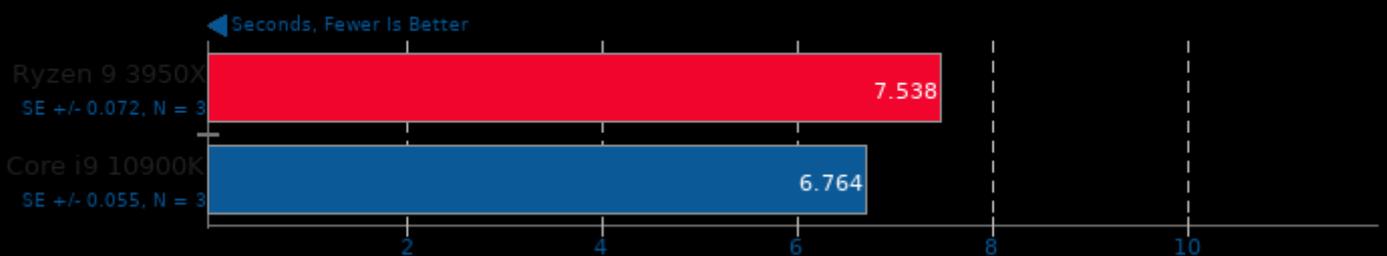
Timed Time - Size 1,000



1. (CC) gcc options: -O2 -ldl -lz -lpthread

### GEGL

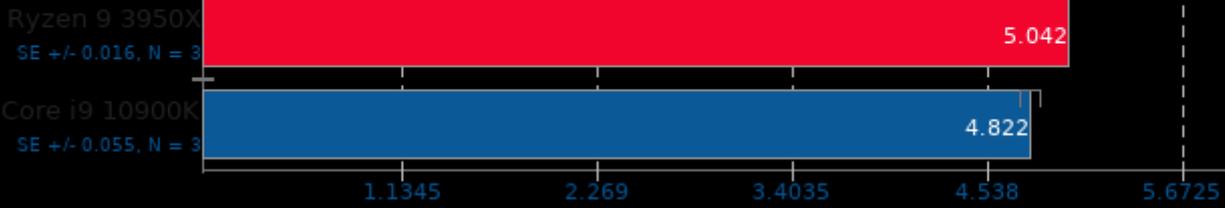
Operation: Crop



### GEGL

Operation: Scale

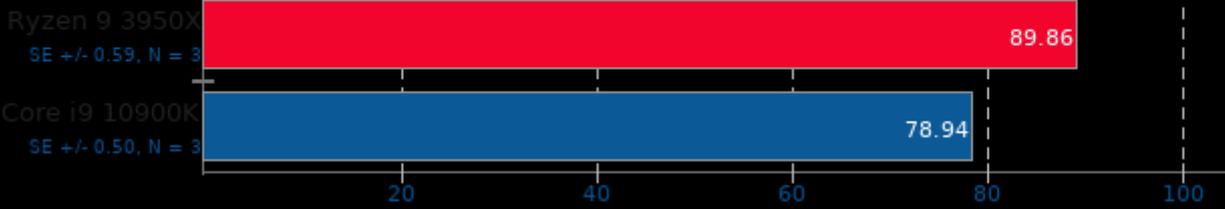
← Seconds, Fewer Is Better



### GEGL

Operation: Cartoon

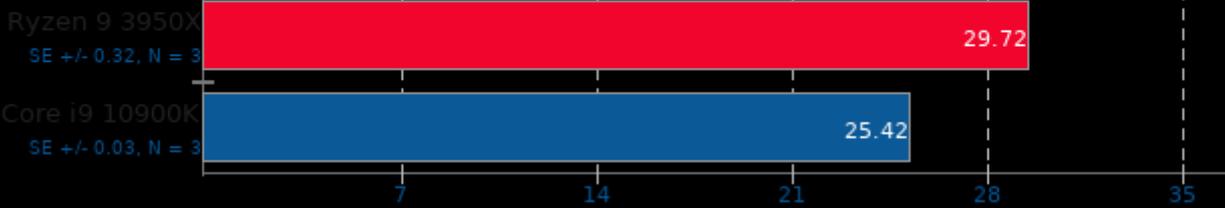
← Seconds, Fewer Is Better



### GEGL

Operation: Reflect

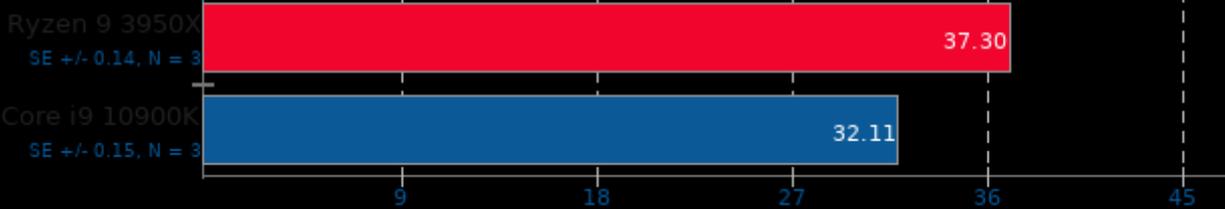
← Seconds, Fewer Is Better



### GEGL

Operation: Antialias

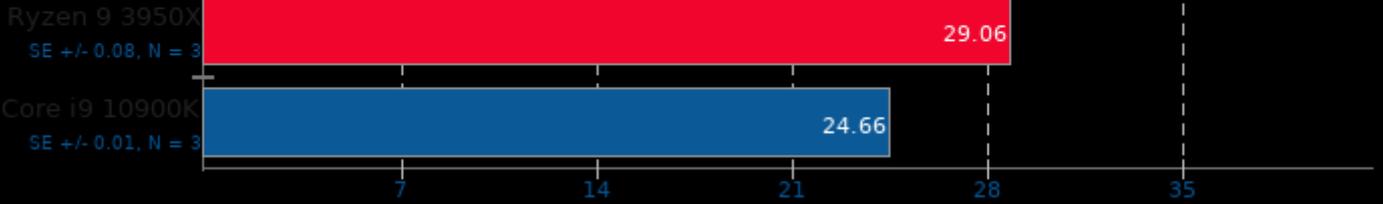
← Seconds, Fewer Is Better



### GEGL

Operation: Tile Glass

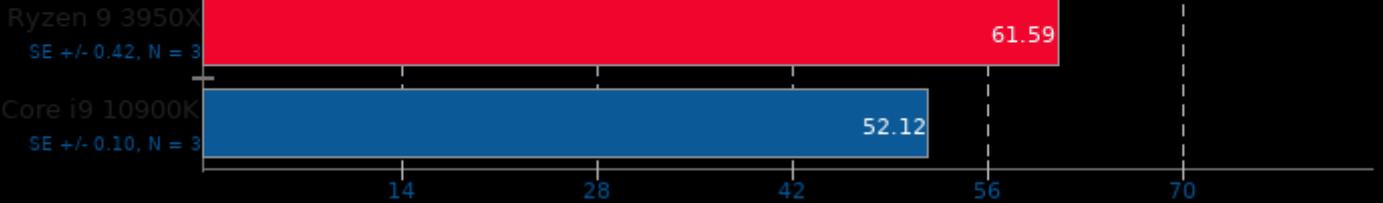
← Seconds, Fewer Is Better



### GEGL

Operation: Wavelet Blur

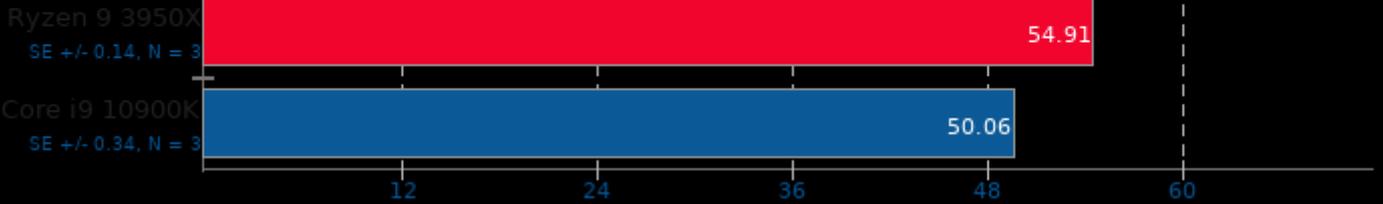
← Seconds, Fewer Is Better



### GEGL

Operation: Color Enhance

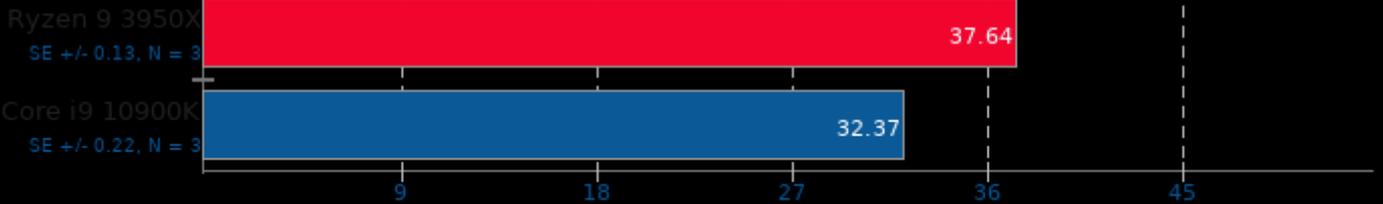
← Seconds, Fewer Is Better



### GEGL

Operation: Rotate 90 Degrees

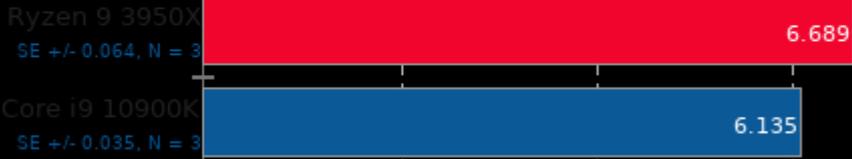
← Seconds, Fewer Is Better



### GIMP 2.10.18

Test: resize

Seconds, Fewer Is Better



### GIMP 2.10.18

Test: rotate

Seconds, Fewer Is Better



### GIMP 2.10.18

Test: auto-levels

Seconds, Fewer Is Better



### GIMP 2.10.18

Test: unsharp-mask

Seconds, Fewer Is Better



### LibreOffice

Test: 20 Documents To PDF

← Seconds, Fewer Is Better

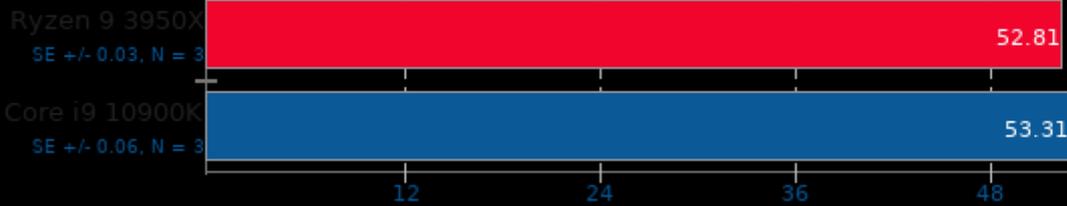


1. LibreOffice 6.4.3.2 40(Build:2)

### RawTherapee

Total Benchmark Time

← Seconds, Fewer Is Better

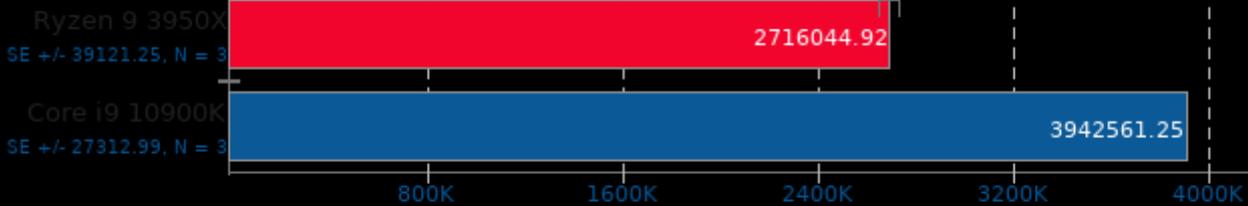


1. RawTherapee, version 5.8, command line.

### Redis 5.0.5

Test: LPOP

▶ Requests Per Second, More Is Better

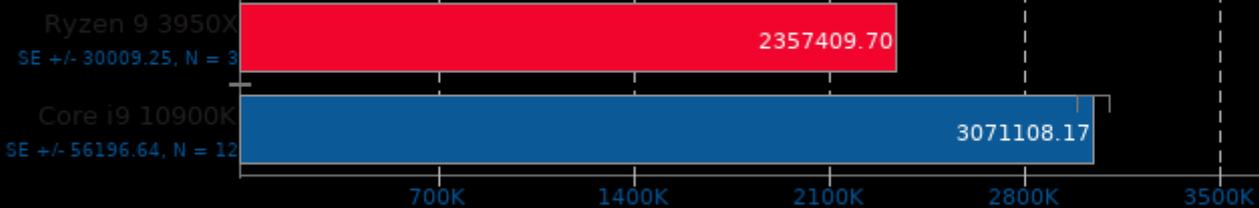


1. (CXX) g++ options: -MM -MT -g3 -fvisibility=hidden -O3

### Redis 5.0.5

Test: SADD

▶ Requests Per Second, More Is Better

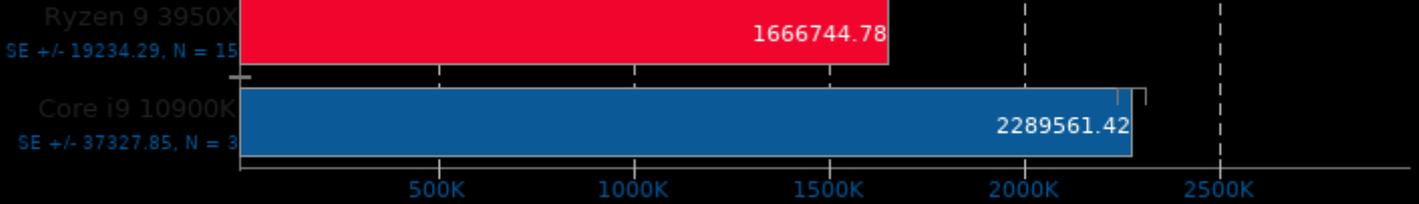


1. (CXX) g++ options: -MM -MT -g3 -fvisibility=hidden -O3

### Redis 5.0.5

Test: LPUSH

Requests Per Second, More Is Better

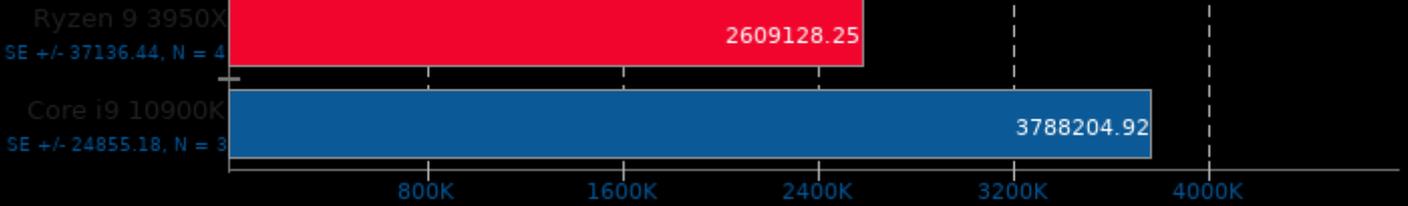


1. (CXX) g++ options: -MM -MT -g3 -fvisibility=hidden -O3

### Redis 5.0.5

Test: GET

Requests Per Second, More Is Better

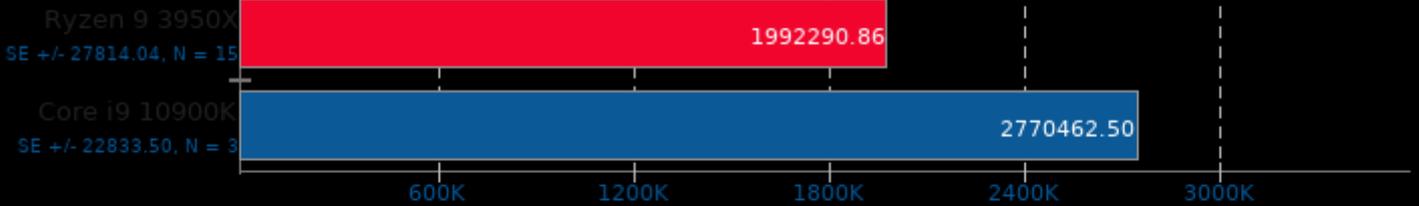


1. (CXX) g++ options: -MM -MT -g3 -fvisibility=hidden -O3

### Redis 5.0.5

Test: SET

Requests Per Second, More Is Better



1. (CXX) g++ options: -MM -MT -g3 -fvisibility=hidden -O3

### Stress-NG 0.11.07

Test: Atomic

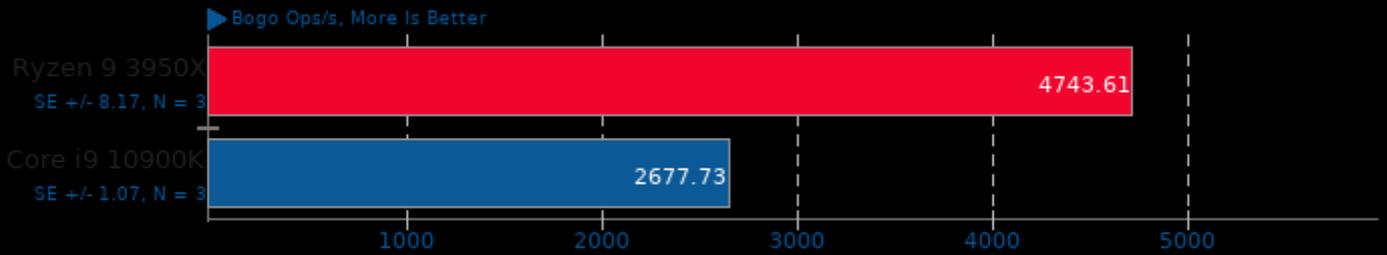
Bogo Ops/s, More Is Better



1. (CC) gcc options: -O2 -std=gnu99 -lm -laio -lcrypt -lrt -lz -ldl -lpthread -lc

### Stress-NG 0.11.07

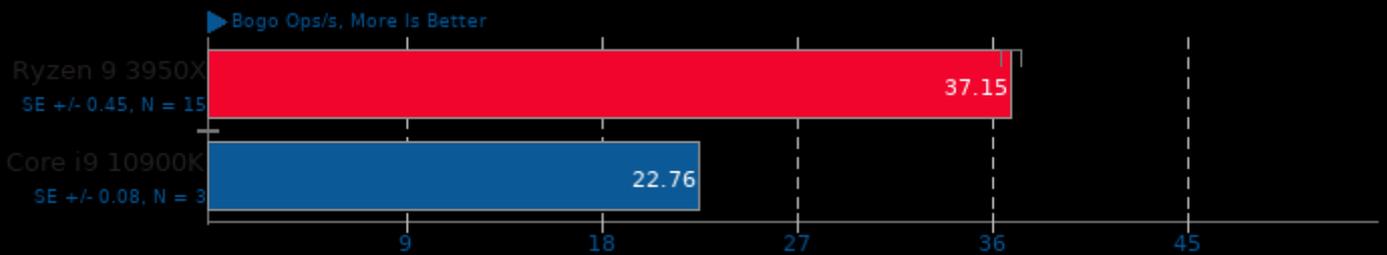
Test: Crypto



1. (CC) gcc options: -O2 -std=gnu99 -lm -laio -lcrypt -lrt -lz -ldl -lpthread -lc

### Stress-NG 0.11.07

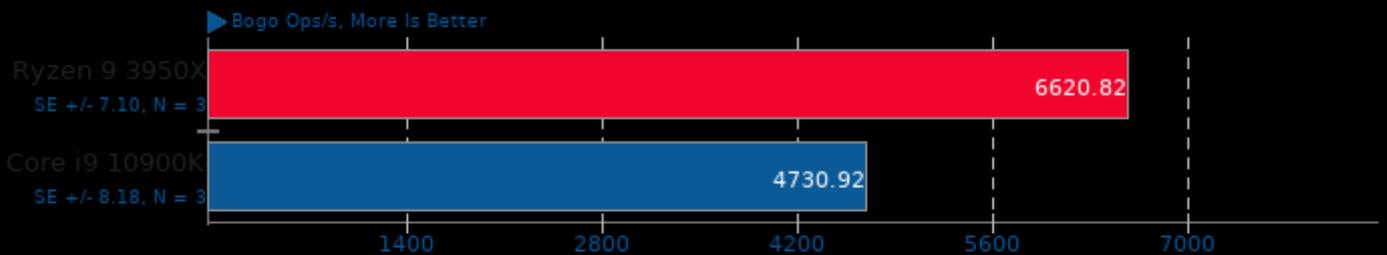
Test: CPU Cache



1. (CC) gcc options: -O2 -std=gnu99 -lm -laio -lcrypt -lrt -lz -ldl -lpthread -lc

### Stress-NG 0.11.07

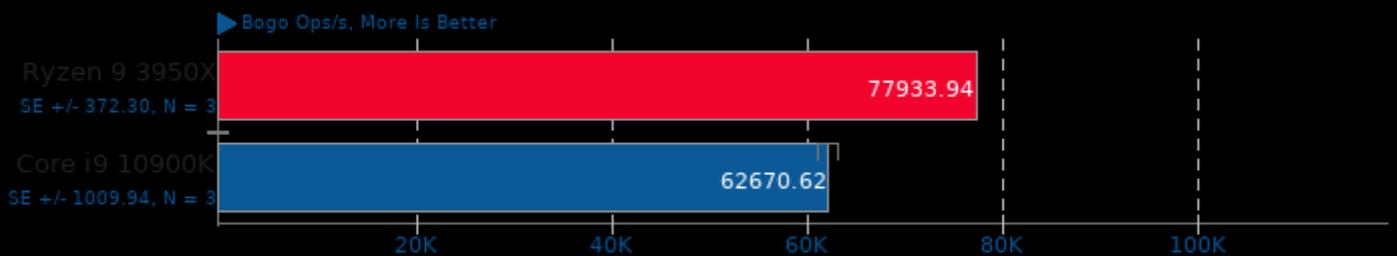
Test: CPU Stress



1. (CC) gcc options: -O2 -std=gnu99 -lm -laio -lcrypt -lrt -lz -ldl -lpthread -lc

### Stress-NG 0.11.07

Test: Matrix Math

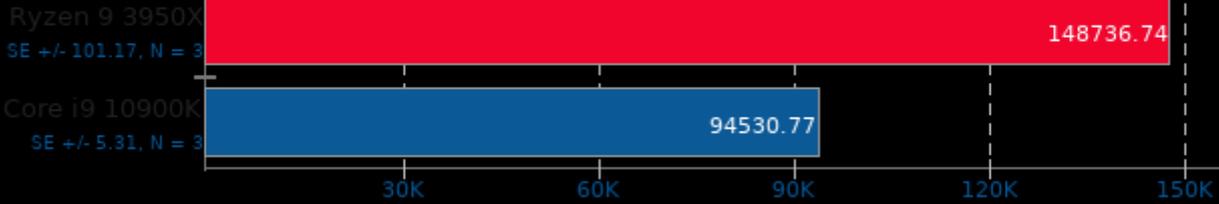


1. (CC) gcc options: -O2 -std=gnu99 -lm -laio -lcrypt -lrt -lz -ldl -lpthread -lc

### Stress-NG 0.11.07

Test: Vector Math

► Bogo Ops/s, More Is Better

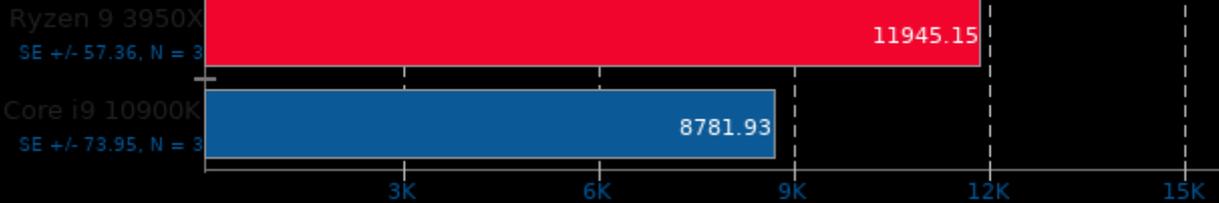


1. (CC) gcc options: -O2 -std=gnu99 -lm -laio -lcrypt -lrt -lz -ldl -lpthread -lc

### Stress-NG 0.11.07

Test: Socket Activity

► Bogo Ops/s, More Is Better

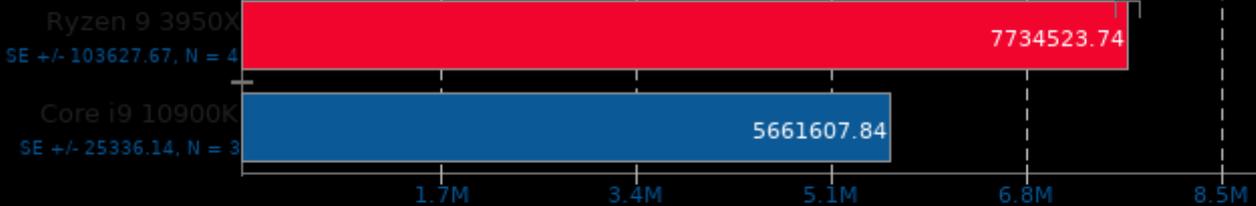


1. (CC) gcc options: -O2 -std=gnu99 -lm -laio -lcrypt -lrt -lz -ldl -lpthread -lc

### Stress-NG 0.11.07

Test: Context Switching

► Bogo Ops/s, More Is Better

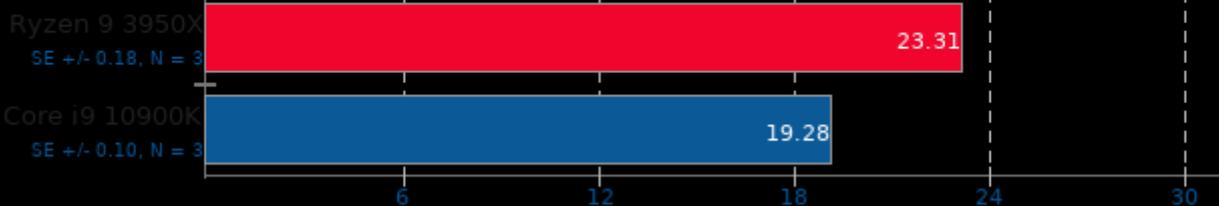


1. (CC) gcc options: -O2 -std=gnu99 -lm -laio -lcrypt -lrt -lz -ldl -lpthread -lc

### PlaidML

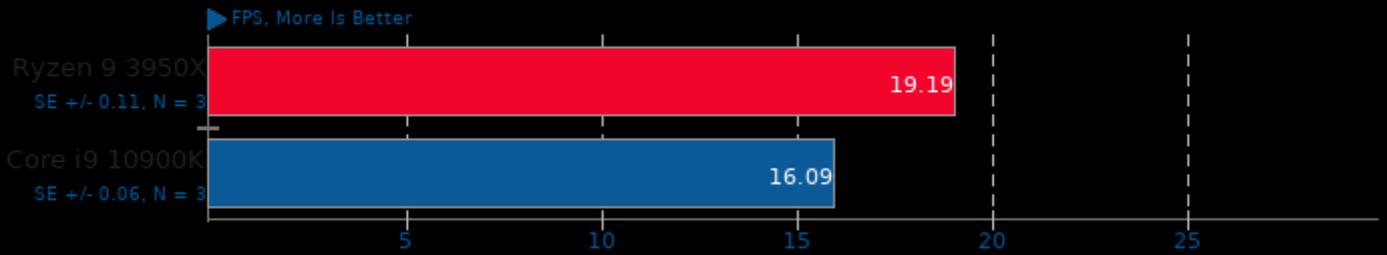
FP16: No - Mode: Inference - Network: VGG16 - Device: CPU

► FPS, More Is Better



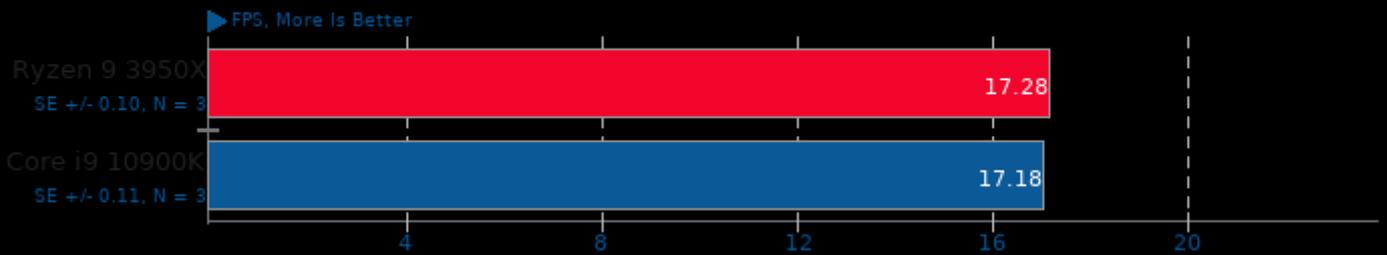
### PlaidML

FP16: No - Mode: Inference - Network: VGG19 - Device: CPU



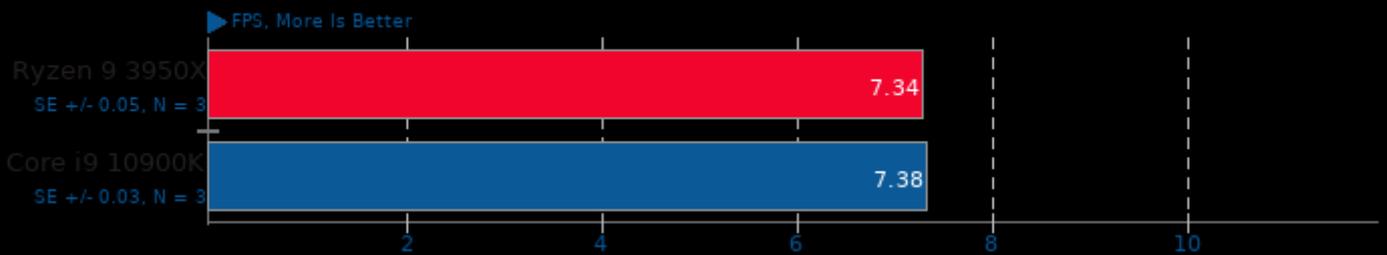
### PlaidML

FP16: No - Mode: Inference - Network: Mobilenet - Device: CPU



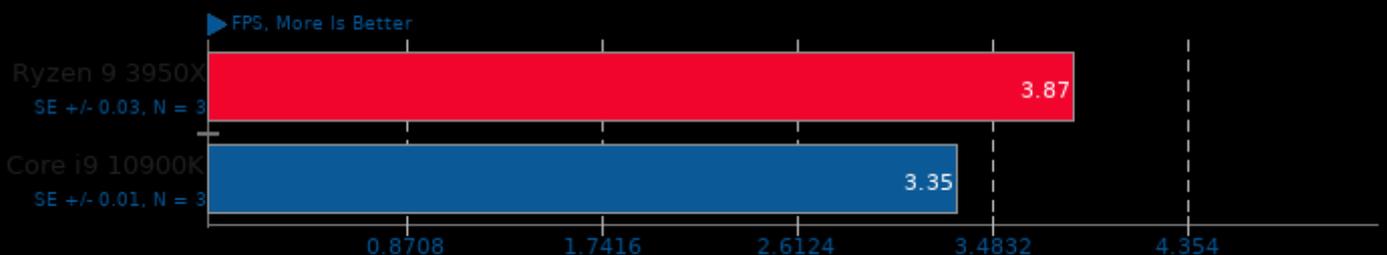
### PlaidML

FP16: No - Mode: Inference - Network: ResNet 50 - Device: CPU



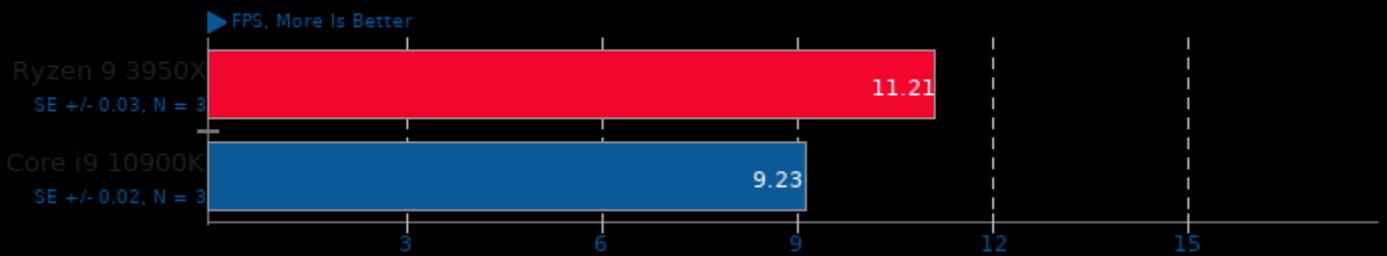
### PlaidML

FP16: No - Mode: Inference - Network: DenseNet 201 - Device: CPU



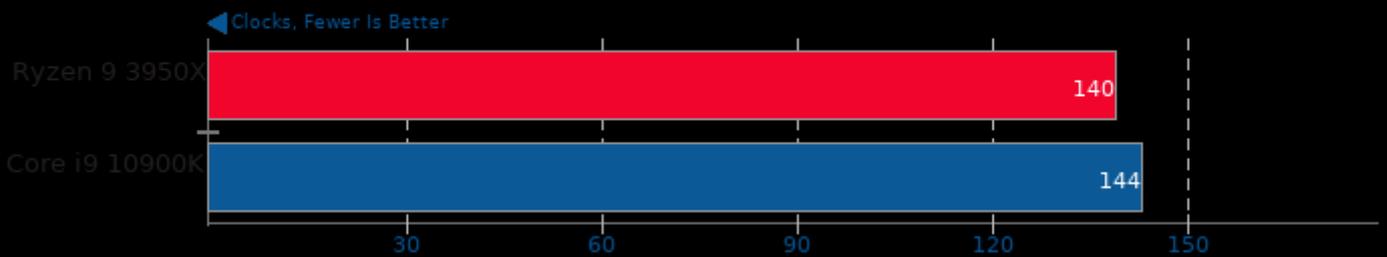
### PlaidML

FP16: No - Mode: Inference - Network: Inception V3 - Device: CPU



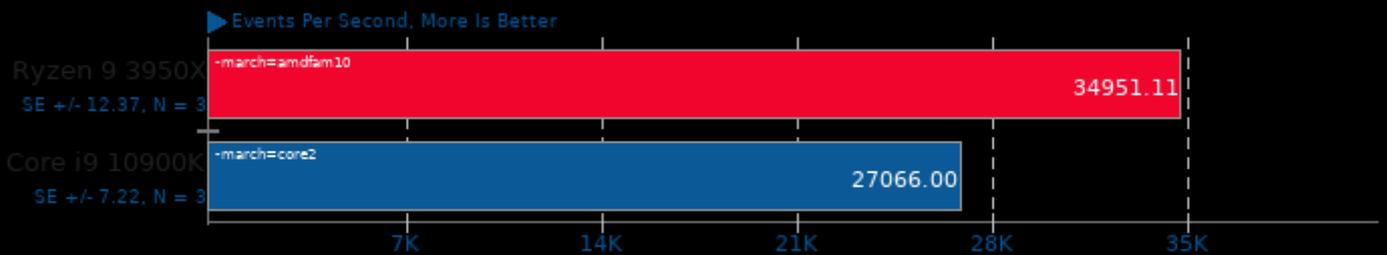
### ctx\_clock

Context Switch Time



### Sysbench 2018-07-28

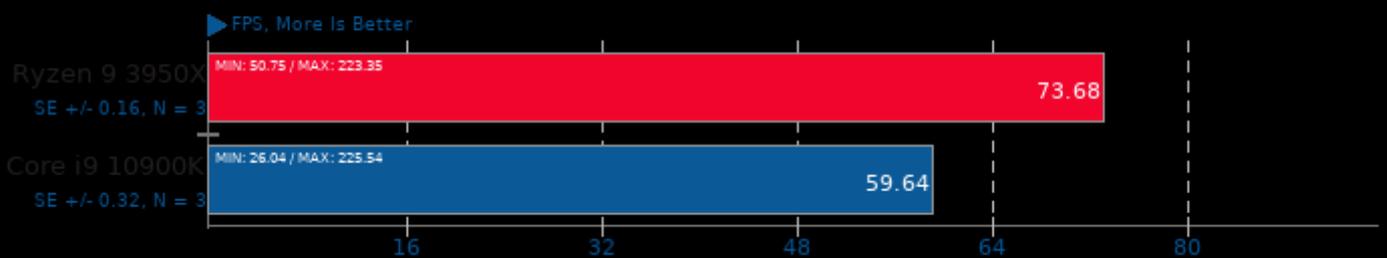
Test: CPU



1. (CC) gcc options: -pthread -O3 -funroll-loops -ggdb3 -rdynamic -ldl -laio -lm

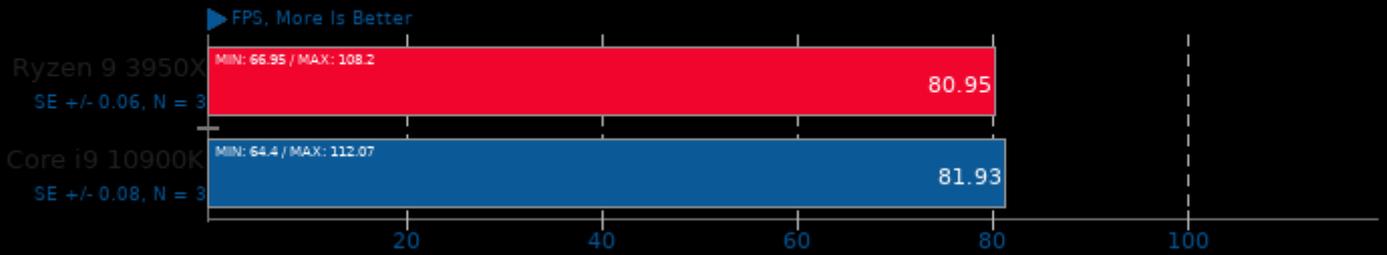
### Basemark GPU 1.2

Renderer: OpenGL - Resolution: 3840 x 2160 - Graphics Preset: High



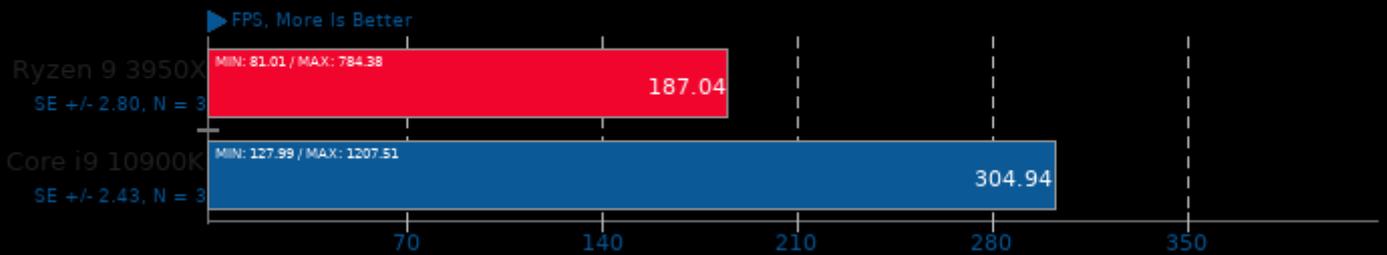
### Basemark GPU 1.2

Renderer: Vulkan - Resolution: 3840 x 2160 - Graphics Preset: High



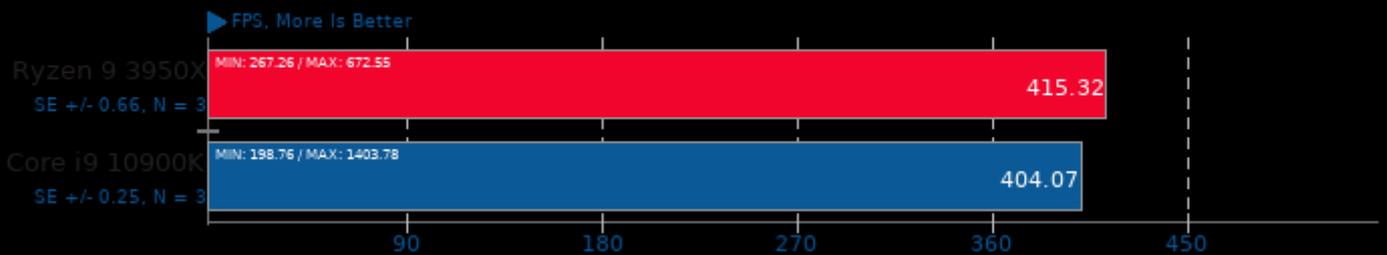
### Basemark GPU 1.2

Renderer: OpenGL - Resolution: 3840 x 2160 - Graphics Preset: Medium



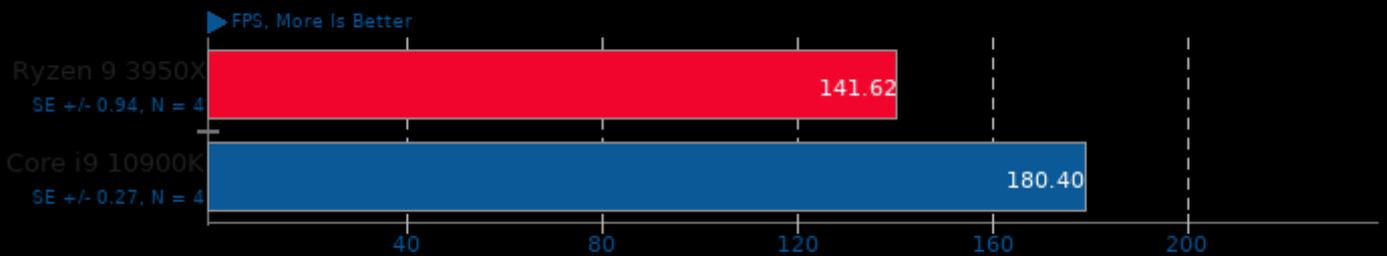
### Basemark GPU 1.2

Renderer: Vulkan - Resolution: 3840 x 2160 - Graphics Preset: Medium



### Optcarrot

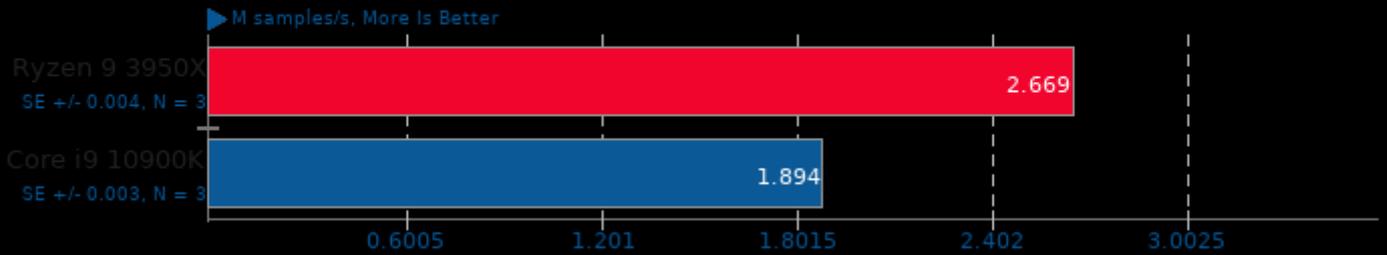
Optimized Benchmark



1. ruby 2.7.0p0 (2019-12-25 revision 647ee6f091) [x86\_64-linux-gnu]

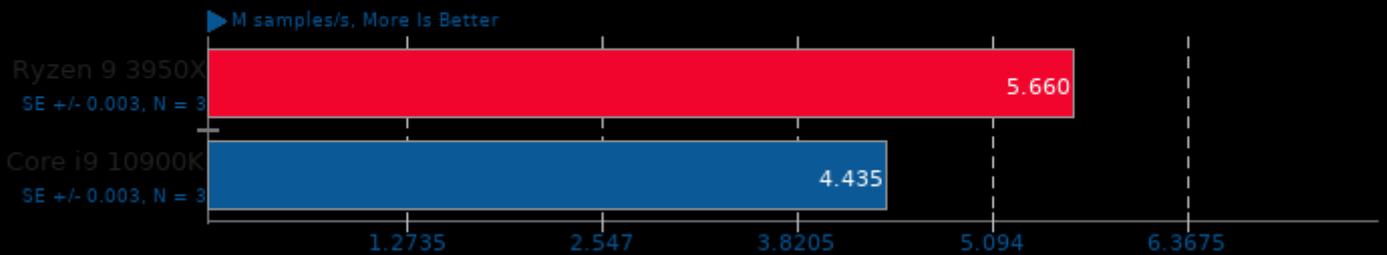
### IndigoBench 4.0.64

Scene: Bedroom



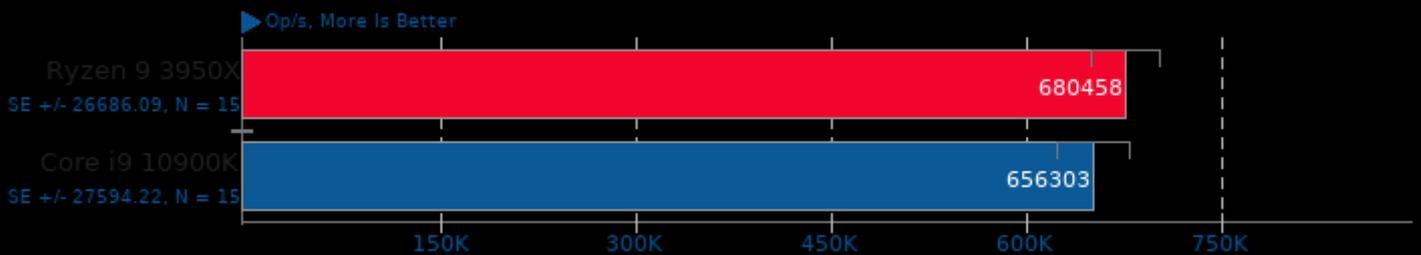
### IndigoBench 4.0.64

Scene: Supercar



### Facebook RocksDB 6.3.6

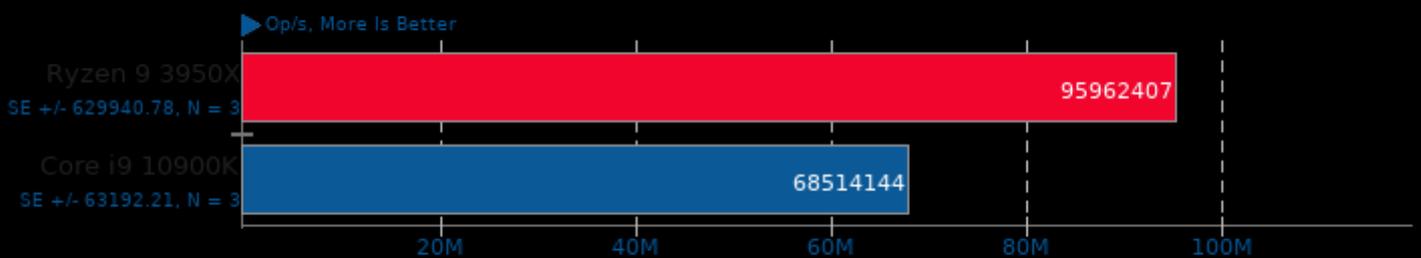
Test: Random Fill



1. (CXX) g++ options: -O3 -march=native -std=c++11 -fno-builtin-memcmp -fno-rtti -rdynamic -pthread

### Facebook RocksDB 6.3.6

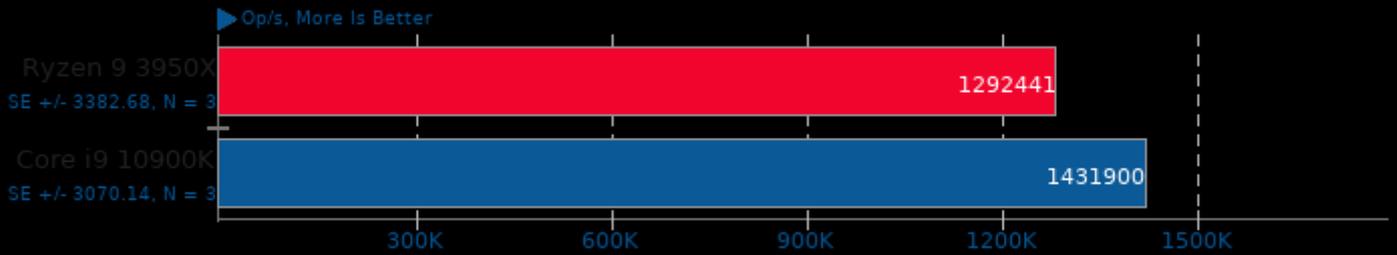
Test: Random Read



1. (CXX) g++ options: -O3 -march=native -std=c++11 -fno-builtin-memcmp -fno-rtti -rdynamic -pthread

### Facebook RocksDB 6.3.6

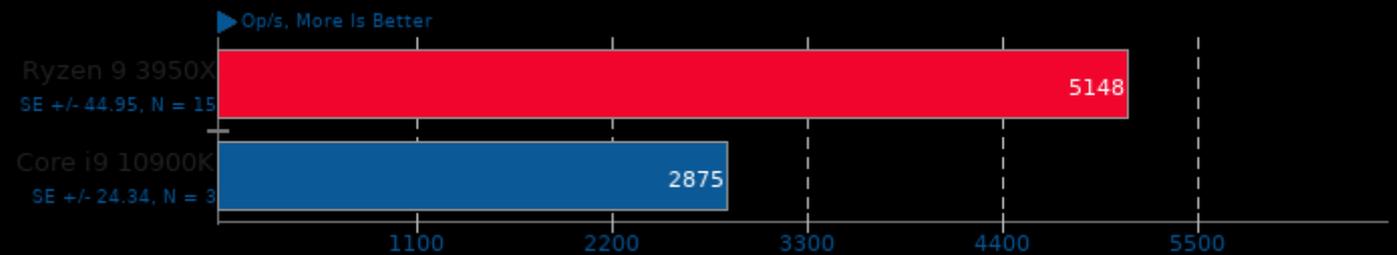
Test: Sequential Fill



1. (CXX) g++ options: -O3 -march=native -std=c++11 -fno-builtin-memcmp -fno-rtti -rdynamic -lpthread

### Facebook RocksDB 6.3.6

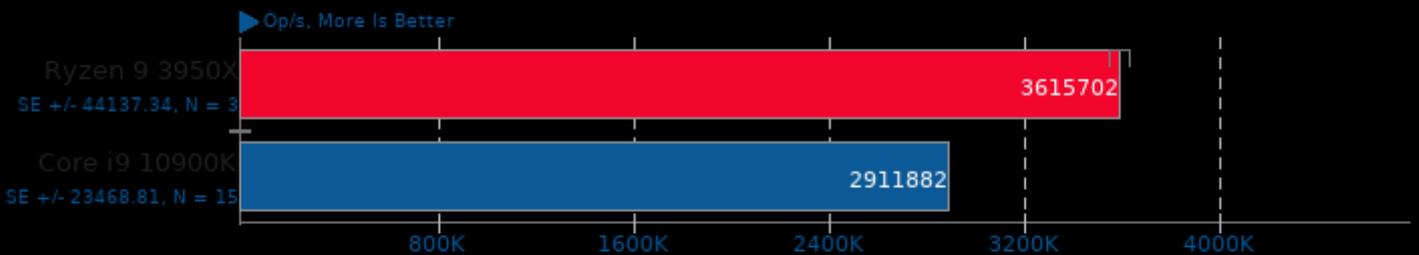
Test: Random Fill Sync



1. (CXX) g++ options: -O3 -march=native -std=c++11 -fno-builtin-memcmp -fno-rtti -rdynamic -lpthread

### Facebook RocksDB 6.3.6

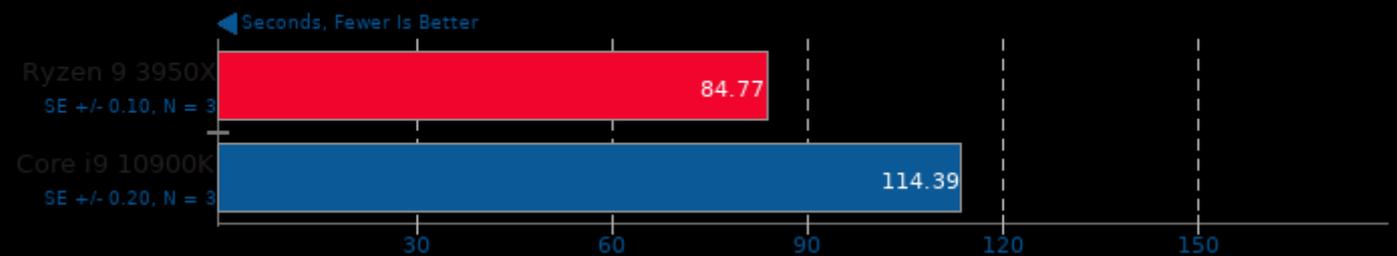
Test: Read While Writing



1. (CXX) g++ options: -O3 -march=native -std=c++11 -fno-builtin-memcmp -fno-rtti -rdynamic -lpthread

### Blender 2.82

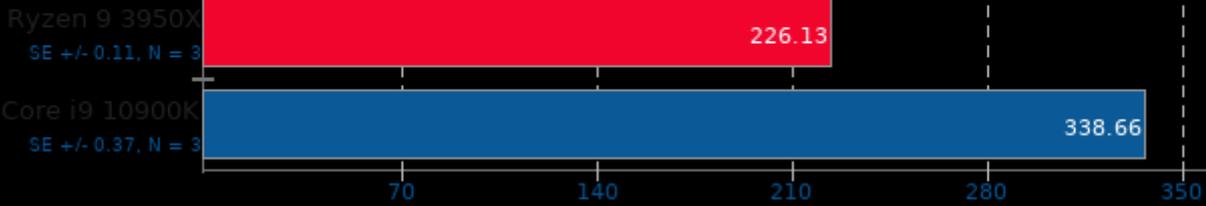
Blend File: BMW27 - Compute: CPU-Only



### Blender 2.82

Blend File: Classroom - Compute: CPU-Only

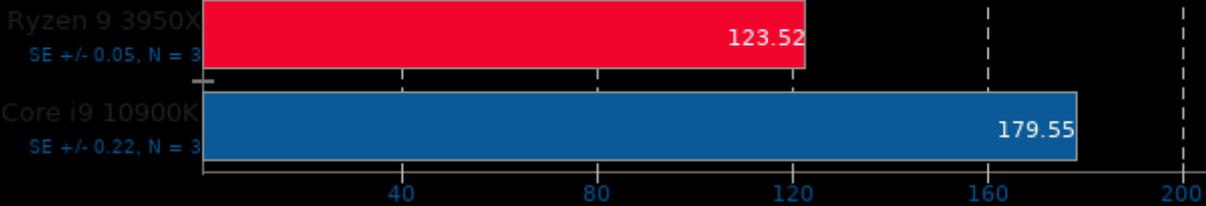
Seconds, Fewer Is Better



### Blender 2.82

Blend File: Fishy Cat - Compute: CPU-Only

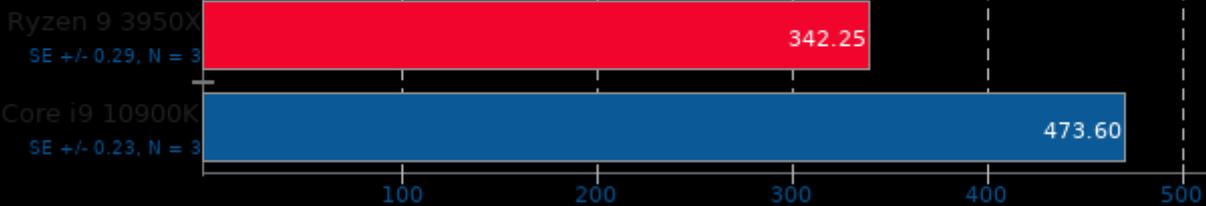
Seconds, Fewer Is Better



### Blender 2.82

Blend File: Barbershop - Compute: CPU-Only

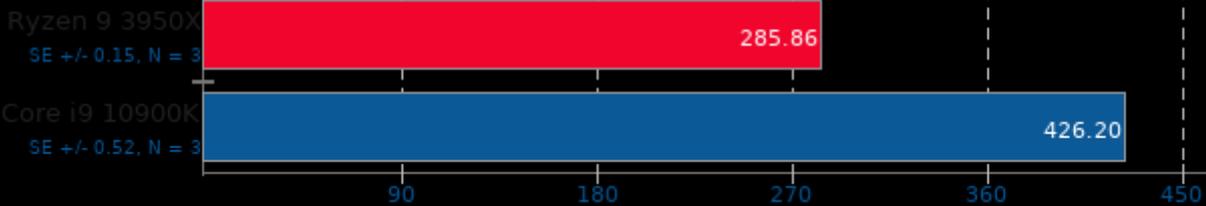
Seconds, Fewer Is Better



### Blender 2.82

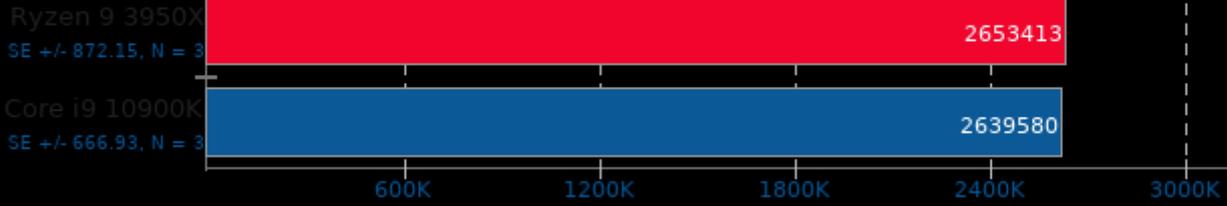
Blend File: Pabellon Barcelona - Compute: CPU-Only

Seconds, Fewer Is Better



### Xsbench 2017-07-06

▶ Lookups/s, More Is Better

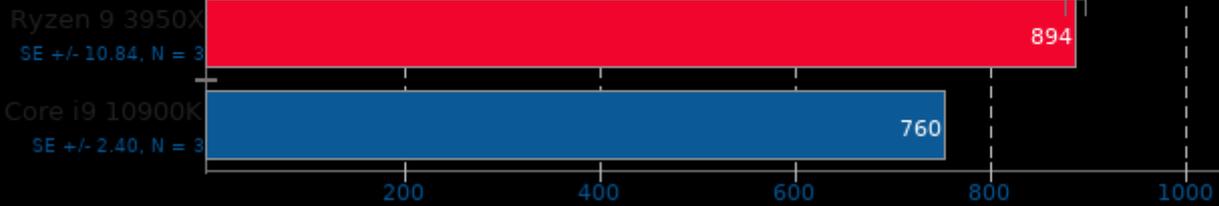


1. (CC) gcc options: -std=gnu99 -fopenmp -O3 -lm

### PyBench 2018-02-16

Total For Average Test Times

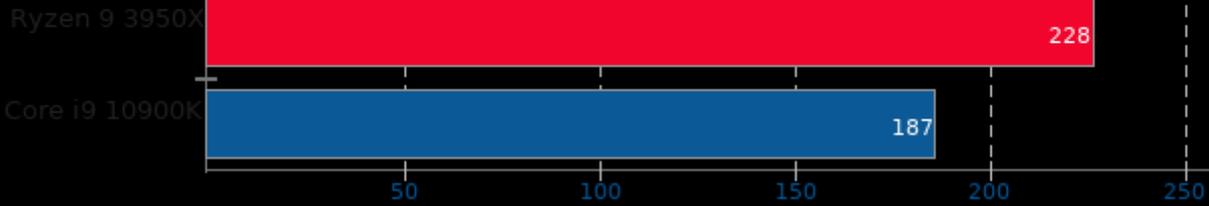
◀ Milliseconds, Fewer Is Better



### PyPerformance 1.0.0

Benchmark: go

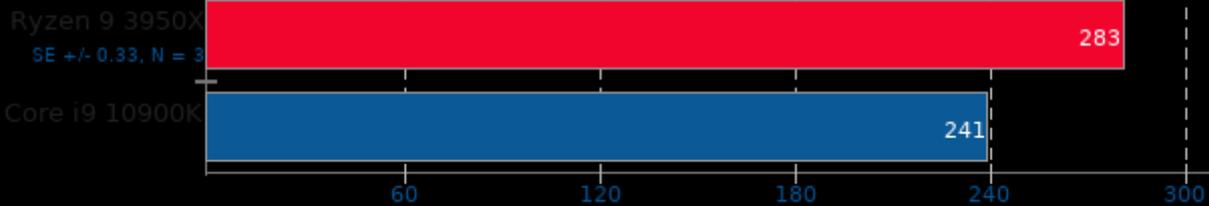
◀ Milliseconds, Fewer Is Better



### PyPerformance 1.0.0

Benchmark: 2to3

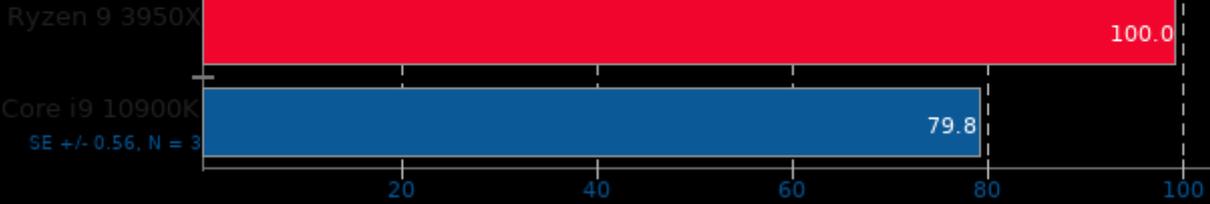
◀ Milliseconds, Fewer Is Better



PyPerformance 1.0.0

Benchmark: chaos

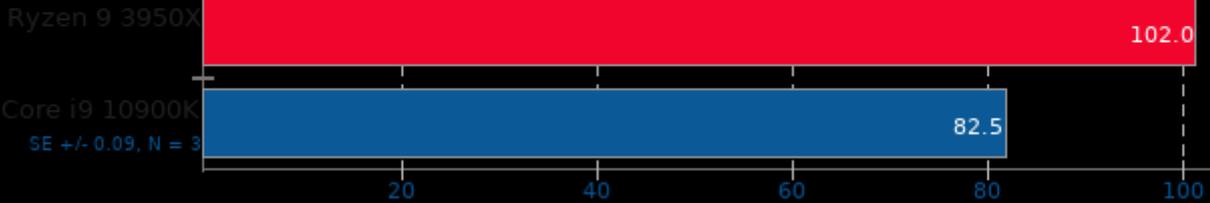
◀ Milliseconds, Fewer Is Better



PyPerformance 1.0.0

Benchmark: float

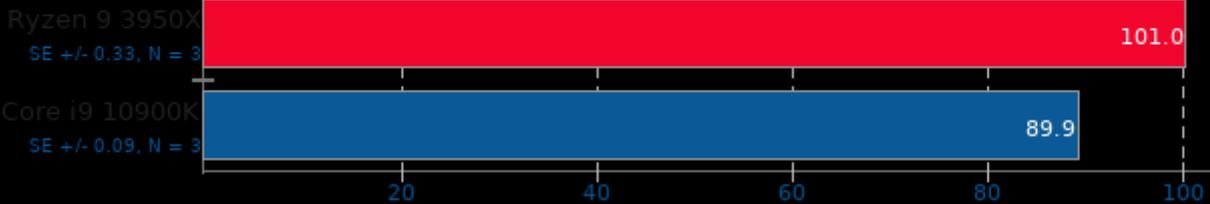
◀ Milliseconds, Fewer Is Better



PyPerformance 1.0.0

Benchmark: nbody

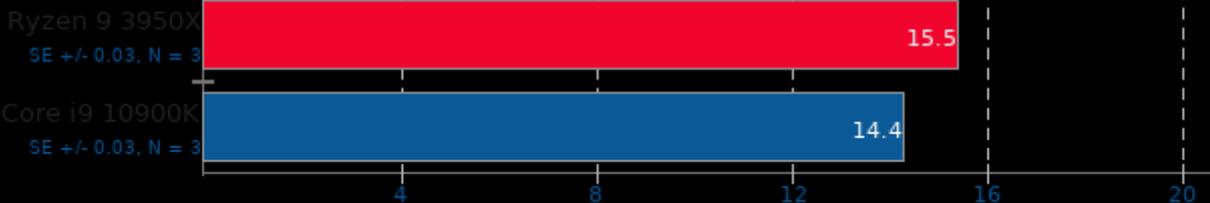
◀ Milliseconds, Fewer Is Better



PyPerformance 1.0.0

Benchmark: pathlib

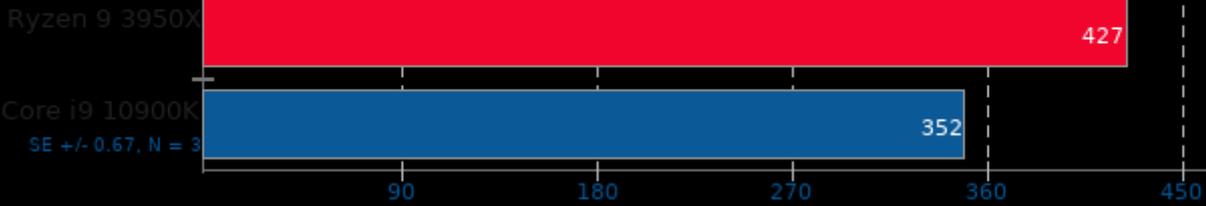
◀ Milliseconds, Fewer Is Better



PyPerformance 1.0.0

Benchmark: raytrace

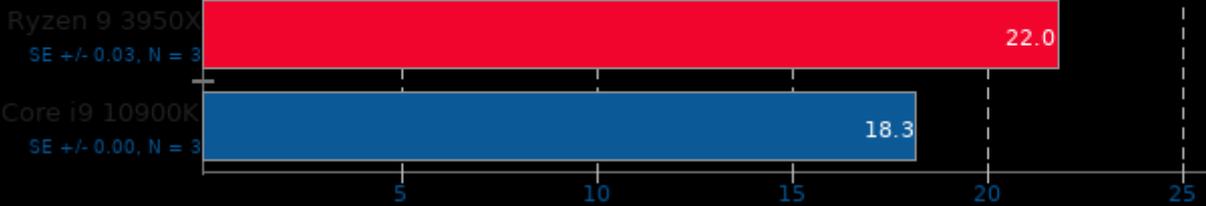
← Milliseconds, Fewer Is Better



PyPerformance 1.0.0

Benchmark: json\_loads

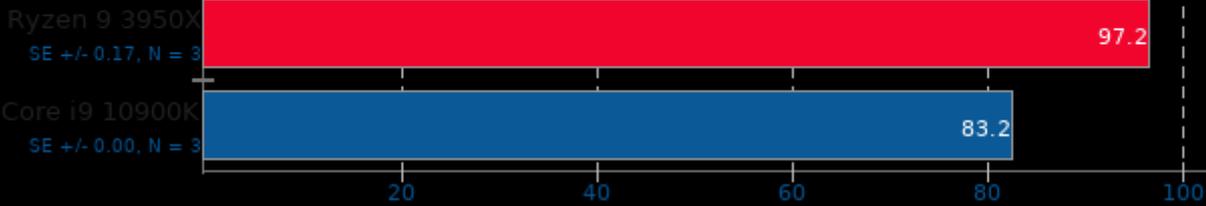
← Milliseconds, Fewer Is Better



PyPerformance 1.0.0

Benchmark: crypto\_pyaes

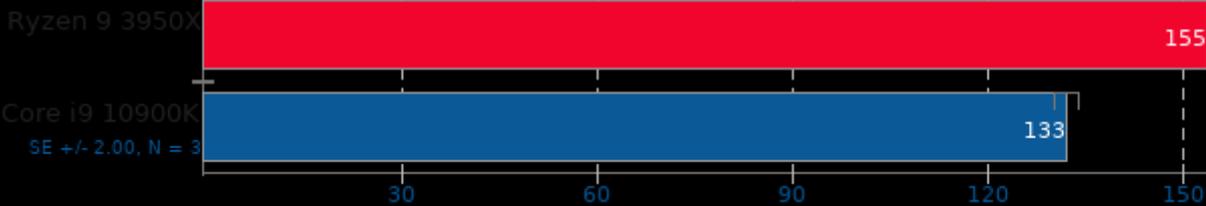
← Milliseconds, Fewer Is Better



PyPerformance 1.0.0

Benchmark: regex\_compile

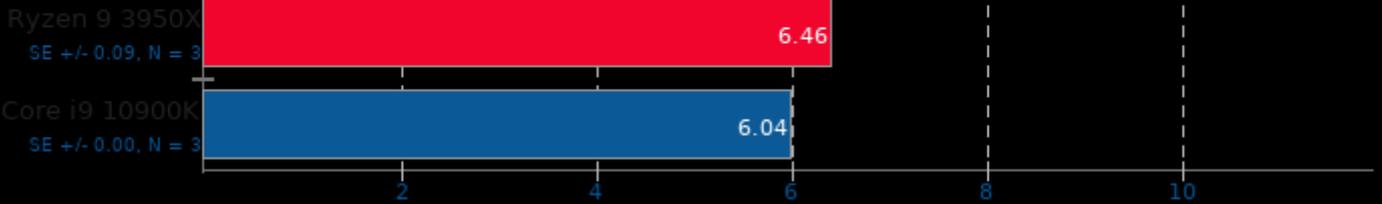
← Milliseconds, Fewer Is Better



### PyPerformance 1.0.0

Benchmark: python\_startup

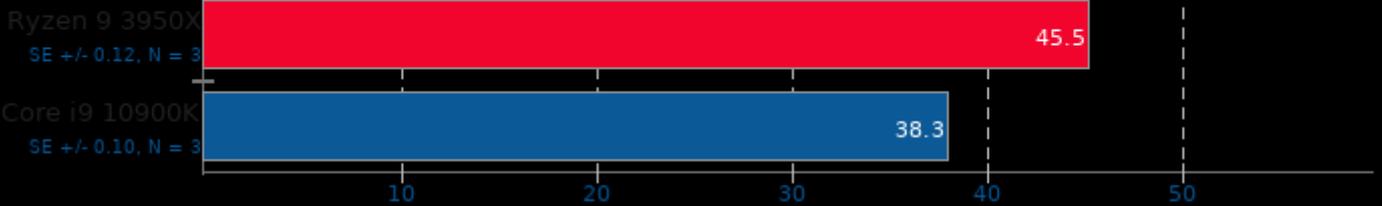
← Milliseconds, Fewer Is Better



### PyPerformance 1.0.0

Benchmark: django\_template

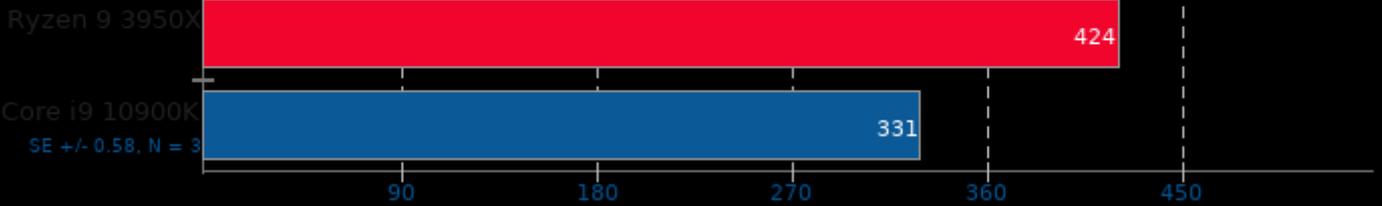
← Milliseconds, Fewer Is Better



### PyPerformance 1.0.0

Benchmark: pickle\_pure\_python

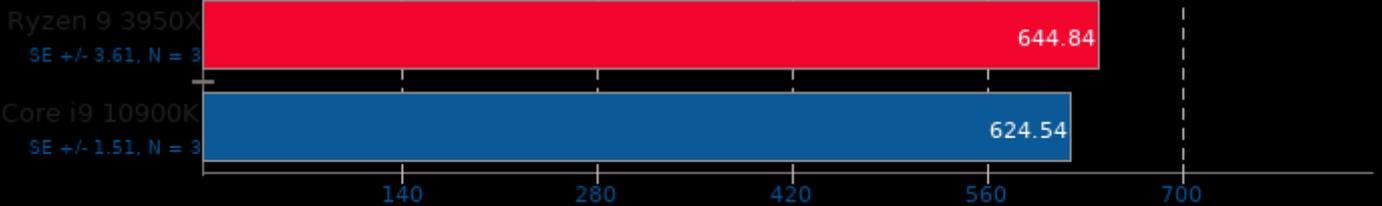
← Milliseconds, Fewer Is Better



### Numenta Anomaly Benchmark 1.1

Detector: EXPoSE

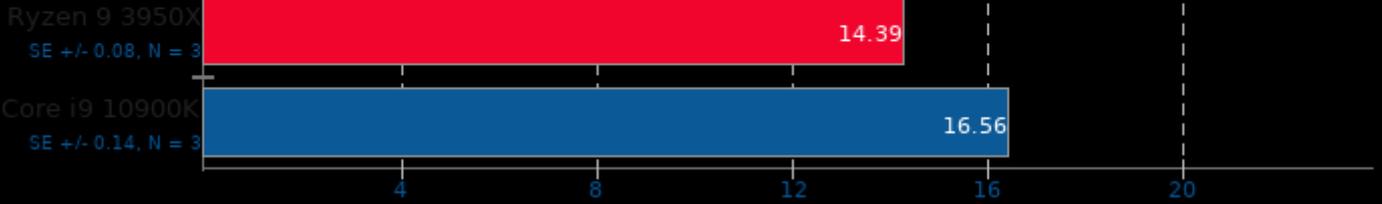
← Seconds, Fewer Is Better



### Numenta Anomaly Benchmark 1.1

Detector: Relative Entropy

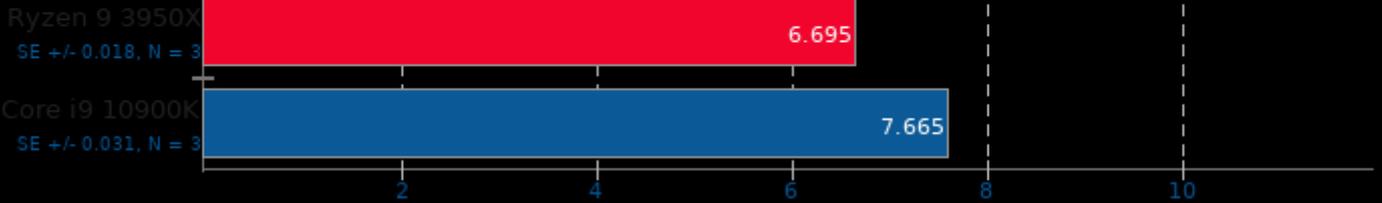
← Seconds, Fewer Is Better



### Numenta Anomaly Benchmark 1.1

Detector: Windowed Gaussian

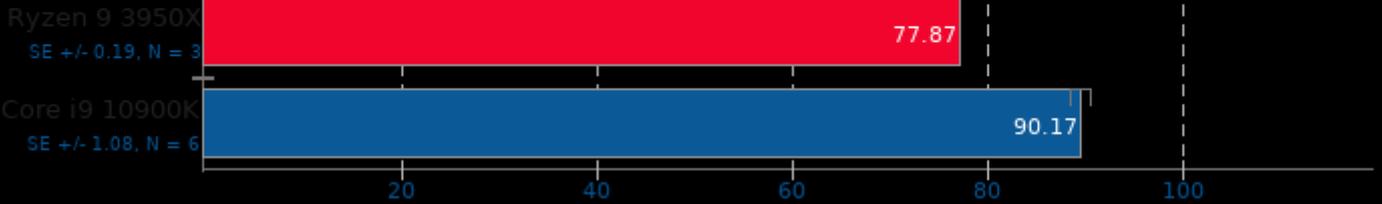
← Seconds, Fewer Is Better



### Numenta Anomaly Benchmark 1.1

Detector: Earthgecko Skyline

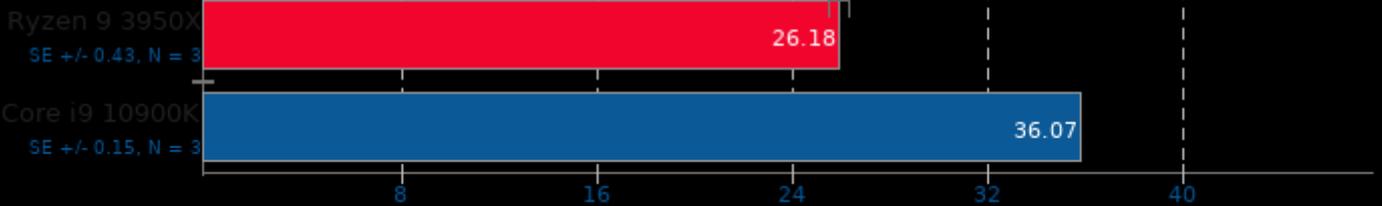
← Seconds, Fewer Is Better



### Numenta Anomaly Benchmark 1.1

Detector: Bayesian Changepoint

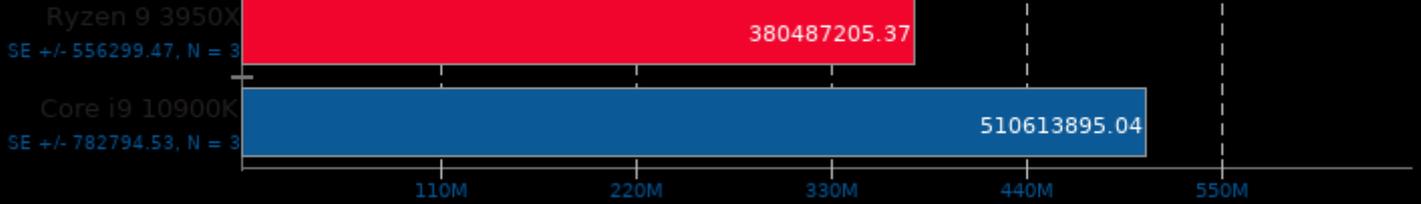
← Seconds, Fewer Is Better



### Hierarchical INTegration 1.0

Test: FLOAT

► QUIPs, More Is Better

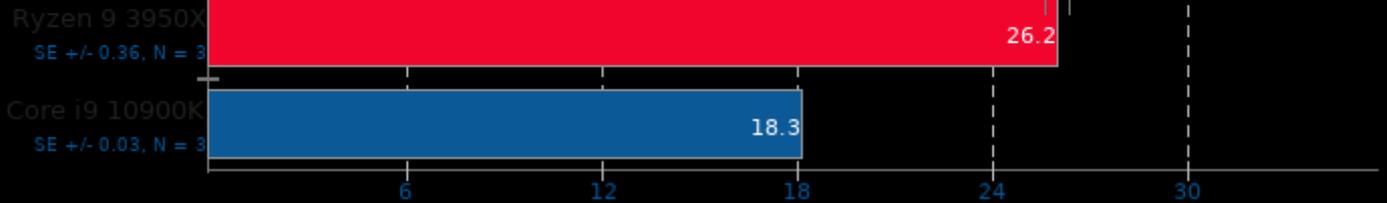


1. (CC) gcc options: -O3 -march=native -lm

### NeatBench 5

Acceleration: CPU

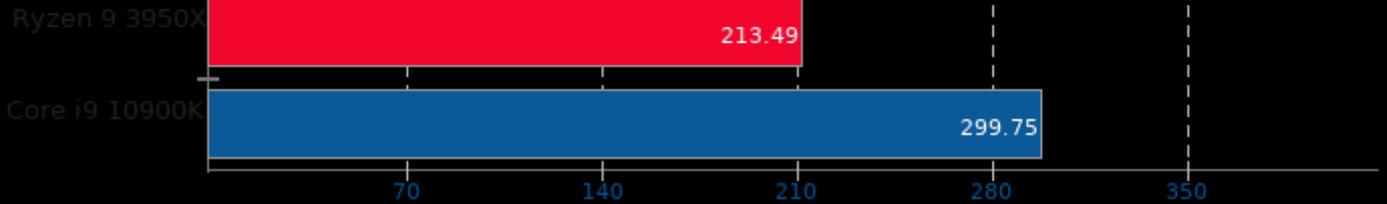
► FPS, More Is Better



### Appleseed 2.0 Beta

Scene: Emily

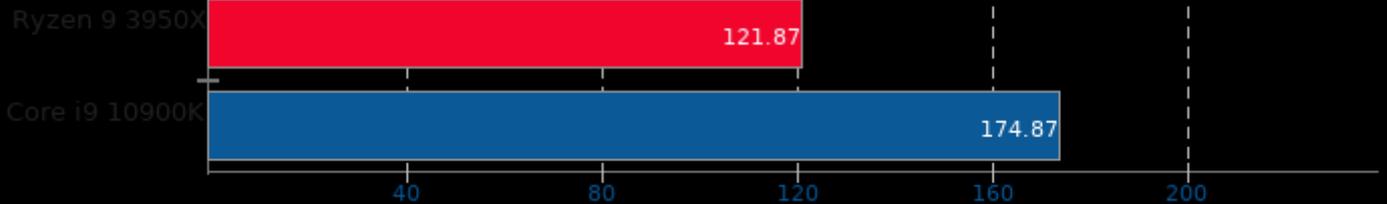
◄ Seconds, Fewer Is Better



### Appleseed 2.0 Beta

Scene: Disney Material

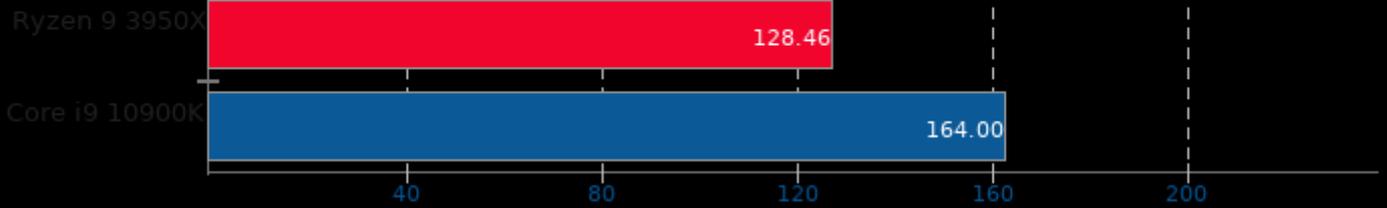
◄ Seconds, Fewer Is Better



### Appleseed 2.0 Beta

Scene: Material Tester

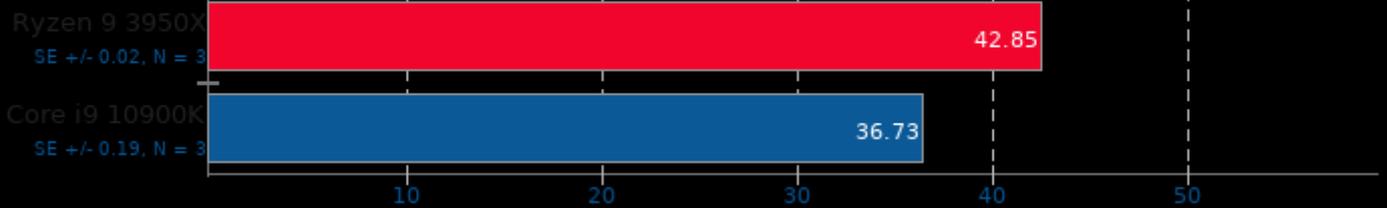
← Seconds, Fewer Is Better



### Selenium

Benchmark: ARES-6 - Browser: Firefox

← ms, Fewer Is Better

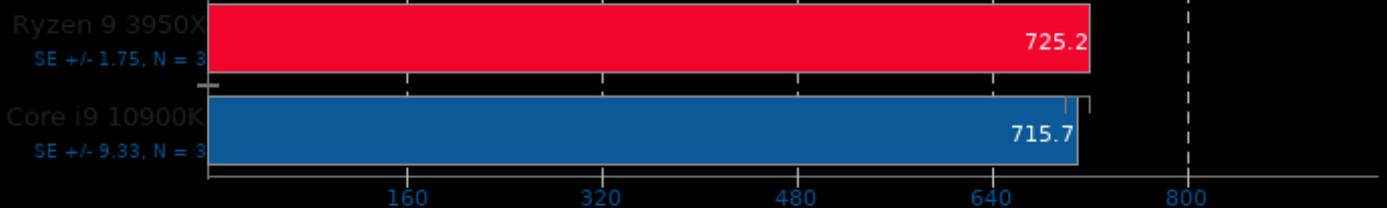


1. firefox 76.0.1

### Selenium

Benchmark: Kraken - Browser: Firefox

← ms, Fewer Is Better

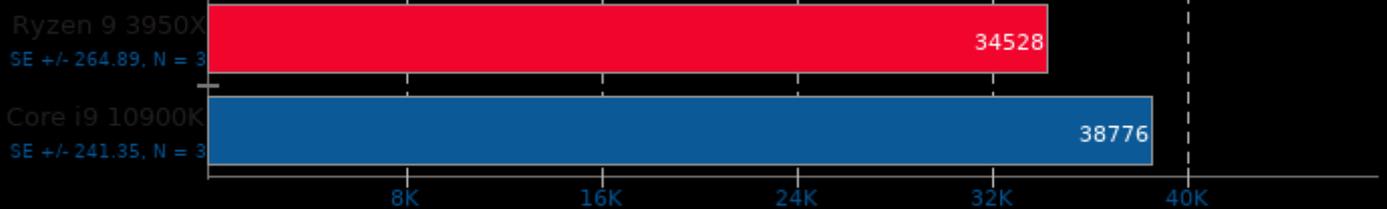


1. firefox 76.0.1

### Selenium

Benchmark: Octane - Browser: Firefox

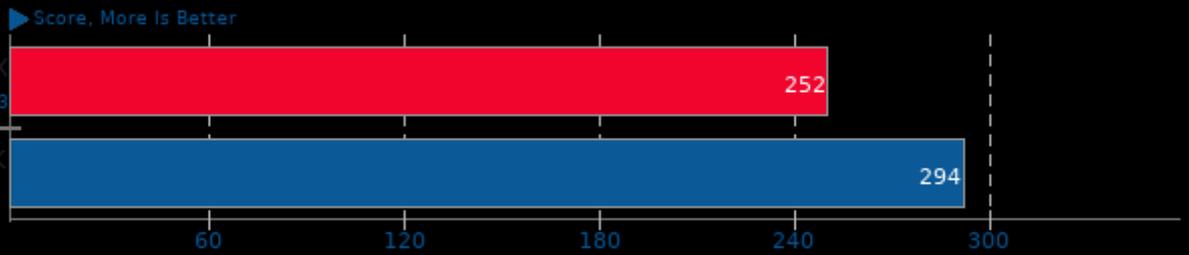
▶ Geometric Mean, More Is Better



1. firefox 76.0.1

### Selenium

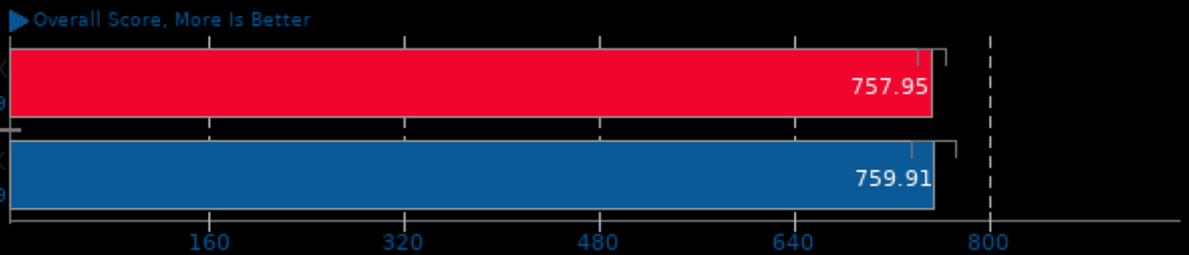
Benchmark: WebXPRT - Browser: Firefox



1. firefox 76.0.1

### Selenium

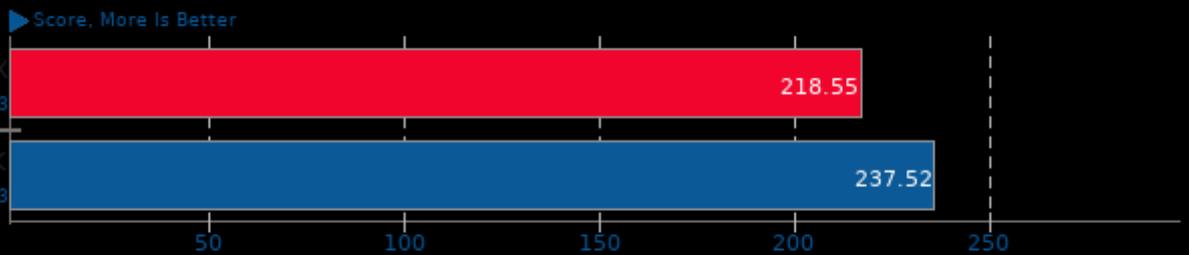
Benchmark: Basemark - Browser: Firefox



1. firefox 76.0.1

### Selenium

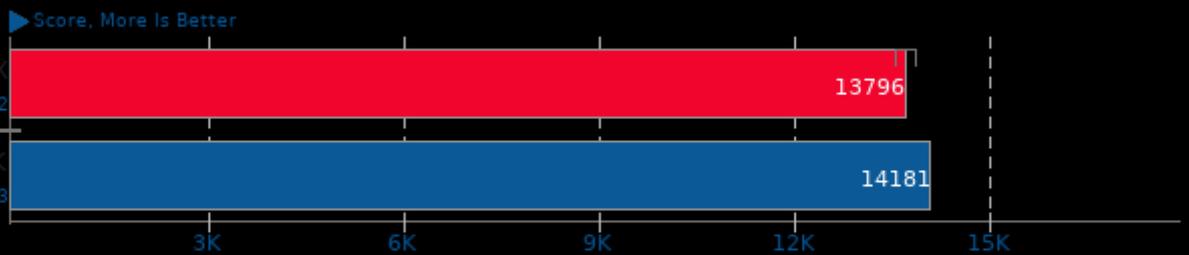
Benchmark: Jetstream - Browser: Firefox



1. firefox 76.0.1

### Selenium

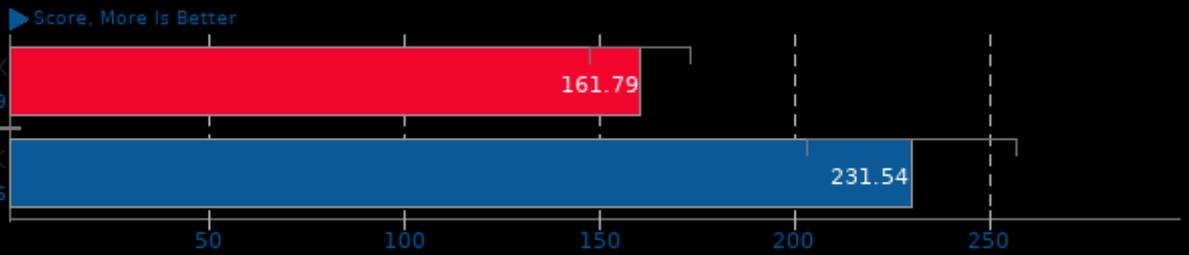
Benchmark: CanvasMark - Browser: Firefox



1. firefox 76.0.1

### Selenium

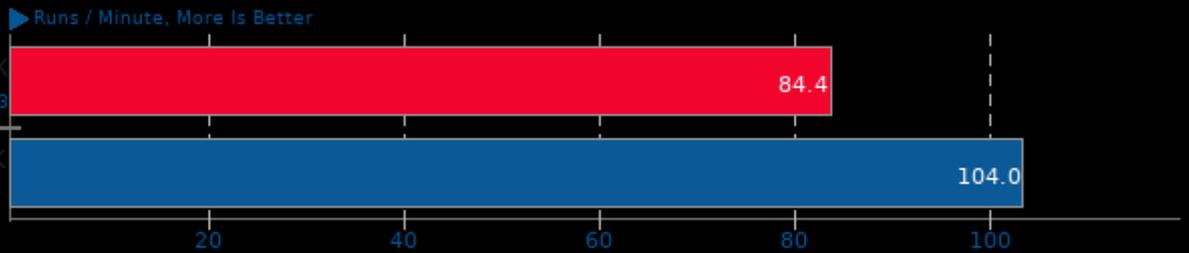
Benchmark: MotionMark - Browser: Firefox



1. firefox 76.0.1

### Selenium

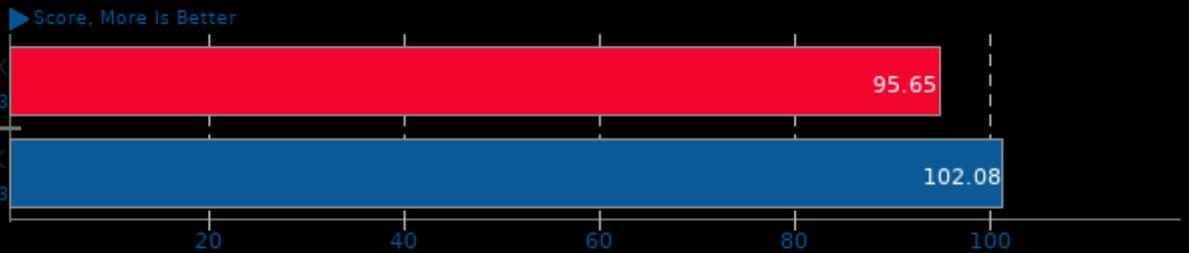
Benchmark: StyleBench - Browser: Firefox



1. firefox 76.0.1

### Selenium

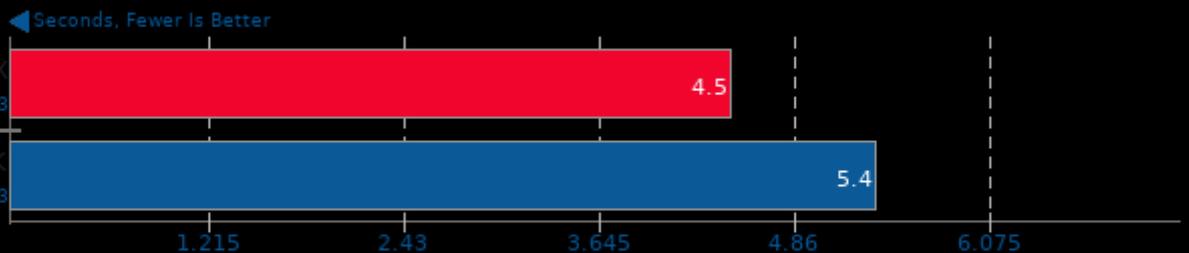
Benchmark: Jetstream 2 - Browser: Firefox



1. firefox 76.0.1

### Selenium

Benchmark: Maze Solver - Browser: Firefox

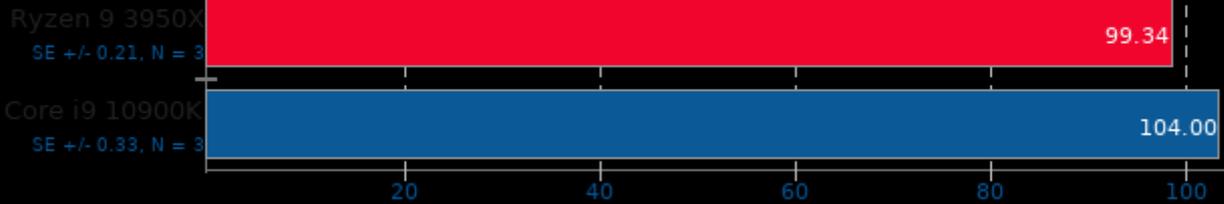


1. firefox 76.0.1

### Selenium

Benchmark: Speedometer - Browser: Firefox

Runs Per Minute, More Is Better

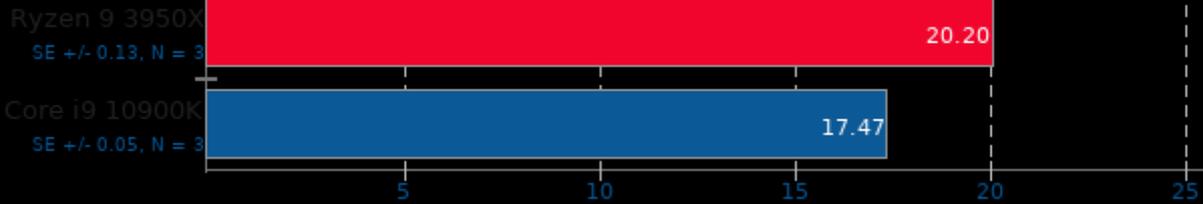


1. firefox 76.0.1

### Selenium

Benchmark: ARES-6 - Browser: Google Chrome

ms, Fewer Is Better

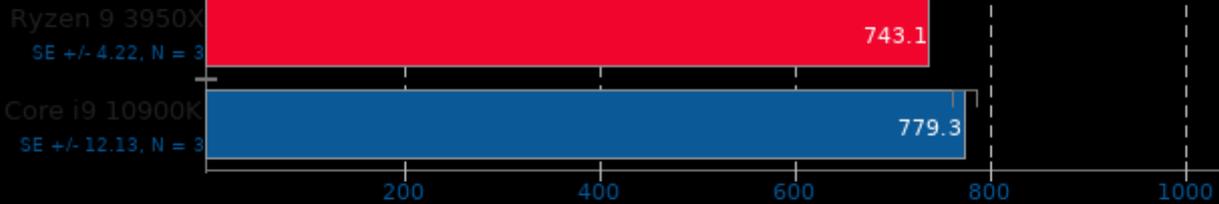


1. chrome 83.0.4103.61

### Selenium

Benchmark: Kraken - Browser: Google Chrome

ms, Fewer Is Better

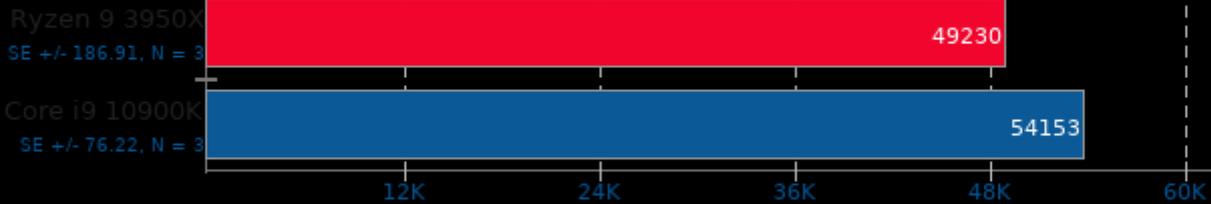


1. chrome 83.0.4103.61

### Selenium

Benchmark: Octane - Browser: Google Chrome

Geometric Mean, More Is Better

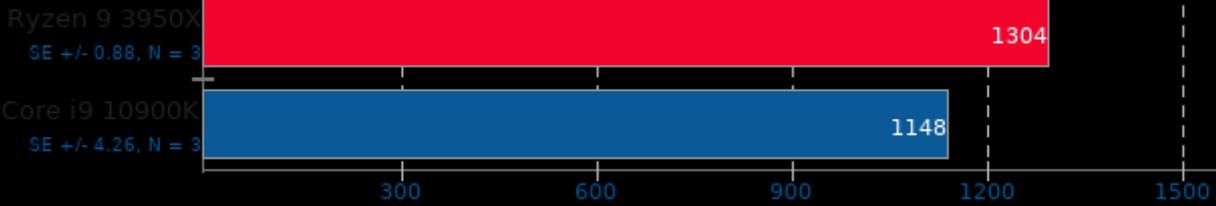


1. chrome 83.0.4103.61

### Selenium

Benchmark: PSPDFKit WASM - Browser: Firefox

Score, Fewer Is Better

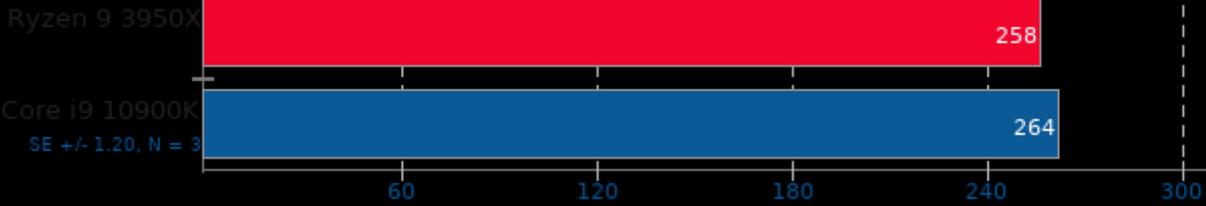


1. firefox 76.0.1

### Selenium

Benchmark: WebXPRT - Browser: Google Chrome

Score, More Is Better

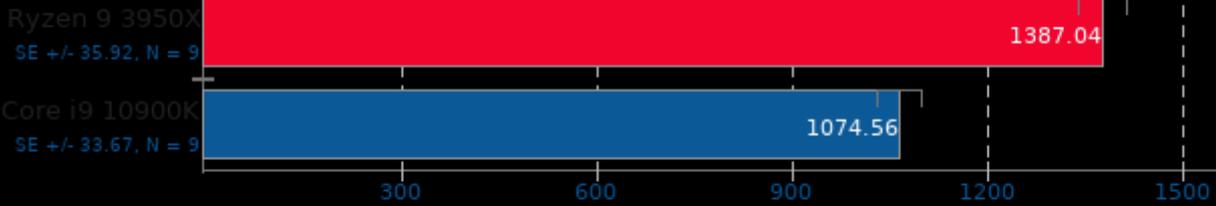


1. chrome 83.0.4103.61

### Selenium

Benchmark: Basemark - Browser: Google Chrome

Overall Score, More Is Better

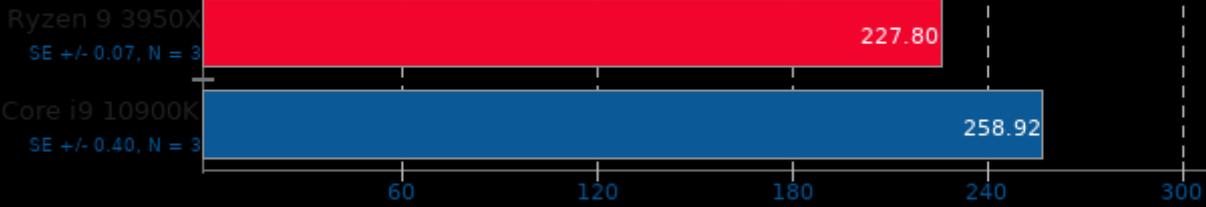


1. chrome 83.0.4103.61

### Selenium

Benchmark: Jetstream - Browser: Google Chrome

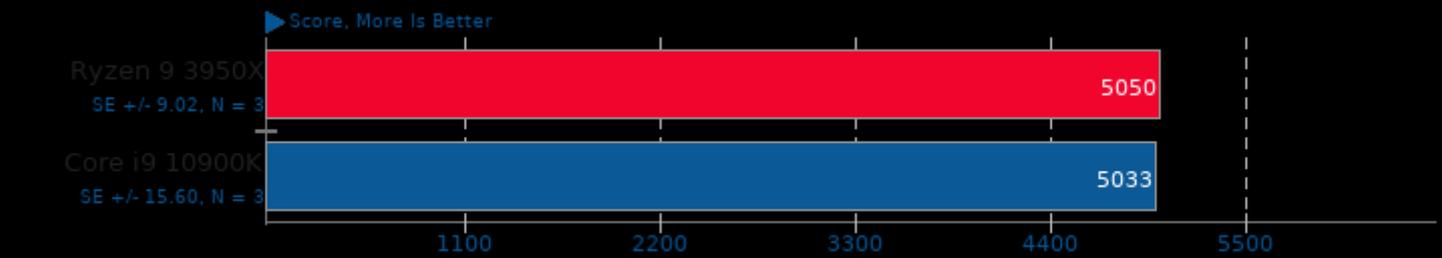
Score, More Is Better



1. chrome 83.0.4103.61

### Selenium

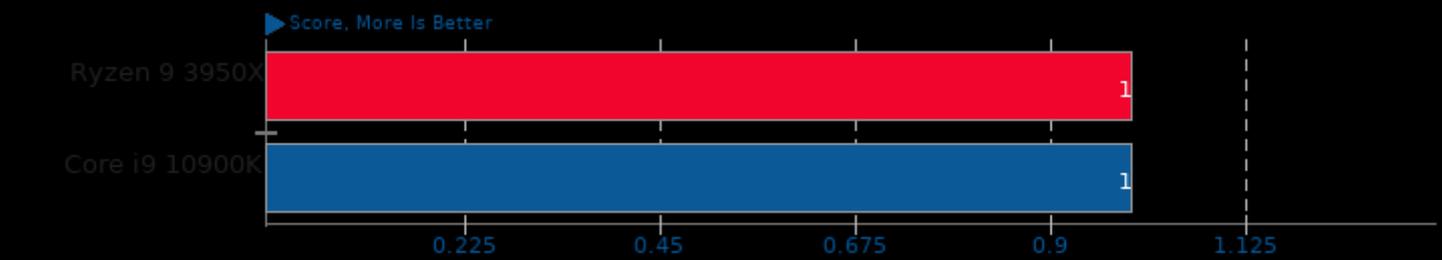
Benchmark: CanvasMark - Browser: Google Chrome



1. chrome 83.0.4103.61

### Selenium

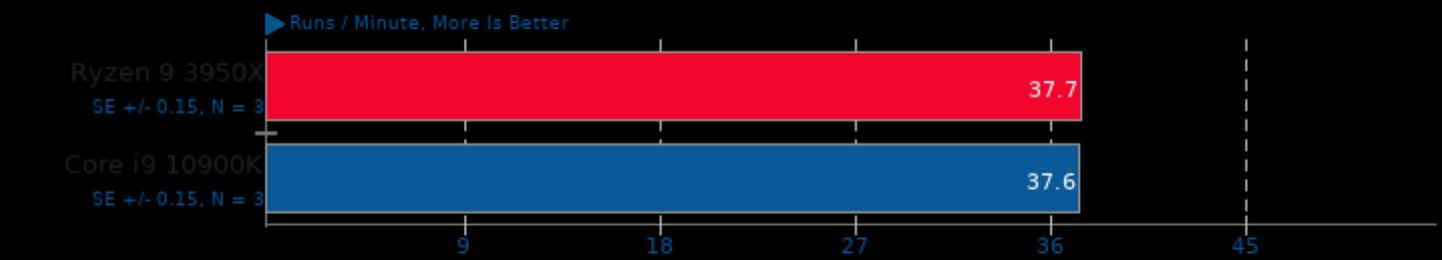
Benchmark: MotionMark - Browser: Google Chrome



1. chrome 83.0.4103.61

### Selenium

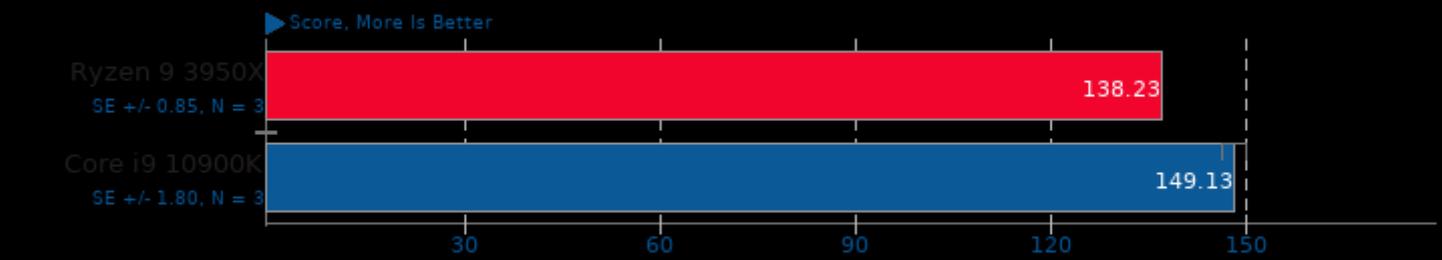
Benchmark: StyleBench - Browser: Google Chrome



1. chrome 83.0.4103.61

### Selenium

Benchmark: Jetstream 2 - Browser: Google Chrome

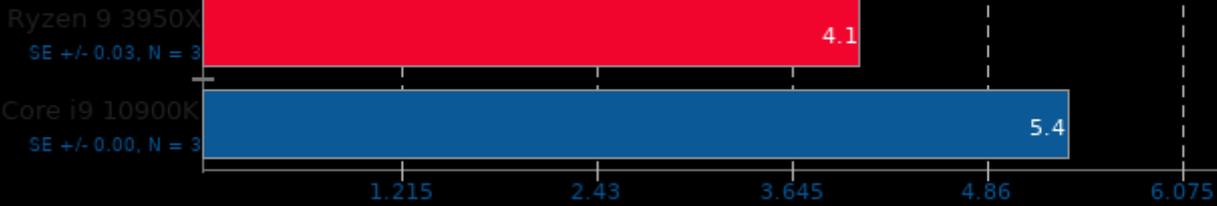


1. chrome 83.0.4103.61

### Selenium

Benchmark: Maze Solver - Browser: Google Chrome

← Seconds, Fewer Is Better

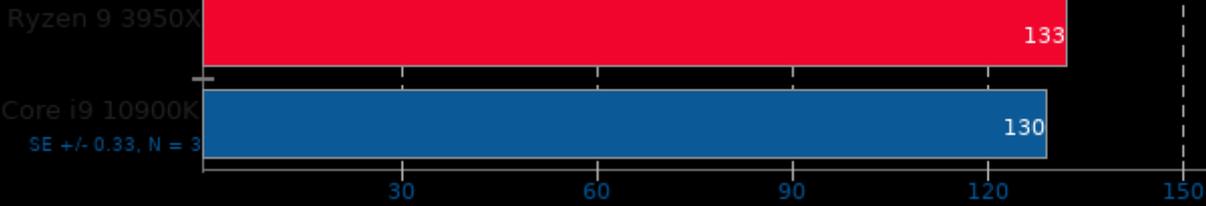


1. chrome 83.0.4103.61

### Selenium

Benchmark: Speedometer - Browser: Google Chrome

▶ Runs Per Minute, More Is Better

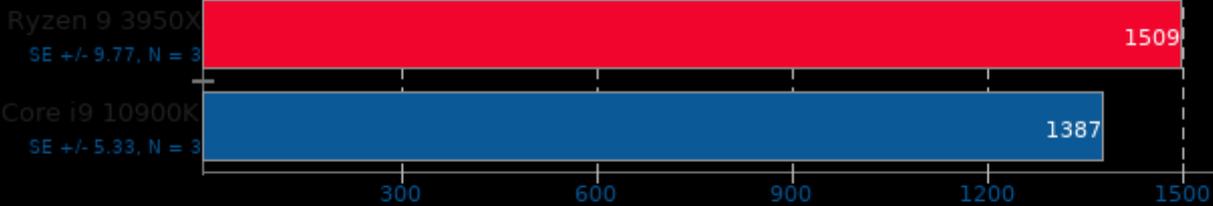


1. chrome 83.0.4103.61

### Selenium

Benchmark: PSPDFKit WASM - Browser: Google Chrome

← Score, Fewer Is Better



1. chrome 83.0.4103.61

### Selenium

Benchmark: WASM imageConvolute - Browser: Firefox

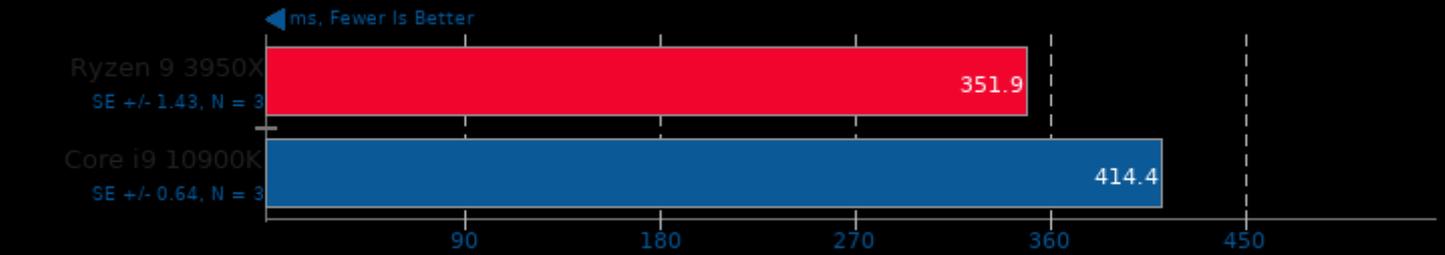
← ms, Fewer Is Better



1. firefox 76.0.1

### Selenium

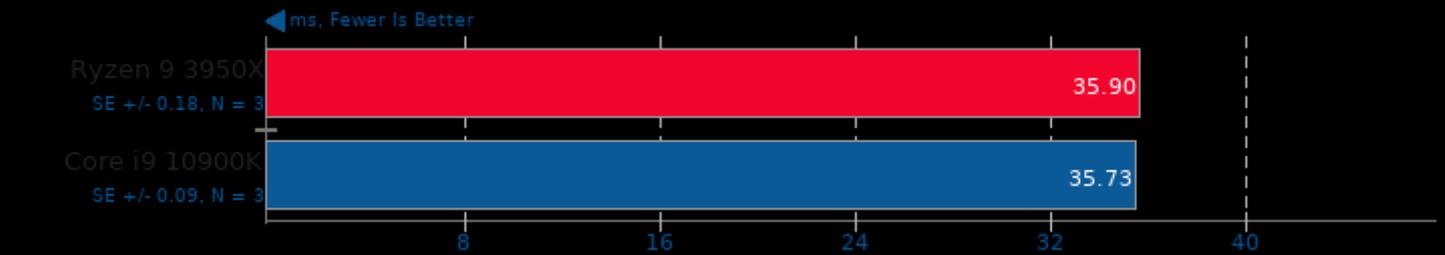
Benchmark: WASM collisionDetection - Browser: Firefox



1. firefox 76.0.1

### Selenium

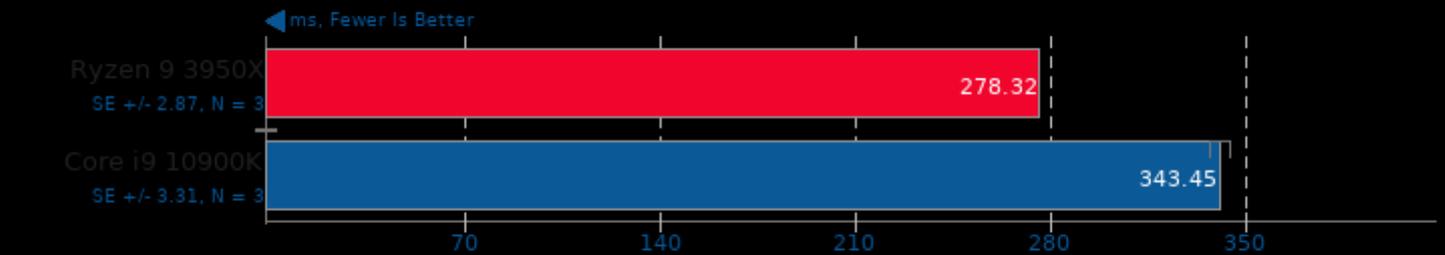
Benchmark: WASM imageConvolute - Browser: Google Chrome



1. chrome 83.0.4103.61

### Selenium

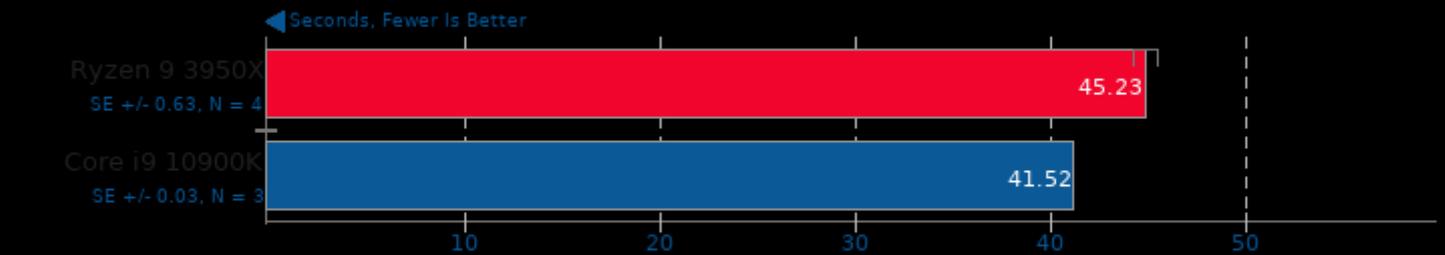
Benchmark: WASM collisionDetection - Browser: Google Chrome



1. chrome 83.0.4103.61

### Git

Time To Complete Common Git Commands

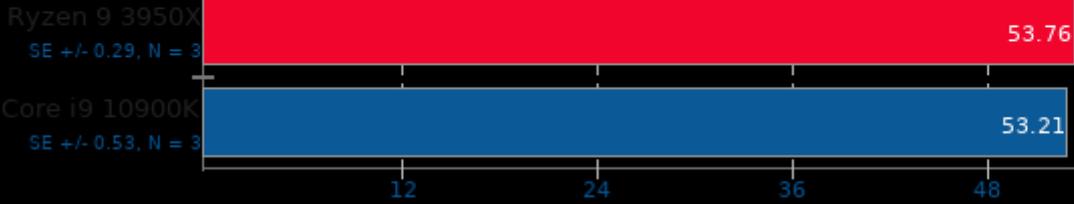


1. git version 2.25.1

### Mlpack Benchmark

Benchmark: scikit\_ica

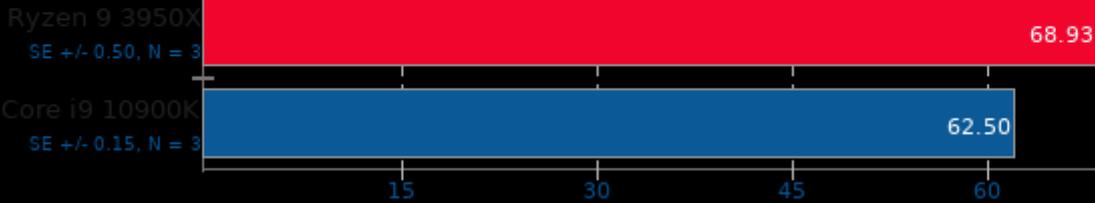
← Seconds, Fewer Is Better



### Mlpack Benchmark

Benchmark: scikit\_qda

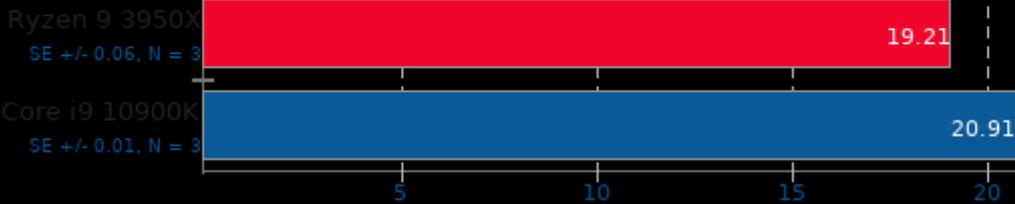
← Seconds, Fewer Is Better



### Mlpack Benchmark

Benchmark: scikit\_svm

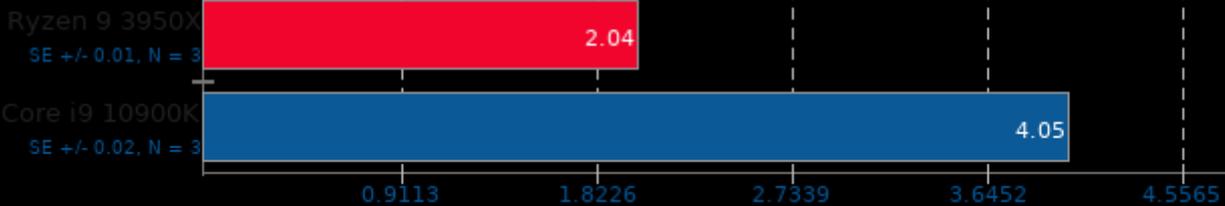
← Seconds, Fewer Is Better



### Mlpack Benchmark

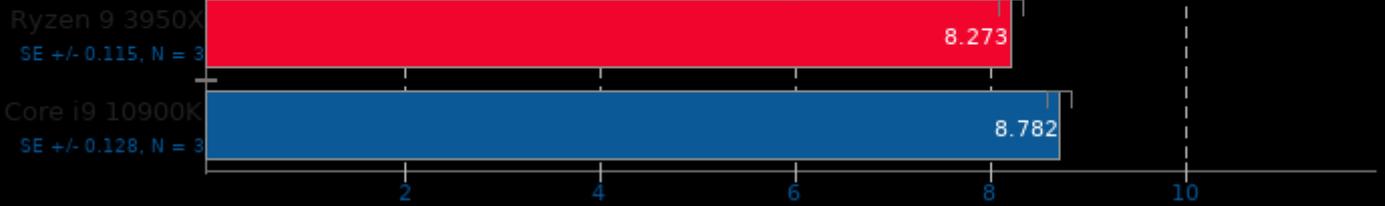
Benchmark: scikit\_linearridgeregression

← Seconds, Fewer Is Better



### Scikit-Learn 0.22.1

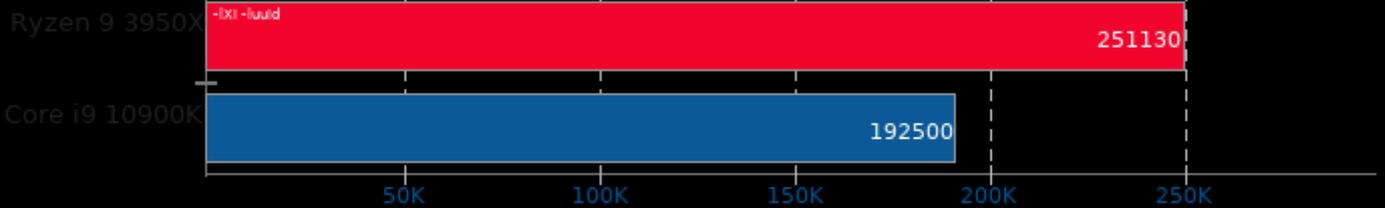
Seconds, Fewer Is Better



### BRL-CAD 7.30.8

VGR Performance Metric

VGR Performance Metric, More Is Better

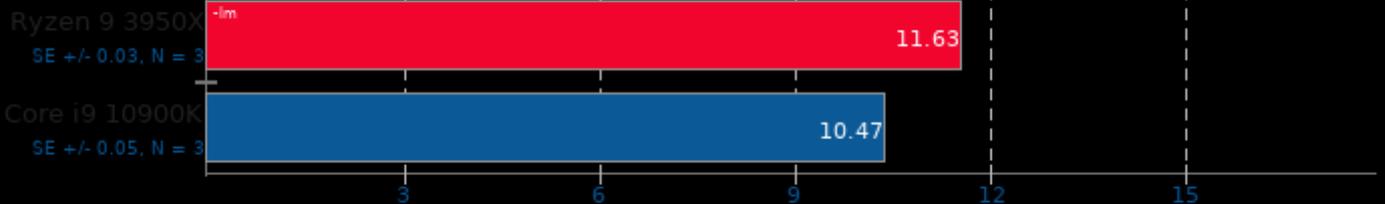


1. (CXX) g++ options: -std=c++11 -pipe -fno-strict-aliasing -fno-common -fexceptions -ftemplate-depth-128 -m64 -ggdb3 -O3 -fipa-pta -fstrength-reduce

### OSBench

Test: Create Files

us Per Event, Fewer Is Better



1. (CC) gcc options:

### OSBench

Test: Create Threads

us Per Event, Fewer Is Better

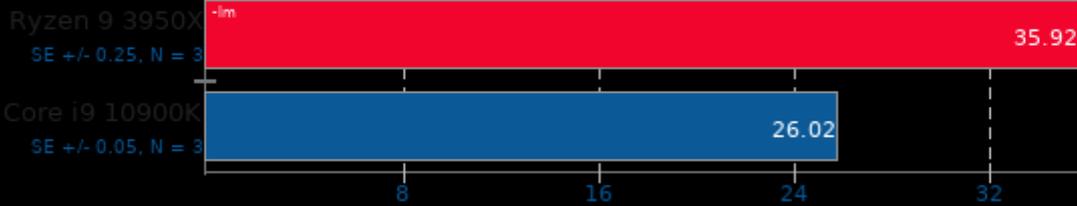


1. (CC) gcc options:

### OSBench

Test: Launch Programs

µs Per Event, Fewer Is Better

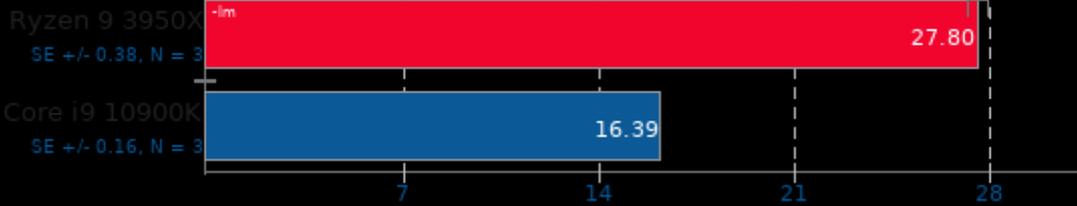


1. (CC) gcc options:

### OSBench

Test: Create Processes

µs Per Event, Fewer Is Better

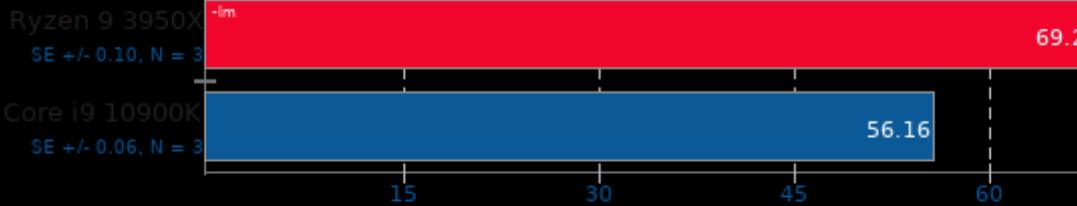


1. (CC) gcc options:

### OSBench

Test: Memory Allocations

µs Per Event, Fewer Is Better



1. (CC) gcc options:

### Zstd Compression 1.4.5

Compression Level: 3

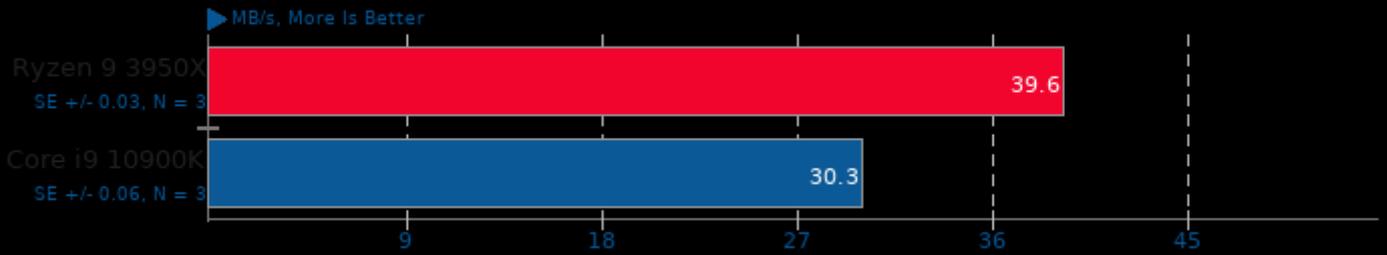
MB/s, More Is Better



1. (CC) gcc options: -O3 -pthread -lz -lzma

### Zstd Compression 1.4.5

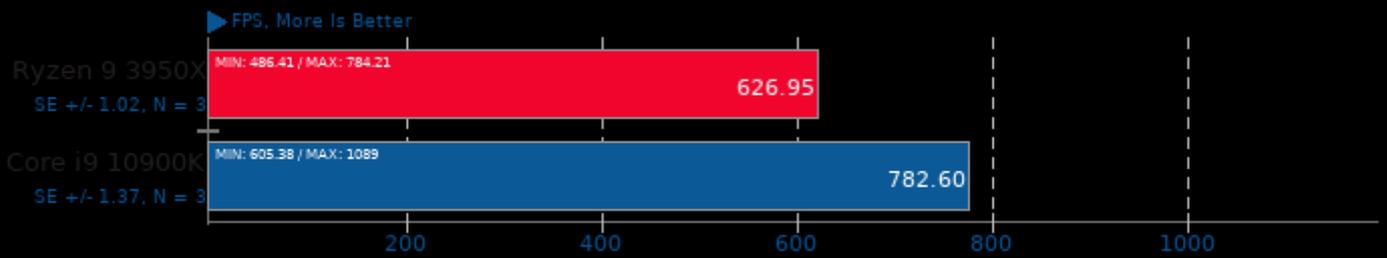
Compression Level: 19



1. (CC) gcc options: -O3 -pthread -lz -llzma

### dav1d 0.7.0

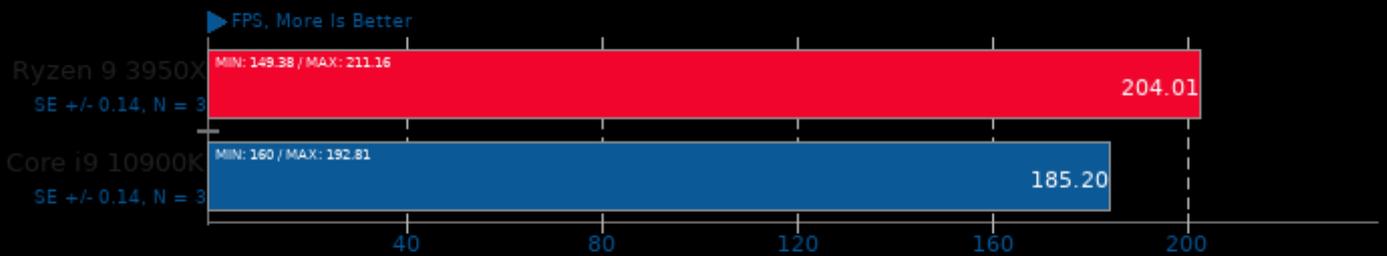
Video Input: Chimera 1080p



1. (CC) gcc options: -pthread

### dav1d 0.7.0

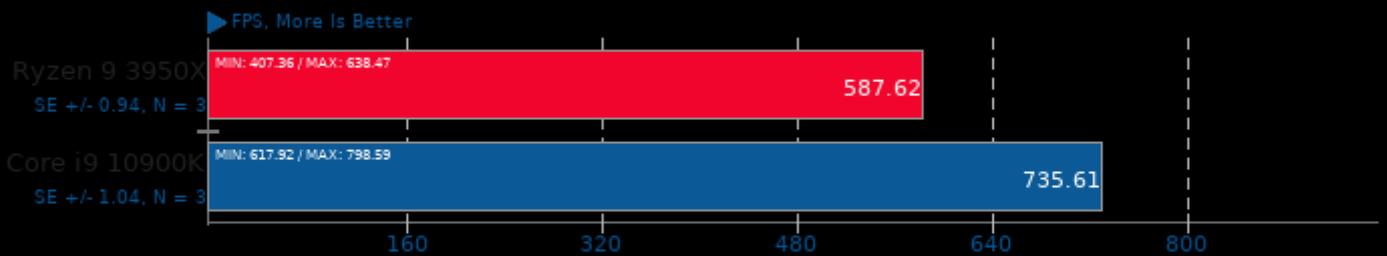
Video Input: Summer Nature 4K



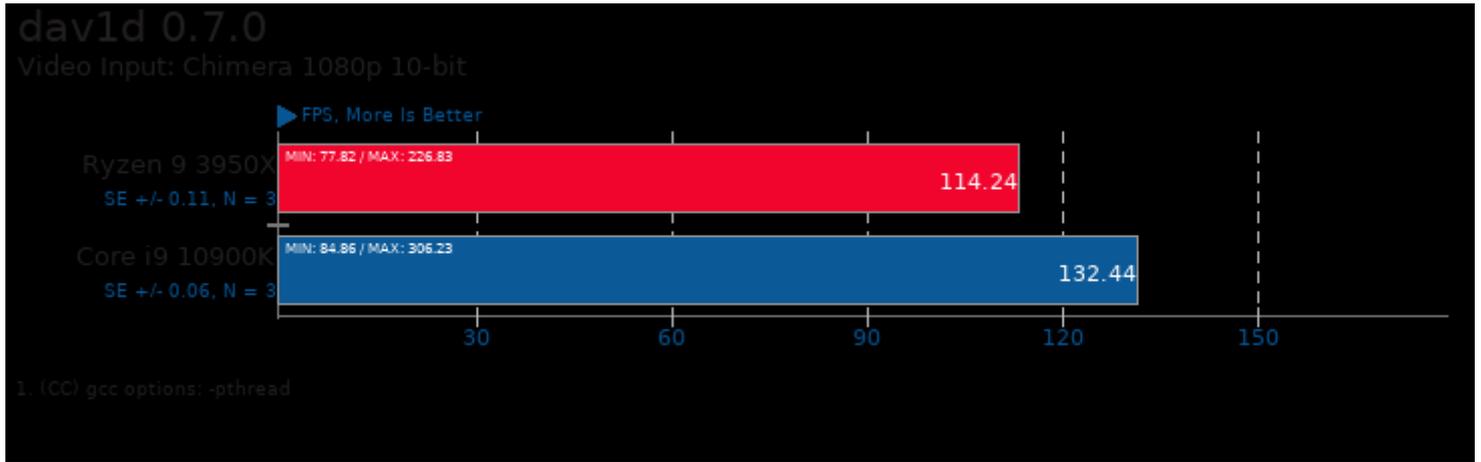
1. (CC) gcc options: -pthread

### dav1d 0.7.0

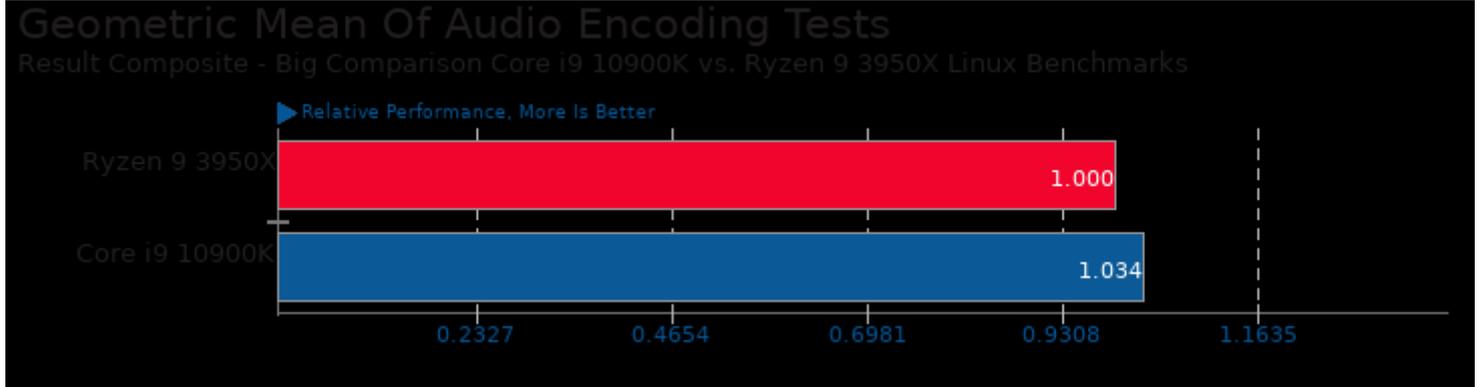
Video Input: Summer Nature 1080p



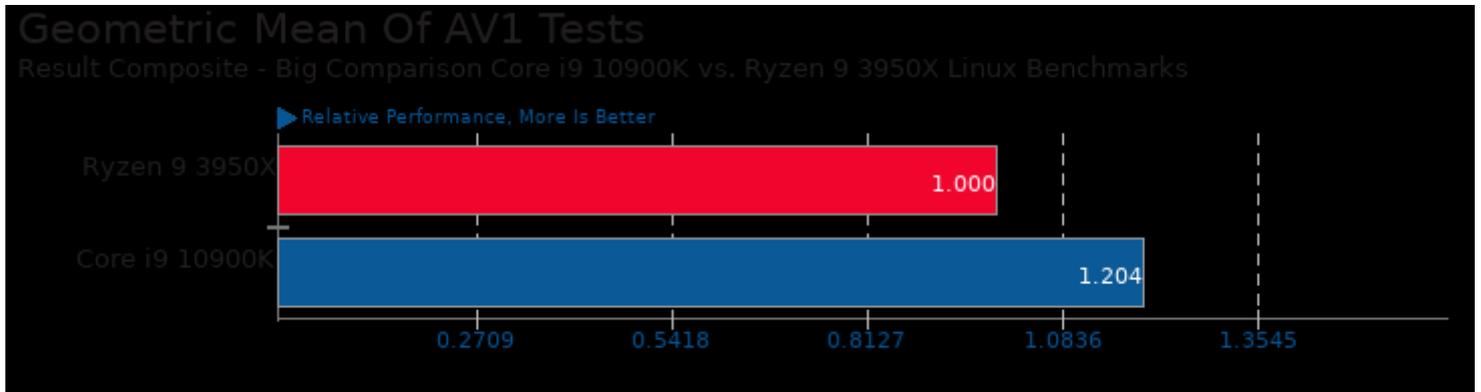
1. (CC) gcc options: -pthread



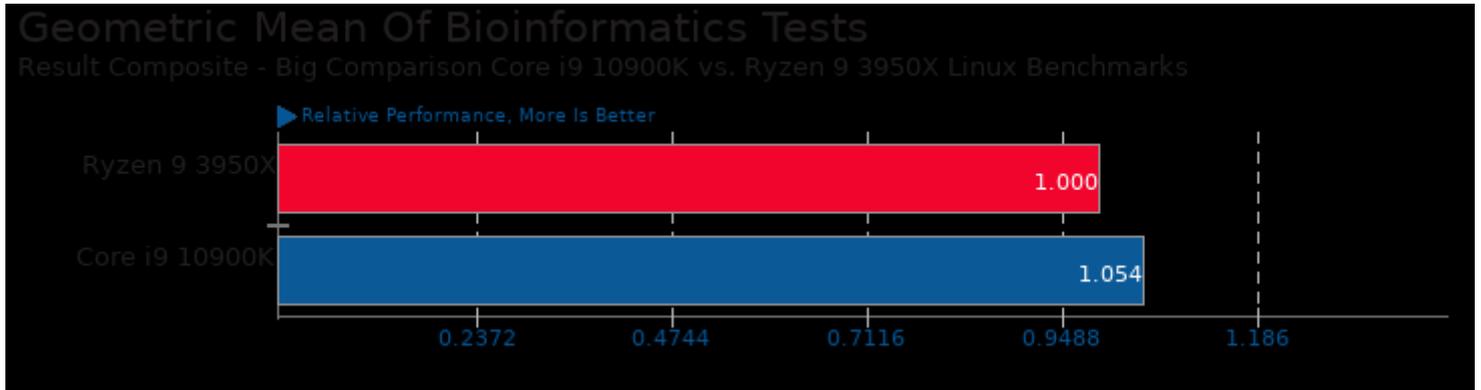
These geometric means are based upon test groupings / test suites for this result file.



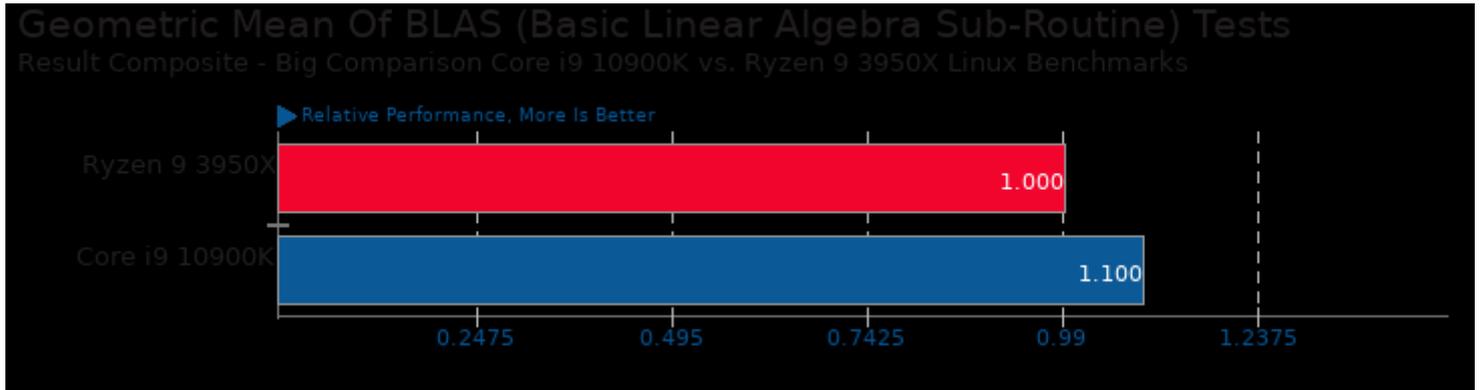
Geometric mean based upon tests: pts/encode-mp3 and pts/encode-flac



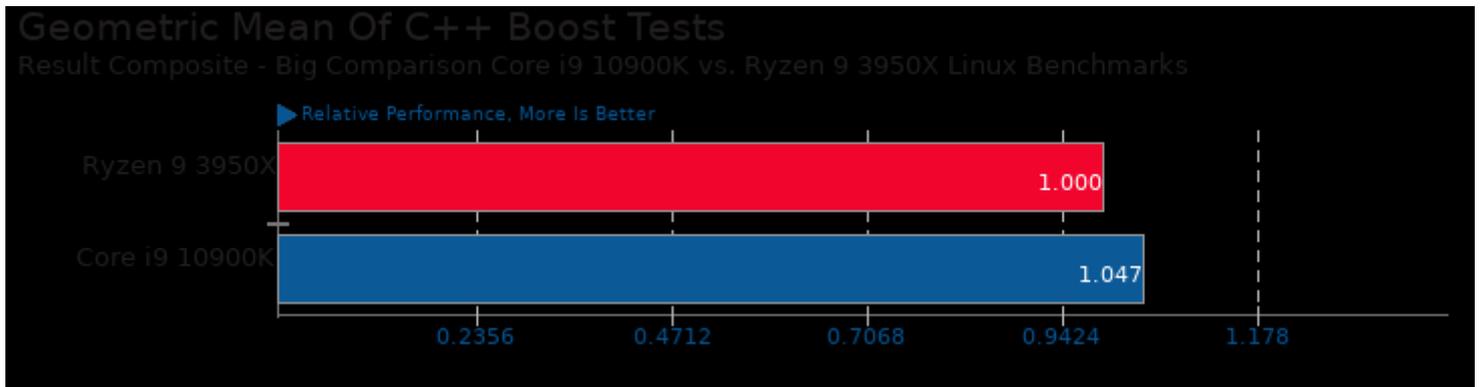
Geometric mean based upon tests: pts/dav1d, pts/aom-av1, pts/libgav1 and pts/rav1e



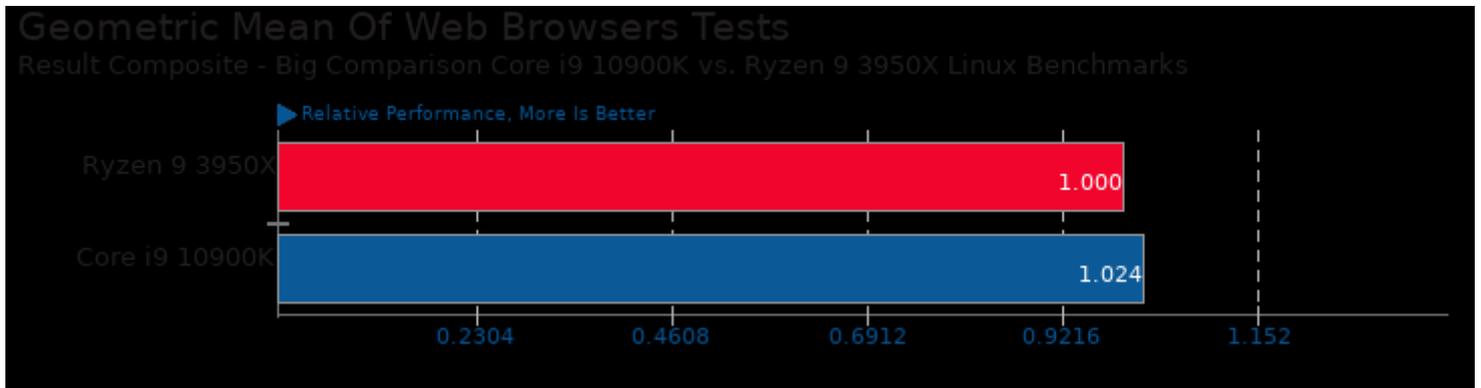
Geometric mean based upon tests: pts/himeno, pts/mrbayes and pts/hmmer



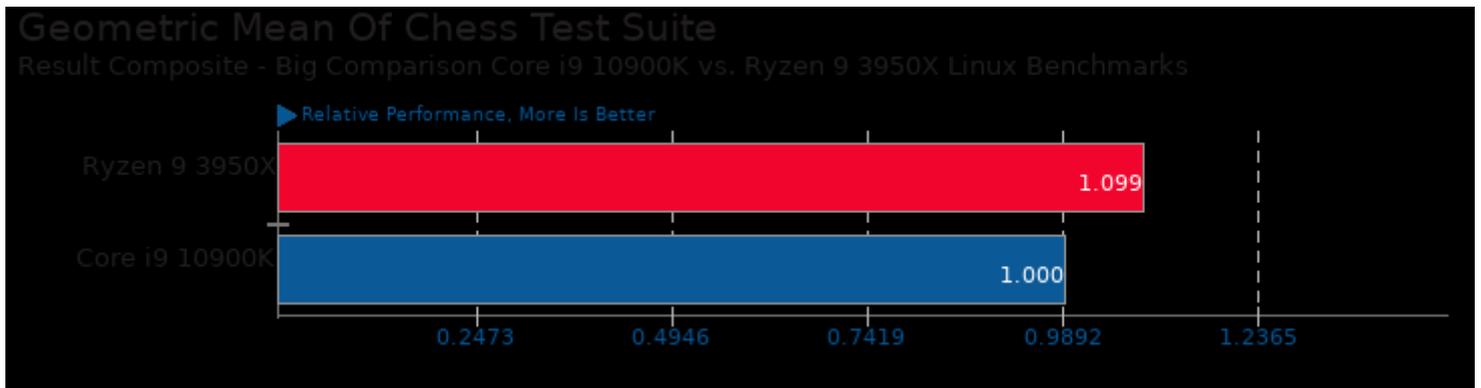
Geometric mean based upon tests: pts/lczero and pts/nwchem



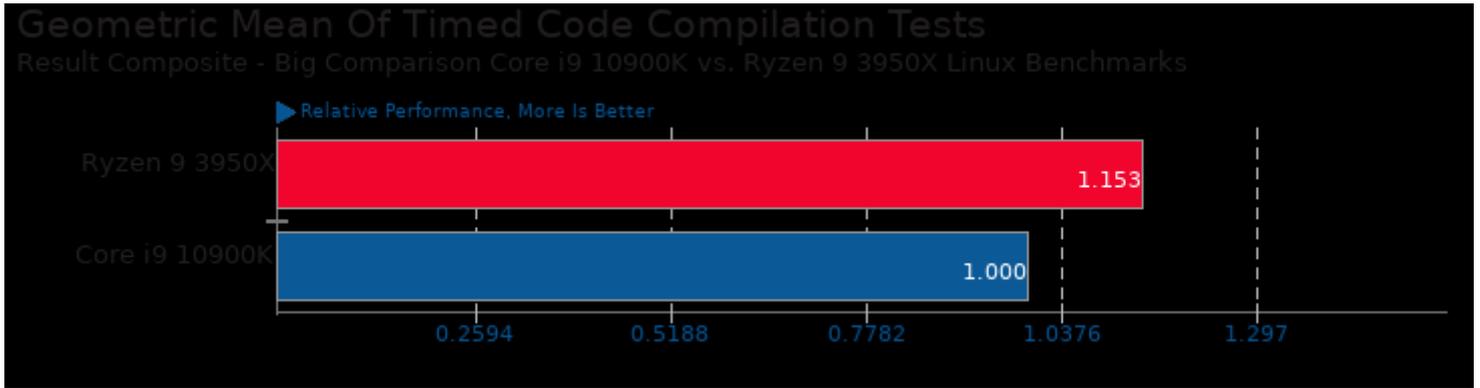
Geometric mean based upon tests: pts/yafaray, pts/minion and pts/core-latency



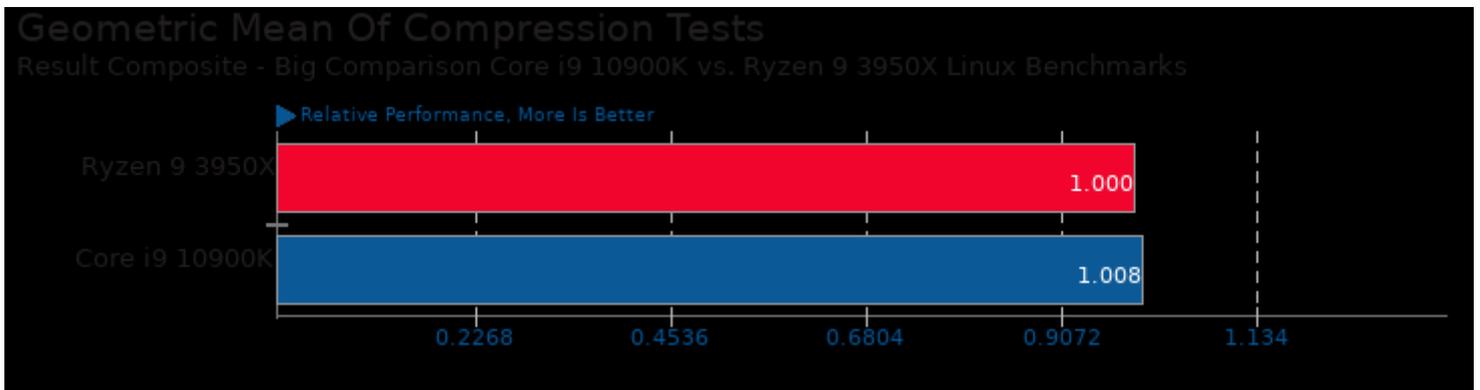
Geometric mean based upon tests: system/selenium



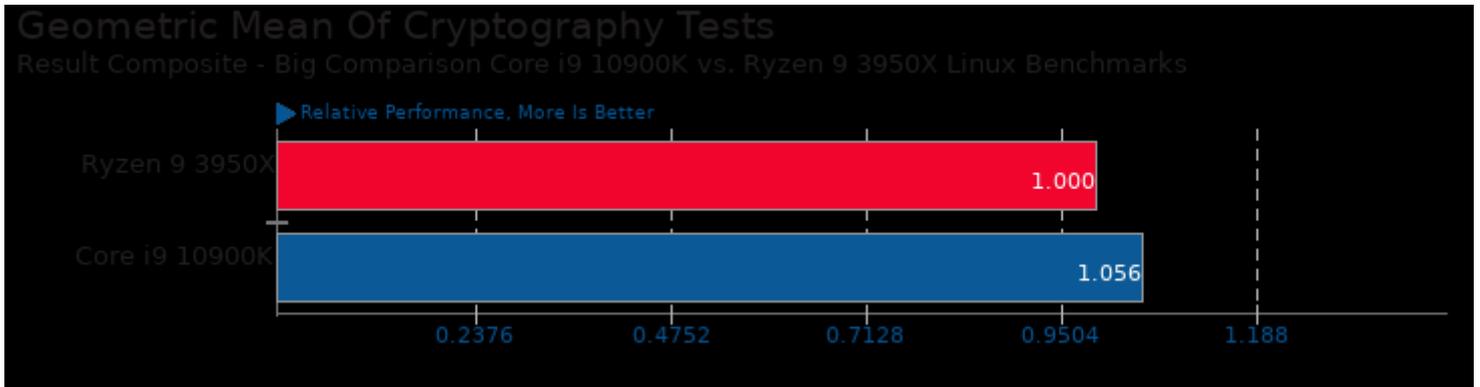
Geometric mean based upon tests: pts/tscp, pts/lczero, pts/stockfish, pts/asmfish, pts/n-queens and pts/m-queens



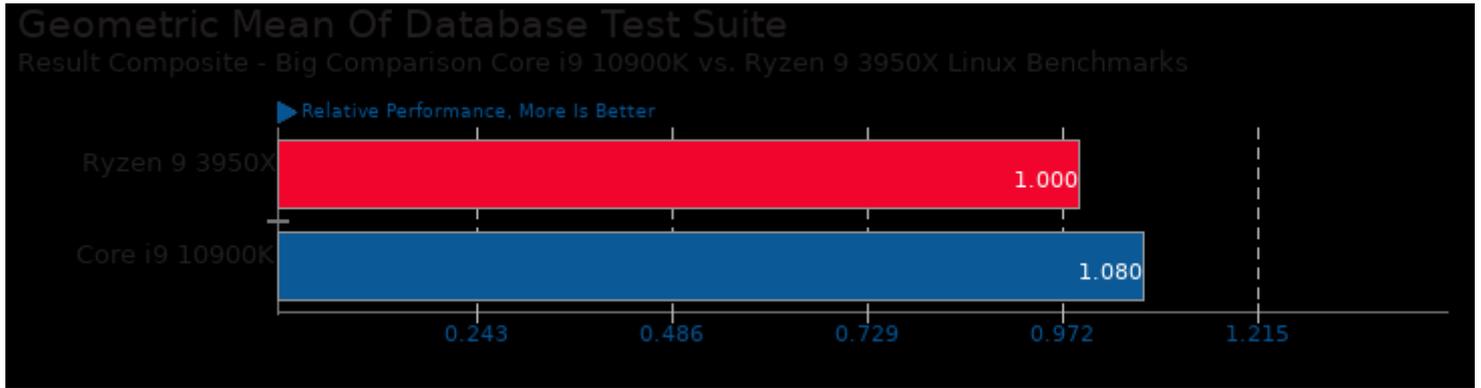
Geometric mean based upon tests: pts/build-apache, pts/build-php, pts/build-linux-kernel, pts/build-imagemagick, pts/build-gcc, pts/build-gdb, pts/build-llvm, pts/build-ffmpeg, pts/build-mplayer and pts/build2



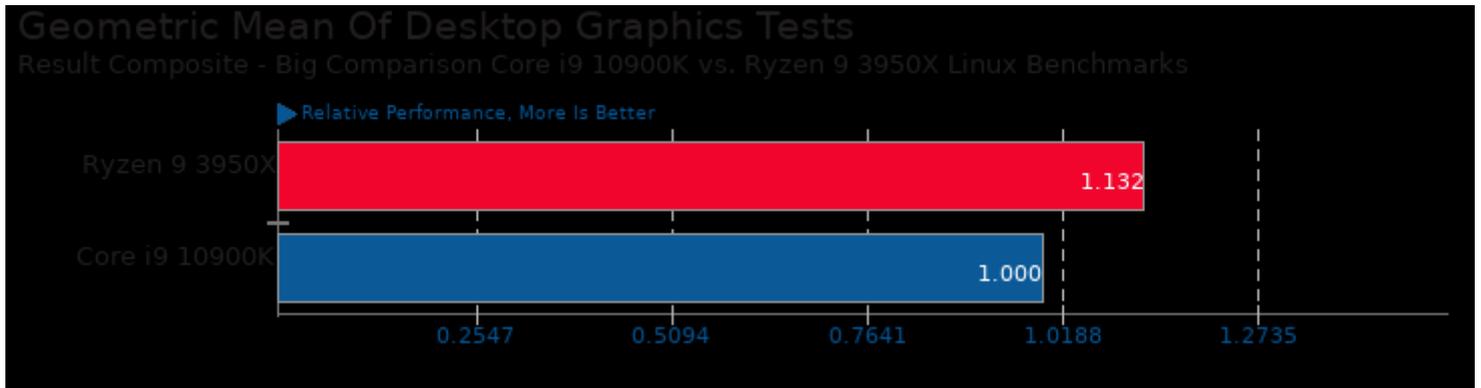
Geometric mean based upon tests: pts/compress-7zip, pts/compress-gzip, pts/compress-pbzip2, pts/compress-zstd, pts/compress-xz, pts/lzbench and pts/blosc



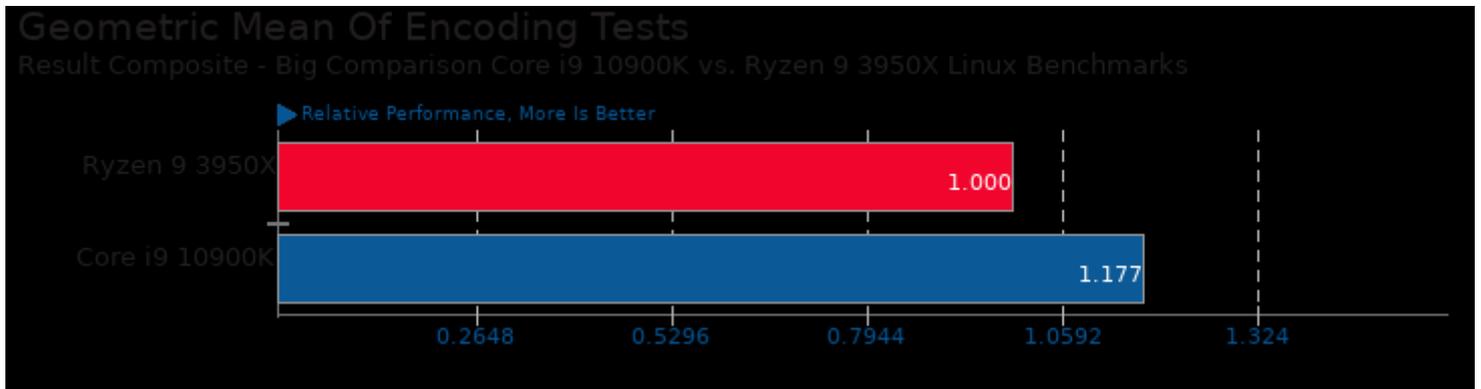
Geometric mean based upon tests: pts/gnupg, pts/openssl, pts/blake2, pts/john-the-ripper, pts/smhasher, pts/botan, pts/cryptopp, pts/bork, pts/nettle, pts/aircrack-ng and pts/cpuminer-opt



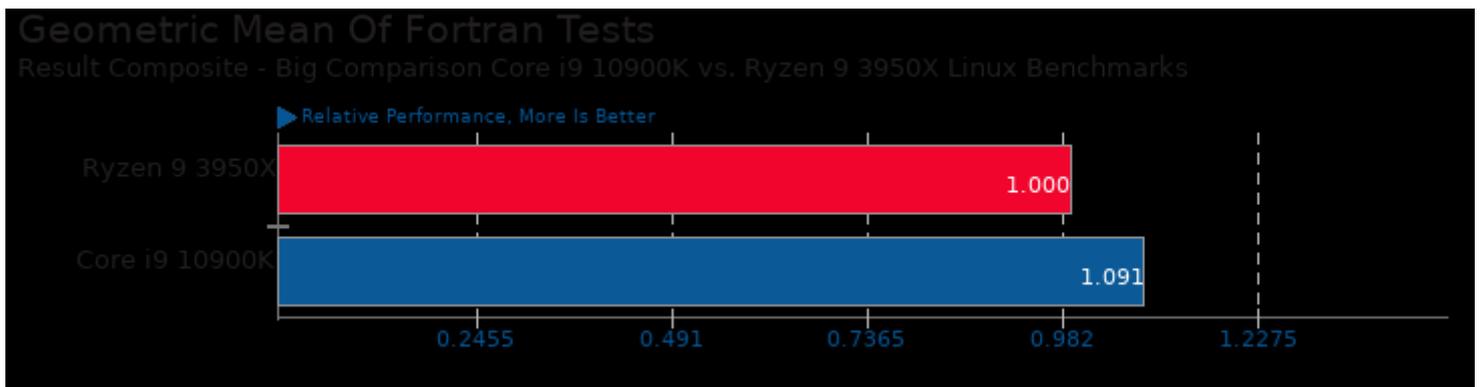
Geometric mean based upon tests: pts/sqlite-speedtest, pts/redis and pts/rocksdb



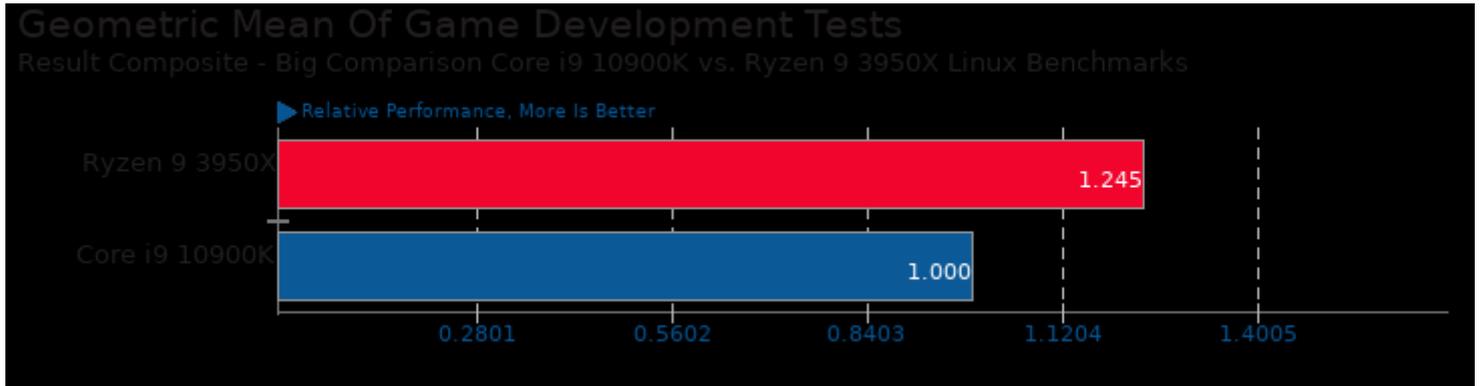
Geometric mean based upon tests: pts/xonotic, pts/tesseract, pts/paraview, pts/unigine-valley and pts/unigine-heaven



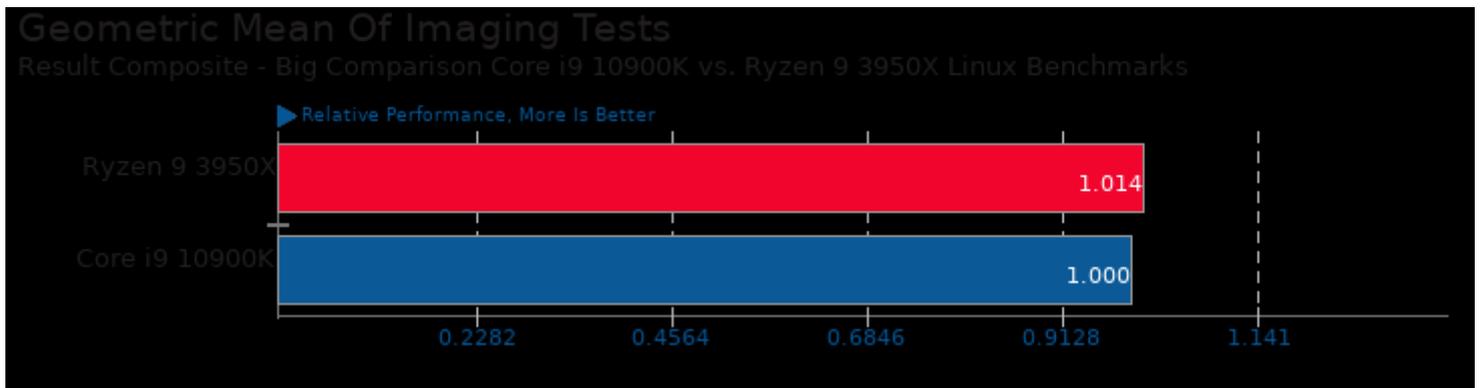
Geometric mean based upon tests: pts/encode-mp3, pts/encode-flac, pts/x264, pts/x265, pts/ffmpeg, pts/vpxenc, pts/dav1d, pts/aom-av1, pts/libgav1 and pts/rav1e



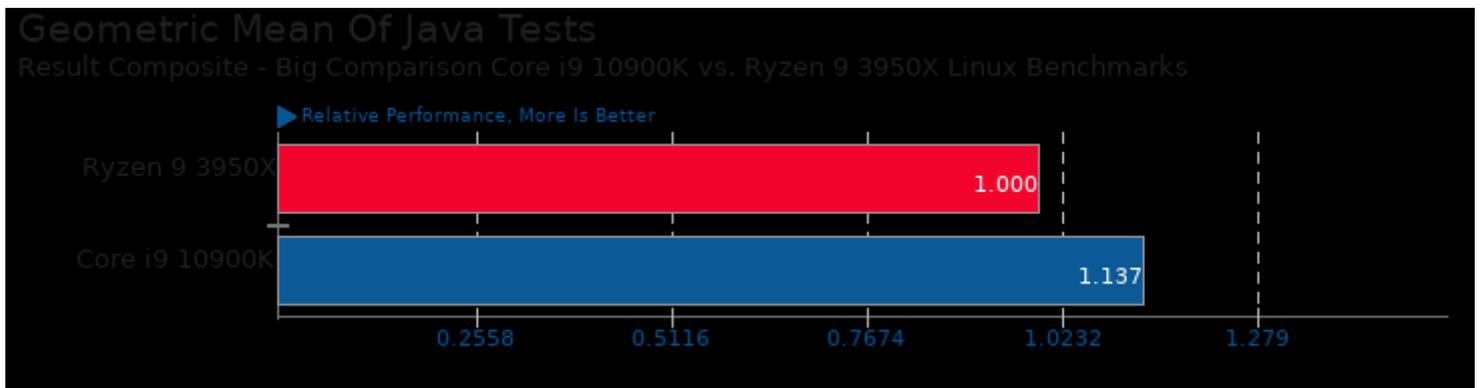
Geometric mean based upon tests: pts/hpcg, pts/npb, pts/neat, pts/polyhedron and pts/nwchem



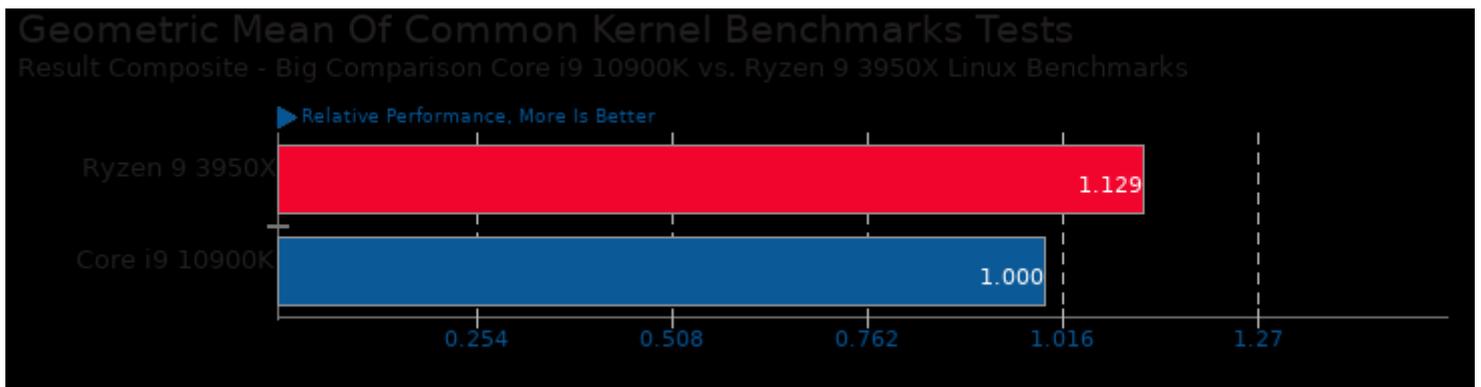
Geometric mean based upon tests: pts/basis, pts/blender, pts/oidn and pts/openvkl



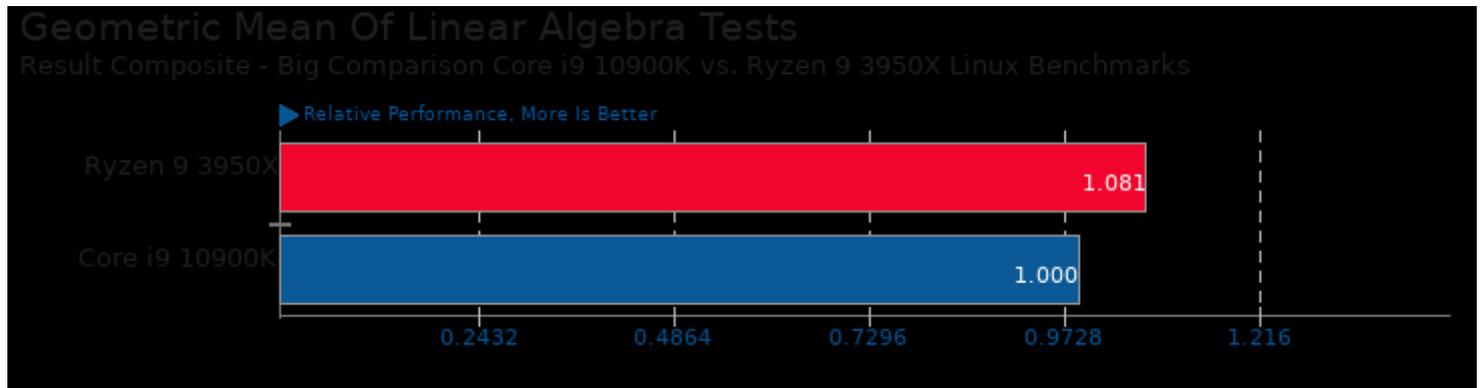
Geometric mean based upon tests: pts/graphics-magick, system/rawtherapee, pts/tjbench, system/gimp and system/gegl



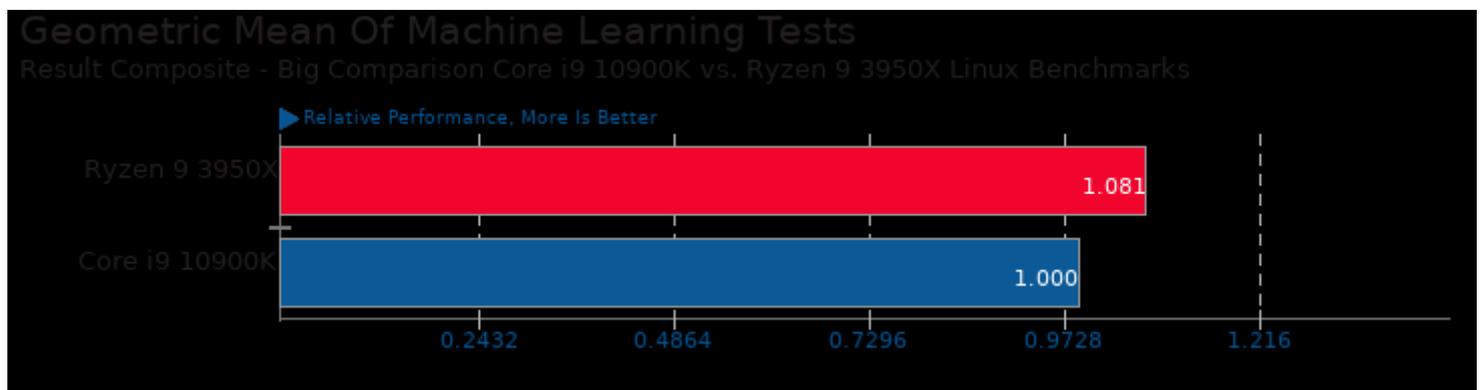
Geometric mean based upon tests: pts/bork, pts/java-scimark2, pts/dacapobench, pts/java-gradle-perf and pts/renaissance



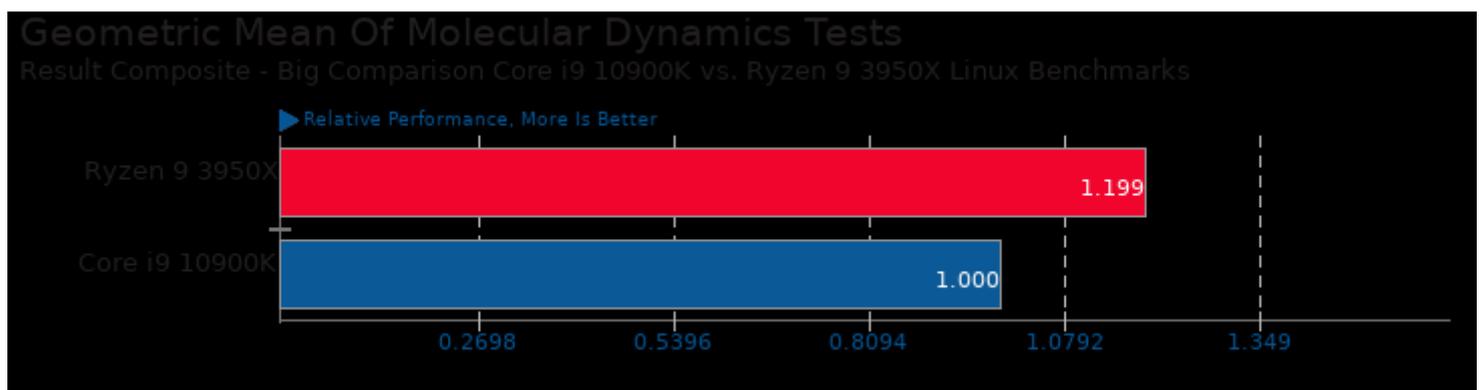
Geometric mean based upon tests: pts/sqlite-speedtest, pts/openssl, pts/ctx-clock, pts/hackbench, pts/ipc-benchmark, pts/stress-ng, pts/osbench and pts/rocksdb



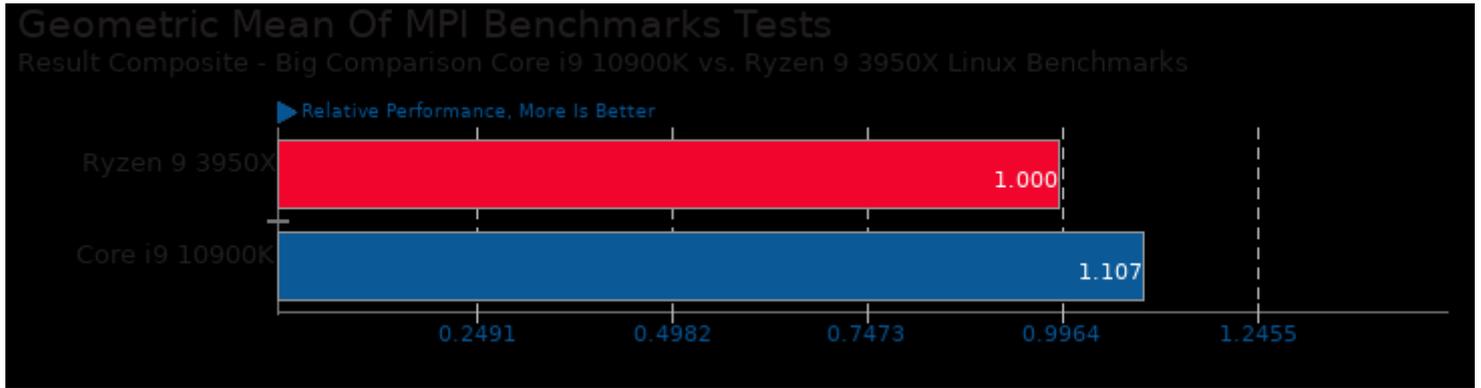
Geometric mean based upon tests: pts/mt-dgemm and pts/amg



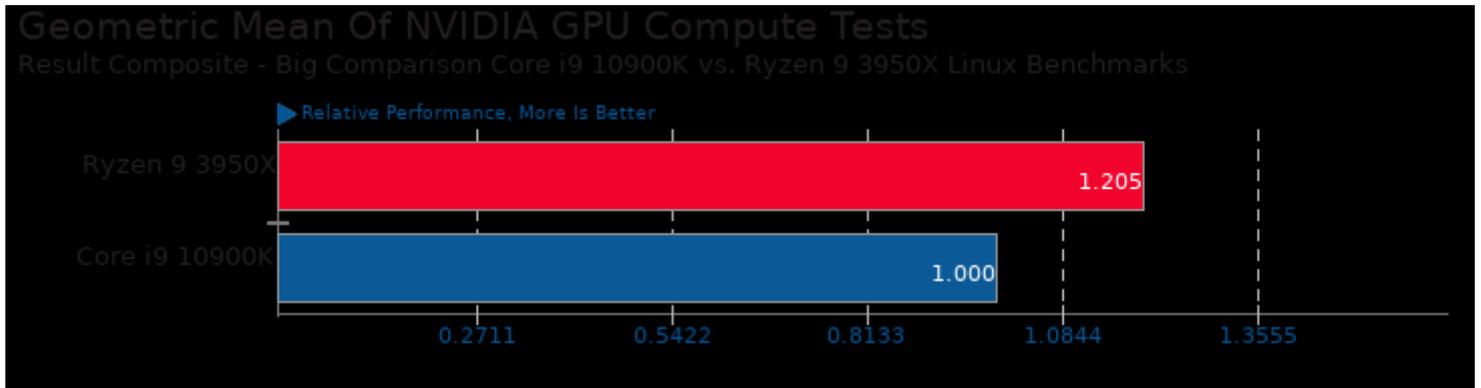
Geometric mean based upon tests: pts/numpy, pts/deepspeech, pts/scikit-learn, pts/mlpack, pts/numenta-nab, pts/plaidml and pts/lczero



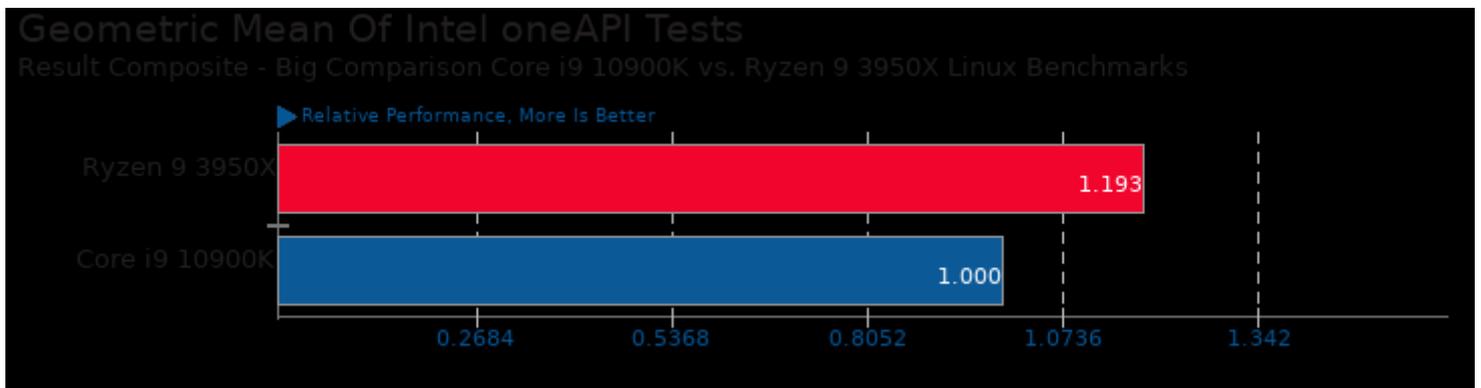
Geometric mean based upon tests: pts/namd, pts/gromacs, pts/cp2k, pts/nwchem, pts/lulesh and pts/pennant



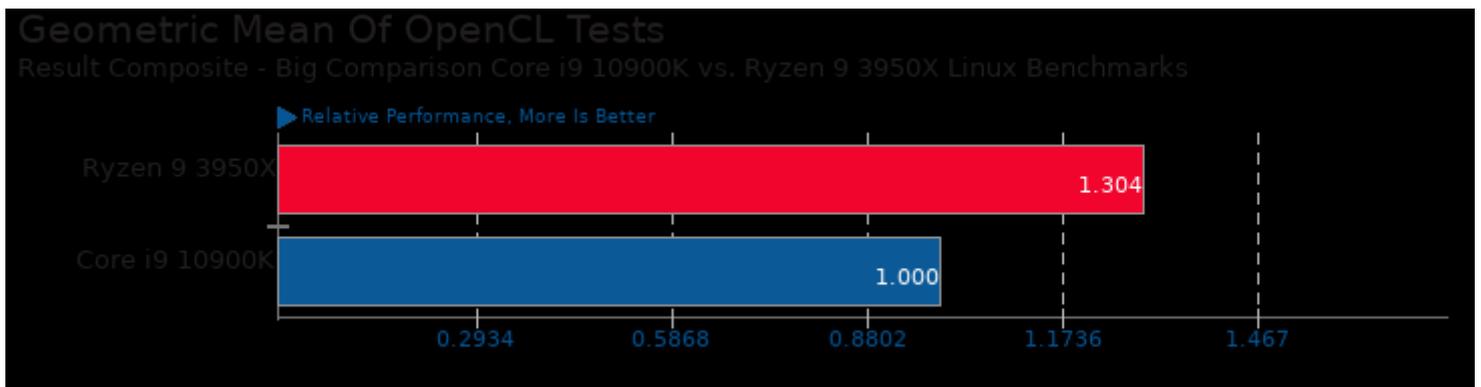
Geometric mean based upon tests: pts/askap, pts/gromacs, pts/pennant, pts/hpcg, pts/mrbyes and pts/npb



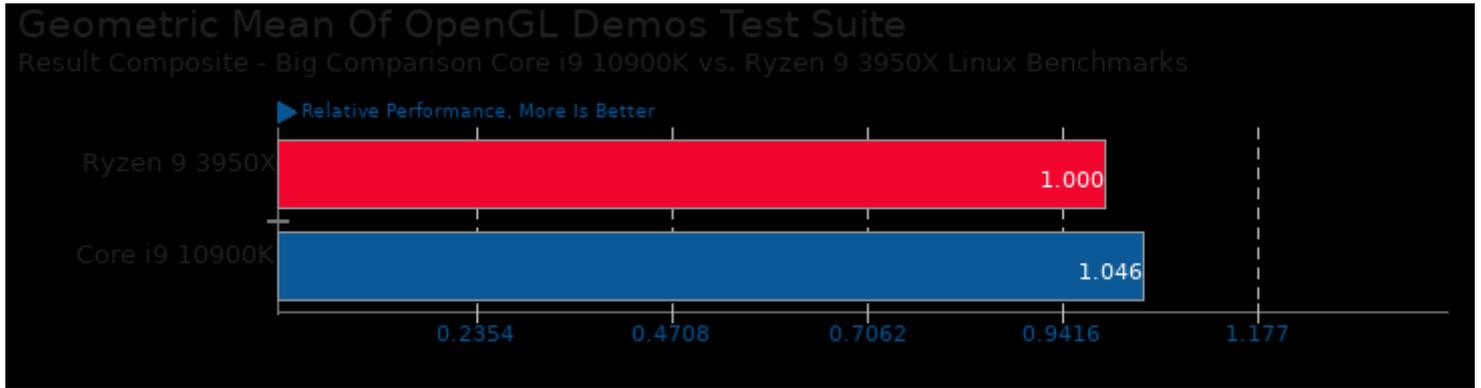
Geometric mean based upon tests: pts/gromacs, pts/luxcorerender, pts/rodinia, pts/neatbench, pts/plaidml, pts/lczero, pts/indigobench and pts/blender



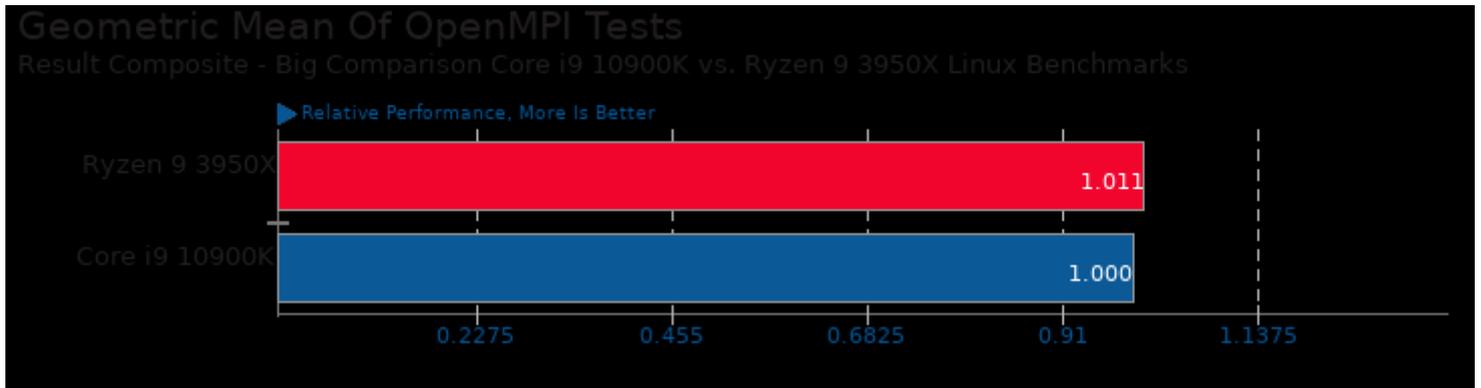
Geometric mean based upon tests: pts/embree, pts/oidn, pts/tungsten and pts/opencvl



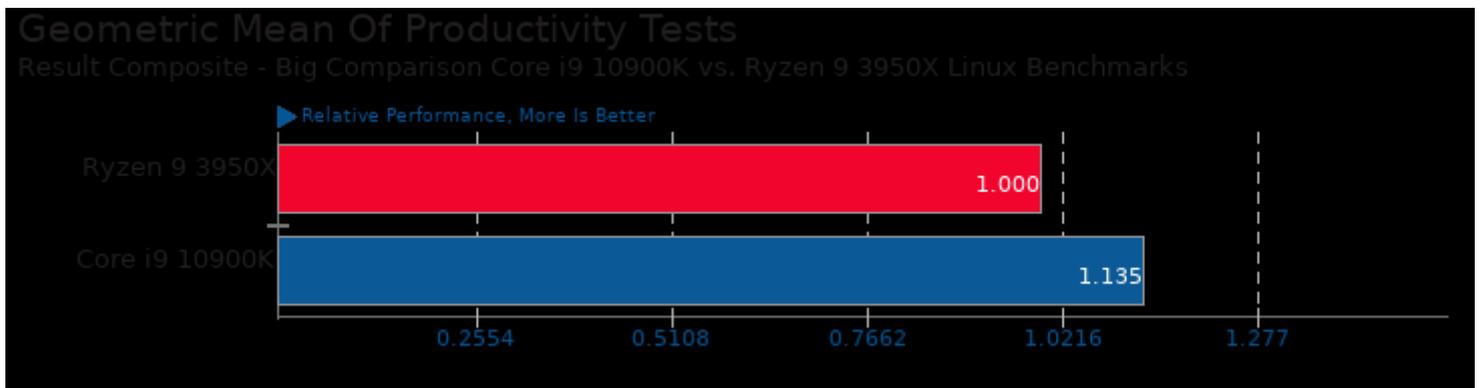
Geometric mean based upon tests: pts/rodinia and pts/parboil



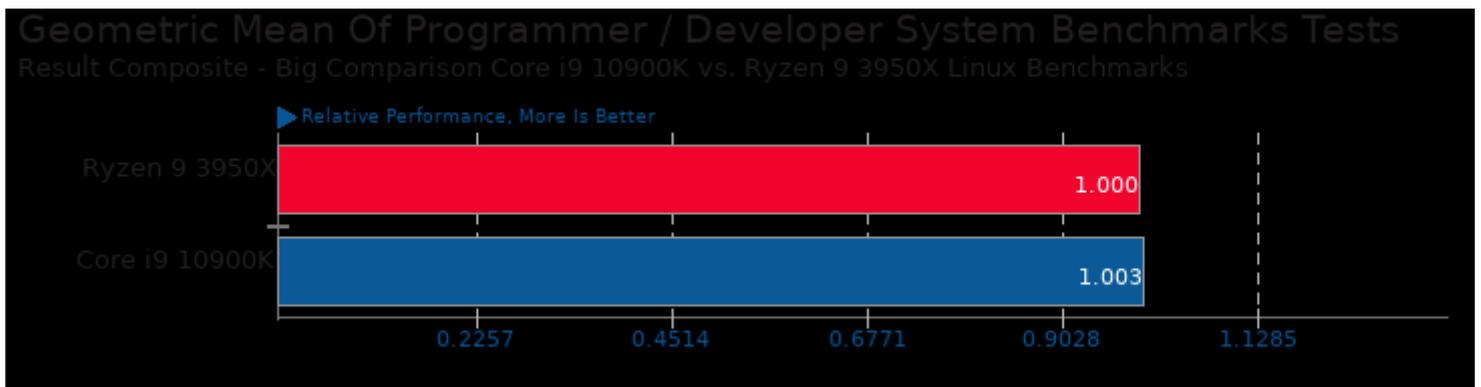
Geometric mean based upon tests: pts/unigine-valley, pts/unigine-heaven and pts/unigine-super



Geometric mean based upon tests: pts/hpcg, pts/npb, pts/parboil, pts/rodinia, pts/amg, pts/pennant, pts/mrbbayes, pts/nwchem, pts/lulesh, pts/askap and pts/gromacs

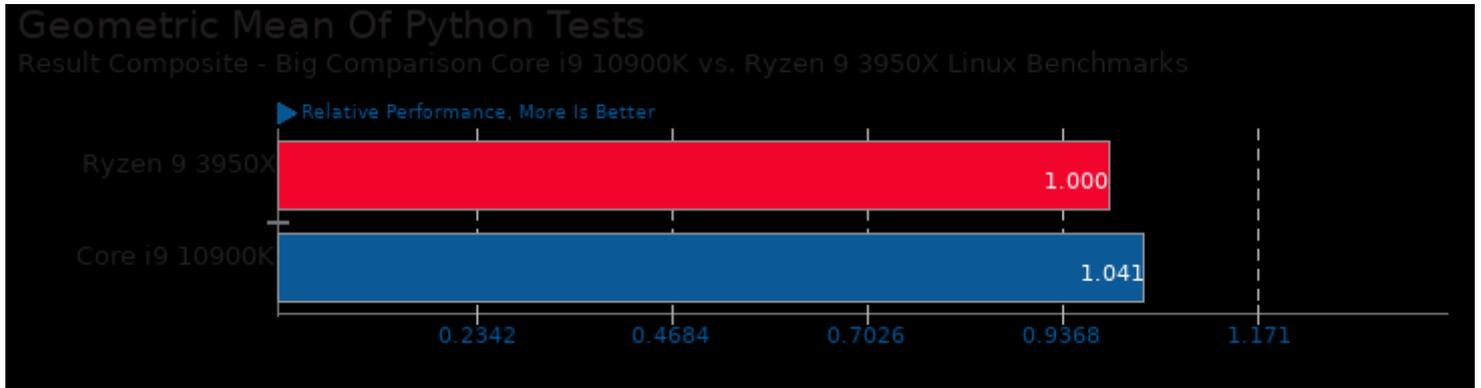


Geometric mean based upon tests: system/libreoffice, system/gimp and system/gegl

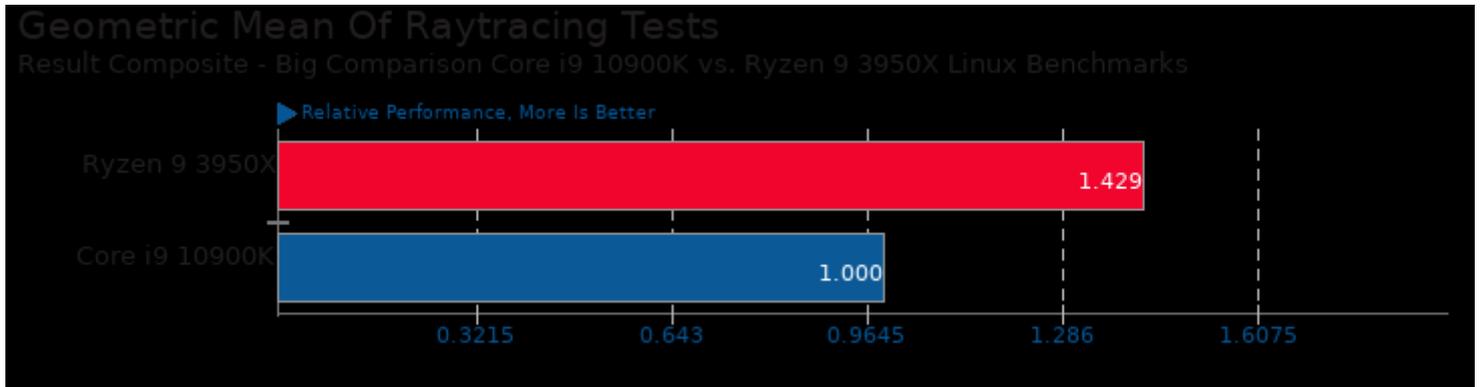


Geometric mean based upon tests: pts/sqlite-speedtest, pts/git, pts/blosc, pts/compress-zstd, pts/pyperformance,

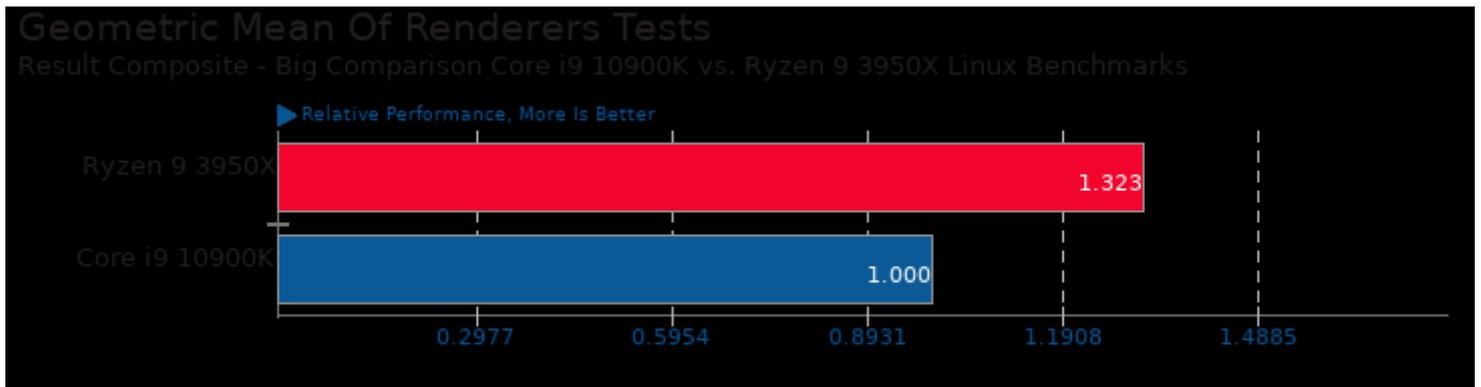
pts/pybench, pts/build-apache, pts/build-php, pts/build-linux-kernel, pts/build-imagemagick, pts/build-gcc, pts/build-gdb, pts/build-llvm, pts/build-ffmpeg, pts/build-mplayer, pts/build2, pts/mt-dgemm and pts/amg



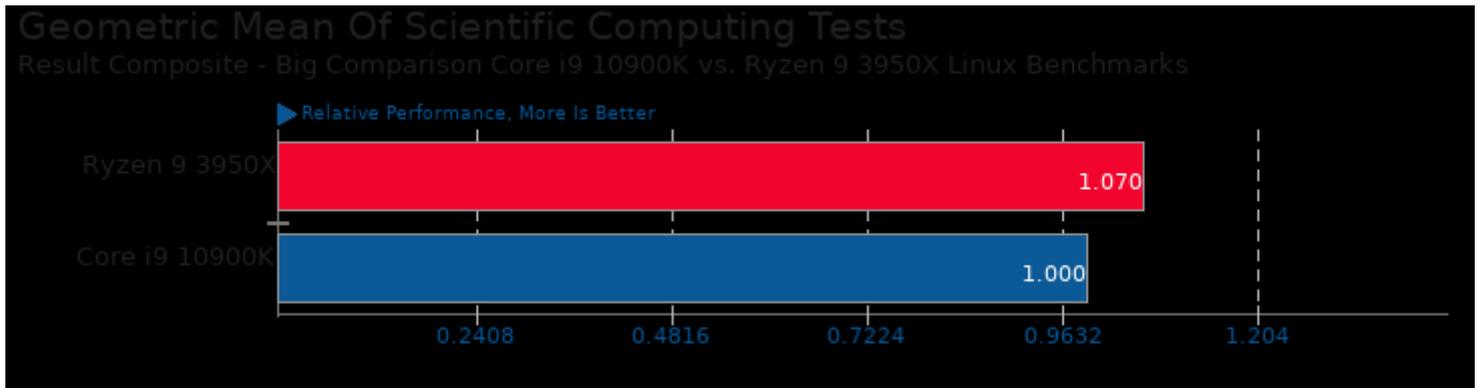
Geometric mean based upon tests: pts/pybench, pts/numenta-nab, pts/cython-bench, pts/numpy, pts/mlpack, pts/scikit-learn and pts/pyperformance



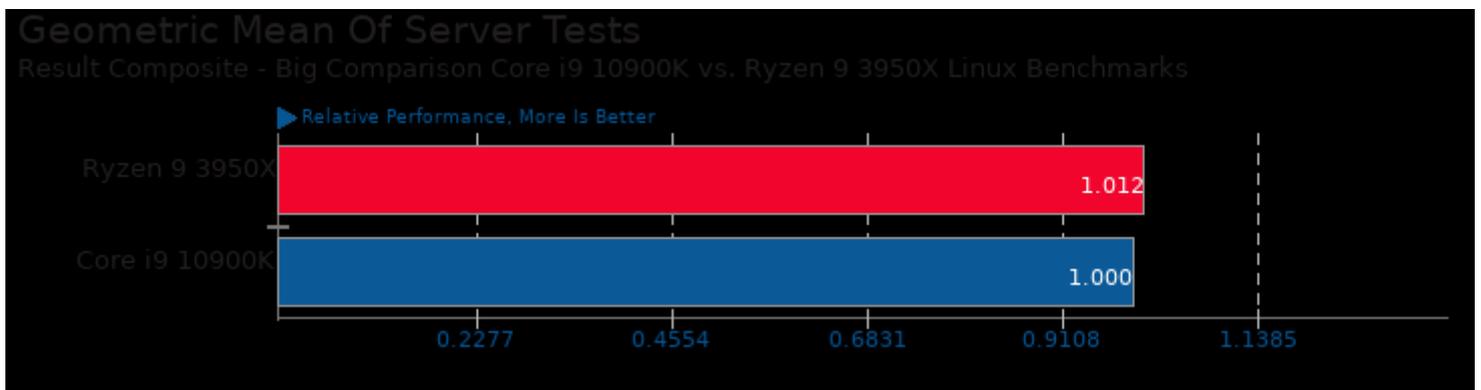
Geometric mean based upon tests: pts/c-ray, pts/tachyon, pts/rays1bench and pts/yafaray



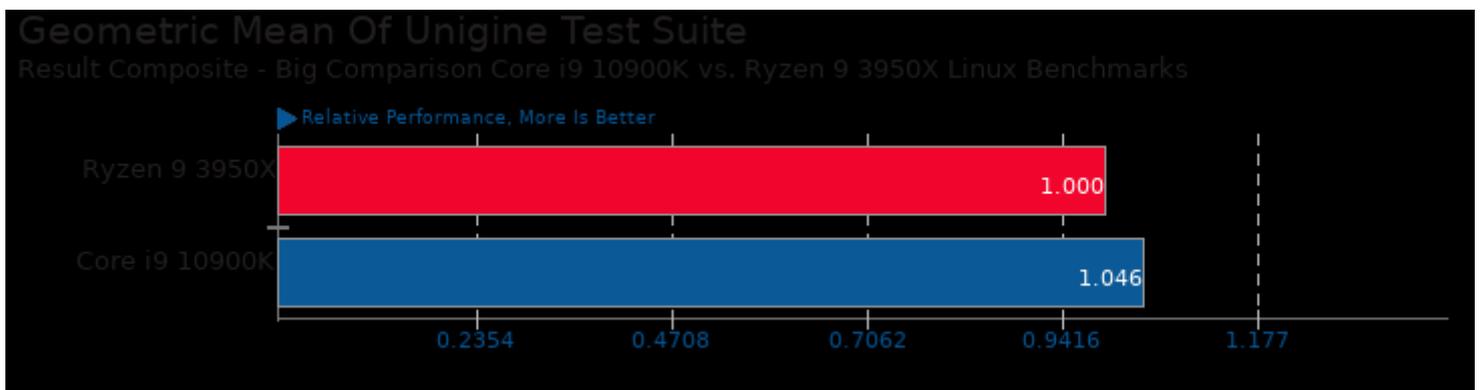
Geometric mean based upon tests: pts/c-ray, pts/tachyon, pts/rays1bench, pts/yafaray, pts/blender, pts/tungsten, pts/appleseed, pts/radiance, pts/aobench, pts/luxcorerender, pts/smallpt, pts/ttsiod-renderer and pts/indigobench



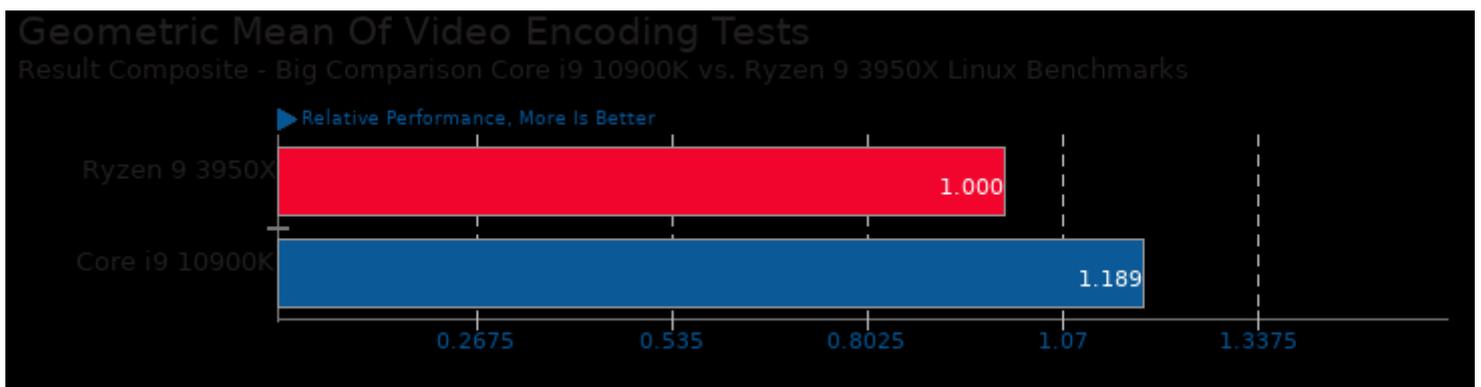
Geometric mean based upon tests: pts/fftw, pts/neat, pts/mt-dgemm, pts/amg, pts/namd, pts/gromacs, pts/cp2k, pts/nwchem, pts/lulesh, pts/pennant, pts/himeno, pts/mrbayes and pts/hmmer



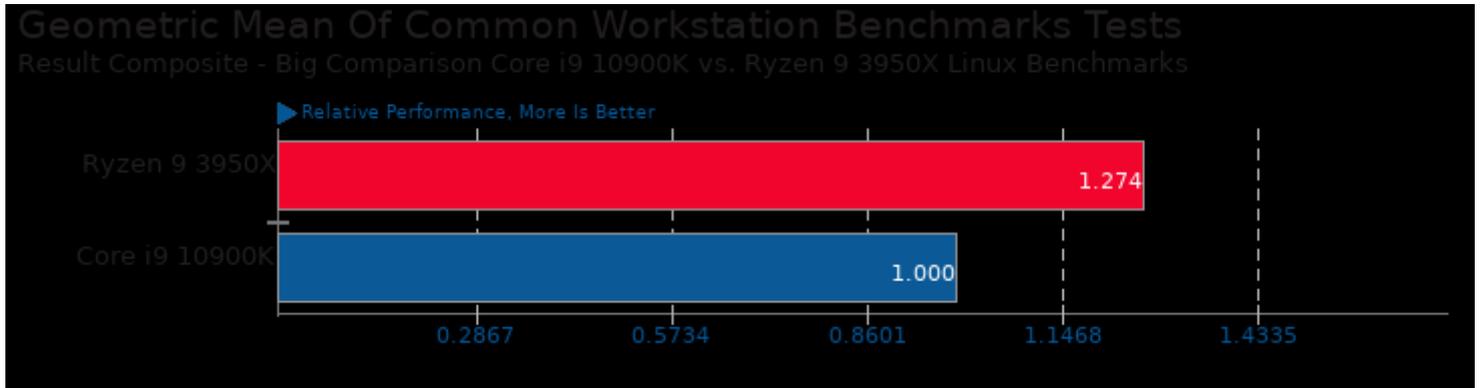
Geometric mean based upon tests: pts/ebizzy, pts/redis, pts/rocksdb, pts/openssl, pts/perl-benchmark and pts/sqlite-speedtest



Geometric mean based upon tests: pts/unigine-valley, pts/unigine-heaven and pts/unigine-super



Geometric mean based upon tests: pts/x264, pts/x265, pts/ffmpeg, pts/vpxenc, pts/dav1d, pts/aom-av1, pts/libgav1 and pts/rav1e



Geometric mean based upon tests: pts/blender, pts/rodinia, pts/parboil, pts/himeno, pts/brl-cad, pts/x265, pts/paraview, pts/swet, pts/sysbench and pts/git

*This file was automatically generated via the Phoronix Test Suite benchmarking software on Thursday, 28 March 2024 04:28.*